INCOME INEQUALITY, GOOD GOVERNANCE AND CRIME IN SOME SELECTED EUROPEAN COUNTRIES

SAAD BUBA

FEP 2019 10

INCOME INEQUALITY, GOOD GOVERNANCE AND CRIME IN SOME SELECTED EUROPEAN COUNTRIES

By

SAAD BUBA

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfillment of the Requirements for the Degree of Doctor of Philosophy

January 2019

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Doctor of Philosophy

INCOME INEQUALITY, GOOD GOVERNANCE AND CRIME IN SOME SELECTED EUROPEAN COUNTRIES

By

SAAD BUBA

January 2019

Chairman : Suryati Ishak, PhD
Faculty : Economics and Management

The goal of this thesis is to study the relationship between income inequality and crime in Europe over the period of 1993 – 2014. Income inequality has been identified as one of the major problems facing developed, emerging, and less developed countries. Europe is a continent with more developed countries. Yet, the United Kingdom recorded a relatively high Gini coefficient. Turkey has the highest income disparity coefficient and the same goes to Greece, Portugal, France, Italy, Germany, and Spain. However, little empirical evidence is established on the effects of income inequality on the property crime rate.

Theoretical considerations suggest that income inequality may have imperative long-run implications on crime rates. However, empirical studies on this relationship have produced mixed findings. Most existing studies disregard the impact of the rule of law (governance) in estimating the determinants and long-run growth effects of income inequality. The present multicollinearity in analysing the interaction effects of income inequality has also led to ambiguous results. In view of these problems, this study is set to examine (i) the effects of income inequality and rule of law on crime in Europe, (ii) the impacts of trade liberalisation on income inequality in Europe, and (iii) the impacts of real gross domestic product (GDP) per capita and income inequality on rule of law in Europe using orthogonalised interaction effects, which provide solution to the multicollinearity problem and Pooled Mean Group (PMG) estimator for all objectives on panel data of 31 European countries, namely 17 countries from the Nordic and Western Europe and 14 countries from the Southern and Eastern Europe, over the period of 1993-2014. The inclusion of rule of law and its interaction with income inequality is the major contribution of this study. Property crime is used as a measure of crime.

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The findings revealed significant evidence, which validates the view of theories and earlier findings that equality of income distribution, good governance, a higher level of educational attainment, and employment rate have a significant relationship with crime rates. The interactive term of income inequality and rule of law revealed a negative effect on property crime. The results revealed significant evidence on the relationship between trade liberalisation in the form of tariff reduction on manufactured goods and financial liberalisation with income inequality in Europe. The findings also showed significant evidence that, in the case of Europe, real GDP per capita growth negatively impacts rule of law. A higher level of education positively influences rule of law, which validate the assertion that educational attainment uplifts the quality of rule of law. Trade openness, on the other hand, negatively determines rule of law in Europe. Other factors like tariff reduction on manufactured goods and the level of income inequality positively and negatively impact rule of law, respectively. The study suggests that pursuing policies related to redistribution of income towards the reduction of social and economic inequality as well as improving the quality of rule of law in order to reduce crime are likely to be successful.

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Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

KETIDAKSAMAAN PENDAPATAN, TADBIR URUS YANG BAIK DAN JENAYAH DI BEBERAPA NEGARA EROPAH TERPILIH

Oleh

SAAD BUBA

Januari 2019

Pengerusi : Suryati Ishak, PhD
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Matlamat tesis ini adalah untuk mengkaji hubungan antara ketidaksamaan pendapatan dan jenayah di Eropah sepanjang tempoh 1993 - 2014. Ketidaksamaan pendapatan telah dikenal pasti sebagai salah satu masalah utama yang dihadapi oleh negara maju, negara membangun dan negara kurang maju. Eropah adalah benua yang mempunyai banyak negara maju. Bagaimanapun, United Kingdom mencatatkan pekali Gini yang agak tinggi. Turki mempunyai jurang pendapatan tertinggi, begitu juga Greece, Portugal, Perancis, Itali, Jerman dan Sepanyol. Walau bagaimanapun, hanya sedikit kajian empirikal yang dibuktikan pada kesan ketidaksamaan pendapatan pada kadar jenayah harta benda.

Pertimbangan teoretik mencadangkan bahawa ketidaksamaan pendapatan mungkin mempunyai implikasi jangka panjang yang penting terhadap kadar jenayah. Bagaimanapun, kajian empirikal berkaitan hubungan ini telah menghasilkan pelbagai penemuan kajian. Kebanyakan kajian yang sedia ada mengabaikan impak peraturan perundangan (tadbir urus) dalam menganggarkan penentu dan kesan pertumbuhan jangka panjang kepada ketidaksamaan pendapatan. Kehadiran kekolineran berbilang semasa dalam menganalisis kesan interaksi ketidaksamaan pendapatan juga membawa kepada keputusan yang tidak jelas. Memandangkan permasalahan ini, kajian ini adalah untuk mengkaji: (i) kesan ketidaksamaan pendapatan, peraturan perundangan mengenai jenayah di Eropah, (ii) kesan liberalisasi perdagangan ke atas ketidaksamaan pendapatan di Eropah dan (iii) kesan daripada KDNK per kapita benar, ketidaksamaan pendapatan pada peraturan perundangan di Eropah, dengan menggunakan kesan interaksi ortogonal, yang memberikan penyelesaian kepada masalah kekolineran berbilang dan penganggar *Pooled Mean Group* (*PMG*) pada semua objektif data panel dari 31 negara Eropah: 17 negara dari Nordic dan Eropah Barat dan 14 negara dari Eropah Selatan dan Timur, sepanjang tempoh 1993-2014.

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Memasukkan peraturan perundangan dan interaksi di antara peraturan perundangan dengan ketidaksamaan pendapatan adalah sumbangan utama kajian ini.

Penemuan menunjukkan bukti yang ketara, yang mengesahkan pandangan teori dan penemuan awal, iaitu kesamaan pengagihan pendapatan, tadbir urus yang baik, tahap pencapaian pendidikan yang lebih tinggi dan kadar pekerjaan mempunyai hubungan yang signifikan dengan kadar jenayah. Kadar interaktif ketidaksamaan pendapatan dan peraturan perundangan menunjukkan kesan negatif terhadap jenayah harta benda. Keputusan kajian membuktikan mengenai hubungan antara liberalisasi perdagangan dalam bentuk pengurangan tarif ke atas barang-barang perkilangan dan liberalisasi kewangan dengan ketidaksamaan pendapatan di Eropah. Penemuan ini juga menunjukkan bukti yang penting bahawa pertumbuhan KDNK per kapita benar memberi kesan negatif terhadap peraturan perundangan dalam kes Eropah. Tahap pendidikan yang lebih tinggi secara positif mempengaruhi peraturan perundangan, yang mengesahkan penegasan bahawa pencapaian pendidikan meningkatkan mutu peraturan perundangan. Bagaimanapun, keterbukaan perdagangan, secara negatif menentukan peraturan perundangan di Eropah. Faktor lain seperti pengurangan tarif ke atas barangan perkilangan dan tahap ketidaksamaan pendapatan secara positif dan negatif memberi kesan kepada peraturan perundangan Kajian ini mencadangkan bahawa meneruskan dasar-dasar yang berkaitan dengan pengagihan semula pendapatan ke arah pengurangan ketidaksamaan sosial dan ekonomi serta meningkatkan kualiti peraturan perundangan untuk mengurangkan jenayah adalah berjaya.

ACKNOWLEDGEMENTS

First, I am expressing my profound gratitude and appreciation to my supervisor, Dr. Suryati Ishak for her guidance support and encouragement throughout the study period. Her insightful comments have left a feeling of indebtedness that cannot be fully expressed.

I also express my gratitude and appreciation to the members of my supervisory committee, Professor Dr. Muzafar Shah Habibullah and Associate Professor Dr. Zaleha Mohd Noor for their guidance and valuable comments that improve the thesis.

I equally wish to acknowledge the Tertiary Education Trust Fund (TETFund) for funding my research through my Institution, Adamawa State Polytechnic, Yola. My appreciation goes to Professor Bobboi Umar, Rector Adamawa State Polytechnic, Yola. Alhaji Ahmed Dadi, former Registrar, Adamawa State Polytechnic, Yola.

I thank all my colleagues during my PhD program especially Dr. Adamu Peter, Dr. Suleiman Chindo, Dr. Salisu Waziri, Salim Mohammed Ibrahim Aljadi and Dr. Kabir Maji Ibrahim.

I am most grateful to my family for their love and moral support which helped me to complete this study. May Allah (SWT) reward you all in abundant, I remained grateful to Allah and to you all.

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This thesis was submitted to the Senate of the Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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LIST OF ABBREVIATIONS

AIC	Akaike Information Criterion
ARDL	Autoregressive Distributed Lag
AREAER	Annual Report on Exchange Arrangements and Exchange Restrictions
ASEAN	Association of South East Asian Nations
DFE	Dynamic Fixed Effect
ECM	Error-correction Model
ESS	European Social Survey
EU	European Union
EUR	Euro (currency)
Eurostat	European Statistics
FBI	Federal Bureau Investigation
FDI	Foreign Direct Investment
FL	Financial Liberalisation
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GMM	Generalised Methods of Moments
HIR	Harvard International Review
ILO	International Labour Organisation
IMF	International Monetary Fund
IV	Instrumental Variable
KAOPEN	Capital Account openness (Chinn-Ito Index)
MENA	Middle-East and North Africa
MG	Mean Group

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OECD	Organisation for Economic Cooperation and Development
OLS	Ordinary Least Squares
PMG	Pooled Mean Group
PWT	Penn World Table
RGDP	Real Gross Domestic Product
SBIC	Schwarz Bayesian Information Criterion
TL	Trade Liberalisation
UCR	Uniform Crime Report
UECM	Unrestricted Error-correction Model
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNODC	United Nation Office on Drugs and Crime
VECM	Vector Error-correction Model
WDI	World Development Indicator
WGI	World Governance Indicator
WTO	World Trade Organization

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CHAPTER 1

INTRODUCTION

1.1 Overview

This study addresses the following four macroeconomics issues that are income inequality and property crime in European countries, the relationship between rule of law and property crime, trade liberalisation and income inequality, and finally whether the economic growth determines the quality of rule of law in European countries. All four macroeconomic issues to be addressed are based on various theoretical backgrounds. For example, regarding rule of law and crime rates, which is the second issue to be addressed is theoretically based on the research of Shaw and McKay (1942) and Bursik and Grasmick (1993), while Daniele and Marani's (2011) findings are the empirical basis for the second macroeconomics issue.

This study incorporates findings from 31 European countries that are further divided into 17 Northern and Western countries and 14 Southern and Eastern countries. The estimation is separately conducted for each set of countries using the PMG estimator.

1.2 Background of the Study

The background of this study focuses on a brief context of Europe as a continent, general trends in income inequality, property crime rates, and the institutional quality in European countries. The background of the study also presents some issues concerning trade liberalisation and financial liberalisation, which are soaring on the European continent. Scatterplots for one-on-one relationships of the variables under study are also presented.

1.2.1 Europe as a Continent

Europe is a continent dominating the western part of Eurasia. The north of the continent borders the Arctic Ocean, while the west and the south of the continent are bordered by the Atlantic Ocean and the Mediterranean Sea, respectively. Europe is the second-smallest continent in the world, with a surface land area covering about 10,180,000 square kilometres or 2 per cent of the Earth's surface. Europe comprises of about 50 countries in which Russia is the largest and most populous, while Luxembourg boasts the highest GDP per capita, as of 2014. As of 2013, the population of Europe stood at 742,452,000, with almost 73 persons per square kilometre and approximately 225 languages spoken. The largest urban areas are Istanbul, Moscow, Paris, London, Madrid, Barcelona, St. Petersburg, Rome, and Berlin.

The economies of Europe are classified into developed and emerging economies. The developed countries, which are also incorporated into this study, are the United Kingdom, France, Germany, Sweden, Luxembourg, Switzerland, the Netherlands, Finland, Denmark, Belgium Austria, Spain, Liechtenstein, Norway, Portugal, Italy, and Iceland, while the emerging countries are Turkey, Hungary, Poland, Slovakia, Slovenia, Romania, and Bulgaria. Europe is doing relatively well in terms of economic growth. The International Monetary Fund (IMF) reported in 2016 that the nominal GDP of the EU stood at EUR16.5 trillion; an amount equal to 22.8 per cent of global GDP (nominal). If treated as a single country, Europe would be the second largest economy in the world. The continent has the highest domestic as well as foreign investments, totalling $5.1 trillion and $9.1 trillion, respectively, as of 2012 (The World Factbook, 2016). In 2015, the public debt in Europe, particularly among the EU-28, was recorded to be 85.2 per cent of its GDP (Eurostat, 2016).

Although Europe is a continent with more billionaires than any other continent in the world (The Wealth-X Billionaire Census, 2016), the region is known to struggle with issues such as the disparity in income distribution and rising property crime rates (Eurostat, 2016). As of 2015, its average Gini coefficient was 0.31 (Eurostat, 2016), with an unemployment rate of 9.5 per cent (The World Factbook, 2016). The region possesses more property than any other region in the world, with a relatively high level of property crime (Eurostat, 2014).

1.2.2 Income Inequality

Some decades ago, Kuznets (1955) posited that the disparity of income distribution among individuals rises during the initial stage of development and eventually declines when economies matured and became industrialised. According to Kaldor (1957), the share of the national capital in relation to wealth is income. The distribution of total generated income amongst individuals or households, in a given society or economy, as well as the determinants of such a distribution is heavily debated. The concept of inequality means the comparability among elements typically centred on precise features that can be measured using indices or indicators.

Income inequality is the unequal distribution of household or individual income across various participants in an economy. It is often presented as the percentage of income to a percentage of the population. For instance, statistics may indicate that 70 per cent of a country's income is controlled by 20 per cent of that country's population. However, there are other methods of measuring income inequality that include the Gini Index, Theil Index, and Hoover Index. The Gini index, also known as the Gini coefficient, is the most prominent measure of income inequality. It was developed by Corrado Gini, an Italian, in 1912. The index is measured from 0 - 1 in which a Gini coefficient of 0 represents perfect equality, while a coefficient of 1 enunciates the highest level of inequality. Inequitable distribution of income splits communities and often creates tension among people (Fajnzylber et al., 2002). It is for these reasons that income inequality remains an issue that must be addressed by economists and policymakers.

Studies on issues related to inequality of income forecast that the problem will remain noticeable in the coming years. The Economic Forum (2014) said in its economic agenda that more concern must be placed on efforts to check increasing global economic risk flexibility in the wake of severe structural unemployment and widening disparities in income. The assertion here is that the disparity in income distribution is not an issue facing by the developing countries alone, but also an issue burdening the emerging and developed countries as well.

In Europe, particularly the European Union (EU) countries, inequality of income is increasing. Although, it is a region of more billionaires than ever before, the percentage of people facing the threat of poverty is also on the increase (Oxfam Report, 2015). Piketty (2003) asserted that the growing inequality of income is a byproduct of globalisation, intensified rivalry or competition in the marketplace, corruption, a concentration on cost savings and the maximisation of profit, advancements in technology, and environmental disasters.

In the South East Asian Nations (ASEAN), for example, the most persistent cause for this trend is the internationalisation of the economic market, which has resulted in both positive and negative consequences (Coburn, 2000). As of 2013, Bulgaria, Romania, and Greece have the highest income disparity in Europe. Figures 1.1 and 1.2 reveal that the richest 10 per cent in Bulgaria (emerging country) and the Netherlands (developed country) earn about 13.69 and 11.4 times more than the poorest 10 per cent, respectively. It shows that both groups have a disparity issue. In Romania, it was 14.55 while in Greece it was 15.36 (Eurostat. 2013).

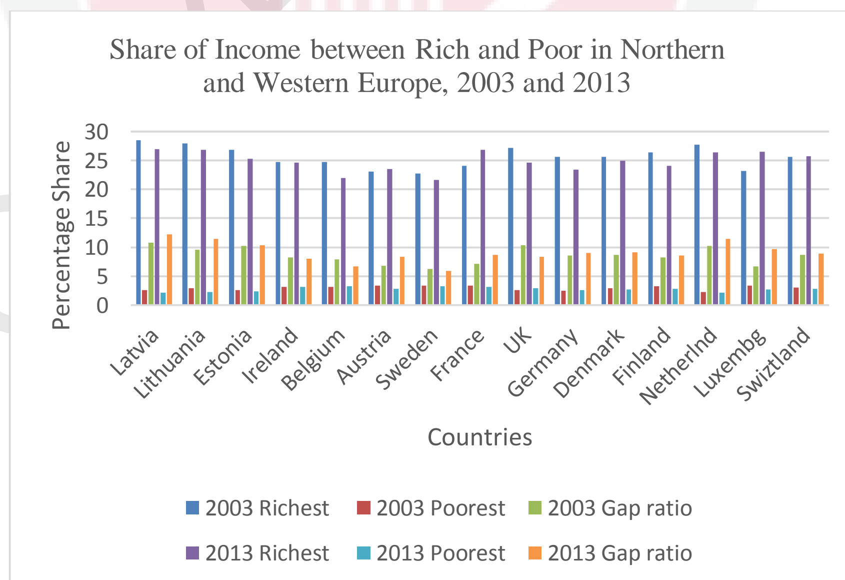

Figure 1.1 : Percentage Share of Income between Rich and Poor in Northern and Western Europe, 2003 and 2013

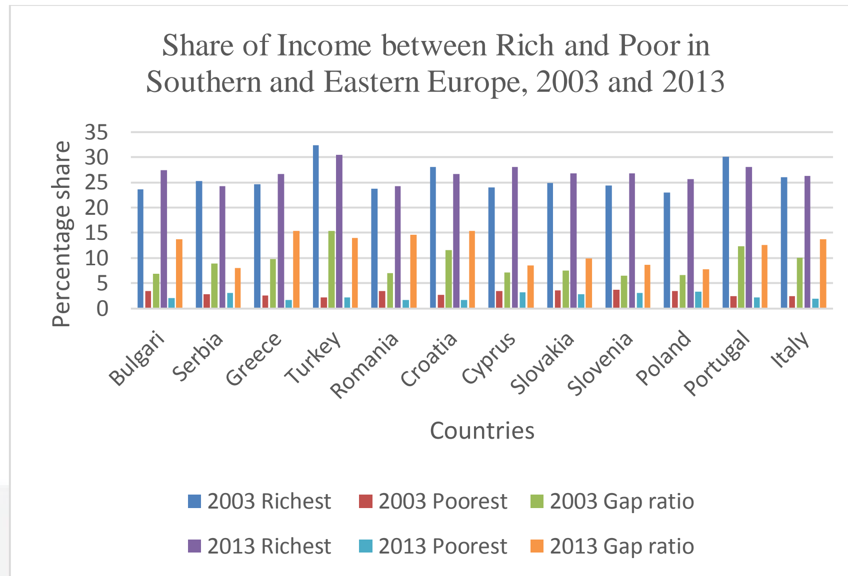

Figure 1.2 : Percentage Share of Income between Rich and Poor in Southern and Eastern Europe, 2003 and 2013
(Source : Eurostat, 2015)

In Figure 1.1 and Figure 1.2, the vertical axis represents the percentage share of income. The income gaps between the rich and the poor in both figures in 2003 and 2013 do not demonstrate any decrease in the gap ratio. These countries are selected because they carry the majority of the income distribution issue. The richest 10 per cent in Portugal controlled about 28 per cent of the country's economic income in 2013 while the poorest 10 per cent controlled 2.2 per cent. The disparity ratio of the share of the income gap (difference) between the richest 10 per cent and the poorest 10 per cent in Portugal, according to Figure 1.2, is 12.3, which means that the richest 10 per cent in Portugal is 12.3 times richer than the poorest 10 per cent. The share of income of the richest 10 per cent and the poorest 10 per cent (richest 10 per cent/poorest 10 per cent) in Latvia is 27/2.2, while in Italy is 26.3/1.9, Romania 24.3/1.6, Greece 26.7/1.7, and Bulgaria 27.3/2 for the year 2013. Additionally, according to the graph, the gap ratio between the richest 10 per cent and the poorest 10 per cent in Latvia is 12.17, while in Italy is 13.8, Romania 14.55, Greece 15.36, and Bulgaria 13.7. Belgium has the lowest disparity ratio at 6.67 and followed by Serbia is at 8.0. In most countries, the income gap between the rich and the poor is at its highest.

In 2013, the Gini index for Turkey was 0.43, which is rather high. Figure 1.2 and 1.2a illustrate the Gini index for 15 developed and 12 emerging countries in Europe that are facing more serious income disparity issues. The figures show that both groups of countries are facing similar problems of income inequality.

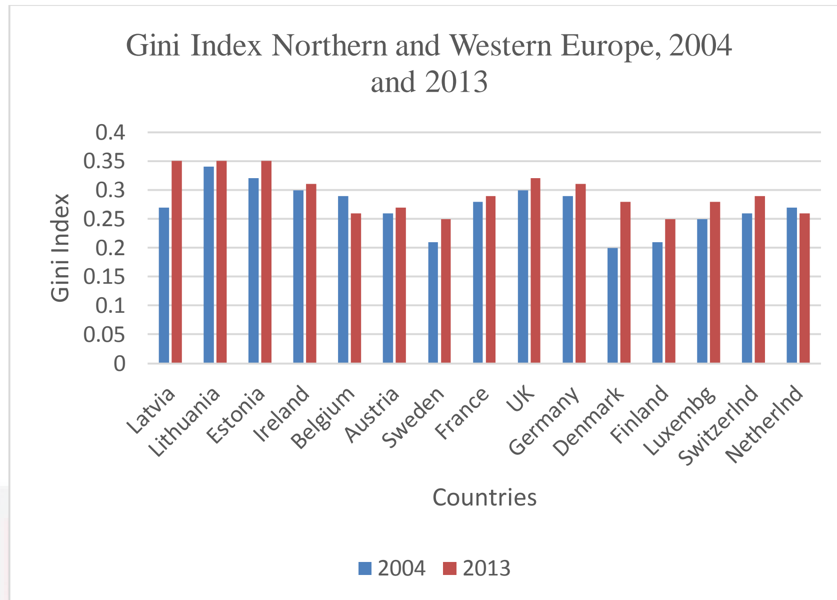

Figure 1.3 : Gini Index for 15 of the Sampled Northern and Western Countries of Europe, 2004 and 2013

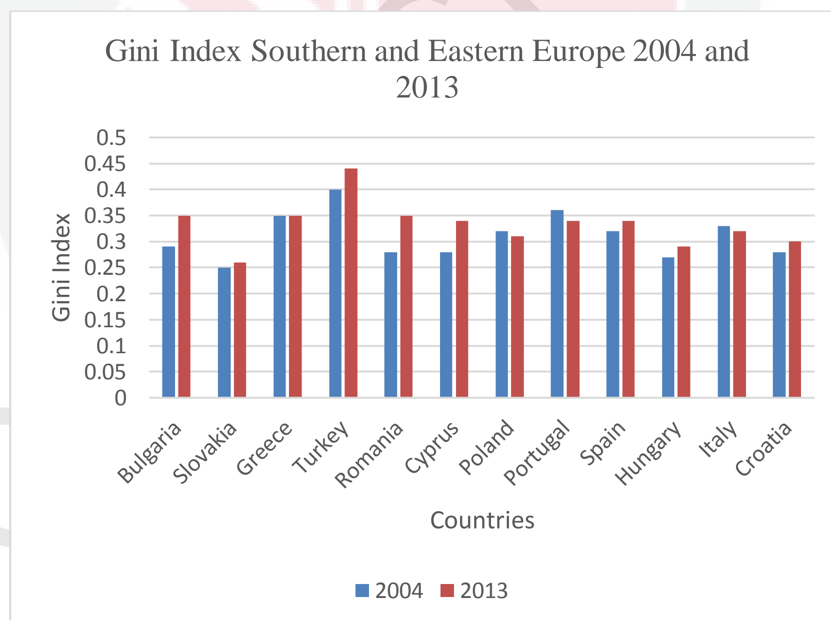

Figure 1.4 : Gini Index for 12 of the Sampled Southern and Eastern Countries of Europe, 2004 and 2013
(Source : WDI, World Bank, 2015)

Figure 1.3 and 1.4 show the 2004 and 2013 Gini coefficient for 15 of the sampled Northern and Western European countries and 12 of the sampled Southern and Eastern European countries, respectively, with Turkey having the highest coefficient of 0.44 (44 per cent). Other countries behind Turkey are Bulgaria at 0.354 (35.4 per cent), and

Latvia, Lithuania, Greece and Portugal at 0.352 (35.2 per cent), 0.346 (34.6 per cent), 0.344 (34.4 per cent) and 0.342 (34.2 per cent), respectively. The results reveal that most of the sampled countries were unable to moderately reduce inequality during the 10-year period spanning from 2004 to 2013. The Gini index extends from 0 to 1; 0 means full income distribution equality, while 1 represents maximum income distribution inequality. Developed countries like the UK, France, Italy, and Luxembourg also have problems related to income disparity among their citizenry. A 2015 OECD report decried increasing income inequality, stating that the top income earners in the developed countries, in general, earn almost 10 times more than those at the bottom of the income scale. This can be explained by the fact that most of the developed countries in Figures 1.3 and 1.4 experience problems with income inequality. The average Gini index for 31 sampled countries in Europe was 0.30 (30 per cent) in 2004, while in 2013 it was about 0.31 (31 per cent). Fredriksen (2012) argued that the primary reasons behind the increase in income dispersion in Europe in recent years are EU enlargement and significant income gains among the top 10 per cent within the core of eight European countries. These two reasons are attributable to a number of factors, such as skill-biased technological change, deregulation of the financial sector, globalisation of financial operations, and offshoring of businesses among others (EU, 2014).

The challenges in facing global economic growth include unemployment, poverty, instability, violence, and conflict (Harvard International Review, 2014). These are often closely related to inequality. For this reason, income inequality is specifically seen as the most noticeable feature of a bigger and more complex issue. Ranking second, in terms of challenges, income inequality has also been identified as the most significant trend in 2015 (Outlook on the Global Agenda Report, 2015). Less than 10 per cent of the wealth in developed and developing countries alike is controlled by the poorest, representing half of the total number of the population of these countries (World Economic Forum Report, 2015). This issue is a global task that the world as a whole should address. According to a 2014 survey on the global agenda, the European region will be affected by expanding income inequality in the year 2017 by 12 per cent, (Global Agenda Report, 2014).

In Europe, the richest countries (the UK, France, Italy, Luxembourg, Sweden, and Germany among others) tend to have relatively higher income disparity indices and are becoming more unequal. The UK and Italy are experiencing increasing income inequality; withstand at nearly 0.36 and 0.34, respectively. Since 2006, France has experienced an increase in its Gini index, same goes to Latvia, Portugal, Romania, Denmark, Italy, Lithuania, and a number of other European countries (World Bank Report, 2016). The possible outcome associated with inequality is obvious that is young people, especially those who feel marginalised, will eventually become easy fodder for conflicts. This will destabilise our democracies and hinder sustainable economic growth (World Economic Forum Report, 2015). The growing income inequality may also generate social unrest as wealth is increasingly absorbed by the few, leaving the rest of the population to fight for small fragments of wealth.

Reports by UNODC (2011) suggested that economic inequality might lead to crime. The lack of ability among individuals to have access to income required for necessary survival appears to drive some individuals into criminal activities. The 2008/2009 report of the UNODC revealed that most countries that experienced a decline in their GDP growth and an increase in income inequality have also noticed a rise in their respective crime rates. A sign of potential crime in a given economy is certainly the presence of income inequality ignited by the concentration of economic wealth in the hands of a few individuals. This can be explained by the fact that as individuals, especially the poor, come to believe that the distribution of income is unfair to them and they perceive crime as a better means of seeking compensation. According to motivational theory, people are more likely to commit a crime during economic hardship in order to maintain usual levels of satisfaction (Agnew, 1992). This hardship could be represented by rising income disparity among individuals in a society. Figure 1.5 shows the one-on-one relationship between income inequality and property crime using a scatterplot graph. It indicates a slightly positive relationship between the two variables (property crime and income inequality). This means that most of the European countries, especially the sampled countries with the exception of the Nordic countries that comprise only about five countries, have issues with income distribution. Income inequality might be one of the reasons behind the rising rate of property crime victims because, within the same period under study, property crime rates have increased. The vertical axis is property crime, while the horizontal axis is income inequality. The crime rate is measured by the number of victims per 100,000 population.

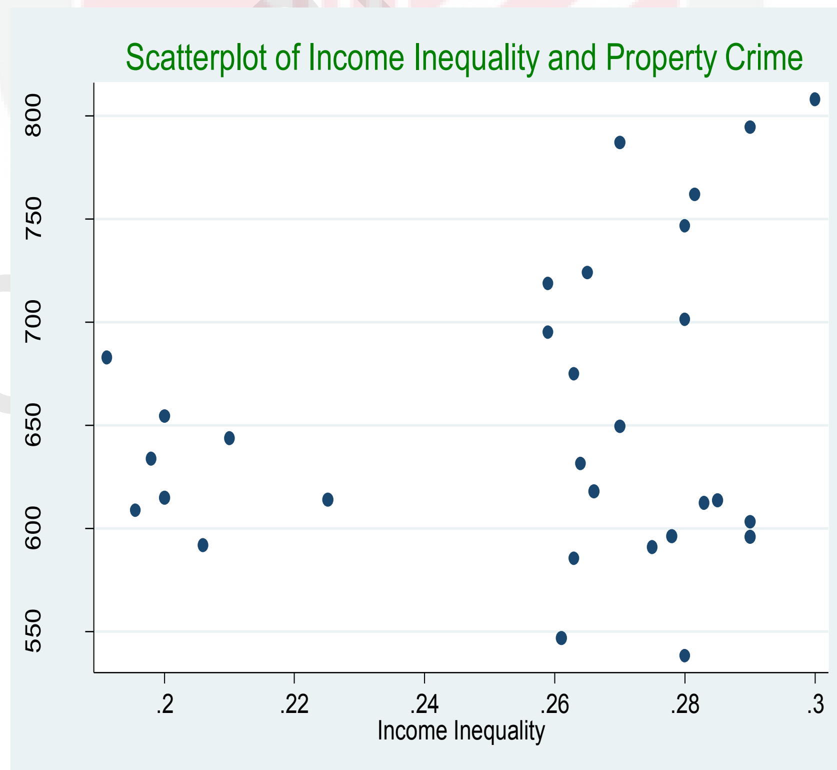

Figure 1.5 : Scatterplots for Property Crime Rate per 100,000 persons and Gini Index in 31 Sampled Countries of Europe

1.2.3 Property Crime

In this study, we refer to the crime rate as the total number of crime victims per 100,000 populations. The crime consists of property crime, violent crime, drug offences, financial crime, and cybercrime, as well as other crime-related offences. This study focuses on property crime as its target area. Property crime incorporates offences such as burglary, larceny-theft, motor vehicle theft, and arson. Arson is included in the property crime category because the offence involves the destruction of property; however, according to a uniform crime report (UCR) of the Federal Bureau Investigation (FBI), arson victims may be subjected to force (FBI's UCR, 2009). Conversely, based on the available data for European countries, this study considers burglary, burglary of private residential premises, and theft crimes. Criminal activity acts as a tax on the entire economy, thereby, discouraging both domestic and foreign direct investment (FDI) (Detotto and Otranto, 2010).

Property crime is used because first, despite the fact that the continent of Europe has relatively better GDP per capita, better infrastructure, better market systems, and better financial institutions, among others, still, this part of the world is recording more and more property crime victims. Second, if the total crimes were used instead, a lot of information would be lost in the process. Third, Entorf and Spengler (2002) revealed that total crime rates could sometimes be misleading. This is because a murder case will be given the same weight as the theft of a bicycle. Thus, variations in property crime control the time series. Edmark (2003) suggested that the ideal way to classify crime is to separate crime against property and crime against persons. Another reason for the use of property crime is that most property crime activities are influenced by socio-economic conditions such as income inequality, unemployment, and low level of education (HIR, 2014). The primary reason is that, of all the categories of crime, property crime has increased the most in the majority of European countries, with an annual percentage increase of 14 per cent since 2007 (Eurostat, 2015). In addition, the percentage of property crime in the European continent is high compared to other categories of crime. As of 2014, the percentage of property crime compared to total crimes in Europe stood at 83 per cent (Eurostat, 2015).

Over the period spanning 2003-2014 in Figure 1.6 and 1.7, most countries in Europe recorded either a stable or an increase in the property crime rate. For instance, according to Eurostat (2015), Romania (emerging country) recorded an increase in the rate of total property crime (rate per 100,000 inhabitants) from 46.3 in 2003 to 129 in 2014. Sweden (developed country) recorded a rate of 193.23 as the number of property crime victims per 100,000 population in 2003; they continued to increase through to 2014, with the number of victims rising to around 434. Bulgaria recorded 504.56 victims per 100,000 populations in 2003, while 622 victims were recorded in 2014. Countries like Italy, Luxembourg, Slovenia, Spain, Ireland, and Belgium, among others, have also recorded increases in the property crime rate. The decision behind the 18 countries selected was based on countries that recorded a decrease and countries that experienced an increase in the rates of property crime victims. The remainder of the sampled countries were unable to record either.

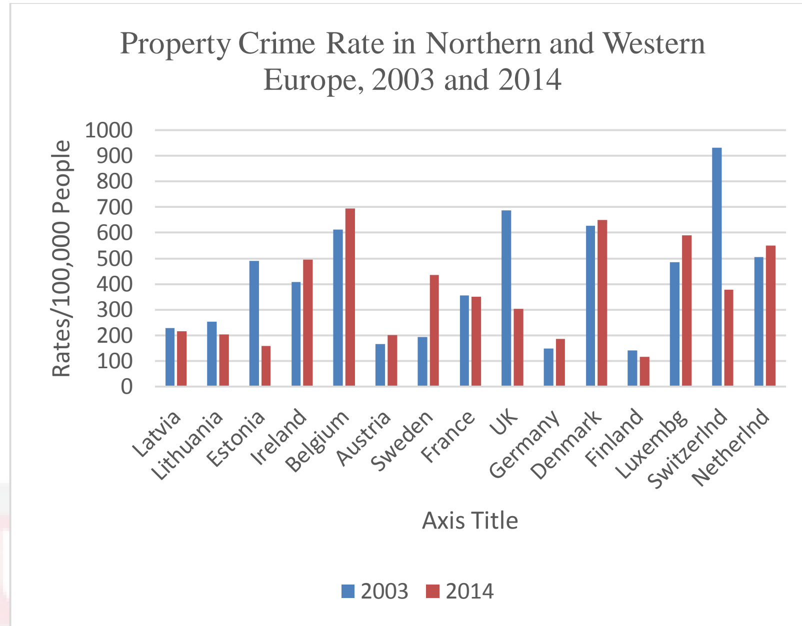

Figure 1.6 : Property Crime Rate per 100,000 Population in 15 Sampled Countries of Northern and Western Europe 2003 and 2014

Most of the sampled countries from Northern and Western Europe (mostly developed) recorded increases in property crime rates.

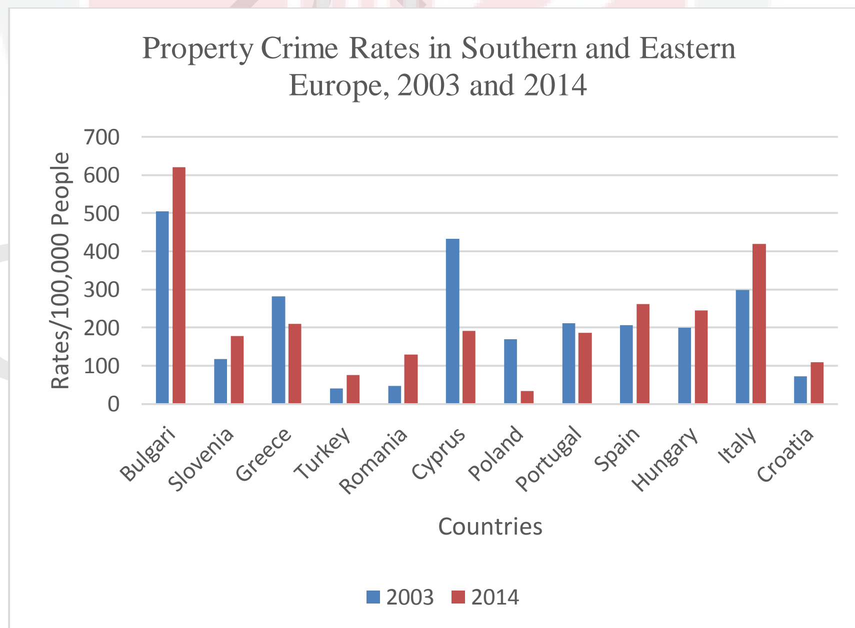

Figure 1.7 : Property Crime Rate per 100,000 Population in 12 Sampled Countries of Southern and Eastern Europe 2003 and 2014
(Source : Eurostat database, 2015)

A theft crime is also increasing in the EU. Eurostat data indicates that the EU recorded increasing theft crime rates in most of the sampled countries between 2003 and 2014, while some countries had a stable theft crime (Eurostat, 2015). However, the rates remained considerably high. The burglary rate per 100,000 inhabitants also exhibited an increase in most of the sampled countries. These two categories of property crime are prevalent in the European countries according to Eurostat (2015). The average burglary rate for 19 sampled countries in the EU, as of 2003, was 507.47 per 100,000 population. This rate increased to 526.4 per 100,000 inhabitants in 2014. There was an increase in the level of burglary rates for most of the sampled countries, and even those that showed a decrease still have considerably high rates. For instance, the United Kingdom and Sweden showed decreases, however, the rates still at 800 and 912 per 100,000 inhabitants, respectively, which are noticeably high.

For the crime and safety indices, the safety index reflects the strength of rule of law in these countries. France had the highest overall crime index in 2015, while Denmark had the highest safety index. According to the crime index, a country with a crime level lower than 20 is considered to have very low crime rates, while an index of 60 to 80 means that a country has a high level of crime. Finally, a crime index above 80 means that a country has a very high level of crime.

The safety index is quite the opposite of the crime index. Although, no country in the EU has its crime index (according to the Numbeo crime index) above 80, neither do these countries have crime levels at or below 22. Luxembourg is at 35.74 percent and the United Kingdom is at 42.01 percent. Ireland is second after France, with a crime level of 49.07 percent. In general, the crime level in EU countries is quite moderate (more than 40 percent), which is actually fairly high.

A high crime rate in a country will have a negative effect on the quality of life of the residents of that country. It will also negatively affect the number of visitors, tourists, and investors coming into that country. Today, crime is a menace every country in the world is facing, and the notable reason for committing a crime, especially property crime, is unemployment and poverty. High levels of unemployment and poverty reflect a high rate of income inequality. Crime rates are much higher in urban cities than in rural areas. In the United States, there were an estimated 8,277,829 property crimes reported by law enforcement in 2014 (FBI Report, 2015). The UNODC reported in 2011 that the property crime rate is expected to increase in most of the European countries.

The property crime rate in Europe is common, especially burglary and theft crimes, which comprise about 83 per cent of total crimes. In the EU-28, domestic burglary increased by 14 per cent between 2007 and 2012. Greece recorded the highest increase in the number of domestic burglaries at 76 per cent, while Spain recorded an increase of 74 per cent in domestic burglary, Italy 42 per cent, Romania 41 per cent, and Croatia 40 per cent. On the contrary, huge reductions in this category of crime were recorded by Lithuania and Slovakia at -36 per cent and -29 per cent, respectively (Eurostat,

2014). The European Commission has defined domestic burglary as gaining access to another person's dwelling by force in order to steal property.

The number of motor vehicle thefts has steadily decreased throughout the EU-28 in recent history. This is due to technical improvements in vehicle theft deterrents. The number of recorded offences for this category of crime decreased by 37 per cent between 2007 and 2012. England and Wales, as well as Scotland, recorded decreases of more than half, at -53 per cent. In Greece, the number of motor vehicle thefts dropped by 28 per cent (Eurostat, 2014). Motor vehicle theft covers theft of cars, motorcycles, buses and Lorries, as well as construction and agricultural vehicles. This excludes theft that involves depriving a person or organisation of belongings without force with the intent to keep it. Property crime can affect the growth of an economy through various channels, such as increased risks and impose a tax of the return to investment as more resources are being channelled to protective activities and away from productivity enhancing events, which will negatively affect the accumulation of capital (Kumar, 2013).

In making a policy to address an issue in a given economy, two things must be considered; first, the cause(s) of the issue, and second, the effects of the issue on the economy (European Union, 2010). This study, therefore, examines both the causes and effects of income inequality and rule of law in the European Region. The rule of law ensures that the provision of safety and stability in a given economy is one among various functions of a strong institution. The lower the level of transaction costs in an economy, the higher the level of safety and stability in that economy. Shaw and McKay (1942) argued that an ineffective social organisation leads to high and stable criminal activities in a given society. Various research studies have also confirmed that a strong institution would warrant the security of property rights and the efficiency of its judicial system. According to Bursik and Grasmick (1993), economically disadvantaged communities would have a particularly difficult time exercising crime control due to problems in the social network. As mentioned, Europe has a relatively better quality of institutions (rule of law) when compared to other regions of the world. Thus, this study used rule of law as a measurement for governance, which is discussed next.

1.2.4 Governance

Good governance is an important tool that distinguishes between successful and unsuccessful countries (Danielle and Luiz, 2013). It is defined in terms of accountability, effectiveness, corruption control, the absence of political instability, democracy, and rule of law, which reflects justice, respect for human rights, and liberties (United Nations Economic and Social Council, 2006). The classical economists stressed that the development pattern of any economy is influenced by the interaction of resources, technology, and comparative advantage with institutional situational changes in institutional quality (Gupta, 2009). A corporate feature that guarantees sustainable growth and stabilises the economy, which most countries experience, represents good governance and rule of law. North (1990) described

governance as feasibly planned constraints that outline the interaction between people. According to North, the quality of institution increases with the limitations enforced over executive power. Good governance broadly captures law, individual rights, and strong effectiveness. In this study, rule of law is taken as a proxy for governance, and, therefore, should be used interchangeably. The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) describes good governance as an intermediate-term used to explain the manner in which government manages public affairs and resources (UNESCAP, 2009). A good institution consists of good governance, which is involved with the protection of investors, good quality of contract enforcement, and commitment to economic development, among others.

In their findings, Chong and Calderon (2000) concluded that countries with poor institutional quality tend to have high inequality of income distribution among their populace. They added that institutional quality is positively related to income distribution for poorer countries and is negatively related in richer countries. In poor countries, the control of political power by the minority elites reflects the positive correlations found between institutional quality and income inequality. A strong institutional quality is planned to constrain the edifices of social, political, and economic relations (North, 1991). Evidence has shown that a country's economic performance depends largely on the quality of its institutions (Levchenko, 2007). Institutional quality that is sufficiently strong will provide the inducement for better performance of an economy and it will outline the path towards economic growth. Institutional quality reflects qualities such as government effectiveness, rule of law, regulatory quality, corruption control, voice and accountability, and political stability. These are factors that determine the extent to which economy a country performs. Williamson (1985) found that most of the contracts awarded to parties in countries with poor institutional quality are found to be incomplete. This is because poor institutional quality guarantees the inability to enforce contracts properly (Grossman and Helpman, 2005). This study uses rule of law as a proxy for good governance or institutional quality.

The quality of rule of law or its effectiveness has a significant effect on the protection of property rights and the well-being and development of an economy. Poor quality of rule of law has a tendency to shrink the trust of the people in government and it affects the poor who rely more on government services and support (Rodriguez, 2009). It has been recently noted that, in Europe, good governance is a critical condition for nations wishing to join the European Union. This criterion spurs countries to develop their institutional quality, especially rule of law. From a global perspective, the quality of rule of law, and in general the quality of institutions in Europe, is relatively better, but it differs considerably across the continent, and it is the main reason for presenting Figure 1.8. According to the Rabobank Economic Report (2015), the Nordic European countries that comprise of Finland, Norway, Denmark, Sweden, and Iceland, have the highest average quality of institutions in Europe with an index value of 1.75 in 2013.

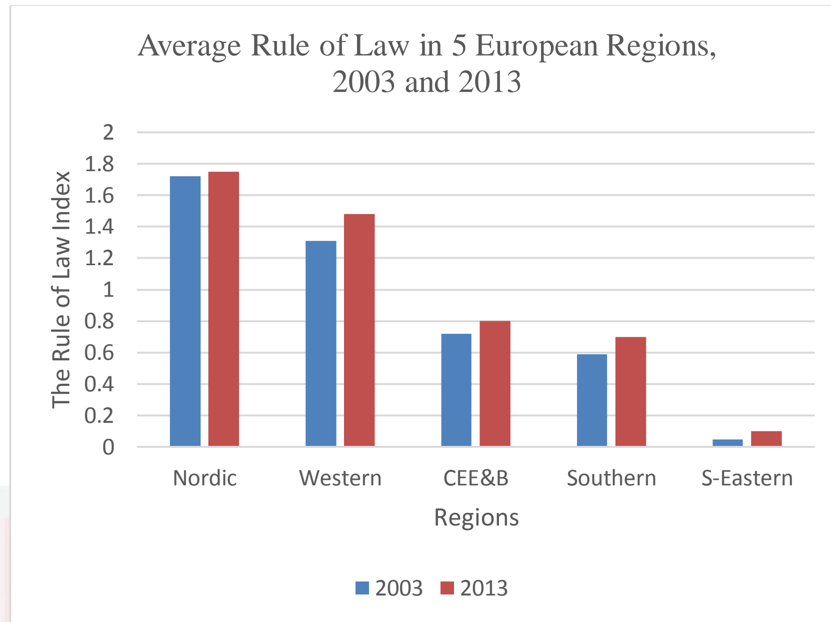

Figure 1.8 : Average Rule of Law Index in 5 of the European Regions, 2003 and 2013
(Source : World Bank, Rabobank, 2015)

The Western European countries, which consist of nine countries - Belgium, France, Monaco, Luxembourg, the Netherlands, Austria, the United Kingdom, Switzerland, and Liechtenstein - have an average index of quality of institutions that stands at 1.48. Central Eastern Europe and the Baltics have an index value of 0.8, Southern Europe 0.7, and finally, South-eastern Europe with 0.1 index value. Figure 1.9 lists a recent rule of law index for each of the sampled countries. It revealed that 12 of the countries in both groups of countries have a rule of law index of less than one, which may likely to undermine social unrest like crime.

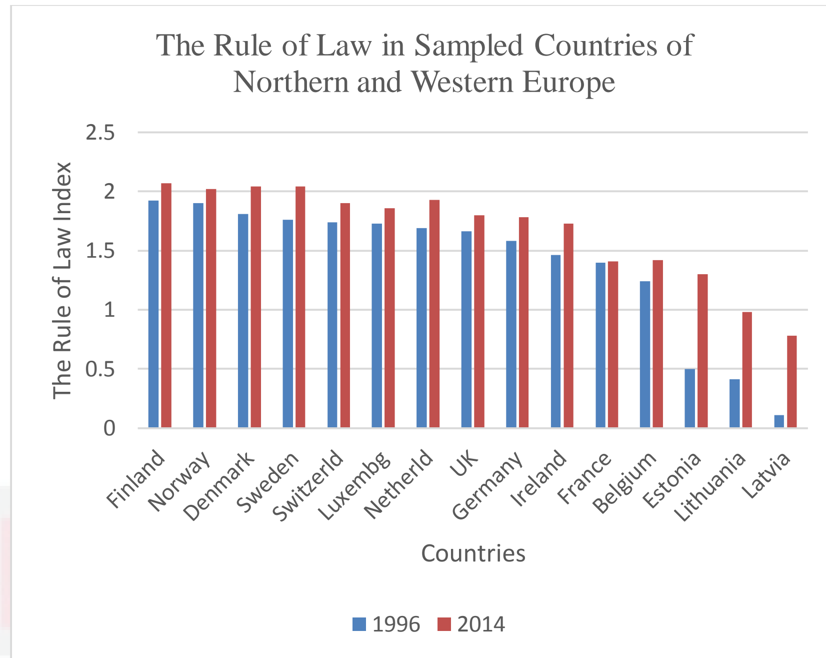

Figure 1.9 : The Rule of Law in Sampled Countries of Northern and Western Europe, 2003 and 2014

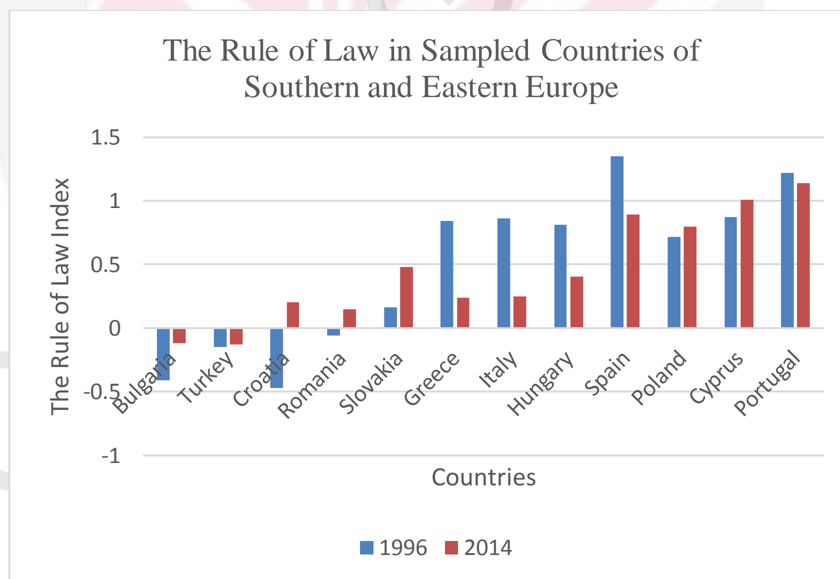

Figure 1.10 : Rule of Law in 12 Sampled Countries of Southern and Eastern Europe, 2003 and 2014

(Source : world Bank, WGI, 2015 Note: the minimum and maximum values of the rule of law among the sampled countries are -0.47 and 2.07 respectively)

The average index for these countries in Figures 1.9 and 1.10 between 1996 and 2014 is shown in Figure 1.11. It reveals that the average index is less than 1, which is a clear indication that the majority of the sampled countries in Europe have a rule of law index

of not more than 1. Countries like Italy, Spain, Greece, Romania, Bulgaria, Croatia, and Poland are among the countries with a low rule of law index. Serbia recorded an index of nearly 0, as of 2014. Finland and Norway, which are from the Nordic region, have better indices. The 20 countries selected from the sampled countries are countries that have recorded both increases and decreases in their respective rule of law indices.

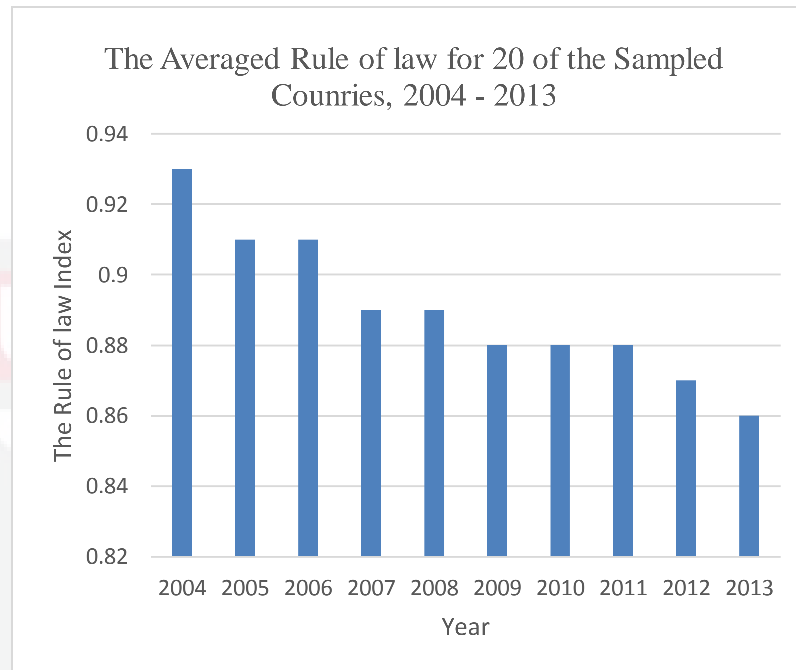

Figure 1.11 : Average Rule of Law Index for 20 of the Sampled Countries (2004 – 2013)
(Source : world Bank, WGI, 2015)

The range of indices used by the World Governance Indicators (WGI) in measuring the rule of law is -2.5 to 2.5. The highest index means the rule of law is excellent, and -2.5 indicates the poorest rule of law index. Countries with a negative index are therefore, considered as having poorest quality rule of law.

According to classical economists, a pattern of development of any economy is affected by the interaction of resources, technology, and comparative advantage with changing institutional reputation in institutional quality. Danielle and Luis (2013) maintained that a strong institution is an important tool that distinguishes between successful and unsuccessful countries. The attractiveness of a strong institution consists of good governance that is involved with establishing the context for the economic activities of a state. As a worthy institution creates an atmosphere, such as better quality of rule of law, which enhances economic growth and activities through protection of property rights, a poor institution usually stagnates economic activities. Countries with poor institutional quality are more likely to have high inequality among their populace (Chong and Calderon, 2000). The quality of rule of law in Europe is relatively high when compared to other regions of the world. However, there are

countries, especially in South-eastern and Southern Europe, with rule of law indices of less than 0.5, as of 2014, such as Bulgaria, Romania, Italy, Greece, and Croatia, among others. There are even some with negative values, such as Serbia (WGI, 2015). This is a clear sign that many countries in Europe need to improve their quality of rule of law as the indices are, on average, low. Otherwise, it would trigger social unrest, such as crime.

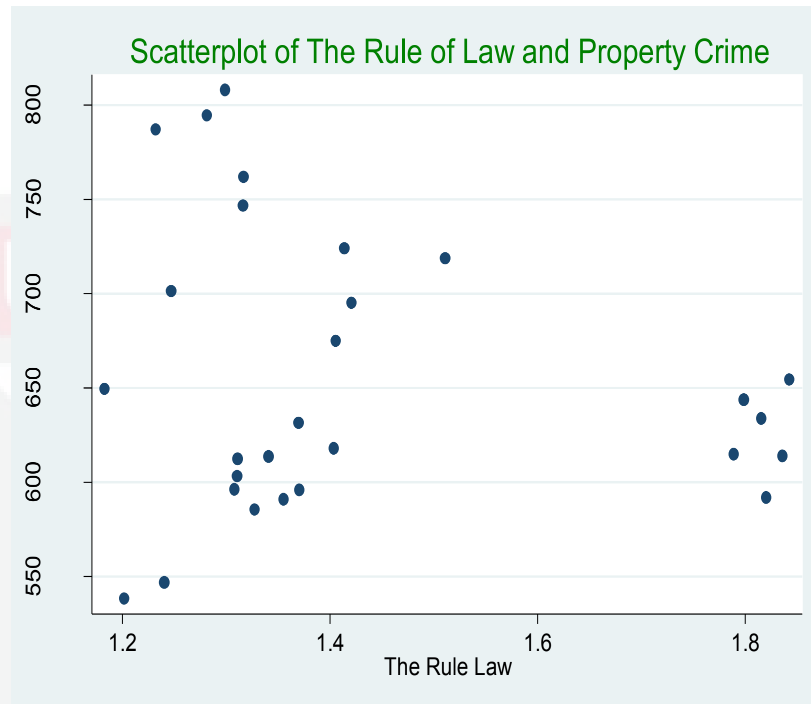

Figure 1.12 : Scatterplots of the Rule of Law and Property Crime for 28 Sampled Countries

Other variables like trade liberalisation and financial liberalisation as well as real GDP per capita growth rate were employed to determine their effects on income inequality and the rule of law respectively.

1.2.5 Trade Liberalisation

Recent theoretical models have suggested that trade liberalisation might reduce crime through its negative effect on income inequality; however, the effect of trade liberalisation differs in labour-abundant and capital abundant-countries. Globalisation, while reducing cross-country income inequality, has increased within-country inequality, since, in a short period, rapid economic growth generates greater income inequality. Trade liberalisation, therefore, has shifted economic inequality from a global to a domestic scale, increasing the risk of a more momentous impact of inequality on crime. A study by Ghosh et al. (2011) discovered that a higher degree of trade liberalisation tends to increase burglaries and thefts in labour-abundant countries

through its effect on the distribution of income, while in capital-abundant countries, it has a little negative effect or no effect on crime rates. Trade across borders of countries represents a great means for nations to promote their economies and improve their standard of living (WTO, 2007). Cross-border trade has been in existence since ancient times. Britain and France were the first to form an official trade agreement in 1860, and it later spurred successive agreements between other European countries (Stearns and William, 2001). The General Agreement on Tariffs and Trade (GATT) was formed in 1948 among 23 countries. These countries have agreed to reduce tariffs. Today, GATT has reduced the average global tariff considerably.

More than a decade ago, Europe began pursuing trade liberalisation through regional, multilateral, and bilateral initiatives. The World Trade Organisation (WTO) in 2002 reported that the European region had held nearly all (except agriculture and textiles) markets largely open (WTO, 2002) and it maintained internal economic integration. This policy review on trade by Europe came after support for producers by the Organisation for Economic Co-operation and Development declined by 10 per cent in just one year (1999 to 2000). Figure 1.13 and Figure 1.14 represents the share of trade to GDP for 15 of the sampled countries from Northern and Western Europe, as well as 12 countries from Southern and Eastern Europe. It reveals that most countries in Europe recorded a tremendous increase in gains from trade. This might be due to the liberalisation process that has taken place in Europe in recent years.

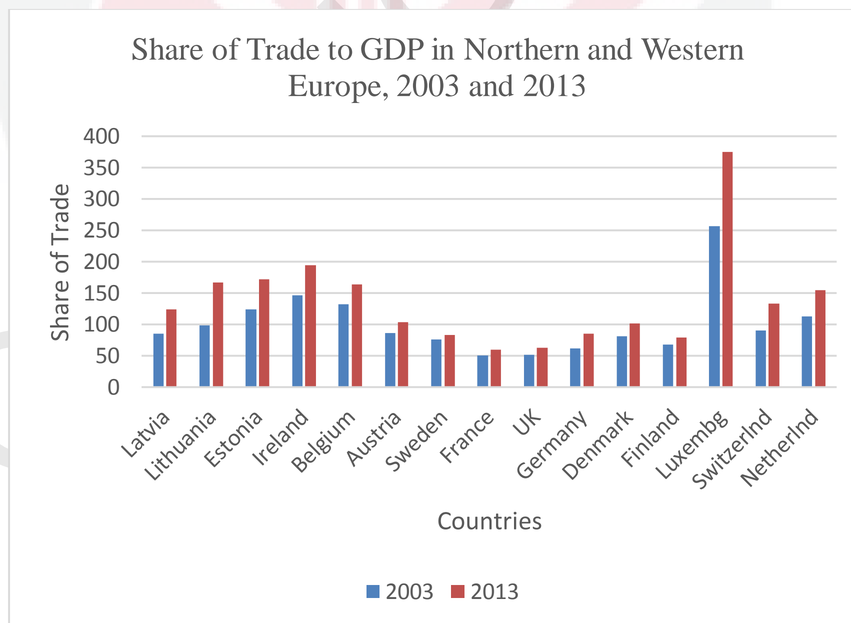

Figure 1.13 : Share of Trade to GDP for 15 of the Sampled Countries of Northern and Western Europe between 2003 and 2013

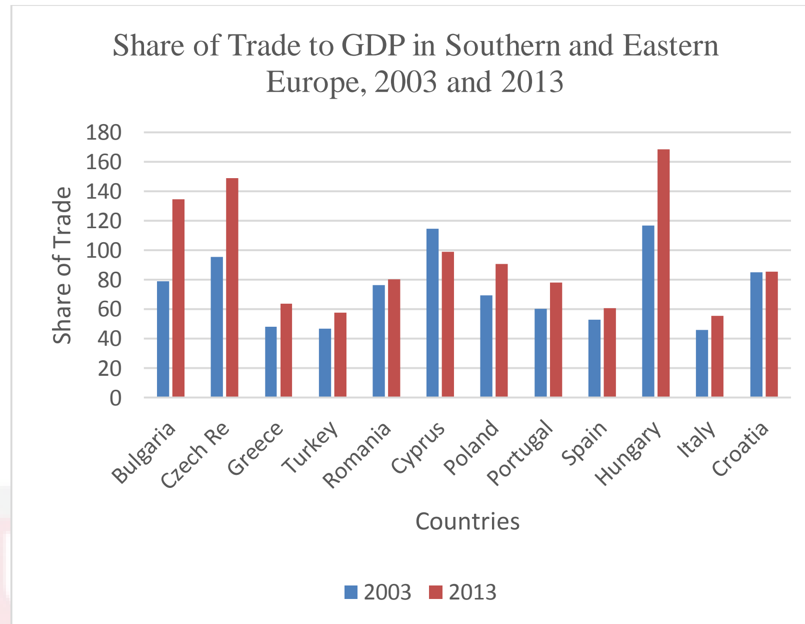

Figure 1.14 : Share of Trade to GDP for 12 of the Sampled Countries of Southern and Eastern Europe between 2003 and 2013

According to Figure 1.13 and Figure 1.14, both groups of countries used for this study have been recording more gains from trade as the share of trade to GDP increased during the period between 2003 and 2013. As a result, recently the value of trade between the EU-28 with the rest of the world stood at EUR 3.517 billion in 2015 (Eurostat, 2016). Exports and imports increased when compared to 2014, with exports experiencing a larger increase. Trade surpluses increased to EUR 64 billion in 2015 from EUR 11 billion in 2014. However, four countries - Germany, the UK, France and Italy - constitute 62.6 per cent of EU-28 exports to non-member states at 28.2 per cent, 12.9 per cent, 10.5 per cent, and 10.4 per cent, respectively (Eurostat, 2016). Trade between EU member states, on the other hand, was valued at EUR 3.070 billion in 2015, that is 71 per cent higher than the level recorded for exports to non-EU member countries. The largest increases in trade within the EU-28 were recorded for Ireland at 13.4 per cent and Croatia at 12.3 per cent. Estonia, Latvia, Belgium, and Finland as member states recorded reductions of -2.7 per cent, -2.1 per cent, -0.4 per cent, and -0.2 per cent, respectively (Eurostat, 2016).

In 2007, the WTO publicised in a report the various advantages of trade liberalisation that are frequently emphasised by experts and researchers. These include increases in exports, different job opportunities, and economic growth. It is generally agreed that trade liberalisation provides many benefits to an economy; however, it also raises a question on how these benefits can be distributed evenly. The United Nations Conference on Trade and Development (UNCTAD, 2012) stated that increases in income inequality will be a major effect a country may experience from trade liberalisation if the benefits derived are not evenly distributed. This reflects the report it issued in 1997 indicating that virtually all developing countries involved in trade liberalisation had experienced an increase in wage inequality. A study for the World

Bank by Anderson and Lomborg (2008) revealed that global income may possibly increase by more than $3 trillion annually, with $2.5 trillion going to developing countries. Yet the welfare of the masses only decreases as market integration in these countries increases. In 1999, a report by UNCTAD on trade and development indicated that due to the excess imports over exports, nearly all developing countries that undertake trade liberalisation have sustained trade deficits. The bulk of exports, precisely 82 per cent, come from the top fifth of people in rich countries (UNDP, 1999).

Therefore, increases in welfare and wellness of the people are largely determined by the manner in which income is distributed. In Europe, the liberalisation in the form of tariff reductions on primary and manufactured products has triggered a massive increase in trade gains; the share of trade to GDP in the sampled countries rose by 50 per cent between 1993 and 2014. The bulk of the increase is from the northern and western countries of the continent. Tariffs on manufactured goods declined by 54 per cent in EU-28 countries while tariffs on raw materials or primary products dropped by 59 per cent in the EU area. This enhances both domestic and foreign trade. The issue here is that if the benefits derived from trade are not evenly distributed, it may undermine the level of income inequality on the continent.

Trade between nations or regions exists due to specialisation and the relative advantage in the production of a given tradable product a region or nation has over another. After World War II, many countries embarked upon trade negotiations in the belief that trade enhances economic growth. This led to the establishment of the General Agreement on Tariffs and Trade (GATT) in 1948. WTO has replaced GATT in ensuring free trade by regulating trade barriers between countries. The Ricardian theory (1817) states that a country can specialise in the production of a commodity for which it has a relative advantage over other trading partners. In so doing, all countries stand to benefit. However, the Heckscher-Ohlin model (1919) states that it is not necessarily true that every country will benefit from trade. In this study, tariff reductions on primary and manufactured goods will also be used as a measure of trade liberalisation, as in the work of Naranpanawa et al. (2012).

The scatterplot in Figure 1.15 shows a one-on-one relationship between trade liberalisation and income inequality in Europe. The graph indicates a positive relationship between the two variables. This means that the benefits from trade liberalisation to most European countries might not have been distributed evenly amongst households or individuals in these countries. However, this is just a one-on-one, bivariate relationship and is not enough to draw an inference on the effect of trade liberalisation on income inequality, as there are other factors that also affect the distribution of income. This study has used tariff reductions on manufactured goods as a measurement for trade liberalisation, while income inequality is measured by the Gini coefficient.

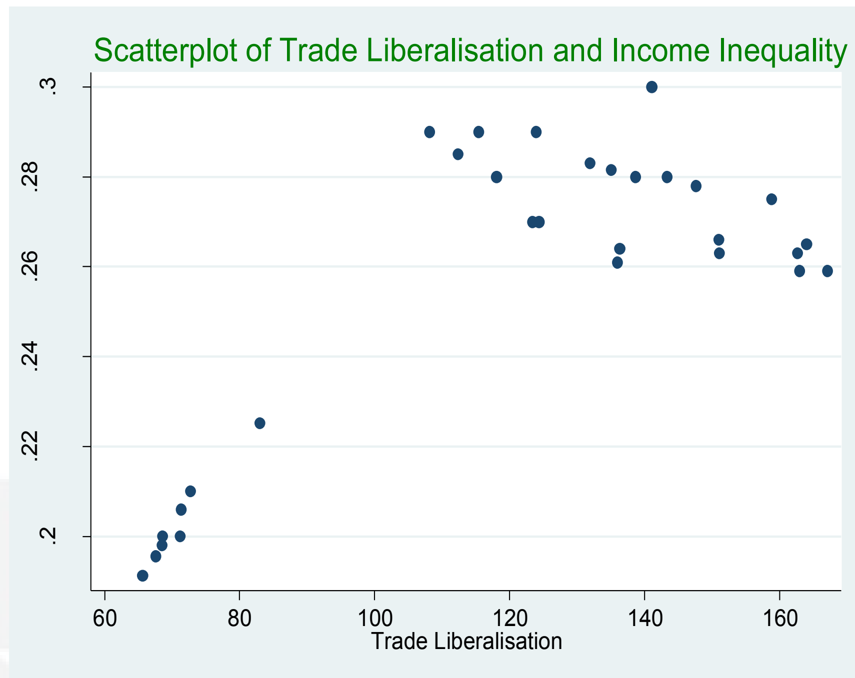

Figure 1.15 : Scatterplots for Trade Liberalisation and Income Inequality in 31 Sampled Countries of Europe

1.2.6 Financial Liberalisation

Financial institutions and financial markets are usually regulated with some restrictions. When these restrictions are eliminated, then we have a liberalised financial sector. Financial liberalisation occurs when some innovations in the financial markets are made - for example, the introduction of subprime mortgage loans. In Europe, financial markets and financial systems are quite liberalised, especially in the Nordic and Western European countries. According to the Chinn-Ito Index of financial liberalisation, which ranges from 0 to 1, all of the 17 countries employed in this study from Northern and Western Europe, with the exception of Iceland, are having an index of 1 throughout the study period. This means that countries in these parts of Europe have financial systems that are fully liberalised. In the southern and eastern parts of Europe - which are mainly referred to as emerging countries, with the exclusion of Italy Spain and Portugal - the Chinn-Ito index of financial liberalisation is less than 1 (The Chinn-Ito Index, 2015). The Chinn-Ito index measures a country's degree of capital account openness and it is based on binary dummy variables reported in the annual report on exchange arrangements and exchange restrictions (AREAER) of the IMF that codify the tabulation of restrictions on cross-border financial transactions.

The expectation of this study is that financial liberalisation, will have a negative relationship with income inequality, demonstrating that financial openness reduces the level of disparity of income distribution across the 31 sampled countries, but it might not necessarily reduce inequality of income distribution in northern and western Europe. Figure 1.16 illustrates this assumption of the negative relationship as follows:

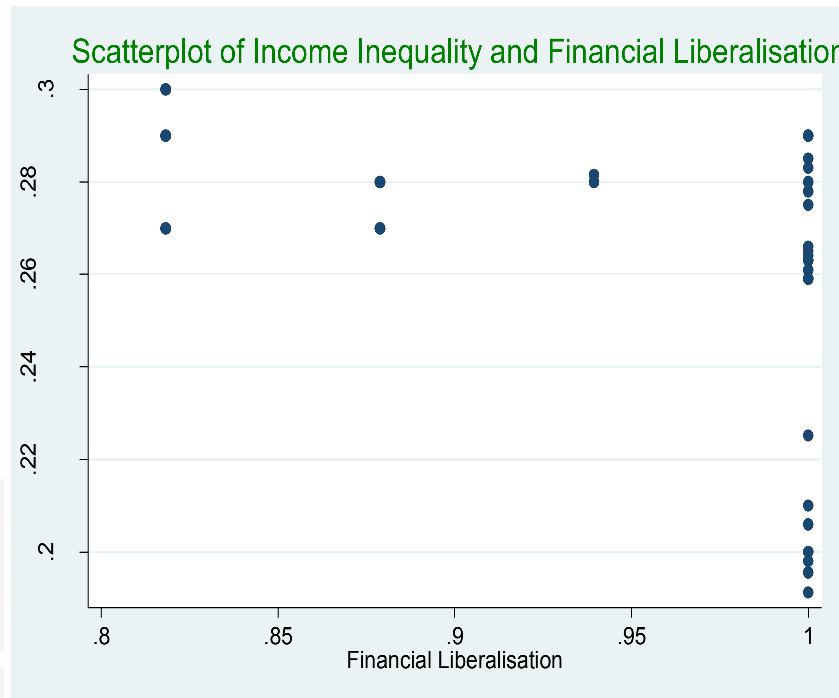

Figure 1.16 : Scatterplots of Income Inequality and Financial Liberalisation for 31 Sampled Countries of Europe

Nevertheless, too much financial liberalisation, according to researchers, may lead to inequality of income distribution. For example, in the United States, Germany, and India, financial liberalisation has steered substantial growth in income inequality (Evans, 2014). In the United States, the financial liberalisations that took place during the 1980s and 1990s have expanded financial institutions, leading to payments of high salaries and causing the non-financial sector to cut costs and raise returns, which eventually led to inequality problems in the United States. The reforms in the labour market in the 2000s in Germany, which were highly regressive, and the greater role given to financial markets in the 1990s have also led to an increase in inequality. In India, the regulation of the financial system in the 1990s, which shifted the priority programmes of financial institutions directed to rural areas towards the provision of financing to business sectors, has led to a remarkable increase in income inequality. This study uses the Chinn-Ito index as a measure of financial openness. The index measures a country's degree of capital account openness.

Findings from several studies have revealed that liberalising financial sectors to a certain level encourages inequality. The United States' financial liberalisation in the 1980s and 1990s has resulted in an increase in the income distribution gap. In Germany and India, the adoptions of financial liberalisation in the early 1990s only resulted in increases in income inequality in the 2000s (Evans, 2011). Bumann and Lensik (2013) found that further liberalisation in financially liberalised economies has a negative effect on income distribution. The findings of Ang (2009) also revealed that financial liberalisation worsens income inequality. These studies have shown that

liberalising the financial sector to a point or level beyond threshold could increase inequality.

1.2.7 Determinants of the Rule of Law

A major distinguishing feature between developed and a developing country is a strong quality institution. However, in making economic policy, considering the quality of institutions alone may not be adequate in formulating policy. It is important, therefore, to also identify the determinants of institutional quality, as are crucial to policy formulation (Rodriguez et al., 2009). The reason for this is to identify the factors responsible for a better quality of the rule of law. In this manner, both the effects and the causes of the rule of law have been incorporated in one study. Some studies have identified geographical location, tradition of the legal system, and resource endowment. These are said to be beyond the reach of economic policy and are considered less significant in measuring development. More recent studies have considered income distribution, openness, and level of education as determinants of institutional quality.

Different studies have considered different factors that determine institutional quality. For example, a study by Siba (2008) revealed that state legitimacy determines institutional quality in Sub-Saharan African countries. Dependence on foreign aid, on the other hand, erodes good governance. Other evidence on the factors that determine the quality of institutions are offered in a study by Alonso and Garcimartin (2010) in which they disclosed that a country's income per capita, distribution of income, efficacy of the system of tax, and the level of education of its population determine the quality of institutions of a country. Rodriguez (2009) found that the level of development of a country determines the level of its quality of institutions; the higher the level of development of a country, the better the quality of institutions of that country.

A study by Kandil (2009) based on six separate indicators of governance analysed the determinants of institutional quality. These determinants are measures of economic freedom, indicators of policy quality, real per capita GDP, risk rating, and the degree of openness. The findings from the study revealed that institutional quality is positively associated with real GDP growth in Middle-East and North African (MENA) nations. On the contrary, private credit and private investment growth are negatively related to institutional quality. Javed (2013) revealed that a parliamentary form of government, openness, monetary and fiscal freedom, and freedom for labour and investment and education significantly enhance institutional quality in IMF Programme countries. In this study, we consider real GDP per capita growth as the main variable that can be used to determine its effect on the quality of the rule of law in Europe. Other variables include trade openness, income inequality, education and trade openness. Figure 1.17 below reveals the scatterplots of economic growth and the rule of law. The measurement for growth is the real GDP per capita annual growth, taken from the World Development Indicator (WDI).

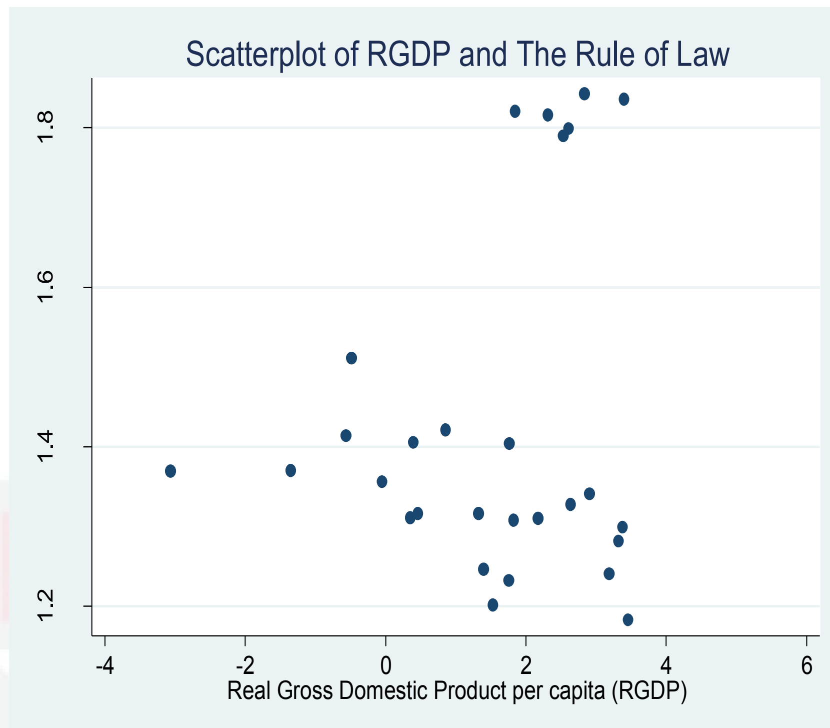

Figure 1.17 : Scatterplots for the Rule of Law and Growth in 28 Sampled Countries of Europe

The growth and trade rule of law in Figure 1.13 is negatively related to the rule of law in Europe. However, this is only a one-on-one relationship between growth and the rule of law and is not sufficient to draw a conclusion, as there are other factors that also determine the rule of law in Europe.

1.3 Problem Statements

Income inequality is one of the major problems facing by both developed and developing countries of the world. For instance, the United Kingdom is regarded as a developed nation, yet it had a Gini coefficient of 0.35 (around 35 per cent), as of 2013. The income inequality level in Europe as measured by the Gini index shows that Turkey, the United Kingdom, Greece, Portugal, and Spain have an average Gini coefficient of 0.36 (Gini index, 2015). France, Italy, and Germany also exhibited the same range of coefficient. This study aims to identify the effects of income inequality, as well as its possible causes. Even though income is not always expected to be equal due to the wavering abilities and conditions among citizens, rising inequality inevitably becomes a concern if it is accompanied by increases in crime rates and other social vices.

1.3.1 Income Inequality and Crime

Income inequality in recent years has been relatively high in most European countries (World Bank's WDI, 2016). According to theories and empirical evidence, income inequality directly influences criminal behaviours, particularly, property crime, which involves theft, vehicle theft (e.g., motorcycle) and burglary, among other things, which represent crimes commonly committed by the underprivileged, the desperate and those who are not generally considered 'professional criminals.' Although, according to the Consumer News and Business Channel (CNBC) report (2016), out of the 11 countries with the most billionaires, 5 countries are from Europe. The continent is better off in terms of GDP per capita and infrastructure compared to other regions of the world (World Fact Book, 2015). However, this region is experiencing disparity of income distribution problem.

The disparity ratio between the rich and the poor has increased by an average of 22.9 percent during the period under study in most of the sampled countries, including France, Italy, Spain, Luxembourg and Germany. This has led to the at-risk-of-poverty rate in the EU-28 rose significantly during the period under study. About one fifth or more of the population in Latvia, Serbia and Macedonia were viewed as being at-risk-of-poverty (Eurostat, 2016). One of the "benefits" of income inequality is that it splits communities and often creates social tensions, such as crime (Agnew, 1992). Within the same period, property crime in Europe has increased by 11.63 percent. Burglary and theft crimes represented the highest percentage of property crime cases in most developed and emerging European countries, in 2013. These crimes are primarily indicative of unemployment, poverty and inequality. For example, burglary and theft crimes are regarded as the most common categories of property crime in most European countries. In addition, the European commission Eurostat (2015) and the World Bank's Gini coefficient index (2016) have revealed that income disparity in the EU countries is steadily increasing. This may lead to various social unrest, especially crime, such property crime. This also calls for a question "is the rising income inequality in selected countries in Europe in recent years behind the increase in property crime rates in these European countries?" Thus, this study will investigate this relationship.

Better quality of the rule of law is expected to reduce the rate of crime, poor quality of the rule of law is expected to do the opposite. One of the functions of the rule of law, therefore, is to grant a higher level of safety and stability to social relations by reducing transaction costs. In Europe, despite the fact that the quality of institutions is relatively better when compared to other regions of the world, it differs across the continent. The Southeastern European countries have an average index of 0.1, which is quite low. In more than 13 of the sampled countries, the average of the rule of law index was less than 1, between 1996 and 2013. The average quality of the rule of law for 20 of the sampled was also very low. Poor quality of the rule of law undermines social security and often leads to social tension. Good quality of the rule of law on the other hand reduces crime rates, this study will interact income inequality and the rule of law so as to observe the how the rule of law can mitigate the effect of income

inequality on crime. It is expected that better quality of the rule of law to reduce the effect of income inequality on crime rates.

1.3.2 Trade Liberalisation and Income Inequality

Trade between countries tenders ample benefits. The simplest advantage is that countries can consume goods that cannot be produced locally. However, a more important reason for trade is that countries differ in terms of efficiency when producing certain goods. Trade allows countries to benefit from their comparative advantage by exporting the goods for which it has a comparative advantage while importing other goods, provided that there are differences in labour productivity between both countries (Ricardo, 1817). Trade is also a reflection of different factor endowments, because each country is likely to produce goods where intensive use is made of those factors (labour or capital) that are abundantly available in the country.

The World Bank's report (2008), reported that 83 percent of global income from trade liberalisation goes to developing countries. Yet, it does not warrant welfare increases of the populace but it does warrant increases for market integration. This can be explained by the fact that upon all these benefits derived by these countries from trade, still the gap or the disparity between the rich and the poor did not changed, but rather keep expanding, because most of the income from trade goes to the few privileged ones. Tariff rates have decreased by more than 50 percent across Europe and as a result, trade surpluses increased by more than 100 percent during the period under study. The questions here are: Does trade liberalization contributes to the amplification of income inequality in the European countries? How have these developments affected people's incomes and the gap between the rich and the poor within countries? This study examines the effect of trade liberalisation on income inequality in 31 European countries. The interactive effect of trade liberalisation on income inequality is also examined. This is done by interacting the rule of law and trade liberalisation. Here, it is expected that better quality of the rule of law to reduces the negative impact of trade liberalisation and income inequality. Trade liberalisation is chosen because other factors like the demographic, political, cultural and environmental factors are less relevance in determining the factors of income inequality in Europe.

1.3.3 Real GDP Per Capita and the Rule of Law

The growth of the real GDP per capita rate in percentage points has declined in 25 of the sampled countries of Europe, including the United Kingdom, France, Italy, Switzerland, Belgium and Luxembourg during the period under study, the average percentage growth rate of real GDP per capita in 25 of the sampled countries decreased by 62 percent. Perhaps this may affect the quality of the rule of law in the region. It has also been examined by this study that the quality of the rule of law has been so low during same period of study, which may call for a question to be asked, thus; does the decline in the real GDP per capita behind the current low level of the quality of the rule of law? The idea of examining the determinants of the rule of law and take real GDP per capita growth as the main explanatory variable is that poor quality of the rule

of law may undermines the rate of crime and it is equally important to identify those factors that are responsible for the poor quality of the rule of law. Hence, this explains the decision to choose economic growth and other macroeconomic variables.

1.4 Research Questions

1. Does income inequality contribute to the high rate of property crime in European countries, and is the effect the same in the presence of the rule of law?
2. Does trade liberalisation contribute to rising level of income inequality in European countries, and is the effect the same when there is better quality of the rule of law?
3. Do real GDP, trade, inequality of income and level of education affect the quality of the rule of law in European countries?

1.5 Objectives of the Study

The general objective of this study is to investigate the link between income inequality, the rule of law and crime, as well as the determinants of income inequality and the rule of law in Europe.

The specific objectives are:

1. To examine the impacts of income inequality on property crime rates in Europe by incorporating the influence of the rule of law.
2. To examine the impacts of trade liberalisation on income inequality in Europe by incorporating the influence of the rule of law.
3. To examine the effect of real GDP per capita growth on the rule of law in European countries.

1.6 Significance of the Study

1.6.1 Income Inequality and Crime

This study will incorporate variables other than income inequality that are also regarded as determinants of crime rate. The study will fill the knowledge gap on the causes of property crime, which will in turn inspire policy makers in efforts to determine how to combat property crime rates in Europe. This is done by including the rule of law and interacting the variable with income inequality, which previous studies have, not considered. Other variables include average years of education attainment, and real GDP per capita. With the insertion of the interactive indicators of income inequality and the rule of law, the findings from this study will inspire policy

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makers to look into the unintended effects of other economic indicators of property crime. The major contribution of objective one of this study is the inclusion of the rule of law and the interaction of the rule of law and income inequality. Besides the study by Vauclair and Bratanova (2016) only focused on the relationship between income inequality and the "fear of crime" using survey. Here, additional instruments will be provided to policy makers and co-researchers when making policy and when advancing research. This study will attempt to investigate the effects of the rule of law on crime rates, as the findings from the study will enable policy makers to arrive at correct decisions in improving the quality of the rule of law and in reducing the levels of crime rates in European countries.

1.6.2 Trade Liberalisation and Income Inequality

This will yield useful information to policy makers and governments on the expected consequences of trade liberalisation and will also provide a supplementary tool to curb inequality when it comes to the formulation of new trade policies. The advantages (surpluses) of trade and financial liberalisations have always been reiterated by the World Trade Organization (WTO) and the International Monetary Fund (IMF). However, these surpluses are also, not always distributed evenly, leading to inequality of income. Therefore, in creating policy in an economy, two things must be considered: first the effects of an issue, and second, the cause of the issue. This work integrates both the effects and causes of income inequality in objectives one and two, respectively, which will provide researchers, policy makers and governments with complete situations and allow for the close coordination of public policies. This is because policy recommendations in one particular area are not logical in the face of less concern for other social and economic policy areas (The European Union, 2010). This study uses trade and financial liberalisations in determining the causes of income inequality in European countries. The major contribution of objective two of this study is the inclusion of the rule of law and the interaction of the rule of law and trade liberalisation.

1.6.3 Economic Growth and the Rule of Law

The findings from the study will enable policy makers arrive at correct decisions to improve the quality of the rule of law and to reduce the levels of crime rates. It will also serve as a basis for further research

1.7 Scope of the Study

This study focuses on income inequality, institutional quality, property crime rate, trade and financial liberalisation, real GDP per capita growth, and level of Education attainment. The study is limited only to European countries, based upon the availability of data. Thirty-one countries were sampled as part of the three objectives of the study. The time period covered by the study for all three of the objectives is 22 years, spanning from 1993 to 2014.

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1.8 Organisation of the Study

This study is outlined to cover chapters One to Five. Chapter One contains the introduction to the study. The chapter encompassed the overview and the background for the study, the problem statement, research questions, objectives, and significance of the study. The chapter also discusses the research gap, the scope of the study, the motivations for conducting the study, and the organisation of the study. Chapter Two covers both a theoretical and an empirical review of literatures based on the research objectives. Chapter Three presents the methods of achieving the stated objectives of the study, the model specification for each objective, measures and sources of data, estimation techniques, and definitions of terms. Chapter Four addressed the presentation and the discussion of results which involves the interpretation of the empirical findings of the study. Chapter Five presents the conclusions and policy implications, which are provided based on the results obtained in Chapter Four.

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