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INTERNATIONAL TRADE AND CIVIL DISORDER

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ABSTRACT

The goal of this study is to investigate the relationship between trade openness and civil disorder in the developing world. The definition of civil disorder in this thesis include violent demonstrations, riots and assassinations. This study presents three conflicting theories that explain the relationship between trade openness and domestic conflicts. Liberal theory suggests that international trade has pacifying effects on domestic situation while structuralists assume that open economy actually increases inequality within a country and thus increases the risk of internal conflict. The third opinion states that international trade does not have any significant impact on domestic affairs. However, the literature about the globalization impact on domestic stability focuses mostly on the occurrence of civil wars as a type of internal conflict. Civil is said to occur out of public discontent among the elites, while lower levels of domestic conflicts like civil disorder occurs among common people. However, there is no systematic research about the impact on the lower level internal conflicts. Therefore, this thesis focuses on the relationship between trade openness and civil disorder. In order to test the assumptions of these three theories and see which one explains the occurrence of civil disorder better a quantitative analysis is conducted. Apart from the variables of trade openness and civil disorder, the analysis includes several control variables that allow to control for other influential factors. The choice of these variables was made according to the existing literature. The statistical analysis includes 87 developing countries based on the World Bank classification.

The results of my multivariate regression analysis did not show a significant relationship between trade openness and civil disorder. The only significant variable of the model was population. The conclusion is that neither liberal nor structuralist models explain the phenomena of civil disorder in the developing world. For future research it would be important to find other factors that might be influential to the risk of civil disorder or look at several cases in more depth.

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Auste Linkeviciute

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LIST OF ABBREVIATIONS

CREG – Composition of Religious and Ethnic Groups Project

EIU – Economist Intelligence Unit

GATT – General Agreement on Tariffs and Trade

GDP – Gross Domestic Product

IMF – International Monetary Fund

ISD – Indices of Social Development

ISS – International Institute of Social Studies

OECD – Organization for Economic Co-operation and Development

PWT – Penn World Tables

UCLA – University of California, Los Angeles

USD – United States Dollar

WB – World Bank

WDI – World Development Indicators

WTO – World Trade Organization

CHAPTER 1. INTRODUCTION

1.1 BACKGROUND

If someone would need to describe the current international economic system with one word it would be "globalization". Whether people support it or not, most would agree that the scope of economic globalization has been largely increasing in the last couple of decades. It is difficult to define globalization but it has various facets including international trade, foreign aid, foreign direct investment and many others. Therefore, a massive amount of studies and empirical research was made in order to explain consequences and impacts of all or some of the components of globalization for countries around the world. However, there has been very little systematic research on the impact of globalization to the conflicts, both armed and non-armed, within the country. It is surprising because domestic conflicts have become the dominant type of conflict in the world since the Cold War (Magee & Massoud, 2011).

This study looks how facets of globalization, more specifically trade, affects the domestic society. Lately, the possible linkage between trade openness and internal stability has become highly discussed but still unresolved question concerning the consequences of globalization. There is a need for academics and policy makers to study how the global economic integration affects domestic cohesion and stability within the society. The current civil conflict literature presents three competing theoretical expectations on how globalization impacts the internal stability. There is a continuing debate between the proponents of the idea that international trade brings peace and stability, and the so called globalization critics who are rather skeptical about the benefits of global economic integration. Furthermore, there is a third opinion that globalization has very insignificant impact for the stability situation within a country.

On the one side of the debating table sit the proponents of liberal theory. They expound that international trade and commerce bring global peace because of the interdependence between participating countries. To be more precise, this economic interdependence increases the cost of a conflict. The theory, though, is mostly applicable to explain peace between trading countries. Trade is said to deter parties

from starting a war because of increased costs caused by economic interdependence. Quite similarly the proponents of this idea try to explain the internal stability. They use the same argument that international trade and openness of economy encourage domestic governments to act in ways which would lower the probability of internal conflicts to occur because the cost of a conflict becomes too high. This relationship can be explained as a fear of losing economic gains that trade brings by the risk of domestic instability (Polachek, 1980). Another argument that proponents of this theory use is the expectation that trade brings development. The economic development is said to strengthen the rule of law and increase the welfare of society itself, which in turn is said to have pacifying effects on domestic unrests.

However, the critics of globalization do not agree with this notion. They expect international trade to have the opposite effect. Followers of this thought prescribe this opinion into the so called structuralist model. It states that open economies are more likely to suffer from internal conflicts than countries with closed economies. Structuralists' argument is based on the dependency theory. According to the dependency theory, globalization and especially international trade promotes underdevelopment. The core of this theory is that developed and rich countries are getting even richer at the expense of the poor countries. Furthermore, trade to developed world increases inequality because it allows the elites in the poor countries to get richer while the masses remain poor (Barbieri & Reuveny, 2005).The industrialization is very limited in developing world and this distorted development promotes discontent that can encourage rebellions and civil wars. The fact that the biggest part of the developing countries' exports consist of primary goods and raw materials also raises the likelihood of domestic conflict. The dependency theory states that penetration of trade into developing economies leads to exploitation of natural resources which is said to further increase the cleavages between the domestic elites and poor labour force. All of the arguments supporting the negative impact of economic openness and domestic stability lead to a rise in inequality. The link between inequality and domestic conflict can be explained by the sense of deprivation (Barbieri & Reuveny, 2005). In other words, the people who are deprived feel that other group succeeded because it was favoured by the government. This grievance

leads to rebellions and even civil wars. This is a result of the fact that depicted people want to fight the regime that took advantage of them in order to promote interest of others.

Finally, the third school of thought argues that globalization has a little or no effect on domestic stability. The proponents of this theory state that the consequences of globalization are exaggerated specially for the developing countries. Even if these consequences exist they vary across countries largely because of the different social identities and local institutions. Therefore, it can hardly be generalized to have one or another effect (Barbieri & Reuveny, 2005). However, this theory is very vague across the literature without any systematic evidence.

This paper looks into the relationship between internal peace and trade openness in developing countries. The history of trade liberalization in developing world started in the second half of the 20th century. At that time, most of the developing countries opened their economies for international trade. Even after 50 years of experience the consequences of international trade and economic integration for developing countries remain unresolved topic of discussion between scholars and policy makers. The proponents of globalization are trying to prove that trade openness is an essential part for the development and economic growth and also ensures the peace between and within countries, while other scholars argue that international trade threatens the internal stability by increasing inequality.

The impact of international trade is said to be even larger for developing world. Developing countries are said to be more vulnerable to domestic conflicts because of the following reason: when developed country opens for trade it increases the social spending at the same time, thus compensating for whatever loses possible. Unfortunately, developing countries do not have enough resources to enact this practice and consequently experience more risk of internal conflict (Blanton & Apodaca, 2007). Despite the warnings and critiques about the consequences of global economic integration most of the developing countries chose to liberalize their trades. This can be seen by constantly growing number of members of the World Trade Organization (WTO). According to organization's public page, two thirds of its member

states are developing countries (The World Trade Organization, 2016). The numbers of international trade are constantly growing, thus, the possible consequences or benefits are increasing simultaneously.

According to current rules and conditions developing and developed countries have the same status and conditions in the WTO. Therefore, if the critics of globalization are correct and trade openness has negative effect on domestic stability in developing countries it would be important to reconsider the conditions of the WTO and international trade. On the other hand, if the results of this research show that open economies suffer from less internal conflicts, it would be an incentive to promote international trading.

1.2 AIM OF THE THESIS

The current literature studying the impact of trade openness to domestic stability is divided on the question of how it affects the occurrence of internal conflicts and if it does have any impact at all. As mentioned before the proponents of liberal theory are certain that international trade ensures domestic peace while the followers of structural model assume the relationship to be completely opposite. Nevertheless, the members of both schools of thought made most of their research on the relationship between trade and the presence of a civil war. Due to the existence of opposing opinions on this matter, the empirical studies have brought opposite results as well. For example, statistical analysis of large-N sample by Barbieri & Reuveny (2005) found that trade openness actually decreases the likelihood of civil wars. On the other hand, a study of globalization consequences for developing countries by Bussmann & Schneider (2007) shows that trade liberalization is likely to increase the risk of domestic conflict in the short run. However, there is a third, very minor part of empirical studies, for example Blanton & Apodaca (2007), that has proven that there is no significant effect of trade on civil wars.

Despite the existence of different assumptions and results, all of the empirical studies about the consequences of globalization to internal stability are focused on the presence of civil wars. However, not every instability or conflict in society develops into a civil war. Civil discontent develops into different levels of conflict depending on

the people that it affects. When the unrest appears among domestic elites it has more probability to outgrow into a civil war. On the contrary, when discontent is prevailed by the commoners it is said to develop into lower levels of domestic conflict (Gurr, 1972). However, literature studying the latter option is not very substantial. Consequently, scholars started to suggest examining the conflict and instability of society at the lower level (Magee & Massoud, 2011; Bussmann & Schneider, 2007). In other words, there is a need of a study that looks at the relationship between openness of the economy and internal conflict with the absence of a civil war. I take this suggestion for my research and I am going to estimate the impact of trade openness on a lower level of conflicts in developing countries. Developing countries are chosen because, as mentioned before, after liberalization of the trade developing countries did not have any "safety net" to compensate for any loses of globalization. As a result, they became more vulnerable to domestic unrest.

The more concrete aim of this research is to study the relationship between trade openness and civil disorder within developing society. In this paper civil disorder refers to riots, violent demonstrations and assassinations. The data for civil disorder comes from the International Institute of Social Studies of Erasmus University Rotterdam. The institute develops the indices of social development with six different dimensions. One of the dimensions that is relevant to this research is called intergroup cohesion. It is defined as the "relations of cooperation and respect between identity groups in society" (The International Institute of Social Studies, 2016). Once this relationship between members of society breaks down, there is a risk of the outburst of violent conflict. The index of intergroup cohesion consists of 11 indicators that in one or another way explain the social cohesion. In this research I pick three of the indicators from the dataset that are most relevant to define the variable of civil disorder. These indicators include: rating of violent demonstrations, number of reported riots and number of reported assassinations. In order to achieve my dependent variable I calculate the average of these three indicators.

1.3 RESEARCH QUESTION

The conflicting assumptions of academics and theorists lead to more questions of what is the actual relationship between the economic openness and internal conflicts. What is more important, there is no systematic research on how international trade influences lower levels of internal conflicts. Consequently, the division of the existing literature and debates in real world arena about the topic induced me to look for the answer to the fundamental question of this research:

What is the impact of trade openness on civil disorder in developing countries?

In order to guide the readers through the thesis it is important to ask several sub-questions. These sub-questions will help to answer the main research question.

  i.   *What is the present theory and existing evidence about the relationship between trade openness and civil disorder?*
  ii. *How can the variables be operationalized and how can the impact of independent variable on the dependent variable be assessed?*
  iii. *What are the results of the analysis?*

1.4 RESEARCH APPROACH

This research is constructed in a way that every chapter answers one of the sub-questions mentioned above. First of all, the first sub-question is answered by reviewing the existing studies. While reviewing and reading current literature I could not find explicit and reliable studies on the relationship between trade openness and civil disorder. As previously mentioned majority of the works made on this topic are focused on the civil wars or other higher levels of internal conflicts. Therefore, in the next chapter I present the three conflicting theories that explain the link between trade and higher levels of domestic conflicts instead of civil disorder. Furthermore, I review the existing literature and discuss current evidence and result from empirical studies on this relationship. After evaluation of the theories and evidence on the link between trade openness and internal conflicts, I draw the theoretical expectation for

this thesis. The specified hypothesis tests if the explained relationship exists on the link between trade openness and civil disorder.

The second sub-question is answered by presenting the research design of this thesis. This part includes the justification of the particular design and variables. The empirical approach used in this thesis is cross-sectional non-experimental analysis with a large-N sample. It is not possible to put control over the independent variable to measure dependent variable before and after the application, thus the study is only based on statistical observations and indices. The study includes all the developing countries in the world that have enough statistical data for the research for the year 2010. The dependent variable of the research is civil disorder. The data is taken from before-mentioned Indices of Social Development (ISD) by the International Institute of Social Sciences. The independent variable of the research is trade openness and is described by country's total exports plus imports as a share of GDP. Furthermore, in order to check the hypothesis other control variables are included. This is done in order to control for other factor that are most likely to have an effect on civil disorder based on the literature of internal conflicts.

Furthermore, I answer the third sub-question by presenting empirical analysis and discussing the results. For the empirical part of this thesis, I choose to conduct a quantitative research in order to test for a general trend for all the developing countries. For the technical side of the analysis I use the multivariate regression analysis as a model conducted in SPSS statistical program. Finally, the interpretation of the multivariate regression analysis results provides the answer to the main research question of this thesis.

1.5 ACADEMIC RELEVANCE

In past several years, the academia has shown focused on the possible impacts of globalization. By answering the research question of this thesis I am going to contribute to the existing literature that studies the consequences of globalization and economic integration. The question is theoretically relevant because it does not look at the already popular topic of research – the relationship between trade openness and domestic stability in terms of outburst of civil wars, but rather it looks at the lower

level of internal conflict namely civil disorder. As mentioned before, representatives of different schools of thought have made several studies concerning the impact of open economy to domestic stability expressed by the occurrence of civil wars. However, internal conflicts, social injustice and civil disorder do not necessarily outgrow into civil wars, thus my study extends the literature by looking at a lower level of internal conflict. The scholars in the field (Magee & Massoud, 2011; Bussmann & Schneider, 2007) see the assumption I use in my study as important and relevant, however, there is no systematic study made to explore this relationship yet.

1.6 POLICY RELEVANCE

The answer to my research question is also important to the real world matters. Nowadays, international trade and global economic integration is seen as a warranty for peace between and within countries. However, we still witness domestic conflicts, instability and growing inequality around the developing world. Evidently, the question if globalization is really beneficial for developing economies still maintains unresolved. This research will help to understand how trade openness can affect lives of people in developing world. Furthermore, it can help to anticipate possible future conflicts that could be harmful not only to the societies living in the developing world but to the whole global community. Finally, if the assumption that economic openness has a negative effect on internal peace in developing countries is proved to be correct and trade openness policies are actually harmful for domestic society, it can help to make further decisions of policy makers in both: developing countries and international organizations.

1.6 OUTLINE OF THE THESIS

Introductory Chapter 1 of my thesis includes the main objectives and aims of the research as well as the specification of the fundamental research question. In order to answer the research question the sub-questions are used throughout the whole thesis. The first sub-question is answered in the Chapter 2 through the review of existing literature and studies. By reviewing current literature I am going to identify and introduce the reader with different assumptions and choose the most relevant theory to my research. The second sub-question is answered by formation of the

research design and presentation of both independent and dependent variables in Chapter 3. The last sub-question is assessed in Chapter 4 by providing and discussing the results of the statistical analysis. More specifically, the answer to this sub-question explains if the theoretical expectations of this thesis are met, and expected influences of independent variables are proven empirically. Finally, the answer to the main research question is presented in the concluding part of this thesis. It is done by interpreting the results of empirical test and comparing them to theories presented in Chapter 2. The concluding Chapter 6 also includes the limitation of this analysis, policy implication and suggestions for further research of the topic.

CHAPTER 2. THEORETICAL FRAMEWORK

2.1 INTRODUCTION

Previously introduced background of this topic suggests that the existing literature has conflicting expectations for the international trade effects on domestic stability. It is important to conduct a systematic literature review in order to see what has and has not been researched. Furthermore, it gives a possibility to identify what other authors have found, what concepts and data was used (Johnson, Reynolds, & Mycoff, 2008). This allows choosing the most reliable operationalization of variables and most suitable control variables. Finally, the review of the literature helps to develop the theoretical expectation of this thesis and to identify the researchable hypothesis.

This chapter presents the overview of the present theories and the evidence behind it by answering the first sub-question:

What is the present theory and existing evidence about the relationship between trade openness and civil disorder?

In order to answer the first sub-question it is important to systematically review the literature on this matter. However, I could not find reliable sources that investigate the relationship between trade openness and civil disorder. Domestic conflicts can be defined in several ways therefore when the role of trade openness for domestic stability was examined empirically it was done by characterizing domestic conflict as civil war. Having in mind the fact that there already are number of research that study international trade relationship with civil war, I define domestic conflict as civil disorders. Civil disorder in this thesis includes the incidents of violent riots, demonstrations and assassinations. If it is true that economic openness affects the likelihood of civil war I expect it would have an effect on civil disorders, too.

This chapter includes all of the three conflicting theories about trade effects on domestic societies together with empirical evidence supporting the expectations. Consequently, this chapter is divided into sub-sections for each of the theories. First of all, I present the liberal theory stating that trade has pacifying effect on domestic conflicts. The theory explains this effect in two ways. Firstly, trade indirectly impacts

internal stability through development and democracy and, secondly, trade has a direct effect explained by the commercial liberalism. In second part of this chapter I introduce the disagreeing theory which states that trade has destabilizing effect. This assumption is supported by the structuralist model. Finally, the third theory denies any significant relationship between trade openness and internal conflicts.

As mentioned before all existing literature focuses on civil wars as a definition of internal conflict. Therefore, this chapter reviews the researched relationship between trade openness and civil wars. After analysing present theories and evidences I introduce the theoretical assumption of my thesis about the relationship between trade openness and civil disorder. Finally, at the end of this chapter the hypothesis of this research is specified.

2.2 PACIFYING EFFECT OF TRADE

In the realm of international relations, liberalism is the theory that says that international trade brings peace. The liberal conflict theorists of international relations have always argued that international trade is a path to global peace. However, this assumption was mainly used in explaining the ways to reach international peace. Nevertheless, there is a solid basis of the liberal theory for assumption about domestic peace (Hegre, Gissinger, & Gleditsch, 2002). Theoretically, economic openness is expected to have pacifying effects in two different ways. Firstly, trade is said to bring development that enhances the welfare of society, strong rule of law and thus ensuring the domestic peace. And secondly, following the commercial liberalism assumption, trade prevents domestic conflicts by increasing the opportunity costs for the actors (Wiesehomeier, 2003). In the next sub-sections I overview both of these assumptions and existing evidence for them.

2.2.1 LIBERAL MODEL

Neoclassical economists state that economic development is promoted by free markets. Globalization and especially openness to trade helps those free markets to spread globally (Barbieri & Reuveny, 2005). Liberal theorists use this argument in explaining the relationship between international trade and domestic peace. The

important argument of the supporters of this idea is that trade promotes economic development that, in turn, is connected to peace and stability (Magee & Massoud, 2011).

Hegre, Gissinger & Gleditsch (2002) constructed a model which explains how open economy leads to a higher level of economic development which can lead to peace directly or through promotion of democratic values in the country. The model can be observed in Figure 1.

Figure 1. Liberal Model
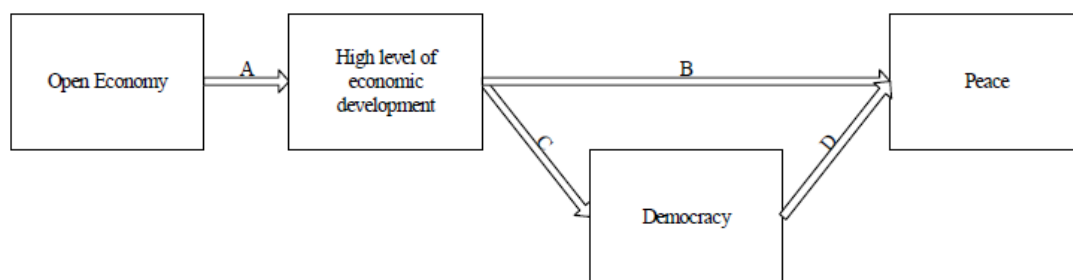
Source: Hegre, Gissinger, & Gleditsch, 2002

Each of the arrows in the model has a theoretical explanation. Furthermore, I support the theoretical assumptions by presenting empirical evidence of it. First of all, the relationship that is presented by arrow A can be found in many works of economists, political scientists and sociologist. Sachs and Warner (1995) believe that economic openness have a direct affect to the growth of the country. Openness is said to bring not only economic strength for the country, but also helps to overcome many problems of developing world such as corruption, arbitrariness, lack of education and inefficient administration (Winters, 2003). Trade openness is said to efficiently allocate production factors, thus promoting development of the country (Barbieri & Reuveny, 2005). The cross-sectional study of Sachs and Warner (1995) proves these assumptions and shows that countries with open economies experienced bigger economic growth. Furthermore, these countries were said to be able to prevent crisis of balance of payments easier than closed economies. The results of time-series cross-sectional analysis by Hegre, Gissinger and Gledisch also provide the evidence that economic growth is associated with increase in trade. The authors conclude that

open countries grow on average by 2 percentage points more than closed economies. In the literature, the example of formerly closed economies like China and Vietnam is very often used. After the liberalization of the trade these countries experienced a rapid growth (Hegre, Gissinger, & Gleditsch, 2002). However, this assumption does not take into account the fact that these countries only promoted exports without fully liberalizing the imports.

Secondly, the arrow B presents the direct link from development to internal peace. This relationship is explained in variety of evidences in the literature. Development is said to strengthen the government by providing it with more financial revenues from taxes (Barbieri & Reuveny, 2005). Richer countries are able to have stronger police and military capabilities thus have more capacity to deter potential conflicts. Fearon and Laitin (2003) state that weak government and military (badly financed, corrupt, divided, etc.) is unable to oppose rebels inside the country. Therefore, insurgents are able to survive and continue the rebellion. Fearon and Laitin attempt to test this relationship with the onset of civil war empirically. As a proxy for government's relative strength to combat insurgents they chose per capita income estimates and found a significant relationship with the onset of the civil wars. The authors found that on average there is 41% more possibility of civil war to begin when the income per capita decreases by $1,000. Additionally, after getting the results of their statistical test, Hegre, Gleditsch and Gissinger (2002) conclude that the risk of civil war is unchanged until the GDP per capita reaches $1,500. After that, the risk decreases at an increasing rate. A study of Bussmann and Schneider (2007) also proved that richer and more developed countries are less likely to suffer from domestic conflict. They separated OECD countries from the whole sample and found that they are at a lower risk of experiencing civil instability than the rest of the countries. Furthermore, the policy research report of the World Bank (2002) states that both low income and falling income proves to double the risk of a conflict for less globalized developing countries. Nevertheless, the opposing evidence exists in the literature, too. A study of Blanton & Apodaca (2007) found that GDP per capita estimate is not significant explaining the conflict occurrence in the country. However, it has a positive effect on the intensity of the conflict. While interpreting the results authors guessed that this

relationship could be the fact that richer governments have more resources to finance internal repression.

Furthermore, there is an argument which states that richer countries have more ability to compensate for the losers of globalization. The compensation argument is expanded by Bussmann and Schneider (2007). They presume that compensation for those who lose because of globalization could decrease inequality and pacify the unrest. However, usually winners of globalization do not compensate the losers voluntarily, and thus the government has to interfere (Barbieri & Reuveny, 2005). As a measurement of compensation Bussmann and Schneider chose social spending indicated by government consumption as a percentage of country's GDP. The empirical results showed a negative relationship meaning that social spending as associated with lower risk of civil conflict. However, this relationship was not significant when controlling for other factors. Thus, authors could not conclude whether compensation mechanism for losers of globalization has pacifying effect.

Arrow C in the model shows the link between development and level of democracy. The positive relationship between these two factors can be explained by a classical theory by Lipset (1959) which states that the richer and more developed the country is the more chances of sustaining the democratic regime it has. Countries with better education, administrative capacity, political resources and higher income are said to have more compromise-oriented political view (Hegre, Gissinger, & Gleditsch, 2002). The assumption that democracies are more likely to emerge and sustain in countries with higher economic development is supported by several empirical studies (Przeworski, Alvarez, Cheibub, & Limong, 2000; Burkhart & Lewis-Beck, 1994). Similarly, Hegre, Gleditsch and Gissinger (2002) finds that democracies in Sub-Saharan Africa have 8 times less possibility to survive than rich and developed democracies in Western Europe. Furthermore, the authors only found this direct effect of economic development to strong democratic system but not to any other type of regime.

Finally, the arrow D in the model presents the effects that democratic regime has on domestic peace. This link is a little bit more complex and double sided. Democracies face civil wars or other serious resistance less frequently because citizens express their

dissatisfaction differently. In democratic regimes public discontent is communicated throughout the political power and voting in elections (Hegre, Gissinger, & Gleditsch, 2002). This is proved by the statistical analysis which showed negative relationship between level of democracy and the likelihood of civil war. However, liberal model does not take into account other regime types. Several studies in the literature (Hegre, Ellingsen, & Gleditsch, 2001; Fearon & Laitin, 2003) suggest that the relationship between the regime type and domestic violence is inverted U-shape. In harsh authoritarian regimes the rebellions are unlikely to happen too because government keeps opposition highly oppressed. The regimes that are most vulnerable to domestic conflicts are semi-democracies and soft authoritarian regimes (Blanton & Apodaca, 2007). This is because in semi-democracies some political opposition is allowed to exist however it does not have any influence (The World Bank, 2003).

2.2.2 COMMERCIAL LIBERALISM

In addition to the model explained above, the classical liberal theory has a branch stating that there is a direct link between trade and domestic peace. The implication that trading states are more pacific and less likely to be involved in a conflict with other states comes from the theory of commercial liberalism. It says that countries are deterred from engaging in the conflict because of the fear of economic loss (Polachek, 1980). For interstate relations this theory has been proved in several studies (Moravcsik, 1997; Hegre, Oneal, & Russett, 2010). Even though, classical commercial liberalism explains the phenomena in international arena, trade is also said to have a direct pacifying effect for public discontent and internal conflict. The current literature agrees that the key factors of commercial liberalism can be extended to the conflict on a domestic level (Bussmann & Schneider, 2007).

Economic openness is expected to reduce internal conflicts because actors are afraid to lose the benefits that international trade brings (Barbieri & Reuveny, 2005). In the literature this is called the opportunity cost of violence. When factors like economic interdependence and international trade increases, the opportunity cost of participating in violent uprisings are higher (Hegre, Gissinger, & Gleditsch, 2002) because conflicts and instability are potentially threatening to destroy trading

relationship. What is more, international trade is said to be more sensitive to domestic conflicts than conflicts between countries. The reason behind it is the fact that foreign firm can easily stop the trade with a county in a conflict and find another trading partner (Magee & Massoud, 2011).

The economic gains that country receives from trade are at risk if the trade relationship is destroyed. Study of Martin, Mayer and Thoenig (2008) of all GATT/WTO members found out that trade fell around 25% from the natural level during the first year of the internal conflict. The economic loss becomes even higher if the conflict lasts for many years. The authors found that if a severe conflict persists for 25 years the trade goes down by 40%. For less severe wars the effect is smaller but still exists. The fear of losing so much income from trade makes governments to acts more pacific towards public discontent so it would not grow into a severe conflict. The example of Zepatista movement in Mexico (Mason, 2003) shows how economic globalization and a fear of losing foreign partners made the onset of civil war less likely. Strong state response to rebellion might have temporarily stopped the uprising but it could have also led to further unrest. It is assumed that stronger resistance from the rebels could bring even more economic losses (Barbieri & Reuveny, 2005). After two weeks of violence with Zepatistas Mexican government understood that military conflict will be very costly for economy so they ceased fire and start negotiations with the rebels. Mason (2003) assumes that if the government continued the military actions against the Zepatistas, the survivors would start building their own stronger military capabilities. That would lead to strong guerilla movement and further destabilization of Mexican economy that was already fragile at the time.

Likewise for the government, internal conflict increases the opportunity cost for the rebels too. If the assumption that international trade and commerce brings development and increase the growth of the country is accepted the following logic is valid. In a richer country the opportunity cost for rebels to engage into conflict is much higher than in a poor country. For instance, the rebel that decides to join the rebellion activity loses the income that he or she could get from joining the labor force (Barbieri & Reuveny, 2005). The salaries in the labor force are higher in rich countries than the ones in poor states. Furthermore, the recruitment process is said to be much easier in

the poor countries where the economic alternative is even worse (Fearon & Laitin, 2003). The statistical analysis of Collier and Hoeffler (1998) supports this assumption. They use income per capita as a proxy parameter for opportunity cost effect of the conflict. The authors conclude that the higher the income per capita and so the higher the opportunity cost of the rebellion leads to lower risk of domestic conflicts.

2.3 DESTABILIZING EFFECT OF TRADE

Despite the fact that trade is said to be economically beneficial to all the participating parties, the critics of globalization are determined that global economic interdependence has destabilizing effects leading to domestic conflicts. There are several channels through which the theory explains how trade can increase the risk of domestic conflict. Those channels are presented in the following sub-section.

2.3.1 STRUCTURALIST MODEL

The structuralist model states that countries with open economies are more likely to suffer from civil uprisings than closed economies. They draw a link between trade openness, inequality and conflict. Hegre, Gleditsch and Gissinger (2002) summarized the structuralist theory into simple model (Figure 2).

Figure 1. Structuralist Model
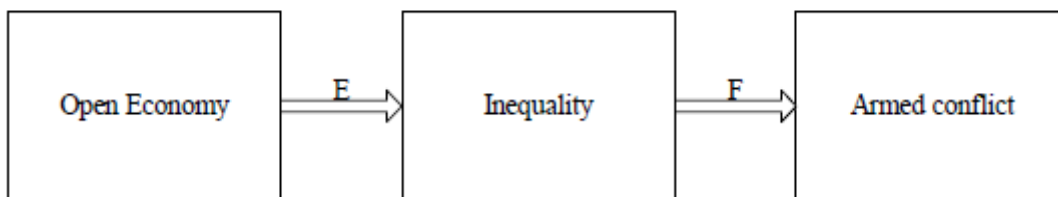
Source: Hegre, Gissinger, & Gleditsch, 2002

The arrow E in this model is explained in several ways. First of all, dependency theory states that the world economy is composed by developed core and underdeveloped periphery (Barbieri & Reuveny, 2005). In other words, the core includes only a few countries, namely the OECD members while the periphery consists of all the developing countries (Ferraro, 2008). A straightforward explanation of this theory is that only the developed countries benefit from free trade while it is done at the

expense of the developing world. Developed countries in the core produce in a capital intensive way. The rest of the countries are situated in the periphery and have dual economy. It consists of a small relatively developed sector controlled by domestic elites while the rest of the economy is underdeveloped (Barbieri & Reuveny, 2005). The sector that is controlled by the elites exports labor intensive primary commodities to the core. The dominant rich countries make manufactured products out of these commodities and sell them back to the periphery (Ferraro, 2008). Manufactured goods always cost more than primary commodities because of the value-added during the production. Therefore, poor countries never earn as much as rich countries, and thus worsen the inequality between countries. Furthermore, this kind of trade harms the periphery and its development. The elites in developing countries have interest to keep trading with developed world because this relationship brings them private gains and power (Ferraro, 2008). While local elites are getting better off by trading with the core the masses remain poor (Barbieri & Reuveny, 2005). The trade dependency between developing and developed world is said to be the source of increasing inequality in developing countries.

Secondly, to explain the phenomena of increasing inequality in developing countries one can refer to the theory formulated by Simon Kuznets (1955). Kuznets claimed that inequality is low in agricultural societies where people do not have a lot of money. International trade is said to bring technology, industrialization and modernization. These aftermaths of the trade directly increase inequality as wages in modernized sector are much higher than in agriculture (Hegre, Gissinger, & Gleditsch, 2002). The inequality is expected to rise during the phase of development as labor force switches from agricultural to industrial sectors. It is increasing until this transition is over and the country becomes fully developed. This process is explained by the inverted-U shaped relationship called the Kuznets curve. The graphical illustration of the Kuznets curve is displayed in Figure 3.

Figure 2. Kuznets curve
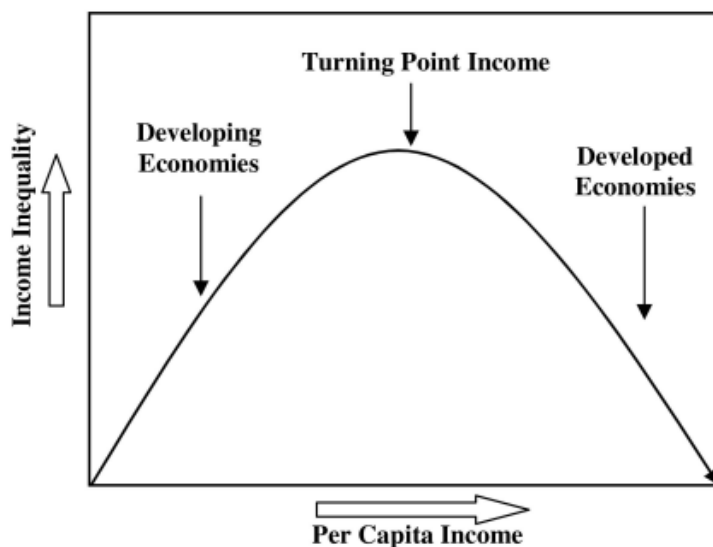
However, Kuznets' theory has been criticized strongly in the literature. Fields (2001) conducted a research and concluded that Kuznets curve hypothesis does not apply for a large number of data. At the time when Kuznets was creating this theory, the data for large number of cases was hardly available.

The counter-argument to the idea of Kuznets curve is formulated by the so called factor-price equalization theorem. This economic theorem also states that development has a different effect on rich and poor countries. (Hegre, Gissinger, & Gleditsch, 2002). However, the direction of the relationship is the opposite than in the Kuznets curve. The followers of this idea assume that trade decreases inequality in the developing world. To explain this relationship one needs to understand the concept of comparative advantage developed by David Ricardo in 1817. Comparative advantage refers to the ability of a country to produce goods at a lower opportunity cost than other countries would. The aspect of comparative advantage makes developing countries to specialize in sectors which are supported by unskilled labor. Trade is said to benefit abundant factors of economy and harm the scarce factors (Barbieri & Reuveny, 2005). Less developed countries are more endowed with labor rather than with capital. According to this theory, trade is expected to reduce the earnings of

capital owners in developing countries and increase the wages for labor, thus decreasing inequality (Barbieri & Reuveny, 2005).

As a consequence of the divided opinion about the link between international trade and inequality, empirical results of this relationship are also dual. Hegre, Gissinger and Gleditsch (2002) using the GINI index for inequality find that a big amount of international trade is associated with some increase in inequality only in poor countries. These results support the previously described dependency theory to some extent, however, not significantly because the relationship is not strong. On a contrary, the results of study by Reuveny and Li (2003) go in conflict with structuralist model which states that international trade increases income inequality within a country. Authors found that income inequality measured in GINI index actually decreases with more trade openness in less developed countries. These results support the notion of comparative advantage.

Finally, the arrow E in the structuralist model represents the link between inequality within a country and the increase in risk of a conflict. This link is supported by the feeling of grievance and deprivation. It starts when part of the society feels deprived and thinks that other group has been favoured by the government (Barbieri & Reuveny, 2005). Deprived people feel that favoured group has benefited at the expense of others. This comparison between unequally poor people and those who are doing better in the same society is said to provide initiative and inspiration to start rebellions and riots. Rebels enact this notion or unequal treatment of the people for recruiting members (Barbieri & Reuveny, 2005). The egalitarian ideas like "*Liberté, égalité, fraternité*" have been propulsion for many revolutions in the history of mankind (Hegre, Gissinger, & Gleditsch, 2002). Several empirical studies (Mason, 2003; Boswell & Dixon, 1990) have found that economic inequality has a significant positive effect on the domestic violence. In other words, countries with more inequality are more likely to suffer from internal conflicts. However, the results in the literature are not unilateral again. In his work Collier (2000) divided the definition of grievance into four different types. According to this division, grievance that is focused on economic inequality can refer to unequal income distribution or ownership of assets. The main asset in low-income developing countries is land, thus, Collier chose

inequality in land ownership as his proxy for overall asset inequality. The results denied the relationship between inequality of land ownership and domestic conflict. The author did not find any significant effect of inequality to internal stability. Similarly, the study of Fearon and Laitin (2003) found out that income inequality do not have any significant effect on the onset of domestic conflict, too. Additionally, Hegre, Gleditsch & Gissinger (2002) conclude that their test did not find any associations between inequality and civil war. These empirical analyses deny the relationship presented in the structuralist model.

The main logic behind structuralist model is that globalization induces inequality which is the main impetus for civil unrest. Despite the existing theories, historical examples and some empirical analysis, majority of the current studies cannot find a strong relationship between inequality and civil wars. Academics agree that this might be a result of a poor data for inequality or the fact that deprived people are silenced with the compensation from those who benefits from the international trade (Fearon & Laitin, 2003). However, as mentioned in the sub-section above, compensation argument has not received much empirical evidence yet.

2.4 NEUTRAL EFFECT OF TRADE

The third assumption about trade openness and internal conflict relationship states that there is no impact at all. This opinion that international trade does not have any effect on domestic conflicts is not explicit in the literature. The assumption that trade is not an important power for influencing internal stability comes from the studies about various effects of economic globalization in general (Barbieri & Reuveny, 2005). Paul Hirst in his work "The Global Economy – Myths and Realities" (1997) stresses how misleading and wrong the current belief that global economy in any way harms countries is. The author thinks that this assumption is exaggerated and global interdependence does not have significant impact on domestic situation. Furthermore, Hirst (1997) also argues against the argument that the global economy is ungovernable and ruled by the invisible hand. He states that world integration is governed by a few superpowers who shape it according to how they see it better.

Another work arguing that globalization does not affect internal affairs is written by Geoffrey Garrett (1998). The author claims that globalization does not affect political autonomy of the governments. He analyses the assumption that political authorities in the states are powerless against the world market. Garrett finds that globalization does not put any significant constraint on policy options for local government. In other words, the problem that can be the cause of civil unrest is not a result of globalization. Furthermore, his empirical results show that the only facet of globalization that has a slight significance on the policy autonomy of the governments is the integration of financial market. While international trade does not have any effect on that.

Despite these couple of studies, the thought of neutral effect of globalization and especially trade is very weak in the literature. There are just a couple of studies in the literature presented above. However, the existence of it just proves the point I made in the first chapter of this thesis that current literature consists of different and conflicting evidences and theories about the effects of trade openness on domestic stability and peace.

2.5 CONTROL VARIABLES

A great number of studies have explored factors influencing the domestic conflicts. My thesis focuses on the relationship between international trade and civil disorder, thus, there is a need to control for other factors that may have an impact. Drawing from existing literature, this sub-section presents control variables that potentially have an influence for the dependent variable.

Economic development

First of all, the most popular and most used in the literature control variable is economic development. Economic development is said to have a significant relationship with civil conflicts in numerous studies (Bussmann, Schneider, & Wiesehomeier, 2005; Barbieri & Reuveny, 2005; Blanton & Apodaca, 2007; Martin, Mayer, & Thoenig, 2008; Magee & Massoud, 2011). As previously mentioned, higher incomes provide governments with more tax money and so richer states have more resources to prevent civil unrest by pacifying the conflict or crushing the opposition.

Richer countries also have more money for compensating the possible losers of globalization. The argument that compensation has pacifying effect was not proven when tested for the effects on civil war. However, I assume that compensation mechanism should be more effective in the case of civil disorder. Furthermore, according to commercial liberalism, increasing wealth is said to raise the opportunity costs of conflict for both rebels and governments, which in turn lowers the risk of internal conflict. For all the before mentioned reasons, I include economic development as a control variable in my model.

Population

Secondly, majority of scholars include population as a control variable in their models (Bussmann, Schneider, & Wiesehomeier, 2005; Barbieri & Reuveny, 2005; Bussmann & Schneider, 2007; Blanton & Apodaca, 2007; Martin, Mayer, & Thoenig, 2008; Magee & Massoud, 2011). Civil conflicts are said to be more frequent in large states (Collier & Hoeffler, 1998). That might be the result of heterogeneity of the society in a large country (Bussmann & Schneider, 2007). What is more, bigger population puts more public demand on governement expenditure that can outgrow into internal conflict (Collier & Hoeffler, 1998). In general, larger populations are said to be more difficult to govern (Barbieri & Reuveny, 2005) which raises the likelihood of civil disorders. Furthermore, academics agree that population also works as an interaction variable in trade openness and internal conflict relationship. Larger states are likely to disintegrate more when they enter the international market (Alesina, Spolare, & Wacizarg, 2000), consequently, this disintegration can lead to domestic unrest (Blanton & Apodaca, 2007). However, the interactive affect of the population is not being studied in this thesis, therefore, I only include population as a control variable.

Regime type

Moreover, based on the existing literature, a regime type is said to be an important determinant for internal conflicts. The democracy-civil war relationship is said to be shaped as an inverted U-curve. In other words, democracies and strong autocracies tend to have less civil wars than transitional or semi-democratic regimes (Hegre,

Ellingsen, & Gleditsch, 2001). Democratic countries provide their society with political rights and freedom, while strong dictatorships repress the population strongly. Therefore, these types of regimes are less likely to suffer from internal conflicts. On the contrary, semi-democratic countries so not have strong institutional and coercive capabilities to suppress the rebellions. Likewise, I assume this relationship to be similar with civil disorder therefore I add regime type as a third control variable to my model.

Ethnic fractionalization

In addition, a portion of current studies on domestic conflicts include ethnic fractionalization as influential factor (Barbieri & Reuveny, 2005; Blanton & Apodaca, 2007; Martin, Mayer, & Thoenig, 2008; Magee & Massoud, 2011). It refers to national ethnic homogeneity and the more fractionalized the society is the bigger the risk is for domestic conflict to occur. As a matter of fact, internal conflict has the highest likelihood to appear if the dominant ethnic group is large but not too large (Blanton & Apodaca, 2007). If dominant group composes close to 100% of the society, there is little possibility of rebels to succeed. Blanton & Apodaca (2007) suggest including a dummy variable for ethnic fractionalization if dominant group composes between 40% and 90% of domestic society. I take this suggestion and include this control variable in my model.

Other control variables

Finally, current literature includes several other variables that are said to have an influence on civil war particularly. However, they do not have an impact on civil disorder. For example, several studies include the variable for the fraction of oil export as a part of all trade (Barbieri & Reuveny, 2005; Magee & Massoud, 2011). The logic behind it is that rebels in a country with large production of oil or other primary resource can fund their activities by overtaking this production. The implication is that internal conflicts are more likely in countries which depend on primary commodities because the commodity is attractive for the rebels (Magee & Massoud, 2011). The exortion of oil is used to fund the civil war (Barbieri & Reuveny, 2005) however large

fundings are not the necessity for demonstrations, riots or other civil disorder, thus, I will not include it in my model. Furthermore, another control variable used in a few studies is a mountainous terrain (Bussmann, Schneider, & Wiesehomeier, 2005; Barbieri & Reuveny, 2005). The mountainous terrain is said to provide the advantage for rebels to hide from the government forces. Similarly to oil export factor, mountainous terrain is not suitable in my model because participants in civil disorders do not need hideouts and concealments to take part in lower levels of domestic conflicts.

In order to measure the link between trade openness and civil disorder, the model of this research will include four control variables: economic development, population, regime type and ethnic fractionalization. The operationalization of these control variables is discussed later on in Chapter 3.

2.6 SUMMARY

In this sub-section I provide a table that summarizes all the relevant studies in the field. I only include empirical studies with results that show the relationship between trade openness and internal conflicts. The table presents studies in chronological order and includes dependent, independent and control variables; countries and time periods covered; method of analysis and the results.

Table 1. Summary of studies on trade openness impact on civil conflicts in chronological order

Author and publication year	Dependent variable(s)	Independent variable(s)	Control variable(s)	Countries covered	Period covered	Methods of analysis	Results
Bussmann, Schneider, & Wiesehomeier, 2005	Civil war onset (Uppsala/PRIO Armed Conflict dataset, battle deaths more than 25)	Trade liberalization (CACAO index) Trade openness (trade as a share of GDP from PWT[1])	Development (PWT) Democracy (Polity IV) Mountainous terrain (Fearon and Laitin (2003) data) Population (PWT) Non-concessional IMF net flows/GDP (WB WDI[2]) Concessional IMF net flows/ GDP (WB WDI)	Guinea and Guinea-Bisau	1980 - 2000	Comparative case study	Trade openness and liberalization has increased the risk of civil wars in Sub-Saharan Africa
Barbieri & Reuveny, 2005	Civil wars (Fearon and Laitin (2003) data)	Trade openness (trade as a share of GDP from WB WDI)	GDP per capita (Fearon and Laitin (2003) data) Fraction of oil export (Fearon & Laitin (2003) data) Mountainous terrain (Fearon and Laitin (2003) data) Democracy (Polity IV) Population (Fearon and Laitin (2003) data) Ethnic fractionalization (Fearon and Laitin (2003) data) Religious fractionalization (Fearon and Laitin (2003) data) Peace Years (Tucker (1999) data)	Ranging from 121 to 156 every year due to missing data	1970 - 1999	Cross-sectional time-series analysis	Trade reduces the likelihood of civil war

[1] PWT – Penn World Tables
[2] WB WDI – The World Bank World Development Indicators

Author and publication year	Dependent variable(s)	Independent variable(s)	Control variable(s)	Countries covered	Period covered	Methods of analysis	Results
Bussmann & Schneider, 2007	Civil war onset (Uppsala/PRIO Armed Conflict dataset, battle deaths more than 25)	Trade liberalization (growth rate of trade openness) Trade openness (trade as a share of GDP from PWT)	Development (GDP per capita PWT) Democracy (Polity IV) Population (WB WDI) Civil war in neighborhood Peace years	127 developed and developing countries	1950 - 2000	Cross-sectional time-series analysis	Trade openness reduces the risk of civil war, but trade liberalization have a substantive effect of increasing the risk of civil war
Blanton & Apodaca, 2007	Civil war (Wallensteen & Sollenber (2001) data, battle deaths more than 25)	Trade openness (exports in billions of USD from WB WDI)	Democracy (Polity IV) Population (WB WDI) Ethnic fractionalization (Ellingsen (2000) data) Military spending as a share of GDP (WB WDI) GDP per capita (WB WDI) Economic growth (WB WDI)	Developing countries	1990-1996	Cross-sectional analysis (regression)	Trade has more influence on the intensity of conflict rather than the probability. No significant impact was observed upon the probability of civil war
Martin, Mayer, & Thoenig, 2008	Civil war (Correlates of War data, battle deaths more than 50,000) Civil war onset (Uppsala/PRIO Armed Conflict dataset, battle deaths more than 1,000)	Trade openness (IMF DOTS data)	GDP per capita (WB WDI) Population (WB WDI) Primary source export (Robert Feenstra dataset) Democracy (Polity IV) Ethnic fractionalization (Alesina's website)	All countries possible in the civil war data	1945 - 2001	Cross-sectional analysis (regression)	Trade openness increases the risk of low intensity conflicts but decreases the risk for severe civil wars

Author and publication year	Dependent variable(s)	Independent variable(s)	Control variable(s)	Countries covered	Period covered	Methods of analysis	Results
Magee & Massoud, 2011	Civil war onset (Uppsala/PRIO Armed Conflict dataset, battle deaths more than 25) Level of conflict (Goldstein score)	Trade liberalization (Waciarg & Welch (2008) data) Trade openness (trade as a share of GDP from PWT)	Development (GDP per capita from PWT) Democracy (Polity IV) Population Ethnic fractionalization (Ellingsen (2000) data) Fraction of oil export (Fearon & Laitin (2003) data) Inequality (GINI index)	137	1950-2004	Cross-sectional time-series analysis	If trade openness is assumed exogenous then more open economies suffer from less conflicts. If openness controlled by instrumental variables then the results showed that trade openness increase risk of conflict. When both models are used simultaneously its shows no effect on conflict or the level of it.

2.7 STATEMENT FOR THEORETICAL ASSUMPTION

This chapter answered the first sub-question of my thesis and presented current theories and evidence. The literature review indeed shows that conflicting theoretical assumptions and results still exist in the academia. Consequently, it is still unclear what the effect of trade on domestic stability is. Furthermore, after conducting the literature review it became apparent that all of the empirical studies were concentrated on the onset of a civil war rather than any other kind of domestic conflict. In this sub-section I will lay the foundation for the theoretical assumption of my thesis.

The literature review presented three conflicting views on of how international trade affects (if at all) internal stability. Structuralist theory assumes that economic interdependence leads to higher inequality within the country and thus higher risk of domestic conflict. However, most of the empirical studies have denied the link between trade openness, inequality and conflict. The other assumption that globalization, including international trade, does not have significant, if any, impact on domestic situation has not received sufficient empirical evidence. Therefore, this thesis and its empirical analysis is going to be based on liberal theory which states that the countries that have more open trade suffer from less internal conflicts.

To this day, however, the liberal approach has been applied to domestic conflict only in terms of occurrence of a civil war. My assumption is that pacifying effects of international trade will be feasible at the lower levels of potential conflicts like riots, demonstrations and assassinations. The way into what public discontent develops is said to depend on the people who are affected (Gurr, 1972). Civil wars are likely to occur when the public discontent is well organized and mobilized. Organization and mobilization of masses are easier to achieve with authority and money which local elites acquire. Consequently, conflict is more likely to develop into civil war when public discontent prevails between domestic elites (Gurr, 1972). On the other hand, when the discontent exists between people without elite qualities, turmoil like riots, demonstrations or assassinations take place as a domestic conflict. The fact that both civil wars and civil disorders of a lower level arise from public discontent allows me to

believe that both types of conflicts have similar roots. According to the literature, trade has pacifying effect on civil wars, likewise, I hypothesize that more trade brings less civil disorder.

The liberal model argues that the more developed the country is the less risk it has to suffer from domestic conflict. As a result, this research is focusing on developing countries because they are more vulnerable to the various effects of globalization. When liberalizing their trade, developed countries have increased their social spending and thus gained the so called "safety net" (Blanton & Apodaca, 2007). Furthermore, developed countries have more financial capacity to deter people from participating in civil disorder. On a contrary, the developing world does not hold any "safety net" or strong financial capabilities, therefore trade openness might have a different effect for less developed countries.

Therefore, the assumption of liberal theory that trade openness leads to lower risk of civil wars is transcribed into the hypothesis of my thesis:

> H_1: Higher trade openness leads to lower risk of civil disorder in developing countries.

The countries that have open economies and high international trade are said to have less civil wars. Due to the above mentioned reasons I argue that developing countries with open trade also have less civil disorder.

2.8 MODEL

Once I presented different variables of this thesis it is necessary to put them in one model. The conceptual model summarizes the influences of independent variables to dependent variable.

First of all, based on liberal theory presented before the main independent variable of this thesis – trade openness – is said to have a negative effect on civil disorder. In other words, the more open the country is the less civil disorder it experiences. Secondly, it is important to model the effects of control variables. Economic development is said to have negative impact to civil disorder so the outcome is: the more developed the country is the less civil disorder it has. Other two control

variables - population and ethnic fractionalization - have the opposite impact on dependent variable. Finally, the regime type has a non-linear relationship, thus, the influence might be negative or positive. Democratic and autocratic regimes are said to have a negative effect while semi-democratic regimes have a positive effect on civil disorder. This conceptual model is summarized in Figure 3.

Figure 3. Model of the Research
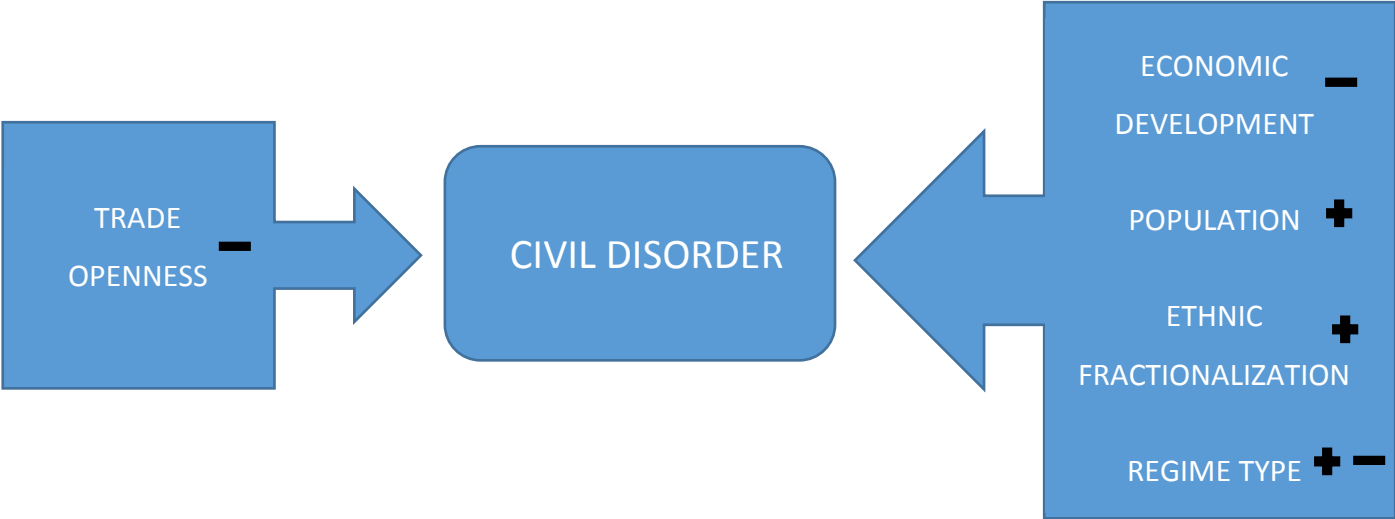
CHAPTER 3. RESEARCH DESIGN

3.1 INTRODUCTION

The purpose of this chapter is to answer the second sub-question of this thesis:

How can the variables be operationalized and how can the impact of independent variable on the dependent variable be assessed?

In order to answer this sub-question I focus on the research design and operationalization of the variables. Firstly, I introduce the design and the main equation chosen for this analysis. Furthermore, I justify why this design is the most suitable for my research. Afterwards, I explain how I operationalize dependent, independent and control variables. Furthermore, after operationalization and data collection process I continue with the presentation of the population and the sample for this analysis. Finally, at the end of this chapter I discuss the validity and reliability of selected measurements and chosen research design.

3.2 RESEARCH DESIGN

The research design of this thesis is non-experimental cross-sectional large-N design. In this sub-section I provide the justification of choosing this design. Furthermore, I introduce the multivariate regression equation for statistical analysis.

3.2.1 NON-EXPERIMENTAL CROSS-SECTIONAL LARGE-N DESIGN

To begin with, the non-experimental method is chosen for the following reason: experimental design is the method where the independent variable is being manipulated in order to see whether this manipulation changes the dependent variable. In social sciences the experimental methods are very difficult to assign and are usually found only in laboratory research where the variables are easy to manipulate (Giannatasio, 1999). In the case of this research the independent variable - trade openness - is impossible to manipulate or prescribe values for units. For this reason, the method of my research is chosen as non-experimental and it is going to be based solely on observations of statistical data, gathered by secondary sources.

For this research it is important to investigate a large number of countries therefore the large-N design is chosen. Large-N design refers to a big amount of cases included into the sample. As a result, it allows to see general trends of trade impact on domestic stability and thus increase the external validity of this research. In other words, it is easier to generalize the results for the whole population if the majority of units are included into the sample. The number of units in the sample is discussed later on in this chapter.

Furthermore, I have chosen to conduct the research by using the cross-sectional analysis. This method uses data of dependent and independent variable taken at approximately the same time (Johnson, Reynolds, & Mycoff, 2008). The units of this research are countries and thus, for every country I observe data on dependent, independent and control variables at a specific period of time. The time frame of this thesis is determined by the availability of the data. The indices that I use for the civil disorder have been measured for a time period of 1990-2010 for the majority of countries in the world. In order to test the most recent trends I choose 2010 as the year of my research. As the impact of trade openness might have the lagged effect on domestic situation the data for trade openness is taken from 1 year before. The operationalization of this data is explained later on in this chapter.

However, there are some drawbacks of using the cross-sectional analysis. It is said to be not useful in explaining single cases in more depth (Johnson, Reynolds, & Mycoff, 2008). In order to explain particular case of countries or occasions qualitative analysis suits better. Nevertheless, the aim of my thesis is to explain and get the results for general trends of the relationship between trade openness and civil disorder. Another type of research design that allows to look at the general trend for large-N sample is is time-series. Time-series design explains the variation of one unit across different time periods (Graddy, 1999). However, this design requires having observations for many different time points, while it is not possible to get civil disorder data for that many points. Nevertheless, several authors of previously reviewed studies researching trade openness effects on internal conflicts have used the cross-sectional design for the empirical part and got significant results (Blanton & Apodaca, 2007; Martin, Mayer, &

Thoenig, 2008). As a consequence, I am using the cross-sectional method for my analysis, too.

3.2.2 MULTIVARIATE REGRESSION

As a tool of the statistical part of my thesis I use the multivariate regression analysis. It is said to be very useful in explaining and determining the causes of phenomena (Graddy, 1999). I am going to use SPSS statistical program to conduct the multivariate regression analysis.

Generally, in order to test the relationship between two variables (dependent and independent variables) bivariate regression analysis is mostly used in academia. However, multivariate regression is more common in social science research because it allows to control for other influences. In the case of this thesis, I use the multivariate regression analysis because there are more than two variables in the equation. The variable that is being explored is called the dependent variable (Y) and the variables that cause influences are called the independent variables (Xs). The general equation of the multivariate regression is:

Equation 1

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + ... + \beta_k X_k + \varepsilon_i$$

where

- Y denotes the dependent variable;

- X_i denotes the independent variables, i = 1, 2, ... , k;

- β denotes the coefficient that measures the effects of independent variables on the dependent   variable;

- ε denotes error term.

Generally, the multivariate regression model allows to see the change in Y equal to β_n when X_n changes by one unit with all the other independent variables held as a constant. In other words, it allows to control for other influential variables. These independent variables that are held constant in the model are called the control

variables. Given that, multivariate regression technique is very suitable when the separation of particular relationship from other effects is very difficult (Graddy, 1999).

The multivariate regression of this thesis is specified in the Equation 2. One of the main threats to my test is the possibility of reverse causality. In other words, while I assume that the independent variables on the right side of the equation have an impact to dependent variable there is a possibility that civil disorder may influence the independent variables. For example, more trade openness can lead to less civil disorder, but less civil disorder may also encourage more trade openness. Similar arguments apply to economic development (Barbieri & Reuveny, 2005). The economic development deters from civil disorder, but civil disorder may have a negative impact on the economic development, too. One possible way to address this problem is the time lag effect on the variables on the right side of the equation. This solution is not perfect and simultaneity bias may still exist, however, I adopt it as one of the best ways to cope with this issue. Additionally, the effects of independent variables may not be immediately visible on the dependent variable. For before mentioned reasons the date for variables of trade openness, economic development, population and regime type are collected from one year before.

Equation 2.

$$CD_{it} = \beta_0 + \beta_1 TO_{it-1} + \beta_2 ED_{it-1} + \beta_3 P_{it-1} + \beta_4 RT_{it-1} + \beta_5 EF_{it} + \varepsilon_i$$

where

- i denotes the country; i = {1...n};
- t denotes the year; t=2010;
- CD denotes the civil disorder;
- TO denotes the trade openness;
- ED denotes the economic development;
- P denotes the size of the population;
- RT denotes the regime type;
- EF denotes the ethnic fractionalization;
- ε denotes the error term.

3.3 OPERATIONALIZATION

This sub-section provides the operationalization of the variables. I explain how I measure dependent, independent and control variables and present where the data for these variables is gathered from.

3.3.1 DEPENDENT VARIABLE

The dependent variable of my thesis is domestic conflict expressed in various kinds of civil disorders. In the literature, domestic conflicts are usually expressed in occurrence of civil war however, I do it by looking at civil disorder. In the definition of civil disorder I include violent demonstrations, riots and assassinations. The International Institute of Social Sciences (ISS) of Erasmus University Rotterdam uses indicators of violent demonstrations, riots and assassinations together with several more to create the index for intergroup cohesion. However, I use only before-mentioned units of this index which are relevant to my thesis. The first indicator of the civil disorder variable is violent demonstration. The ISS database uses the data for violent demonstrations from the Economist Intelligence Unit (EIU) index. EIU creates a rating for the likelihood of violent demonstrations ranked from 1-5 (from very low to very high). The ranking is calculated by and based on expert assessment. The second and third indicator of civil disorder variable of this thesis are riots and assassinations. For these indicators the ISS database includes data from the Databanks International's Cross-National Time-Series Data Archive. The data is coded from the newspaper reports of riots and assassinations and expressed as numbers of reported incidents per capita. The ISS dataset of Social Development Index transforms the data for riots and assassinations by using the logarithmical transformation. In order to achieve similar frequency distribution for all three units of civil disorder variable, I use the data for riots and assassinations without logarithmical transformation.

The variable of civil disorder is made by calculating the average of before mentioned three indicators. However, the ways of measuring these indicators are different. The likelihood of violent demonstrations is measured in a rating while the riots and assassinations are measured in numbers per capita. In order to combine these three

indicators in one variable I need to synchronize them. To do so I need to set a value from 0 to 1 to all three of them by using the following equation:

Equation 3

$$\frac{Xi - \min}{\max - \min}$$

where,

- X_i denotes the actual value of the indicator;

- *min* denotes the minimum value of the data;

- *max* denotes the maximum value of the data.

The exact formulas for all three indices can be observed in Appendix A. Once all the indices are synchronized and expressed in values from 0 to 1 I can add them up and calculate the averages. This average of three indicators is my dependent variable – civil disorder.

3.3.2 INDEPENDENT VARIABLE

The main independent variable of the research is trade openness. It refers to the sum of exports and imports of the country as a share of its gross domestic product. This data is retrieved from the World Development Indicators (WDI) database of the World Bank. The trade openness data in WDI database is gathered by the World Bank and OECD every year.

There are a few factors of this variable to consider. First of all, the variable of trade openness has a time lag effect. As previously mentioned the relationship between trade and civil disorder may suffer from reverse causality. In order to reduce the endogeneity problem and ensure that civil disorder is influenced by trade openness and not *vice versa*, I use the time lag effect by 1 year on the trade openness variable. Furthermore, the pacifying effect of trade may not be experienced immediately in the same year, thus time lagging ensures the more reliable effect.

Futhermore, in order to see different aspects of trade openness effects I choose to measure trade openness in two different ways. The first and most often used in the literature measurement of trade openness is exports+imports/GDP. I take the average of three years from 2007-2009. The year 2009 is chosen because of before mentioned time lag effect on the year of interest 2010. The data for all three years are taken from WDI database. However, in this thesis I want to look at another measurement of trade openness, too. That is a percentage change in trade levels. The logic behind it is as following. I assume that when countries increase their trade openness over the years they are less likely to suffer from civil conflicts. In other words, increase in change in trade openness has pacifying effect on domestic society. This impact can be better seen if the change is big. I assume that when countries increase their trade largely over the years they should suffer from less civil disorder. I choose the year period to be 15 years from year 1995 to 2009. The year 1995 is chosen in order to maintain more countries in the sample by including the countries from former Soviet Union. The year 2009 is chosen for before mentioned time lag effect. The data is taken from the WDI database too.

The independent variable is measured in two different ways in order to test whether there is a different effect on civil disorder. Further on in this thesis I check which measurement composes the best model and thus better explain the variations of the dependent variable.

3.3.3 CONTROL VARIABLES

There are several control variables in my analysis. In order to control for other factors apart from trade openness that may affect civil disorder I use these four variables: economic development, population size, the type of regime and ethnic fractionalization.

The first control variable is economic development. Most of the empirical research studying the relationship between trade openness and internal conflict expresses economic development in terms of GDP per capita (Barbieri & Reuveny, 2005; Bussmann & Schneider, 2007; Blanton & Apodaca, 2007; Martin, Mayer, & Thoenig, 2008). As a result, I operationalize economic development in terms of GDP per capita,

too. It is composed by dividing the gross domestic product by midyear population of the country. This variable is expressed in the international current dollar which is assumed to have the same purchasing power over GDP as the US dollar in the United States of America (The World Bank, 2016). Consequently, it is possible to compare the economic strengths of different countries. The data for this measurement is taken from before mentioned WDI database. The data for GDP per capita is gathered annually from the World Bank and OECD National accounts data files.

 Secondly, the population size number is also taken from the World Bank database WDI. The description of the variable in the database states that it is based on the *de facto* definition of the population. It includes all the residents regardless the legal status or citizenship with an exception of the refugees without the permanent asylum rights (The World Bank, 2016). The variable includes data from the year 2009 and it is taken from several sources[3].

The third control variable of this analysis is the type of the regime. There are three possible regime types on the scale: democracy, autocracy and semi-democracies. The data for this variable is taken from Polity IV project of Integrated Network for Societal Conflict Research Armed Conflict and Interventions datasets. The countries are given a numerical value corresponding to the regime type. The numerical values are prescribed based on the evaluation of the competitiveness and openness of the elections, the extent of checks on executive authorities and the openness of the political participation. The values range from -10 to +10 where values between +10 and +6 refers to democracies, values between +5 and -5 refers to semi-democracies and values between -6 and -10 refers to autocratic regimes. As mentioned before, autocratic and democratic regimes tend to suffer from less domestic conflict than semi-democracies. Furthermore, I expect the regime type to have a time lagged effect too, so I take data for the year 2009. The time lagging is used on this variable because regime type impact on civil disorder is not immediate. Empirical studies testing the relationship between civil war and trade openness also put the time lag effect on

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[3] United Nations Population Division, World Population Prospects; United Nations Statistical Division, Population and Vital Statistics Report (various years); Census reports and other statistical publications from national statistical offices; Eurostat: Demographic Statistics; Secretariat of the Pacific Community: Statistics and Demography Programme; US Census Bureau: International Database.

regime type variable (Bussmann & Schneider, 2007; Fearon & Laitin, 2003; Barbieri & Reuveny, 2005). Additionally, the relationship between civil disorder and Polity IV ratings is non-linear. In order to conduct the multivariate regression analysis one of the requirements of linearity has to be met. In other words, the relationship between dependent and each of the independent variables has to be linear. In the case of regime type variable, there is a need to make the relationship linear. To do so, I use regime type as a dummy variable. If countries are democracies (ratings from +6 to +10) or strong autocracies (ratings from -6 to -10) I set a value of 0. If a country is a semi-democracy (ratings from +5 to -5) the value of 1 is prescribed. Consequently, I lose the variety of the scale, but the linear relationship is ensured.

Finally, the last control variable is ethnic fractionalization. To operationalize this variable I use the data from Composition of Religious and Ethnic Groups Project (CREG) by the Cline Center for Democracy of University of Illinois. The data includes the percentage of all ethnicities in the country. The literature on civil wars assumes that ethnic fractionalization does not require time lagging because there is no reverse causality with internal conflicts (Barbieri & Reuveny, 2005; Martin, Mayer, & Thoenig, 2008). Therefore, the data is taken for the year 2010. For my research I look at the number of the biggest ethnic group in the country. The ethnic fractionalization variable is operationalized as a dummy variable. If the dominant group composes between 40% and 90% I set a value of 1. If it composes lower than 40% or higher than 90% a value is set as 0.

3.3.4 EXPECTED INFLUENCES

This sub-section includes the summary of previously discussed variables and the operationalization of them in the Table 2. Furthermore, it shows the expected direction of influence that each of them has on civil disorder.

Table 2. Expected Influence of Variables on Civil Disorder

Independent variables	Expected influence on civil disorder	Operationalization
Change in trade openness ↑	↓	(Exports + Imports) / GDP % change for years 1995-2009
Level of trade openness ↑	↓	(Exports + Imports) / GDP Average of years 2007-2009
Economic Development ↑	↓	GDP per capita 2009
Population ↑	↑	Size of the population 2009
Regime Type ↑	↑	Dummy variable 2009 Polity IV rating (1 – semi-democracy, 0 – democracy or autocracy)
Ethnic Fractionalization ↑	↑	Dummy variable 2010 CREG data (1 - largest group between 40% and 90%, 0 – largest group less than 40% or more than 90%)

3.4 POPULATION AND SAMPLE

The scope of this thesis is to investigate the relationship between trade openness and civil disorder in all of the developing countries. The most common used classification is made by the World Bank. The classification orders countries into four categories based

on the income. These categories include: low income, lower-middle income, upper-middle income and high income countries. In this thesis I choose to consider countries to be developing if they belong to three lowest income groups in the classification: low income, lower-middle income and upper-middle income countries. The whole population consists of 135 developing countries according to the World Bank classification. The full list can be seen in Appendix B. In order to ensure external validity and be able to generalize for the whole population, the sample has to be as large as possible. However, after the data collection process several countries had to be deleted from the sample because of missing data. Therefore, the sample of this thesis include all countries in the before mentioned list that has available data for all variables at the particular time points. The sample size is 87 countries and the list can be observed in Appendix C.

3.5 RELIABILITY AND VALIDITY

In order to test previously specified hypothesis of this thesis it is important to ensure that the measurements are accurate and the test is valid. Therefore, it is important to satisfy the requirements of reliability and validity of the measurements as well as internal and external validity of the test. Following sub-section includes the explanations of these concepts together with incorporation of them into this thesis.

Reliability refers to the consistency of measurements across time and units. The less consistent they are the lower the reliability is (Johnson, Reynolds, & Mycoff, 2008). The reliability of the variables used in this thesis can be trusted because the data is produced annually by reliable sources. The data is consistent for every year thus it is easy to compare it. Furthermore, the data for variables of this thesis is often used in many other academic studies, which shows even more support for the reliability principles.

Another specification that needs to be ensured is the validity of measurements. This principle refers to the degree to which chosen variables explain what they intend to be explaining (Johnson, Reynolds, & Mycoff, 2008). In other words, there is a need to make sure that I measure the phenomena that I suppose to be measuring. The majority of indicators chosen for this thesis are direct numbers of specific phenomena.

More precisely, variables of trade openness, population and ethnic fractionalization measure the exact calculated numbers. The variable of civil disorder is an average of three measurements where two out of three are the exact reported numbers. Finally, the remaining two measurements are the closest proxies for the variables of the regime type and economic development. I can trust their validity because these measurements are most often used in the literature. According to that, the requirements for validity of the measurements are met.

The other requirement that needs to be considered is the validity of the test. It can refer to two kinds of terms: internal and external validity. Internal validity ensures the cause-effect relationship (Johnson, Reynolds, & Mycoff, 2008). In other words, it means that the independent variable, and not some other factors, influences the dependent variable. Theoretically, it is very difficult to ensure internal validity in cross-sectional research design. Therefore, in order to reduce a possible threat to the test I introduce the control variables what allows to determine the particular relations between dependent and independent variables. Furthermore, in order to increase internal validity the time lag effect is added on the variables on the right side of the equation.

Secondly, external validity refers to the degree to which the results of the study can be generalized across the whole population (Johnson, Reynolds, & Mycoff, 2008). One way to ensure external validity is to include a Large-N sample into the research. As previously mentioned the population of this thesis is all developing countries based on the income (low-income, lower-middle income and upper-middle income countries) according to World Bank classification. The population consists of 135 developing countries while the sample is made out of 87 countries. The fact that the sample includes 87 countries of the whole populations allows to assume that the results of this thesis can be generalized to some extent for all the remaining 48 countries.

CHAPTER 4. EMPIRICAL RESULTS

The Chapter 4 focuses on the statistical analysis of the thesis and answers the last sub-question:

What are the results of the analysis?

In order to answer this sub-question in this chapter I conduct the statistical analysis of the thesis. In the first part of this chapter I present the summary statistics for all the variables following with the frequency distribution graphs and normality tests. If the variables are not normally distributed the transformations are done. After that, I need to choose the best model for the analysis with the most suitable combination of control variables. Furthermore, this chapter includes the tests of four assumptions for chosen multivariate regression model: linear relationship, normality of residuals, homoscedasticity and the absence of multicollinearity. After all the requirements are met I present the results of the statistical analysis of this thesis.

4.1 DESCRIPTIVE STATISTICS

Table 3. Descriptive Statistics

| Variable	Number of Observations	Minimum	Maximum	Mean	Standard Deviation
Civil disorder (CD)	87	0.086	0.645	0.303	0.114
Change in trade openness (TC)	87	-0.734	1.435	0.106	0.345
Level of trade openness (TL)	87	24.885	177.231	79.921	32.488
Economic development (ED)	87	190.394	10151.646	2972.161	2543.507
Population (P)	87	707830	1331260000	44448140.885	146637138.699
Regime type (RT)	87	0	1	0.38	0.488
Ethnic fractionalization (EF)	87	0	1	0.66	0.478

In order to start the analysis it is important to look at the descriptive statistics of the collected data at first. The summary descriptive statistics of the data can be observed in the Table 3. The table includes the number of observations, minimum and maximum values of the variables, the mathematical mean of the observation and the standard deviation. Standard deviation refers to the squared root of the variance and measures the spread of the observations. In other words, the larger the standard deviation is the more spread the observations are (Johnson, Reynolds, & Mycoff, 2008). All the variables are based on 87 cases in the sample. The cases of the population with missing observations have already been excluded in the data collection process. All the values for variables are rounded on three decimal points so it is easier to process it.

4.2 NORMAL DISTRIBUTION

This sub-section provides the histograms of frequency distribution for independent and dependent variables. It is important to provide histograms because they show the frequency distributions for all the variables separately and compare them with the normal distribution curve. If the variable is normally distributed data points have to follow the normal distribution line. Furthermore, to support the visual graphs I include statistical test for normality to ensure that the data for each variable is normally distributed. I choose to test normality with the Shapiro-Wilk test as it said to be most suitable for smaller samples (up to 200 observations) (UCLA: Statistical Consulting Group, 2016).

First of all I look at the frequency distribution of the dependent variable civil disorder (CD). The histogram comparing the actual distribution and the normal distribution can be observed in the Figure 4.

Figure 4. Frequency Distribution CD

	Shapiro-Wilk		
	Statistic	df	Sig.
Civil Disorder	0.903	87	0.000
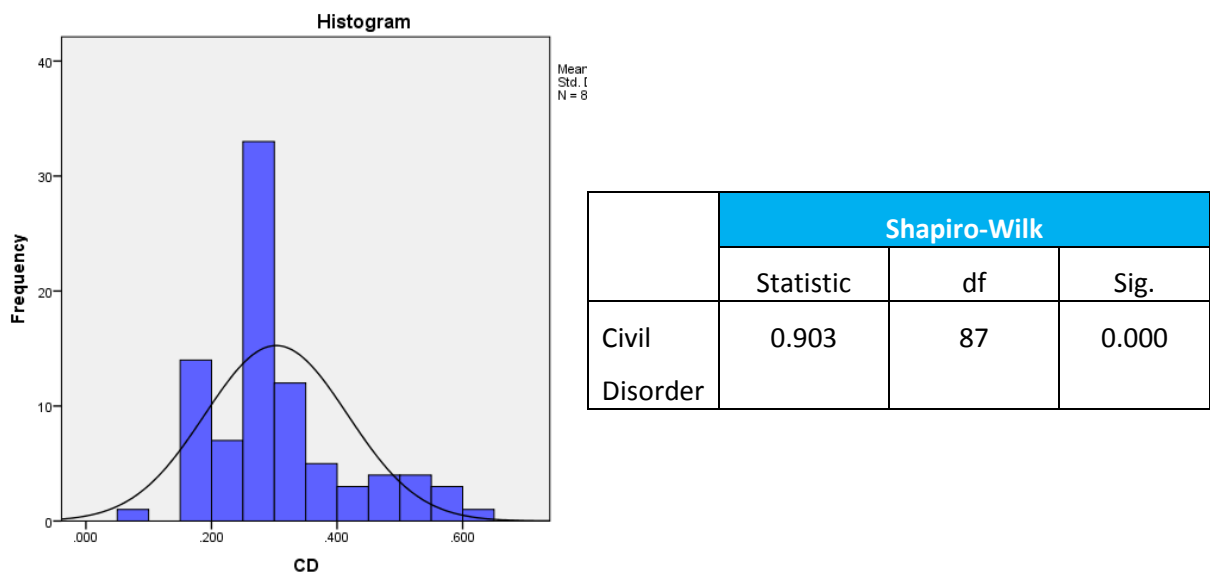
As it can be seen from the histogram, the distribution of civil disorder variable is not normal. The data points vary a lot when comparing to the normal distribution curve. Furthermore, the significance of the p-value of the Shapiro-Wilk test is equal to 0.000. P-value of 0.000 proves the absence of normal distribution. Consequently, I need to transform the variable of civil disorder. In order to get as normal distribution as

possible I raise the variable CD to the power of 0.1. The new frequency distribution of transformed civil disorder can be observed in the Figure 5.

Figure 5. Frequency Distribution CDpwr0.10
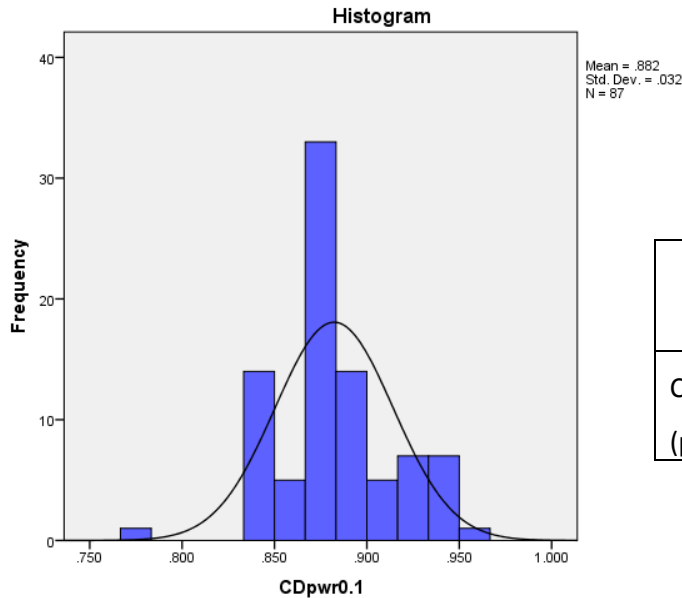
	Shapiro-Wilk		
	Statistic	df	Sig.
Civil Disorder (power to 0.10)	0.961	87	0.01

After the transformation, the data for civil disorder has gained more bell-like shape which means that it became more normally distributed. That is supported by the Shapiro-Wilk test results where the p-value increased to 0.01. The p-value has to be at least 0.01 for the distribution to be considered as normal. The p-value for transformed civil disorder variable is exactly 0.01, thus I can conclude that data is normal, additionally the distribution is more normal comparing to the original civil disorder data. Therefore, in upcoming analysis I use the transformed civil disorder variable.

Additionally, I am going to check the frequency distribution of the independent variable trade openness. First of all, Figure 6 presents the frequency distribution of the change in trade openness (TC) measurement.

Figure 6. Frequency Distribution TC
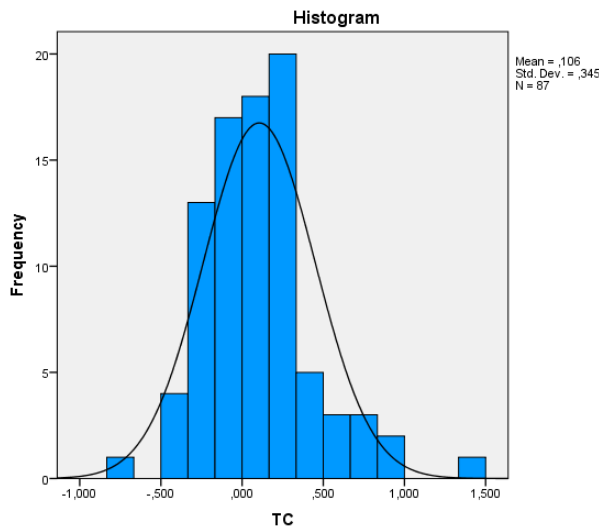
	Shapiro-Wilk		
	Statistic	df	Sig.
Change in Trade Openness	0.957	87	0.005

Similarly to the case of civil disorder variable, the observations of change in trade openness are not normally distributed. It is supported by the histogram and the Shapiro-Wilk test again. The significance of the test shows that TC is not normally distributed as the p-value is only 0.005. Once again I need to transform the variable in order to get more normally distributed sample and the best way to do it is to calculate a square root of TC. However, the variable of change in trade openness has negative values in some cases. It can happen when a country's ratio of exports plus imports as share of GDP was bigger in 1995 than in 2009, thus it has a negative percentage change. In the sample of 87 countries negative change is observed in 35 cases. Therefore, to transform TC into sqrtTC I add a constant number *a* to all the value of TC in the sample. Similarly to the case of civil disorder, I choose *a* to be as small as possible so that min(TC+*a*) is equal to a small positive number. When min(TC+*a*)=0,01 then *a*= 0,744415. Consequently, I add a number 0,744415 to all the values of TC. Now, when all values of TC are positive I transform it by calculating the square root. The frequency distribution and test for normality of sqrtTC can be seen in Figure 7.

Figure 7. Frequency Distribution sqrtTC
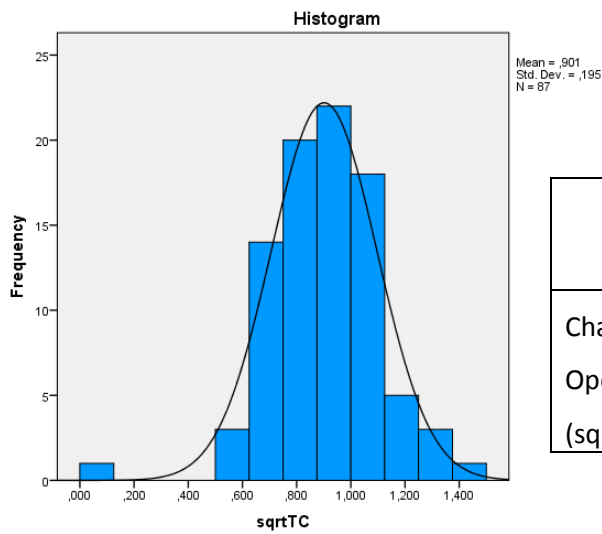
	Shapiro-Wilk		
	Statistic	df	Sig.
Change in Trade Openness (square root)	0.962	87	0.012

The graphical distribution of independent variable became more bell-shaped after the transformation. This is supported by increased p-value of Shapiro-Wilk test too. The p-value is 0.012, therefore, the significance of the Shapiro-Wilk test allows to confirm the null hypothesis which states that the distribution of the transformed change in trade openness variable is normal.

Finally, the distribution of the second measurement of independent variable - level of trade openness (TL) can be observed in the Figure 8.

Figure 8. Frequency Distribution TL
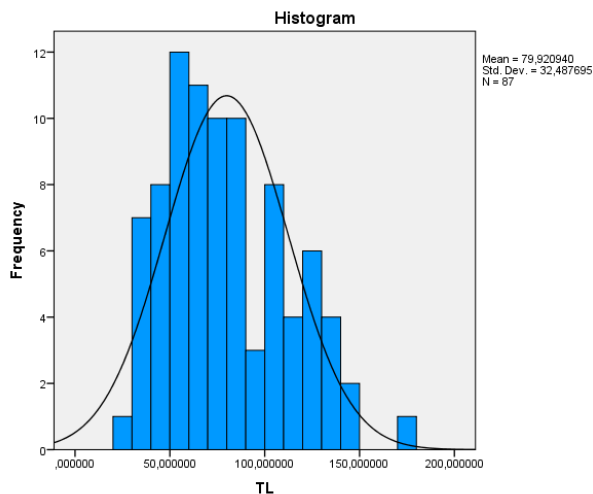
	Shapiro-Wilk		
	Statistic	df	Sig.
Level of Trade Openesss	0.961	87	0.011

The histogram shows a relatively normal distribution. Furthermore the p-value of Shapiro-Wilk test is also bigger than 0.01 meaning it is considered as a normal

distribution. However, in order to improve the normality of distribution I add log onto the TL variable. The new graph for the distribution of logTL is presented in Figure 9.

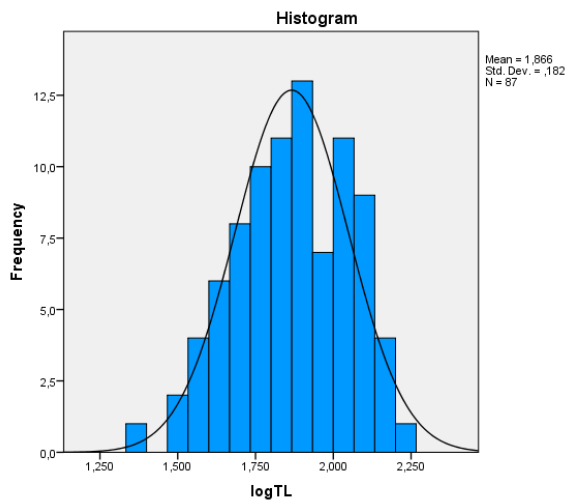*Figure 9. Frequency Distribution logTL*

	Shapiro-Wilk		
	Statistic	df	Sig.
Level of Trade Openness (log)	0.987	87	0.535

As it can be seen from the Figure 9 the frequency distribution of the transformed variable logTL became more normal. Additionally, the significance of the Shapiro-Wilk supports the argument for increased normality of the transformed TL variable distribution.

Furthermore, the frequency distribution graphs and tests for control variables can be observed in Appendix D. The variables of population (P) and economic development (ED) to be transformed in order to improve the normality of the distribution. Logarithmic transformation was made to normalize both of the variables. These transformations can also be observed in the Appendix D. The frequency distribution of two dummy variables regime type (RT) and ethnic fractionalization (EF) can also be observed in the same appendix.

4.3 MULTIVARIATE REGRESSION ANALYSIS

To answer the third sub-question and to test the hypothesis of my thesis I use the multivariate regression analysis. As previously mentioned in Chapter 3, the variable of trade openness is expressed in two different ways: level of trade openness (TL) and change in trade openness (TC). In order to test the different aspects of each of these variables the regression analysis produces two models. In model A trade openness is expressed in level of trade openness, while model B assumes trade openness as the

change in trade openness. I start this sub-section with correlation matrix to see if there is no multicollinearity problem in both of the models. Secondly, in order to find the best composition of control variable I add them one by one according to correlation coefficients. This is done in order to find what control variable compose the best model to explain the relationship between dependent and independent variables. I have to check for best composition because the control variables are chosen based on the literature about civil wars rather than civil disorder. There is a need to check whether all of them fit for modelling the analysis of civil disorder. Finally, when the best compositions of both models are found I present the results of multivariate regression analysis.

4.3.1 MODEL A

First of all I present the correlation matrix for Model A in Table 4 below.

Table 4. Correlation Matrix Model A

Correlations						
		Civil Disorder	Level of Trade Openness	Economic Development	Population	Regime Type	Ethnic Fractionalization
Civil Disorder	Pearson Correlation	1	-0.086	-0.245*	0.335**	0.285**	-0.075
	Sig. (2-tailed)		0.429	0.022	0.002	0.007	0.492
	N	87	87	87	87	87	87
Level of Trade Openness	Pearson Correlation	-0.086	1	0.310**	-0.438**	-0.096	0.147
	Sig. (2-tailed)	0.429		0.004	0.000	0.378	0.174
	N	87	87	87	87	87	87
Economic Development	Pearson Correlation	-0.245*	0.310**	1	-0.033	-0.417**	0.190
	Sig. (2-tailed)	0.022	0.004		0.760	0.000	0.079
	N	87	87	87	87	87	87
Population	Pearson Correlation	0.335**	-0.438**	-0.033	1	0.037	-0.087
	Sig. (2-tailed)	0.002	0.000	0.760		0.733	0.422
	N	87	87	87	87	87	87
Regime Type	Pearson Correlation	0.285**	-0.096	-0.417**	0.037	1	-0.230*
	Sig. (2-tailed)	0.007	0.378	0.000	0.733		0.032
	N	87	87	87	87	87	87
Ethnic Factionalization	Pearson Correlation	-0.075	0.147	0.190	-0.087	-0.230*	1
	Sig. (2-tailed)	0.492	0.174	0.079	0.422	0.032	
	N	87	87	87	87	87	87

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Multicollinearity problem is said to exist when the correlation coefficient exceeds the value of 0.8 or -0.8. As it can be observed from Table 6 model A does not include multicollinearity problem. The largest coefficient of -0.438 between level of trade openness and population does not reach the threshold of -0.8.

In order to find the best multivariate regression model for trade openness variable TL I add control variables one by one according to the correlation coefficients in Table 4. The most correlated variable is population (composition 1) followed by regime type (composition 2) and economic development (composition 3). Finally, the least correlated control variable is ethnic fractionalization (composition 4), thus I add it the last. The summary of all compositions can be observed in Table 5.

Table 5. Summary of Compositions Model A

	Composition 1	Composition 2	Composition 3	Composition 4
Level of Trade Openness (TL)	0.013	0.018	0.029	0.029
Population (P)	0.019	0.019	0.021	0.021
Regime Type (RT)		0.018	0.013	0.014
Economic Development (ED)			-0.014	-0.015
Ethnic Fractionalization				0.001
N	87	87	87	87
Adjusted R square	0.096	0.166	0.187	0.177
F value	5.552	6.715	5.934	4.700
Significance	0.005	0.000	0.000	0.001

According table presented above the composition 3 is best for model A. The adjusted R square and F-value are bigger in composition 3 is larger than in all the other compositions. Therefore, composition 3, including transformed variable of level of trade openness, population, regime type and economic development is used for multivariate regression analysis. The variable of ethnic fractionalization is not used in the analysis. The f-value and adjusted R square of the model only decrease when variable of ethnic fractionalization is added. Furthermore, the coefficient of ethnic fractionalization variable is comparatively smaller than remaining four independent

variables. Therefore, the analysis does not include ethnic fractionalization as a control variable.

4.3.2 MODEL B

Furthermore, I present the model B that measures the independent variable by the change in trade openness. I begin with the correlation matrix in Table 6.

Table 6. Correlation Matrix Model B

		Civil Disorder	Level of Trade Openness	Economic Development	Population	Regime Type	Ethnic Fractionalization
Correlations							
Civil Disorder	Pearson Correlation	1	0.201	-0.245*	0.335**	0.285**	-0.075
	Sig. (2-tailed)		0.063	0.022	0.001	0.007	0.492
	N	87	87	87	87	87	87
Level of Trade Openness	Pearson Correlation	0.201	1	0.044	0.147	0.116	0.058
	Sig. (2-tailed)	0.063		0.685	0.173	0.287	0.597
	N	87	87	87	87	87	87
Economic Development	Pearson Correlation	-0.245*	0.044	1	-0.033	-0.417**	0.190
	Sig. (2-tailed)	0.022	0.685		0.760	0.000	0.079
	N	87	87	87	87	87	87
Population	Pearson Correlation	0.335**	0.147	-0.033	1	0.037	-0.087
	Sig. (2-tailed)	0.001	0.173	0.760		0.733	0.422
	N	87	87	87	87	87	87
Regime Type	Pearson Correlation	0.285**	0.116	-0.417**	0.037	1	-0.230*
	Sig. (2-tailed)	0.007	0.287	0.000	0.733		0.032
	N	87	87	87	87	87	87
Ethnic Factionalization	Pearson Correlation	-0.075	0.058	0.190	-0.087	-0.230*	1
	Sig. (2-tailed)	0.492	0.597	0.079	0.422	0.032	
	N	87	87	87	87	87	87

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

According to Table 6, model B does not suffer from multicolinearity problem either. There are no coefficient higher than 0.8 or -0.8.

In order to see what composition is the best for model B I use the same strategy as for model A. I add control variable to the model starting from the highest correlation coefficient to the lowest. I begin with adding population (composition 1) following

with regime type (composition 2), economic development (composition 3) and finally the ethnic fractionalization (composition 4). The summary can be found in Table 7.

Table 7. Summary of Compositions Model B

	Composition 1	Composition 2	Composition 3	Composition 4
Change in Trade Openness (TC)	0.025	0.021	0.023	0.023
Population (P)	0.016	0.016	0.016	0.016
Regime Type (RT)		0.017	0.013	0.013
Economic Development (ED)			-0.012	-0.012
Ethnic Fractionalization				0.001
N	87	87	87	87
Adjusted R square	0.115	0.173	0.178	0.176
F value	6.585	7.004	5.894	4.667
Significance	0.002	0.000	0.000	0.001

Table 7 presents the summaries for all four compositions of the control variables. According to the adjusted R squares and the significance of the F values the composition 3 of the model B is the best to explain the variation of civil disorder. Composition 3 includes the independent variable change of trade openness, population, regime type and economic development. Again, ethnic fractionalization is not used in the analysis, due to the lower adjusted R square and F-value when adding this variable to the model.

4.4 ASSUMPTIONS FOR MULTIVARIATE REGRESSION ANALYSIS

The previous subsection allowed me to see which compositions of both models are the best to answer the third sub-question and to test the hypothesis of my thesis. Before I run the full multivariate regression analysis there is a need to consider several assumptions. This sub-section tests whether the data of my model meets following assumptions: linearity, normal distribution of residuals, homoscedasticity and no multicollinearity.

4.4.1 LINEAR RELATIONSHIP

First of all, the assumption of linearity has to be met in order to run the multiple regression analysis. There must be a linear relationship between the dependent variable and all the independent variables. The linearity can be tested by looking at the scatterplots of residuals in Figure 10 and Figure 11. Residuals are the differences between the predicted values by the model and the real scores of the data. These differences refer to the extent to which the model is incorrect: the smaller the residuals the more correct the model is (UCLA: Statistical Consulting Group, 2016).

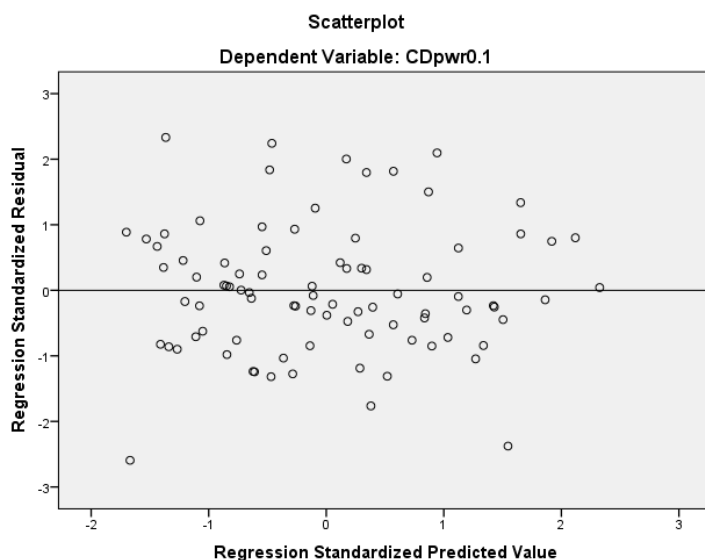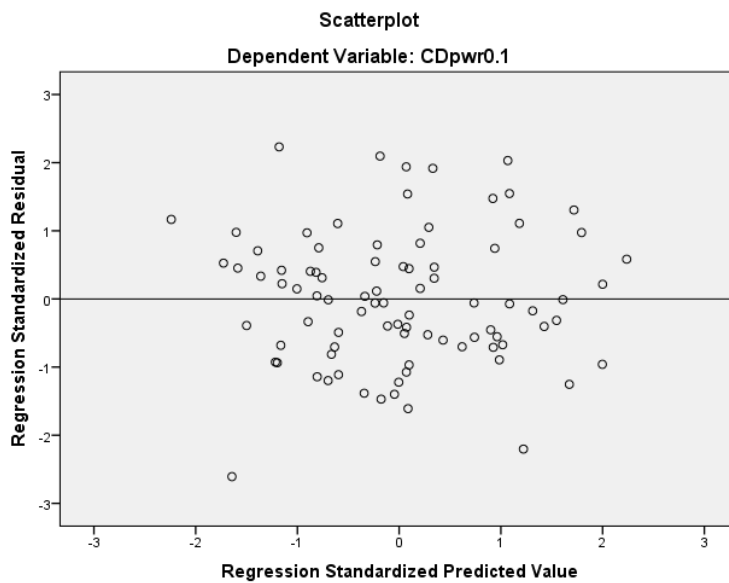*Figure 10. Scatterplot of residuals model A*

Figure 11. Scatterplot of residuals model B

Linearity is tested by looking at the scatterplot and observing the arrangement of residuals. If residuals do not follow any pattern and are situated randomly the assumption of linearity is met. The scatterplots of the standardized residuals in Figure 10 and Figure 11 show linear relationship because the residuals do not follow any observable pattern either. The residuals are both positive and negative and scattered around the plot.

Furthermore, in order to make sure about the linear relationship between dependent and all independent variable I look at the scatterplots of bilateral correlations. These scatterplots can be observed in Appendix E. All the scatterplots in Appendix E show that the relationship is linear enough because the points do not follow any observable pattern. In other words, this confirms that there is no reason to doubt the linearity of the model, and thus, the requirement of the first assumption is met.

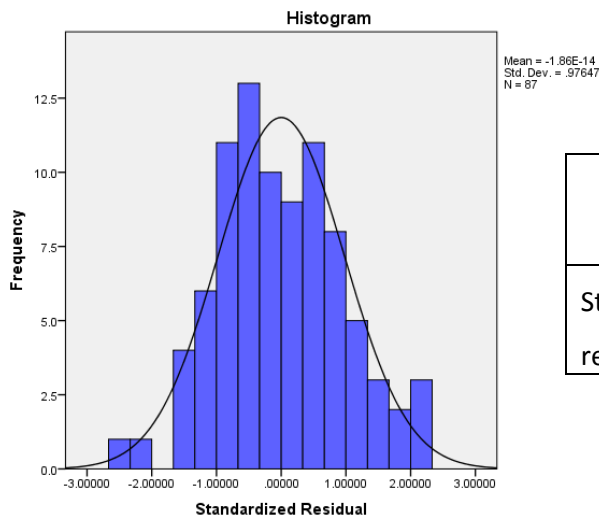### 4.4.2 NORMAL DISTRIBUTION OF THE RESIDUALS

The second assumption that I am going to check on my model is the normal distribution of the residuals. The normality of residuals is important in order for the p-values of t-test in multivariate regression analysis to be valid (UCLA: Statistical Consulting Group, 2016). In order to check this assumption I can refer to the Figure 12 and Figure 13 presented below.

Figure 12. Frequency Distribution of Residual Model A
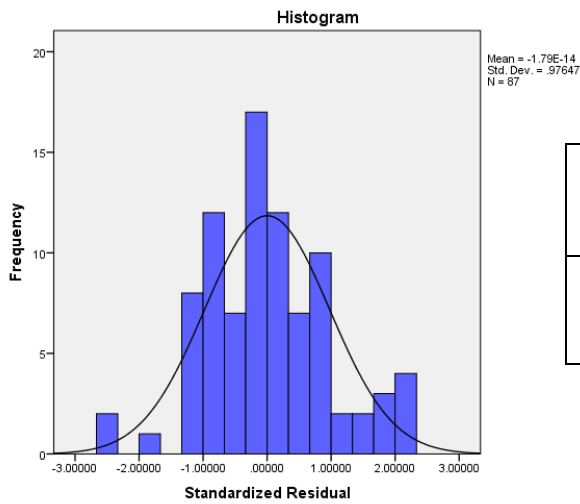
	Shapiro-Wilk		
	Statistic	df	Sig.
Standardized residual	0.981	87	0.228

Figure 13.Frequency Distribution of Residuals Model B.

	Shapiro-Wilk		
	Statistic	df	Sig.
Standardized residual	0.991	87	0.797

Figure 12 and Figure 13 shows that the distributions of standardized residuals in both models are normal. There are no positive or negative skewness. In order to support the visual graphs I run the Shapiro-Wilk tests. The significances of the Shapiro-Wilk test are equal to 0.228 and 0.797 which is higher than the threshold of 0.01. That shows that the distribution is normal, thus I can state that the assumption of normality of residuals is met.

4.4.3 HOMOSCEDASTICITY

The third assumption states that the variance of the residuals has to be constant for the independent variables. If the variance of the residuals is not constant it does not meet the requirement of homoscedasticity and the model suffers from heteroscedasticity problem. In order to check if this assumption is met I can again refer to the scatterplots of residuals in the Figure 10 and Figure 11 above. The scatterplots do not show any "trumpet-like" pattern on any side of the plots, thus the assumption for homoscedasticity is also met.

4.4.4 NO MULTICOLLINEARITY

Furthermore, it is important to test the data for multicollinearity problem. This assumption means that there are no independent variables in the model that test the same thing. If the correlation coefficient between two variables is high it means that these two variables are collinear, and thus, explain the same or similar thing. The assumption for multicollinearity has already been tested in Table 4 and Table 6. None of the coefficients were even close enough to reach the threshold of 0.8 or -0.8. Thus I can conclude that none of the models suffer from multicollinearity.

4.5 RESULTS OF THE MODEL

The sub-section 4.2 showed that the best compositions of control variables to explain the relationship between civil disorder and trade openness for the both models are: population, economic development and regime type. Furthermore, the sub-section 4.3 has tested the models for several assumptions of multivariate regression analysis. All of the assumptions were met, therefore, the results of the analysis are valid. In this sub-section I present the results of the both models of the multivariate regression analysis.

Table 8 presents the results for model A and model B.

Table 8. Impact of Trade Openness on Civil Disorder

Variables	Model A	Model B
Level of Trade Openness (log)	0.029 (0.148)	
Change in Trade Openness (square root)		0.023 (0.160)
Population (log)	0.021 (0.001)***	0.016 (0.003)***
Economic Development (log)	-0.014 (0.083)*	-0.012 (0.138)
Regime type	0.013 (0.060)*	0.013 (0.082)*
Constant	0.722 (0.000)***	0.782 (0.000)***
N	87	87
Adjusted R square	0.187	0.185
F-value	5.934 (0.000)	5.894 (0.000)

*** significant at 1 percent, ** significant at 5 percent, * significant at 10 percent.

In Table 8, Model A includes level of trade openness and Model B includes change in trade openness. Constant refers to the predicted value of civil disorder (CD) when all the other variables in the equation are equal to 0. The second and third columns for variables include unstandardized coefficients with the significance in the brackets.

Because all the variables have been transformed it is hard to present the numerical impact of independent variables to dependent. However, it is still possible to present the signs of the relationship. All the coefficients of independent variables are positive except the economic development variable that has a coefficient of -0.014 (Model A) and -0.012 (Model B). Economic development was expected to have a negative impact on civil disorder. The signs of the coefficients of population and regime type variables

are in accordance with the expected signs. Both of these variables were expecting to have a positive sign on the relationship with civil disorder. However, the signs of variables of level of trade openness and change in trade openness are the opposite from those expected. Both variables of trade openness were expected to have a negative impact on civil disorder, nevertheless, the results of multivariate regression analysis show differently. Furthermore, the coefficients of both trade openness variables are very small and not significant.

Furthermore, the significance of the variables is presented in the brackets next to the coefficients. The test of p-value shows how significant the coefficient is comparing it to 0. It is assumed to be significantly different if the p-value is lower than 0.05. The only significant variable in both models is population with a p-value of 0.001 (Model A) and 0.003 (Model B). The remaining four variables (level of trade openness, change in trade openness, economic development and regime type) have p-values larger than 0.05. That means that the coefficients of these four variables are not significantly different from the ones equal to zero.

Table 8 also gives the information about the extent to how good this model explains the changes in dependent variable. R stands for the correlation between the actual values of dependent variable and the estimated values by the model. The R square shows how good can independent variables explain the variance in the dependent variable. It is an overall number and do not show how particular variable influence the dependent variable. The adjusted R square that is presented in Table 8 is used to calculate the R square for all the population. Therefore, for the whole population only 18.7% of the variance of civil disorder is explained by the independent variables in model A and 18.5 % in model B. Accordingly, the remaining 81.3% and 81.5% of the variance remain unexplained.

Furthermore, Table 8 provides the information about the F value of the models. It refers to a test that shows if the model as a whole has statistically significant predictive capabilities (Greene, 2016). F value is the ratio of regression mean square and residual mean square. The test checks the null hypothesis that the model does not have any predictive capability. In other words, the whole population regression

coefficients are equal to zero (UCLA: Statistical Consulting Group, 2016). The null hypothesis is rejected if F value is large with acceptable significance level. In my case, the F-value of Model A is relatively high of 5.934 and the significance level of 0.000 and F-value of Model B is 5.894 with significance of 0.000. Both significances of F-values are smaller than the threshold of 0.05. Therefore, I can conclude that both models as whole have significant predictive capabilities.

Based on the coefficients in both models of multivariate regression analysis, it can be seen that my hypothesis that higher trade openness leads to lower risk of civil disorder can be rejected. The Table 8 shows that the relationship between variables of trade openness and civil disorder is positive while the expected sign of the relationship was supposed to be negative. However, trade openness variables in both models are insignificant, thus it cannot be stated that more trade openness leads to higher risk of civil disorder, either. In other words, the probability that these results have occurred by chance are too high to confirm that trade openness have any significant effect to civil disorder.

CHAPTER 5. CONCLUSIONS

This thesis contributes to the existing knowledge about the relationship between economic openness and internal conflicts. So far, this relationship was studied by assuming civil wars as the only expression of internal conflict. My thesis introduces civil disorder as a measurement of lower level of internal conflict and tests this relationship again. In order to do so, the main research question of this thesis must be answered:

What is the impact of trade openness on civil disorder in developing countries?

In order to answer the main question three sub-questions were defined. All the sub-questions of the thesis were answered in previous chapters. In the next-section I summarize these answers. Furthermore, the main research question is answered by interpreting the results of multivariate regression analysis presented in Chapter 4. Additionally, this concluding chapter of my thesis includes limitations to the research. Finally, I end my research with providing the suggestions for future research in this field.

5.1 ANSWERS TO SUB-QUESTIONS

The first sub-question was defined as:

What is the present theory and existing evidence about the relationship between trade openness and civil disorder?

This sub-question was answered in Chapter 2 by reviewing the literature and existing theories. All the research that has been done on the relationship between trade openness and internal conflicts is focused on the occurrence or the risk of civil war. The existing literature includes three theories explaining the relationship between trade openness and internal conflicts. To begin with, the liberal theory states that those countries which have more open trade suffer from less civil disorder. Liberal theory uses two arguments. First of all, it states that trade brings development which deters conflicts directly or through increasing the quality of democracy in the country.

Secondly, a part of liberal theory called commercial liberalism states that trade deters internal conflict because of the increase of the opportunity costs. The second theory presented in the Chapter 2 is based on structuralist model. It assumes that international trade openness increases inequality within country and thus increases the risk of internal conflict. The third theory is not very explicit in the literature but it states that trade openness and globalization in general do not have significant influence on the internal stability. Nonetheless, majority of existing research are based on the liberal theory and provides evidence supporting its notion.

Chapter 3 answered the third sub-question which was specified as:

How can the variables be operationalized and how can the impact of independent variable on the dependent variable be assessed?

The independent variable of trade openness was measured in two different ways: change in trade openness and level of trade openness. In line with the majority of previous evidence, the initial model expected the relationship between trade openness and civil disorder to be negative. In other words, the more open the country is the less civil disorder it experiences. Furthermore, this chapter included operationalization for other four control variables.

Finally, the last sub-question was defined as:

What are the results of the analysis?

In order to get the results I conducted a multivariate regression analysis. After choosing the best compositions of the control variables for both models and checking for several assumptions the multivariate regression analysis was run. The results showed that my models explains only 18.7% (in model which includes level of trade openness, population, economic development and regime type) and 18.5% (in model which includes change in trade openness, population, economic development and regime type) of variation of the civil disorder. Furthermore, the coefficients of trade openness variables showed that the hypothesis of my research, stating that countries with more open trade suffer from less civil disorder, can be rejected. This is a result of the insignificance of the coefficients. All the other three control variables follow the

expected directions for the relationship with civil disorder. However, only population variable appeared to be statistically significant in this model.

5.2 INTERPRETATION OF THE RESULTS

Following the answer to the third sub-question which provides the results of the analysis this sub-section answers the main research question of my thesis. In order to do so I interpret the results that I got from multivariate regression analysis. I discuss the influences on civil disorder of independent and each of the control variables separately.

5.2.1 CIVIL DISORDER AND TRADE OPENNESS

First of all, I discuss the results of the main independent variable - trade openness. The main hypothesis states that the more open the country is the less civil disorder it experiences. This hypothesis was made based on the theoretical assumptions presented in Chapter 2, which follows the logic of liberal theory. This assumption was created after analysing the existing literature and empirical studies that look deeply into the relationship between trade openness and civil wars. Liberal theory for intrastate conflicts assumes that countries which trade more suffer from less civil wars. However, the results of this thesis do not show support for this assumption. The coefficients of trade openness variables in Table 8 are small and not significant, while expected influences were supposed to be negative. Therefore, based on the statistical analysis, I can state that liberal model does not stand the truth when civil disorder is taken as a form of domestic conflict.

The fact that trade openness variables have positive coefficients should mean that liberal theory fails to correctly assume the relationship between trade openness and civil disorder. Structuralists state that countries with more open trade suffer from more domestic conflicts. However, the coefficients of both trade openness variables in regression models are statistically insignificant. The large p-values (0.148 and 0.160) show that structuralists' assumption is cannot be confirmed when domestic conflict is expressed as civil disorder either. The main logic behind structuralist model is that international trade increases inequality within the country and so increases the risk of

internal conflict. Therefore, the model might have showed different results if it had included the mediating variable of inequality.

The fact that trade openness is statistically insignificant in both of the models, the third opinion that globalization in general does not affect internal stability has the most support. The fact that the models explain only 18.7% and 18.5% of the change in civil disorder allows me to assume that there are other variables which have more significant effects on domestic discontent than trade openness or control variables of the models. The results of my thesis show that trade openness does not have significant impact on civil disorder.

Furthermore, there seems to be very little difference between two variables of trade openness. Model A (where trade openness is expressed as average level of trade of three years) and model B (where trade openness is expressed as the change in trade openness over 15 years) have shown very similar results. Level of trade openness seems to have a slightly higher coefficient. However, according to the results of my analysis both of the variables of trade openness appeared to be statistically insignificant and barely explain the change in civil disorder. Therefore, there is no significant effect of trade openness on civil disorder whether you take the level of trade openness or the change in it.

5.2.2 CIVIL DISORDER AND POPULATION

Apparently, the independent variables do not have any significant impact on the dependent variable. Therefore, it is important to interpret the results of regression analysis for control variables. I begin with the only variable that is significant in both models – population. The positive coefficients show that the bigger the population the more civil disorder a country has. Collier & Hoeffler (1998) made an assumption that bigger population might put more pressure on the government that might outgrow into a civil conflict. The results of my regression analysis show some support for the assumption that this pressure might take a form of civil disorder. In other words, bigger countries experience more demonstrations, riots and assassinations.

5.2.3 CIVIL DISORDER AND REGIME TYPE

Previous studies have argued that regime type is an influential variable to internal conflicts. This notion is supported by Hegre, Ellingsen & Gleditch (2001) where authors say that democracy and civil war relationship is shaped like an inverted U-curve. According to the coefficient of regime type variable in my analysis, this notion reflects in democracy-civil disorder relationship, too. The expected influences and the actual values after running the regression analysis take the same direction. In other words, the positive coefficient shows that democracies and autocracies suffer from less civil disorder than semi-democratic countries. In democratic regimes people have more rights and political power to vote, thus they might express their discontent in the elections. Strong dictatorships do not provide theirs citizens with such kind of power, however, the population in those regimes are very repressed and any civil disorders are silenced. In the case of semi-democratic countries, the regimes are not strong enough to supress civil disorders by repressed and discontent society. These countries are said to be in lack of institutional means and coercive capacities to silence the discontents (Blanton & Apodaca, 2007). However, the significance of the regime type variable are 0.060 and 0.082. For the variable to be significant in the model the p-value has to be smaller than 0.05. Therefore, I cannot conclude that regime type *per se* is important determinant in influencing civil disorders.

5.2.4 CIVIL DISORDER AND ECONOMIC DEVELOPMENT

Another control variable in my model is economic development. I measured it as GDP per capita. The initial model of this thesis expected that economic development should have a negative influence on civil disorder. In other words, the more developed the country is the less likely it is to suffer from civil disorder. Likewise, after running the multivariate regression analysis, the variable of economic development has a negative coefficient. This means that the expected negative relationship between civil disorder and economic development has not been rejected. Richer countries are said to have more financial capabilities, thus can ensure stronger police and military forces (Barbieri & Reuveny, 2005). These capabilities deter people from participating in civil disorders like violent demonstrations, riots or assassinations.

Furthermore, more economic development means that government has more money and more abilities to meet the expectations of its citizens and thus making civil disorders less likely. However, looking at Table 8 the variable of economic development is statistically insignificant in both models. That means that the coefficient of economic development, and so the impact of it to civil disorder, is not highly different from the situation where the economic development would be equal to 0.

5.3 LIMITATIONS OF THE ANALYSIS

The literature studying the relationship between trade openness and civil conflicts has presented conflicting theories. The results of my empirical study show that support for the theory that has received the least evidence in the literature. Therefore, it is important to identify several limitations of the analysis. First of all, one limitation of the research relates to the number of countries in the sample. Even though 135 developing countries were chosen for the analysis, only 87 of them had data for all the variables. Therefore, the results of the regression model might have shown different results if another sample was taken. Furthermore, a small sample makes it hard to generalize the results for all the population of developing countries.

Second limitation of the analysis relates to the fact that theoretical expectation of this thesis was made based on the literature analysing civil wars. However, there is no systematic research made on the relationship between trade openness and civil disorder. It might be the case that civil disorders are influenced by many other processes when comparing to civil wars. Therefore, some other control variables might have made the model of regression analysis better. For example, the control variable of regime type that I use only differentiates countries in democracies, semi-democracies and autocracies. However, it might be interesting to look at the change in regime types. In order to portray this phenomenon, this variable could be expressed as change in the quality of democracy. Similarly to the case of regime type, there might be situation were the significance of the economic development variable would be bigger if expressed as the change in GDP per capita. When GDP per capita decreases people might express their discontent through civil disorders, and *vice*

versa, when GDP per capita increases people might feel more stable and satisfied with the living conditions.

Furthermore, there is a limitation that relates to the operationalization of the dependent variable. First of all, one of the components of civil disorder variable is an expert assessed rating of the risk of violent demonstrations. These ratings are partly based on perception which sometimes can lead to wrong judgements of reality. However, because of the lack of better indicator this expert assessed rating is used in the thesis. Furthermore, the scale of the civil disorder variable is hard to interpret, thus only the direction of relationship is presented as the results.

Finally, it is hard to determine the causal relationship between civil disorder and trade openness. Does more open trade impact internal stability, or peaceful and stable country takes part in more trade. I tried to solve this problem by adding time lag effect on the independent variable. However, It does not completely neutralize this reverse causality effect.

5.4 POLICY IMPLICATIONS

The results of my thesis show that there is no significant evidence that trade openness pacifies domestic society in terms of violent demonstrations, riots and assassinations. Similarly, the low significance of trade openness variables rejects the notion that trade can actually stimulate civil disorder, too. This is a valuable finding to support the opinion that international trade and globalization in general do not play a crucial role in domestic affairs.

In the first chapter of the thesis I presented the ongoing debate whether current international trade order is harmful for developing countries or not. In case of domestic stability, the results of my thesis did not support either of the opposing ideas. According to this analysis, there is no need to reconsider the conditions of current international trade if the goal is to stabilize the domestic order in developing countries. International trade should be promoted for different reasons like economic development but not for pacifying effects in terms of violent demonstrations, riots and assassinations.

5.5 SUGGESTIONS FOR FUTURE RESEARCH

The fact that the model of this thesis does not explain the phenomena of civil disorder very well suggests that there is space for further research. First of all, if future research continues to look into the relationship between trade openness and civil disorder it would be interesting to conduct a time-series analysis. That would allow to see the development and change of the relationship between trade openness and civil disorder. Furthermore, time-series design is said to cope with the reverse causality effect better than cross-sectional. Another way to study the relationship between trade openness and civil disorder would be to conduct a qualitative analysis. It would allow to research deeper into several cases and see what actually stands behind the numbers of the indices.

However, the results of my multivariate regression analysis showed that trade openness does not have significant effect on civil disorder. Therefore, the future research should find other variables that have more significant influence on civil disorder. As previously mentioned in this chapter, changes in GDP per capita or changes in regime type could be influential aspects. Due to the time constraints of this thesis I could not try a new model with these variables. The results of my thesis showed that trade openness does not work as a protective measure against internal conflict neither it is a significant cause of it. Therefore, the future research should find what actually triggers the civil disorder in developing world, in order to ensure peace within the countries.

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APPENDICES

APPENDIX A. EQUATIONS FOR DEPENDENT VARIABLE

Equation for demonstrations: $\dfrac{X-1}{5-1}$

Equation for assassinations: $\dfrac{X-0}{8.354-0}$

Equation for riots: $\dfrac{X-0}{7.295-0}$

APPENDIX B. POPULATION

List of all countries in the population

1.	Afghanistan
2.	Albania
3.	Algeria
4.	American Samoa
5.	Angola
6.	Armenia
7.	Azerbaijan
8.	Bangladesh
9.	Belarus
10.	Belize
11.	Benin
12.	Bhutan
13.	Bolivia
14.	Bosnia and Herzegovina
15.	Botswana
16.	Brazil
17.	Bulgaria
18.	Burkina Faso
19.	Burundi
20.	Cabo Verde
21.	Cambodia
22.	Cameroon
23.	Central African Republic
24.	Chad
25.	China
26.	Colombia
27.	Comoros
28.	Congo, Dem. Rep
29.	Congo, Rep.
30.	Costa Rica
31.	Côte d'Ivoire
32.	Cuba
33.	Djibouti
34.	Dominica
35.	Dominican Republic
36.	Ecuador
37.	Egypt, Arab Rep.
38.	El Salvador
39.	Eritrea
40.	Ethiopia

41.	Fiji
42.	Gabon
43.	Gambia, The
44.	Georgia
45.	Ghana
46.	Grenada
47.	Guatemala
48.	Guinea
49.	Guinea-Bisau
50.	Guyana
51.	Haiti
52.	Honduras
53.	India
54.	Indonesia
55.	Iran, Islamic Rep.
56.	Iraq
57.	Jamaica
58.	Jordan
59.	Kazakhstan
60.	Kenya
61.	Kiribati
62.	Korea, Dem. People's Rep.
63.	Kosovo
64.	Kyrgyz Republic
65.	Lao PDR
66.	Lebanon
67.	Lesotho
68.	Liberia
69.	Libya
70.	Macedonia, FYR
71.	Madagascar
72.	Malawi
73.	Malaysia
74.	Maldives
75.	Mali
76.	Marshall Islands
77.	Mauritania
78.	Mauritius
79.	Mexico
80.	Micronesia, Fed. Sts.

81.	Moldova
82.	Mongolia
83.	Montenegro
84.	Morocco
85.	Mozambique
86.	Myanmar
87.	Namibia
88.	Nepal
89.	Nicaragua
90.	Niger
91.	Nigeria
92.	Pakistan
93.	Palau
94.	Panama
95.	Papua New Guinea
96.	Paraguay
97.	Peru
98.	Philippines
99.	Romania
100.	Rwanda
101.	Samoa
102.	São Tomé and Principe
103.	Senegal
104.	Serbia
105.	Sierra Leone
106.	Solomon Islands
107.	Somalia
108.	South Africa
109.	South Sudan
110.	Sri Lanka
111.	St. Lucia
112.	St. Vincent and the Grenadines
113.	Sudan
114.	Suriname
115.	Swaziland
116.	Syrian Arab Republic
117.	Tajikistan
118.	Tanzania
119.	Thailand

120. Timor-Leste
121. Togo
122. Tonga
123. Tunisia
124. Turkey
125. Turkmenistan

126. Tuvalu
127. Uganda
128. Ukraine
129. Uzbekistan
130. Vanuatu
131. Vietnam

132. West Bank and Gaza
133. Yemen, Rep.
134. Zambia
135. Zimbabwe

APPENDIX C. SAMPLE

| List of all countries in the sample		
1. Albania	30. Gambia, The	60. Nicaragua
2. Algeria	31. Georgia	61. Niger
3. Armenia	32. Ghana	62. Nigeria
4. Azerbaijan	33. Guatemala	63. Pakistan
5. Bangladesh	34. Guinea	64. Panama
6. Belarus	35. Guyana	65. Paraguay
7. Bhutan	36. Haiti	66. Peru
8. Bolivia	37. Honduras	67. Philippines
9. Botswana	38. Indonesia	68. Romania
10. Brazil	39. Iran, Islamic Rep.	69. Rwanda
11. Bulgaria	40. Jamaica	70. Senegal
12. Burkina Faso	41. Jordan	71. Sierra Leone
13. Burundi	42. Kazakhstan	72. South Africa
14. Cambodia	43. Kenya	73. Sri Lanka
15. Central African Republic	44. Kyrgyz Republic	74. Sudan
16. Chad	45. Lao PDR	75. Swaziland
17. China	46. Lebanon	76. Tajikistan
18. Colombia	47. Libya	77. Tanzania
19. Congo, Dem. Rep	48. Macedonia, FYR	78. Thailand
20. Congo, Rep.	49. Madagascar	79. Tunisia
21. Costa Rica	50. Malawi	80. Turkey
22. Côte d'Ivoire	51. Malaysia	81. Turkmenistan
23. Cuba	52. Mali	82. Uganda
24. Dominican Republic	53. Mauritania	83. Ukraine
25. Ecuador	54. Mexico	84. Uzbekistan
26. Egypt, Arab Rep.	55. Moldova	85. Vietnam
27. El Salvador	56. Mongolia	86. Zambia
28. Eritrea	57. Morocco	87. Zimbabwe
29. Gabon	58. Namibia	
	59. Nepal	

APPENDIX D. FREQUENCY DISTRIBUTIONS OF CONTROL VARIABLES
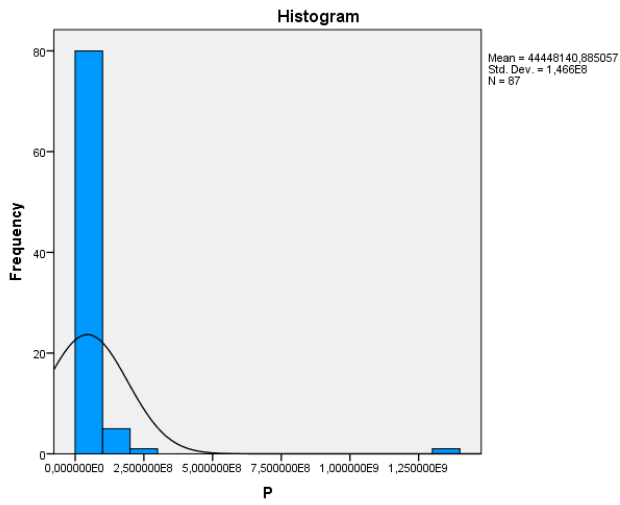
Frequency distribution Economic Development
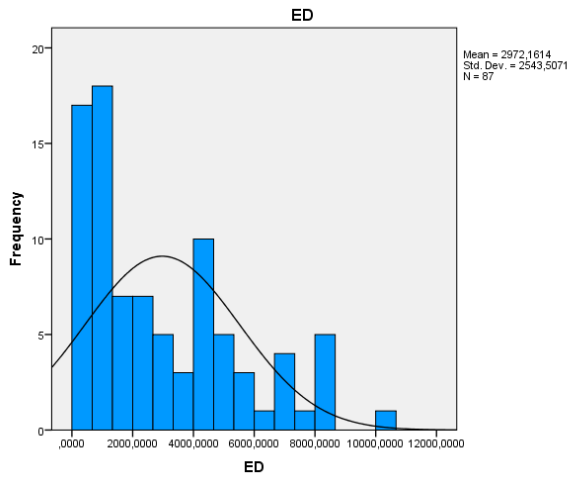
	Shapiro-Wilk		
	Statistic	df	Sig.
Economic Development	0,878	87	0,000

Frequency distribution Economic Development (log)
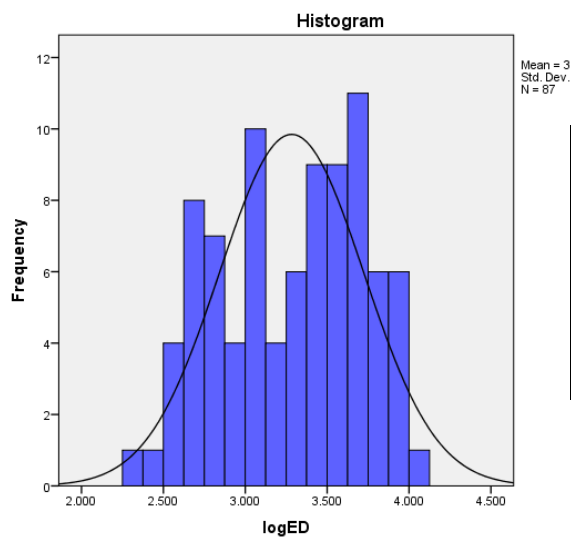
	Shapiro-Wilk		
	Statistic	df	Sig.
Economic Development (log)	0,955	87	0,004

Frequency distribution Population

	Shapiro-Wilk		
	Statistic	df	Sig.
Population	0,249	87	0,000

Frequency distribution Population (log)
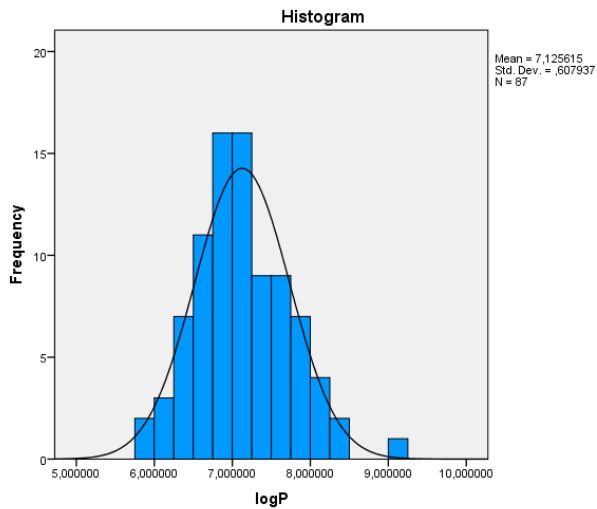
	Shapiro-Wilk		
	Statistic	df	Sig.
Population (log)	0,984	87	0,384

Frequency Distribution Regime Type
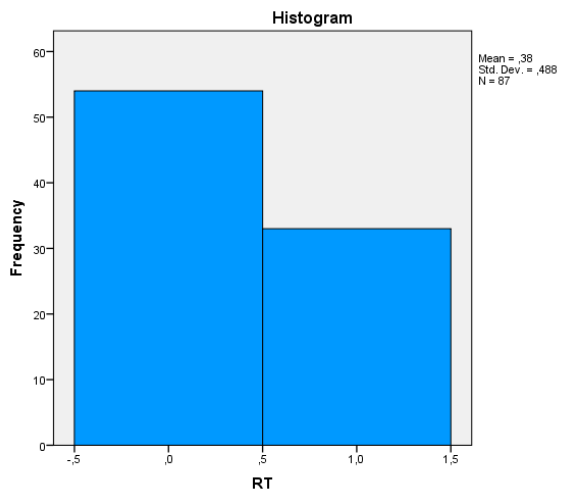
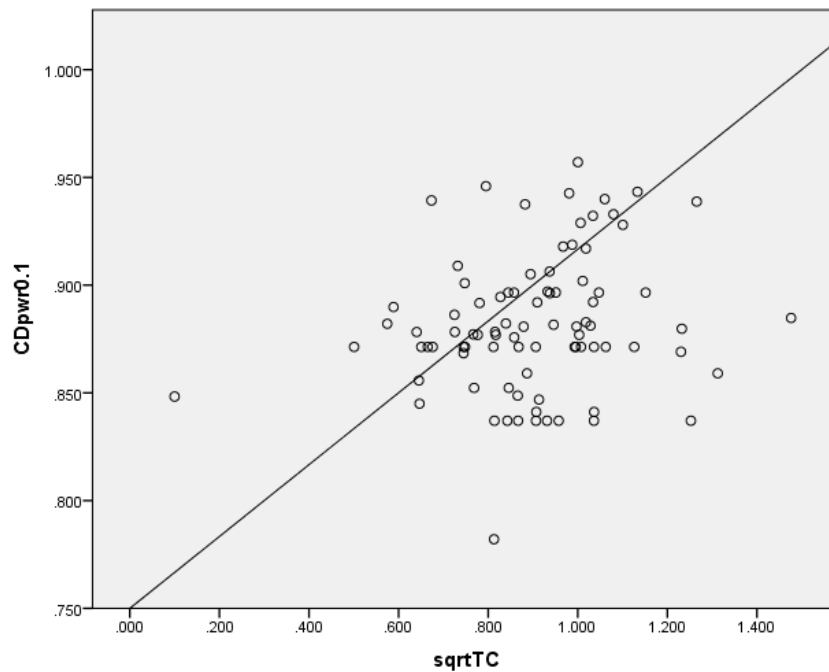## Frequency Distribution Ethnic Fractionalization
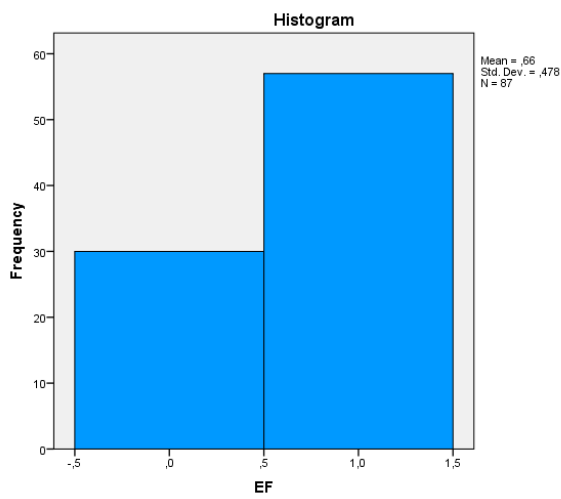
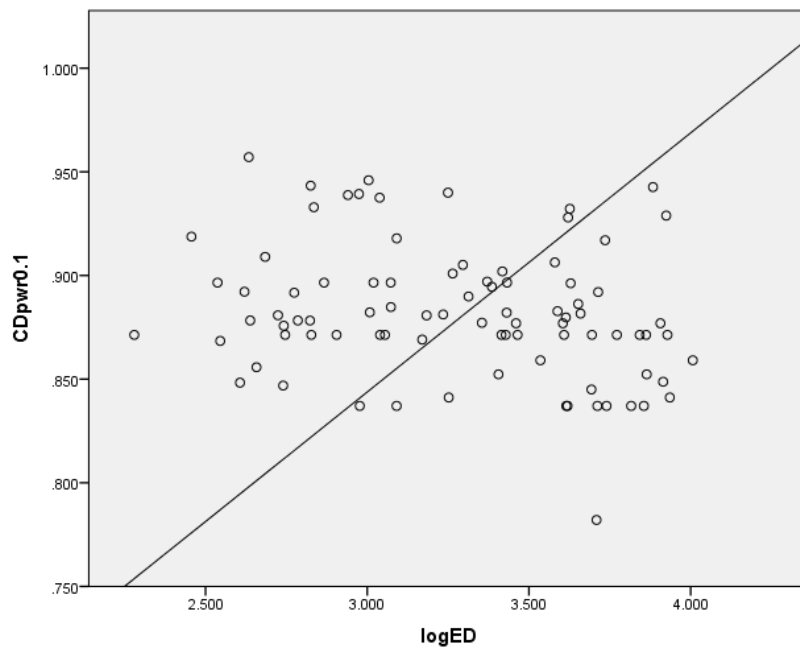## APPENDIX E. SCATTERPLOTS OF BILATERAL CORRELATIONS

Scatterplot bilateral correlation Civil Disorder and Level of Trade Openness
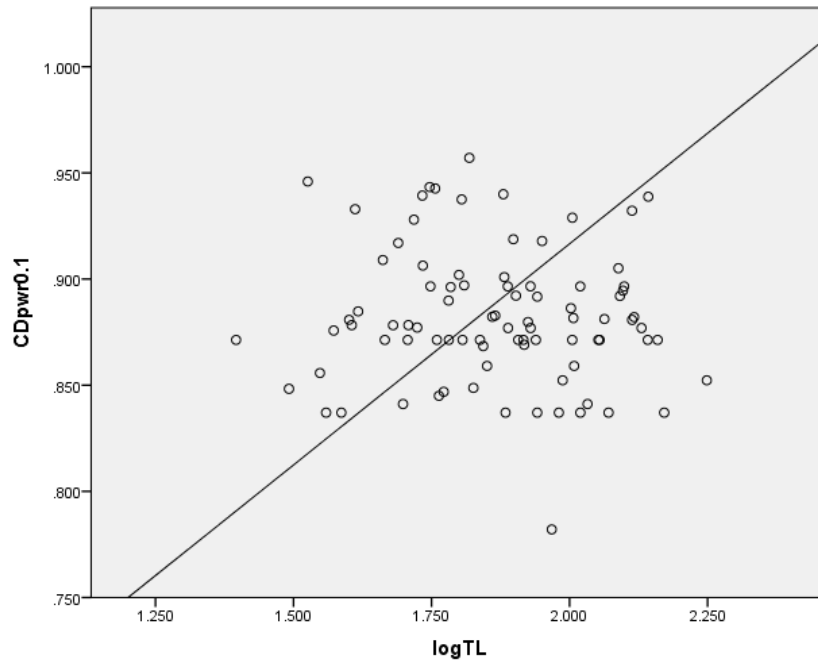
Scatterplot bilateral correlation Civil Disorder and Change in Trade Openness

Scatterplot bilateral correlation Civil Disorder and Economic Development

Scatterplot bilateral correlation Civil Disorder and Population