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Master thesis: Turkmenistan's potential accession to the WTO - lessons to be learned from other countries

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Abstract

With 98% of world trade being carried out by the 159 WTO members and further 24 countries negotiating to join the WTO, it is a matter of time for the remaining – mostly developing – countries, including Turkmenistan, to file for WTO application, especially if they want to develop competitive industries and access foreign export markets. That said, the economic development policies newly acceding governments have in place in their countries and other accession conditions may affect the extent of economic benefits countries, including their industries, are able to yield from the WTO accession.

This paper examines three conditions that can potentially have an effect on the level of WTO accession benefits in developing resource-rich countries and traces the mechanisms through which these conditions influence economic growth. The research findings suggests that countries that have achieved a greater level of industrialization by the time of WTO accession are better able to yield economic benefits from trade liberalization that the accession entails. This finding can encourage developing countries to help their industries upgrade their comparative advantage before they enter a competitive international trade environment through WTO accession.

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List of abbreviations

EU	European Union
WTO	World Trade Organization
CIS	Commonwealth of Independent States
USAID	United States Agency for International Development
MFN	Most Favored Nation
WB	World Bank
IMF	International Monetary Fund
GATT	General Agreement on Tariffs and Trade
GATS	General Agreement on Trade in Service
USSR	Union of Soviet Socialist Republics
GDP	Gross Domestics Product
MVA	Manufacturing Value Added
FDI	Foreign Direct Investments
SAP	Structural Adjustment Program
UNIDO	United Nations Industrial Development Organization
CPI	Competitive Industrial Performance
NDP	National Development Plans

Chapter 1. Introduction

European Union (EU) aims to encourage the integration of all countries into the world economy, including through the abolition of restrictions on international trade. The EU's Central Asia strategy adopted in 2007 outlined, among other things, promotion of economic development and trade and investments. According to the strategy EU supports the removal of trade barriers between the Central Asian states and it will continue to support World Trade Organization (WTO) accession for the four Central Asian states, some of which are not yet WTO members.

At present about 98% of world trade is carried out by the 159 WTO members. A further 24 countries are currently negotiating to join the WTO, including Uzbekistan (with no major progress to date), Kazakhstan, and Azerbaijan among the CIS countries. Turkmenistan is the only CIS country which has not yet applied for membership. Hence, the case of Turkmenistan and its considerations and reasoning about joining the WTO deserve greater academic attention. More research into the conditions for a more beneficial way of acceding to the WTO could persuade the government of Turkmenistan to file a membership application sooner rather than later.

This master thesis aims to explore key conditions that could influence the level of benefits a country like Turkmenistan could gain from a WTO accession. The key conditions being looked at are (1) the level of a country's industrialization, (2) central government coordination of economic policies, and (3) the lateness of a country's accession to the WTO. Analyzing past accession cases of countries similar to Turkmenistan in economic structure, the author assesses these conditions' influence on economic growth rates of these countries. The outcomes will help evaluate whether there is actually a relationship between the analyzed conditions and the acceding countries' long-term economic growth. If/where the positive relationship is evidenced, the acceding countries' economic policies could be adjusted to strengthen the presence and efficacy of these conditions.

To explore the subject area described above the master thesis will set forth the following research question: "*Under which conditions is it economically beneficial for a resource-exporting developing country to accede to the WTO?*"

This subject area is of particular interest to the author of this master thesis, for he is a citizen of Turkmenistan. But even more importantly, the author is professionally engaged in a United States Agency for International Development (USAID) funded development projects called the Economic

Reforms to Enhance Competitiveness Project[1] and the Macroeconomic Project in Turkmenistan. The aim of the projects is to provide assistance to the government of Turkmenistan in promoting broad-based economic growth based on expanded private sector participation in the economy, including effective trade policies as part of the potential accession of the country to the WTO. The knowledge and insights gained by the author as a result of conducting the present research will be of high value as he engages in the implementation of private sector and trade-related development assistance projects of the Macroeconomic Project. Likewise, the author's practical experience in the area of trade reforms will contribute to the quality and practicality of the present academic research.

Chapter 2. About WTO and WTO Accession

All discussions in the present thesis will be conducted within the notional framework of countries' accession to the WTO. This, in a way, will be the realm of the thesis. That said, some of the conclusions made in this master thesis might be applicable to events happening not only as part of a WTO accession, however it is not the objective of the thesis to focus on those wider-scale events, but to only focus on events and mechanisms taking place in relation to or as a result of countries' accession to the WTO. Thus, because accession to the WTO was identified as the so-called 'realm' of the present thesis, it is important to provide a due description of this international organization, including the benefits and challenges of becoming its member.

In its official website, the WTO is described as "the only global international organization dealing with the rules of trade between nations" (WTO web site 2015a). The organization operates based on its agreements, "negotiated and signed by the bulk of the world's trading nations and ratified in their parliaments" (Ibid.). The organization officially started its operation from 1 January 1995, following the Marrakech Agreement, replacing the General Agreement on Tariffs and Trade (GATT), which commenced in 1948. Principles and agreements of the WTO are largely based on neoclassical economic theories which advocate for free trade. It is based on these theories that WTO's "liberal trade policies — policies that allow the unrestricted flow of goods and services — sharpen competition, motivate innovation and breed success. They multiply the rewards that result from producing the best products, with the best design, at the best price" (WTO web site 2015b)

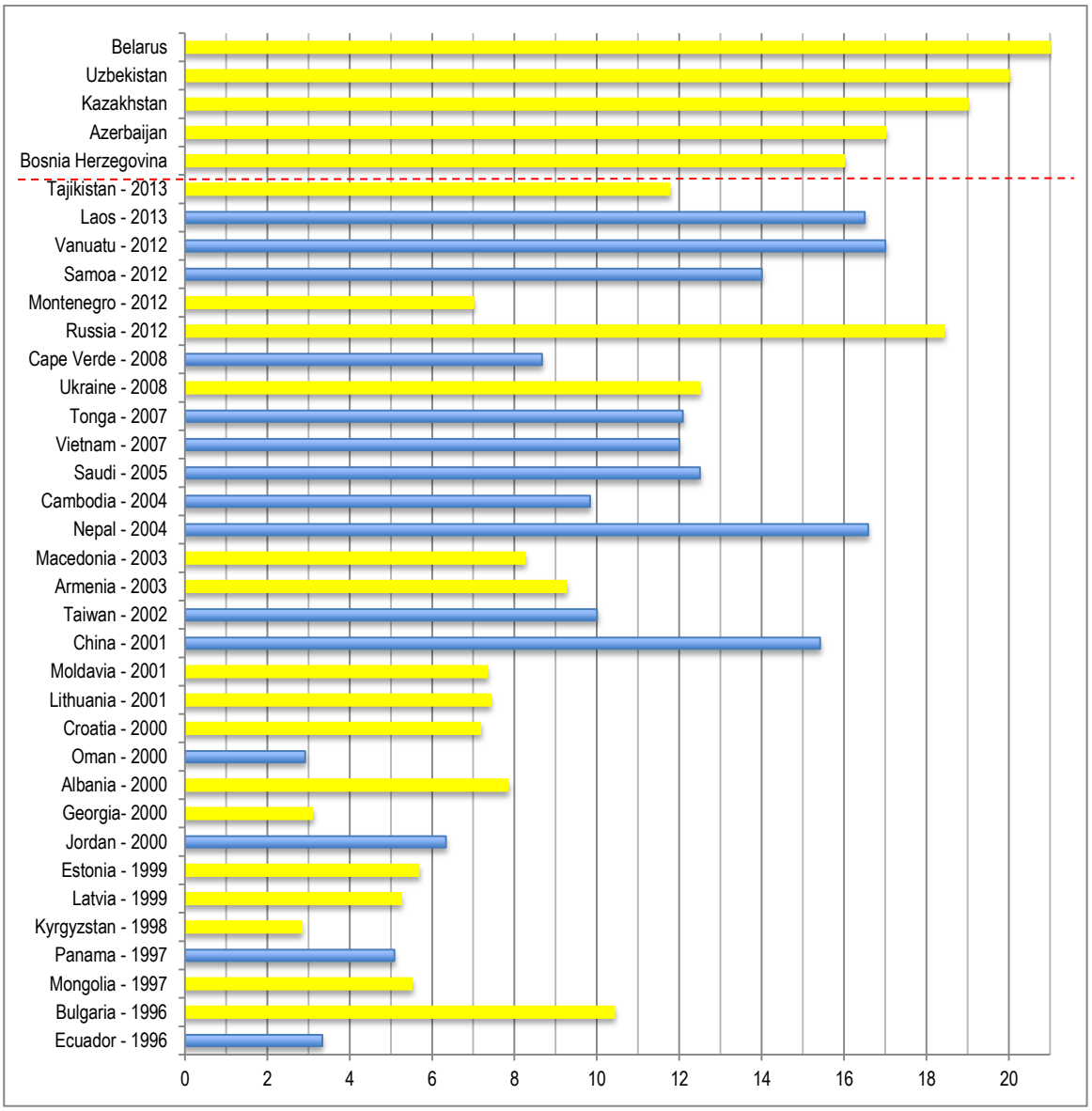
Most of the arguments in favor of the WTO accession go along the same lines. They have been well documented in a number of recent publications. Cattaneo and Braga summarize the key benefits

[1] EREC project ended in 2011. Its successor is Macroeconomic Project, implemented by Deloitte Consulting LLP.

well in their World Bank Policy Research Working Paper under two broad themes – acceding or member countries' outward and inward policies (Cattaneo and Primo Braga 2009). Among the key 'outward-looking' reasons behind WTO accession, they list (1) better terms for exports to other countries through having access to the Most Favored Nation (MFN) status in those countries; (2) the reduction in the cost of trade negotiations; (3) the participation in setting international rules on trade; and (4) the access to an international dispute resolution mechanism (Ibid.: 4-5). The 'inward-looking' reasons for WTO accession are related with an improved business environment for domestic firms and international investors and specifically include (1) reforming towards more efficient and credible trade policies and (2) using the accession as an anchor or framework for improving domestic legislation (Ibid.: 5-6).

While there are obvious benefits of joining WTO, there are also costs involved. The WTO accession process involves a significant public sector resource commitment in terms of staffing, coordination, capacity building, legislative drafting and approval, which a developing country may lack. For instance, Saudi Arabia joined the WTO in 2005 after 10 years of negotiations, 365 bilateral and 14 multilateral rounds of negotiation, answering to 3,500 questions about its trading regime and system of business regulation, and submitting 7,600 pages of documentation. Saudi Arabia also prepared implementation of its commitments by issuing 28 Royal Orders and 42 laws and regulations (Evenett 2006). Moreover, the time taken to complete the WTO lengthy accession process has steadily grown over the past decade (see Figure 1 below).

Figure 1. Accession Time for All New Members Joining the WTO (Years)



Source: WTO website.

Two World Bank trade specialists, Simon Evenett and Carlos Prima Braga, briefly summarized the costs of the accession process in Issue 23 of the World Bank's Trade Notes' Series. Among them is the level of commitments required from new entrants, which is much higher than it was in the early stages of General Agreement on Tariffs and Trade (GATT). Evenett and Braga note that "given the conjunction of bilateral and multilateral negotiations in the accession process, the larger the membership, the more specific requests a candidate country will receive, and the longer the process is likely to be". With the increasing diversity of interests in the WTO, more topics are under scrutiny than ever before in the accession process (Evenett and Braga 2006).

Based on the above costs and challenges of the WTO accession, significant degree of criticism of the WTO has emerged in the scholarly literature in the recent years, especially in the context of developing countries[2].

Despite all these challenges of the WTO accession, most of which lie in the sphere of national economic policy and stringency of WTO accession rules, new countries do actually choose to pursue WTO accession. It is believed that this is not only related with economic benefits, but also with the political considerations of new acceding states, which want to demonstrate to the world community that they choose to follow market economy principles in their economic development path. As Cattaneo puts it, for many countries the WTO accession is now "a political decision with a varnish of economic rationale" (Cattaneo 2008: 37). With some countries' accession, even the 'varnish of economic rationale' is absent, as they choose to join without any substantial analysis of economic effects of WTO membership, as it was the case with Mongolia, for example (Tsogtbaatar 2005).

[2] see Chapter 4 on Literature Review below

Chapter 3. Turkmenistan

As the title of the present dissertation focuses on Turkmenistan, it is important to provide background information on Turkmenistan and its status in the WTO accession process. For the sake of effectively addressing the research question which states "Under which conditions is it economically beneficial for a resource-exporting developing country to accede to WTO?", it is assumed that Turkmenistan has already made a decision to pursue the WTO accession and is currently considering its policies as part of its accession plan and the conditions it wants to negotiate with other member-countries as part of the process. Assuming that Turkmenistan has made the decision to join will influence the theoretical framework and the formation of the relevant hypotheses later in this thesis, as it is important to keep the theoretical discourse not only within the contemporary literature framework, but also applicable to the country mentioned in the title of the dissertation. But as it should be the case with any academic research, the conclusions of the present thesis will likely be relevant to a class of countries similar to Turkmenistan in its economic structure, the role of the government in centrally coordinating the country's economic strategy and in the timing of its WTO accession (which actually will be the themes of the three hypotheses to be formed later in the thesis). Likewise, the background description of Turkmenistan will also be mainly contained to these three thematic areas (i.e. economic structure, role of central government coordination and the country's status in acceding to the WTO), which will ensure making the hypothesis formation informed, while not spending too much time on the descriptions not directly relevant to the focus of this work.

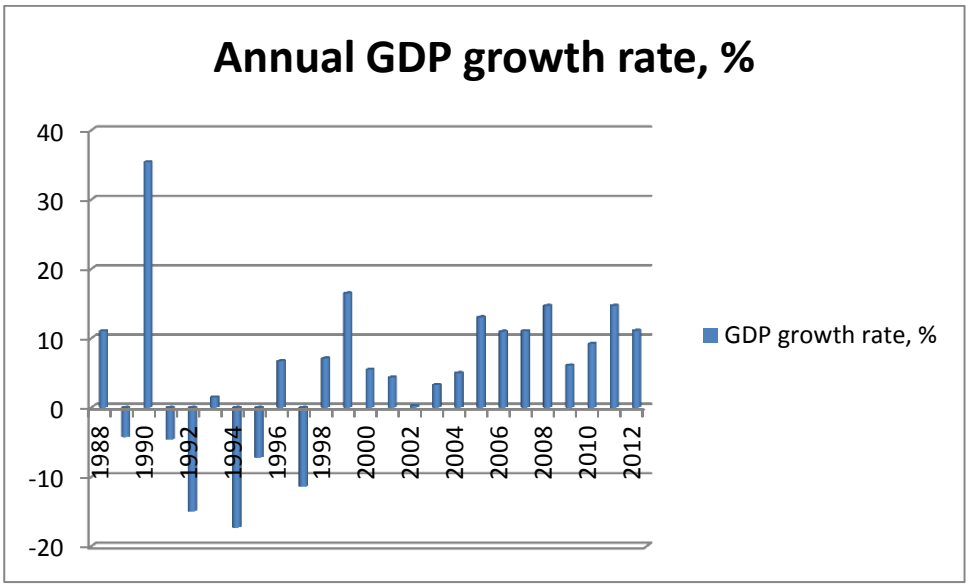
So Turkmenistan is one of the five Central Asian countries and one of the 15 former USSR republics, which have now become independent states. The country borders with Afghanistan, Iran, Kazakhstan, Uzbekistan and the Caspian Sea. Approximately 80% of the country's territory is desert. Turkmenistan's climate is severely continental and extremely dry (Turkmen Statistics Committee website). The country is rich in oil and natural gas resources and cotton is its major agricultural product. However, other processing industries have developed over the years of independence since 1991, including oil refining, chemical and petro-chemical industries, textile and food processing industries, among some others.

3.1. GDP Growth Figures

The GDP of Turkmenistan has been consistently growing since 1998 due to the growing energy prices in the world. Over the 15-year period from 1998 to 2012 growth has averaged almost 9% (see

Figure 2 below), which allowed Turkmenistan to be reclassified by the World Bank in July 2012 as an upper-middle-income country. Growth in GDP through these years allowed increasing public investment volumes. Public investment fuelled strong non-hydrocarbon growth as well. The external current account was broadly in balance as growth in imports of investment goods outpaced growth in exports (Asian Development Outlook 2014; EBRD Turkmenistan Transition Report 2014).

Figure 2. Turkmenistan's annual GDP growth rates in YoY%, 1998-2012.



Source: World Development Indicators, The World Bank, 2015

As can be seen from Figure 2, Turkmenistan's GDP growth rates have been quite impressive. As mentioned above, this can primarily be explained by the country's growing energy exports and growing energy prices on the world market. The next section provides a statistical explanation of this.

3.2. Resource-export dependency

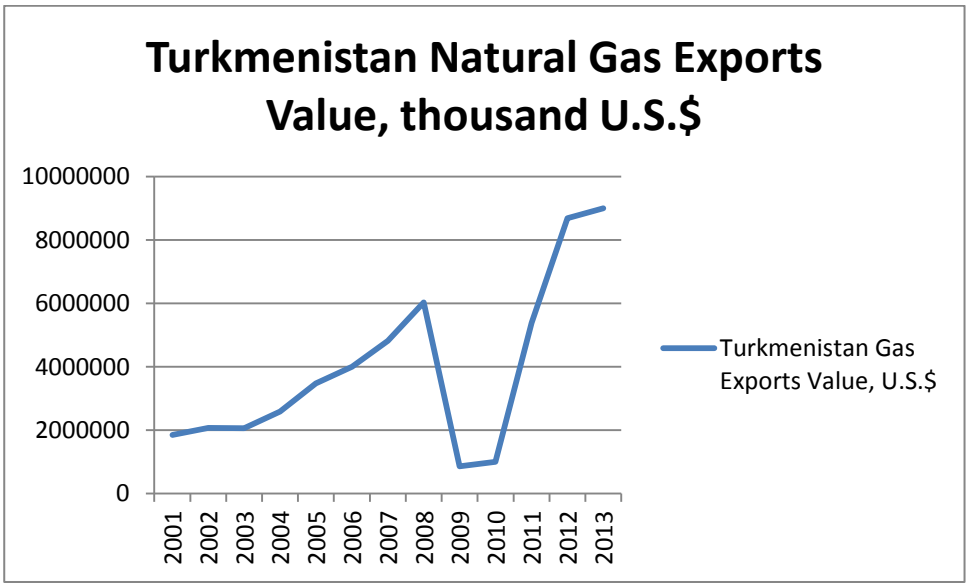
It is commonly agreed that the impressive growth rates of the Turkmen economy have taken place on the back of increasing hydrocarbon prices. The fact that 90% of the country's exports in 2013 comprised of natural gas, crude oil and hydrocarbon byproducts (International Trade Centre 2015) demonstrates the country's heavy dependence on hydrocarbon resources. At the same time, the share of the country's total exports in its GDP is also quite high, i.e. 79% in average over the past 12 years (The World Bank, 2014).

Figure 3. Turkmenistan's exports as share of GDP.

Source: World Development Indicators, The World Bank, 2014

But because hydrocarbon products comprise an overwhelming majority of the country's exports, the fluctuations in the volume of total exports can be traced back and linked to the fluctuations in the volume of energy exports, namely natural gas exports, because natural gas is the largest item in the export structure of the country, which comprised 79% in 2013 (International Trade Centre 2015).

Figure 4. The value of Turkmenistan's natural gas exports during 2001-2013.



Source: International Trade Centre, Trade Map Database, accessed 2015

The figure above provides statistics for natural gas exports from the year 2001[3]. If the curve for natural gas sales during 2001-2013 is compared to the curves in Figure 2 (above, Turkmenistan's

[3] no data is available for years prior to that period.

annual GDP growth rates) and in Figure 3 (above, Turkmenistan's exports as % of GDP), then for the period of 2001-2013, the obvious similarities can be observed. Specifically, the low rates of natural gas exports during 2001-2002 (in Figure 4) explain the relatively slow GDP growth rates during 2001-2003. Likewise, further growth in the natural gas volumes in 2004 and onwards (in Figure 4) explains the higher growth rates of the economy during the following decade (in Figure 2). And even the lower natural gas exports during the global crisis years, i.e. during 2009-2010, haven't had such a strong influence on the GDP rates thanks to the foreign currency reserves and other growth momenta accumulated during the previous growth years. Obviously, the key explanatory factor for this strong correlation between the volume of natural gas exports (Figure 4) and the GDP growth rate (Figure 2) is the high share of natural gas in the export structure and the high share of the total exports in the country's GDP (Figure 3).

The fact that the country hasn't still applied for WTO membership could be explained by hydrocarbon prices not being subjected to tariffs and that they are set independently from the principles of competitive free trade and don't really depend on the level of the economy's trade liberalization. Thus, the country has not made WTO accession its priority.

3.3. Central coordination of economic policies by the state

Being a former republic of the Soviet Union, Turkmenistan has inherited a command economy structure, under which the state used to design an economic plan, with pre-identified types and volumes of production and necessary resources allocated by the central government to be used as inputs for the planned productions. Over the course of the past 23 years since gaining its independence, Turkmenistan has been gradually moving away from this model towards a market economy. The current economic governance style can be characterized as a mixed economy, with market economy principles in force in certain industries and sectors (e.g. retail trade, food processing, construction, transportation, etc.), but the state has preserved the role of guiding the overall economic policy, as well as keeping control of certain industries considered to be of strategic nature (e.g. oil and gas, aviation, railway transportation).

Some examples of the strategic management of the economic policy by the state are the types of medium- and long-term economic development programs adopted by the government. For example, to guide the economic development of the country for the next two decades, the government approved the National Program of Socioeconomic Development (NPSED), 2011–2030, which aims to diversify and modernize the country's industrial base, develop rural areas, and raise living

standards. For the medium-term future, the government has adopted a number of sectoral development strategies, including the following:

1. The State economic development program for 2012-2016
2. The State stock markets and stock exchange development program for 2012-2016
3. The Banking sector development program for 2012-2016
4. The Privatization program for 2013-2016

These programs identify the key directions for further economic development and set various qualitative and quantitative objectives.

That said, the policy of the country cannot be described as strictly an import-substitution policy. Although import-substitution is still present in the government's economic policy lingo, it is part of a wider development policy, which also includes such terms as 'economic diversification', 'export promotion', 'innovation', 'technologies' and 'industrialization'. Thus, the economic policy approach undertaken by the government of Turkmenistan can be qualified as 'the industrialization strategy approach', if one is to refer to the typology used by Todaro and Smith (2011: 613). According to them, the industrialization strategy approach as an "outward-oriented and optimistic about export-led development but still envisions an active role for government in influencing the type and sequencing of exports as a country strives to produce more advanced products, adding higher value" (Ibid.). Turkmenistan appears to qualify this definition.

3.4. Still no application for WTO membership

Turkmenistan has not made an application to join the WTO. That said, two years ago, in January of 2012, the President, who is also the head of government, decreed to form a commission that would look at the feasibility and consequences of acceding to the WTO. No formal findings or recommendations of the task force have since been announced.

As mentioned above, the fact that the country is not in a hurry to seek WTO membership can be explained by the economic structure of the country, which is heavily reliant on hydrocarbon exports. As is known, hydrocarbon exports, particularly natural gas exports, are not subject to tariffs or other widely accepted trade conditions. Instead, terms and conditions for the exports of natural gas, which is predominantly transported via pipelines, are decided on individual case-by-case basis

as a result of mutual negotiations between governments and/or companies. This makes most of the WTO agreements not applicable to practical circumstances affecting natural gas sales and prices.

In any case, should Turkmenistan file an application to join the WTO, it would be qualified as a ‘late applicant’ or ‘latecomer’.

Chapter 4. Related Literature Review and Relevant Theories

Keeping the research question in mind, the current chapter provides a review of scholarly literature which forms the theoretical basis for discussions on trade liberalization through joining the WTO and the specific conditions which affect the extent of benefits from WTO accession.

4.1. General Theories on International trade supporting Free Trade

One doesn't have to be an economist or a scholar to agree that the most dominant theory related to international trade is the 'free trade' theory, which is also called the Neoclassical Theory of Comparative Advantage. At the foundation of this theory is the work by Adam Smith called "The Wealth of Nations" (Smith 1776). Smith introduced the argument that opening up of trade with other countries allows expanding the market, which allows greater levels of specialization for trading countries, i.e. countries don't have to produce the goods they can buy from other countries for relatively cheaper prices.

This idea of free trade based on specialization and the division of labor was further developed by David Ricardo, who introduced the Theory of Comparative Advantage (Ricardo 1817). The principle of comparative advantage asserts that countries should engage in international trade by specializing in the export of goods that can be produced at lowest relative cost. This principle of comparative advantage creates opportunities for beneficial trade even between unequal trading partners.

In this classical comparative advantage model the basis of trade exists in international difference in labor productivity, or technology, only. Later in the 20th century, Swedish economists Eli Heckscher and Bertin Ohlin further elaborated the Ricardian theory by taking into account differences between countries in factor supplies, namely land, climate, labor, and capital (Heckscher 1949; Ohlin 1933). This theory, referred to as the Factor Endowment, or Heckscher-Ohlin, theory, postulates that countries will tend to specialize in the production of the commodities that make use of their abundant factors of production (land, labor, capital, etc.).

It is based on this neoclassical model of free trade the proponents of globalization argue that increased cross-border economic activities bring huge benefits for all countries (Bhagwati 2007; Friedman 2005).

4.2. Theories competing with classical free-trade arguments

4.2.1. On the role of government intervention

Though the free-trade argument of the neoclassical theory is quite appealing in terms of the potential to maximize global wealth, there are, however, opinions that do not agree with some of its assumptions and postulates, such as non-interference of governments in the markets through policies affecting 'natural' trade or the assumption that technology of production is fixed (Ricardian model) or similar and freely available to all countries (Neoclassical/Factor Endowment model).

One of the long-time critiques of the free-trade theory has been the Infant Industry argument, which states that firms from poor or least developed nations are not able to establish themselves in new industries, unless they are protected from international competitors, either through trade restrictions or through government subsides. With time, the protected domestic producers raise their productivity to the level of international competitors or higher. This usually happens through conscious efforts on the part of the national government to raise productivity through investments in worker training, research and development, and corporate management skills (Todaro and Smith 2011: 600).

Similar to the traditional infant industry argument is the Big Push argument. It tries to justify the state-led economic development by arguing that there is a need for advance coordination of investments by the government due to 'demand complementarity' between different industries, if the purpose is to develop industries in a country where they do not exist (Rosenstein-Rodan 1943, 1961; Nurkse 1953).

Thus, we can distinguish between a more outward-looking and more inward-looking development policies. An outward-looking development policy is the one that "encourages not only free trade but also the free movement of capital, workers, enterprises and students…, the multinational enterprise, and an open system of communications" (Streeten 1973). On the other side, an inward-looking development policy focuses on the need for countries to establish their own styles of development and to control their own economic destiny, including through domestic development of technology, the imposition of barriers to imports, and the discouragement of private foreign investment (Streeten 1973). Although the infant industry policy is often seen as a part of the inward-looking strategy, often associated with the import substitution strategy or the theory of protectionism, it can actually facilitate the export promotion strategy as well. There are numerous authors who have used the infant industry argument as the basis for arguing in favor of the more dynamic theories of trade

(Rodrick 1991; Bell et al 1984; Pack & Westphal 1986; Westphal 1982). These dynamic theories of trade are based on the adoption by countries of a nuanced approach in their trade policy that draws on some elements of both the import substitution and export promotion strategies to develop targeted sectors.

One approach in this strand of thought is the industrialization strategy approach, which is "outward-oriented and optimistic about export-led development but still envisions an active role for government in influencing the type and sequencing of exports as a country strives to produce more advanced products, adding higher value" (Todaro and Smith 2011: 613). While having developed as an empirical literature, the industrialization strategy approach has then developed into a theory which explains why an interventionist strategy towards exports can accelerate growth and improve development outcomes more than a strict free-trade approach (Cimoli, Dosi and Stiglitz 1999).

4.2.2. On unequal starting conditions of the North and the South

From another, geographical or chronological, angle, there are critics of the free trade theory which argue that the *lateness* of many developing countries, i.e. the South, in joining the liberalized global trade environment plays against them, and that the currently developed countries, the North, had the advantage of entering this global trade field earlier than most other countries. The so-called North-South trade models focus on trade relations between rich and poor countries in an attempt to figure out how these separate groups of countries have benefited, or suffered losses, due to the various conditions existent at the time of their active global integration. In contrary, the traditional trade theory was assumed to apply to all countries. (Krugman 1981; Dutt 1988; Khor 2001).

The Late Development theory, also called late industrialization theory, which was advanced by Alexander Gerschenkron, argues that the later a country embarks on the process of industrialization and global trade integration, the more it requires more powerful financing institutions, which justifies a more powerful role of the states in developing countries, e.g. the state in Tsarist Russia (Gerschenkron 1962).

4.2.3. On unequal starting conditions in the WTO framework

These theories (the North-South trade models and the Late Development theory) can also be applied to the issue of WTO membership, if one is to assume that this international organization is the 'territory' or the North. Chakravarthi Raghavan in his article entitled "UNCTAD Plan of Action Provides Critique of WTO agreements" argues:

“The WTO trading system has asymmetries and imbalances against the developing world, and has made 'late-comers' face more stringent policy conditions for industrialization and development, and the remaining trade barriers have a negative impact on developing countries. Although developing countries need policy flexibility to support and promote their enterprises, investments in production and marketing, and export expansion and diversification, latecomers now face more stringent policy conditions than those which prevailed previously. The multilateral framework of WTO rules, while contributing to a stable and predictable environment, in certain cases has narrowed the range of policy options for Governments, while the commitments undertaken under IMF/World Bank structural adjustment programs have further reduced the remaining policy options”. (Raghavan 2000).

Raghavan continues to argue that trade policies and trade liberalization should be made more consistent with overall development objectives, and ways and means need to be sought in developing countries to ensure that trade makes a more decisive contribution to alleviating poverty. Further attention, including monitoring of developmental impact of multilateral trade agreements, is required on the role of trade for stimulating economic growth, distribution of growth effects, and sectoral policies for agricultural and tourism, and longer term for diversification into industry and advanced services (Ibid.). Another argument set forth by Aileen Kwa states that compliance with WTO rules is problematic for developing counties and that “over the years, as the corporate interests of the developed countries have expanded, these countries have also lobbied for more issues to be incorporated into the GATT/WTO. (Kwa 2003).

There is also growing criticism related to WTO as an entity. For example, Martin Khor argues that “the WTO does not manage the global economy impartially, but in its operation has a systematic bias toward rich countries and multinational corporations, harming smaller countries which have less negotiation power” (Khor 2000). Other critic Richard Blackhurst describes “Green Room” discussions in the WTO as ‘unrepresentative and non-inclusive’. He notes that “more active participants, representing more diverse interests and objectives, have complicated WTO decision-making, and the process of ‘consensus-building’ has broken down. Results of green room discussions are presented to the rest of the WTO which may vote on the result. They have thus proposed the establishment of a small, informal steering committee (a ‘consultative board’) that can be delegated responsibility for developing consensus on trade issues among the member countries (Blackhurst 2000).

4.2.4. Questions on the 'added value' of the WTO

There is also literature that questions the value added by the institution of the WTO for international trade. Some scholars have collected empirical data that does not demonstrate a correlation between WTO membership and trade gains of a country. One of the works that demonstrated this is by Andrew Rose in his article titled "Do we really know that the WTO increases trade?" (2004).

In regards to the gains in the services sector, Eschenbach and Hoekman (2006) have also concluded that the more a country commits to WTO principles, namely the General Agreement on Trade in Services (GATS), the less effective are its services sector policies. However, according to the authors, this might partly be related with the unwillingness of WTO partners to file disputes within the framework of the WTO in the cases when newly acceded countries don't live up to their WTO commitments, due to high costs of this enforcement mechanism.

The literature on assessing or measuring benefits of the WTO accession is relatively scarce and the matter deserves to be explored in greater depths. Hence, the choice of the general theme of the present master thesis, which is to assess conditions for a more beneficial accession for countries.

Chapter 5. Theoretical Framework

Taking into account the literature review conducted above on the theoretical concepts of international trade, as well as background information and academic literature about the benefits and challenges of acceding to the WTO, it makes sense now to return to the research question of the master thesis and then to formulate the hypotheses.

5.1. Research question

The research question needs to be reviewed at this stage based on the above discussions, as well as to guide further methodological discourse and research. Having provided background information on Turkmenistan, the author of this thesis will now attempt to formulate the research question to make it as applicable to the case of Turkmenistan as possible. The general framework of the present research will be 'WTO accession', i.e. the discourse will stay within the framework of countries' accession to the WTO. To further narrow the research area, the author will look at WTO accession from the angle of its economic benefits, i.e. how countries are able to benefit economically from acceding to the WTO. More specifically, how the GDP rate, and possibly some other economic development indicators such as the Manufacturing Value Added (MVA) or Foreign Direct Investments (FDI) rates grow – or decline – as a result of countries' WTO accession (these indicators will be discussed later in the context of operationalizing the hypotheses).

As mentioned above it is necessary to narrow down the types of countries to be analyzed, i.e. choose them in line with – or in a way to be able to observe and analyze – the characteristics present in the case of Turkmenistan. One of such characteristics is that the country is resource-dependent or resource-exporting, i.e. mineral fuels' exports take up a large share of its GDP. In a way, this also qualifies the country as a developing country. There may be some other critical characteristics and factors that will need to be analyzed, including through the formulation of hypotheses (i.e. strong state coordination of economic policy, 'late-joiner' to the WTO, etc.), but not all of them need to be included in the research question. Taking these into account the formulation of the research question will be as follows:

"Under which conditions is it economically beneficial for a resource-exporting developing country to accede to the WTO?"

It is hoped that the present research work will contribute to the scholarly knowledge in the area of WTO accession and different conditions that influence prospects for getting benefits from the

accession. Based on the findings of the present thesis, countries which are similar in economic structure and governance to Turkmenistan, would be able to develop a more nuanced approach to negotiations as part of their WTO accession and better manage effects of WTO accession for their economies, as well as mitigate adjustment costs and maximize benefits following the WTO accession.

5.2. Hypotheses Concerning the Research Question

Based on the research question formulated above, as well as on the above literature review on key factors affecting benefits from free trade and WTO accession, relevant research hypotheses can now be formulated. The hypotheses will focus on the areas – or conditions or factors – affecting economic benefits from WTO accession which appear to be under-researched, i.e. in which there is lack of scholarly consensus as to whether these conditions have a clearly positive or negative influence on gaining benefits from WTO accession. The hypotheses will not be mutually exclusive, but will still compete with each other to explain which condition influences a developing, resource-exporting country's ability to gain more economic benefits from its WTO accession.

Three hypotheses will be formulated based on economic theories and debates around international trade and WTO with three Independent Variables (IVs) that can be expressed as: "X1", "X2", "X3" and one Dependent Variable (DV) or "D", which I will attempt to explain by testing "X1", "X2", "X3" and their impact on "D".

5.2.1. Hypothesis 1

An important term included in the research question is 'resource-exporting'. By a 'resource-exporting' country, a lower level of the economy's industrialization is implied. This is explained by the temptation of the resource-rich country to enhance its welfare merely through the sale of its mineral resources or commodities. Developing through enhancing production and technological capabilities, knowledge and education is much longer-term and requires much more patience and consistent, disciplined efforts on the part of the state. That is why resource-rich countries don't tend to focus much on diversifying their industries towards other industries or do it at a slow pace. This process of slower development in other industries is also likened to the phenomenon of 'resource curse', i.e. abundance of a specific resource, which can bring quick enrichment, but usually leads to slack progress in other areas of economic development, such as the manufacturing sector, which require steady knowledge-based progress (Ross 1999; Rosser 2006; Humphreys, Sachs and Stiglitz 2007).

However, some states, such as Norway, have been able to overcome the danger of becoming dependent on their natural resources and have advanced industrially at high rates. Norway's ranking in the UNIDO's Competitive Industrial Performance Index is 0.12 which is quite high, i.e. the 31st in the world, despite the exports of its mineral fuels and oils comprising two-thirds of its total exports (International Trade Centre 2014). This demonstrates that there are resource-exporting states which have been able to reach a significant level of industrialization, despite the risk of being 'cursed' by their resources.

As this discussion is moved into the WTO accession context, one needs to recall that the fundamental theoretical framework of the WTO is based on the concept of free trade, which stands on the Theory of Comparative Advantage (Ricardo 1817) and the Neoclassical or Factor Endowment Theory (Heckscher 1949; Ohlin 1933), as described in an earlier section of the present research paper (Chapter 4 on Literature Review). The Comparative Advantage theory asserts that countries should engage in international trade by specializing in the export of goods that can be produced at *lowest relative cost*, while the Factor Endowment theory postulates that countries should specialize in the production of the commodities that make use of their *abundant* factors of production (land, labor, capital, etc.). Applied to a resource-exporting economy this means that such countries should continue to focus on selling – and maybe processing, in some cases – their natural resources, which are their 'cheapest' and most 'abundant' product. After all, theoretical and most practical principles laid at the foundation of the WTO call on countries to trade in the goods which they're most competitive in, which, according to the Neoclassical theory and the WTO, are supposed lead to greatest economic benefits for any country.

But would such an approach, solely based on the neoclassical theory of free trade, lead to the greatest economic benefits through a resource-rich country's accession to the WTO? Or should the country first seek to industrialize by developing a comparative advantage in a different sector and thus move itself away from heavy dependence on its natural resources and its exports?

The attempt through the first hypothesis is to test whether the level of industrialization of a resource-rich and resource-exporting country acceding to the WTO influences its potential for reaping more economic benefits as a WTO member. Thus, the level of industrialization of a country will be the independent variable, or "X1", in the first hypothesis, while economic benefits stemming from WTO accession will be the dependent variable or "D".

While the theory of free trade supposes that any economy, including a resource-rich economy, should not make any special or 'unnatural' efforts to industrialize before or after the WTO

accession, but merely continue to capitalize on its comparative advantage (which is often understood as selling its natural resources), the author of the present research takes a stance opposing to that of the free trade theory and hypothesizes that the level of industrialization positively affects the degree of benefits gained from the WTO accession. This also assumes that even if a resource-rich country makes active efforts to industrialize, this can be rewarded by greater economic benefits as a member of the WTO. Thus, the hypothesis itself can be formulated as follows:

"The more industrialized a country is, the more economic benefits it reaps from the WTO accession".

Testing this hypothesis on the cases of resource-exporting countries and the resulting findings should help advance scholarly literature in the area of whether a resource-rich country should seek to industrialize in order to maximize its economic benefits from WTO accession.

5.2.2. Hypothesis 2

The second hypothesis is similar to the first hypothesis in terms of the logic used for its formulation. The neoclassical theory of economics postulates that the state should not interfere in the market, except in areas where there is a market failure. The natural market forces of supply and demand would bring to optimal relations between producers and buyers on the market, including on the global market, and the prices would be set on the appropriate level to facilitate the largest volume of trade, which would lead to greatest economic growth. As with the previous hypothesis, this theory of the state's non-interference in market affairs lies in the foundation of the WTO's agreements and policies (e.g. the Agreement on Subsidies and Countervailing Measures).

On the other hand, however, alternative arguments, such as the Infant Industry argument, the Big Push argument and the Industrialization Strategy approach, have been reviewed above, which call for a more active, steering role of the state in promoting a country's economic growth, including through a more intelligently guided trade policy by "influencing the type and sequencing of exports as a country strives to produce more advanced products, adding higher value" (Todaro and Smith 2011: 613). This approach goes against the fundamental theoretical principles of the WTO and claims it can lead to greater economic benefits for a developing country (see the Literature Review chapter above; Gerschenkron 1962).

In an attempt to identify which of these theoretical approaches leads to greater economic benefits for a country acceding to the WTO, the author, again, will take a stance opposing that of the free

trade theory and hypothesize that a centrally coordinated economic development strategy oriented at increasing exports would lead to greater economic benefits, even as part of the WTO. In the second hypothesis, the dependent variable would remain the same ("greater economic benefits stemming from WTO accession"), while the independent variable (X2) would be "centrally coordinated industrialization strategy". Thus, the second hypothesis will be formulated as follows:

"If a country has a centrally coordinated industrialization strategy, then it will reap more economic benefits from WTO accession."

In approaching this hypothesis, the author believes that researching strictly resource-rich countries is not a requirement, as resource abundance of a country does not directly influence the causal relationship between central coordination of economic policy and economic benefits stemming from WTO accession. At the same time, the outcomes of testing this hypothesis will be applicable to resource-rich countries as well and will contribute to the research question of the present thesis.

Testing the second hypothesis should help advance scholarly literature in the area of whether a country should have its government actively guide or direct its industrialization-focused economic policy in an attempt to maximize economic benefits from the WTO accession.

5.2.3. Hypothesis 3

In the sections titled "On unequal starting conditions of the North and the South" and "On unequal starting conditions in the WTO framework" above, relevant literature and arguments were discussed on how the 'lateness' of developing countries in joining the liberalized global trade environment and the WTO play against them, and that the currently developed countries have the advantage of entering the global trade field earlier than most other countries or that the current WTO members have the advantage of already being in the WTO, while other developing countries are only undergoing the accession process.

These theoretical arguments, in a way, go against the neoclassical free trade theory by questioning the beneficial nature of free, liberalized trade for all countries, at least in the short- or medium-term context. Instead, the 'lateness' arguments suggest possible losses for developing countries in freely trading with developed countries (see Krugman 1981; Dutt 1988; Khor 2001). This also applies to the WTO framework, as it too has "asymmetries and imbalances against the developing world, and has made 'late-comers' face more stringent policy conditions for industrialization and development" (Raghavan 2000).

Through the third hypothesis, the author attempts to test these arguments. Again, the dependent variable would remain the same ("greater economic benefits stemming from WTO accession"), while the independent variable (X3) would be "the earliness/year of a country's WTO accession". So the third hypothesis states:

"The earlier a country accedes to WTO, the more economic benefits it will gain from the accession."

Again, in approaching this hypothesis, the author believes that researching strictly resource-rich countries is not a requirement, as resource abundance of a country does not directly influence the causal relationship between the timing of a country's WTO accession and economic benefits stemming from the accession. At the same time, the outcomes of testing this hypothesis will be applicable to resource-rich countries as well and will contribute to the research question of the present thesis.

Testing the third hypothesis should help advance knowledge on how much the lateness of developing countries' accession to the WTO affects their ability to reap benefits from the accession. Also, this knowledge will help acceding countries adjust their policies and the speed of their accession process in order to maximize economic benefits from the WTO accession.

Chapter 6. Methodology and Case selection

To test the above hypotheses, a suitable methodology needs to be developed. The methodology will mostly focus on using quantitative (basic statistical) methods for conducting the analyses, but will also refer to qualitative methods, where quantitative methods are deemed insufficient. This chapter on methodology will also define the types of quantitative and qualitative approaches and methods (comparative, forward-looking vs. backward-looking, most similar vs. most different systems design, etc.), operationalize the variables in the hypotheses, after which the actual cases will need to be identified and analyzed.

6.1. Summary of Methodology Used

The research will apply both quantitative and qualitative methods. The quantitative methods are going to be very basic statistical ones. Once the three independent variables (X1, X2 and X3) and the dependent variable (D) are operationalized, suitable cases (i.e. country experiences) will need to be identified. Two cases will be selected for each of the hypotheses. Each pair of cases will be analyzed separately, first, using the statistical comparative methods, and then, when necessary, by going into qualitative comparative methods.

The focus in testing the hypotheses will be on the independent variables (the level of countries' industrialization, their central governments' level of coordination of economic policy and the earliness/lateness of their WTO accession). This means the design of the present research is forward-looking (and not backward-looking), i.e. by analyzing independent variables their effect on the dependent variable (economic benefits stemming from WTO accession) will be determined.

Obviously, cases will be carefully selected based on theoretical considerations discussed up to this point in the thesis. While basic statistical methods will also be applied, the importance of careful theory-based selection of cases will become evident, when the analysis reaches the stage of qualitative comparison of the cases. One of the reasons for well-thought-through case selection is to increase the internal validity of the research project. I.e. the analysis will actually need to explain as much as possible the factors affecting the causal relationship between independent variable and the dependent variable. This means that the cases (or country experiences) that actually clearly demonstrate the relevant observable factors' influence (or lack thereof) on the dependent variable are going to be most useful.

In order to ensure this, the most similar systems design will need to be applied. What this means is that in selecting the country cases two most similar countries will be chosen, which only differ on

the main factor that interests the research, i.e. the independent variable. Then, depending on how this factor plays out on the dependent variable (economic benefits stemming from the WTO accession), relevant conclusions can be made.

6.2. Operationalization and Data Sources

6.2.1. Dependent Variable Operationalization and Data Source

For the quantitative and qualitative methods of analysis to be specific and to refer to the same set of indicators in the analysis of different cases or different independent variables, one common and well recognized, but also quantifiable indicator needs to be identified. Since the dependent variable in the hypotheses of the present research is 'economic benefits stemming from the WTO accession', the author believes the best indicator representing an increase or decline in the economic wellbeing of any country is its annual GPD growth/decline rates. This indicator is widely used and recognized, with commonly agreed methodology of its calculation and easily available data. The data for the present research will be mostly extracted from the World Bank's online statistical database (http://data.worldbank.org).

GDP is also a very comprehensive indicator, which encompasses many other aspects of 'economic benefits' or economic development within just one indicator. Since there're many declared 'benefits' of WTO accession, it would be too challenging to analyze them individually, but they all, to a degree, manifest themselves in GDP growth rates in the long-run (10-15 years), while other measures of accession effects (exports volumes, FDI volumes, etc.) show only a partial picture (for some other ways to capture effects of WTO accession, see Cattaneo and Primo Braga 2009: 9).

Another key comment in relation to the operationalization of the dependent variable is that economic benefits from a specific factor, event or process cannot be measured at a specific point in time, i.e. usually effects of an economic or other event on a country's economy are promulgated and are observable after or over a certain period of time (several months, but usually several years). This is even more so for such a macro-level event as a WTO accession, the effects of which are only visible several years after, once the economic transformations and policies implemented as part of WTO accession are starting to take effect. This timeframe issue is complicated even further if one is to consider that the timing of the actual economic reforms that an acceding country commits to do not necessarily coincide with the date of the formal accession. It is only as a result of the actual reforms that economic processes and market relationships begin to change and evolve. So the timing of those reforms becomes important if one really wants to attribute the benefits of the WTO

accession. Sometimes the difference in years between the formal accession and the real economic reforms can amount several years.

That is why in each of the countries to be identified as case studies, it will be necessary to observe and compare a longer span of years, i.e. a period of at least 8-10 years prior to the WTO accession and a period of at least 8-10 years following the WTO accession in order to provide the assessment as accurately as possible and the economic benefits to be attributed to WTO accession-related reforms.

GDP growth rates in per cents (%) for those periods will need to be averaged. The comparison of the GDP growth rates prior to and after the WTO accession should give an idea of whether the economic growth of a specific country has accelerated or decreased post-WTO accession. This method of dependent variable operationalization will be applied in testing all three hypotheses in the present research.

In some cases where it will be purposeful to do so, some other dimensions will be added to the Dependent Variable, i.e. additional methods of its operationalization will be introduced. Alternatively, this can also be done by introducing intermediate variables. For example, indicators for the Manufacturing Value Added (MVA) for periods prior and post WTO accession can be compared and analyzed for the countries in question. Data for this indicator can also be accessed at that above-mentioned World Bank online database. The purpose behind adding additional operationalization indicators is to provide a more focused perspective or additional angles on how independent variables influence economic benefits as a result of WTO accession.

6.2.2. Independent Variable Operationalization and Data Sources

Operationalization of the independent variables will need to be done using both the quantitative indicators and qualitative definitions. The reason for this is that not always clear quantitative indicators are available. In any case, operationalization and available data sources for each of the independent variables will need to be discussed separately.

6.2.2.1. Independent Variable 1

The independent variable in the first hypothesis developed for the present research is ‘the level of industrialization of a country’. To operationalize this variable, an objective statistical,

i.e. quantifiable, indicator needs to be identified. There are several institutions that do this, but one should also remember that the level of industrialization needs to be assessed for the year in which a country acceded to the WTO. This is a more challenging task given that most of our case studies will need to be of the countries, which had acceded several decades ago, or one decade ago at the latest (this is necessary to ensure a time series of at least 8 years for the dependent variable, which was discussed in the previous sector on Dependent Variable Operationalization and Data Source). So the source for the industrialization indicator has to go back in time at least around 15-20 years ago.

Having conducted in-depth research into statistical databases that track the level of countries' industrialization, the author came to the conclusion that the Competitive Industrial Performance (CIP) Index of the United Nations Industrial Development Organization (UNIDO) is the most comprehensive and elaborate measure of countries' progress in industrialization. Its data goes back until 1990, although not available for all countries. But its key advantage is its objectivity and accuracy as the UNIDO is a well-recognized, reputable and non-biased international organization specializing on the matters of industrialization. This makes the methodology behind the CIP index reliable and trustworthy.

So according to the most similar systems design for Hypothesis 1, two oil-rich and/or oil-exporting countries would need to be identified with their CIP indices significantly differing from each other's at the time of their WTO accession. The fact that the UNIDO data goes back to only 1990 limits the choice of countries available for selection for Hypothesis 1 to only those countries which acceded after 1990. But this is not a huge limitation as the author's intention was to stay within the timeframe of the past 20 years or so anyway, because other data (e.g. GDP, other intervening variables, secondary literature, etc.) is likely to be scarce for years prior to 1990 anyway.

The two selected cases will also need to be as similar as possible on all other control variables, i.e. other factors that might influence the dependent variable, i.e. their GDP growth rates. Some of the possible control variables to keep an eye on are:

- Geographical location;
- Economic structure (share of mineral resources sales in GDP);
- Size of the economy;
- GDP growth rates prior to WTO accession;
- Political structure;
- Government's level of commitment to reform and actual implementation of those reforms;

- Year of joining the WTO, etc.

It is unrealistic to expect that these control variables would be totally similar in terms of their level of influencing countries' GDP growth rates. So the similarity of the ones that are deemed to have lesser effect on GDP growth rates can be sacrificed, which should not affect the internal validity of the research. These factors will be analyzed at a greater depth in further chapters of the research.

6.2.2.2 Intervening Variables for Independent Variable 1

As part of testing Hypothesis 1, the author also introduces and analyzes intervening variables, which also need to be operationalized. One of the variables will be the value added in the manufacturing sector, which can be operationalized by the indicator often used by the World Bank, i.e. the Manufacturing Value Added (MVA). This indicator is calculated by the World Bank for most countries of the world on annual basis and is measured in several different ways, including as percentage share of GDP and in absolute values, e.g. current US dollars. This data is also accessible on the World Banks online database of World Development Indicators.

Another intervening variable that will be referred to as part of testing Hypothesis 1 is the dependency of countries on their exports of mineral fuels. This variable can be operationalized in a straightforward manner, by using either the percentage share of mineral fuels' exports in a country's GDP or the absolute values of mineral fuels' exports in current US dollars or in current national currencies of the countries of interest. This kind of data is available on various sources, including in the Trade Map database of the International Trade Centre, which collaborates with the UN Comtrade database.

6.2.2.3 Independent Variable 2

Operationalization of the second independent variable will need to be more subjective, i.e. refer to a well-established qualitative definition of the "centrally coordinated industrialization strategy". Obviously, this variable is difficult to quantify. Various rankings of countries by economic freedom (The Heritage Foundation) or economic transformation (Transformation Index BTI) assess economic developments in a country on a wider scale, whereas for the present research the role of the government specifically in relation to steering economic policy needs to be defined. That is why the author decided to use qualitative judgment in choosing two countries that will need to be different in terms of their government's intervention in steering trade policy.

The specific definition of a 'centrally coordinated industrialization strategy' will be taken from an earlier chapter of this research on state-of-the-art literature review, i.e. it envisions "*an active role for government in influencing the type and sequencing of exports* as a country strives to produce more advanced products, adding higher value" (Todaro and Smith 2011: 613).

The stance of the government will be assessed for the several years before and after the WTO accession and that stance will need to remain consistent during that whole time span in order for this independent variable to be properly operationalized.

So according to the most similar systems design for Hypothesis 2, two developing counties would need to be identified with different levels of their government's intervention in their trade policies. One government would need to be very actively engaged in guiding the country's trade policy and reforms, while the other country's government would need to take a laisser-faire approach and let market forces take care of what's produced and traded by the country.

As was the case with Hypothesis 1, the two cases would need to be selected in such a way so that all/most other control variables in the two countries would be as similar to each other as possible. These control variables would be the same for Hypothesis 2, as they were for Hypothesis 1, with the addition of one more factor – the level of the countries' industrialization (which had to be different for the two cases identified for Hypothesis 1).

6.2.2.4. Independent Variable 3

For Hypothesis 3, it may seem quite straightforward to operationalize its independent variable, which is the 'year of a country's WTO accession'. The year in which any WTO member acceded to the WTO or signed the GATT agreement is available on the WTO website (2015c).

But one important qualification has to be made. Often, the actual year in which the country formally accedes to the WTO does not coincide with the actual economic and/or legislative reforms a country undertakes as part of its WTO accession. In some cases the reforms can be implemented several years prior to the formal accession due to the country's early efforts to bring its economic and legislative regime in compliance with the WTO's rules and requirements. In other cases, especially with the least developing countries, a transition period can be granted to an acceding country, which allows the country to undertake many of the reforms several years down the road, and a the actual WTO accession can take place before those reforms are undertaken. So whenever

possible, the author will try to track the year in which the majority of the reforms related with the country's WTO accession actually took place.

The differentiation between the two cases selected for testing Hypothesis 3 can be done by ensuring a sufficient time gap between the accession years of the two selected developing countries. It would be appropriate if that gap is between 10-15 years. If it's closer, there is a risk that the differentiation between the independent variables of the two cases would not be as clear-cut. If it's longer than 15 years, there is a risk that data may not be available (or sufficient) for the country that acceded, to the WTO, or signed the GATT Agreement, earlier (i.e. prior to 1990). However, if this data concern is addressed, then the time gap can be even longer.

Again, according to the most similar systems design, other independent variables affecting the two countries' GDP growth rates, called control variables, would need to be as similar to each other as possible. It would be ideal if the only differing independent variable would be the year of accession.

One of such control variables is the historical economic context of the case countries. This factor should be stable around the accession years of both countries to be selected. This means that there should not be major political or economic shocks for either of the countries during the time periods to be analyzed, i.e. 10-15 years before the accession and the 10-15 years post-accession. Shocks, such as financial or economic crises often significantly affect countries' growth trajectories, whereas our objective is to trace the influence of the WTO accession year per se on the two selected countries' growth trajectories.

6.3. Actual case (country) selection

6.3.1. Selection of Two Cases for Hypothesis 1

The selection of the two cases for testing the first hypothesis needs to be done in a way to ensure that all – or at least the most critical – conditions set out in the previous section on the operationalization of the relevant independent variable (X1) are met. While the variable that is of research interest to us (the level of industrialization of a country) needs to be different for the two cases, the other control variables that should be as similar as possible are:

- Geographical location;
- Year of accession the WTO;
- Economic structure (share of mineral resources sales in GDP);
- Size of the economy;
- GDP growth rates prior to WTO accession;

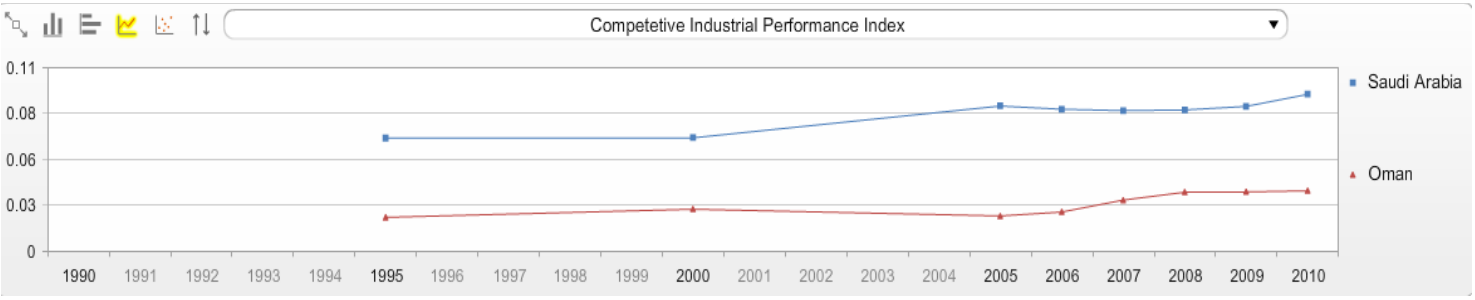
- Political structure;
- Country's/government's commitment level to reform and actual implementation of those reforms.

After careful consideration of various regions and countries, the author of the research came to a conclusion that the Middle Eastern region provides a good selection of countries, located with the same region, with similar political systems and economic structures heavily reliant on mineral resource exports. Out of the Middle Eastern countries Saudi Arabia and Oman comprise a pair of countries whose industrialization levels are quite different from each other's, while their accession to the WTO happened at around the same period (2000 for Oman and 2005 for Saudi Arabia).

The sizes of the economies vary by around nine times: Saudi Arabia's GDP in 2013 was 748 bln US dollars, while Oman's GDP was 80 bln US dollars (The World Bank online database, http://data.worldbank.org/country?display=graph, accessed January 2015). However, this factor is believed not to be so critical in analyzing the independent variable.

The countries' UNIDO CPI indices were 0.09 for Saudi Arabia and 0.02 for Oman at their time of their WTO accession (2005 and 2000 accordingly) (UNIDO 2015). Saudi Arabia's CIP Index is approximately on the level of such countries as Russia and Argentina. There are roughly around 50 countries that are placed between Oman and Saudi Arabia, while the total number of ranked countries on the CIP Index list is little over 100. Almost all other Middle Eastern countries are placed between Oman and Saudi Arabia in the ranking, which makes the two countries almost as distant from each other as possible in terms of the independent variable being analyzed (level of their competitive industrial performance).

Figure 5. Oman's and Saudi Arabia's UNIDO CIP indices from 1990 to 2010.



Source: UNIDO Competitive Industrial Performance Index, 2015.

The level of both economies' dependence on hydrocarbon (mainly, oil) resources is very similar to each other's. Saudi Arabia's exports of mineral fuels, oils and distillation products comprising 89%

of its total exports at the year of its WTO accession (2005). The share of Oman's exports of the same types of products in its total exports comprised 80% in 2000, the year it joined the WTO (International Trade Centre 2015).

Table 1. Oman's and Saudi Arabia's mineral resource exports at time of WTO accession.

Exports at year of WTO accession	Oman (2001*, US dollar thousand)	Saudi Arabia (2005, US dollar thousand)
All products	11 036 616	180 737 249
Mineral fuels, oils, distillation products, etc	8 883 366	161 718 621
Share of Mineral resources in Total exports	80%	89%

* Data for 2000 not available

Source: TradeMap, Market Analysis and Research, International Trade Centre (ITC), 2015

Both countries demonstrated steady growth rates in the decade preceding their accession with the average annual growth rate of Oman equaling 4.21% and the average annual growth rate of Saudi Arabia equaling 3.45%. The similar rates of GDP growth of both countries is another control variable that qualifies these cases to be selected according to the most similar systems research design.

6.3.2. Selection of Two Cases for Hypothesis 2

Similar to the approached used in relation to Hypothesis 1, the selection of the two cases for testing the second hypothesis needs to be done in a way to ensure that all – or at least the most critical – conditions set out in the previous section on the operationalization of the relevant independent variable (X2) are met. While the variable that is of research interest to us (the level of the government's central coordination of the economic/trade policy) needs to be different for the two cases, the other control variables that should be as similar as possible are:

- Geographical location;
- Year of accession the WTO;
- Economic structure (share of mineral resources sales in GDP);
- Size of the economy;
- GDP growth rates prior to WTO accession;
- Level of industrialization of the economy.

There were different approaches to selecting case studies for the second hypothesis. The biggest challenge is the subjectivity of identifying countries with governments either actively implementing

economic development strategies or letting the economy develop on the laissez-faire principle. The second challenged encountered during this exercise was the matching of the countries' years of WTO accession. Often, the countries that seemed to suit the definitions for operationalization turned out to have very distant years of accession, which distorts the global/regional economic contexts for the countries at question. A third challenge was to identify two cases of countries located in the same region or even the same continent. Often, countries located in the same region have similar economic governance systems, whereas for the present research the author sought for two countries with significantly differing independent variables (i.e. economic governance styles).

The various options, i.e. pairs of countries, considered by the author for testing this hypothesis included: an East Asian country vs. a Latin American country, a former-Soviet laisser-faire country vs. a former Soviet developmental state, South Korea vs. Hong Kong, Costa Rica vs. Mexico. But the choice was made to compare two African countries, especially given West African countries' experience of Structural Adjustment Programs in the 1980-90s, which can represent a good case of a laisser-faire economy. So Ghana was selected as country to represent that style of economic governance, while Botswana was selected as a country with the state leading an outward-oriented economic – or industrialization, or trade – policy.

One qualification has to be made up front, i.e. it was not possible to meet all of the challenges listed above. Specifically, in the case of Ghana-Botswana, the two countries did not sign the GATT Agreement at around the same time. Ghana signed it in 1957, while Botswana signed it in 1987, i.e. 30 years later. But the actual effect of this huge time difference on the countries' economic policies should not be misleading. In fact, unlike in the times of WTO, signing of the GATT Agreement did not entail an obligation to undergo substantial reforms in the economy. So Ghana's economic governance and, in fact, the structure of economy as a whole between 1957 and 1984, when it embarked on its World Bank and IMF-initiated Structural Adjustment Programs, has not changed much (Ghana Web).

In fact, the actual neoliberal reforms which the WTO advocates for have taken off in Ghana in 1984, with the implementation of the above-mentioned Structural Adjustment Program (SAP). So in effect, the SAP's effect on Ghana's economy was virtually the same as the WTO accession would have on a developing country in the present days. So conditionally qualifying Ghana's SAP as a WTO accession can allow us to comparatively study Ghana and Botswana by preserving the methodological consistency. One would just need to take account of this conditionality in interpreting the results.

The author believes the two other challenges mentioned above (identifying countries that match the definition for operationalization and finding two countries from the same region) have been satisfactorily resolved. Obviously, the countries are from the same continent, though not quite closely located to other. They have similar political histories, having been colonies of the United Kingdom, which also means their property rights and rule of law systems interested from the colonial era were similar at the time they gained their independence (see Acemoglu and Robinson 1999 on the significance of pre-independence colonial regime in determining the adoption of property rights and rule of law institutions post-independence).

Both countries were very poor at the early stage of their independence (1960s), but had sufficient reserves of mineral resources to aid their development. Botswana identified large deposits of diamonds in 1967 (Capital Resources, Botswana Country Overview, 2013/14: 7), while Ghana possesses industrial minerals, hydrocarbons and precious metals and is considered an average natural resource enriched country. Its 1960 per capita income of about $500 was comparable to that of South Korea or Mexico (see Benneh 1998: 1).

According to the research design of this thesis, the two countries are different in terms of the second independent variable, the centrally coordinated industrialization strategy. Their economic governance during the years to be analyzed, 1984-2000, has differed significantly. This SAP program launched in Ghana, with the assistance of the World Bank and the International Monetary Fund, introduced such policy changes as the implementation of free market principles, removing price controls, privatization of state industries, currency rate liberalization, etc, i.e. all attributes of a free market system. This process was accompanied by layoffs of civil servants, students hearing higher costs for their education and patients facing higher costs for health services (GhanaWeb).

Botswana's stable political situation over the years of independence has allowed it to carry out economic development policies conducive for growth. Other than leading the country in a stable political environment, the role of the government was also critical in terms of economic governance. Botswana's National Development Plans (NDPs) have historically been the main document setting out economic policy priorities and framework for the country. Their term is for six years and they have been used since independence. The current NDP is the tenth in Botswana's history. These documents help the government plan economic development, as well as specific development projects. Other than traditional state ministries and institutions, the country also has the Botswana Economic Advisory Council (BEAC), a high level body comprising local and foreign experts that provides guidance on economic development strategies. BEAC has produced the Botswana Excellence Strategy document, a high-level overview of development priorities and

strategies based on the diversification objective (Capital Resources, Botswana Country Overview, 2013/14: 30).

All of the above qualifies Botswana as a country with its government centrally coordinating its industrial policies, which qualifies this country as one of the two cases, along with Ghana, for testing Hypothesis 2.

6.3.3. Selection of Two Cases for Hypothesis 3

In identifying the two cases for testing the third hypothesis, which states that 'the earlier a country accedes to WTO, the more economic benefits it will gain from the accession', the comments and qualifications made in the section above on the operationalization of the third independent variable (determining the year in which most WTO-related reforms took place, ensuring a time gap of around 15 years, keeping other control variables similar, etc.) will need to be taken into account.

One of the control variables mentioned in the section above is the historical economic context, i.e. our case countries should not have been subjected to major political or economic socks during the period before or after the accession. With this in mind, we would have to eliminate former Soviet republic – or even former socialist bloc countries for that matter – from our Hypothesis 3 analysis. The break-up of the USSR and the socialistic block had a major impact on the economic growth trajectories of these countries, most of which started their WTO accession process at around the same time (see Table 2 below). Those eastern European countries which were signatories to GATT since 1950s or 1960s did not really implement the GATT agreement provisions until late 1980s or early 1990s (Cattaneo and Primo Braga 2009: 9-12). All this makes the quantitative comparison of either of these countries with another country which acceded to the WTO either more than 15 years before or around 10-15 years after, i.e. in 2000s, biased. This means the selection will have to be made from among some other countries.

Table 2: CIS countries' accession status to the WTO

Country	Application	Membership
Armenia	November 1993	February 2003
Azerbaijan	July 1997	Ongoing negotiations
Belarus	September 1993	Ongoing negotiations
Georgia	July 1996	2000
Kazakhstan	January 1996	Ongoing negotiations
Kyrgyzstan	February 1996	December 1998
Moldova	November 1993	2001
Russia	June 1993	August 2012
Tajikistan	May 2001	2013
Turkmenistan	…	…
Ukraine	November 1993	May 2008
Uzbekistan	December 1994	Ongoing negotiations

Source: WTO website

Similar challenges exist when other geographically co-located countries are analyzed. Most of the East Asian countries joined GATT quite early in the process, and their joining/accession years are not too distant from each other's. The author came to a conclusion that, again, a Middle Eastern pair of countries would be a good set. Despite these countries' similar economic structures and political and economic histories, they have varying WTO accession years. For example, Kuwait signed the GATT Agreement back in 1963, whereas Yemen acceded to the WTO as recently as in June of 2014 (WTO website, accessed in January 2015). But choosing two countries which are so long apart in time would present a historical context challenge, i.e. the political and economic context changes too much over such a long time period, while in the case of Yemen post-accession data time series would not be available.

Thus, Bahrain and Saudi Arabia were actually selected for the analysis as part of testing Hypothesis 3. These countries' accession years are 12 years apart. Bahrain joined the GATT agreement in 1993, while Saudi Arabia acceded to the WTO in 2005. Thus, the difference between the independent variables (year of WTO accession) of the two countries is sufficiently big. Also, Bahrain joined the GATT agreement, the process for which is much easier, whereas Saudi Arabia had to undergo stringent accession processes, including difficult negotiations with member countries. This adds to the time contrast that is the subject of analysis as part of this Hypothesis.

Almost all of the control variables for these countries are the same. They are both located in the same geographical region and have similar resource-dependent economic structures. Their political systems are also the same, i.e. a monarchy.

The sizes of the economies vary by more than 20 times: Saudi Arabia's GDP in 2013 was 748 bln US dollars, while Oman's GDP was 33 bln US dollars (The World Bank 2015). However, this factor is believed not to be so critical in analyzing the independent variable.

Both countries demonstrated steady growth rates in the decade preceding their accession with the average annual growth rate of Bahrain equaling 5.53% and the average annual growth rate of Saudi Arabia equaling 3.45%. The similar rates of GDP growth of both countries is another control variable that qualifies these cases to be selected according to the most similar systems research design.

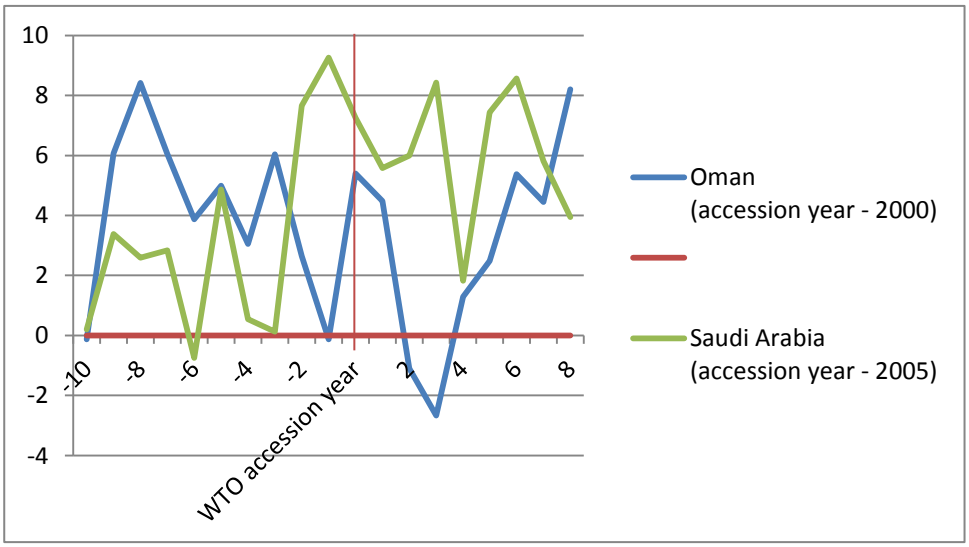
6.4. Actual case analyses – Hypotheses Testing

6.4.1. Testing Hypothesis 1

6.4.1.1. Statistical Comparative Analysis

To test the hypothesis which states that 'the more industrialized a country is, the more economic benefits it reaps from the WTO accession', using the selected cases, i.e. Oman and Saudi Arabia, it is necessary to compare the statistical indicators of the two countries. Specifically, the dynamics of the two cases' dependent variables, i.e. the changes observed in the countries' GDP growth rates following their WTO accession, need to be analyzed. To do this the following figure was developed by the author using World Bank historical statistics on countries' annual GDP growth rates.

Figure 6. Oman's and Saudi Arabia's annual GDP growth rates before and after WTO accession.



Source: World Bank's World Development Indicators, 2015

Looking at the graph, a trend can be observed that Oman's growth rates were generally higher during the 10 years before the accession year (red vertical line). But the trend changes for the period after the accession, which is already quite indicative. Quantifying the two countries' annual GDP growth rates through calculating their average GDP growth rates for the periods before and after the WTO accession will provide even a clearer picture. As a result of this, it will be possible to trace the relative changes in the growth rates (negative or positive) after the accession and even determine the extent of such changes (as a difference of two averaged percentage figures).

Table 3. Oman's and Saudi Arabia's average growth rates before and after WTO accession.

Average GDP growth rates (%)	WTO accession		Change in GDP rate
	10 years prior	8 years after	
Oman	4,21	3,49	-0,72
Saudi Arabia	3,45	6,86	+3,41

Source: World Bank's World Development Indicators, 2015

As it can be seen from Figure 6 and Table 3 above, the WTO accession has affected the two countries' growth rates, i.e. the dependent variable, in different ways, despite the similarity of many independent control variables. The average GDP growth rate for Oman, which had a lower level of industrialization at the time of WTO accession, has gone down from 4.21% prior to the accession to 3.49% during the eight years following the accession. This marks a negative trend of -0.72%.

At the same time, the trend for Saudi Arabia, which had a higher index of industrial performance, was much more positive. Its average GDP growth rate has increased twofold from 3.45% during the decade before the WTO accession to 6.86% during the period following the WTO accession, which is a significant increase of 3.41%.

To comment on the possibility of large-scale external factors affecting the calculations, it should be noted that the global crisis of 2008-2009 should have affected both countries in a similar way, i.e. for both countries the crisis years fell on the period after the WTO accession. This means that other things being equal, the crisis should have affected both countries' GDP growth rate trends in a similar way. Thus, the change in different rates of GDP growth after the accession cannot be related with the global crisis.

The only key variable that was different for the two countries in the research model (other than the sizes of the economies, which we mentioned above) is the two countries' level of industrial

performance, which supposedly affected the differences in their GDP growth rates, which has been clearly demonstrated statistically.

The whole statistical comparison exercise has been summed up in the following table:

Table 4. Comparative Statistical Analysis of Oman's and Saudi Arabia's starting conditions before WTO accession and GDP performance after the WTO accession.

Variables	Oman	Saudi Arabia
Independent Variable:		
UNIDO CIP Index	0.02	0.09
Control Variables		
WTO accession year	2000	2005
Mineral resource dependency (share of mineral exports in total exports at year of accession)	80%	89%
Size of economy (GDP in 2013, USD)	80 bn	748 bn
Geographic region	Middle East	Middle East
Average GDP growth rate before WTO accession (10 yrs.)	4.21%	3.49%
Dependent variable		
Average GDP growth rate change before and after WTO accession	-0.72%	3.41%

Source: Previous sections of the present thesis.

While the statistical method of testing the causal or correlational relationship between the two countries' level of industrialization at the time of WTO accession and their GDP performance following the accession has provided initial positive answers regarding Hypothesis 1, this relationship needs to be analyzed further by searching for intervening variables that should shed more light on whether the relationship is actually causal or simply correlational through another independent variable that affects both the independent variable and the dependent variable in Hypothesis 1. Thus, searching for an intervening variable will help explore the exact mechanisms of this relationship. This will be the next stage of testing Hypothesis 1.

6.4.1.2. Looking for Intervening Variables: Manufacturing Value Added

Whether and how a country's industrialization level translates into its faster economic growth or more effective economic development following its WTO accession is the question to be answered by looking for intervening variables in Hypothesis 1? In this section an attempt will be made to identify intervening variable(s) that relate the independent variable 1 (X1) with the dependent variable (D), i.e. the level of a country's industrialization and its economic benefits from WTO accession.

Since the approach selected in this thesis is forward-looking, i.e. from the independent variable towards the dependent variable, the author begins the search for intervening variables from the independent variable (X1 or the level of a country's industrialization) and looks at immediate effects that the independent variable may have had on other factors (I-1.1; I-1.2; etc.), under the influence of the WTO accession, that could then pass on their effect on the dependent variable (D or economic benefits).

The first step in assessing that relationship is to determine whether the level of Saudi Arabia's or Oman's industrialization, measured by the UNIDO Competitive Industrial Performance Index above, has affected the growth of Manufactured Value Added (MVA) in the two countries during the years after the WTO accession, or has the MVA share remained at around the same level.

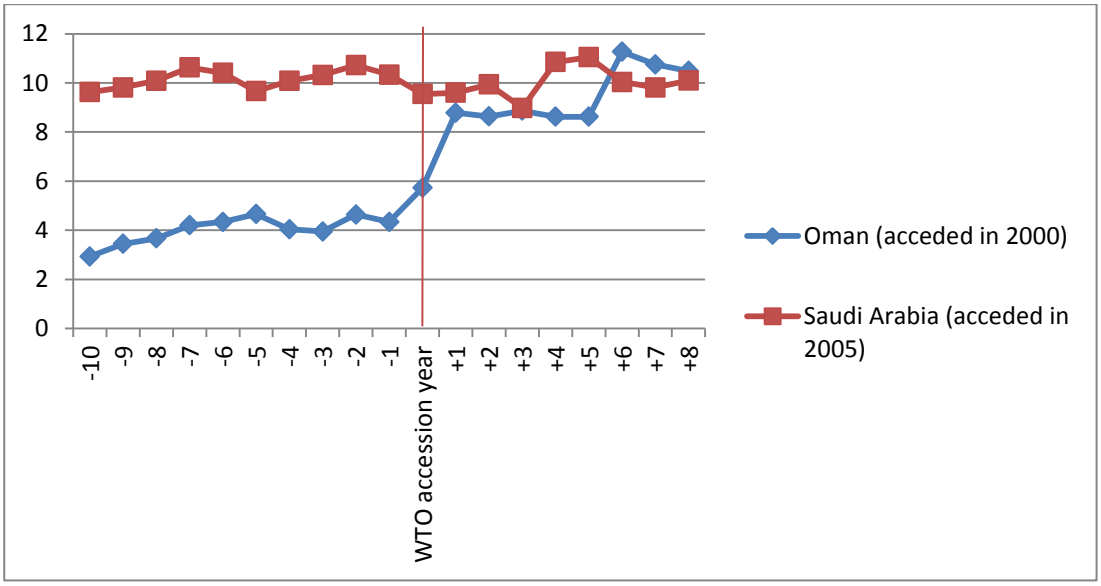
Logically thinking, if Saudi Arabia's CIP index is higher, i.e. it's more industrialized, at the time of WTO accession, the country's MVA should grow faster in the following years, especially with the effect of greater industrial and trade liberalization that the WTO brings. With easier access to international export markets and better conditions for foreign investment attraction, which the WTO provides, Saudi Arabia should have been more successful than Oman in increasing the share of its manufacturing sector in its exports, including through higher MVA share in its GDP.

This line of thinking is also supported by a research conducted by S.M.Shafaeddin, senior economist in charge of macroeconomics and development policies at UNCTAD, in 2005. In his work titled "Trade Liberalization and Economic Reform in Developing Countries: Structural Change or De-Industrialization" Shafaeddin shares outcomes of his statistical observations in a wide range of developing countries during and after their trade liberalization reforms and concludes that for most of them "trade liberalization has led to the development and re-orientation of the industrial sector in accordance with *static comparative advantage*, with the exception of industries that were *near maturity*" (Shafaeddin 2005: 1, script changed to cursive by the author of this thesis).

Saudi Arabia, with the UNIDO CIP index of 0.9, can be qualified as a country with its manufacturing sector 'near maturity', thus should have experienced a structural change towards greater industrialization, i.e. gained *dynamic comparative advantage*, following the implementation of the WTO-driven trade liberalization policies. According to the observation of Shafaeddin, Oman, with the UNIDO CIP index of 0.2, i.e. with the manufacturing sector *not yet close to maturity*, should have continued its industrial development "in accordance with static comparative advantage" (Ibid.) following its WTO accession and the accompanying trade liberalization reforms.

The validity of the above logic can be tested by statistically comparing the MVA growth rates of the two countries, i.e. their MVA share in GDP, during their pre- and post-WTO accession periods:

Figure 7. Oman's and Saudi Arabia's Manufacturing Value Added (% of GDP)

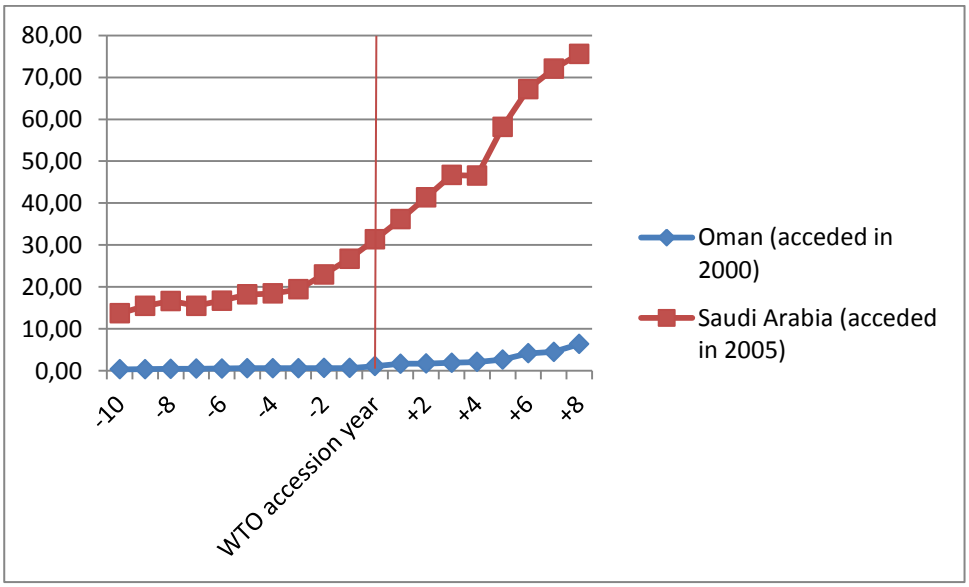


Source: World Bank's World Development Indicators, 2015

Looking at the graph above, which measures MVA of Saudi Arabia and Oman as a share in their GDP, one may get an impression that the relationship between the countries' level of industrialization (IV1) at the time of WTO accession and their further MVA growth is inverse. The MVA share in GDP for Saudi Arabia, which has a higher industrialization level, stays at the same level in Figure 7, i.e. at the level of around 10%, throughout the whole period (1995-2013). It only slightly grew to a level of around 11% during 2008-2009. Whereas, for Oman, the share of its MVA to GDP has started to grow from 1999, i.e. one year before its WTO accession and continued to grow steadily and reach the level of 10% by 2006.

But this if we look at absolute MVA figures for these two countries, measured in either national currencies of these countries or in US dollars, it becomes obvious that the figures of MVA as percentage share in GDP are misleading. This is related with an external factor, another intervening variable one may call it, which is influenced the total GDP base. While, that intervening variable (I-1.2) will be considered later in this section, below in Figure 8, are the MVA figures for Saudi Arabia and Oman for the pre- and post-WTO accession periods:

Figure 8. Oman's and Saudi Arabia's Manufacturing Value Added (in current US$, bn)



Source: World Bank's World Development Indicators, 2015

The MVA growth trends in value terms in this figure are totally different and demonstrate that the MVA for Saudi Arabia has grown significantly starting from a few years before the accession year and rapidly accelerating during the years after the accession. More specifically, Saudi Arabia's MVA in current US dollars increased from USD 13.7bn in 1995 to USD 75.5bn in 2013 (World Bank's World Development Indicators 2015), i.e. 5.5 times, with most of that growth taking place after the WTO accession. Meantime, the rate of Oman's MVA growth has also been significant, i.e. 18-fold from USD 350mln in 1990 to USD 6.4bn in 2008, but it was from a very low base.

In terms of the difference in the values of Saudi Arabia's and Oman's MVA indicators, it was USD 13.35bn ten years prior to their relevant WTO accession years (shown as '-10' on the graph above), then it was USD 30.24bn during their WTO accession years (the level of the red vertical line), and eight years past their WTO accession, the MVA difference was USD 69.15bn. Thus, the MVA difference in value terms between the two countries grew by 5.2 times.

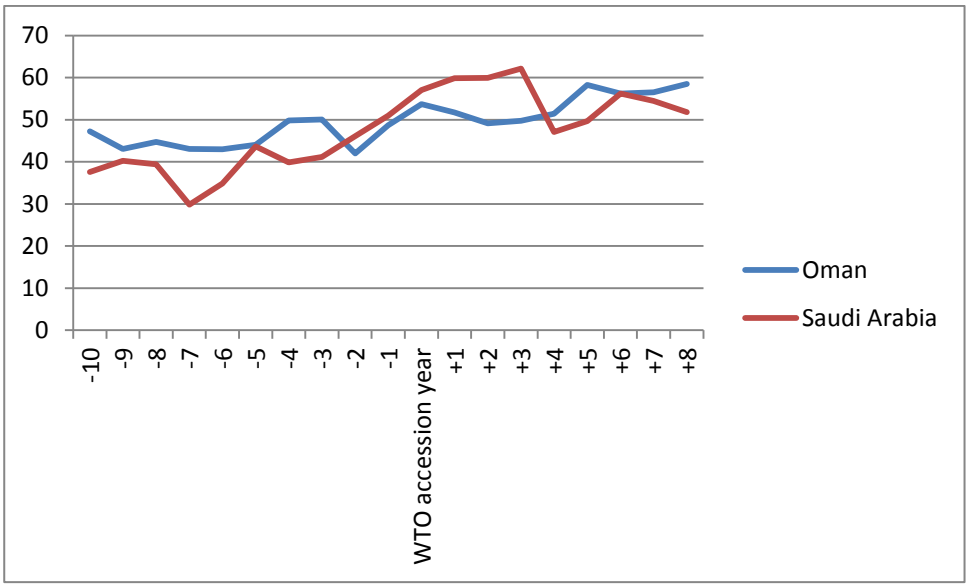
It is obvious that the key factor behind this MVA growth leap for Saudi Arabia, in comparison with Oman, is its higher level of industrialization, which it gained during the years prior to its WTO accession. It is thanks to that level of industrialization that Saudi Arabia's MVA was able to take off even stronger after the WTO accession in 2005. Speaking in terms of Shafaeddin (2005), Saudi Arabia's manufacturing industry was already at the 'near maturity' stage by its accession year, or by the time it launched its trade liberalization reforms, which allowed its economy to gain 'dynamic comparative advantage' and further build on its manufacturing sector. This allowed Saudi Arabia to

overcome to a certain degree the risk of getting stuck in its 'static comparative advantage', which is mainly crude oil exports.

6.4.1.3. Looking for Intervening Variables: Mineral Fuel Exports

But why were the MVA figures as percentage share of GDP so misleading in Figure 7 above? What was that external factor that distorted these figures by having such a great effect on the value of the GDPs of Saudi Arabia and Oman during the analyzed periods? To answer this question, one needs to look at the structure of these countries' GDPs and at how it has changed over the analyzed period. To be more exact, the share of exports of these countries in their GDP structure needs to be analyzed.

Figure 9. Share of Oman's and Saudi Arabia's exports in their GDPs.

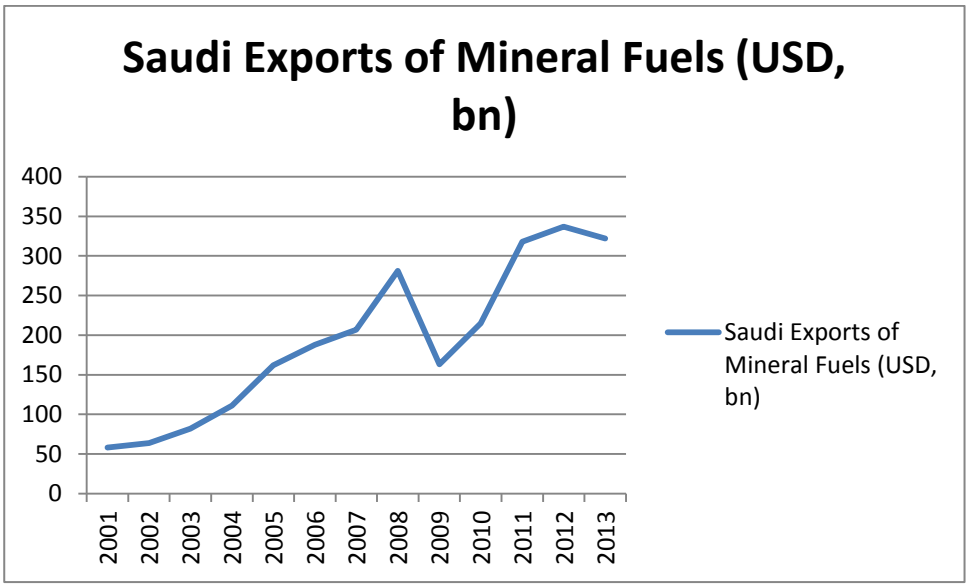


Source: World Bank's World Development Indicators, 2015

It's clearly visible even without specific figures that the share of exports of both countries in their GDP has been steadily growing. This suggests that there may be a commodity or service in the composition of these countries' exports structure, which has been influencing the higher level of exports and the higher share of exports in the GDPs during the analyzed period.

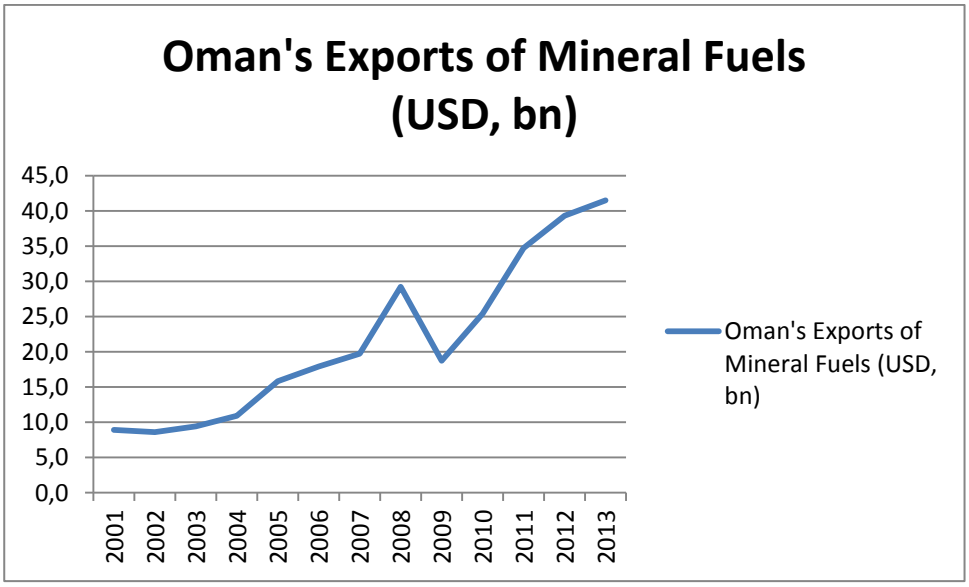
Table 1 shows that both Omani and Saudi exports are heavily dependent on mineral fuels. At their year of accession, the share of mineral fuel exports in total exports comprised 80% and 89% respectively for Oman (acceded in 2000) and Saudi Arabia (acceded in 2005). Thus, it is natural to analyze the two countries' mineral fuel exports during the observed period.

Figure 10. Saudi Arabia's Exports of mineral fuels during 2001-2013.



Source: International Trade Centre, Trade Map Database

Figure 11. Oman's Exports of mineral fuels during 2001-2013.



Source: International Trade Centre, Trade Map Database

Looking at the graphs above, which demonstrate the high pace of growth of mineral fuels exports of both Saudi Arabia and Oman, it becomes obvious why the two countries' share of exports in their GDP rose (see Figure 9) and why their GDP base grew so rapidly during the 2000s as well. This also explains why Figure 7, which demonstrates the two countries MVA as a percentage share of GDP, becomes difficult to interpret, despite the high pace of Saudi Arabia's MVA growth in absolute terms (Figure 8).

Thus, the rapid growth rate of mineral fuels export revenue for Saudi Arabia and Oman during the 2000s intervenes in the analysis of the causal relationship between the independent variable (X1 or the level of a country's industrialization) and the dependent variable (D or economic benefits stemming from WTO accession). Thus, it can be defined as the second intervening variable (I-1.2) in the analysis of Hypothesis 1. Knowing that mineral fuels exports (I-1.2) played such a huge role in the two countries' GDP growth during the 2000s, it would now be virtually impossible to statistically follow the causal relationship between X1 and D. The effect of the level of countries' industrialization (X1) or the effect of the level of the countries' manufacturing value added (I-1.1) over the analyzed period becomes very minor when compared to the effect of such a huge factor as the growth rate of the mineral fuels exports (I-1.2).

6.4.1.4. Qualitative Methods of Testing Hypothesis 1

At this stage of testing Hypothesis 1, the analysis reached a certain milestone, but also encountered the challenge of a strong intervening variable. Further conclusions about Hypothesis 1 need to be made on 'hypothetical' or conditional basis. It's already statistically proven that the positive relationship between the level of industrialization of a country (X1) and the level of Manufacturing Value Added (I-1.1) holds true. This means the effect of the level of industrialization on the so called 'manufacturing sector GDP' is also positive. If one is to remove the intervening variable which so significantly affects the total GDP level, i.e. the high growth rate of mineral fuels exports or I-1.2, from the total GDP picture, then one can assume that the MVA would have a much stronger influence on the total GDP. In this case, the stark contrast between Saudi Arabia's and Oman's MVA levels (Figure 8) would be more demonstratively reflected in the two country's GDP dynamics, i.e. Saudi Arabia's GDP growth rate would be even higher compared to that of Oman, which would prove Hypothesis 1.

Thus, introducing this qualification, i.e. removing the effect of rapidly growing rates of mineral fuels exports in Saudi Arabia and Oman during 2000s from their historical GDP figures, it is possible to conclude that the level of industrialization of these countries at the time of their WTO accession did indeed have a positive effect on their economic benefits stemming from their WTO accession. This causal mechanism happened through the increasing value added in Saudi Arabia's manufacturing sector, thanks to its solid base of industrialization at the time of WTO accession, proven by the UNIDO CIP index of 0.09. The manufacturing sector of Saudi Arabia was able to withstand the trade liberalization which the WTO brought, because it was at the near maturity stage already.

These conclusions are confirmed through reports on the nature of Saudi Arabia's economic development during the years following its WTO accession, including in the manufacturing sector. As is the case in many countries with a strong manufacturing base, the WTO accession brought greater levels of investments and higher employment rates to Saudi Arabia. The country's Trade Policy Review for the years 2005-2011 states:

> *"Growth of real GDP [during 2005-2009] was attributable to the high level of investment, which enhanced productivity in many sectors. The annual growth rate for investments during 2005-09 amounted to about 11.2%, which led the average ratio of investment to real GDP to rise to about 28.1% in 2009, compared to 21.1% in 2005 (WTO: Trade Policy Review Report by The Kingdom of Saudi Arabia, 2011)."*

The growing role of the manufacturing sector in the Trade Policy Review is also underlined: "The contribution of manufacturing to GDP in Saudi Arabia is about 12.7% and it is expected to increase to about 14% by 2014." The value of various newly emerging manufacturing industries and sectors in the Saudi economy, including their role in increasing the employment rate, is obvious from the following excerpt from the Trade Policy Review:

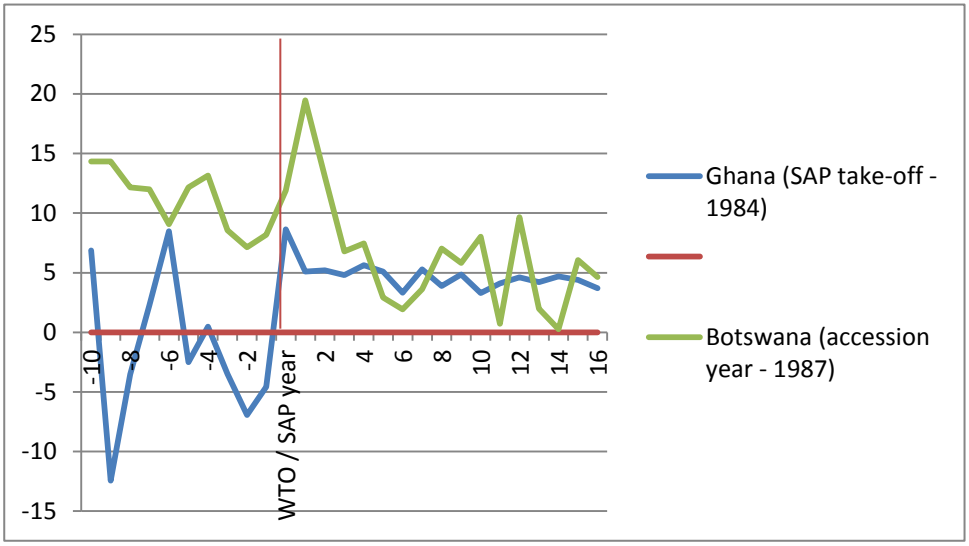
> *"The value added of other manufacturing industries is expected to grow at an average annual rate of 7.6%, compared with 6.8% in 2009. Hence, the Ninth Development Plan forecasts a contribution by these industries to GDP of about 9.2% in 2014. Investment and employment in these industries is expected to grow during the next three years at average annual rates of approximately 15.3% and 0.3% respectively, compared with 6.3% and 0.8% respectively in 2009 (Ibid.)."*

All of the above contributes to greater levels of GDP growth, especially the non-hydrocarbon part of the GDP, which is an important priority of the Saudi government's economic policy. The sound industrialization level achieved by the time the country acceded to the WTO in 2005 is the result of the country's five-year development plans, which have set diversification of the economic base as a key objective for Saudi Arabia's economic and social development. The development plans have "consistently focused on developing and enhancing the role of non-hydrocarbon sectors in the national economy" (Ibid.). This is why "the contribution of non-hydrocarbon sectors has grown in value at an average annual rate of 5.5%, with its share in GDP growing from 51% in 1970 to 73.5% in 2009" (Ibid.).

6.4.2. Testing Hypothesis 2

The second hypothesis that needs to be tested states that "if a country has a centrally coordinated industrialization strategy, then it will reap more economic benefits from WTO accession." Hence the first, most basic, stage of testing Hypothesis 2 statistically is comparing how the two countries GDP performance trends have changed after the WTO accession (or the conditional WTO accession for Ghana). The GDP annual growth trends for Ghana and Botswana have been visualized on the same graph below:

Figure 12. Ghana's and Botswana's annual GDP growth rates before and after the WTO accession (Botswana) or SAP reforms initiation (Ghana).



Source: World Bank's World Development Indicators, 2015

The figure above demonstrates different levels of GDP growth before the WTO accession or the SAP initiation year (the vertical red line). The low and unstable levels of Ghana's GDP during the years prior to the SAP are likely related with the high corruption level and social and political strives in the country (African Economic Outlook: Ghana 2014). Apparently, the SAP reforms, oriented at implementing a free market-based economy in the country had its positive effects on stabilizing the GDP growth rates. The average GDP growth rate in Ghana during the 10 years prior to the SAP program was negative, at -0.61%. But during the following 16 years, the country's GDP growth rate has stabilized and stayed on a pretty good level of 4.75% in average.

Table 5. Ghana's and Botswana's average growth rates before and after WTO accession/SAP launch.

Average GDP growth rates (%)	WTO accession (Botswana, 1987) or SAP launch (Ghana, 1984)		Change in GDP rate
	10 years prior	16 years after	
Ghana's average growth rates	-0,61	4,75	5,36
Botswana's average growth rates	11,17	6,55	-4.62

Source: World Bank's World Development Indicators, 2015

While there're are varying opinions on whether the free-market model or a developmental state model would have worked better for Ghana, the statistical comparison provides evidence that the Structural Adjustment Program, with its free-market reforms, was an effective path of development and had a positive effect on the country's economy.

In the case of Botswana, the boom, which the country had experienced following the discovery of its diamond deposits in 1960s, has decelerated in the 1990s, as demonstrated by the graph above. The average level of GDP growth in Botswana was 11.17% during 1977-1987, which is an impressive figure. It goes down to 6.55% during the 16-year period after that.

While the rate of 6.55% is also a very good indicator, which many other countries would like to have for themselves, a question remains as to the reason for this deceleration in the average GDP growth rate for Botswana, i.e. -4.62%. The matter would need to be explored through qualitative observations and analyses as part of a separate research project.

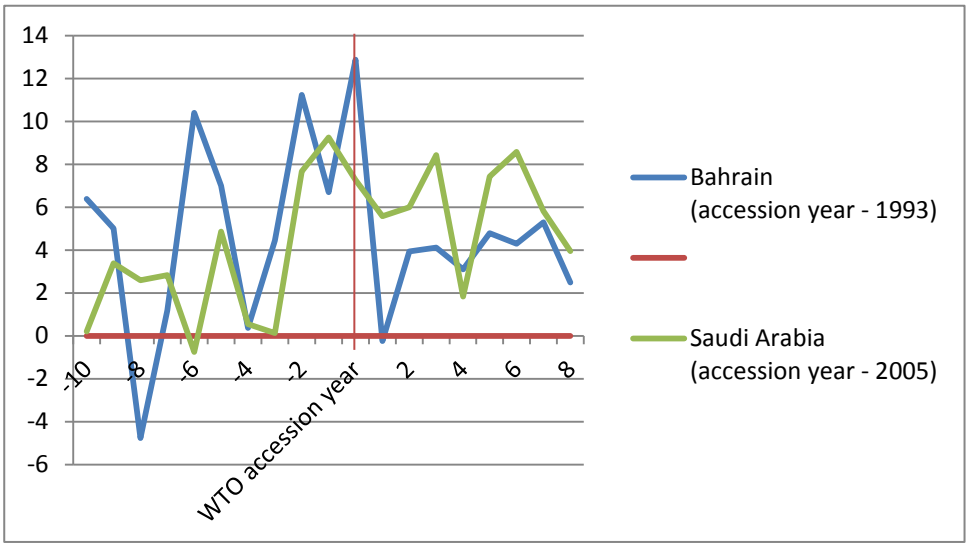
In the meantime, based on the statistical comparisons of Ghana and Botswana, the author concludes that the statement that if a country has a centrally coordinated industrialization strategy, then it will reap more economic benefits from WTO accession *cannot be proven*. Ghana, whose government largely abandoned its interventionist policies after the conditional WTO accession in 1984, actually experienced higher GDP growth rates. At the same time, Botswana, whose government continued its developmental approach and policies with high levels of intervention in its industrial and trade policies after the WTO accession in 1987, could not accelerate its economic growth, but instead faced slower growth rates.

6.4.3. Testing Hypothesis 3

6.4.3.1. Statistical Comparative Analysis

To test the hypothesis which states that 'the earlier a country accedes to WTO, the more economic benefits it will gain from the accession', using the cases of Bahrain and Saudi Arabia, it is again necessary to compare the statistical indicators of the two countries, i.e. the annual GDP growth rates before and after the WTO accession (or GATT joining in the case of Bahrain). That will allow us to see whether the change in the average annual GDP growth rates was positive or negative in the case of each country and thus draw initial conclusions as to whether the hypothesis tests positively or negatively.

Figure 13. Bahrain's and Saudi Arabia's annual GDP growth rates before and after WTO accession.



Source: World Bank's World Development Indicators, 2015

According to Figure 13, the GDP trend changes more positively for Saudi Arabia after its accession to the WTO. For Bahrain, the trend goes down sharply in the next year after its GATT accession and then stays approximately at the level of 4-5%. To quantify these trends using specific numbers, one needs to look at the exact averaged GDP growth rates for the two periods:

Table 6. Bahrain's and Saudi Arabia's average GDP growth rates before and after WTO accession.

Average annual GDP growth rates	WTO accession		Change in GDP rate
	10 years prior	8 years after	8 years after
Bahrain's average growth rate	5,53	5,08	-0,45
Saudi Arabia's average growth rate	3,45	6,86	3,41

Source: World Bank's World Development Indicators, 2015

The average GDP growth rate for Bahrain, which acceded to GATT/WTO in 1993, has actually slightly gone down from 5.53% prior to the accession to 5.08% during the eight years following the GATT joining. This marks a negative trend of -0.45%. At the same time, the trend for Saudi Arabia, which acceded later, i.e. in 2005, was much more positive. Its average GDP growth rate has increased twofold from 3.45% during the decade before the WTO accession to 6.86% during the period following the WTO accession, which is a significant increase of 3.41%.

This observation is not consistent with the third hypothesis, in fact, it goes against it, which leads to a conclusion that the time, i.e. the earliness or lateness, of WTO accession probably does not play a major role in an acceding country's ability to yield economic benefits from the accession. The qualitative analysis of the results of the statistical exercise should help shed more light on the causal mechanism between the lateness of accession and economic benefits, if any. Another possible outcome of the further qualitative analysis is the identification of other intervening variables that have a stronger influence on a country's ability to yield economic benefits from a WTO accession. While, this kind of a thorough qualitative analysis would need to be a subject of a separate research project, the author will attempt to briefly provide some explanatory factors related with yielding benefits from earliness or lateness of acceding to the WTO.

6.4.3.2. Some Explanatory Factors

First of all, the earlier sections of the present thesis shed light on at least one qualification behind the statistical outcomes in Figure 13 above. One hugely important intervening variable affecting the case of Saudi Arabia is its increased mineral fuels exports during the 2000s (see Figure 10). This in itself is a factor much stronger than any possible, likely fragmental, gains from the timing of a country's WTO accession. That is why it becomes problematic to analyze Hypothesis 3 statistically, or even qualitatively, using the example of Saudi Arabia. For that matter, it is very likely that any country's case would have similar challenges, i.e. factors that would have greater influence on the

types of economic benefits a country can have compared to the timing of its WTO accession. This is related with the vast number of different factors – economic, political, social – which affect gains or losses in economic welfare of a country or community.

That is why in further qualitative studies of benefits or costs of the earliness or lateness of a country's WTO accession, the issue of methodology and operationalization needs to be well thought through. The statistical comparative analysis above was intentionally done using a rather simple methodology just to launch the debate around late-joiners' economic losses, compared to the early-joiners.

One way to possibly quantify gains/losses from the timing of WTO accession is assessing the extended duration of WTO accession processes that 'late-joiners' have to go through. It is widely accepted that the lateness of WTO application influences not only the burdensome nature of the accession process, but also the number of commitments the acceding country has to be undertake (Evenett and Braga 2006; also see Chapter 2 above on WTO accession). All that might be quantified at least through various administrative costs of the institutions and officials involved in the accession process on behalf of the acceding country.

But judging by the outcome of the statistical comparison above there is not directly significant economic effect of the timing of a WTO accession on the country's economy. Rather on the policy-level the acceding governments' focus should be more on the core benefits or costs of the WTO accession, i.e. those related with the opening up of export markets, attraction of more foreign investments, increasing the domestic industry's competitiveness, etc.

Chapter 7. Research Results

In answering the research question "Under which conditions is it economically beneficial for a resource-exporting developing country to accede to the WTO?", the author worked with three hypotheses. The results of the comparative statistical testing of the hypotheses are illustrated in Table 7 below.

Thus, one out of three hypotheses tested positively. It would now be the right time for the academic/peer community to review and critique the methodological and logical grounding of the testing process. Perhaps, once comments are received on possible flaws of the present research, the

methodology could be further fine-tuned to conduct a new research around the same research question.

In the meantime, the hypothesis can serve as a preliminary guidance for country which are considering a WTO accession or are in the process of accession. These countries could factor in the advantage of their early industrialization for their ability to reap greater economic benefits once trade liberalization is launched as part of acceding to the WTO.

As for Hypotheses 2 and 3, they should not be totally abandoned only because they tested negatively as part of the present research. The ideas proposed as part of these hypotheses can be further explored, perhaps, through a more elaborate methodology. One possible way to improve the methodology could be to identify a dependent variable that is in a more direct causal relationship with the independent variables. This means, the quantifiability of that dependent variable may need to be sacrificed, but this approach has its merits. The present research aimed at focusing on solely economic benefits of acceding to the WTO and on quantifying those benefits.

Table 7: Causal relationships between independent variables and the dependent variable in three hypotheses

Hypothesis	Independent Variable	Case A	Case B	Dependent variable (D)	Result
1) "The more industrialized a country is, the more economic benefits it reaps from the WTO accession"	Level of Industrialization (X1)	**Saudi Arabia**: higher level of industrialization causes economic growth after WTO accession through greater value added in the manufacturing sector (+)	**Oman**: lower level of industrialization does not cause economic growth as much as Case A (-)	Economic benefits (GDP and Manufacturing Value Added)	Hypothesis 1 tested positively, but intervening variable of high revenues from mineral fuels exports in both countries prevents revealing a clearer statistical causation between X1 and D.
2) "If a country has a centrally coordinated industrialization strategy, then it will reap more economic benefits from WTO accession."	Central economic/ industrialization strategy in place	**Botswana**: practice of central economic development planning by the government does not cause greater economic growth after WTO accession (-)	**Ghana**: absence of central economic development planning by the government correlated with greater economic growth (+)	Greater economic growth	Hypothesis 2 did NOT test positively.
3) "The earlier a country accedes to WTO, the more economic benefits it will gain from the accession."	Earliness of WTO accession	**Saudi Arabia**: Lateness in joining the WTO does not case fewer economic benefits (-)	**Bahrain:** Earliness in joining the WTO does not cause greater economic growth (+)	Greater economic growth	Hypothesis 3 did NOT test positively.

Chapter 8. Conclusion

The present thesis analyzed three hypotheses which were developed around the research question of "Under which conditions is it economically beneficial for a resource-exporting developing country to accede to the WTO?" Three hypotheses were developed and analyzed, each representing one condition which affects the level of economic benefits countries' can gain from WTO accession.

Specifically, the conditions were (1) the level of a country's industrialization, (2) central government coordination of economic policies, and (3) the lateness of a country's accession to the WTO. Three pairs of cases were selected for testing the three hypotheses, according to the most similar systems design approach. The selected countries were from among developing, resource-rich countries to more specifically answer the research question. The method of comparing statistical indicators for the selected pairs of countries for the periods of approximately 10 years before and after their WTO accession was selected. This helps trace the effect of the varying independent variables (the three conditions listed above) on the dependent variable (economic benefits stemming from WTO accession) in each of the hypotheses. The case of Turkmenistan, which has not yet applied for the WTO, but considers acceding, has been identified as a country representing a class of countries which could potentially benefit from the findings of the present research.

One of the three hypotheses, namely the first one on the level of a country's industrialization, tested positively. This means that there is now stronger evidence for countries to implement the strategic industrialization approach, in order to expand their manufacturing capabilities before they are faced with the immediate need to liberalize their economies and trade policies as part of their WTO accession commitments.

While this thesis researched the conditions (independent variables) that affect the efficacy of WTO accession (essentially, the dependent variable) and the causal mechanisms, further research can analyze in greater detail whether the independent variables can be influenced or not, particularly the one that tested positively.

On a practical level, policy-makers and other stakeholders should aim at changing the current state of the conditions that affect the WTO accession outcomes. So, further policy of the national government and/or the industry can focus on working with those conditions. For example, the industrialization strategy is something the central government and other stakeholders can work on and use to gain

more benefits from the accession to the WTO. The structure of a country's economy, including its dependency on the exports of a specific commodity, can be changed, but would require a long period of time, so the process needs to start as soon as possible, if it hasn't started already.

These very conclusions are very relevant and timely for Turkmenistan, as the country develops and implements its industrialization strategy. Developing export-oriented industries would help gain greater benefits from the opening up of export markets. The country should aim at reaching near-maturity level in its industrialization, so that when the actual trade liberalization reforms are introduced under the aegis of WTO accession, the static comparative advantage can move towards a dynamic comparative advantage. This would increase the value added in the manufacturing sector of the economy and contribute to greater economic growth.

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