Participation of Developing Countries in the World Trade Organizations' Dispute Settlement System

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Abstract

The dispute settlement system of the World Trade Organization is designed as to provide equal opportunities to its member states to participate. In reality, participation is not distributed equally. Some member states do not participate at all, amongst which many developing countries. This research is aimed at identifying reasons why some developing countries participate in the system while others do not, focussing on the variables that could explain (non-) participation within the countries, rather than at the level of the DSS itself. The outcome of a logistic regression analysis is that none of the variables researched are significant. However, an independent sample t-test shows that economic growth and financial capacity are likely to lead to participation, as well as a good functioning bureaucratic apparatus. A high level of perceived international political pressure is shown to be likely to give a negative incentive towards participation.

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1   Introduction

1.1   Introduction

The World Trade Organization (WTO), established in 1995 out of the General Agreement on Tariffs and Trade (GATT) is the world's leading organization dealing with international trade, with 153 member states. The philosophy on which the agreements are based is that free trade will lead to economic growth and development. Each country will benefit from free trade, including developing countries, based on the economic theory of comparative advantage. According to the organization itself, the WTO should be seen as a 'forum for governments to negotiate trade agreements [and as] a place for them to settle trade disputes' (World Trade Organization: n.d. a). The organization thus not only functions as a place where governments can negotiate issues concerning international free trade, but also has a juridical (institutional) body that makes sure that the agreements resulting from the various negotiating rounds are complied with. It is this juridical part of the WTO system called the Dispute Settlement System (DSS), which is the focal point of this paper in relation to developing countries. Before going into detail about the issues surrounding the DSS and the so far limited participation of developing countries therein, a brief overview is provided of the transition path from the GATT towards the WTO, the system and the position and functioning of the DSS and the special position of developing countries within the WTO.

WTO principles
There are two basic WTO principles which are both based on the rule of non discrimination. Article I and III of the GATT[1] concern respectively the Most Favoured Nation principle (MFN) and the National Treatment principle (NT). The first principle 'forbids Members to discriminate between trading partners' (Horn and Mavroidis: 2001, p 233). This means that all member states should get equally favoured treatment. National Treatment refers to 'the principle of giving others the same treatment as one's own nationals' (p 234). GATT Article III requires that imports be treated no less favourably than the same or similar domestically-produced goods once they have passed customs. GATS Article 17 and TRIPS Article 3 also deal with national treatment for services and intellectual property protection (World Trade Organization: n.d. e). It means that local and imported products have to be treated equally, for instance when taxed.

GATT to WTO
Several changes have been made to the system following the transition period from the GATT to the establishment of the WTO. The GATT was, as the name reveals, not a formal organization, but an agreement, established after the Second World War. Parallel to the GATT negotiations, another organization was negotiated on: the International Trade Organization (ITO), but it failed to be established because of political reasons. Although the GATT started out as a provisional agreement, de facto it was functioning as a formal organization. One obstacle which kept the organization from becoming formalized was the American legal system. Various negotiation rounds took place, but it was not until the 1970s that substantive change was proposed. In the so-called Tokyo round (1973-1979), named after the location where the negotiations took place, a shift was made from focusing on trade barriers (tariffs and quotas) to focusing on non trade barriers, such as technical standards. An agreement was not produced, but codes (of conduct) were introduced on a voluntary basis. The codes could be used in a plurilateral context, meaning countries could choose whether or

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[1] The articles of the 'GATT' referred to in this paper are the articles of the 'GATT 1994' agreement

not the rules applied to them, which is often referred to as an 'a la carte agreement', instead of a multilateral context, in which case the rules apply to all member states. Some of these Tokyo codes have been inserted in current WTO agreements, such as in the agreements on subsidies and countervailing measures; Technical barriers to trade and Anti-dumping (World Trade Organization: n.d. g).

The next important round of negotiations is called the Uruguay round. It started in 1986 and ended in 1993 with the creation of the WTO. In this round new subjects were added to the agreement. The GATT dealt only with the trade in goods, but now services and intellectual property rights (IPS) were included. Furthermore, two important mechanisms were discussed: the Dispute Settlement System (designed to deal with disputes) and the Trade Review Mechanism (designed to assess national trade policies) which would make systematic review of trade policy possible (World Trade Organization: n.d. f). Because the negotiations took longer than expected, especially because of topics dealing with agriculture, the matter of the establishment of an organization could be dealt with too. Although the negotiations were not aimed at establishing a formal organization, it was the result after eight years. Besides the formal institutionalization, the introduction of a formal DSS and the expansion of new topics such as services were the two main differences between the GATT and the WTO. Decisions on agreements are almost always taken by consensus. Each member state has one vote. In case there is no consensus, majority voting will be used. This is one reason the negotiating rounds have take so much time.

Dispute Settlement System
There are two approaches which have been surrounding the idea of a multilateral trading system and dispute settlement. The first approach stresses the importance of conciliation of disputes. According to this pragmatist approach, disputes are best settled through diplomatic negotiations, a view traditionally shared by many Europeans. The second approach is called a rule-oriented approach in which preference is given to settlement of disputes through legally binding rules. This legalistic approach is common in the United States and has gained territory with the formal creation of the WTO in 1994, after the Uruguay round (Barfield: 2002, p 132). Both approaches can be found back in the agreements of the WTO, but after 1994 there has been shift towards the legalistic approach, especially in dispute settlement.

WTO dispute settlement differs from GATT dispute settlement on three counts: the introduction of an appellate body made it possible to appeal a ruling. The decision making mode changed from positive consensus to negative consensus and in addition, a specified time frame was introduced for ruling and implementation. Negative consensus entails that rulings of the panels and Appellate Body are adopted unless all member states agree that the ruling will not be adopted. This leads to an almost automatic adoption which makes it easier to make decisions. It also means a shift towards a legalistic approach because it are the juridical bodies that have the final say in the disputes because there reports are either accepted or appealed (Barfield: 2002, p 132). Critics fear that the diplomatic nature of the organization will disappear and that it will reduce the legitimacy of the organization because of the reduction in democratic control and rule making. Proponents however claim that the 'rule of law' is an objective tool to decide on who is right and who is wrong (Barfield: 2002, p 132). The objectivity of the panellists is however under discussion. On top of that systemic problems arise because of the ever increasing quantity of cases of dispute settlement between the US and the EU/EC (Barfield: 2002, p 133).

The Dispute Settlement System is based on the assumption that there are benefits from free trade. Course of action is specified in article XXIII GATT. Three types of complaints are defined: the first type of complain is a violation of the rules (article XXIII: 1a GATT). Assumed is that a violation has a negative impact on the country faced with the violation. The impaired/nullified benefits are taken into consideration to determine the counteractions to be implemented. The second type of complaint is a non-violation of the rules. This type of complaint arises when a member state is convinced that there is impairment or nullification of benefits even though the targeted defendant did not violate any agreement. This is the result of 'the application by another contracting party of any measure, whether or not it conflicts with the provisions of this Agreement' (article XXIII: 1b GATT). This type has almost never been used, because it is difficult to prove impairment or nullification in case of a non violation. The third complaint is a situation complaint: a complaint that is neither a violation nor a non violation of the agreements (article XXIII: 1c GATT). This type has never been used and thus there are no examples which show situations in which this violation can be used by the complainant. Only members can initiate a dispute, but they are not the only actors in the DSS. The procedures and time lines which have to be followed in case of a violation are set out in the Dispute Settlement Understanding (DSU) which can be found in Annex two of the WTO agreements. Article 13 DSU states that experts can be called to give statements. Members which are neither complainant nor defendant, but do have an interest in the case are called third parties. They do not have the right to appeal, but they can present data. Private parties do not have an official status within the DSS, but they can execute power through their national governments. It is up to the defendant to prove that there is no impairment or nullification of benefits. Article 3.3 DSU states that the defendant must present evidence which proves the complainant is wrong. This 'reverse law' was introduced because preparing a case proved to be difficult. Collecting all the evidence necessary is time-consuming and expensive and might deter (developing) countries in bringing forward a complaint. The aim of the measure was to provide equal opportunities for the member states, despite their unequal level of resources.

There are two ways to settle a dispute. The first is to find a mutually acceptable solution through consultations, which represents the diplomatic approach. The second method is to follow the juridical process, leading to panel and Appellate Body (AB) reports which become binding as soon as the Dispute Settlement Body (DSB) has accepted them, representing the legalistic approach. The DSB consists of all member states and is a meeting of the General Council. The General Council also meets as the Trade Policy Review Body. The DSB can therefore be seen as a special meeting of the General Council, performing a specific task. The procedure starts with consultations (article 4 DSU) which lead to closure of approximately a quarter of the cases. If consultations fail, a request to establish a panel follows. Panels are established by the DSB and consist of three persons who are experts on the subject of the case (article 6 DSU). Their task is to examine the case in light of the WTO agreements. The panel has to produce a report in which they present their findings and give the result of their interpretation on whether or not the defendant is acting in violation with the agreements. This process can take up to nine months. If the report is adopted by the DSB, the case is closed and the report has to be implemented. Either party can ask for an appeal. The AB, a permanent body consisting of seven persons will take a new look at the case and review the findings of the panel. They then produce their own report. The AB can reverse panel findings and recommendations, as a whole or parts of it. After adoption of the AB report implementation follows. The AB report is impossible to appeal. It could happen that a member state does not comply with the implementation 'within a reasonable period of time' (article 21.3 DSU). In that case compensation is negotiated between the complainant and the defendant.

Retaliatory measures are the last and final option in case of non compliance with the implementation of the report. An example of a retaliatory measure is found in article 22.1 DSU which deals with the suspension of concessions: '[...] the suspension of concessions or other obligations are temporary measures available in the event that the recommendations and rulings are not implemented within a reasonable period of time' (article 22.1 DSU). In practice this measure leads to trade sanctions towards the member state that has violated the agreement. These trade sanctions should target in principle the same trade sector as was affected by violation of the agreement to minimize spill-over effects to other sectors.

Special position of developing countries
First of all, there is a problem with the definition of 'developing country'. It is not specified in any of the agreements what a developing country is. It is stated that member states can determine themselves whether or not they consider themselves a developing country. Other countries do have the option to challenge this self-categorization. In the beginning of GATT, the majority of the member states consisted of developed countries, which means there was no need for such a definition and therefore no definition was agreed on. Currently the situation is reversed and the majority of member states have considered themselves to be in the category of 'developing country'.

Preferential treatment for developing countries is scattered through the various agreements such as the agreement on agriculture, the agreement on trade related aspects of intellectual property rights (TRIPs), the agreement on trade related investment measures (TRIMs), the agreement on technical barriers to trade (TBT), the agreement on sanitary and phytosanitary measures (SPS), the agreement on import licensing procedures (LIC) and the general agreement on trade in services (GATS). Developing countries are granted special treatment when it comes to time frames, as is the case in the DSS, which means they get more time than developed countries for the implementation of the agreements. Part V of the GATT contains statements on trade and development, but critics point to its vagueness. It is therefore considered not to have many positive effects on the development of developing countries. The most important provision for developing countries is the so-called enabling clause, officially called the decision on the 'differential and more favourable treatment, reciprocity and fuller participation of developing countries' (World Trade Organization: n.d. c). With this clause from 1979 two waivers from 1971 were made permanent. These 'waivers of obligations' can be used by either developed countries for developing countries or between developing countries themselves. In practice, it meant that either obligations could be postponed or countries could decide not to make use of certain rights. The enabling clause should not be seen as a waiver itself to article I GATT (Most Favoured Nation principle), but should be seen as an instrument which can be used on a voluntary basis (Bartels: 2003). The legal status and the rules for the use of the enabling clause are unclear, amongst other things because the clause is legally considered not to be part of the general rights and obligations of the member states (Bartels: 2003). However, the legal justification for the Generalized System of Preferences (GSP) as well as the Global System of Trade Preferences (GSTP) is based on this enabling clause (World Trade Organization: n.d. b)The result of these new agreements was that there were possibilities for member states to apply preferential (or more favourable) treatment to countries despite of the MFN principle, which states that all members are to be treated equally.

The before mentioned negotiating rounds did not end in 1995. In 2001 a new round was launched and was scheduled to end in 2005. However, it has yet to be finished and is therefore

sometimes referred to as the 'suspend and resume' round. The Doha round is known for its development agenda, called the Doha Development Agenda or DDA. In the Uruguay round the position of developing countries within the WTO agreements had been part of the negotiations, but the general consensus amongst most developing countries was that this round did not bring them as many advantages as they had hoped for. In the Uruguay round, some developing countries were granted preferential access to more developed markets. Examples are the special trade preferences granted by the European Union to some of its former colonies and programs by the US, in so-called GSP programs.

However, developing countries have claimed that because only some developing countries could make use of this preferential treatment, the countries that were left out of the agreement could be worse off than before in their terms of trade. In addition, the commitments that were attached to new agreements such as the TRIPS and SPS were expensive for developing countries. Developing countries as a group also lowered their tariffs more than was agreed on. Before they would agree on opening up their markets even more, more advantages would have to be given to them (Anderson and Martin: 2005).

A reaction was given through the 2001 Ministerial Declaration. The goals for the Doha round were defined as to ensure 'that the system plays its full part in promoting recovery, growth and development' (Doha Declaration: 2001, article 1, p 1), and 'to ensure that developing countries, and especially the least-developed among them, secure a share in the growth of world trade commensurate with the needs of their economic development' (article 2, p 1). In 2001 a Special Safeguard Mechanism (SSM) was proposed for developing countries as an exception to general rules (Annex A of WT/L/579). The goal of this safeguard was that in case of emergency developing countries could protect their markets. It would 'allow developing countries to raise tariffs temporarily to deal with import surges and price falls' (World Trade Organization: n.d. d)As of yet there is no consensus on the SSM and other possible advantageous measures for developing countries.

In 2004 a new EU GSP program was launched which will last until 2015, but only very small changes were made. At present there are three components within the GSP program: the standard GSP; the GSP + or the 'special incentive arrangement for sustainable development and good governance' and the EBA: everything but arms arrangement, which targets 50 LDC's (European Commission: 2009b). The standard GSP holds for all 176 countries in the GSP system. The GSP + is based on the idea of positive conditionality: if a developing country complies with certain standards set by the EU, on for example labour standards, it can apply to additional preferential treatment, for instance on sensitive products[2] (Bartels: 2003). Both positive and negative conditionality are frequently debated on because it is unclear whether or not such conditionalities are in conflict with WTO law (Bartels: 2003).

Problem statement
The WTO system has been in operation for almost fifteen years and various scholars have done research to see how the system has been working so far. Various studies have showed that participation in the WTO DSS has not been equally spread amongst the members states. There are a number of countries which are referred to as the 'usual suspects' which participate in over half of the complaints that have been brought forward, either as a complainant or as respondent. This group includes the European Union (EU, which is seen in the WTO system as an actor in itself and is in the official documents referred to as the European Communities,

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[2] There is no clear definition of sensitive and non-sensitive products and therefore cause of discussion and conflict.

or EC[3], for legal reasons), the United States of America (US), India and Brazil. Developing countries make less use of the system and countries in the category Least Developed Countries (LDC's) seem to not at all participate in the system. The question is why it is a problem when developing countries seem to participate relatively less.

According to Shaffer (Shaffer: 2009) it is important for developing countries to participate because legal decisions made by the WTO affect economic outcomes in those countries directly, in a negative as well as a positive way. Non-participation can therefore affect the overall welfare of a country. He also states that 'WTO jurisprudence shapes the interpretation, application and social perceptions of the law over time and thus affects future bargaining positions in light of these understandings' (p 172). This means that non-participation will lead to even less expected participation in the future which leads in turn to a downwards spiral. When developing countries make less use of the system they miss out on potential future benefits. A second problem is that the legitimacy of the system decreases because the system is designed for participation of all countries.

Which reasons can be given for the seemingly lower participation of developing countries? Answers to the question why developing countries have participated less than developed countries have been sought in the design of the Dispute Settlement System (DSS). The most important reason given for the lack of participation due to the design of the DSS is the nature of possible retaliatory measures, such as the option of 'suspension of concessions'. Although in theory a retaliatory measure has as result that the complainant is compensated for future economic losses, in reality this is only the case when retaliatory measures are taken by developed countries against other developed countries or developing countries. Unfortunately, when the measure is used by developing countries against other countries, it often does not generate benefits: the costs that come with imposing such a measure are likely to be higher than the benefits arising from the measure. Another point of critique concerns the vagueness of many articles in the agreements. Because of this vagueness, in the case of a complaint, the recognition of a violation of the agreements, and the application of the rules that follow, depend on the interpretation of the panellists (Barfield: 2002, p 133). There has been done research to determine which countries provide the experts for the panels. Panels with experts from the US and EU could be biased towards developed countries. Furthermore, because in developed countries there are more possibilities for education and training in international trade law and economics, panellists from these areas could be more likely to be chosen as a panellist. Critique from the side of developing countries also targets the so-called Amicus Curiae Briefs. Amicus Curiae Briefs are unofficial documents which function as a source of information for panels and the AB, but are not mentioned in any of the WTO agreements. The briefs are prepared by non-parties to the dispute (organizations, meaning both NGO's and multinational corporations, as well as individuals) and can (but do not have to) be accepted by panels as a source of information. Its controversy rests upon the lack of transparency that comes with the briefs: it can be unclear which briefs with which information have been considered by a panel or the AB in its decision. Furthermore developing countries argue that when allowing the briefs to be admitted, developed countries gain power in the decision making process because most NGO's and multinationals are located in the US and Western Europe (Umbricht: 2001). The legitimacy of the system decreases with the above mentioned alleged bias towards developed countries. Further specification of the agreements or the training of experts from developing countries in order to balance the composition of panels could be a solution.

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[3] The member states of the European Union are also members of the WTO, separately from the EC.

Besides the challenges countries face due to the nature of the WTO agreements and the DSS, reasons for the lack of participation can also be found within the countries themselves. Shaffer has categorized constraints within countries as constraints of law, money and politics (Shaffer: 2006). Other authors have made comparable distinctions such as asymmetric legal capacity, economic dependence via bilateral assistance and political factors. Such constraints could be solved outside of the WTO DSS system.

In March 2008 an extensive dataset on the DSS was published by Horn and Mavroidis: *The WTO Dispute Settlement System 1995-2006, some descriptive statistics* (Horn and Mavroidis: 2008). This dataset contains 28.000 observations and was initially compiled for the World Bank. It covers all disputes between 1995 and 2006. It contains information about various aspects of the DSS among which: the type of complaints; the composition of panels, the way complainants and respondents are spread over the different cases; the agreements and provisions which have been invoked; the winners and losers of legal claims and the length of the different processes. The authors only present the data and do not perform any statistical analysis. Others are stimulated to take on research. They do however point to three observations. The first is the 'almost complete absence of Least Developed Countries' (Horn and Mavroidis: 2008, p 1) (LDC's) in the DSS, which has been observed before. Their second observation is that developing countries are more active and more successful within the system than they had expected which was a new observation and changes the outlook on the participation of developing countries. The third observation is that 'the EU and the US dominate less than expected, being much more often the subject of complaints, than a complaining party' (p 1). This is an important observation because it suggests that there are indeed countries willing to make a complaint against the US and EU.

Although research at the system level could lead to improvements to the system, leading to increased participation, the fact that the dataset suggests that developing countries as a group are participating better than expected, makes research at the country level very relevant. By targeting issues at the country level only, while at the same time no changes are made at the system level, participation, which is assumed to lead to positive welfare effects, could still be increased. Making changes to the legal system is likely to be difficult because of the intergovernmental nature of the organization. All countries would have to agree on new rules. Looking at the present Doha round makes it clear that it would be a difficult and lengthy process, which makes country level research even more important. When looking at the individual developing countries, it can be noted from the presented data that there is a difference between larger and smaller developing countries in their participation. Brazil is one case in which a large developing country was effectively able to make use of the system (Shaffer: 2008). Also India, Argentina and Thailand have participated more than other developing countries. Additionally, what is interesting is that, at first sight, the complaints are not equally spread amongst the remaining developing countries. Consequently, the key question researched in this paper is:

Why do some developing countries participate in the dispute settlement system of the WTO while others do not?

This question is policy relevant. When reasons for participation at the country level are defined, one country can learn from another and set up policies leading to participation. The question is theoretically relevant because it does not look at developing countries as a group, as has been the case in previous research, but looks at the individual level of developing

countries. It is also theoretically relevant because it does not only considers the often used three fold explanation for developing country participation, law, money and politics, as categorized by Shaffer (Shaffer: 2006), but takes additional variables into consideration such as political stability and government effectiveness.

In order to answer the key question, three sub questions need to be answered:
1. **What is the present theory and evidence behind the difference in participation of developing countries in the DSS?**
2. **How can the independent variables be operationalized and how can their influence on the dependent variable be researched?**
3. **What are the results?**

The first sub question is answered in chapter two through a review of the existing literature, identifying and introducing different assumptions, providing the theoretical framework of this paper. The second sub question is answered in chapter three in the form of a research design, including justification of the design and the used data. The third sub question is answered in chapter four. Chapter five consists of the conclusion in which the answer to the key question is presented.

1.2   Research design

Unit of analysis
The unit of analysis is the country. Country participation is the dependent variable in this research.

Research design
In order to test the assumptions, presented in chapter two, which lead up to the independent variables, a regression analysis is performed on the data, also referred to as a non-experimental 'large N' design. In a regression analysis, there are at least one dependent variable and one independent variable. The independent variables are assumed a priori to have a causal relationship with the dependent variable and are presented in various assumptions. The goal of such a statistical analysis is to research whether or not there are correlations between the one dependent variable and the various identified independent variables. Because multiple variables are put together in one model, it is possible to determine the influence of the independent variables taking the other independent variables into consideration. When a correlation is found, it has predicting value and can be used in policy making. This can be of use in policy making for example when making a decision about which project to give the highest priority. In addition, the allocation of resources can be linked with the expected outcome of the dependent variable of each project.

1.3   Thesis overview

Chapter two
In chapter two, present theory and evidence surrounding country participation is presented. The variables that are assumed and sometimes proven to be related to participation are divided into three groups which deal with different issues: objective factors that contribute to participation; capacity and bureaucratic apparatus; and political factors. Out of the different

variables, six independent variables which are used in this research are identified. At the end of chapter two, justification of the choices made is presented.

Chapter three
In chapter three the research design is presented and justified. The proxies used for the independent variables are also presented and justified. The dependent variable in the analysis is the participation of countries. The independent variables are based on the theory presented in chapter two. Before the execution of the regression analysis, information is provided about measurement and data validity. Measurements for both the dependent as well as the independent variables are defined in this chapter. In addition, information on the different datasets and specific data is given and arguments are presented for its validation.

Chapter four
In chapter four the answer to the third sub question is given, consisting of the results of the statistical analysis.

Chapter five
In chapter five the answer to the key question is presented which leads to a conclusion.

2   Theory and evidence on country participation

2.1   Introduction

In this chapter an overview of the present theory and evidence behind, and research on country participation is provided in order to answer the first sub question:

What is the present theory and evidence behind the difference in participation of developing countries in the DSS?

The research that has been done on country participation in the DSS so far, has not been aimed at explaining the difference in participation between developing countries. Research has been done on the participation of the entire group of WTO member states. Countries are not investigated individually regarding their participation behaviour, but are divided into groups, although the precise classification of countries is not always the same (Francois et al: 2008 and Busch et al: 2007). The aim of those researches is to explain the difference in participation between the different classified groups. Research also has been done specifically on African countries as a group (Alavi et al: 2007). On top of that several case studies have been done, for example on the DSS participation of Brazil (Shaffer et al: 2008). Some of the factors which are presented in the paragraph below therefore have become visible in research focussing on developing countries, while others do not. Factors that could help to explain the difference between developing countries as a group and developed countries are not necessarily useful to explain the difference in participation between the various developing countries. At the end of this chapter, the factors which are used as independent variables in this research are presented, including a justification of the choice made.

In the literature up to now many different factors have been presented which are assumed and sometimes proven to be of importance for the participation of (developing) countries. To increase the overview on the various factors, they are divided into three groups. One group contains objective factors concerning the importance of trade and size of the economy. Another group contains factors which have to do with a lack of capacity and the functioning of the bureaucratic apparatus. The third group consists of external and internal political factors.

2.2   Factors that explain country (non-) participation

1   Objective factors for participation: importance of trade and size of the economy.
Since the WTO deals with the rules surrounding international trade flows, the first factor under investigation is trade. In case a member country does not take part in international trade, meaning it is a completely self-sufficient country, there is no incentive to participate in the system. In theory, a country could consider being a third party to a dispute, for instance to show their support to a neighbouring country, even though it would not participate in the system itself, but so far there has not been evidence for that. Francois et al (2008) have shown that country size (measured as GDP, or Gross Domestic Product) and export volumes (measured as a member's share of total exports) are correlated to the participation of the different groups of countries (p 15). Following the results of their research, a large country with high export volumes would be very likely to participate in the DSS. The European Union (EU/EC) and the United States (US) are the most obvious examples thereof. Small countries with low export volumes would consequently be unlikely to participate in the system, as is the case for most Least Developed Countries (LDC's).

Because trade volumes are of importance for country participation, the composition of these trade volumes is also interesting. Francois et al (2008) have investigated whether or not the composition of trade matters for participation. Their research consists of an experiment (using the negative binominal regression model) to see whether or not this factor contributes to participation, consisting of hypothetically merging all LDC's in one large LDC. They have found that composition of trade is not a determining factor in LDC participation. When merging all LDC's in one union, the change in composition of trade does not really affect their participation. They therefore conclude that 'the trade structure of LDC's seems to have a very limited impact on their dispute initiation' (p 28). It is therefore not of importance which sectors in a country are developed, but whether any of these sectors are developed at all.

2   Capacity and bureaucratic apparatus
Besides trade and development there is another factor which frequently occurs in the literature about country participation and that is a lack of capacity. This gap in capacity (the difference between actual and needed capacity) arises because developing countries do not have access to as many resources as developed countries. The result is a lack of financial and legal capacity.

Financial resources are needed in order to participate in the DSS which means a lack of financial resources is a problem for countries that want to participate. The costs of participation are higher for developing countries, not only in relative terms, but also in absolute terms (Shaffer: 2006). Because they make so scarcely use of the system developing countries can not benefit from economies of scale. Economies of scale occur when activities, such as participation, are increasing. The costs of participating consist of initial costs and additional costs. Initial costs are assumed to be higher than the supplemental costs and consist for example of the money that is spent on lawyers and other advisors which are hired to get to know the structure of the agreements and the application of the DSS. These costs have to be made regardless of the amount of participation that follows. The supplemental costs are costs which apply to the specific conditions of each individual case of participation, for instance the information needed to detect a certain violation of the agreements. The average cost of one 'unit of participation' goes down with an increase in the number of units. For a country it will become relatively less expensive to participate each time it participates. This leads to a vicious circle in which it is difficult to make the decision to start participating.

Busch, Reinhardt and Shaffer (Busch et al: 2007) have done research on the importance of legal capacity for participation. The define legal capacity as 'the institutional resources required to prepare and prosecute disputes' (p 1). The authors have conducted a survey at the WTO Head Quarters in Geneva. Based on the answers given by the WTO delegations of each member state they have created a 'legal capacity index' which shows the level of legal capacity of each country according to this index. Their conclusion, following a multivariate regression analysis was that legal capacity is a very important factor in predicting participation. Because of the increased legalization of the WTO system, a high level of legal capacity is a necessary precondition for countries to benefit from the system. One of the policy implications of their research it that it is worth investing in legal capacity in (developing) countries which do not yet participate. Even a small change in the amount of legal capacity could lead to an improvement in their position and an increase in participation (p 14). Another outcome of their research is that not only the amount of legal capacity is of importance, but also the experience of the legal staff (p 14).

In addition to (the lack of) capacity and resources, the functioning of the bureaucratic apparatus of a country could also be of importance for participation. When the bureaucratic apparatus is not functioning properly, it is likely that participation is low or nonexistent. The outcomes of an effective government are numerous: improved decision making, better allocation of resources, enhanced performance in the planning of activities, the achievement of goals and the strengthening of implementation of internationally agreed development goals. It could also affect country per capita income and social progress. Better governed countries are said to have higher productivity growth, which will eventually lead to a higher level of welfare. An effective government could thus lead to higher participation because its capacity can be put to use more effectively. The argument following Busch et al (2007) is that on top of (legal) capacity more is needed to obtain the highest possible rate of participation.

Another example of the consequences of a lack of government effectiveness is that it could be necessary for different ministries, such as the ministries of economic affairs and justice, to work together when preparing the decision whether or not to participate. When there are problems with this cooperation, the preparation of the decision will take longer, which means other issues might be given priority to. It could also be a problem when there is no coordination between the national government and other actors such as the private sector. There is evidence that good public-private network coordination is one of the reasons for the success of Brazil in the DSS (Shaffer et al: 2008, p 90). Its success is also explained by the fact that Brazil has acted both as a defendant and as a complainant. The experience and knowledge gained by being a defendant has been used when acting as a complainant and has increased the strength of the national government to deal with international affairs. The strength of the ministry of foreign affairs has in turn led to successful participation (p 88).

Another probability is that ineffective governments are likely to be unable to work and cooperate with other national governments. Francois et al (2008) have researched whether or not hypothetical cooperation between different LDC's would increase their overall participation. They have found that when combining all the LDC's into one union, their participation would double. Research done specifically on African countries shows that cooperation between African countries is not taking place as much as it could. Cooperation could be much more improved and it is argued that this lack of cooperation is one of the reasons for their non-participation (Alavi et al: 2007).

3   Political factors
Politics can be defined as 'the activity by which groups reach binding collective decisions through attempting to reconcile differences among their members' (Hague and Harrop: 2007, p 3). Binding collective decisions are in this case taken on two different levels. One level is situated at the WTO where new agreements are agreed on by means of intergovernmental negotiations. The level of politics which is relevant for this research is the national government level of decision-making. The decision to be made by the national governments is whether or not to participate. The national governments have the authority to decide on participation because only countries (except for the EU/EC) can initiate consultations and thus dispute settlement at the WTO. The national governments are however influenced by various actors who can have some kind of interest in the (non-) participation of that country. There are actors (and groups of actors) who could try to pressure the government to participate (positive pressure) or not to participate (negative pressure). Examples of actors are: other countries and member states, Non Governmental Organizations (NGO's), public and private enterprises (national and multinational) and pressure groups from within the country.

Negative pressure could occur when there is a relationship between a developing country and its targeted defendant outside of the WTO organization. It is for instance possible that country A is involved in negotiations with country B in another organization. When a country receives aid from the US, it might not want to influence the probability of receiving aid the following year in a negative way by targeting the US in the DSS of the WTO. Clearly, formally these two processes are not linked to each and it is very difficult to prove that there is a relationship between these two processes. However even if it were easy, for this research the actual correlation is not important. What is important is the perceived relationship between the two by governments in developing countries. When a country is under the impression it might influence the outcome of a negotiation process in a negative way by bringing forward a violation, it might consider not doing so. The more international political pressure is perceived by developing countries, for instance because of the amount of international development aid they receive, either by an individual country or by an international organization such as the IMF (in which western countries have a powerful vote in the decision making process), the lower the probability that a country will participate in the DSS. This so-called aid-dependency could therefore lead to non-participation.

Positive pressure could come from the private sector in a country. In order to set up a business, investments are necessary: whether they are private investments, sponsored investments (for example by the government of a country) or investments from abroad. Once investments are made, a return on those investments is expected, since the goal of most private businesses is to make profit. These expectations have as a result that all the information necessary to make that profit is collected and that businesses will guard their interests. To do that they will also collect information on international trade law, since it directly affects them, if they export. Businesses which have been funded with public resources have the same interests if they export, as for example in (former) communist countries, and can execute pressure with similar methods.

In developed countries businesses often form associations or organizations in order to have a stronger voice in negotiation processes with the national (and other levels of) government as to better defend their interests. Throughout Europe there are many SME (small and medium enterprises) organizations in which different businesses come together to defend their interests at the European Union. The EU even organizes a special SME week with which they promote entrepreneurship and discuss policies with the SME organizations (European Commission: 2009a)), which shows that these organizations are listened to and are recognized as an actor in the (international) political arena. However these private sector organizations also play an important role within the different developing countries. Private sector organizations could pressure national governments to make new policies and change their priorities. When the private sector plays an active role in a country, it could be able to push the national government in setting priorities which are important for them, and as a result making the needs of the private sector known. This type of information would otherwise not reach the national government. Interest in trade issues could go up because if there are problems with exporting products to other countries, it affects the private sector directly. With the help of private businesses, national governments will have the information they need to spot a violation of a WTO trade agreement.

NGO's and idealistic pressure groups formed by citizens could also pressure the national governments, in both a positive and a negative direction, depending on the subject it concerns. Both types of actors could provide information to the national governments which could lead to participation. NGO's could also for instance provide assistance in legal matters (when there

is low legal capacity). They could also help with starting up cooperation between two or more developing countries and with that preparing a stronger case before of the DSS.

There is one last factor which falls into the category of politics and that is political stability. Political stability has proved to be of great importance for the path of development of developing countries. The correlation between political instability and economic growth rates has been researched, for example by Alessina et al (2006). Their conclusion was simple: political instability reduces growth. They have also found that political instability is likely to persist because changes in government lead to even more changes, which makes it difficult to end the vicious circle. Although there is proof that uncertainty, created by for example political instability, sometimes leads to a higher level of investments (see for example Sarkar: 2000), it is generally accepted that in most cases political instability will lead to lower levels of investment. It is because of their risk aversion, that investors are hesitant to invest in these kinds of countries (Rodrik: 1989). Countries that are politically stable are thus more likely to attract investment, which could lead to economic growth (which is, as mentioned above, assumed to have a positive effect on participation).

There is another reason why political stability is assumed to lead to an increase in participation. Governments of politically stable countries are not distracted by the consequences of the instability. Countries at war have other priorities which have to be dealt with first. For countries where there is a new government every six months, whether that is due to warfare or to something else, trade will be likely not to be their first priority. Because of this, politically stable countries are assumed to be more likely to have trade on their agenda and to participate in the DSS.

2.3   Independent variables
In the previous paragraph several variables have been presented which are assumed to have an effect on country participation. Not all of these variables are used in this research, amongst other things because of time and resource constraints. The amount of information available is not the same for each variable. In addition, some variables are more difficult to operationalize and measure than others.

1   Objective factors: importance of trade and size of the economy:
GDP and 'export as percentage of GDP' are taken as independent variables for size of the economy and the importance of trade respectively. These data are relatively easy to gather because they are basic data which are used for many different types of research and are available in more than one online database.

2   Capacity and functioning of the bureaucratic apparatus:
A lack of capacity or a resource gap is more difficult to use as an independent variable because as of yet there are no general data available about the precise amount of money needed to initiate a dispute. However, the level of development of a country is assumed to also say something about the financial position of the national government and is measured as 'GNI per capita'.

Legal capacity is an indicator which already has been used and hence can be measured. Unfortunately, in the article by Busch et al (2007), the precise data of their 'legal capacity

index' are not available. It is because of this lack of information that legal capacity is not an independent variable in this research.

The hypothetical cooperation between countries has been an independent variable in previous research. However, it would timely to collect data on present cooperation between the different countries in the research population. Therefore, this indicator is not an independent variable in this research.

There is no information available on the level of coordination between different ministries in the different individual countries. There is however an indicator available that measures the overall quality of a country's bureaucratic apparatus. Government effectiveness is an aggregated indicator which is available at the World Governance Indicators (WDI) online database, developed by Daniel Kaufmann and his team.

3   Political factors:
Political pressure can be exercised by different actors. Because of time and resource constraints it has not been possible to collect data on pressure by NGO's, the private sector and local pressure groups. To obtain these data extensive research would have to be done in each of the individual countries under investigation. Surveys would have to be done in order to determine the perception of what pressure is in the different countries and the depth of pressure on the decision making process surrounding participation. The only pressure that can be measured to a certain extend is pressure executed by other governments. The reason for that is that there are data available on international aid flows.

An aggregated indicator for political stability is also available from the WGI online database. The exact composition of both of these aggregated indicators is provided in the next chapter.

Consequently, the six independent variables which are researched in this paper are: the importance of trade; the size of the economy; financial capacity, measured by level of development; government effectiveness; international political pressure, measured by aid-dependency and political stability.

Chapter 3   Research Design

3.1   Introduction

In this chapter operationalization and measurements for the dependent and independent variables are given. In addition the research design is presented and validated/justified in order to answer the second sub question:

How can the independent variables be operationalized and how can their influence on the dependent variable be researched?

In paragraph 3.2 the following terms will be explained and operationalized: the research population, the dependent variable; participation, and the independent variables: the importance of trade, the size of the economy, financial capacity, government effectiveness, international political pressure and political stability. The proxies which are used are justified and the data sources which are used presented and explained. The way the influence of the independent variables on the dependent variable can be researched is set out in paragraph 3.3.

3.2   Operationalization

Introduction
Both the dependent variable and the various independent variables used in this research are impossible to measure without further specification. Words like pressure, stability and participation are concepts which cannot just be expressed in numbers. This means that these concepts must be replaced by concepts which are possible to measure in order to conduct statistical analysis. Both the dependent and the independent variables are therefore represented by proxies and substitutes that most closely symbolize or are most closely correlated with the variables to be measured. All of the proxies used in this research are either interval variables or ratio variables. The interval variables can be ranked, quantified and compared to one another. Ratio variables are interval variables with an additional quality because they hold a clear definition of 0.0.

Research population
Horn and Mavroidis (2008) have made a categorization for WTO member states which consist of four categories (see annex 1) for complete country list):
- G2: European Communities and United States;
- IND: industrialized countries;
- LDC: Least Developed Countries and
- DEV: other Developing countries

Francois et al (2008) make use of this dataset for their research. They however make a different categorization (see annex 2 for complete country list):
- G2: EC, US;
- Earlier Industrialized (EI): non-G2 countries traditionally considered as industrialized;
- Newly Industrialized (NI);
- High Income Developing (HID): countries other than NIs with GDP/cap > $4 000;
- Medium Income Developing (MID): countries with $800< GDP/cap < $4 000;
- Low Income Developing (LID): countries other than LDCs with GDP/cap < $800;
- Centrally planned or in Transition (CT) and

- Least Developed Countries (LDC)

In order to keep the number of countries (the N of this research) used in the statistical analysis as high as possible, the research population consists of all WTO member states (153 countries), with the exception of current OECD countries. The countries which are left out because of their OECD membership are: the US, the EU-15; meaning member states who were a EU member state in 2004 (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom), Australia, Canada, Czech Republic, Hungary, Iceland, Japan, Korea, Mexico, New Zealand, Norway, Poland, Slovak Republic, Switzerland and Turkey. Also the EU/EC as an actor is left out. Countries which fall within the IND group as categorized by Horn and Mavroidis but are included in the research population of this research are: Bulgaria, Cyprus, Hong Kong (China), Israel, Romania, Singapore and Slovenia because they are not OECD members. These countries participate less than the other IND countries. However, their lack of participation is not attempted to be explained separately in this paper and may give cause to other research. The N of this research then arrives at 122.

Because data on country participation are available for the period 1995-2006, all countries which have become members after 1998 are left out of the research population. Because these countries became member of the WTO later than other countries, the individual country research results could be distorted in case they would be part of the research population. It concerns the following countries and entry dates: Albania (8 September 2000), Armenia (5 February 2003), Cambodia (13 October 2004), Cape Verde (23 July 2008), China (11 December 2001), Croatia (30 November 2000), Estonia (13 November 1999), Former Yugoslav Republic of Macedonia (FYROM) (4 April 2003), Georgia (14 June 2000), Jordan (11 April 2000), Lithuania (31 May 2001), Moldova (26 July 2001), Nepal (23 April 2004), Oman (9 November 2000), Saudi Arabia (11 December 2005), Chinese Taipei (1 January 2002), Tonga (27 July 2007), Ukraine (16 May 2008) and Viet Nam (11 January 2007). Within this group only China and Chinese Taipei have been a complainant in the DSS of the WTO, the other countries have not participated. The gross amount of countries within the research population has become 'members' of the GATT as early as 1955.

The argument which supports this decision is twofold. First of all, the countries in this group did not have the opportunity to participate in the system as much as countries who became members in 1995 because of their late entry date. Their participation levels could be explained partly by this time factor. The second reason is that becoming member of an international organization such as the WTO is a political process. The decision to become member at a later stage as well as the subsequent (non-) participation is assumed to be political. For these countries, the identified independent variables might be less significant in explaining their participation levels. Leaving these countries out is further justified because it only concerns 19 countries and therefore does not decrease the research population dramatically. Separate research would be necessary to determine the reasons for these countries' specific late entrance, and is left outside this research.

The total adjusted N or research population consists of 103 countries out of 153 countries: Angola, Antigua and Barbuda, Argentina, Bahrain, Kingdom of, Bangladesh, Barbados, Belize, Benin, Bolivia, Botswana, Brazil, Brunei, Darussalam, Bulgaria, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Chile, Colombia, Congo, Costa Rica, Côte d'Ivoire, Cuba, Cyprus, Democratic Republic of the Congo, Djibouti, Dominica,

Dominican Republic, Ecuador, Egypt, El Salvador, Fiji, Gabon, The Gambia, Ghana, Grenada, Guatemala, Guinea, Guinea Bissau, Guyana, Haiti, Honduras, Hong Kong (China), India, Indonesia, Israel, Jamaica, Kenya, Kuwait, Kyrgyz Republic, Latvia, Lesotho, Liechtenstein, Macao, China, Madagascar, Malawi, Malaysia, Maldives, Mali, Malta, Mauritania, Mauritius, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nicaragua, Niger, Nigeria, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Qatar, Romania, Rwanda, Saint Kitts and Nevis, Saint Lucia, Saint Vincent & the Grenadines, Senegal, Sierra Leone, Singapore, Slovenia, Solomon Islands, South Africa, Sri Lanka, Suriname, Swaziland, Tanzania, Thailand, Togo, Trinidad and Tobago, Tunisia, Uganda, United Arab Emirates, Uruguay, Bolivarian Republic of Venezuela, Zambia and Zimbabwe.

Measurement of the dependent variable or participation

Participation of the individual countries can be measured in different ways. One possibility is to look at the amount of cases in which a country has been a complainant before the DSB of the WTO. It is also possible to look at the amount of cases in which a country has been a respondent in a case. However, in that case it only shows a country's involuntary participation in the system and not their voluntary participation, or level of initiative. A different approach is taken by Horn and Mavroidis (2008). Horn and Mavroidis do not only define participation as being either a complainant or a respondent in a case, but also include in their definition of participation countries that make a request for consultations. A request for consultations sets the DSS in motion and is the first phase of dispute settlement. A case could be closed after consultations when an agreement is made between the defendant and complainant. The case then consequently does not enter the panel stage. Cases which are settled in this first phase of dispute settlement are therefore included in the total amount of cases. In addition they count each bilateral dispute as an individual dispute. This means that a multilateral dispute in which there is one respondent and three complainants, holds three bilateral disputes. The total amount of bilateral disputes between 1995 and 2006 then arrives at 965. With the expansion of the definition of participation the amount of disputes is increased by 300% (from 321 to 956). It therefore makes it possible to get a more pronounced indication which countries are participating in the system and enlarges the differences between countries and groups of countries. There is one other element of participation: being a third party to the dispute in panel proceedings. A third party to a dispute in panel proceedings is a country which has an interest in the matter or alleged violation, but which does not want to act as a complainant. Third parties do not have the right to appeal a panel report.

The definition of complainant and third party participation partly overlap: all countries that are considered as a complainant have also participated as a third party to a dispute. There are however several countries which have participated as a third party to a dispute, but did not act as a complainant. The countries concerned all fall under the definition of developing countries or LDC's as defined by Horn and Mavroidis and also fall within the research population of this research: Dominica, Egypt, Ghana, Grenada, Nigeria, Paraguay, Saint Vincent & the Grenadines, Suriname, Tanzania, Benin, Chad and Senegal. The new definition captures all available data on measuring any type of participation. This extension therefore increases the measurement validity for this proxy. Because OECD countries are left out of the research population, as well as China and Chinese Taipei, 622 cases are left out of the research. The other countries that are left out of the research population did not participate and hence do not influence the amount of cases. The total amount of cases then arrives at 343. Figure 1, on the next page, shows the distribution of participation over the different researched countries.
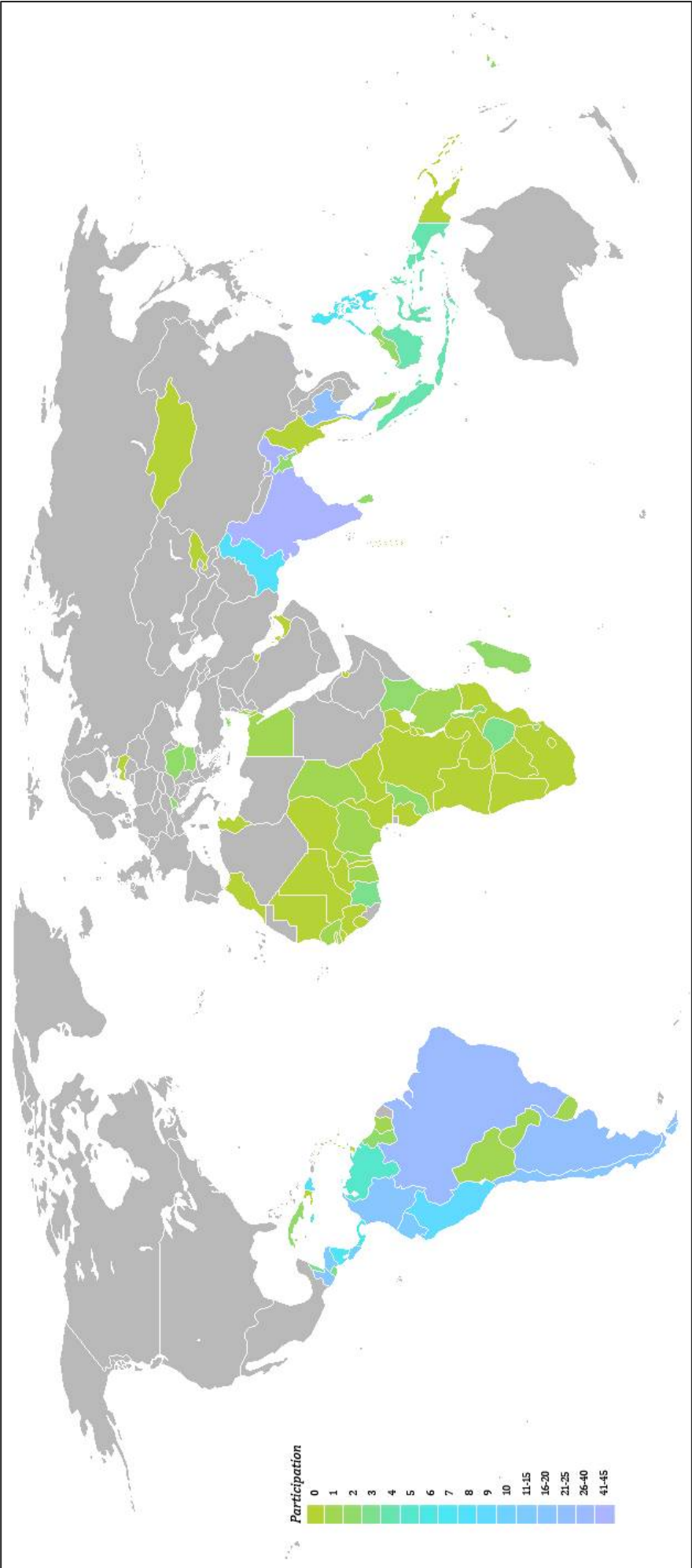
Measurement of the independent variables
In chapter two six variables have been presented which are assumed to have influence on participation. Measurement of each of the proxies for the independent variables is explained and justified below:

1   The importance of trade
The importance of trade is measured as 'export as percentage of GDP' or Gross Domestic Product in US dollars. The data for 'export as percentage of GDP' are taken from the WDI online database (The World Bank Group: 2007). The values for 'export as percentage of GDP' represent the year 2000. The year 2000 is chosen as a base year for all the independent variables. Because data on participation are available between 1995 and 2006, the year in the middle is chosen as a base year. In this case it is relevant to use GDP rather than GNI because it concerns output or production rather than income.

2   Size of the economy
Size of the economy is measured as GDP in US dollars, in the year 2000.

3   Financial capacity measured by level of development
The level of development of each country is measured as 'GNI per capita'. GNI[4] is similar to GDP, or Gross Domestic Product. According to the definition of the OECD, GNI is 'GDP less primary incomes payable to non-resident units plus primary incomes receivable from non-resident units' (OECD: n.d.). To measure the level of development, GNI is used rather than GDP, because it refers to income and not to output or production. The data of the values of GNI are taken from the WDI online database. GNI denotes the GNI of each country in the year 2000 in US dollars.

4   Functioning of the bureaucratic apparatus, measured by government effectiveness
The proxy for government effectiveness is represented by data provided by the World Governance Indicators (WGI) website, developed by Daniel Kaufmann (The World Bank Group: 2009). This indicator is the most extensive indicator that exists referring to government effectiveness. Kaufmann and his team have conducted research in over 200 countries and territories to measure six dimensions of governance: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. Online data are available between 1996 and 2007[5]. As stated in the most recent paper covering the WGI's 'the latest aggregate indicators are based on hundreds of specific and disaggregated individual variables measuring various dimensions of governance, taken from 35 data sources provided by 32 different organizations. The data reflect the views on governance of public sector, private sector and NGO experts, as well as thousands of citizen and firm survey respondents worldwide' (Kaufmann et al: 2008, p 1). All of the six indicators developed by Kaufmann could be relevant for this research and could function as an independent variable in the statistical analysis. However only government effectiveness and political stability are used for this research because they are assumed to be the most related to country participation.

In the WGI dataset, government effectiveness is defined as 'the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies' (The World Bank Group: 2009). It is an aggregated variable

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[4] Similar to the abandoned notion of GNP
[5] The update with the data for 2008 is scheduled end of July 2009

which means that there are multiple sources that have been used to set up this variable. The researchers have made a distinction between representative and non representative data, indicating that there is a difference between the reliability of the separate data. Non representative data are accordingly 'more likely to be subject to higher measurement error given their more limited scope'[6]. The variable of government effectiveness as well as the other five variables are based on subjective measures rather than objective indicators: they state that 'objective data are almost by definition impossible to obtain'[7] because the data often refer to perception of the person who provided the data through a questionnaire. A complete overview of the data used to create this indicator is provided in annex 3.

To create the values of the indicators, the Unobserved Component Model (UCM) is used. This model 'constructs a weighted average of the sources for each country as the best estimate of governance for that country'[8], proportional to the reliability of each source. Value of each indicator ranges between -2.5 and + 2.5. The higher the score, the better the outcome, in this case government effectiveness.

Changes in both directions in the values can be observed when taking a first look at the data. What is interesting, is that most countries seem to have moved in the same direction each year, meaning either up or down since 1996 and not back and forth between 1996 and 2005. In other to get the value that is most representative for this research, the value for the year 2000 is used.

5   International political pressure, measured by aid dependency
The proxy used for this independent variable is 'aid as percentage of GNI'. Data are provided by the WDI online database. Values represent the year 2000. The amount of ODA (official development assistance) consists of the total amount of ODA given to the recipient countries. Because it is a sum-amount, no distinction is made between the different areas aid is given to, or the projects funding is given to.

Aid that is specifically aimed at improving the trading structure of a country, also referred to as aid-for-trade is included in the total amount of ODA. The aim of aid-for-trade is to promote trade (policy), to improve economic infrastructure, to build productive capacity in all kinds of business areas. This type of aid should fall outside of amount of ODA the hypothesis is referring to because aid-for-trade is assumed to increase participation in the WTO system rather than to decrease it, as is the case with other types of ODA. Unfortunately, as of yet, there are no specific data available on the amount of aid-for-trade given within the total amount of ODA. A report, which combines information from both the WTO and the OECD, with country specific data will be published at the end of July 2009. A more general report on aid-for trade from the perspective of the donor countries has been published already. In the report, the focus is on the way aid-for-trade flows are monitored globally, both in donor and recipient countries, and not so much on the possible effects or outcomes of aid-for-trade flows, because there are not enough data yet to make any conclusions about its effects (OECD and World Bank: 2007).

The factor aid in the proxy aid/GNI and therefore the entire proxy may consequently reduce the correlation between aid-dependency and participation. The proxy is used nevertheless because it can give an indication of the correlation. It is assumed that the amount of aid-for-

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[6] idem
[7] idem
[8] idem

trade is too small in order for the proxy to become useless. When more specific data are available, new statistical analysis could be conducted in order to show a correlation which more closely represents the real correlation between the two.

6   Political stability

The data for the proxy of the independent variable political stability are, as is the proxy for government effectiveness, taken from the online dataset of the Worldwide Governance Indicators, developed by Daniel Kaufmann and provided by the World Bank (The World Bank Group: 2009). The variable in their dataset which is used as a proxy is called: 'Political Stability and Absence of Violence/Terrorism'. The information that applies to the validation of the data used for the proxy of governance effectiveness equally applies to the information used for this proxy and is therefore not repeated here.

In the WGI dataset the variable political stability measures 'the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including domestic violence and terrorism' [9]. The exact factors that form this (again) aggregated indicator can be found in annex 4. The values of this indicator are, as is the case with governance effectiveness, ranked between -2.5 and +2.5. The higher the score, the better the outcome, or the more politically stable the country is.

When taking a first look at the values for, for instance, sub Saharan countries in the years 1996, 2000 and 2005, large changes in the values can be observed, in both directions, as is the case for the values of government effectiveness. Also in this case, countries have moved in the same direction each year, meaning either up or down since 1996 and not back and forth in value. Because of this the value of the year 2000 is used.

3.3   Research design

In order to test the assumptions about the reasons for (non-) participation, which are presented in chapter two, statistical analysis is performed on the data. There are multiple independent variables, or X, which are assumed a priori to have a causal relationship with the dependent variable, or Y. The goal of any type of regression analysis is to investigate whether or not there is a correlation between at least one independent variable and one dependent variable. A common and often used form of regression analysis is linear regression analysis, called either a single regression - or a multiple regression analysis depending on the number of independent variables. These types can be used in case a linear relationship is observed between multiple X and one Y.

There are several preconditions that have to be met in order to be able to conduct a multiple regression analysis (De Vocht: 2008, p 199). The first precondition is that the dependent variable is either an interval or a ratio variable. The second precondition is that there is a plausible linear relationship between Y and each X. This can be investigated using scatter plots where the dots in the figure represent the combination of the values of Y and each X. It can be assumed that there is a linear relationship between Y and each X when in the different scatter plots, the dots do not create the form of a hyperbola, parabola or any other clear shape other than linear. For the multivariable regression analysis multicollinearity is not allowed which means that each independent variable should measure something different than the

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[9] idem

other used independent variables. The last precondition for a multivariable regression analysis is that the values of Y should be normally distributed. This is usually assumed to be the case when N > 30. In this research N (the number of countries researched) is 103 and therefore it could be assumed that the values of Y are normally distributed. However, looking at the data on participation (as visualized in figure 1 and graph 1), it is evident that the Y in this research is not normally distributed, because in that case, a bell-shaped figure would appear.
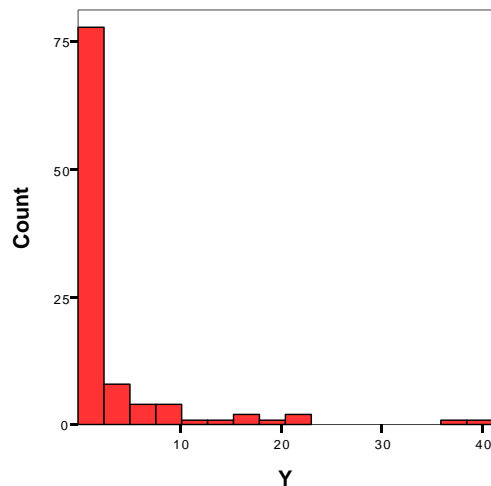
Graph 1:   Distribution of participation over the research population

Whether or not a variable is normally distributed can be tested with the help of a QQ test and plot in SPSS. This tests shows if the observed values are equal to the expected values in case the distribution of values would be normal. In case Y is normal, the dots are be positioned straight along sides the line. This test also shows that the Y in this research is not normally distributed.
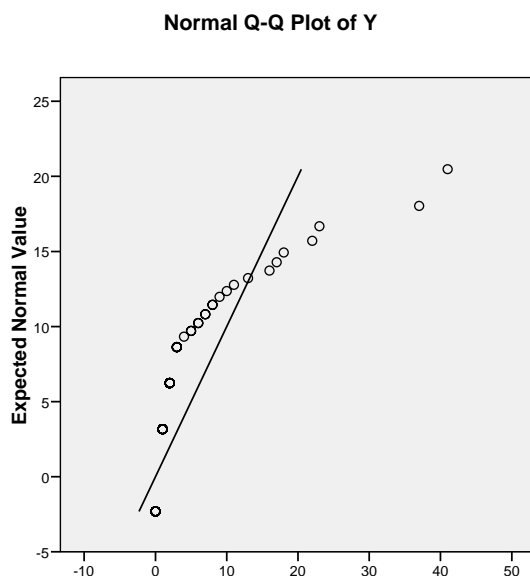
Graph 2:   QQ plot of Y (participation)

However, SPSS provides the possibility to transform values which are not normally distributed into values which are normally distributed. One option is to compute the Natural

Logarithm (ln) of the values of Y^{10}. The result of such a transformation is that the differences between the values which are far apart become smaller than before (Bloothooft: n.d.). This could be especially of help when there are derogatory observations (or outliers) at the right side of the graph. Another possibility is to transform the data through a logarithm with base 10 (Log), through calculating the square root of the data, or to use exponentiations. When adjusted values for Y are calculated, with any (combination) of the possible transformation options, it is still impossible to observe a normal distribution of Y.

Another option is to change the research population. Graph 1 shows that 75 countries out of the research population have a participation value of 0. This is over half of the research population. By taking these countries out of the dataset, the remaining dataset contains the information about the countries that have a participation value of 1-42, and could be used to explain the difference in participation rather than the difference between participation and non/participation. But even with this manipulation of the dataset, it is not possible with transformation to get a dataset of Y which is normally distributed. Changing the research population would also decrease the usefulness of the outcomes of the research. The lower the N of the research, the less the results can be used to make a generalized statement.

There is however another form of regression analysis which can be used to calculate whether or not there are correlations between various independent variables and one Y, in case the values of Y are not normally distributed. A logistic regression can be performed on the data when the values of Y are neither interval nor ratio variables, but dichotomous. This means that the values of Y are divided into two categories, represented by 0 and 1 (De Vocht: 2008, p 217). For this research, Y is divided into the categories participation; represented by 1, and non-participation; represented by 0. All the values of Y as presented in graph 1 are converted into either 1 or 0. When Y > 0, its new value becomes 1. When Y = 0, its new value is 0.

The values of X, or the independent variables, do need to be (close to) normally distributed. In order to create a (close to) normal distribution of each of the values of the independent variables, the data for the independent variables are transformed. The values for political stability and government effectiveness are already close to normally distributed. The values for GNI and GNI per capita are transformed with ln, or the natural logarithm. 'Export as percentage of GDP' and 'aid as percentage of GNI' are transformed using exponentials: 0.2 and 0.15 respectively. The graphs and QQ tests in annex 5show the distribution of the (transformed) variables.

A logistic regression analysis predicts the probability that Y has a value of either 0 or 1 based on the values of the independent variables. Also for this type of regression analysis there are preconditions which have to be fulfilled. The first precondition is that Y is dichotomous. This condition is fulfilled by transforming the values of Y into either 0 or 1. The independent variables have to be either interval, ratio or dummy variables and this condition is also met. As is the case for a multiple regression analysis, the different independent variables all have to measure something else. If this condition is also met it means that it is justified to use a logistic regression analysis on the data in order to research possible correlations between the various independent variables and Y.

In a logistic regression analysis, the probability of Y having the value of 1 is represented by P. The probability of Y having the value of 0 is 1-P. Based on these probabilities, the correlation

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[10] $(Y) = e^{(Y)}$

between the independent variables and the dependent variable is determined. The 'odds-ratio' is $P/1-P$. The so-called 'logit' is the natural logarithm of the odds-ratio: logit = Ln $(P/1-P)$. This logit is the outcome of the logistic regression equation and forms a straight line. A standardized equation looks as follows:

Logit = B0 + B1 *X1 + B2 * X2 + … + Bx * Xk

In the equation B0 represents the constant or intercept. It represents the value of the logit when all $X_i = 0$ (De Vocht: 2008, 219). B1, B2 and Bk are the partial logistic regression coefficients. They denote the influence of each X on the logit, whilst controlling for the other independent variables (or X) in the equation. In case a B is > 0 it means that there is a positive relationship between the corresponding X and the logit (and therefore P). A negative B would in return increase the 1-P. Changes in the logit are linear, but the changes in P are not.

Chapter 4   Analysis

4.1   Introduction

In this chapter the results of the research done following the research design are presented in order to answer the third sub question:

What are the results?

In the second paragraph the calculated values of both the dependent and the independent variables are presented in a table as well as the results of a test for multicollinearity. In the third paragraph the results of the logistic regression analysis are presented. The results are interpreted in paragraph four.

In Annex 6, the calculated values of the dependent and independent variables are presented based on the operationalization of the variables as presented in paragraph one of the third chapter.

One of the preconditions for carrying out a logistic regression analysis is that there are no multicollinearities between the different independent variables. In SPSS it is possible to test whether or not that is the case. In table 1 the Pearson Correlations between the different independent variables are shown. There is multicollinearity when the Pearson Correlation (or r) between two variables $> 0,9$ (De Vocht: 2009, p 220). The upper number denotes the Pearson Correlation. The lower number denotes the significance of the correlation.

	Export as percentage of GDP	GDP	GNI per capita	Government effectiveness	Aid as percentage of GNI	Political stability
Export as percentage of GDP	1	-,075 ,463	,548 ,000	,510 ,000	-,374 ,000	,060 ,578
GDP	-,075 ,463	1	,341 ,001	,305 ,002	-,502 ,000	,011 ,915
GNI per capita	,548 ,000	,341 ,001	1	,813 ,000	-,719 ,000	,026 ,810
Government effectiveness	,510 ,000	,305 ,002	,813 ,000	1	-,497 ,000	-,091 ,387
Aid as percentage of GNI	-,374 ,000	-,502 ,000	-,719 ,000	-,497 ,000	1	-,109 ,312
Political stability	,060 ,578	,011 ,915	,026 ,810	-,091 ,387	-,109 ,312	1

Table 1: Pearson Correlations of the independent variables

The results show that none of the independent variables have a Pearson Correlation > 0.9 which means that also this condition is fulfilled. GNI per capita and government are highly related, but still just under 0,9.

4.2 Results of the logistic regression analysis

The results of the logistic regression analysis are presented in tables. There are no graphs with curve estimations as would be the case when conducting a multivariable regression analysis. There are two components of the regression analysis: the model as it is before the parameters are estimated (0); and the model as it is after the parameters are estimated (1). The percentages of correct predicted are presented in table 2, as well as the model significance and the model Nagelkerke R square.

	Model 0	*Model 1*
Y = 0	0	52.9
Y = 1	100	76.9
Total	60.5	67.4
Significance	_	0.012
Nagelkerke R square	_	0.235

Table 2:   *Model before and after estimation of the parameters*

Based purely on the values of Y, by random chance 60,5 percent of the values are correctly estimated by the model before the parameters are estimated. This is important to know because the model in which the parameters for the independent variables are included need to estimate more than 60,5 percent of the values of Y in order to be useful. After the parameters have been estimated, the percentage of cases which is predicted correctly is now 67,4 percent. This is an improvement in the percentage correct prediction of 67,4 – 60,5 = 6,9percent in relation to the model as it were before the parameters were estimated. Out of the countries that have a value of 0, meaning countries which did not participate, 52,9 percent is predicted correctly. Out of the countries that have a value of 1, meaning the countries which did participate, 76,9percent is predicted correctly. Table 2 therefore also shows that the model is more reliable in predicting participation than in predicting non-participation.

The significance of the model (Model) needs to be ≤ 0,05 in order to be significant. The logistic model based on Y in combination with the independent variables is significant because Sig. = 0,012. The Nagelkerke R Square measures the quality of the model and is always represented by a number between 0 and 1. The closer the figure is to 1, the higher the

quality of the model. The Nagelkerke R Square of this model is 0,235 which indicates that there is a small correlation between the independent variables and Y.

Independent variable	B coefficient	S.E	Wald coefficient	Significance	Exp (B)
Export as percentage of GDP(EX)	-,850	1,269	,449	,503	,427
GDP	,302	,166	3,303	,069	1,353
GNI per capita (GNI)	-,048	,396	,015	,903	,953
Government effectiveness (GOV)	,461	,609	,574	,449	1,586
Aid as percentage of GNI (AID)	-1,376	,999	1,896	,169	253
Political stability (PS)	-,001	,275	,000	,996	,999

Table 3: Independent variables in the equation

Table 3 shows the regression coefficients of the independent variables and their significance. The B coefficient represents the regression coefficient and denotes the direction of the correlation between the different independent variables and Y. It is important not to confuse the numbers of significance and the B coefficient. The regression coefficients indicate something about the direction of the correlation and the size meaning whether the effect on the logit and thus P are positive or negative. The significance says something about the strength of the correlation. The Wald coefficient, calculated by B/SE, is an indicator for the relative importance of each independent variable for the prediction of P. The significance levels of the independent variables that were added to the model, are all too low to be called significant (Sig. > 0,05). Exp (B) represent the exponential B coefficient, or e^B. It shows the influence of the each independent variable on the odds-ratio (P/1-P). This figure however is most relevant when the independent variables are categorical variables. The constant or intercept of the model is -2,562.

4.3   Interpretation of the results

Independent variable	B Coefficient	Wald Coefficient	Significance
Export as percentage of GDP	-,850	,449	,503
GDP	,302	3,303	,069
GNI per capita	-,048	,015	,903
Government effectiveness	,461	,574	,449
Aid as percentage of GNI	-1,376	1,896	,169
Political stability	-,001	,000	,996

Table 4: Summary of the results of the logistic regression analysis

1   Export as percentage of GDP
The value of 'export as percentage of GDP' for B shows that there is a negative relationship between export as % of GDP and P. This means that an increase in 'export as a percentage of GDP' leads, ceteris paribus, to a reduction in the probability of Y having a value of 1. This is opposite to what was expected in chapter two. The significance level of 'export as percentage of GDP' is low. The reliability of this indicator is only 49,7percent. The Wald score indicates that this indicator influences P moderately within the model.

2   GDP
The value of GDP for B shows that there is a positive relationship between GDP and P. This is consistent with the theory and evidence as provided in chapter two. This means that an increase in a country's GDP, ceteris paribus, increases the probability that this country participates in the DSS. The Wald score of GDP indicates that GDP is in this model the factor that contributes most to P. The significance level is however just too low to be called significant (> 0,05). The reliability of this indicator is 93,1percent.

3   GNI per capita
The value of 'GNI per capita' for B shows that there is a small negative relationship between GNI per capita and P. This means that an increase in GNI per capita, ceteris paribus, decreases P. This is inconsistent with what was expected in chapter two. The B is however very small as well as the Wald score, which indicates that the change in P in this model due to GNI per capita is small. The significance level of GNI per capita is extremely low. The reliability of the indicator is only 9,7 percent.

4   Government effectiveness
The value of 'government effectiveness' for B shows that there is a positive relationship between government effectiveness and P. An increase in the value of government effectiveness of a certain country leads, ceteris paribus, to an increase in the probability that this country is participating. This is consistent with what was expected following the theory presented in chapter 2. The Wald score indicates that government effectiveness is moderately important for the changes in P. The significance level of government effectiveness is low. The reliability of this indicator is 55,1 percent.

5   Aid as percentage of GNI

The value of 'aid as percentage of GNI' for B shows that there is a strong negative relationship between aid dependency and P. An increase in the value of aid dependency leads, ceteris paribus, to a decrease in the probability that Y has a value of 1. This corresponds with the assumptions following the theory in chapter 2 that high aid dependency levels could give a negative incentive towards participation. 'Aid as percentage of GNI' has a high Wald score. This means that the relative importance of the indicator is high, looking at the importance of the other indicators. The significance level of 'aid as percentage of GNI' is not high enough to be called significant. The reliability of the correlation between aid dependency and P is 83,1 percent.

6   Political stability

The value of 'political stability' for B shows that the correlation between political stability and P is negative. An increase in the value for political stability leads, ceteris paribus, to a decrease in the probability that Y has a value of 1. This result is not in accordance with the expected relationship between the two. B is however really small as well as the Wald score. This indicates that political stability is not important in predicting P in comparison with the other independent variables in the model. Also the significance level of the indicator is extremely low: the reliability of this indicator is only 4 percent. This means that political stability is not at all a reliable factor in predicting the (non-) participation of developing countries.

Based on the results, the following regression equation can be presented:

Logit =
-2,562 - 0,850*EX + 0,302*GDP - 0,048*GNI + 0,461*GOV − 1,376*AID − 0,001*PS

Even though none of the correlations of the independent variables are significant enough to explain (non-) participation outside the model, they do have to be included in the model equation because the entire model itself did prove to be significant (0,012).

It is important however not to forget that the model significance means that the model is significant in predicting 67,4 percent of the cases correctly, and not in predicting 100% of the cases correctly.

4.4   Independent sample-t test

The difference between the significance level of the model and the individual independent variables indicates that the independent variables influence each other. In order to be more specific about the relation of the individual independent variables to (non-) participation, an independent sample t-test can be performed. With this test it is possible to determine whether or not the mean (μ) of a variable is different for two sample groups. In this research the two sample groups are defined as: the countries which participate (Y = 1), and the countries which do not participate (Y = 0). If the difference in mean of an independent variable is significant ($\leq$ 0,05), it means that the average value of the independent variable for the two groups is not the same.

Because the μ and σ of the distribution of the independent variables is measured, it is again necessary that the independent variables follow a normal distribution. The transformed values of the independent variables are used for this test.

Table 5 (on the next page) shows the results of the independent sample t-test and can be explained as follows. The significance level in the column 'Levine's Test' is a testto measure the equality of variances and indicates whether or not the variance (σ) of the distribution of the values of the independent variable is different or the same for the two groups (Y =1 and Y = 0). If the variances are the same (σ1 = σ2), the significance level of the difference in mean (μ) has to be read in the row 'Equal variances assumed'. If the variances are not the same, the significance level of the difference in mean has to be read in the row 'Equal variances not assumed'.

The 'Levine's Test' assumes that both variances are equal (σ1 = σ2). This is the null hypothesis (H0) of the first part of the test. The alternative hypothesis (H1) is that both variances are not equal (σ1 ≠ σ 2). When the significance level of the variance (denoted as **Sig.**) ≥ 0,05, it means that H0 cannot be rejected and that the variances do not differ from each other significantly. When the **Sig.** is < 0,05, it means that H0 is rejected and that the variances do differ from each other significantly.

Sig. (two-tailed) indicates the significance level of the mean difference (μ). For this part of the test ('t-test for Equality of Means') there are again two hypotheses. H0 is that μ1 = μ2. H1, the alternative hypothesis is that μ1 ≠ μ2. If **Sig. (two-tailed)** ≤ 0,05, it means that H0 can be rejected with a reliability of 95%: this means that the μ's of the two groups differ from each other. If **Sig. (two-tailed)** > 0,05, H0 cannot be rejected. This means that μ1 and μ2 do not differ significantly from each other.

A positive **t** indicates that the average for the group Y = 1 is higher than the average for the group Y =0. A negative **t** indicates the reverse. The last column shows the averages of the two groups. The applicable significance levels and t-values are coloured **red.**

Independent variable		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Average of the group Y = 1	Average of the group Y = 0
Export as percentage of GDP	Equal variances assumed	,043	,836	**,358**	95	**,721**	,01965	,05482		
	Equal variances not assumed			,356	82,319	,723	,01965	,05514	2.0649	2.0453
GDP	Equal variances assumed	4,354	,040	3,251	98	,002	1,17996	,36292		
	Equal variances not assumed			**3,440**	96,543	**,001**	1,17996	,34301	23.1268	21.9468
GNI per capita	Equal variances assumed	2,779	,099	**2,723**	97	**,008**	,76570	,28124		
	Equal variances not assumed			2,613	70,161	,011	,76570	,29300	7.4795	6.7138
Government effectiveness	Equal variances assumed	4,230	,042	1,999	101	,048	,30089	,15049		
	Equal variances not assumed			**1,930**	76,907	**,057**	,30089	,15591	-0.0546	-0.3555
Aid as percentage of GNI	Equal variances assumed	1,909	,170	**-3,329**	97	**,001**	-,24846	,07464		
	Equal variances not assumed			-3,207	71,119	,002	-,24846	,07748	0.9793	1.2278
Political stability	Equal variances assumed	,055	,814	**,025**	90	**,980**	,00482	,19513		
	Equal variances not assumed			,025	77,471	,980	,00482	,19507	.0.0549	-0.0597

Table 5: Results of the independent sample t-test

The results of the independent sample t- test are as follows:

1   Export as percentage of GDP
Sig. (two-tailed) > 0,05 which means the means of this indicator for Y = 0 and Y = 1 do not differ significantly. The average 'export as percentage of GDP' is the same for both groups. This means that 'export as percentage of GDP' cannot be used as an indicator to predict developing country (non-) participation. This is consistent with the low reliability score that resulted from the logistic regression analysis.

2   GDP
Sig. (two-tailed) ≤ 0,05. This means that there is a significant difference between the average GDP of the group Y =1 and the group Y = 0. The value for **t** is small, but positive. This means that the average GDP of the group of countries that participate is slightly higher than the average GDP of the group of countries that do not participate. This is consistent with the relatively high reliability score and the direction of B in the logistic regression analysis (93,1 percent). It is also consistent with the theory and evidence provided in chapter two.

3   GNI per capita
Sig. (two tailed) ≤ 0,05. This means that there is a significant difference between the average GNI per capita of the two groups (Y = 1 and Y = 0). The **t** value indicates that the average GNI per capita of the group Y = 1 is a lot higher than the group Y = 0. This is not consistent with the results of the logistic regression analysis: the reliability of GNI per capita in the analysis was only 9,7 percent and the B indicated a relation in the opposite direction. The **t** value is however consistent with the theory and evidence as presented in chapter two.

4   Government effectiveness
Sig. (two-tailed) is a little above 0,05 (0,057). This means that the difference in μ is not significant enough to claim that there is a difference between the means. However, the indicator is significant at the 10 percent level. The value for t is positive and large: the average of the government effectiveness scores for the group Y =1 is substantially higher than the average for the group Y = 0. The fact that the difference in mean is not significant is consistent with the results of the logistic regression analysis: the reliability of government effectiveness was 55,1 percent. The positive value of **t** is however consistent with the direction of B as in the logistic regression analysis and the theory provided in chapter two.

5   Aid as percentage of GNI
Sig (two-tailed) is ≤ 0,05 which means there is a significant difference between the means of the two different groups. The value for **t** indicates that the average 'aid as percentage of GNI' is substantially lower for the group of countries that participate than the average for the group that does not participates. This is consistent with the relatively high reliability score and the direction of B of this variable in the logistic regression analysis (83,1 percent).

6   Political stability
Sig. (two-tailed) is > 0,05 which means that there is not a significant difference between the means of the two groups. This is consistent with the low reliability score of this variable in the logistic regression analysis (4 percent). The value of t is positive, but small, which is consistent with the direction of B as in the logistic regression analysis. This is however not consistent with the theory provided in chapter two.

For the indicators 'export as percentage of GDP' and political stability the t-test did not show significant differences in the averages of the group Y = 1 and Y = 0. For government effectiveness, the t-test shows a significant difference at the 10 percent level in the averages of the two groups. For the indicators DGP; 'GNI per capita'; and 'aid as percentage of GNI' the t-test shows that significant differences at the 5 percent level in the averages of the two groups.

5　Conclusion and policy implications

5.1　Introduction

In this chapter the answer will be given to the key question:

Why do some developing countries participate in the WTO dispute settlement system while others do not?

In order to answer the key question, three sub questions were defined:
1　**What is the present theory and evidence behind the difference in the participation of developing countries in the DSS?**
2　**How can the independent variables be operationalized and how can their influence on the dependent variable be researched?**
3　**What are the results?**

In the second paragraph the answers to the sub questions are presented. In the third paragraph the key question will be answered. In the fourth paragraph the policy implications that follow from the answer to the key question are presented.

5.2　Answers to the sub questions

Sub question 1: What is the present theory and evidence behind the difference in participation of developing countries in the DSS?

Research that has been done on country participation so far has been aimed at explaining the difference in participation between different groups of countries. In this type of research developing countries are seen as one group and the difference in participation with for instance the US and EU/EC is investigated. Research has also been done on African countries as a group, and Least Developed Countries, as well as on specific individual cases such as Brazil. Because there are many different variables which are assumed and sometimes proven to be related to participation they are, for the purpose of this paper, divided into three groups: objective factors that contribute to participation; capacity and functioning of the bureaucratic apparatus; and political factors.

1　Objective factors: importance of exports and size of the economy:
Research has proved that country size, in terms of the economy, and export volumes are correlated to the difference in participation of the various groups of countries. Composition of trade was also researched but is not important for the participation of Least Developed Countries. To measure the size of the economy, GPD is measured.

2　Capacity and functioning of the bureaucratic apparatus:
Developing countries have access to fewer financial resources than developed countries. Financial resources are however needed to participate in the DSS. When developing countries do not have enough resources they miss out on future potential benefits. Because developing countries do not make use of the system, they cannot benefit from economies of scale which means it is not cost-effective to develop capacity, such as legal capacity. This legal capacity has been researched and proved to be highly correlated with participation: a small increase in legal capacity could lead to an increase in participation.

Low effectiveness of the bureaucratic apparatus of a country is assumed to be a reason for non-participation. Better governed countries have a higher output and improved decision-making. A lack of ministerial coordination can slow the process of participation down. Good coordination with for instance the private sector has been proved to have a positive effect on participation in Brazil. Cooperating with other countries could also lead to an increase in participation. Merging all LDC's into one union could increase the amount of participation of this group.

3   Political factors:
Political pressure on the decision making process of the national government (in deciding on participation) could be performed by different groups of actors: other countries; the public and private sector; NGO's and local pressure groups. This pressure could have both a negative as well as a positive effect on participation, depending on the interests of the actor. International negotiations between country A and B within another organization could be an incentive for country A not to target country B at the WTO. Political stability is also assumed to affect participation. High political instability reduces the amount of investments (especially from abroad). Political instability also prevents trade issues from being put on the political agenda, because it is likely that there are other priorities.

Due to time constraints it has not been possible to collect data on all of the variables. Out of the different variables, six variables have been chosen to be used as an independent variable in this research: the importance of export, country size, financial capacity measured by the level of development, the functioning of the bureaucratic apparatus measured by government effectiveness, international political pressure measured by aid dependency and political stability.

Sub question 2: How can the independent variables be operationalized and how can their influence on the dependent variable be researched?

In order to operationalize the dependent as well as the independent variables, proxies have been presented. The variables cannot be operationalized without the use of proxies because the variables consist of terms such as participation and stability. Measurements for both the dependent as well as the independent variables have been defined as follows.

The proxy for participation is measured as the number of bilateral complaints in which a country has either been a complainant or has requested to join consultations. For importance of exports, 'export as percentage GDP' is used. For country size GDP is used. To measure financial capacity, the level of development is measured, using 'GNI per capita'. The functioning of the bureaucratic apparatus is measured by 'government effectiveness' (using the indicator as developed by Daniel Kaufmann). International political pressure is measured as aid-dependency: 'aid as percentage of GNI'. 'Political stability' is measured using the indicator political stability developed by Daniel Kaufmann.

To research the influence of the six independent variables on the dependent variable (Y, or participation), a logistic regression analysis is performed on the data. A multivariable regression analysis was not possible to perform because of the nature of the distribution of the values of Y. The values of Y would need to be normally distributed in order to research the existence of linear relations between X and Y. In order to conduct a logistic regression analysis, the values of Y are divided into two categories: 0 for non-participation and 1 for

participation. In a logistic regression analysis the probability that Y has a value of 1 is determined based on the values of the independent variables.

Sub question 3: What are the results?

The Pearson Correlation test shows that there are no multicollinearities between any of the independent variables. This is a precondition for executing a logistic regression analysis. The results of the logistic regression analysis show that the model as a whole after the estimation of the parameters is significant (Sig. = 0,012) which means that the model is reliable enough to predict the probability that Y has a value of 1, based on the given independent variables. The Nagelkerke R Square indicates a small correlation between the independent variables and Y. The model after the parameters have been estimated leads to an increase in the % of correctly predicted cases from 60,5 percent to 67,4 percent. The second classification table also shows that the model is better, in percentages, at predicting participation based on the independent variables than at predicting non-participation based on the independent variables.

The strength of the different B's (or correlation coefficients) is different for each independent variable. The B indicates the direction of the relation between X and P. The direction of the B's for 'export as percentage of GDP', 'GNI per capita' and 'political stability' is opposite to what was expected based on the theory and evidence presented in chapter two. The direction of the B's for 'GDP', 'government effectiveness' and 'aid as percentage of GNI' is consistent with what was expected in chapter two.

None of the independent variables is statistical significant. All of the reliability levels of the six indicators are too low. The independent variables are however included in the model because the model in itself proved to be reliable. Reason for this difference in significance between the model on one hand and the independent variables on the other hand could be that the independent variables not only influence the probability that Y has a value of 1, but influence each other as well.

In order to say more about the relation of the independent variables and Y, an independent sample t- test is performed on the data. This test measures whether or not the average of each of the independent variables is the same for the group of countries that participate (Y =1) as for the group of countries that does not participate (Y = 0). The results of this test are that there is a significant difference in means for 'GDP'; 'GNI per capita' and 'aid as percentage of GNI'. There is no significant difference in means for 'export as percentage of GDP'; 'government effectiveness' and 'political stability'. The independent variables, for which the difference in mean is significant, all show a difference between the means of the two groups as was expected in chapter two. Out of the independent variables for which the difference in mean is not significant, 'export as percentage of GDP' and political stability show a t value which is not consistent with the theory. The t value of government effectiveness is consistent with was what expected in chapter two, but was significant at the 10 percent level rather than at the 5 percent level.

5.3   Answer to the key question

Following the answer to the third sub question which consists of the results of the logistic regression analysis and the independent sample t- test, the key question of this research can be answered:

Why do some developing countries participate in the WTO dispute settlement system while others do not?

In can be concluded that out of the independent variables researched in this paper, political stability is the least reliable indicator in predicting the (non-) participation of developing countries. The reliability levels of political stability in both the logistic regression analysis and the independent sample t-test are extremely low. Political stability therefore is not a factor for developing countries in deciding on participation. In case a country is politically unstable it will depend on the values of the other independent variables whether or not it participates in the DSS of the WTO. An increase in the level of political stability will have no effect on participation by itself, although it could happen that a country which experiences an increase in political stability will start to participate in the system. In that case it would be very likely that other variables have had an effect on participation.

'Export as percentage of GDP' which measures the importance of exports for a country also has low reliability scores for both the logistic regression analysis and the independent sample t-test percentage. The direction of the relationship is however consistent with the theory. This means that other independent variables are of importance for country participation. It also means that a higher score for 'export as percentage of GDP' alone, without the influence of the other independent variables, does not necessarily lead to participation. This could be caused by the fact that the indicator is represented by a ratio which consists of two variables. An increase in 'export as percentage of GDP' could be caused by an increase in exports, but also by a decrease in GDP. Participation thus could become more likely when there an increase in exports while at the same time GDP increases[11]. This is not consistent with the findings of Francois et al (2008): they found a correlation between export volumes and participation. There are two reasons that could contribute to the difference in result. The first reason is that the indicator is measured in a different way. Francois et al (2008) have measured the importance of exports as 'export as percentage of world trade' while in this research 'exports as percentage of GDP' is measured. A second reason could be that Francois et al (2008) use data of a different research population, which includes all member states. Their research shows that there is a correlation between the importance of exports and overall participation. This research has aimed at researching whether or not the importance of exports is a factor for participation within the group of developing countries only.

The indicator government effectiveness has reliability levels which are, too low to be called significant at the 5 percent level, but is significant at the 10 percent level. The direction of the relationship is consistent with the theory and the reliability level of the sample t-test is 94,3 percent This indicates that an increase in government effectiveness is likely to lead to participation in most cases if a country does not participates yet. This will not be the case for all countries, meaning there is no general relation between the two. For some countries, investing in capacity and increasing the effectiveness of the bureaucratic apparatus will not lead to participation in the DSS. An explanation for the lack in participation in those cases could be that the levels of the other independent variables do not create the necessary preconditions for participation, for example because the level of aid dependency is too high, or the level of GDP too low (as is explained below).

The remaining three independent variables have the most effect on the participation of developing countries in the DSS. GDP which measures the size of the economy; 'GNI per

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[11] However, exports would have to increase relatively more than GDP to increase the value of 'exports as % of GDP'.

capita', which measures the level of development and hence the financial capacity of a country; and 'aid as percentage of GNI', which measures aid-dependency and hence international political pressure, all show the direction of the relationship as was expected in chapter two. The results from the independent sample t-test show that all three variables have high enough reliability scores in order to be called significant. It can therefore be concluded that GDP, GNI per capita and aid as percentage of GNI are indicators that most probably affect country participation.

It is hence likely that an increase in GDP and GNI per capita leads to participation in case a country does not participates yet. This means that economic growth and growth in financial capacity are factors that probably explain participation. A decrease in 'aid as percentage of GNI' also is also likely to lead to participation in case a country does not yet participate. A decrease in the amount of perceived international political pressure could thus be an incentive for developing countries to participate in the DSS of the WTO. A well functioning bureaucratic apparatus is also likely to lead to participation in most cases.

5.4   Policy implications

The most important policy implication of this research is that it would be possible to design general policies aimed at increasing developing country participation in the DSS of the WTO which could increase the participation of developing countries without changing the system itself.

A lack of financial capacity is perhaps the relatively easiest problem to solve. Funds could be set up in order to support developing countries by providing the resources necessary for participation. Such funds could be set up by for instance the WTO itself. The Advisory Centre on WTO Law in Geneva, funded by European governments, already provides subsidized legal assistance (Shaffer: 2006, p 187) and could expand its financing role. Developing countries could also try to combine their resources to decrease the amount of financial capacity needed to initiate dispute settlement. As was researched by Francois et al (2007) collaboration between developing countries could increase their participation.

Perceived international pressure is likely to be more difficult to combat, especially because it concerns perceptions. Decreasing the amount of aid would decrease the level of aid dependency, but would not be a solution, because the lack of financial capacity would become even larger. Member states such as the US and EU/EC could emphasize the inexistence of the perceived relationship, perhaps in a declaration at a WTO ministerial conference, but even if that would happen, it is doubtful whether this would affect the decisions made by the governments of developing countries.

Enhancing government effectiveness could be a solution to non-participation of most developing countries. Government effectiveness is however a broad and vague term. The aggregated indicator as developed by Daniel Kaufmann would require more in-depth research since it consists of many different variables which are combined to produce this one indicator. Which of those individual variables are probable to matter most for participation is as of yet unclear. Moreover, it is important to note that the importance of the different variables, within the indicator, is not necessarily the same for each individual developing country.

This research has added to the theory because it has aimed to explain the (non-) participation of developing countries, looking only at developing countries, rather than comparing participation behaviour of developing countries as a group to other countries. Although various statistical research has been done, they were all aimed at explaining general country participation within the DSS of the WTO.

5.5   Limitations of and reflection on the research

Limitations of this research are due to the nature of the independent variables. The independent variables are represented by proxies, which means the values are measured as closely as possible. As mentioned earlier, political stability and government effectiveness are measured using aggregated (subjective) indicators. Which of the components out of these indicators is of (non) importance has yet be researched. 'Aid as percentage of GNI' and ; export as percentage of GDP' are indicators which consist of a ratio. This makes it more difficult to determine which part of the ratio is responsible for the correlation. GDP is the most straight forward indicator. It is generally accepted that this indicator measures the size of the economy of a country.

Furthermore, it is likely that the proxies used in this research also measure things which were not meant to be researched. 'Aid as percentage of GNI' could not only be used to measure aid-dependency, or international political pressure, but could also be used to measure the level of development of a country. The higher the amount of aid, the more likely that a country has low development levels. However, because of the lack of better indicators, these indicators are used to start researching the factors that contribute to developing country participation.

Annex 1: Country classification by Horn and Mavroidis (2008)

G2	LDC	DEV
EC	Angola	Albania India Tanzania
US	Bangladesh	Antigua and Barbuda Indonesia Thailand
	Benin	Argentina Jamaica Trinidad and Tobago
	Burkina Faso	Armenia Jordan Tunisia
IND	Burundi	Bahrain Kenya Unit. Arab Emirates
	Cambodia	Barbados Kuwait Uruguay
Australia	Central Afr. Rep	Belize Kyrgyz Republic Venezuela
Bulgaria	Chad	Bolivia Macao - China Zimbabwe
Canada	Dem. Rep. Congo	Botswana Malaysia
Croatia	Djibouti	Brazil Mauritius
Cyprus	Gambia	Brunei Darussalam Moldova
Czech Republic	Guinea	Cameroon Mongolia
Estonia	Guinea-Bissau	Chile Morocco
Hong Kong - Ch.	Haiti	China Namibia
Hungary	Lesotho	Colombia Nicaragua
Iceland	Madagascar	Congo Nigeria
Israel	Malawi	Costa Rica Oman
Japan	Maldives	Côte d'Ivoire Pakistan
Korea	Mali	Cuba Panama
Latvia	Mauritania	Dominica Papua New Guinea
Liechtenstein	Mozambique	Dominican Republic Paraguay
Lithuania	Myanmar	Ecuador Peru
Malta	Nepal	Egypt Philippines
Mexico	Niger	El Salvador Qatar
New Zeeland	Rwanda	Fiji St Kitts and Nevis
Norway	Senegal	F. Yug.. Rep Maced. St Lucia
Poland	Sierra	Leone Gabon St Vincent & the Gr.
Romania	Solomon	Islands Georgia Saudi Arabia
Singapore	Togo	Ghana South Africa
Slovak Republic	Uganda	Grenada Sri Lanka
Slovenia	Zambia	Guatemala Suriname
Switzerland	Guyana	Swaziland
Turkey	Honduras	Chinese Taipei

Annex 2: Country classification by Francois et al (2008)

G2	NI	HID	CT
EC	Argentina	Antigua and Barbuda	Albania
US	Hong Kong -	China Bahrain	Bulgaria
	Israel	Barbados	China
EI	Korea	Brunei Darussalam	Czech Republic
Canada	Mexico	Chile	Estonia
Iceland	Philippines	Cyprus	Georgia
Japan	Singapore	Gabon	Hungary
Malta	South Africa	Kuwait	Kyrgyz Rep
New Zealand	Thailand	Macao - China	Latvia
Norway	Turkey	Oman	Lithuania
Switzerland	Qatar	Moldova	Mongolia
		Saint Kitts and Nevis	Poland
	MID	Saudi Arabia	Romania
LDC	Belize	Trinidad and Tobago	Slovak Republic
Angola	Bolivia	United Arab Emirates	Slovenia
Bangladesh	Botswana	Uruguay	
Benin	Colombia		
Burundi	Congo		
Cambodia	Costa Rica	**LID**	
Central African Rep	Cuba	Armenia	
Chad	Dominica	Burkina Faso	
Dem. Rep. Congo	Dominican Republic	Cameroon	
Djibouti	Ecuador	Côte d'Ivoire	
Gambia	Egypt	Ghana	
Guinea	El Salvador	Guyana	
Guinea-Bissau	Fiji	Honduras	
Haiti	FYROM-Macedonia	India	
Lesotho	Grenada	Kenya	
Madagascar	Guatemala	Nicaragua	
Malawi	Indonesia	Nigeria	
Maldives	Jamaica	Pakistan	
Mali	Jordan	Sri Lanka	
Mauritania	Mauritius	Tanzania	
Mozambique	Morocco	Zimbabwe	
Myanmar	Namibia		
Nepal	Panama		
Niger	Papua New Guinea		
Rwanda	Paraguay		
Senegal	Peru		
Sierra Leone	Saint Lucia		
Solomon Islands	Saint Vincent & the		
Togo	Grenadines		
Uganda	Suriname		
Zambia	Swaziland, Tunisia, Venezuela		

Annex 3:   Aggregate indicators used for government effectiveness (The World Bank Group: 2009)

Representative Sources:

DRI   Government Instability: An increase in government personnel turnover rate at senior levels that reduces the GDP growth rate by 2% during any 12-month period.

Government Ineffectiveness: A decline in government personnel quality at any level that reduces the GDP growth rate by 1% during any 12-month period.

Institutional Failure: A deterioration of government capacity to cope with national problems as a result of institutional rigidity that reduces the GDP growth rate by 1% during any 12-month period.

EGV   Global E-government

EIU   Quality of bureaucracy

Excessive bureaucracy / red tape

GCS   Quality of general infrastructure

Quality of public schools

GWP   Satisfaction with public transportation system

Satisfaction with roads and highways

Satisfaction with education system

IPD   Government-citizen relations

Capacity of the tax administration to implement measures decided on

Quality of the supply of public goods: education and basic health

Capacity of the political authorities

MIG   Quality of Bureaucracy

PRS   Bureaucratic Quality. Measures institutional strength and quality of the civil service, assesses how much strength and expertise bureaucrats have and how able they are to manage political alternations without drastic interruptions in government services, or policy changes.

WMO Policy consistency and forward planning: How confident businesses can be of the

Continuity of economic policy stance - whether a change of government will entail major policy disruption, and whether the current government has pursued a coherent strategy.

Bureaucracy: An assessment of the quality of the country's bureaucracy. The better the bureaucracy the quicker decisions are made and the more easily foreign investors can go about their business.

Non-representative Sources:

ADB   Management of public debt
Policies to improve efficiency of public sector
Revenue Mobilization
Budget Management

AFR   Based on your experiences, how easy or difficult is it to obtain household services (like electricity or telephone)?

Based on your experiences, how easy or difficult is it to obtain an identity document (like birth certificate, passport)?

Government handling of health services

Government handling of education

ASD   Civil service

Revenue Mobilization and Budget Management

Management and Efficiency of Public Expenditures

BPS   How problematic are telecommunications for the growth of your business

How problematic is electricity for the growth of your business.

How problematic is transportation for the growth of your business.

BRI   Bureaucratic delays

BTI   Consensus Building

Governance Capability

Effective Use of Resources

CPIA   Management of external debt

Quality public Administration

Revenue Mobilization
Budget Management

IFD   Allocation & management of public resources for rural development

LBO   Trust in Government

WCY Government economic policies do not adapt quickly to changes in the economy

The public service is not independent from political interference

Government decisions are not effectively implemented

Bureaucracy hinders business activity

The distribution infrastructure of goods and services is generally inefficient

Policy direction is not consistent

Annex 4: Political stability (The World Bank Group: 2009)

Representative Sources:

DRI   Military Coup Risk: A military coup d'état (or a series of such events) that reduces the GDP growth rate by 2% during any 12-month period.

          Major Insurgency/Rebellion : An increase in scope or intensity of one or more insurgencies/rebellions that reduces the GDP growth rate by 3% during any 12-month period.

          Political Terrorism: An increase in scope or intensity of terrorism that reduces the GDP growth rate by 1% during any 12-month period.

          Political Assassination: A political assassination (or a series of such events) that reduces the GDP growth rate by 1% during any 12-month period.

          Civil War: An increase in scope or intensity of one or more civil wars that reduces the GDP growth rate by 4% during any 12-monthperiod.

          Major Urban Riot: An increase in scope, intensity, or frequency of rioting that reduces the GDP growth rate by 1% during any 12-month period.

EIU   Armed conflict

          Violent demonstrations

          Social Unrest

          International tensions

GCS   Country terrorist threat: Does the threat of terrorism in the country impose significant costs on firms?

HUM   Frequency of political killings

          Frequency of disappearances

          Frequency of torture

IJT   Security Risk Rating

IPD   Conflicts of ethnic, religious, regional nature

          Violent actions by underground political organisations

          Violent social conflicts

          External public security

MIG   Extremism. The term "extremism" covers the threat posed by any individuals or organisations who hold a narrow set of fanatical beliefs. Extremists are likely to believe that any and all means are justified to eradicate the target of hostility, and are not afraid to destroy themselves in the process. This ideological aspect of extremism makes it highly unpredictable, and its close association with violence makes it highly dangerous. The extent to which extremism should be judged a threat to a particular business in a particular market can be assessed along the following lines: integration issues; religious tensions; pressure groups; terrorist activity; xenophobia.

PRS   Internal Conflict: Assesses political violence and its influence on governance.

External conflict: The external conflict measure is an assessment both of the risk to the incumbent government and to inward investment.

Government Stability. Measures the government's ability to carry out its declared programs, and its ability to stay in office.

Ethnic tensions: This component measures the degree of tension within a country attributable to racial, nationality, or language divisions.

PTS   Political Terror Scale

WMO Civil unrest. How widespread political unrest is, and how great a threat it poses to investors. Demonstrations in themselves may not be cause for concern, but they will cause major disruption if they escalate into severe violence. At the extreme, this factor would amount to civil war.

Terrorism. Whether the country suffers from a sustained terrorist threat, and from how many sources. The degree of localization of the threat is assessed, and whether the active groups are likely to target or affect businesses.

Non-representative Sources:

AEO   Political Troubles

BRI   Fractionalization of political spectrum and the power of these factions.

Fractionalization by language, ethnic and/or religious groups and the power of these factions.

Restrictive (coercive) measures required to retain power.

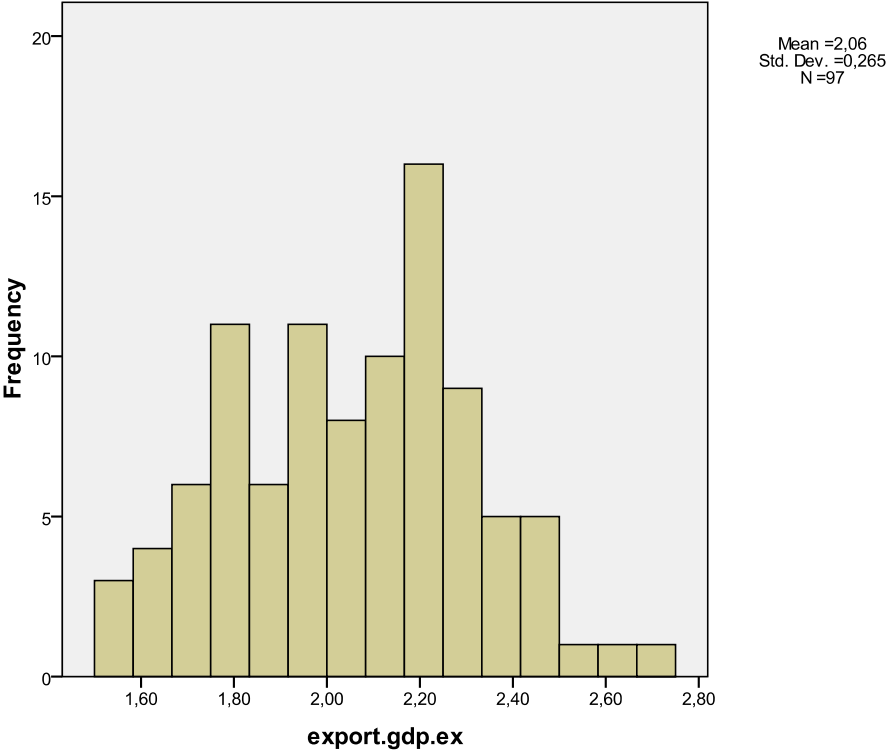Organization and strength of forces for a radical government.

Societal conflict involving demonstrations, strikes, and street violence.

Instability as perceived by non-constitutional changes, assassinations, and guerrilla wars.
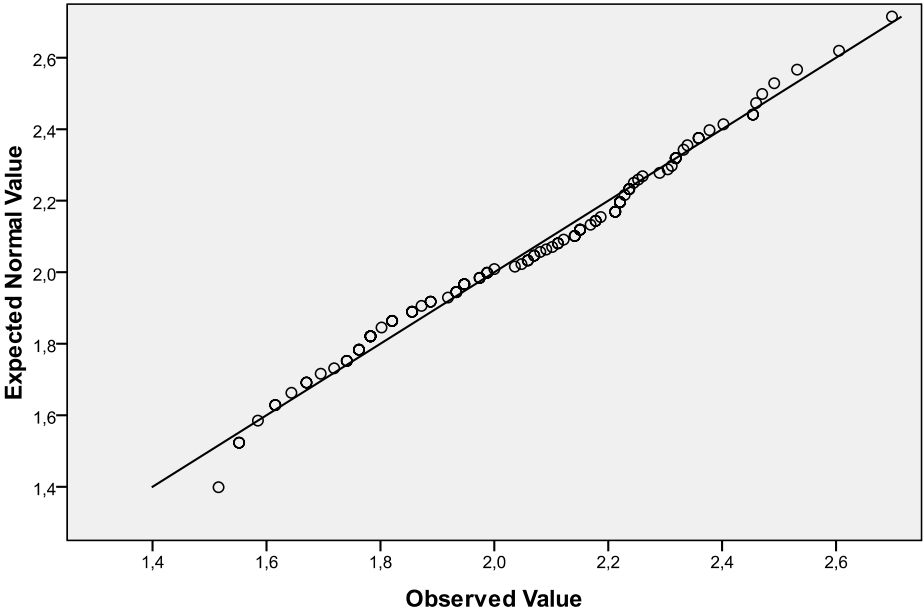
WCY   Risk of political instability

Annex 5: QQ test of normality for the independent variables

1 Export as percentage of GDP

Normal Q-Q Plot of export.gdp.ex

Mean =22,65
Std. Dev. =1,862
N =100
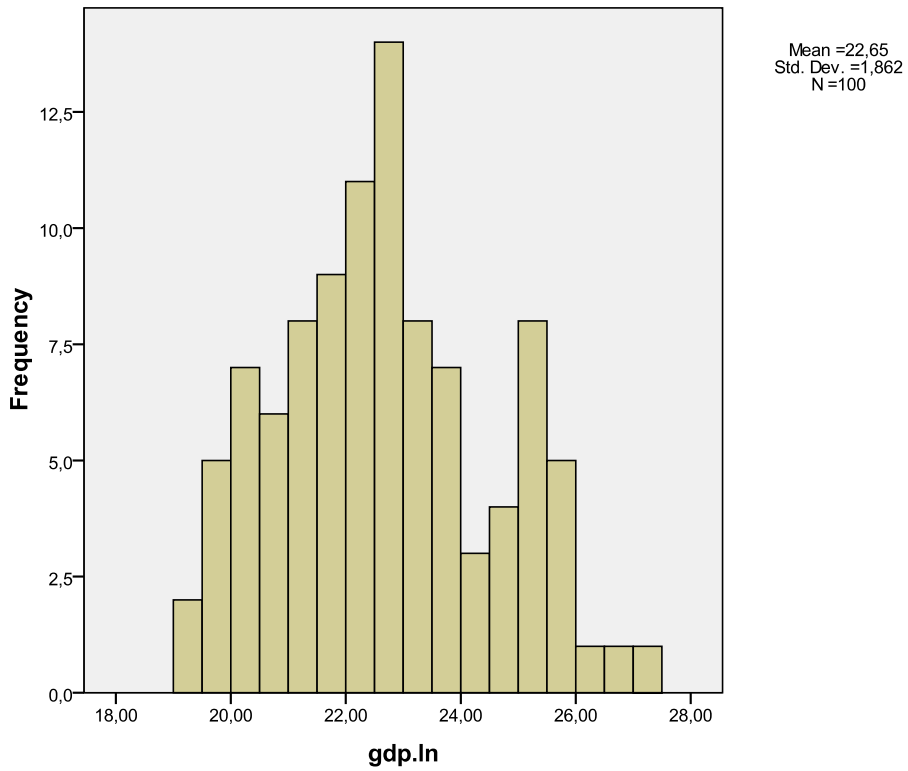
Normal Q-Q Plot of gdp.ln

Mean =7,18
Std. Dev. =1,411
N =99
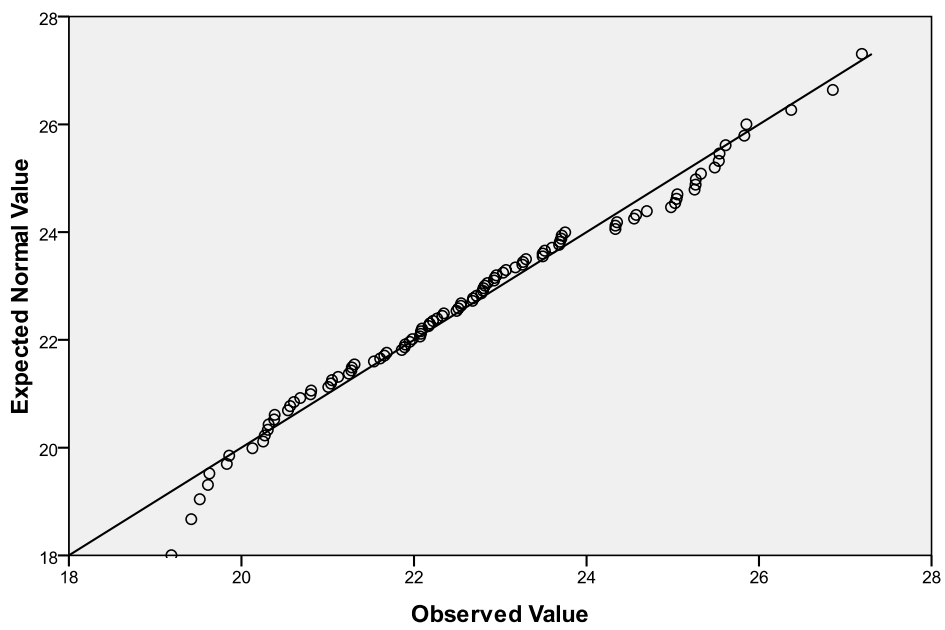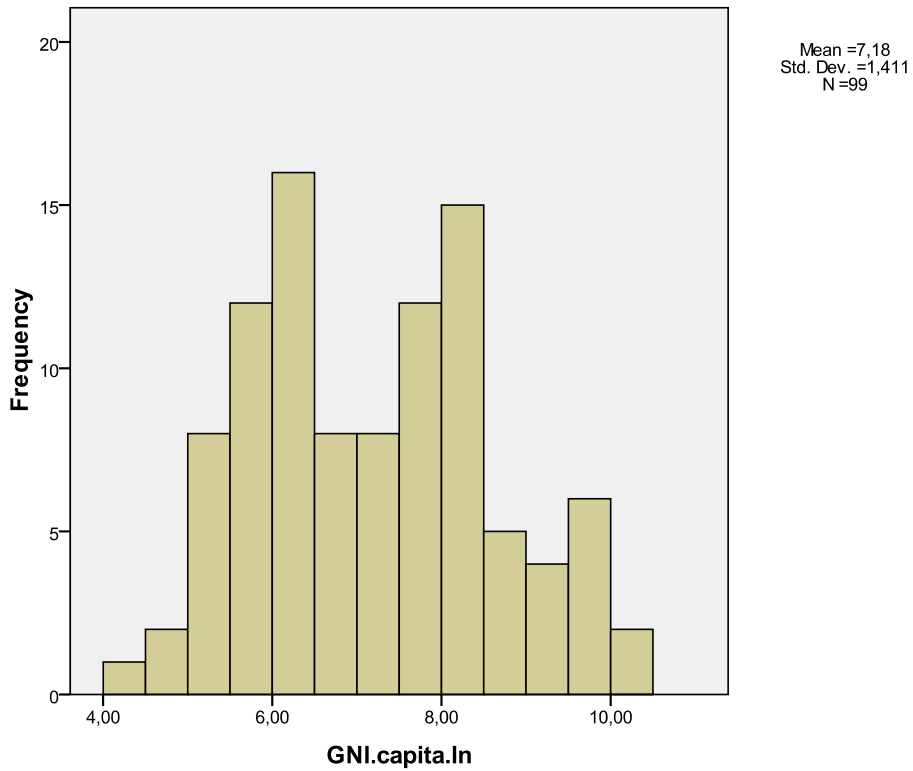
Normal Q-Q Plot of GNI.capita.ln

Mean =-0,18
Std. Dev. =0,761
N =103
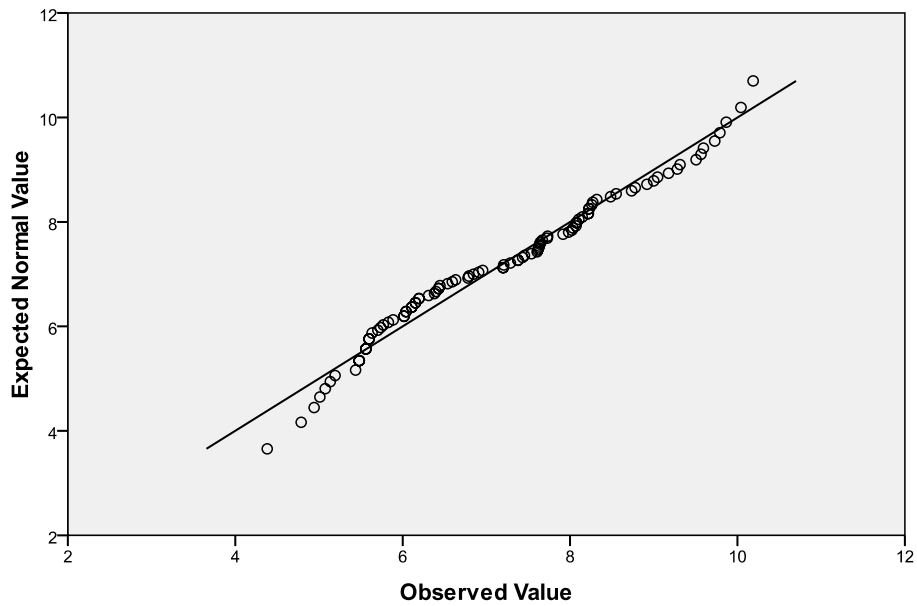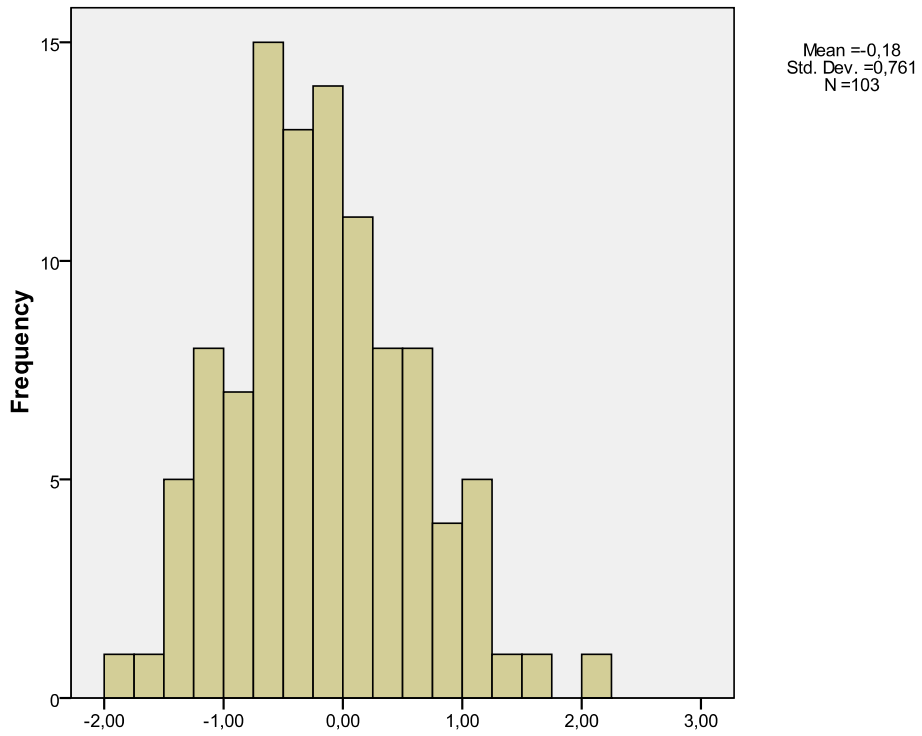
Normal Q-Q Plot of GOV

Mean =1,08
Std. Dev. =0,381
N =99
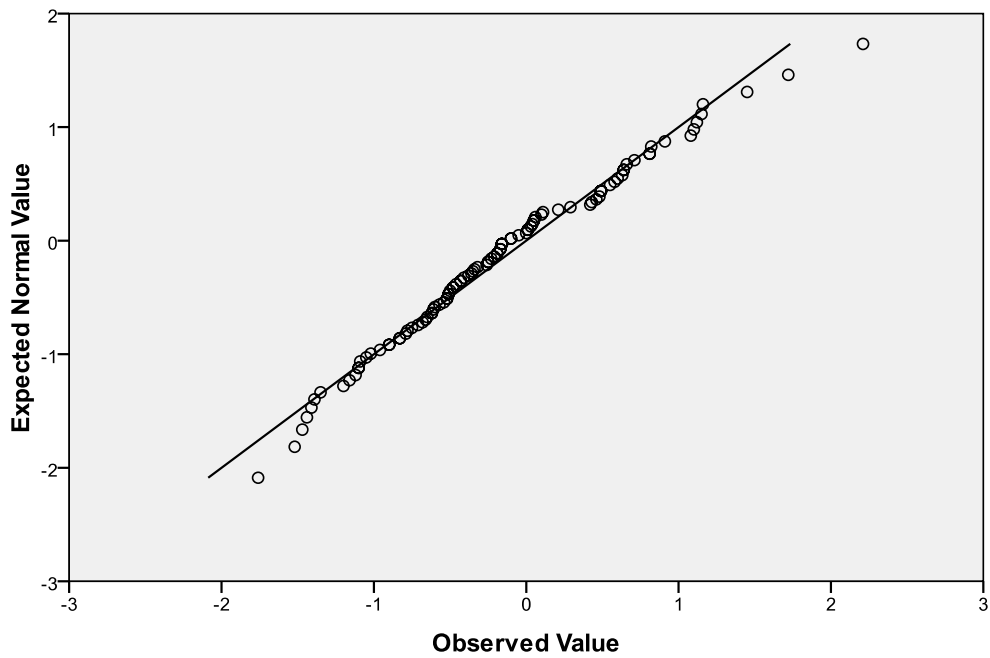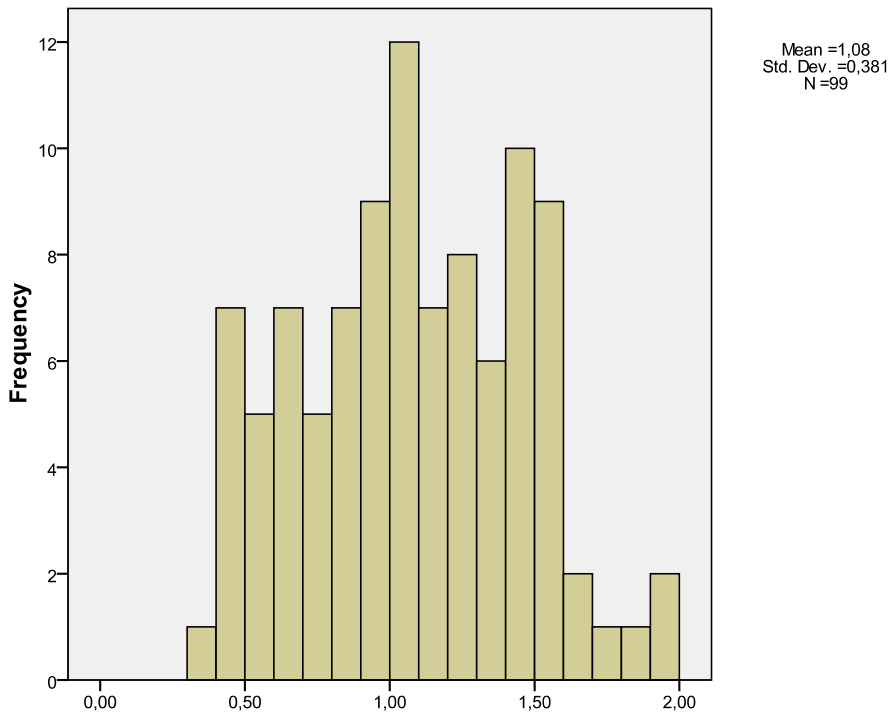
Normal Q-Q Plot of Aid.ex

Mean =-0,06
Std. Dev. =0,913
N =92
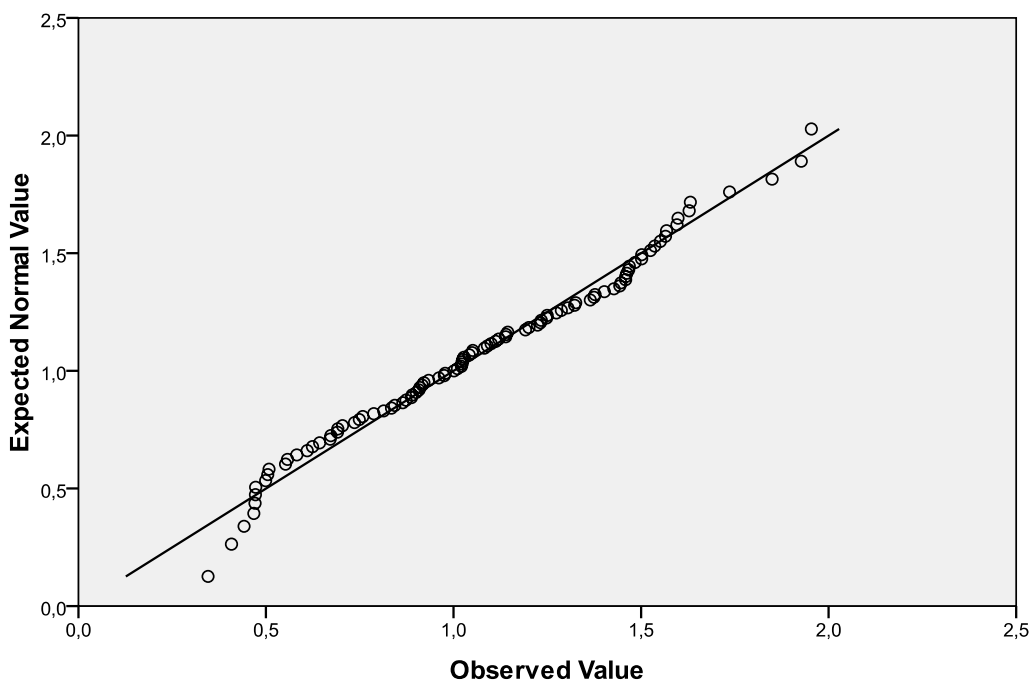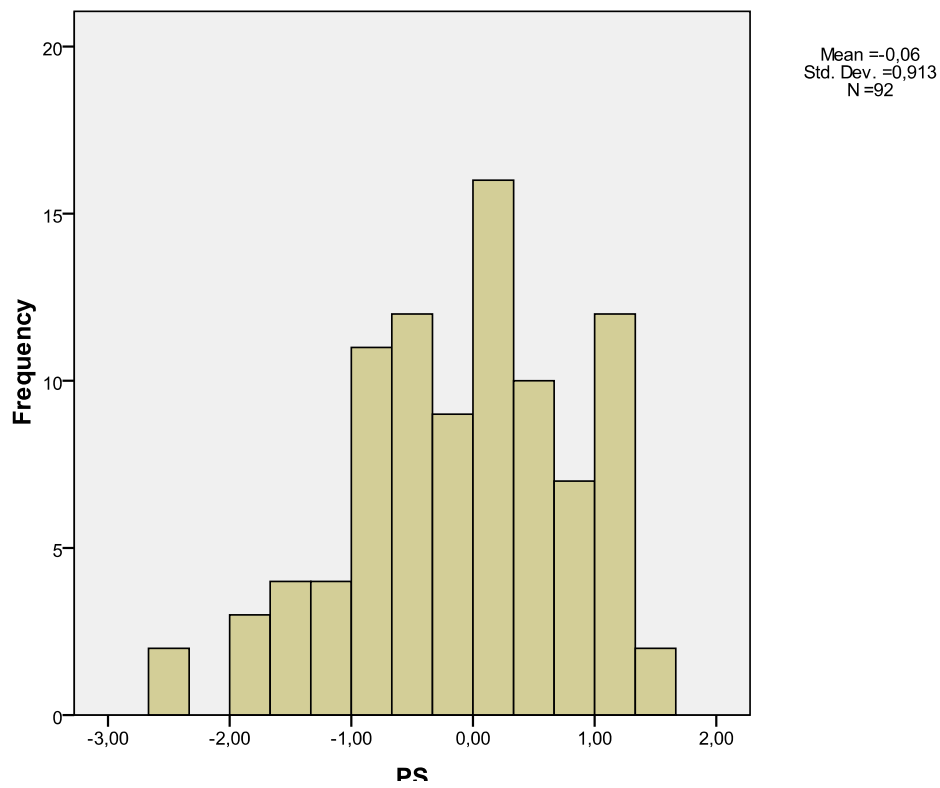
Normal Q-Q Plot of PS
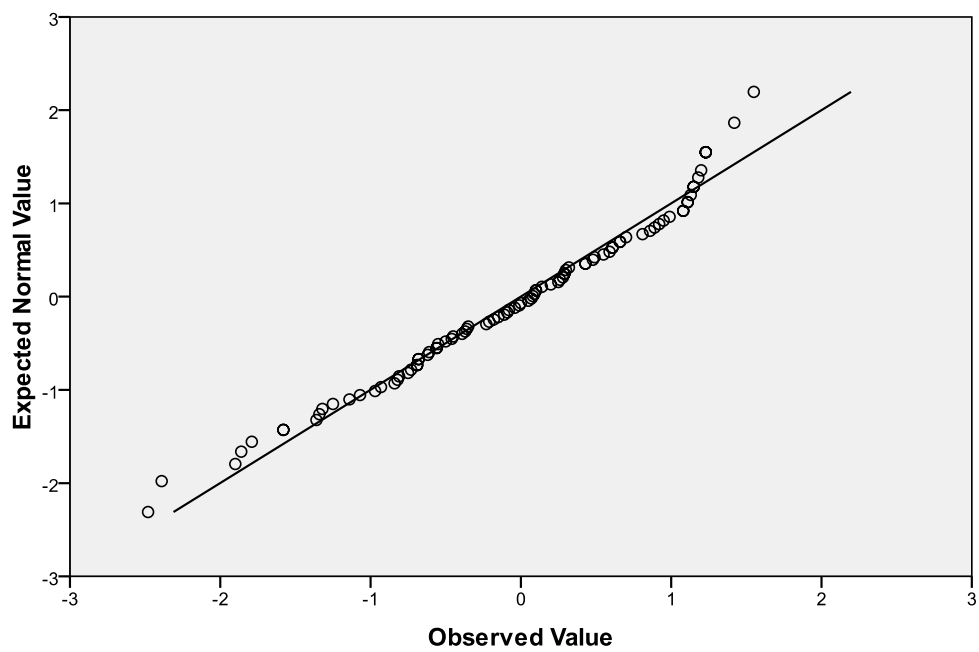
Annex 6: Calculated values of the variables (after transformation)

Country	Y	Y1.0	Export as percentage of GPD	GDP	GNI per capita	Government effectiveness	Aid as percentage of GNI	Political stability
Angola	0	0	2,46	22,93	6,04	-1,39	0,87	1,13
Antigua and Barbuda	1	1	2,34	20,32	9,00	0,64	0,76	
Argentina	22	1	1,62	26,37	8,92	0,10	0,55	0,66
Bahrain, Kingdom of	0	0	2,45	22,80	9,28	0,71	0,93	1,11
Bangladesh	2	1	1,70	24,58	5,89	-0,52	1,14	0,07
Barbados	2	1	2,19	21,66	9,05	1,45	0,50	-0,55
Belize	3	1	2,21	20,54	8,04	0,04	1,10	0,99
Benin,	1	1	1,72	21,54	5,83	-0,21	1,43	0,29
Bolivia	1	1	1,78	22,85	6,91	-0,23	1,30	0,48
Botswana	0	0	2,21	22,54	8,10	0,63	0,91	-0,62
Brazil	37	1	1,58	27,19	8,26	0,03	0,61	0,95
Brunei Darussalam	0	0	2,32	22,52	9,59	0,91	0,50	0,09
Bulgaria	2	1	2,24	23,26	7,38	0,05	0,81	1,23
Burkina Faso	0	0	1,55	21,68	5,48	-0,61	1,47	0,49
Burundi	0	0	1,52	20,38	4,79	-1,44	1,47	-0,09
Cameroon	0	0	1,87	23,03	6,43	-0,75	1,23	-0,75
Central African Republic	0	0	1,82	20,68	5,60	-1,41	1,36	0,66
Chad	1	1	1,76	21,05	5,19	-0,62	1,40	-1,32
Chile	18	1	2,40	25,04	8,48	1,15	0,47	-1,36
Colombia	16	1	1,76	25,27	7,73	-0,32	0,79	-0,11
Congo	2	1	1,86	21,89	6,31	-1,52	0,98	-0,18
Costa Rica	10	1	2,18	23,49	8,22	0,49	0,90	
Côte d'Ivoire	3	1	2,09	23,07	6,45	-0,79	1,14	0,89
Cuba	2	1				-0,48	0,89	0,32
Cyprus	2	1		22,96	9,51	1,16		-0,35
Dem. Rep. of the Congo	0	0	1,86	22,18	4,38	-1,76	1,11	-1,14
Djibouti	0	0	2,04	20,13	6,63	-1,09	1,46	1,20
Dominica	1	1	2,21	19,42	8,07	0,46	1,33	-0,50
Dominican Republic	8	1	2,14	23,71	7,63	-0,17	0,83	0,43
Ecuador	11	1	2,06	23,49	7,20	-0,83	1,00	0,10
Egypt	1	1	1,74	25,33	7,29	-0,25	1,04	-0,97
El Salvador	3	1	1,93	23,30	7,62	-0,51	1,05	-0,36
Fiji	2	1	2,30	21,24	7,73	-0,41	1,08	-1,25
Gabon	0	0	2,33	22,35	8,08	-0,60	0,58	-0,04
The Gambia	0	0	2,17	19,86	5,74	-0,46	1,46	0,29
Ghana	1	1	2,18	22,33	5,77	0,01	1,46	1,23
Grenada	1	1	2,25	19,83	8,22	0,42	1,25	0,61
Guatemala	17	1	1,82	23,68	7,46	-0,48	1,05	
Guinea	0	0	1,89	21,86	6,02	-0,90	1,27	-0,68
Guinea Bissau	0	0	2,00	19,19	5,08	-1,10	1,74	-1,79
Guyana	2	1	2,49	20,39	6,79	-0,25	1,54	-0,81
Haiti	0	0	1,64	22,07	6,15	-1,35	1,29	-0,56
Honduras	13	1	2,22	22,68	6,85	-0,50	1,32	-0,82
Hong Kong, (China)	6	1	2,70	25,85	10,19	1,10	0,41	-0,23
India	41	1	1,67	26,85	6,11	-0,17	0,84	1,42
Indonesia	4	1	2,10	25,83	6,38	-0,52	1,01	-0,68
Israel	1	1	2,06	25,54	9,79	1,08	0,67	1,23
Jamaica	5	1	2,12	22,81	7,98	0,05	0,74	0,70
Kenya	2	1	1,86	23,26	6,04	-0,65	1,23	0,05
Kuwait	0	0	2,24	24,35	9,73	0,11	0,47	
Kyrgyz Republic	0	0	2,11	21,04	5,63	-0,51	1,53	0,61
Latvia	0	0	2,11	22,78	8,08	0,49	1,02	-0,73
Lesotho	0	0	1,97	20,56	6,40	-0,16	1,20	-0,61
Liechtenstein	0	0				1,72		-0,69
Macao	0	0	2,53	22,49	9,56	0,64	0,51	1,55

Country								
Madagascar	2	1	1,99	22,08	5,48	-0,57	1,38	-0,84
Malawi	2	1	1,92	21,28	5,01	-0,34	1,63	0,14
Malaysia	2	1	2,61	25,26	8,15	0,82	0,64	-0,56
Maldives	0	0	2,45	20,25	7,67	0,48	1,19	0,28
Mali	0	0	1,93	21,61	5,56	-0,78	1,50	1,11
Malta	2	1	2,47	22,08	9,18	1,12	0,92	0,20
Mauritania	0	0	2,15	20,80	6,15	-0,19	1,57	0,43
Mauritius	2	1	2,29	22,22	8,23	0,49	0,89	0,10
Mongolia	0	0	2,24	20,81	6,02	-0,35	1,57	
Morocco	0	0	1,95	24,33	7,20	0,01	1,02	
Mozambique	0	0	1,78	22,17	5,44	-0,36	1,60	-0,21
Myanmar	0	0				-1,20		-0,01
Namibia	0	0	2,15	21,95	7,54	0,29	1,25	-1,58
Nicaragua	7	1	1,89	22,09	6,59	-0,62	1,50	1,15
Niger	0	0	1,78	21,31	5,14	-1,12	1,45	-0,08
Nigeria	1	1	2,22	24,55	5,60	-1,02	0,62	-0,15
Pakistan	8	1	1,67	25,03	6,19	-0,66	0,70	0,86
Panama	6	1	2,36	23,18	8,23	0,21	0,75	
Papua New Guinea	0	0	2,31	21,98	6,43	-0,54	1,37	0,26
Paraguay	1	1	2,07	22,68	7,21	-1,10	1,02	-0,45
Peru	9	1	1,74	24,70	7,64	-0,16	0,96	-1,07
Philippines	7	1	2,23	25,05	6,96	-0,19	0,67	-0,93
Qatar	0	0	2,32	23,60		0,60		0,59
Romania	2	1		24,34	7,43	-0,38	1,02	
Rwanda	0	0	1,55	21,27	5,48	-0,83	1,55	-0,69
Saint Kitts and Nevis	2	1	2,15	19,61	8,78	-0,10	0,69	-1,58
Saint Lucia	3	1	2,24	20,31	8,27	0,00	1,09	
Saint Vincent & the G.	1	1	2,22	19,63	7,92	-0,10	0,47	1,08
Senegal	1	1	1,95	22,27	6,19	-0,05	1,12	0,00
Sierra Leone	0	0	1,78	20,27	4,94	-1,47	1,85	1,15
Singapore	1	1		25,25	10,04	2,21	0,35	-1,90
Slovenia	2	1	2,22	23,71	9,31	0,81	0,86	0,55
Solomon Islands	0	0	2,07	19,52	6,54	-1,05	1,60	0,92
South Africa	0	0	1,95	25,61	8,02	0,66	1,93	-2,48
Sri Lanka	2	1	2,08	23,52	6,78	-0,26	1,95	0,81
Suriname	1	1	1,82	20,61	7,63	-0,16	1,22	-2,39
Swaziland	2	1	2,38	21,12	7,38	-0,71	0,98	0,25
Tanzania	1	1	1,76	22,93	5,56	-0,43	1,44	-1,86
Thailand	23	1	2,32	25,53	7,61	0,06	0,92	-0,46
Togo	0	0	1,99	21,01	5,60	-1,16	0,91	0,30
Trinidad and Tobago	0	0	2,26	22,82	8,55	0,43	0,56	
Tunisia	0	0	2,14	23,69	7,64	0,55	1,03	0,08
Uganda	0	0	1,62	22,55	5,56	-0,43	1,48	
United Arab Emirates	0	0	2,36	24,98	9,87	0,81	0,44	-0,37
Uruguay	1	1	1,80	23,75	8,74	0,58	0,69	1,18
Venezuela, Bol. Rep. of	5	1	1,97	25,49	8,32	-0,68	0,47	1,08
Zambia	0	0	1,93	21,90	5,70	-0,96	1,63	-1,34
Zimbabwe	3	1	2,05	22,72	6,11	-0,90	1,14	-0,39

References

Anderson, K. and Martin, W. (2005) Agricultural trade reform and the Doha Development Agenda, *available at www.worldbank.org,* last accessed July 15 2009.

Alessina, A., Ardagna, S. and Trebbi, F. (2006) Who adjusts and when? On the political economy of reforms, Harvard University.

Alavi, A. And Alle, F. (2007) African countries and the WTO's Dispute Settlement Mechanism*, Development Policy Review*, volume 25, number 1, pp 25-42.

Barfield, C (2002) WTO dispute settlement in need of change, *Intereconomics*, pp 131-135.

Bartels, L. (2003) The WTO enabling clause and positive conditionality in the European Communities' GSP program, *Journal of International Economic Law*, volume 6, number 2, pp 507-532.

Bloothooft, G. (n.d.) *Handleiding statistiek*, Universiteit Utrecht, available at http://www.let.uu.nl/~Gerrit.Bloothooft/personal/onderwijs/statistiek/handleiding6.pdf , last accessed July 15 2009.

Busch, M., Reinhardt, E. and Shaffer, G. (2007) Does Legal Capacity Matter? Explaining Dispute Initiation and Antidumping Actions in the WTO, *available from the authors at www.ictsd.net,* last accessed July 15 2009.

European Commission (2009a) *Enterprise and Industry, European SME week*, available at: http://ec.europa.eu/enterprise/policies/entrepreneurship/sme-week/index_en.htm, last accessed July 15 2009.

European Commission (2009b) *Trade Issues, Generalized System of Preferences*, available at: http://ec.europa.eu/trade/issues/global/gsp/index_en.htm, last accessed July 15 2009.

Hague, R. and Harrop, M. (2007) *Comparative Government and Politics, an introduction*, Palgrave Macmillan, New York.

Horn, H and Mavroidis, P. (2001) Economic and legal aspects of the Most-Favored-Nation clause, *European Journal of Political Economy*, volume 17, pp 233-279.

Horn, H. and Mavroidis, P. (2008) The WTO dispute settlement System 1995-2006: Some descriptive statistics, *available at www.worldbank.org,* last accessed July 15 2009.

Francois, J., Horn, H. and Kaunitz, N. (2008) Trading Profiles and Developing Country Participation in the WTO Dispute Settlement System, *available from the authors at www.ictsd.net,* last accessed July 15 2009.

Kaufmann, D., Kraay, M. and Mastruzzi, M. (2008) Governance Matters VII: Aggregate and Individual Governance Indicators 1996-2007, *World Bank Policy Research Working Paper* 4654.

OECD (n.d.) *statistics portal, glossary of statistical terms*, available at: http://stats.oecd.org/glossary, last accessed July 15 2009.

OECD and Word Bank (2005) Aid for trade at a glance, *available at www.oecd.org,* last accessed July 15 2009.

Sarkar, S. (2000) On the investment uncertainty relationship in a real options model, *Journal of Economic Dynamics and Control*, volume 24, pp 219-225.

Shaffer, G. (2006) The challenges of WTO law: strategies for developing country adaptation, *World Trade Review*, volume 5, number 2, pp 177-198.

Shaffer, G. (2009) Developing country use of the WTO dispute settlement system: why it matters, the barriers posed, *legal studies research paper series*, research paper number 08-50, pp167-190.

Shaffer, G., Ratton Sanchez, M. and Rosenberg, B. (2008) The Trials of Winning at the WTO: What Lies Behind Brazil's Success, forthcoming *Cornell International Law Journal*, volume 21, number 2.

Rodrik, D. (1989) Policy uncertainty and private investment in developing countries, working paper 2999, *National Bureau of Economic Research*.

Rodrik, D. (2003) Growth strategies, working paper W10050, *National Bureau of Economic Research*.

The World Bank Group (2007) *World Development Indicators Online*, available at: http://ddp-ext.worldbank.org/ext/DDPQQ/member.do?method=getMembers&userid=1&queryId=6, last accessed July 15 2009.

The World Bank Group (2009) *Governance matters 2009, Worldwide Governance Indicators, 1996 – 2008*, available at: http://info.worldbank.org/governance/wgi/index.asp, last accessed July 15 2009.

Umbricht, J. (2001) An 'Amicus Curiae Brief' on Amicus Curiae Briefs at the WTO, *Journal of International Economic Law*, volume 4, pp 773-794.

Vocht, de A. (2008) *Basishandboek SPSS 16,* Bijleveld Press, Utrecht.

World Trade Organization (n.d. a) *A Summary of the Final Act of the Uruguay Round*, available at: http://www.wto.org/english/docs_e/legal_e/ursum_e.htm, last accessed July 15 2009.

World Trade Organization (n.d. b) *Development: trade and development committee, work on special and differential provisions*, available at: http://www.wto.org/english/tratop_e/devel_e/dev_special_differential_provisions_e.htm, last accessed July 15 2009.

World Trade Organization (n.d. c) *Differential and more favourable treatment, reciprocity and fuller participation of developing countries*, available at: http://www.wto.org/english/docs_e/legal_e/enabling1979_e.htm, last accessed July 15 2009.

World Trade Organization (2001) *Doha Declaration*, WT/MIN(01)/DEC/1, ministerial conference, Fourth Session, available at:

http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.htm, last accessed July 15 2009.

World Trade Organization (1994) *General Agreement on Tariffs and Trade 1994*, available at http://www.wto.org/english/docs_e/legal_e/legal_e.htm, last accessed July 15 2009.

World Trade Organization (n.d. d) *news items, DDA July 2008 Package: summary 30 July*, available at: http://www.wto.org/english/news_e/news08_e/meet08_summary_30july_e.htm, last accessed July 15 2009.

World Trade Organization (n.d. e) *Understanding the WTO basics, The principles of the trading system*, available at: http://www.wto.org/english/theWTO_e/whatis_e/tif_e/fact2_e.htm, last accessed July 15 2009.

World Trade Organization (n.d. f) *Understanding the WTO basics, The Uruguay Round*, available at: http://www.wto.org/english/theWTO_e/whatis_e/tif_e/fact5_e.htm, last accessed July 15 2009.

World Trade Organization (n.d. g) *Understanding the WTO basics, what is the World Trade Organization?*, available at: http://www.wto.org/english/thewto_e/whatis_e/tif_e/fact1_e.htm, last accessed July 15 2009.