Bachelor Thesis

Development of the Poorest of the South

A Quantitative Study of Co-variation between Trade and Human Development in Sub-Saharan Africa

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ABSTRACT

The purpose of the study is to investigate the relationship between two phenomena which are much-disputed and whose mechanisms and processes are interlaced with each other: trade and human development. The focus is a specific type of South-South trade; interregional trade in Sub-Saharan Africa, as well as international trade to and from Sub-Saharan Africa.

A quantitate method, using a deductive approach, was utilized in this study. The quantitative research data was accessed from the World Bank database and the human development reports of the UNDP. The data was processed in regressions and the level of co-variation (a term used in this paper as the statistical relation between data) between the variables is established and shown through the unit of measurement $r^2$.

The results tend to indicate that the level of statistical co-variation between interregional trade and international trade in various commodities and human development in Sub-Saharan Africa exist but are varied. Interregional trade does not seem to have a stronger co-variation with human development than general international trade despite the structural viewpoint of the academic field. Interestingly, the commodity traded with does have a varied impact on the level of co-variation with human development.

**Keywords:** Human development, Sub-Saharan Africa, South-South trade, interregional trade, type of commodity.
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<table>
<thead>
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<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>BRICS</td>
<td>Association of Leading Emerging Economies: Brazil, Russia, India, China and South Africa</td>
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<tr>
<td>GATT</td>
<td>General Agreement on Tariffs and Trade</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GNI</td>
<td>Gross National Income</td>
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<td>HDI</td>
<td>Human Development Index</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
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<td>SAPS</td>
<td>Structural Adjustment Programs</td>
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<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<td>UNDP</td>
<td>United Nations Development Program</td>
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Development of the Poorest of the South, Karin Strömberg
1. INTRODUCTION

When studying the subject of Peace and Development studies for a number of years, one area of interest moves me more than anything; the situation of the poorest of the poor and the populations in the absolute bottom of the world’s economies. They are sometimes referred to as “the Bottom Billion” (Collier 2008) or the Global South. Development of the poorest countries of the world is a challenge for the field of Peace and Development studies as well as for a number of policy-forming organizations, institutions and states. The concept of development is closely linked to economy, and development economy is inevitably entwined with international trade, which in turn is a vital part of the current international economic system.

Trade is relevant for human development, because as Collier states (2008), money is not everything, but is it a vital part for other types of development to occur. Patterns of international trade shape the conditions for economic growth and are thus an integral part of the process of development. Trade is crucial for all economies and poor developing economies in particular (Todaro et al. 2009, p. 668).

The focus of this paper is a specific type of South-South trade; interregional trade in Sub-Saharan Africa, as well as international trade to and from Sub-Saharan Africa.

Within the field of Peace and Development studies, there are optimists and pessimists as regards trade. There is talk of poverty levels decreasing and development levels moving upwards and Millennium Development Goals (MDGs) soon met. Optimists talk of the South and its recent successes on the world market, and the booming South-South trade as a cure-all for global poverty. However, as pointed out by Collier (2008), the image of South-South trade has a danger of being over-optimistic, as the BRICS inflate the overall perception of the current economic situation.

1.1. Research Problem

According to the pessimistic viewpoint as regards trade and development, there is risk of an excessive optimism as regards the success rate of development of the very poorest countries:

“The development problem we now face is not that of the South in general, but of the very bottom of the South, those whose plight goes missing in the positive numbers of Southern
countries that do good development-wise, such as Brazil, China and India” (Collier 2008, p. 192).

In my opinion, it is not the already “well-on-their-way” countries in the South that is interesting and that the field of development studies should focus on. It is the poorest of the poor, those who are in danger of becoming a new South when the more successful Southern economies such as the BRICS leave them behind to join the North. The research problem is thus, academically, the lack of focus on the essentials as I see it, and pragmatically, the lack of directed and niched policies and plans to help poorest countries. Thus, this paper will look at some of the poorest countries in the world and attempt to study the statistical co-variation between a number of various versions of trade and their level of human development.

1.2. Purpose of the Study
This study investigates the co-variation between various forms of trade to, from and within Sub-Saharan Africa and human development. The purpose is to elucidate the relationship between two phenomena which are much-disputed and whose mechanisms and processes are interlaced with each other. Furthermore, the intention is, based on the literature presented in chapter 2, to examine a number of specific areas of international trade: South-South trade and more specifically interregional trade in Sub-Saharan Africa. The commodities which are traded with and their effect on human development are also examined. The Human Development Index is used as the dependent variable representing level of human development. A number of variables on trade are used as the independent variables. Based on the purpose, the following specific research questions are investigated:

1. Looking at Sub-Saharan Africa, is it possible to show statistically that a specific type of South-South trade; interregional trade, has a higher level of co-variation with human development than trade in general?

2. Looking at Sub-Saharan Africa, is it possible to show statistically that the type of commodity traded with has an impact on the level of development? The co-variation between trade with the following commodities and human development will be investigated and compared to the co-variation between general merchandise trade and human development:
- Agricultural raw material
- Food
- Oil
- Ores and metals

1.3. Relevance
South-South trade and interregional trade and its effects on development have been studied at length before. This study is relevant because it will illuminate a very specific group of countries, for a very specific purpose. My intention is to deepen the understanding of the workings of trade in Sub-Saharan Africa and investigate if this kind of trade is likely to be beneficial for the developing countries which are under scrutiny. This paper may be useful for scholars within the field of Peace and Development studies but also for other people with an interest in trade, development and Sub-Saharan Africa. It may serve as a basis for further and more elaborate and extensive studies on this topic. Finally, it may act as an example of how to conduct a quantitative study within an area which is more commonly studied through qualitative methods.

1.4. Delimitations
As stated previously, the focus of this paper is a specific type of South-South trade; interregional trade in Sub-Saharan Africa, but also international trade to and from this geographical area. The case selection for this study is explained in detail in chapter 3 but in short, the number of cases that are studies is 45, all located in Sub-Saharan Africa, all but one part of the South according to the chosen definition, and all but one part of the two bottom categories of the HDI ranking list. The case selection is based on data from 2009. I have chosen to focus on (mostly) very poor countries within the South and not to include the so called BRICS except for South Africa. Furthermore, I have chosen to concentrate on two very specific research questions for the purpose of narrowing down the scope of interest to a degree that is manageable in a bachelor thesis.

1.5. Limitations
In this study, I will use official trade statistics from the World Bank and development statistics from UNDP. As I intend to focus on developing countries, and in particular very poor developing countries, the usage of official data will proce a number of problems.
Firstly, official trade statistics tend to be unreliable and give a wrongful image of the actual amount of trade occurring between countries, as informal trade is a more or less substantial part of the financial landscape in developing countries (Todaro et al. 2009, p. 760). For instance, significant levels of trade occur along borders that go unregistered. Besides informal trade, there is also the concept of illegal trade to take into consideration. Corruption within the state system is common, and smuggling of valuable and illegal goods is a known feature of the economic landscape between poor countries, not the least in Sub-Saharan Africa. Thus, it is safe to say that the value of the informal and illegal trade is considerable as well as difficult to predict. Based on this, one could argue that it is fruitless to attempt to conduct quantitative studies involving trade as regards developing countries as the results will build on wrongful and misleading data. However, as the official data is what I have access to, and as I have chosen to use a quantitative method of research, I need to accept these issues and have in mind that I study the available data, not reality. Secondly, some of the cases in this study lack data for some of the variables.

Some variables have less data than others, which shows in the regressions in the chapter on results. However, I have chosen a source for the data which is comprehensive. Thus, I have done what I can to ensure that the variables have as much data as possible, but there is obviously still a risk of biased responses (Creswell 2009, p. 151).

According to Myrdal (1974), human development is a societal concept which is difficult to trace as regards origin (Myrdal 1974, pp. 729-730). This is because development is a process which is integral with its components; the various components of human development stimulate each other, and the result is a circular co-variation. Thus, it is difficult, not to say impossible, to distinguish between the independent variable and the dependent variable. Trade may cause development to occur, but development may also cause trade to occur. In this study, various forms of trade have been chosen as the independent variables, and human development has been chosen as the dependent variable. However, an equally interesting and relevant research project would have been to study the reversed relationship of human development as the independent variable, and trade as the dependent variable. Finally, the time limit will ultimately have a great impact on the outcome of this study. I need to limit the study to the allocated time. There is so much one would like to do, and so many aspects that are interesting, but I have had to limit my scope of interest to a specific group of countries.
1.6. Disposition

In chapter 2, a background of the literature on the area of trade and development is outlined. The concept of South-South trade and the North-South divide is explained and discussed as well as international trade and the trade regime which has formed the rules of the global economy of today. Some relevant theories on trade are presented as well as the general policy debate on trade, development and South-South trade, in particular in an African perspective.

In chapter 3, the methodology for the study is outlined. The choice of method is presented and the data and variables are described and motivated. I also provide definitions for some of the concepts which I employ, such as human development, the South and Sub-Saharan Africa. The time span used in the study is also presented here. I select the cases which are studied through a system of my own design, and the parameters which make up the system are outlined and explained. Furthermore, I explain how the data has been analyzed and how it will be presented in the next chapter. The anticipated ethical issues as well as the limitations are also outlined. The chapter is concluded with a description of the sources which have been used.

In chapter 4, the results are presented and the two research questions are answered systematically.

In chapter 5, the results are analyzed and compared to the literature review and the policy debate. I attempt to draw conclusions of the significance of the results. In chapter 6, the paper is concluded and the results and analysis is reflected upon. I attempt to view the study as part of the field of development studies and contemplate on the significance and usage of the results.
2. BACKGROUND

In this chapter, I present a background on the topic of the paper and the areas which are touched upon. A literature overview has been made on the historical origin of the North-South Divide and the International Trade Regime. A number of common and relevant trade theories are presented, and the general view on trade in Africa is reviewed. Furthermore, the policy debate regarding the pros and cons of South-South trade is mapped out. Finally, literature on interregional trade in Africa in general and in Sub-Saharan Africa in particular is presented.

2.1. Historical Background of the North-South Divide

The North-South discourse and its historical, political and economic background are central for understanding the North-South divide today. Although difficult to establish exactly when the concept of the North-South divide arose, the specific North-South discourse, however, developed after the end of the Cold War, as the new political situation after the fall of the Soviet Union demanded for a new way of politically and economically conceptualizing the world (Ravenhill 2008, p. 413). Before the fall of the Soviet Union, the world was stratified into the first, second and third world. Policy makers of that time generally believed that the former second world would belong to the first world and form the North, and many former Soviet Union countries have in fact done so, depending on the definition of the North and the South (Ravenhill 2008, p 413).

So, according to Ravenhill (2008), the discourse of the South can be traced to the discourse of the third world. The term “third world” was coined by Alfred Sauvy in 1952 and is part of a structural framework of thought (Tomlinson 2003, p. 309). The first, second and third world division was first evident in the literature after the end of the Second World War and is a product of the new economic politics of that time (Ravenhill 2008, p. 412). The “third world” is more than anything a political definition of countries that were neither industrialized market economies such as the United States and Great Britain, nor planned economies such as the Soviet Union and some Eastern European countries. The third world consisted of countries that were poor and without political and economic influence, which ultimately left them outside the policy debate. Thus, the third world was (and is, as it is still in use, although much less so academically nowadays) a concept with economic, but mostly political connotations (Ravenhill 2008, p. 412).

According to Tomlinson (2003), the South and the Third World, together with a number of other
terms such as “the developing world” and “less and least developed countries”, are used normatively within the field of development studies and development economy: they lack scientific parameters and exact definitions. The South is often a fluent concept with a vague definition of those countries that are low in economic development and have historically been so for some time. Furthermore, Tomlinson (2003) argues that it is problematic to place such a large and diverse group of countries into a common category, as it signals, when mentioned in policy discussions, that the South can be regarded as a homogenous group with similar characteristics and similar problems (Tomlinson 2003, p. 308). This is also a reason for the general reluctance to provide a definition in the literature. There are few definitions that cover the entire group that scholars refer to. Besides the fact that these countries are poorer than the North and have a history of economic and political exclusion, they are very diverse and any attempt to form a common definition will be met with a number of problems. I continue this discussion in the methodology chapter later on where I provide the definition of the South that will be used in this study.

An interesting and normative rather than descriptive interpretation of the North-South divide is provided by Tomlinson (2003). According to him, the main purpose of dividing the world into the North and the South is essentially to illuminate the fact that the North dominates the economic arena and that in the South trade and economically exist under less favorable conditions. According to Tomlinson, such a discourse of division and categorization, although not always appreciated by the Southern countries themselves, helps to emphasize the existence of negative relationships on the world market (Tomlinson 2003, p. 309). The workings of the International Trade Regime and its implications for developing countries will be discussed later in this chapter.

In sum, according to the literature review of the origin of the North-South divide discourse, the concept has political and economic connotations, with a greater emphasis on the political aspects historically, and a greater emphasis on the economic aspects today. Previously, it reflected which countries that had the political power to shape the international economic arena. Today, it is used to describe countries with differing economic capacities. The concept originated from a structuralist discourse, but has been used widely by organizations, institutions, states, scholars and media since the end of the Cold War. The division can be traced as far back as to the end of the Second World War, but has possible connections to the colonial structure of the 18th and 19th century. There are few precise definitions of the concept that indicates exactly which countries to include in which category. One such definition will however be decided upon in the methodology chapter in this paper for the purpose of justifying which countries to include in the study. Finally, the North-South
division can also be used not only as a descriptive concept, but also as a normative concept to illuminate problems on the global market.

2.2. The International Trade Regime and its Impact on Development

The current international economic system is built upon the International Trade Regime, a product of liberal theory. The Regime was founded after the end of the Second World War, together with the North-South divide discourse (Tomlinson 2003, Staiger 2004 and Ravenhill 2008). According to the more politically oriented understanding of the South, they are the countries that were and are excluded from the policy debate, and those who did not have a say in the design of the international economic system (Tomlinson 2003, p. 309 and Ravenhill 2008, p. 412). The International Trade Regime has great influence over the workings of international trade, however, and the rules of the Regime decide how and if various countries benefit from trade. As the aim of this paper is to investigate how trade affects human development, it is thus interesting to consider the impact of the International Trade Regime on the South.

The rules of the International Trade Regime apply to three economic institutions; international agreements, trade, and national regulations (Ravenhill 2008, p. 138). The General Agreement on Tariffs and Trade (GATT) provided the founding framework for the regime. GATT was based on the principle of free trade and equal competition between countries. The World Trade Organization has now taken over the function as the primary policy-setting institution (Staiger 2004).

According to Ravenhill (2008), GATT has been problematic for developing countries for a number of reasons. Primarily, GATT proclaims a reduction of tariffs, which have proved more damaging for developing countries, as they suffer from the lack of protection that their young and fragile industries require (Ravenhill 2008, p. 154). Due to this, the South has since the founding of GATT attempted to apply methods of self-sufficiency in order to participate in trade as little as possible than attempt to battle with the richer countries on the world market (Ravenhill 2008, p. 155). Historically, trade has not been as beneficial for development for the South as it is has been for the North. As this is the case, it is one of the reasons why I find the connection between trade and human development interesting.

GATT’s policy in tariffs is one reason for the less profitable relationship between developing countries and international trade. According to Ravenhill, the design of international trade
agreements is another. Common for many trade agreements formed in the post-war period and up until the 1980s was that they were designed primarily by the US and Europe, and was thus beneficial mainly for them (Ravenhill 2008, p. 157). This is and has been a problem for developing countries, as they have experienced difficulties on the world market because of this.

In short, trade is - in theory - good for development, but due to the design of the international trade system, poor economies have a more difficult time than others to assimilate to the benefits.

2.3. Trade in Theory

The fundamental purpose of trade is to get access to something one does not have. Besides that, international trade is also an important means for states to earn money. Within the modern international trade system, states do not only trade with goods they cannot produce themselves, they also trade with goods they profit from not producing themselves, because they can save money by purchasing it and concentrate their production on something else. Traditional theory of international trade explains this phenomenon, and is based on the logic of comparative advantage (Todaro et al. 2009, p. 599-600).

2.3.1. Theory of Comparative Advantage

Depending on who has the lowest marginal cost of production of a certain good, countries choose to specialize in different types of production (Grimwade 1989, p. 6). It is the comparative cost of production, not the absolute cost, which determines the layout of the international trade system, according to the theory of comparative advantage. The cost of production is waged against the price that other countries are prepared to pay for the commodity. In a country with higher living costs and higher wages, goods from a country with lower wages and lower living costs will comparatively be cheaper (Grimwade 1989, p. 7).

Countries with comparatively lower living costs will benefit from selling their products on the world market, as they will be sold at a higher price there than they would in their own domestic market. Countries with comparatively higher living costs will also benefit from buying these products, as it is cheaper to buy them than to produce them within their domestic production (Grimwade 1989, p. 7).

The international trade system is ultimately a win-win situation according to the comparative
advantage theory. This theory is part of a liberalist viewpoint and is ultimately positive in its approach to trade and development. Thus, within liberal theory, trade is beneficial for the development of all states. In practice, however, some states benefit more from trade more than others, and at the expense on those who do not benefit as much. Poorer countries experience a number of drawbacks on the global market, which is why a number of critical theories on trade have developed over time as a response to the liberal, and in essence positive, theories. One of these critical structural theories is the North-South Model of Unequal Trade. This theory is central to this study.

2.3.2. North-South Model of Unequal Trade
The model explains how capital-rich countries stimulate themself into more growth, while capital-poor countries fall behind, creating a gap between rich and poor countries. The model is a critique of the neoclassical trade model, concerning the relationship between the North (developed rich countries) and the South (developing poor countries) and how international trade interacts with unequal and imperfect relationships. The model criticizes the notion that factor endowments and relative costs are constant, as they have to be if the neoclassical trade theory is to be correct (Todaro et al. 2009, p. 607). According to the North-South model of unequal trade, comparative costs of production change over time. Furthermore, there are a number of resources which are particularly important for successful development: physical capital, entrepreneurial abilities, scientific capacities, the ability to carry out technological research and development, and the upgrading of technology, and upgrading of technological skills of the work force (Todaro et al. 2009, p. 607). As the South has an abundance of (unskilled) labor, the South specializes in primary production (according to the factor endowment theory), but that is according to the North-South model of unequal trade unfavorable. Export of primary products is in general less cost effective than export of manufactured products. Specialization according to factor endowment traps poor countries in a mode of production which inhibits accumulation of capital (necessary for successful development) and distributes incomes from production and export to those few who own capital, which emphasize and worsens the pattern of unequal distribution, causing underdevelopment for the masses (Todaro et al. 2009, p. 607).

2.4. Africa and its Economic Conditions – Problems Related to Trade
As regards both trade and development, Africa is an interesting continent to study. It has many of the world’s least developed economies, it has a history of extreme political and economic exclusion,
it suffers and has suffered from a number of financial difficulties such as debt crises, uneven
distribution of wealth and inability to partake in global trade. The opinions as to why this is the case
are diverse and often depend on one’s political viewpoint (mainly liberal or structural ideologies).
However, some facts can be established about the continent.

Historically in Africa, a large proportion of production and exports have been of primary goods,
often agricultural commodities but also other natural resources (Todaro et al. 2009, p. 591). African
countries are often dependent on one or a few commodities which amount to the bulk of their GDP
(Todaro et al. 2009, p. 591). To be dependent on a single commodity creates increased sensitivity
for fluctuations on the world market relating to price and demand of the commodity in question.
The profit for primary goods is also lower compared to secondary goods or services. African
countries that are dependent on exports of primary goods also struggle with a high need to import
secondary goods and refined food products which they do not produce themselves (Todaro et al.
2009, p. 593). A relatively low profit on exports and a high need of imports (which are more
expensive) creates a vicious circle of balance of payment deficits and an increased vulnerability to
crises. This, in turn, leads to an inability to save long term and reinvest capital in the domestic
economy (ibid).

These are the main challenges that many (but not all) African countries face in terms of trade. Thus
far, scholars generally agree. What they disagree on, however, is on why this is so, and how to
remedy the problems that Africa faces in terms of lack of development. There are no direct links
between trade and human development, but as stated by Collier (2008), money is an integral part in
the process of human development, and trade is linked to economic development. I now move on to
the structural discussion on a specific type of South-South trade: interregional trade in Africa. As
one of my research questions is about this specific type of trade, I provide more detail on this.

2.5. Interregional Trade in Africa: A Background

Regionally integrated trade is another more specific type of South-South trade (UNCTAD 2009, p.
2). Interregional trade in Africa is, according to UNCTAD, an opportunity for the African
economies to diversify their trade to mutually benefit all involved and to structurally alter their
economies to gain development effects.

Historically, the share of interregional trade in Africa is considerably lower than interregional trade
in other developing regions such as Asia and South America (UNCTAD 2009, p. 21). The colonial trade patterns established in Africa is believed to be a contributing factor for this (UNCTAD 2009, pp. 21-22). In the 1980s, the situation started to shift and interregional trade in Africa began to increase compared to other types of trade. This had, according to UNCTAD its reasons in two major events; first, the end of Apartheid in South Africa, which resulted in an increase in trade between South Africa and the rest of Africa, and second, the SAPS. Although structural adjustment programs caused a number of economic and social problems for Africa, they also contributed to opening up African markets, which made it possible for African countries to trade with each other (UNCTAD 2009, pp. 22-23).

Interregional trade in Africa consists of about 10 percent of Africa’s total trade (UNCTAD 2009, p. 23). The growth rate of interregional trade within Sub-Saharan Africa has been significantly higher from 1960 to 2004 than the rate in North Africa, which is rather surprising. The UNCTAD report suggests that the linguistic and cultural similarities of Northern Africa should facilitate interregional trade, but this has not been the case (UNCTAD report 2009, p. 23). This is an interesting phenomenon which contributed to my decision to focus on Sub-Saharan Africa in this study.

How then, will regional trade in Africa more specifically contribute to development? After the removal of trade barriers between countries in Africa, low-cost producers within the region will have access to a larger market and can lower their production costs even more through advantages of economies-of-scale (UNCTAD 2009, p. 18). Consumers in the region will benefit from lower prices on commodities, and consumption will go up. Areas that produce more expensive goods will be able to export to low-income areas, as the low-income areas will become richer as they too will be able to expand their export. There is a win-win situation. Today, however, trade barriers between African countries are generally higher than between Africa and the North in general, which naturally makes interregional trade difficult (UNCTAD 2009, p. 18).

2.5.1. Interregional Trade in Sub-Saharan Africa

Sub-Saharan African countries dominate the interregional African trade sector (UNCTAD 2009, p. 27). South Africa is regarded as a force of growth, spurring on economic growth in surrounding countries. The positive effect of good neighbors on trade patterns is highlighted in the report (UNCTAD report 2009, p. 34). If one country is successful in terms of trade and development, so are its neighbors to a higher extent. South Africa and Botswana in Sub-Saharan Africa has thus a
positive still-over effect on its Sub-Saharan neighbors, which is an explanation to the more favorable (from a structural point of view) trade patterns in the Southern part of Africa as opposed the Northern part. Paradoxically, the spill-over effect is strengthened through the general lack of efficient infrastructure (UNCTAD 2009, p.34). Transportation of traded goods over large distances is due to this expensive, especially if the goods must travel by road. Thus, land-locked countries in particular will strive to trade with neighbors if possible in order to keep transport costs down. This will result in a concentration of trade within limited areas, as seen in Sub-Saharan Africa (UNCTAD 2009, p. 34).

Below follows an outline of the policy debate on the subject of development of the South and South-South trade.

2.6. The Policy Debate on Trade and Development

The debate on trade and development is large and varied. It is, however, possible to roughly divide the field into a structural and a liberal side, although it is sometimes not a clear-cut case that should belong where; instead, the field is more like a linear scale with structuralism at one end and liberalism at the other end rather than a clear division of opposing sides. The following section will outline some of the general arguments of the field on how to achieve development for the South, divided into trade liberalists and trade structuralists. A liberal viewpoint is in essence positive towards trade and its potential as a tool for development. A structural viewpoint is a critique of the liberal viewpoint. Please see the previous sections on the Theory of Comparative Advantage and the North-South Model of Unequal Trade for some general traits of liberal and structural viewpoint.

The subject of trade and development is a contested one, and heated discussions have occurred on the subject for a long time. An early and famous discussion is the one between Lewis and Riedel (Bredesen and Strobel 1991, p. 51). Lewis was pessimistic of the market liberal viewpoint of trade between developed countries and less developed countries leading to economic growth for all parties. Instead, export of primary goods by less developed countries to developed countries was beneficial for the growth of developed countries, and not so much of less developed countries (Bredesen and Strobel 1991, p. 51). Thus, the argument of Lewis was that North-South trade generated growth, but not necessarily for the South as much as for the North. Riedel, on the other hand, contested Lewis’ results and suggested that no such stable relationship between export of primary products and economic growth could be found (Bredesen and Strobel 1991, p. 51). Riedel
was thus not convinced that a structural pattern could be proved to exist. These two scholars, in essence, represent the two sides in this debate. Lewis is structural and Strobel is liberal.

2.6.1. Liberal Point of View on Trade and Development

The World Bank is an example of an institution which has gone from a thoroughly liberal approach to a more moderate and inclusive version of its former policy. For instance, according to the newly published policy report by Behar and Crivillé (2011), for a developing country, its level of bilateral trade will rise regardless of whom the country signs a bilateral trade agreement with (and thus whomever it later trades with). However, South-South bilateral trade agreements tend to increase the total share of trade more that North-South bilateral trade agreements do (Behar and Crivillé 2011, p. 16).

Even though their more rigid liberal point of departure of the 70s and 80s has been abandoned, the IMF and the World Bank together with the WTO stands to maintain a free world market (Geithner and Nankani 2002, p. 4). These institutions represent the market liberal point of departure of today, producing a development policy with a more liberal angle compared to for instance UNCTAD (which has a clear structural discourse). In their joint report (by Geithner and Nankani 2002), the IMF and the World Bank argues that integration into the entire world market and participation in international trade will increase economic growth and reduce poverty for the poorest countries (Geithner and Nankani 2002, p. 4). The organizations are critical of protectionist measures, as they see it as disruptive for the free market. Their main method for increased development of the South is to take measures to improve market access for exports from the South. The report by Geithner and Nankani particularly emphasizes the importance of OECD members to reduce their protectionist measures on agricultural products and textiles, as those markets are heavily distorted and because many countries in the South are dependent on those markets (Geithner and Nankani 2002, p. 8-9).

According to the OECD (2006), far-reaching trade liberalization is the most effective way for developing countries to increase their rate of development. Developing countries would benefit massively from opening up their markets for the world market in general and also “boost” South-South trade (OECD 2006, p. 1). The OECD paper states that about 6 % of the total world trade is South-South trade, which according to them shows that there is considerable scope for improvement of that particular branch. They also, however, state that the bulk of the South-South trade is
happening between the upper layer of the South, and not in the poorest of the South (OECD 2006, p 1). The OECD does not provide a varied policy depending on where on the income scale a country is situated, which according to the structural point of departure is very important, and a key explanation as to why development policy works for some countries and regions, but not for others.

2.6.2. Structural Point of View on Trade and Development

According to Reuveny and Thompton, systemic leadership (and cooperation/interdependence with the leader) is very important for economic success, which explains why the North has succeeded better in achieving economic growth than the South (2008, p. 597). As the system leaders (Great Britain and the United States) are part of the North, the growth rate and economic behavior of them are reflected in the growth rate and economic behavior of the rest of the North, while a similar pattern cannot be seen among the South (Reuveny of Thompton 2008, p. 598-599). The question of what is produced/exported and what is most profitable to produce/export is also central for explaining different economic growth patterns of the North and the South (Reuveny and Thompton 2008, p. 600).

Thus, the structural argument of Reuveny and Thompton (2008) is that the gap between the North and the South is caused by the fact that the economic policy and behavior of the Northern hegemonic leader is mirrored by other Northern economies, and that technology, policy and knowledge developed by the hegemonic leader is more likely to succeed in the North than in the South. The advantages of these elements are not spread to the South, hence the gap in economic growth and the current situation with poverty and under-development of the South.

The question of production and what is traded is vital. In the South, labor-intensive sectors are stimulated while technology-intensive sectors are stimulated in the North. According to Reuveny and Thompton (2008), this leads to a higher productivity and a more profitable trade for the North, which explains the higher growth rate over time.

According to the structural viewpoint, the gap between the North and the South is to a large extent caused by differences in technology (Reuveny and Thompton 2008, p. 601). This structural interpretation of the lack of economic growth in the South implies that the North-South divide and the gap between the rich and the poor will not go away until the structure which keeps the system in place is changed. The gap may decrease temporarily, caused by a comparatively successful
development policy in the South (Reuveny and Thompton 2008, p. 602). However, as soon as the
next great technological innovation of the North arrives, the gap will increase again, as the growth
of the North will surge, while the growth of the South will stay comparatively stagnant (Reuveny

These particular scholars point at a number of specific structures that hampers successful
development of the South. The essence is, however, similar to all structural arguments; that the
structure of the international market matters for economic growth and development, and that the
pre-conditions for economic growth are very different depending on structural and hierarchal
position; that is, where a country is positioned on the GDP per capita-scale. Thus, development
policy must have structural awareness.

The structural view point above explains why many institutions, policy-makers and scholars are
hopeful of South-South trade. Through South-South trade, the structure that hampers development
of the South can be avoided.

The work of UNCTAD has an outspoken structural viewpoint. In a report from 2010, the issue of
African development is discussed (UNCTAD 2010). There are several arguments in favor of an
increased South-South economic partnership in Africa. For examples, it may increase the overall
bargaining power of the African region vis à vis the industrial world on the global market. This will
structurally increase the power of the South in global financial matters and within policy-forming
institutions (UNCTAD 2010, p. 11). However, according to UNCTAD (2010), South-South trade in
Africa must be designed in a way that breaks with the trade patterns of the traditional North-South
trade. South-South trade does not per se lead to improved development; structural change is the key
factor, and South-South trade is a tool to reach that change (UNCTAD 2010, p. 13).

The structural pattern that the UNCTAD report (2010) refers to more specifically is, among other
things, the diversity of exports. For South-South trade to have maximum benefits for Africa,
African countries should take this opportunity to diversify their export sector, and strengthen their
capacity for capital accumulation, especially through technological progress (UNCTAD 2010, pp.
13 and 102).

I have now outlined the general policy debate as regards trade and development and its connection
to South-South trade, as well as some specific opinions about African trade.
3. METHODOLOGY

This paper employs a deductive approach, using a quantitative method to collect the available data which is then analyzed. Variables from two reliable sources, the World Bank and the UNDP, are singled out and data from those variables is gathered. Software developed for analysis of data, PASW Statistics 18, is then used to create regressions between two variables at a time. The result from these regressions is based on the theoretical framework presented in the previous chapter. The results enable me to talk about specific trends within the group of countries (population) chosen as subjects in this paper. Definitions of the concepts used as well as the choice of variables and population are discussed later in this chapter.

3.1. Choice of Method

The design of the research problem necessitates the usage of a quantitative method to answer my research questions. As stated by Creswell, “if the problem calls for (a) the identification of factors that influence an outcome… a quantitative approach is best” (Creswell 2009, p. 18). Had the area of interest been unexplored and/or if the study had needed to be exploratory in its approach then a qualitative method would have been more appropriate. Although my particular research problem is not very well explored (hence the decision to do this study), the economies of the Sub-Saharan African countries are, which make a qualitative method less useful. Finally, as I intend to use a deductive approach to my research, the quantitative research is well suited for that way of approaching the research questions (Creswell 2009, p. 18).

3.2. Data and Variables

The data used in this study is collected from the existing data bases of UNDP and the World Bank. My material is gathered in this manner for a number of reasons. The main reason is the accessibility of the data from the above mentioned sources. The format of the data from the World Bank is easy to convert into excel files and PASW Statistics files. Aiming to use data that is as reliable as possible, I selected a source that would be able to provide the most adequate number of variables needed. Had I used data and variables from many different sources, there might have been problems with compatibility; consequently, the results would have been misleading. By using variables from the same source, it is also more likely that the data is generated with similar methods: this is turn contributes to a more reliable result. Other sources of data were rejected in favor of the World
Bank’s data as it is, in my viewpoint, always more sound to use data that is as distorted as possible.

3.2.1. Independent Variables
The following variables were gathered from the World Bank data base and were used as independent variables. Definitions of these variables can be found in the annex.

- Merchandise trade (% of GDP)
- Merchandise exports (current US$)
- Merchandise imports (current US$)
- Merchandise exports to developing economies in Sub-Saharan Africa (% of merchandise exports)
- Merchandise imports from developing economies in Sub-Saharan Africa (% of merchandise imports)
- Agricultural raw material export (% of merchandise export)
- Agricultural raw material import (% of merchandise import)
- Food export (% of merchandise export)
- Food import (% of merchandise import)
- Oil rents (% of GDP)
- Ores and metals export (% of merchandise export)
- Ores and metals import (% of merchandise import)

Within quantitative research, the concept of cause and effect is central. This assumes that one variable (the independent one) causes the other (the dependent one) to occur (Creswell 2009, p. 50). However, within social science, there is no definitive way of proving an absolute co-variation between two variables, especially not in a quantitative study. The regressions in this study will thus only manage to establish a probable co-variation (Creswell 2009, p. 50). At best, I can hope to claim that one of the independent variables in the bullet list above probably causes the dependent variable (human development) to occur. I cannot say that there is an absolute co-variation, as there may be a false connection between the variables that is caused by a number of underlying mechanisms.

Throughout this paper, I will be using the term “co-variation” to describe the statistical connection
between two variables. With co-variation, or level of co-variation, I mean the statistical connection that is possible to see when comparing two variables in a regression. Whether or not there is an actual co-variation is more difficult to establish. As stated by Creswell (2009), when using statistics, one can hope to show tendencies, trends, indications, and such. I hope to be able to see a general picture of the co-variation between human development in 1990 and various other variables in 2009. However, to explore the underlying mechanisms and reasons for a specific quantitative co-variation, in-depth studies of a qualitative nature, and a detailed review of the available data is necessary. Given that I am aware of the limitations of the data that is used in this study and the possible criticisms that may be leveled to my including/excluding certain countries or certain years, I base my findings on statistical regressions calculated in this paper. As such, I use the term co-variation defined as being one thing causing another but am, nevertheless, aware that this may not be the case beyond the scope of this study.

3.2.2. The Dependent Variable: Human Development
There are a number of different units that one may choose to represent. GDP per capita is often used, particularly by economic scholars. That is also the variable used by the World Bank when they have created the independent variables in the list above. I find it necessary, however, to find another unit of measurement that includes more than just economics as I have chosen to define development according to the reasoning of Myrdal (1974).

Myrdal offers a definition of development which has been widely accepted and applied within the field of Peace and Development studies. Myrdal defines development as “the movement upward of the entire social system” (Myrdal 1974, p. 729). According to Myrdal, his definition is suitable for the field of study as it incorporates other variables into the concept besides economic factors, such as non-economic consumption; consumption of education, health, societal distribution of power, formation and design of institutions, both economic, cultural and social ones (Myrdal 1974, pp. 729-730). Thus, the concept of development reaches far beyond the economic realm, and policy formation for developmental purposes must also stretch beyond the economic sphere in order to be successful. This is a suitable definition of development for this study, as the area of interest is human development rather than economic development.

Similar to Myrdal, Ravenhill (2008) understands the concept of development as a process of structural transformation. Economic growth is a component in this transformation, but other elements are equally important, such as human development (Ravenhill 2008, p. 411). Economic
growth per se does not necessarily generate an improvement of the living standards of the general public, which is what development according to Ravenhill is all about. Economic development and human development must be incorporated into each other in order for this to happen.

The different societal, economic and cultural components which make up development according to the definitions of Myrdal and Ravenhill often have a causal relationship where it is difficult to decide in which direction the co-variation is going (Myrdal 1974, p. 730). This is referred to as a circular co-variation by Myrdal (1974), and common between variables that are part of the development process. It is thus likely that there will be a circular co-variation between the variables in this study, as they are part of the same process and together form a structure which is interdependent of itself. The argument of circular co-variation will be taken into consideration in the chapter on analysis of the results.

The Human Development Index (HDI) developed by UNDP is an index that measures human development rather than economic development. It correlates with development as defined by Myrdal (1974) and Ravenhill (2008) to a higher degree than just purely economic units of measurement such as GDP or Gross National Income (GNI). HDI will consistently be the dependent variable in the regressions used in this paper as the aim in all my research questions is to investigate the effect that the independent variables have on human development.

3.2.3. Definition of the Human Development Index

HDI was introduced by the UNDP in 1990, and used in the first Human Development Report from the same year (UNDP 2011a). The new index for measuring development was created through combining dimensions of health, living standard and education. The new units of measurement were meant to depict development as social as well as economic phenomena (UNDP 2011a). HDI has been improved since its creation in 1990. Since 2006, a disaggregated version of HDI is used to avoid those gaps and disparities within a country’s population which previously gave a wrongful or confusing result (UNDP 2011a). That means that the use of HDI from before and after 2006 may give a somewhat inconsistent result. This is something which one needs to be highlighted when using HDI over time. See figure 1 for an outline of the HDI used in this paper.
3.2.4. Relation between Research Questions and Variables

According to Creswell (2009, pp. 150), it is useful for the purpose of clarity to relate the variables to the research questions in a table, especially if the variables are many. Please see figure 2 for an outline of the research questions and of the variables that will be used to answer them.

**Figure 2**

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Name of Variable</th>
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<tbody>
<tr>
<td><strong>Question 1</strong>: Looking at Sub-Saharan Africa, is it possible to show statistically that a specific type of South-South trade, interregional trade, has a higher level of co-variation with human development than trade in general?</td>
<td>Independent variables:</td>
</tr>
<tr>
<td></td>
<td>• GDP (current US$)</td>
</tr>
<tr>
<td></td>
<td>• Merchandise trade (% of GDP)</td>
</tr>
<tr>
<td></td>
<td>• Merchandise exports (current US$)</td>
</tr>
<tr>
<td></td>
<td>• Merchandise imports (current US$)</td>
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<tr>
<td></td>
<td>• Merchandise exports to developing economies in Sub-Saharan Africa (% of merchandise exports)</td>
</tr>
<tr>
<td></td>
<td>• Merchandise imports from developing economies in Sub-Saharan Africa (% of merchandise imports)</td>
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<tr>
<td></td>
<td>Dependent variable:</td>
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<tr>
<td></td>
<td>• HDI value</td>
</tr>
</tbody>
</table>
**Question 2:** Looking at Sub-Saharan Africa, is it possible to show statistically that the type of commodity traded with has an impact on the level of development? The co-variation between trade with the following commodities and human development will be investigated and compared to the co-variation between general merchandise trade and human development:

- Agricultural raw material
- Food
- Oil
- Ores and metals

**Independent variables:**

- Agricultural raw materials exports (% of merchandise exports)
- Agricultural raw materials imports (% of merchandise imports)
- Food exports (% of merchandise exports)
- Food imports (% of merchandise imports)
- Oil rents (% of GDP)
- Ores and metals exports (% of merchandise exports)
- Ores and metals imports (% of merchandise imports)

**Dependent variable:**

- HDI value

### 3.3. Time Span

Data has been collected from two points in time: from 2009, which represents the present time, and from 1990. The year 1990 is chosen for two primary reasons. Firstly, the time span between 1990 and 2009 is (almost) 20 years which is equivalent to a generation; hence, an appropriate time span to check for delayed effects between the independent variables and human development. Secondly, 1990 is the year when UNDP published their first Development Report, and the year when HDI (variable for this study) was launched (UNDP 2011) to show human development. Therefore, I go as far back as possible whilst still using HDI as my variable for human development. The year 2009 represents the present as that is the most recent year from which the data is as complete as possible. One must allow a certain amount of time for data to be gathered, processed and published, which means that data from 2012 will not be available for quite some time.

#### 3.3.1. Discussion on Issues with the Time Span

There are always pros and cons for different time spans. I have chosen to use a comparatively long time span due to the nature of human development. If I had focused on primarily economic development, I would have chosen a shorter time span, as trade has an almost immediate effect on economic growth, or lack thereof, while the societal elements inherent in human development require a longer period of time to occur as a result of trade. Besides economic growth, the measurement of human development is compiled of a factor of education and one on health care. The actual development, the effect of an increased attendance in the education system, or an
improved general health status due to an expansion of the universal health care system, takes place when people start to benefit from these stately measures of provision. Thus, for schooling to benefit an individual, a number of years must elapse from the point of provision to when the education can be fully applied, e.g. in a profession. Similarly, the developmental benefits of a health care system may take many years to fully expand, e.g. when a child is saved from dying as an infant, its contribution to society will occur much later, most likely when that individual reach adulthood, or when the life-long reduction in income for that individual due to stunting is absent. Thus, a 19 years’ time span between the independent variable and the dependent variable makes sense from a human development perspective.

From other perspectives, the chose time span may be less suitable. From an economic and political macro-perspective, a lot of things have happened to the Sub-Saharan countries since 1990, e.g. several of the countries have found and started to exploit oil and other natural resources. This naturally alters the economic and political outlook for these countries, and through that changes the possibilities for human development. Thus, an occurrence in 1998 may alter the economic climate in a country, which has a greater effect on the level of human development in 2009 more than one of the variables in 1990 has. Despite this, I maintain that 19 years is an appropriate time span for this study due to its nature as primarily interested in human development rather than anything else. That said, it would be interesting to expand this study on another occasion and do a time line of regressions where the independent variables from 1990, 1991, 1992, 1993, 1994 and so on up until 2008 is tested against the dependent variable from 2009. That way, one could see what happens over time, and distinguish specific years had a greater effect on human development than others, and do a mixed method study by qualitatively explore what occurred during those specific years. The qualitative study could then potentially be used to form appropriate development policies.

3.4. Case Population

The countries that comprise the case population in this study were selected through a three-parameter system which incorporates geographical and/or political stratification, economic development and human development. A country was deemed suitable if falling within the first parameter (the geographical/political one), and at least within one of the two other (economic and/or human development).

My population from which the data was drawn consisted of 45 countries, all from a part of sub-
Saharan Africa. I concentrated the study to a geographically defined area for several reasons. Firstly, I am interested in the poorest part of the South, as the South is, by anyone’s standards, a diverse group of countries with a broad spectrum of characteristics. Secondly, a large part of the countries at the bottom of the South (explained shortly) are Sub-Saharan African countries. Thirdly, geography is an interesting aspect of development and a firmly established component of the possibilities of development within the literature on the subject. For the purpose of making my country selection clear and the choice valid, I will now guide the reader through the process step by step.

To begin with, I need to define which countries constitute the South today. For that purpose, a literature overview was made to determine the general definition of the North and the South and the historical background of the origin of the concept within the field of development studies and economics. Below follows an outline of the literature and a general definition of the concept.

3.4.1. Definitions of the South

Within the field of development studies and economics, there are many definitions of the South and interpretations of which countries to include in the concept. According to Reuveney and Thompson (2008, p. 591), there are no established tradition on how to define the South and it is up to each author to choose an appropriate definition. Some scholars base their classification of countries belonging to the North or the South on their level of industrialization or on how long they have been involved in the process of industrialization (Reuveney and Thompson 2008, p. 591). Others divide countries into the North and the South based on economic or even military capacities. Ravenhill (2008) defines the South as “countries which do not have the opportunity to play a significant role in global rule-making and policy formulation” and use the South as a less politically charged term than “the third world”, although the two terms are similar and would possibly embody the same countries (Ravenhill 2008, p. 411). Thus, Ravenhill’s definition of the South is based on politics and power.

Reuveney and Thompton (2008) use the level of GDP per capita to decide whether a country should be regarded as belonging to the South or the North. If the GDP per capita of a country is equal or less than 25 % of the GDP per capita of the country with the highest GDP per capita rating, it belongs to the South. Thus, as the GDP per capita for different countries varies over time, the group classified as the South is flexible. The definition provided by Reuveney and Thompson is entirely
Based on economics in connection with population. I have chosen the Reuveny and Thompson definition of the South to be used throughout this paper.

Based on the method of Reuveny and Thompson and applied on statistics from the World Bank (2012p), the countries that make up the North in 2009 are a total of 42 countries and are as follows (in order of GDP per capita, current US $, richest country first):

**Figure 3**

<table>
<thead>
<tr>
<th>Countries in the North</th>
<th>22. United Kingdom</th>
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</thead>
<tbody>
<tr>
<td>1. Luxembourg</td>
<td>23. Equatorial Guinea</td>
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<tr>
<td>2. Qatar</td>
<td>24. France</td>
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<tr>
<td>3. Norway</td>
<td>25. Italy</td>
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<tr>
<td>4. Macao SAR, China</td>
<td>26. Spain</td>
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<td>5. Singapore</td>
<td>27. Japan</td>
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<tr>
<td>6. United Arab Emirates</td>
<td>28. Cyprus</td>
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<tr>
<td>7. Brunei Darussalam</td>
<td>29. New Zealand</td>
</tr>
<tr>
<td>8. United States</td>
<td>30. Greece</td>
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<tr>
<td>9. Switzerland</td>
<td>31. Slovenia</td>
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<tr>
<td>10. Hong Kong SAR, China</td>
<td>32. Israel</td>
</tr>
<tr>
<td>12. Ireland</td>
<td>34. Oman</td>
</tr>
<tr>
<td>13. Australia</td>
<td>35. Trinidad and Tobago</td>
</tr>
<tr>
<td>14. Austria</td>
<td>36. Czech Republic</td>
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<tr>
<td>15. Canada</td>
<td>37. Malta</td>
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<tr>
<td>16. Denmark</td>
<td>38. The Bahamas</td>
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<tr>
<td>17. Sweden</td>
<td>39. Portugal</td>
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<tr>
<td>18. Iceland</td>
<td>40. Slovak Republic</td>
</tr>
<tr>
<td>20. Germany</td>
<td>42. Antigua and Barbuda</td>
</tr>
</tbody>
</table>

The countries that comprise the South are a total of 141 countries and are as follows in order of GDP per capita current US $, beginning with the richest country (World Bank 2012p):
### Countries in the South

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<table>
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<tbody>
<tr>
<td>1</td>
<td>Seychelles</td>
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<td>2</td>
<td>Croatia</td>
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<td>3</td>
<td>Hungary</td>
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<td>4</td>
<td>Estonia</td>
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<td>5</td>
<td>Barbados</td>
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<td>6</td>
<td>Poland</td>
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<td>7</td>
<td>Russian Federation</td>
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<tr>
<td>8</td>
<td>St. Kitts and Nevis</td>
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<td>9</td>
<td>Lithuania</td>
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<td>10</td>
<td>Libya</td>
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<td>Latvia</td>
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<td>12</td>
<td>Argentina</td>
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<td>13</td>
<td>Gabon</td>
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<tr>
<td>14</td>
<td>Chile</td>
</tr>
<tr>
<td>15</td>
<td>Turkey</td>
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<tr>
<td>16</td>
<td>Romania</td>
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<tr>
<td>17</td>
<td>Malaysia</td>
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<tr>
<td>18</td>
<td>Mexico</td>
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<td>19</td>
<td>Bulgaria</td>
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<td>20</td>
<td>Palau</td>
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<td>22</td>
<td>Lebanon</td>
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<tr>
<td>23</td>
<td>Panama</td>
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<tr>
<td>24</td>
<td>Mauritius</td>
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<tr>
<td>25</td>
<td>Botswana</td>
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<tr>
<td>27</td>
<td>Belarus</td>
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<tr>
<td>28</td>
<td>Venezuela, RB</td>
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<tr>
<td>29</td>
<td>Dominica</td>
</tr>
<tr>
<td>30</td>
<td>Iran, Islamic Rep.</td>
</tr>
<tr>
<td>31</td>
<td>Kazakhstan</td>
</tr>
<tr>
<td>32. Costa Rica</td>
<td>103. Senegal</td>
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<tr>
<td>---------------</td>
<td>------------</td>
</tr>
<tr>
<td>33. Macedonia, FYR</td>
<td>104. Mauritania</td>
</tr>
<tr>
<td>34. St. Vincent n. the Gren.</td>
<td>105. Cote d'Ivoire</td>
</tr>
<tr>
<td>35. Serbia</td>
<td>106. Sao Tome and Principe</td>
</tr>
<tr>
<td>36. Grenada</td>
<td>107. Myanmar</td>
</tr>
<tr>
<td>37. St. Lucia</td>
<td>108. Kenya</td>
</tr>
<tr>
<td>38. Brazil</td>
<td>109. Benin</td>
</tr>
<tr>
<td>39. South Africa</td>
<td>110. Bangladesh</td>
</tr>
<tr>
<td>40. Azerbaijan</td>
<td>111. Ghana</td>
</tr>
<tr>
<td>41. Tunisia</td>
<td>112. Lesotho</td>
</tr>
<tr>
<td>42. Colombia</td>
<td>113. Zambia</td>
</tr>
<tr>
<td>43. Peru</td>
<td>114. The Gambia</td>
</tr>
<tr>
<td>44. Dominican Republic</td>
<td>115. Tanzania</td>
</tr>
<tr>
<td>45. Albania</td>
<td>116. Chad</td>
</tr>
<tr>
<td>46. Bosnia and Herzegovina</td>
<td>117. Uganda</td>
</tr>
<tr>
<td>47. Algeria</td>
<td>118. Haiti</td>
</tr>
<tr>
<td>48. Thailand</td>
<td>119. Burkina Faso</td>
</tr>
<tr>
<td>49. Maldives</td>
<td>120. Guinea-Bissau</td>
</tr>
<tr>
<td>50. Ecuador</td>
<td>121. Nepal</td>
</tr>
<tr>
<td>51. Jamaica</td>
<td>122. Afghanistan</td>
</tr>
<tr>
<td>52. Suriname</td>
<td>123. Rwanda</td>
</tr>
<tr>
<td>53. Turkmenistan</td>
<td>124. Comoros</td>
</tr>
<tr>
<td>54. China</td>
<td>125. Guinea</td>
</tr>
<tr>
<td>55. Belize</td>
<td>126. Mali</td>
</tr>
<tr>
<td>56. El Salvador</td>
<td>127. Togo</td>
</tr>
<tr>
<td>57. Ukraine</td>
<td>128. Madagascar</td>
</tr>
<tr>
<td>58. Namibia</td>
<td>129. Ethiopia</td>
</tr>
<tr>
<td>59. Angola</td>
<td>130. Mozambique</td>
</tr>
<tr>
<td>60. Egypt, Arab Rep.</td>
<td>131. Timor-Leste</td>
</tr>
<tr>
<td>61. Jordan</td>
<td>132. Malawi</td>
</tr>
<tr>
<td>62. Armenia</td>
<td>133. Sierra Leone</td>
</tr>
<tr>
<td>63. Syrian Arab Republic</td>
<td>134. Zimbabwe</td>
</tr>
</tbody>
</table>
According to this definition of the North and the South, 77% of the countries of the world belong to the South and 23% belong to the North. As seen in figure 1 and 2, this definition of the North-South divide is not geographical but rather economic in its nature. Countries belonging to the South according to level of GDP per capita may be geographically situated anywhere on the globe. The 141 countries in figure 2 represent the “Global South”, a concept which is discussed by many scholars and important actors within the field of development studies, for instance Collier (2008) and the United Nations Fund for International Partnerships (UN 2005). It is logical for this study to use a definition of the North and the South that is based on the countries’ level of economic development rather than anything else, as development is the central concept of this study, and because the level of development is in a continuous state of flux.

Having established which countries are to be regarded as the North and which to be regarded as the South, it is evident when studying the list above that the South is a large group of counties with extremely diverse properties and capacities. I do not deem it possible or even desirable to attempt to draw any general assumptions about the group as a whole as regards its possibilities or history of development. Thus, to be able to study the “Bottom Billion” (Collier 2008), those countries that are the South of the South, whose inhabitants make out the absolute poor, I need to narrow down my population of study further. Those countries are, in my opinion, the ones that ought to be of the greatest interest to scholars within development studies, and global policy makers. Their level of development are the most difficult and yet the most crucial. As stated by Collier in his reasoning about the MDGs, the plight very bottom of the South goes missing in the positive numbers of Southern countries that do good development-wise (Collier 2008, p. 192). I now proceed to define which countries are parts of Sub-Saharan Africa in order to continue with the establishment of the population for the study.
3.4.2. Definition of Sub-Saharan Africa

Sub-Saharan Africa is a geographical and occasionally a political concept. According to the definition provided by the United Nations (2011), Sub-Saharan Africa incorporates all of Africa except northern Africa, with the Sudan and South Sudan included in the concept. It is this definition which I employ in this study, as it is a widely used definition provided by a global actor of great importance. See figure 4 for a list of all Sub-Saharan countries in alphabetical order according to the UN definition:

Figure 5

<table>
<thead>
<tr>
<th>Countries in Sub-Saharan Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Angola</td>
</tr>
<tr>
<td>2. Benin</td>
</tr>
<tr>
<td>4. Burkina Faso</td>
</tr>
<tr>
<td>5. Burundi</td>
</tr>
<tr>
<td>6. Cameroun</td>
</tr>
<tr>
<td>7. Cape Verde</td>
</tr>
<tr>
<td>9. Chad</td>
</tr>
<tr>
<td>10. (Comoros)</td>
</tr>
<tr>
<td>12. Congo, Rep.</td>
</tr>
<tr>
<td>13. Cote d'Ivoire</td>
</tr>
<tr>
<td>14. Djibouti</td>
</tr>
<tr>
<td>15. Equatorial Guinea</td>
</tr>
<tr>
<td>16. Eritrea</td>
</tr>
<tr>
<td>17. Ethiopia</td>
</tr>
<tr>
<td>18. Gabon</td>
</tr>
<tr>
<td>19. Gambia, The</td>
</tr>
<tr>
<td>20. Ghana</td>
</tr>
<tr>
<td>21. Guinea</td>
</tr>
<tr>
<td>22. Guinea-Bissau</td>
</tr>
<tr>
<td>23. Kenya</td>
</tr>
</tbody>
</table>
The Sub-Saharan African countries are a total of 52 countries. However, seven of those countries have been excluded from this study. Comoros, Lesotho, Mayotte, Réunion, Saint Helena and Swaziland have been eliminated from the study due to either lack of political independence, or due to size (too small and/or geographically situated in a way that endangers the reliability of the data). South Sudan has also been excluded as the country is newly formed and data is not readily available for the time span that has been chosen for this study. The countries that has been excluded are marked with ( ) in figure 5.

According to UNCTAD (2009), there are a number of components often seen in Sub-Saharan Africa, which makes it a suitable group to examine:

- The small size of African economies, and the fact that many small economies lie in the same region
- Low GDP per capita, which means that the market demand is low
- Political and structural problems such as latent or active conflicts, corruption, and lack of sufficient policy and laws, weak institutions and lack of democratic and transparent political processes (UNCTAD report 2009, p. 35)

In the process of selecting a population of countries, I have now established two out of three parameters. However, as this study is focusing on development, and not only economic development, one more aspect needs to be taken into consideration. Thus, human development is the third parameter in the process of choosing a population for the study. The Human Development Index ranking system established by the UNDP is used for this purpose.

### 3.4.3. Definition of the Human Development Index ranking system

The UNDP has on a yearly basis ranked all countries in order of their Human Development Index value since 1990. In this study, I utilize the ranking list in the 2009 Development Report (UNDP 2009, pp. 143). In the list, there are four categories: very high human development; high human
Development of the Poorest of the South, Karin Strömberg

For my third parameter (one that includes human development into the selection process), I use the medium human development category and the low human development category, as the countries that are in these categories are the most interesting for my research problem.

3.4.4. System of Case Selection

The three parameters used in the selection process for this paper have now been established. Combined, they make up a system, and the case population is chosen accordingly. Moreover, the three parameters have different “strengths”. The strongest parameter is Sub-Saharan Africa. For a country to be chosen, that country has to be part of Sub-Saharan Africa. For a country to qualify further, it needs to fulfill at least one more parameter: either being part of the South or a part of the two bottom categories of development. See figure 5 where the countries that are chosen are listed and the parameters marked out; (X) indicates confirmation, (-) indicates negation.

Figure 6: System of case selection

<table>
<thead>
<tr>
<th>Countries (listed in alphabetical order)</th>
<th>Part of Sub-Saharan Africa 2009</th>
<th>Part of the South 2009</th>
<th>Part of the two bottom categories, HDI ranking list 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Angola</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2. Benin</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td>3. Botswana</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>4. Burkina Faso</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>5. Burundi</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6. Cameroon</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7. Cape Verde</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>8. Central African Republic</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>9. Chad</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>12. Cote d’Ivoire</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>13. Djibouti</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>14. Equatorial Guinea</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>15. Eritrea</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>16. Ethiopia</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
The countries in figure 4 are the ones that are the subject of study in this paper. As evident in the figure, all of the 45 countries that are chosen are part of Sub-Saharan Africa. Among these countries, Equatorial Guinea is the only one not part of the South according to the chosen definition.
due to its considerably higher income per capita than its neighboring countries. Furthermore, the Seychelles and Mauritius do not belong to the two bottom categories of the HDI ranking list. There are thus three cases that derive from the typical conditions within Sub-Saharan Africa.

3.5. Data Analysis
I have now established the 45 cases that will be make up the material for the study. The data that I gather from the World Bank and UNDP will be analyzed with the help of the statistics software PASW Statistics 18. I use the software to conduct a specific statistical test: regressions and more specifically curve estimations. I will thus examine the statistical correlation between two variables and make graphs that show the estimated curve. The value of the correlation is presented in the unit r². For example, if the correlation between the independent variable and the dependent variable in a regression is r²: 0,5, it means in theory that these variables correlate to a degree of 50%.

For my own sake as the conductor of the study as well as for the reader, it is helpful to see a visual image of the results, as it can be difficult to see the differences between regressions when one only has a value to take into account. I include graphs which will help to visualize the results and facilitate the understanding of the results. The results from the regressions and the graphs will be presented in chapter 5 and then later discussed and analyzed in chapter 6. It is in this chapter that I discuss if the research questions were appropriate answered and I will also discuss the implications of my result. I will compare the result to the literature presented in chapter 2, and also discuss how the result fits into the theoretical background that I have previously outlined.

3.5.1. Limitations of the Data
Besides the general limitations of this study which is presented in the introduction, another limitation that may affect the outcome is the theoretical position of my major source of data. The World Bank is an institution with thoroughly liberal values, which naturally reflect on the type of data they collect, and the direction in the formation of their variables. They move within a particular ideological framework, and the data they collect is naturally affected by that framework. I imagine that problems arise when one attempts to study conditions from another theoretical point of departure whilst still using data from the World Bank to do so.
3.6. Anticipated Ethical Issues

Ethical issues are important to have in mind when one is conducting a study where the data is collected from for instance surveys or interviews (Creswell 2009, p. 89 ff.). Due to the nature of this study and the research questions that I have posed, I have a macro perspective rather than discussing the actions of individual; consequently, I meet no major ethical issues that I need to be aware of. As I use data that has already been collected by other recognized bodies, I do not need to take measures to protect the integrity of the people that are studied. It goes without saying that I make every effort to avoid using biased language throughout the report.

3.7. Evaluation of Sources

The data and literature used in this paper are reliable and from well-renowned sources. The data for the regressions are all, as stated before, collected from the World Bank database and from the UNDP database. The literature is a mixture between books and published articles as well as official reports.
4. RESULTS

In this chapter, the results from the regressions are presented. Throughout the presentation of the results, HDI value is the dependent variable and the independent variables varies. The purpose of the regressions is to investigate the co-variation between development and various variables that measure aspects of trade to, from and within Sub-Saharan Africa. As stated in the methodology, the time span will be 19 years; 1990 (when UNDP launched the HDI) and 2009, which is the most recent year that at the same time has the most complete data. The research questions will be answered one by one with the help of the regressions.

As mentioned before in the chapter on methodology, I will be using the term “co-variation” to describe the statistical connection between two variables. With co-variation, or level of co-variation, I mean the statistical connection that is possible to see when comparing two variables in a regression. Whether or not there is an actual co-variation is more difficult to establish, especially within a quantitative study. As stated by Creswell (2009), when using statistics, one can hope to show tendencies, trends, indications, and such. I hope to be able to see a general picture of the co-variation between human development in 1990 and various other variables in 2009. However, to explore the underlying mechanisms and reasons for a specific quantitative co-variation, in-depth studies of a qualitative nature, and a detailed review of the available data is necessary. Given that I am aware of the limitations of the data that is used in this study and the possible criticisms that may be leveled to my including/excluding certain countries or certain years, I base my findings on statistical regressions calculated in this paper. As such, I use the term co-variation defined as being one thing causing another but am, nevertheless, aware that this may not be the case beyond the scope of this study.

4.1. Question 1: Co-variation between interregional trade and human development in sub-Saharan Africa

Starting with the first research question: looking at Sub-Saharan Africa, is it possible to show statistically that a specific type of South-South trade; interregional trade, has a higher level of co-variation with human development than trade in general?

Co-variation Between Trade in General and Human Development in Sub-Saharan Africa

To answer the question, it is necessary to first establish the co-variation between trade in general
and human development in Sub-Saharan Africa. Figure 7 shows the co-variation between the independent variable merchandise trade (% of GDP) 1990 and the dependent variable HDI value 2009 (World Bank 2012c and UNDP 2011).

**Figure 7: Merchandise trade (% of GDP) 1990 and HDI value 2009**

The $r^2$ is 0.008 and the co-variation is positive, which means that the level of merchandise trade in 1990 for Sub-Saharan countries has a positive co-variation with the level of human development for Sub-Saharan countries in 2009 of 0.8%. However, as one case is clearly deviating from the other cases as regards its level of merchandise trade in 1990 (close to 400% of its GDP); another regression was made where cases with a level of merchandise trade above 200% of their GDP were excluded.

In figure 8, the co-variation between the level of merchandise trade (% of GDP) 1990 < 200% and the level of HDI 2009 is shown (World Bank 2012c and UNDP 2011). One case is excluded compared to the regression in figure 7; South Africa. As seen in figure 8, the co-variation is quite different.
Now with South Africa excluded, the $r^2$ is 0.321, which means that the higher the level of merchandise trade in 1990, the higher the level of human development in 2009. I deem that this result is more reliable and more representative for Sub-Saharan countries in general, as South Africa’s merchandise trade in 1990 were so far from the median value.

In sum, drawing on the gathered data, it is possible to say that there is a relatively substantial statistical co-variation between merchandise trade in 1990 and human development in 2009 among the 42 countries in Sub-Saharan Africa that are the subject of this study.

**Co-variation between Interregional Trade and Human Development in Sub-Saharan Africa**

After establishing the significant statistical co-variation between general trade and human development, I will now investigate the co-variation between interregional trade within Sub-Saharan Africa and human development. Unfortunately, the World Bank does not provide a variable that represent trade within Sub-Saharan Africa, only merchandise exports and merchandise imports respectively. Due to that fact, and for the purpose of being as transparent and methodical as possible, I need to compare interregional merchandise exports with general merchandise exports, and interregional merchandise imports with general merchandise imports. I will thus begin by
investigating the co-variation between general merchandise exports/imports and human development.

Exports
Figure 9 shows the co-variation between level of merchandise exports (current US$) in 1990 and level of HDI in 2009 (World Bank 2012d and UNDP 2011).

Figure 9: Merchandise exports 1990 and HDI value 2009

The $r^2$ is 0.053 and the co-variation is positive, which means that the higher the level of merchandise exports from Sub-Saharan Africa to the rest of the world in 1990, the higher the level of human development in 2009. However, as seen in figure 9, there are two cases that are clearly deviating from the other cases, which may give a distorted result. Therefore, as seen in figure 10, a regression was made while the two cases with merchandise export value above 1000000000 US dollars were excluded.
In figure 10, the co-variation between the independent variable merchandise exports (current US$) 1990 < 10000000000 US$ and the dependent variable HDI 2009 is displayed (World Bank 2012d and UNDP 2011).

With the two deviating cases excluded, the $r^2$ is 0.031 and the co-variation is positive, which is a marginal difference compared to the results of the entire population of cases ($r^2$ 0.053). Thus, the level of co-variation between the independent variable merchandise exports and the dependent variable human development is either $r^2$ 0.053 or $r^2$ 0.031. Regardless, it is safe to say that the statistical co-variation is positive but minor.

Having established the level of co-variation between general merchandise exports and human development, the co-variation between interregional merchandise exports and human development will be examined. In figure 11, the level of co-variation between the independent variable merchandise exports to developing economies in Sub-Saharan Africa (% of merchandise exports) 1990 and the dependent variable HDI 2009 is displayed (World Bank 2012e and UNDP 2011). The $r^2$ is 0.021 and the co-variation is negative. This means that the higher percent of a country’s merchandise exports that are interregional in character in 1990, the lower the level of human

development in 2009. The co-variation is minor, but interesting as it is negative, which is the opposite situation as regards general merchandise exports as seen in figure 10.

Figure 11: Merchandise exports to developing economies in Sub-Saharan Africa (% of merchandise exports) 1990 and HDI value 2009

Imports
I will now move on to establishing the co-variation between interregional merchandise imports and human development in Sub-Saharan Africa.

The level of co-variation between general merchandise imports and human development will first be investigated and later on compared to the co-variation as regards interregional merchandise imports.

In figure 12, the co-variation between the independent variable merchandise imports (current US$) 1990 and the dependent variable HDI 2009 is displayed (World Bank 2012g and UNDP 2011).
The $r^2$ is 0.061 and the co-variation is positive, which means that the higher the level of merchandise imports in 1990, the higher the level of human development in 2009. However, as seen in figure 12, there is one case (South Africa) that is yet again strongly deviating from the other cases. That may cause the results to get distorted, which is why another regression was made while excluding the deviating case.

In figure 13, the co-variation between the independent variable merchandise imports (current US$) 1990 < 18399000000 US$ and the dependent variable HDI 2009 is displayed (World Bank 2012g and UNDP 2011).

The $r^2$ is 0.014 and the co-variation is positive, which means that the higher the level of merchandise imports in 1990, the higher the level of human development in 2009. The $r^2$ with all cases included was 0.061. Thus, as the deviating case was removed from the regression, the level of co-variation decreased.
I have now established the level of co-variation between general merchandise imports in 1990 and human development in 2009. The co-variation was positive. I will now establish the co-variation between the interregional merchandise imports for 1990 in Sub-Saharan Africa and human development in 2009.

In figure 14, the co-variation between the independent variable merchandise imports from developing economies in Sub-Saharan Africa (% of merchandise imports) 1990 and the dependent variable HDI 2009 is displayed (World Bank 2012h and UNDP 2011).
The $r^2$ is 0.053 and the co-variation is negative, which means that the higher the level of merchandise imports from developing economies in Sub-Saharan Africa in 1990, the lower the level of human development in 2009. Compared to the co-variation between general merchandise imports and human development (seen in figure 12 and 13), the co-variation is quite different, as it is negative in its character.

So, to answer the research question posed in the beginning of this chapter; is it possible to show statistically that interregional trade in Sub-Saharan Africa has a higher level of co-variation with human development than trade in general? Thus, is it possible to find statistical evidence to support the structural argument of the benefits of interregional trade (see the chapter on background for a detailed outline of the argument)? Let us summarize the results and review it.

**Figure 15: Summary of results from the regressions**

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>Co-variation ($r^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchandise trade 1990</td>
<td>HDI 2009</td>
<td>0.008 (pos.)</td>
</tr>
<tr>
<td>Merchandise trade 1990 &lt; 200 % of GDP</td>
<td>HDI 2009</td>
<td>0.321 (pos.)</td>
</tr>
<tr>
<td>Merchandise exports 1990</td>
<td>HDI 2009</td>
<td>0.053 (pos.)</td>
</tr>
</tbody>
</table>
As seen in figure 15, the variables that represent general trade all have a positive co-variation with human development. The variables that represent interregional trade have a negative co-variation with human development. Thus, the more interregional trade that the Sub-Saharan countries engaged in in 1990, the lower was their level of human development in 2009. This result does not strengthen the structural argument that interregional trade is particularly beneficial for human development, as least not over the time span that is chose for this study. Instead, the level of co-variation between the variables are all rather moderate, except for the co-variation between merchandise trade < 200 % of GDP 1900 and human development 2009 where the $r^2$ was 0,321. The answer to the research question is thus: No, it is not possible to show statistically that interregional trade has a higher co-variation with human development than general trade.

I will now move on to the second research question regarding the relevance of type of commodity traded with in Sub-Saharan Africa as regards human development.

4.2. Question 2: Relevance of Type of Commodity for Human Development in sub-Saharan Africa

Looking at Sub-Saharan Africa, is it possible to show statistically that the type of commodity traded with has an impact on the level of development? The co-variation between trade with the following commodities and human development will be investigated and compared to the co-variation between general merchandise trade and human development:

- Agricultural raw material
- Food
- Oil
- Ores and metals
Co-variation between Trade with Agricultural Raw Materials and Human Development in Sub-Saharan Africa

Again, to answer the question, it is necessary to establish the co-variation between general merchandise exports and imports and human development. As seen in figure 16, the co-variation between merchandise exports (current US$) in 1990 and HDI in 2009 is positive and the $r^2$ is 0.053 (World Bank 2012d and UNDP 2011). Thus, the higher the level of merchandise exports from Sub-Saharan Africa in 1990, the higher the level of human development in 2009. As the $r^2$ was only marginally different when I excluded the two deviating cases (see figure 16), this is the co-variation that will be used to comparison later.

Figure 16: Merchandise exports (current US$) 1990 and HDI value 2009

I will now move on to establish the co-variation between trade with agricultural raw materials and human development. In figure 17, the co-variation between the independent variable agricultural raw materials exports (% of merchandise exports) 1990 and the dependent variable HDI 2009 is shown (World Bank 2012i and UNDP 2011). The co-variation is negative and the $r^2$ is 0.188. This means that the higher the level of agricultural raw materials exports in 1990, the lower the level of human development in 2009. In sum, the co-variation between general merchandise exports and human development is positive and the $r^2$ is 0.053. The co-variation between agricultural raw materials exports and human development in negative and the $r^2$ is 0.188.
Figure 17: Agricultural raw materials exports (% of merchandise exports) 1990 and HDI value 2009

As regards agricultural raw materials imports (% of merchandise imports), the co-variation between merchandise imports (current US $) 1990 and HDI 2009 is shown in figure 18 (World Bank 2012g and UNDP 2011). The co-variation is positive and the $r^2$ is 0.061.

Figure 18: Merchandise imports (current US$) 1990 and HDI 2009
In figure 19, the co-variation between agricultural raw materials imports (% of merchandise imports) 1990 and HDI 2009 is displayed. The co-variation is negative and the $r^2$ is 0.002 (World Bank 2012j and UNDP 2011). However, as seen in the figure, one case is clearly deviating from the other cases as regards level of agricultural raw materials imports.

Figure 19: Agricultural raw materials imports (% of merchandise imports) 1990 and HDI value 2009

The case in question is South Africa. Another regression was made when the deviating case was excluded to get a result that corresponds to a higher degree to the general trend within Sub-Saharan Africa.

Thus, in figure 20, the co-variation between the independent variable agricultural raw materials imports (% of merchandise imports) in 1990 < 10 % and the dependent variable HDI 2009 is shown (World Bank 2012j and UNDP 2011).

As seen, when excluding the case that had an agricultural raw material imports percentage above 10 % of merchandise imports, the result is quite different. The co-variation is now positive as opposed to the previous negative caution, and the $r^2$ is 0, 14.
This means that when looking at Sub-Saharan countries that had an agricultural raw materials import level below 10% of total merchandise imports in 1990 (the majority of the countries), the co-variation between the level of agricultural raw material imports and the level of human development is 14%. Thus, the higher the agricultural raw materials imports in 1990, but not above 10%, the higher level of human development in 2009.

In sum, the co-variation between general merchandise imports and human development is positive and the $r^2$ is 0.061 (see figure 18). However, when South Africa is excluded, the $r^2$ is 0.014 (see figure 13). In comparison, the co-variation between raw materials imports and human development is negative and the $r^2$ is 0.002 (see figure 19). However, when South Africa (??) is excluded, the co-variation is positive and the $r^2$ is 0.14 (see figure 20).

**Co-variation between Trade with Food and Human Development in Sub-Saharan Africa**

Another type of commodity that is part of the debate and interesting as regards human development is food. Thus, the co-variation between trade with food and human development will be investigated.
In figure 21, the co-variation between the independent variable food exports (% of merchandise exports) 1990 and the dependent variable HDI 2009 is shown (World Bank 2012k and UNDP 2011).

**Figure 21: Food exports (% of merchandise exports) 1990 and HDI value 2009**

![Graph showing the co-variation between food exports and HDI](image)

The co-variation is positive and the $r^2$ is 0.063. This means that the higher the percentage of food exports in 1990, the higher the level of human development in 2009. For the purpose of comparison, the co-variation between general merchandise exports and human development is positive and the $r^2$ 0.053 (see figure 9). Thus, food exports have a marginally larger co-variation with human development than general merchandise exports has.

After establishing the co-variation between food exports and human development, I now move on to food imports. As seen in figure 22, the co-variation between the independent variable food imports (% of merchandise imports) 1990 and the dependent variable HDI 2009 is positive and the $r^2$ is 0.005 (World Bank 2012l and UNDP 2011).
For the purpose of comparison, the co-variation between general merchandise imports and human development is positive and the \( r^2 \) is 0.061 (see figure 12). Thus, food imports have a considerably lower co-variation with human development than general merchandise imports. In fact, food imports have almost no co-variation with human development at all.

In sum, food exports (see figure 21) and general exports have a similar co-variation with \( r^2 \) 0.063 and \( r^2 \) 0.053 respectively. Food imports, however, have a quite different co-variation than general imports with \( r^2 \) 0.005 and \( r^2 \) 0.061 respectively. Food imports is clearly less possible to link statistically to human development than general imports.

**Co-variation between Trade with Oil and Human Development in Sub-Saharan Africa**

I will now move on to examine the co-variation between trade with oil and human development. The variable oil rents (% of GDP) are used as the independent variable (World Bank 2012m). Please see the methodology chapter and the section on definitions for the independent variables for a detailed explanation of what this particular variable entails. In short, the countries in Sub-Saharan Africa that do not trade with oil at all are represented with a value of 0. Those that do trade with oil are represented by a varied percentage.
As seen in figure 23, quite a few of the cases have an oil rent value of 0. The causation between the independent variable oil rents (% of GDP) 1990 and the dependent variable HDI 2009 is positive and the $r^2$ is 0.064 (World Bank 2012m and UNDP 2011). This means that the higher the oil rents in 1990, the higher the level of human development in 2009.

**Figure 23: Oil rents (% of GDP) 1990 and HDI value 2009**

However, as seen in figure 23, the countries that have an oil rent of 0 have a wide range of different levels of human development, diverging from just above 0.3 to over 0.6. This needs to be take into consideration, and as the positive co-variation between the countries that did have oil rents in 1990 and human development in 2009 is minor ($r^2$ 0.064), oil rents does not seem to be of great importance for future level of human development.

**Co-variation between Trade with Ores and Metals and Human Development in Sub-Saharan Africa**

Another commodity of interest is ores and metals and how trade with these commodities affects human development. In figure 24, the co-variation between the impendent variable ores and metals exports (% of merchandise exports) 1990 and the dependent variable HDI 2009 is shown (World Bank 2012n and UNDP 2011). The co-variation is negative and the $r^2$ is 0.074. Thus, higher the percentage of merchandise exports that consisted of ores and metals exports in 1990, the lower the
level of human development in 2009.

For the purpose of comparison, the co-variation (see figure 9) between general merchandise exports and human development for the same years is positive and the $r^2$ is 0,053 (World Bank 2012d and UNDP 2011). Thus, the co-variation between ores and metals exports and human development over time is very different compared to the co-variation between general merchandise exports and human development for the same years.

**Figure 24: Ores and metals exports (% of merchandise exports) 1990 and HDI value 2009**

Moving on to imports of ores and metals, the co-variation (see figure 25) between the independent variable ores and metals imports (% of merchandise imports) 1990 and HDI 2009 is negative and the $r^2$ is 0,085 (World Bank 2012o and UNDP 2011). Thus, the higher the percentage of merchandise imports that consisted of ores and metals imports in 1990, the lower the level of human development in 2009.
For the purpose of comparison, the co-variation between merchandise imports in 1990 and human development in 2009 is $r^2 0.061$ and positive with all cases included (figure 12), and $r^2 0.014$ and positive with one case (South Africa) excluded (figure 13), (World Bank 2012g and UNDP 2011). So, to answer the research question posed in the beginning of this section; looking at Sub-Saharan Africa, is there a statistical co-variation between the type of commodity traded with and level of human development? Is the effect positive or negative for human development?

The co-variation between trade with the following commodities and human development will be investigated and compared to the co-variation between general merchandise trade and human development:

- Agricultural raw materials
- Food
- Oil
- Ores and metals

Let us summarize the results and review it.
As seen in figure 26, the co-variation between agricultural raw materials exports and human development is negative and $r^2 0,188$. Compared to merchandise exports, which has a co-variation with human development that is positive and $r^2 0,053$, the negative co-variation is significant. As regards the co-variation between agricultural raw materials imports and human development, it is also negative, but very minor compared to agricultural raw materials exports. However, when one looks only on the cases that have an import rate below 10 % of their GDP (which excludes one case), the co-variation is positive and the $r^2$ is 0,14, which is higher than the co-variation between general merchandise imports and human development. To answer the question, there is negative co-variation between agricultural raw materials exports and human development (18, 8 %), and positive co-variation between agricultural raw materials imports (14 %), with one clearly deviating case omitted. Thus, it seems to be positive for human development to import raw materials, but negative to export it.

As regards the co-variation between food exports and human development, the level of co-variation is similar to the level of co-variation between general merchandise exports and human development ($r^2 0,063$ and $r^2 0,053$ respectively). Thus, food exports per se do not seem to be of great significance for human development, as least no more than exports in general are. However, the co-variation between food imports and human development is positive but very minor ($r^2 0,005$). Thus, food imports have a lower impact on human development than general merchandise imports have.
Moving on to oil rents, which has a positive co-variation with human development of \( r^2 \ 0.064 \). As stated before, merchandise exports and merchandise imports have a positive co-variation with human development with \( r^2 \ 0.053 \) and \( 0.061 \) respectively, which is similar to the co-variation between oil rents and human development. Thus, to trade with oil does not seem to affect human development more than trade in general does.

Finally, the co-variation between trade with ores and metals and human development has been examined. The co-variation between both ores and metals exports and imports and human development is negative. The \( r^2 \) is \( 0.074 \) and \( 0.085 \) respectively. Thus, trade with ores and metals seems to have a negative effect on human development.
5. ANALYSIS

In this chapter, I analyze and explain the results presented in the previous chapter by applying the theories and drawing parallels to the literature overview presented in chapter 2.

5.1. Question 1: Co-variation between Interregional Trade and Human Development in Sub-Saharan Africa

As was established in the results and reviewed in figure 15, the answer to the first research question is, in essence, no – there is no co-variation. The co-variation between interregional trade & human development is not higher than between general international trade & human development. In fact, there is a negative co-variation between interregional exports/imports & human development. The conclusion that one should draw for this is thus that interregional trade is bad for human development, because the higher the level of interregional trade countries in Sub-Saharan Africa had in 1990, the lower the level of human development in 2009.

This is somewhat surprising. It is not what I expected to find, as the general opinions on the benefits of South-South trade, and in particular interregional trade in Sub-Saharan Africa, is that it is equal to or better than general international trade. For instance, the UNCTAD report from 2009 describes interregional African trade as an opportunity for African economies to increase their development, as interregional trade will help to diversify the market and structurally change the pattern of exports and imports (UNCTAD 2009, p. 2).

The time period between 1990 and 2009 should provide adequate time for one variable to affect the other. Also, according UNCTAD (2009, p. 22-23), the rate of interregional trade in Africa started to increase during the 1980s for a number of reasons, both political and economic. In effect, this means that in 1990, interregional trade should have reached a level that would potentially affect other social and economic phenomena, if there were indeed such a connection. As such, I do not consider that the time span is causing a false lack of positive co-variation.

An explanation for the surprisingly low and negative co-variation between interregional trade and human development could be found in the fact that interregional trade consists of about 10 % of Africa’s total trade (UNCTAD 2009, p. 23). Thus, 90 % of African trade goes to other countries than Sub-Saharan countries, which means that even though interregional trade might be beneficial
for human development, the effect is so far so small that other factors cloud the results. The reason why general international trade has a higher co-variation with human development would then be explained by the fact that 90% of total trade generates the bulk of the GDP, which then has an effect on HDI as 30% (see the section on HDI in the methodology chapter) of the HDI value is made up of GDP.

What is clear is that, in spite of the structural argument that very poor economies benefit considerably less from trade than richer economies, a comparatively high co-variation is found between merchandise trade and human development (see figure 8), especially after excluding South Africa (Todaro et al. 2009, Ravenhill 2008, Staiger 2004).

There is a 32% positive co-variation between merchandise trade & human development, which I deem as a comparatively high level of co-variation, as the majority of causalities throughout this study have been below 10%. In fact, the liberal theories on trade and development seem to be more applicable to the results than structural theory here. As stated by Grimwade (1989) with regard to the Theory of Comparative Advantage, countries with comparatively lower living costs will have an advantage on the world market, and thus be able to financially benefit more than countries with a higher living cost (Grimwade 1989, p. 7). Drawing from my results, Sub-Saharan countries certainly seem to benefit a great deal from trade, but if they benefit more or less than richer countries is difficult to conclude as I have not used a control group of other countries to check for that in this paper.

Although the data that compiled for this study did not per se support the structural argument of why interregional trade is good for developing countries, I nevertheless maintain that their arguments are sound, and that interregional trade should be further researched to better understand the exact processes and to be able to eventually incorporate interregional trade in development policies to a greater extent. As stated by UNCTAD, if trade barriers were lowered within Sub-Saharan Africa, the market access for low-cost producers will increase, and their goods will be available to more potential consumers. In turn, this will increase the development of exporters who will earn more money, and increase the development of the importers who will have access to cheaper products; Consequently, the consumers will increase their living standard and be able to spend more money on things that will boost the other elements of human development or HDI, such as a larger tax base that will lead to more funds to the educational system and the health system, which will lead to better and more schooling, and improved general health (UNCTAD 2009, p. 18). However, the
trade barriers within Africa are today higher than those of the rest of the world, which is one of several structural obstacles that hamper the growth of interregional trade (UNCTAD 2009, p. 18).

5.2. Question 2: Relevance of Type of Commodity for Human Development in Sub-Saharan Africa

As established in the results that were reviewed in figure 26, the answer here is: yes. The commodity that is traded with seems to have an effect on human development, and different commodities have different effects. Four different commodities where examined: agricultural raw materials, food, oil, and ores and metals.

There is significant negative co-variation between agricultural raw materials exports and human development (18, 8 %), and an almost equally significant positive co-variation between agricultural raw materials imports (14 %), with one clearly deviating case omitted. Thus, it seems to be positive for human development to import raw materials, but negative to export it. This result correlates with the structural theory as regards the negative aspects of producing and exporting primary goods (Todaro et al. 2009, p. 591-593). A relatively low profit on exports creates a vicious circle of balance of payment deficits and an increased vulnerability to crises (ibid).

Agricultural raw materials are a typical primary good that generates a low profit margin. The negative co-variation between agricultural raw materials exports and human development indicates that there is not only a connection between primary exports and low economic growth, but also between primary exports and human development. There is no such negative co-variation between agricultural raw materials imports, which make sense, as it is good to import cheap commodities and refine them instead of buying secondary goods. Also, a high production and export rate of agricultural raw materials indicates that the agricultural sector is large. According to Lewis’ Two Sector Model, development on a grand scale happens when a society goes from being a rural agricultural economy to an urban industrial economy (Todaro et al. 2009, p. 118). Thus, according to the Two Sector Model, the type of commodity traded with can tell us something about the general characteristics of the economy in question.

Trade of food products is an interesting aspect of Sub-Saharan trade due to the structuralist argument of developing economies attempting to be self-sufficient thereby avoiding negative aspects of the global market (Ravenhill 2008, p. 154). Food is one of these commodities that
countries in economic crisis strive to be self-sufficient in. Food is also interesting as it is one of the most heavily subsidized commodities on the global market. Developed countries are generally eager to protect their own domestic food sector, which creates a distortion of price levels, and makes it very difficult for developing countries to compete internationally (Ravenhill 2008). Trade in food and its effects on development are a complex business.

As regards the co-variation between food exports and human development, the level of co-variation is similar to the level of co-variation between general merchandise exports and human development ($r^2 0.063$ and $r^2 0.053$ respectively). Thus, food exports per se do not seem to damage a Sub-Saharan country’s prospects of development, at least not at those levels that the countries in question export. The co-variation between food imports and human development is positive but very minor ($r^2 0.005$). This would indicate that food imports have a lower impact on human development than general merchandise imports have; therefore, it seems advisable for countries in Sub-Saharan Africa to attempt to limit their food imports to a minimum, and thus apply the principle of self-sufficiency.

Oil is always a central concern when one discusses African development, and especially human development. One of the countries in this study, Equatorial Guinea, has an extremely high annual GDP per capita, which is due to its exports of oil. In fact, according to the economic parameters used to define the South in this paper, Equatorial Guinea is part of the North. The country had in 2009 a GDP per capita well above France (World Bank 2009). On the other hand, their level of human development is a completely different matter. This is a commonly discussed phenomenon within development studies; it is observed in very poor and undeveloped countries when oil or other natural resources are discovered. In such cases, the economic growth rate surges, but the human development rate does not follow. It is also common for political unrest to occur after some time. This is discussed and theorized by Collier (2008), where he refers to the phenomena as a “Resource Trap”. It is sometimes also referred to as a “resource curse” or a “paradox of plenty” (Palley 2003). Investigating the co-variation between oil rents and human development was of great personal interest to me.

I found that oil rents have a positive co-variation with human development of $r^2 0.064$. As stated before, merchandise exports and merchandise imports have a positive co-variation with human development of $r^2 0.053$ and 0.061 respectively, which is similar to the co-variation between oil rents and human development. Thus, to trade with oil does not seem to affect human development more than trade in general does. However, it is important to note that far from all cases in the study
has a figure for oil rents, which may have contributed to a somewhat distorted result. However, among the counties that had a 0 in oil rents (did not export oil at all); the level of human development fluctuated greatly, from very low to moderately high (see figure 23). I am thus tempted to suggest that although oil often is considered to be a troubled commodity in Africa; other factors seem to have a greater effect on human development.

Finally, the co-variation between trade with ores and metals and human development has been examined. Ores and metals fall in two of the categories of commodities that I have already discussed: primary goods and natural resources. The same analysis will thus apply here. Primary goods have its drawbacks when exported due to its comparatively low profit margin and natural resources have a knack to increase economic growth heavily but human development not so much (Todaro et al. 2009, p. 591-593, Collier 2008 and Palley 2003). As expected, the co-variation between trade in ores and metals and human development is negative. The r² is 0.074 and 0.085 respectively. Thus, trade with ores and metals seems to have a negative effect on human development. It is likely that the explanations provided by the scholars above are the reasons behind this negative co-variation.

5.3. Reflections & Afterthoughts

On completion of the analysis, a few things came to my realization as regards what could have been done differently.

It would have been interesting to have a number of different time spans for the purpose of comparison; for instance, the 1990 and 2009 time span could have been compared to a 1995 and 2009 time span and a 2000 and 2009 time span to check for differences and similarities in the level of co-variation. This way, I could have drawn conclusions on the appropriateness of the time span that I chose and possibly seen a more detailed pattern of co-variation between trade and human development. For instance, perhaps a specific level of trade is particularly beneficial or unfavorable for the furthering of human development? Such a discovery would potentially have been useful for other scholars within the field of Peace and Development studies, and instigated a more in-depth study on time spans and co-variation.

It would also have been interesting to have more than one population of cases in the study. I would have liked to have a test group of countries from the other end of the income scale but still part of
the South and see if there is a significant difference in level of co-variation between that group and the group which was the object of study in the paper. To compare the results would have given a deeper insight in the importance of trade in relation to human development at different stages in the development process.
6. CONCLUSIONS

The research problem from which the idea to this thesis originated is the one on the complex and occasionally paradoxical relationship between trade and human development in poor countries. The research questions are the following two:

1. Looking at Sub-Saharan Africa, is it possible to show statistically that a specific type of South-South trade; interregional trade, has a higher level of co-variation with human development than trade in general?

2. Looking at Sub-Saharan Africa, is it possible to show statistically that the type of commodity traded with has an impact on the level of development? The co-variation between trade with the following commodities and human development will be investigated and compared to the co-variation between general merchandise trade and human development:
   - Agricultural raw material
   - Food
   - Oil
   - Ores and metals

The research method is quantitative and the approach deductive. A number of trade variables are used as the independent variable in the regressions which are used to answer the questions. Human development is the dependent variable and represented by HDI.

The answer to the first research question is in short that no, it is not possible to show statistically that interregional trade has a higher level of co-variation with human development than trade in general with the methods that have been used. The answer to the second question is that yes, all commodities that are tested against human development have an impact, but they do not all have a positive co-variation. As regards ores and metals trade, the co-variation between the variables that represent the same and human development is negative, which indicates that the more trade in ores and metals 1990 that occurred, the lower is the level of human development in 2009. As regards trade in oil, that specific type of trade has a slight positive level of co-variation with human development, but not a bigger level of co-variation than general merchandise trade. As regards trade in food products, exports of foods do not seem to have a damaging effect on the prospects of
development. The co-variation between food imports and human development is also positive but very minor. This would indicate that food imports have a lower impact on human development than general merchandise imports have; therefore, it seems advisable for countries in Sub-Saharan Africa to attempt to limit their food imports to a minimum, and thus apply the principle of self-sufficiency. As regards trade in agricultural raw materials, the negative co-variation between agricultural raw materials exports and human development indicates that there is not only a connection between primary exports and low economic growth, but also between primary exports and human development. There is no such negative co-variation between agricultural raw materials imports, which make sense, as it is economically sound to import cheap commodities and refine them instead of buying secondary goods. The two research questions are hereby answered. Please see chapter 3 on results and chapter 4 on analysis for a more detailed presentation and analysis of the results.

The issue of co-variation and how to define and use the concept has been discussed previously in the paper, and revisited here in the concluding chapter as a reminder to the reader. Please note that when the term “co-variation” is used, it is the statistical level of co-variation between a dependent and an independent variable displayed as an r² value that is referred to. To establish an actual co-variation within a social science quantitative research project is less straightforward and sometimes very time-consuming and complicated due to the many layers of underlying mechanisms. Thus, what the results convey is the answers to the research questions and does not attempt to paint a “true” picture of reality.

As a final note, the original idea was to answer a third research question, but due to time limits and the realization that this question requires so much more than statistics to answer it properly, that question was taken out. The question was as follows: Looking at Sub-Saharan Africa, is it possible to show statistically that the political situation has an impact on both development and trade? Is it possible to see a connection between level of development and political (in)stability? Is it possible to say that politics is an as integral part in the opportunities of both trade and development?

- Control of corruption
- Government effectiveness
- Political stability and absence of violence
- Rule of Law
For future studies, this third research question would be interesting and relevant to answer, as it would have a valuable political and legal angle to the discussion on human development vis à vis trade.
**LIST OF REFERENCES**

*Printed sources:*


*Web-based sources:*


ANNEX

Definitions of independent variables

Variables from the World Bank are part of their World Development Indicators data base (World Bank 2012a). Below follows definitions of the variables.

GDP (current US$) is defined as: “the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the product. It is calculated without making deduction of fabricated assets or for depletion and degradation of natural resources. Data are in current US dollars. Dollar figures for GDP are converted form domestic currencies using single year official exchange rates. For a few countries where the official exchange rate does not reflect the rate effectively applied to actual foreign exchange transactions, and alternative conversion factor is used.” (World Bank 2012b). The data is compiled from World Bank national accounts data and OECD National Accounts data files (ibid).

Merchandise trade (% of GDP) is defined as: “the sum of merchandise exports and imports divided by the value of GDP, all in current U.S. dollars.” (World Bank 2012c). The data is compiled from the World Trade Organization and from World Bank GDP estimates (ibid).

Merchandise exports (current US $) are defined as: “the f.o.b. value of goods provided to the rest of the world valued in current U.S. dollars.” (World Bank 2012d). The data is compiled from the World Trade Organization (ibid).

Merchandise exports to developing economies in Sub-Saharan Africa (% of total merchandise exports) are defined as: “the sum of merchandise exports for the reporting economy to developing economies in the Sub-Saharan Africa region according to World Bank classification of economies. Data are as a percentage of total merchandise exports by the economy. Data are computed only if at least half of the economies in the partner country group had non-missing data.” (World Bank 2012e). The data is produced from World Bank staff estimates based on data from International Monetary Fund’s Direction of Trade database (ibid).

Merchandise imports from developing countries in Sub-Saharan Africa (% of total merchandise imports) are defined as: “the sum of merchandise imports by the reporting economy from
developing economies in the Sub-Saharan Africa region according to the World Bank classification of economies. Data are expressed as a percentage of total merchandise imports by the economy. Data are computed only if at least half of the economies in the partner country group had non-missing data.” (World Bank 2012f). The data is produced from World Bank staff estimates based on data from International Monetary Fund’s Direction of Trade database (ibid).

Merchandise imports (current US $) are defined as: “the c.i.f. value of goods received from the rest of the world valued in current U.S. dollars.” (World Bank 2012f). The data is compiled from the World Trade Organization (ibid).

Agricultural raw materials exports (% of merchandise exports) are comprised by: “SITC section 2 (crude materials except fuels) excluding divisions 22, 27 (crude fertilizers and minerals excluding coal, petroleum, and precious stones), and 28 (metalliferous ores and scrap).” (World Bank 2012i). The data is produced by World Bank staff estimates from the Comtrade database maintained by the United Nations Statistics Division (ibid).

Agricultural raw materials imports (% of merchandise imports) are comprised by: “SITC section 2 (crude materials except fuels) excluding divisions 22, 27 (crude fertilizers and minerals excluding coal, petroleum, and precious stones), and 28 (metalliferous ores and scrap).” (World Bank 2012j). The data is produced by World Bank staff estimates from the Comtrade maintained by the United Nations Statistics Division (ibid).

Food exports (% of merchandise exports) are comprised of: “the commodities in SITC sections 0 (food and live animals), 1 (beverages and tobacco), and 4 (animal and vegetable oils and fats) and SITC division 22 (oil seeds, oil nuts, and oil kernels).” (World Bank 2012k). The data is produced by World Bank staff estimates from the Comtrade database maintained by the United Nations Statistics Division (ibid).

Food imports (% of merchandise imports) are comprised of: “the commodities in SITC sections 0 (food and live animals), 1 (beverages and tobacco), and 4 (animal and vegetable oils and fats) and SITC division 22 (oil seeds, oil nuts, and oil kernels).” (World Bank 2012l). The data is produced by World Bank staff estimates from the Comtrade database maintained by the United Nations Statistics Division (ibid).

Oil rents (% of GDP) are defined as: “the difference between the value of crude oil production at

Ores and metals export (% of merchandise export) are comprised of: “the commodities in SITC sections 27 (crude fertilizer, minerals nes); 28 (metalliferous ores, scrap); and 68 (non-ferrous metals)” (World Bank 2012n). The data is compiled by World Bank staff estimates from the Comtrade database maintained by the United Nations Statistics Division (ibid).

Ores and metals imports (% of merchandise imports) are comprised of: “commodities in SITC sections 27 (crude fertilizer, minerals nes); 28 (metalliferous ores, scrap); and 68 (non-ferrous metals).” (World Bank 2012o). The data in compiled by World Bank staff estimates from the Comtrade database maintained by the United Nations Statistics Division (ibid).