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Afghanistan's WTO accession: Costs, benefits and post-accession challenges

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**Afghanistan's WTO
Accession: Costs, Benefits
and Post-accession
Challenges**



Ahmad Shah Mobariz

ASIA-PACIFIC RESEARCH AND TRAINING NETWORK ON TRADE

Working Paper

NO. 147 | 2015

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Abstract

The paper undertakes a cost-benefit analysis of Afghanistan's accession to the WTO while attempting to shed light on the post-WTO accession challenges. For our empirical analysis we have applied the WITS/SMART model to assess the implication of the WTO membership. A cut in tariffs is the independent variable and government revenue, trade creation, consumer welfare and general welfare of the economy are dependent variables. The results indicate that Afghan consumers stand to benefit from tariff reforms with overall positive welfare gains to the economy. However, reduced tariff rates will lead to a fall in government revenue and a substantial increase in imports, subsequently raising concerns over negative trade balances. The final section of this paper studies the post-accession challenges with a particular focus on development, institutional, legal and environmental issues. Our analysis, based on the sectoral mix of Afghanistan's economy suggests that producers will lose out. The findings of this study support the position that Afghanistan should maintain the maximum policy space in order to achieve its long-term development goals.

JEL classification: F130, F170

Keywords: Liberalization, WTO Accession, Afghanistan Economy, Policy Space, Accession Challenges

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Introduction

Having completed the bulk of the accession formalities¹, Afghanistan is scheduled to become the 35th Least Developed Country (LDC)² member of the WTO. Afghanistan is a landlocked country, strategically located at the heart of the Silk Road³, which even today can serve as the "trade and transit hub" of Central Asia and South Asia⁴. Sustainable economic growth cannot be achieved without broader integration into the world economy. The Afghanistan National Development Strategy (ANDS) explicitly recognizes the role of trade for economic development and highlights Afghanistan's integration into the world economy as one of the key development goals for which membership to the WTO is an essential step (ANDS, 2008). Economic Growth and Poverty Reduction are the core objectives of ANDS⁵, which places great emphasis on a free market and private sector-led economy.

With the belief that the WTO will foster economic growth through increased exports and attraction of foreign direct investment (FDI), Afghanistan applied for WTO membership. Almost all trading partners of Afghanistan within SAARC, Central Asia and West Asia are either WTO members or are in the process of accession. The WTO membership thus gives Afghanistan a greater chance for fair trade through dispute settlement mechanisms at the WTO (MoCI, 2012). However, Afghanistan's WTO accession will require extensive reforms to its rules and regulations in order to be compatible with the multilateral trade regime under the WTO. These compliance requirements itself pose a real challenge to a least developed country like Afghanistan. Keeping in view the development objectives of the Afghan government, this paper undertakes a cost benefit analysis of Afghanistan's accession to the WTO and assesses the challenges for post-accession. The objective is to identify key sectors of the economy where policy space needs to be preserved to address future development challenges. Furthermore, the study provides an ex-ante and ex-post assessment of Afghanistan's

¹ The fourth meeting of the Working Party was held on 25 July 2013 in which Afghanistan was urged to resolve outstanding technical issues, enact the few outstanding draft laws and conclude remaining bilateral negotiations to ensure that it remains on track to complete its accession process at the Ninth Ministerial Conference (MC9) in Bali.

² There are 44 countries recognized as LDC by the UN, of which 34 countries are member of the WTO. Eight LDCs including Afghanistan, Bhutan, Comoros, Equatorial Guinea, Ethiopia, Liberia, Sao Tome & Principe and Sudan are currently negotiating for the WTO membership. Yemen is the recent LDC member of the WTO.

³ The Silk Road was a network of trade routes that linked cities, trading posts, hostels and caravan-watering places. It was most active from about 300 BC to 200 AD and extended between the Eastern Roman frontier in the Middle East to the Chinese frontier, with other paths going north through Afghanistan from the Indian Ocean to the Siberian Steppe.

⁴ Afghanistan representative presentation to WTO, 2012.

⁵ For details the reader can refer to ANDS Preamble.

accession to the WTO. The cost and benefit analysis in this study is a pre-accession simulation, while in a separate section we study the post-accession challenges.

The study is structured as follows: the second section of the paper presents an overview of trade and an economic profile of Afghanistan; the third section briefly presents the WTO accession process of Afghanistan; and the fourth section is devoted to the empirical part of the study which undertakes simulation of cost and benefits of WTO accession in terms of consumer and welfare gain and implication on government revenue. This will allow us to identify sensitive sectors of the economy. In section five, the post-accession challenges are briefly discussed. The final section of the paper concludes by presenting all major findings and their implications.

1. Economic and trade profile of Afghanistan

1.1. Afghanistan economy: A general overview

Afghanistan, a landlocked, war-torn and aid-dependent economy, covers 652,864 square kilometres and has a population of approximately 30 million. Roughly 75% of the population live in rural areas (AISA, 2013), and are primarily involved in the country's agrarian economy (World Bank; 2013). GDP per capita amounted to \$687 in 2012. Real GDP growth for the same period was 9.2% and the inflation rate was 6.4% (CSO, 2013). In 2012, the country's agricultural produce contributed 24.6% to its GDP. Industry is at a very early stage and mostly run at a small scale. The industrial produce of the country includes textiles, soap, furniture, shoes, fertilizers, leather, non-alcoholic drinks, cement, carpet and natural gas. The country's industrial products are mainly manufactured for domestic consumption and do not play a large role in Afghanistan's export revenues. According to the United Nations' classification of countries, Afghanistan is one of the poorest countries in the world and is classified both as a Least Developed Country (LDC)⁶ and a Land-locked Developing Country (LLDC). Measures like the Human Development Index (HDI) places Afghanistan at a very low level of human development when measured in terms of health, education and living standards. These measures reflect the results of decades of conflict which has destroyed much of the agricultural and industrial capacity of the country.

⁶ The least developed countries (LDCs) are a group of countries that have been classified by the UN as "least developed" in terms of their low gross national income (GNI), their weak human assets and their high degree of economic vulnerability (Source: UN).

Table 1.1: The structure of the Afghan economy, 2012

Indicator	Value/Percentage
Population	29.82 Million
GDP	20.5 billion
GDP per Capita	687 USD
GDP growth	14.40%
Inflation	7.20%
Imports of goods and services as percentage of GDP	39.20%
Exports as percentage of GDP	5.50%
Current account gap	7.5 billion USD
Services as percentage of GDP	53.5
Trade in services	25.90%
Agriculture value added as percentage of GDP	24.60%
Industry as a percentage of GDP (2011)	22.50%

Source: World Bank (2013).

Since international forces intervened and toppled the government in 2001, Afghanistan has seen several years of economic growth. Despite Afghanistan's recent positive economic achievements, current estimates place 42% of the population below the national poverty line. The following World Bank sectoral analysis sheds light on the Afghan economy and provides further insights into the dynamics and position of its international trade.

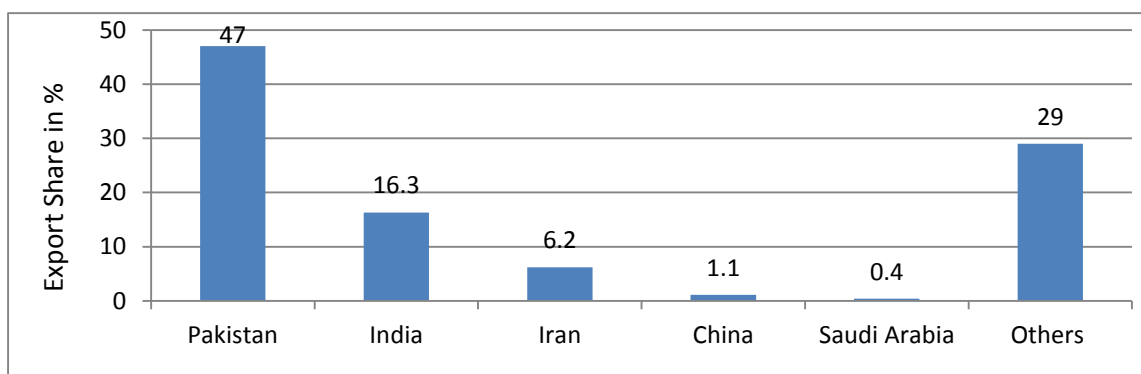
1.2. Exports and imports

As of 2011, the export-import ratio of Afghanistan was 20% (as per World Bank data calculation). Major exports consist of dried fruits, saffron, fresh fruits, rags, leather and precious stones, which are exported to country's including Pakistan, India, United Arab Emirates, Kazakhstan, Uzbekistan and several other countries. The country's import portfolio covers a wide range of products including food, industrial products, automobiles, heavy machines and energy. Since its establishment in 2002, the government of Afghanistan has understood the importance of trade with its neighbouring countries and has tried to integrate with them through membership in regional organizations, for example the South Asian Association for Regional Cooperation (SAARC).

Through SAARC Afghanistan already has trade agreement (SAFTA) with most of its major trading partners, but it has not yet been able to capture a significant share in these markets for its export products. Under SAFTA, tariffs are to be lowered: the Non-Least Developed Contracting States (NLDCS) such as India, Pakistan and Sri Lanka and the other five Least Developed Contracting States (LDCs) including Afghanistan will bring down their tariffs on average to 20% and 30% respectively⁷. In addition to this, Afghanistan has signed a Preferential Trade Agreement (PTA) with India, under which it agrees to reduce its tariffs for essential goods including tea, medicines, sugar and cement imported from India.

The total value of the country's exports amounted to 370 million United States dollars in 2012, contributing to a meagre share of the world exports, at 0.03%. 86% of total export earnings were from agricultural products, while 14% was from manufactured commodities. Pakistan, India, Iran, Saudi Arabia, Russia and the European Union are Afghanistan's major export destinations (figure 1.1). As previously mentioned, Afghanistan is a net importer sourcing almost everything from abroad, including heavy machinery, automobiles, and technology to textiles and food. Afghanistan's major suppliers include Pakistan, China, Japan, Iran, India, and the European Union (figure 1.2).

Figure 1.1: Afghanistan's export destinations, 2012

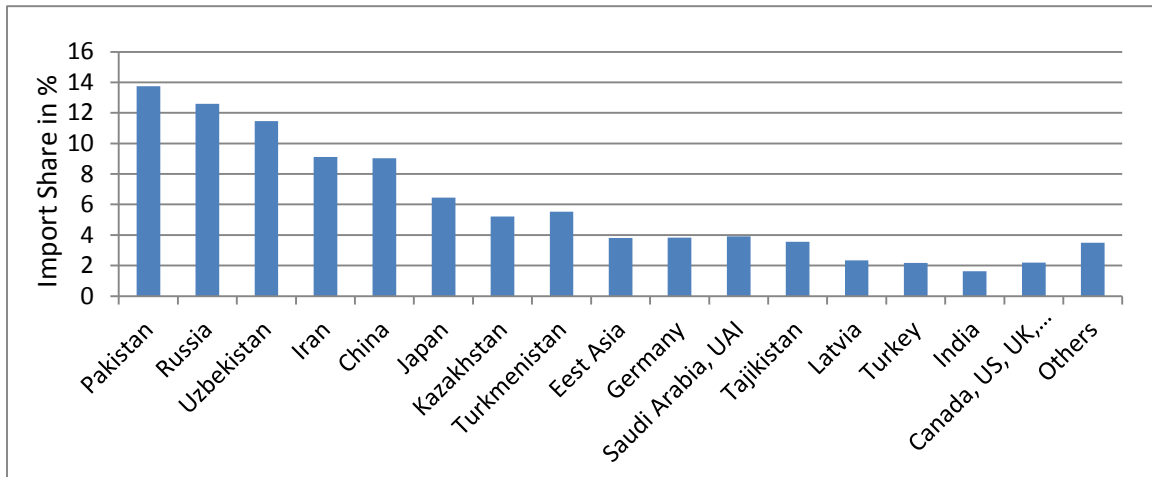


Source: WTO, CSO (2012).

SAARC countries alone make up 60% of Afghanistan's export markets (ADB, 2012) and Afghanistan imports 30% of its requirements from SAARC countries. The Afghanistan-SAARC trade intensity index has declined, yet trade growth between the regions have been fluctuating.

⁷ Article 7 of the SAFTA Agreement.

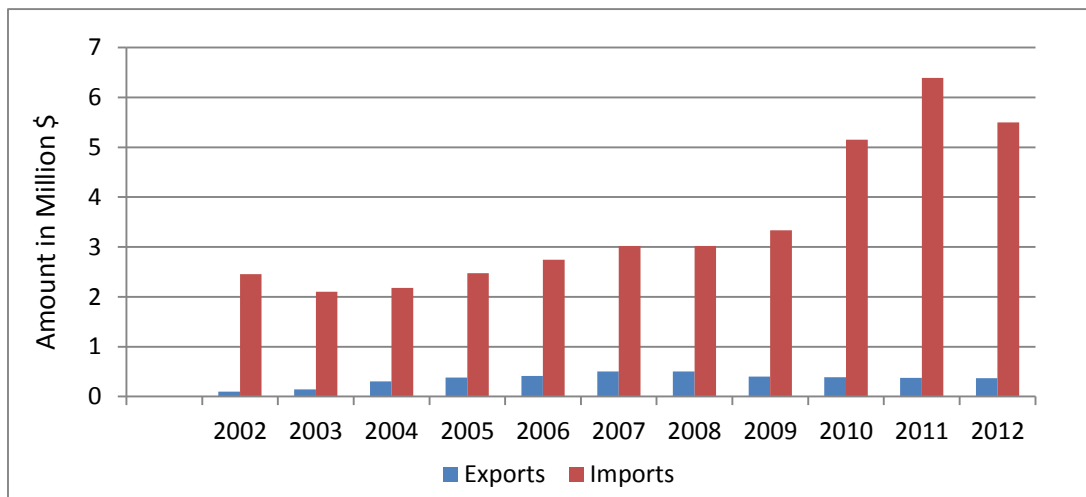
Figure 1.2: Major suppliers to Afghanistan, 2012



Source: WTO, CSO (2012).

As shown in figure 1.3, Afghanistan has consistently had a large export-import gap. Over the past few years Afghanistan has increased its imports, yet exports remained relatively constant, subsequently increasing this trade gap (figure 1.3).

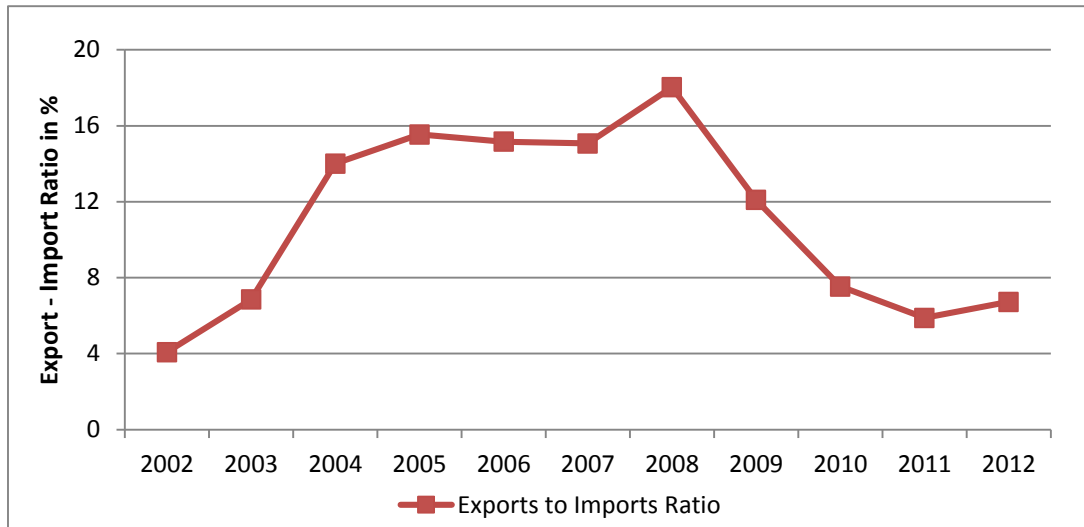
Figure 1.3: Afghanistan's imports and exports



Source: CSO (2012).

Afghanistan's Export-Import Ratio has always been below 20 percent. In 2002, when the country was recovering from conflict and foreign aid started flowing into the country, the ratio was approximately 4 percent. The following years saw a steady increase until it reached its peak in 2008 with a ratio of 18 percent. Following this peak in 2008, Afghanistan's export-import ratio declined to 6.8 percent in 2012. Figure 1.4 illustrates Afghanistan historical export to import ratios.

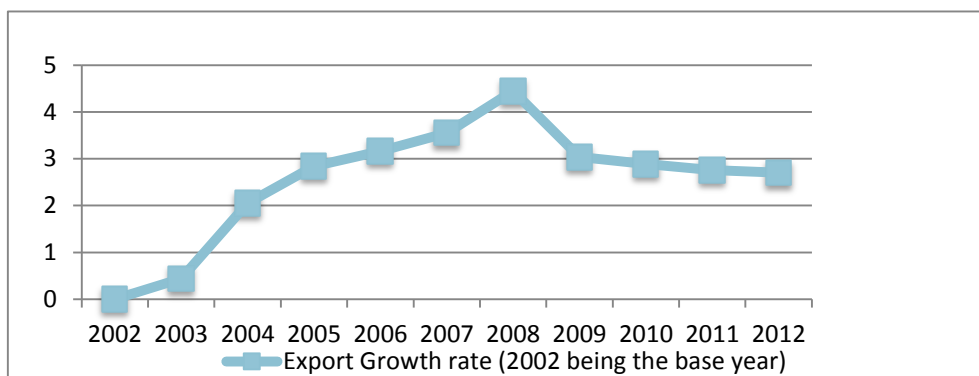
Figure 1.4: Export-import ratio Afghanistan, 2002-2012



Source: WTO website (2012).

Afghanistan's export growth rate has been relatively slow. If we take 2002 as the base year for the country's export performance, the data indicates that the country's growth was relatively stable until 2008 (4% growth in comparison to 2002) and then steadily declined to 2 percent in 2012. The average growth rate of exports for this period was approximately 2.78 percent per year. The following figure shows Afghanistan's export growth trend. One of the fundamental reasons for exports lagging behind imports is the fact that the country heavily relies on foreign aid. Aid-funded projects are major contributors to the country's imports such as machinery and oil. The fiscal gap in 2007-08 was 70%, which declined to 34% in 2012 and has been financed by aid throughout.

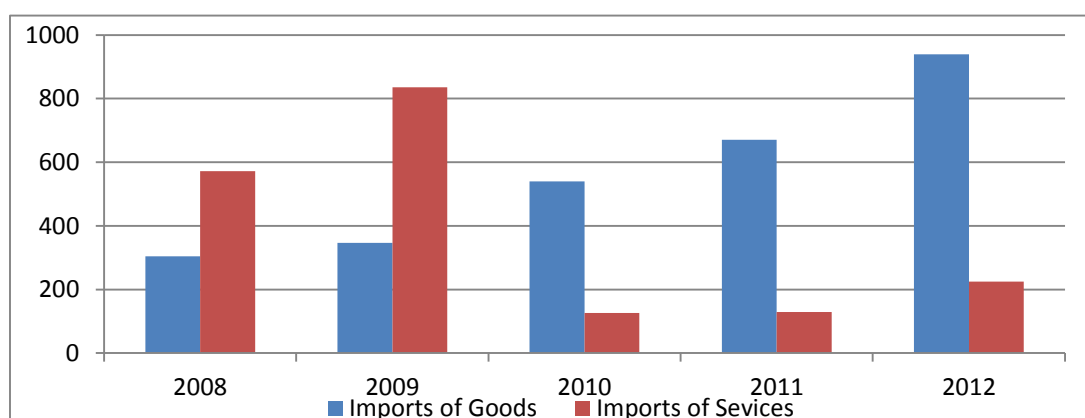
Figure 1.5: Export growth rate, 2002-2012



Source: CSO and MOCI (2012).

Imports of goods and services in Afghanistan changes depending on the circumstances, for instance prior to 2008, due to a lack of capacity, the country had to avail of foreign consultancy services in many sectors related to public management, and therefore the share of services is more than that of goods. While later on services imports declined and the imports of goods increased (figure 1.6). The services sector has considerable potential, and could attract significant FDI, especially if Afghanistan accedes to the WTO and reduces its charges for the foreign businesses in services.

Figure 1.6: Imports of goods and services (100 million USD)



Source: World Bank (2013).

1.3. Tariff profile of Afghanistan

Since the inception of the post-Taliban regime in Afghanistan, the government has maintained as low as possible tariff rates in order to keep goods and services affordable and accessible to consumers. The tariff structure maintained by the Afghanistan National Tariff Schedule (ANTS) is based on a Harmonized Commodity Description and Coding System (HS 2012), where the tariff rates consist of 14 tariff bands which range from 0 to 50% (table 1.2).

Table 1.2: Afghanistan's tariff structure, 2012

Serial No	Tariff Band	No of Tariff Lines	Share in Total
1	0%	27	0.50
2	1%	83	1.54
3	2.5%	1510	28.11
4	3.5%	10	0.18

5	5%	2255	41.98
6	8%	28	0.52
7	10%	1123	20.90
8	12%	4	0.07
9	16%	207	3.85
10	20%	21	0.39
11	25%	38	0.70
12	35%	4	0.07
13	40%	9	0.16
14	50%	4	0.07
15	Prohibited	48	0.89
I.	Total	5471	100

Source: WTO working part report (2012).

Prohibited goods include goods which are illegal as per the constitution of the country, e.g. alcoholic drinks, pork, narcotics, etc. Vehicles and salt are commodities which fall within the highest tariff band (35%-50%), followed by furniture, fruits, nuts, processed marbles and carpets (25%). Apart from tariff regulations, goods are also subject to import tax, which range from 2 to 3% and are levied on all imports.

Currently the tariff structure provided for legal documents include the following provisions:

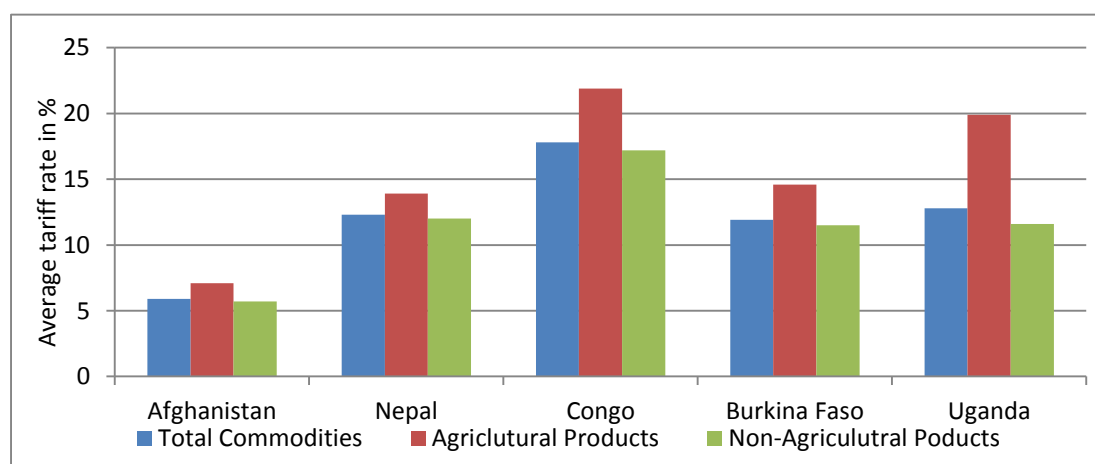
- Ad valorem tariffs (presently applied);
- Specific duties, charged as a fixed amount per quantity;
- A combination of ad valorem tariffs and specific tariff rates;
- Preferential tariff rates (only for some goods imported from India in line with the Indo-Afghan Preferential Trade Agreement (PTA))

Customs valuation is done on the basis of Article VII of GATT. Valuation is based on the transaction value of the goods subject to adjustments due to the inclusion of the cost insurance and freight charges. There are no VAT and excise duty taxes applicable at the customs stations. Afghanistan's tariffs are one of the lowest among LDCs for most commodities (World Bank, 2010; for details of MFN applied tariff rates in 2012 refer to appendix I). The tariff structure is slightly progressive and according to the 2008 National Risk Vulnerability Assessment (NRVA) wealthier groups tend to pay higher duties for their imports. Notably, richer households in Afghanistan consume a larger share of services, thus, when including services to the basket of goods, the impact turns from progressive to regressive. In 2010 the average tariff rate in Afghanistan was lower than rates in similar LDCs in South Asia (13.5%), Afghanistan's maximum tariff band is 25% (World Bank, 2012). The tables in appendix I illustrate the existing tariff (weighted tariff) structures of Afghanistan as per WTO calculations.

1.4. Afghanistan's tariffs in comparison to other LDCs

Though Afghanistan is not yet a member of the WTO, the applied tariffs of the country is still lower than many of the WTOs current LDCs. This is evident from figure 2.8, which compares the simple average MFN rates of a few selected LDCs. The figure shows that among the five LDC members of WTO, Afghanistan has the lowest tariffs for both agricultural and non-agricultural products. In 2012 the MFN rate Afghanistan applied was below 5% which covered 73.8% of the non-agricultural imports and 60.2% of the agriculture imports, while 15.6% of agriculture imports and 2.7% percent of the non-agriculture imports were tariffed between 15 and 25% (please refer to appendix I for further details). For the same year a maximum tariff rate of 50% was applied to transport equipment.

Figure 1.8: Simple average applied MFN rates between five LDCs, 2012



Source: WTO website (2013).

2. Afghanistan's accession process to the WTO

This section briefly discusses Afghanistan's accession to the WTO. Afghanistan applied for WTO accession in 2004 with the following objectives⁸:

- a) Secure stable and non-discriminatory access for Afghan exports
- b) Control over unfair treatment of Afghanistan's goods and services in foreign markets
- c) Secure non-discriminatory transit for Afghanistan's exports
- d) Modernization of the economy
- e) Enhance economic growth and development
- f) Increase fiscal revenue
- g) Good governance, enhancement of the rule of law and transparency in the system

A Working Party was established in 2004, but the accession process was very slow and sluggish. However, viewing table 2.3, one can see that Afghanistan has made significant progress since the beginning of 2009 by completing the bulk of accession negotiations, both in multilateral and bilateral tracks. To initiate discussions within the framework of the working party, on March 31, 2009 Afghanistan submitted the 'Memorandum on the Foreign Trade Regime' (MFTR) delineating its current policies and laws related to trade in goods, services, intellectual property, and government procurement (WTO, 2009). Accession negotiations accelerated since the first working party meeting that was held in 2010. Afghanistan was actively engaged in the negotiations, whilst answering a range of questions which it received from Canada, EU, and US regarding their trade and investment framework for September 2012.

Table 2.3: Afghanistan's WTO accession process

1.	Application received	21 November 2004
2.	Working party established	13 December 2004
3.	Memorandum of Foreign Trade Regime (MFTR) submitted	31 March 2009
4.	Replies to the questions raised	26 July 2010
5.	Meetings of the working party	31 January 2011 18 June 2012

⁸ These objectives has been highlighted in Afghanistan's first application and reiterated in various presentations made by Afghan delegates.

7 December 2012

25 July 2013

Other documentation

6.

(a) Additional questions & replies

19 November 2012

31 October 2012

10 April 2013

7 June 2013

27 June 2013

2 July 2013

(b) Information on agriculture ([WT/ACC/4](#))

29 October 2012

(c) Information on services ([WT/ACC/5](#))

(d) SPS/TBT checklists ([WT/ACC/8](#))

6 February 2012 (SPS)

26 April 2012 (TBT)

7 June 2012 (SPS)

(e) TRIPS checklist ([WT/ACC/9](#))

28 October 2011

19 November 2012

(f) Legislative action plan

28 October 2011

6 June 2012

5 December 2012

15 July 2013

Market access negotiations

7.

Goods offer

14 November 2012

(a) initial

(b) latest

Services Offer

13 June 2012

(a) initial

(b) latest

Factual summary	
8.	3 May 2012
Elements of a draft working party report	
9.	9 November 2012
	14 November 2012
Draft working party report	
	24 June 2013

Source: WTO website (2013).

In June 2011 Afghanistan launched service negotiations and submitted the goods offer during the first week of October 2012, and started facilitating bilateral negotiations on goods at the end of 2012 (WTO, 2013). At the fourth meeting of the Working Party on 25 July 2013, WTO members commended Afghanistan for its strong commitment matched by its technical inputs to advance its WTO accession negotiations to closure (WTO, Dec 2013). At the agriculture plurilateral negotiations, chaired by the WTO Secretariat on 25 July, members welcomed Afghanistan's commitment to bind export subsidies at zero and also welcomed the fact that its domestic support was concentrated in the "Green Box" (i.e. domestic support for agriculture that is allowed without limits because it does not distort trade, or at most causes minimal distortion) (WTO, 2013). Afghanistan's accession is expected to be approved in the year 2014 (MoCI, 2014).

3. Cost-benefit analysis

3.1. Literature review

Globalization is a fact of our time and integration to the global economy is considered one of the preconditions for economic development. In the meantime the WTO is considered to be the only universal governing institution which facilitates the development of trade-related institutions, regulatory frameworks and builds capacity of the private sector in domestic economies to benefit from the fruits of liberalization. The WTO promotes that we are all consumers, the price paid for food; clothing and other necessities of life are affected by trade policies. Protectionism is expensive and raises prices, and according to the WTO "The WTO's global system lowers trade barriers through negotiation and applies the principle of non-discrimination. The result is reduced costs of production (because imported inputs used in production are cheaper) and reduced prices of finished goods and services, and ultimately a lower cost of living". Furthermore, the WTO stipulates that WTO-based trading systems promote rule-based trading through dispute settlement mechanisms under the WTO, enhances efficiency, improves good governance, reduces cost of living and speeds up economic growth. However, there is a large body of literature evaluating costs and benefits and of WTO membership. Some authors have looked at net benefits from WTO accession

rather than segregating the implications in terms of cost and benefits of different sectors. Other studies are country specific, showing that a significant policy space is lost during the undertaking of WTO commitment, despite a range of benefits that countries stand to gain from integrating into the world economy.

According to one study, net benefits from accession seems strictly positive (Kym Anderson, 1998). This strong assertion on the net benefit of WTO accession implies that whatever the cost might be, the positive effect thereof can generate sufficient welfare for the economy. This notion of cost-benefit disregards the sectoral mix of the economy, and believes that as long as the loss of one sector is more than compensated by a gain in the other sectors, the economy is at a better position and there is a Pareto improvement. Institutional reform after WTO accession is another very important factor for the economic growth of a country (UNCTAD, 2009). Institutional and legal framework adjustment to WTO prescription is an impetus to economic efficiency, growth and enhanced welfare.

Studies on Least Developed Countries (LDCs) are not as optimistic on the positive impact of WTO accession as the above findings. The benefits from WTO membership in terms of improved market access for traditional exports are likely to be limited for vulnerable economies and developing countries. However, by submitting a wide range of trade-related policies to international scrutiny and by entering into binding commitments on the conduct of these policies, reform-oriented governments in these economies can make it more likely that their reforms will be successful (Rolf J. Langhammer & Matthias Lücke, 2001).

WTO promotes trade liberalisation and free trade. Trade liberalization has been beneficial for many countries, but the gains from liberalizing remaining of protection may be outweighed by the costs. Tariff revenue losses even outweighed by gain in other areas are very significant. Total tariff losses for developing countries under the NAMA⁹ could be \$63.4 billion or almost four times the benefit. Countries in Sub Saharan Africa and Middle East, and Bangladesh with large informal economies, where tariff revenues are important for government revenues are predicted to be net losers in terms of benefits. They will also suffer even larger losses in tariff revenues (Kumar and Kallegher, 2006).

⁹ Non Agriculture Market Access (NAMA) refers to all products not covered by the Agreement on Agriculture. In other words, in practice, it includes manufacturing products, fuels and mining products, fish and fish products, and forestry products. They are sometimes referred to as industrial products or manufactured goods. Available from http://www.wto.org/english/tratop_e/markacc_e/nama_negotiations_e.htm

3.2. Cost and benefit Afghanistan's accession to the WTO

This section attempts to shed some light on the cost and benefits of the WTO accession for Afghanistan. The result of the study will guide policy makers to identify the most sensitive sectors of the economy in which sector policy space is required to address future development goals. Afghanistan as an LDC and Land Locked Country (LLC) can benefit from integration to the global economy through the WTO membership significantly. The country is one of the important producers of dry fruits¹⁰ and carpet¹¹ in the world and WTO membership provides greater opportunities to exploit the vast potential in the international markets and emerge as a major player in these two commodities. Similarly, cheap raw material and labour, untapped resources like iron, copper, coal and a host of other mineral resources can change the development trajectory of the country attracting much needed investment (FDI), which is encouraged and facilitated by the WTO regulations. Furthermore, Afghanistan is an important tourist destination and the WTO regulations on services¹² can help the country to enhance this business at the regional and international level.

While the benefits of trade liberalization are of paramount importance, the cost is nonetheless critical for any country especially for vulnerable economies. Import liberalization through tariff cuts for a small country like Afghanistan may bring down the prices by the amount of tariffs cuts, increase imports and decrease the government revenue from tariffs. The general welfare of the economy which is the combination of consumer surplus, producer's surplus and government surplus (government revenue) depends on the effect tariff cuts have on a specific country, this may be either negative or positive. According to theory, consumer surplus is positive due to cheaper prices of commodities. The producer surplus can take be either positive or negative. If the producer is competitive and benefits from cheap imported raw material that would enable the company to increase sales at a lower price, both at domestic and international markets, then it may gain from liberalization; but if the firm uses domestic raw material and produces for the domestic market, liberalization may be detrimental to it. Therefore, an industry in a country may lose or gain from trade, depending on their competitive position. In the case of Afghanistan, since the industries are at their primitive stage, import liberalization may affect them negatively. Government revenue may increase due to increased imports but could also fall due to reduced tariffs.

¹⁰ Before 1980 over 60% of global dried fruits was supplied from Afghanistan. For more information refer to USDA report on "Afghanistan's Dried Fruit Market Regains Strength".

¹¹ In 1975 up to 35 per cent of employed population in selected provinces were engaged in carpet weaving (KAS-Kabul, 2005), and currently over one million Afghan population are engaged in carpet industry (Mc Cord Group, 2007).

¹² Refer to WTO General Agreement on Trade and Services

Though Afghanistan's current applied tariff rates are very low¹³ and the country as an LDC may not be required to undertake further commitment to reduce its current MFN applied tariff rates, it still has to bind its tariffs at certain rates. The question will be which products to bind at a higher rate and which ones to a lower rate in order for the average to comply with the WTO stipulations? In order to maintain the maximum policy freedom Afghanistan has to have a clear idea of the cost and benefits corresponding to each commodity or group of products. The country needs to maintain certain policy freedom suitable to its long term development goals.

3.3. Methodology

An ex-ante analysis of the cost and benefits of a policy change is challenging and developing such a model which can capture all variables and establish relationships between all factors concerned is called a General Equilibrium Analysis; but this undertaking on one hand requires large amounts of data for each variable and on the other hand there is no customised tool to calculate this model. Exhaustive quantitative measurement of the expected benefits and costs is beyond the scope of this study. However, in a similar study the Asian Development Bank¹⁴ used a Partial Equilibrium Model to assess the welfare and revenue implication of SAFTA. Lawrence Otheino and Isaac Shaniyekwa (2011) used the same model to assess the effect of tariff reduction¹⁵ on trade, welfare and revenue of Uganda¹⁶. Following the same methods used in similar studies, we undertake a partial equilibrium analysis of tariff cuts.

The independent variable utilized in this study is tariff cuts and the dependent variables include trade creation, government revenue, consumer surplus and welfare. There are various tools to run Partial Equilibrium analysis among which we used the World Bank/UNCTAD SMART Simulation Model that is a suitable tool to assess the costs and benefits of accession to the WTO.

3.4. WITS/SMART model¹⁷

This model was developed by Jammes and Olarreaga (2005) and operationalized by the World Bank. The model is based on the Armington assumption which assumes that imports

¹³ Working Party on the Accession of the Islamic Republic of Afghanistan, 29 October 2013.

¹⁴ Quantification of Benefits from Economic Cooperation in South Asia, 2008.

¹⁵ Tariff reduction was imposed on what the author calls category B goods such as agricultural products, processed food, textile, plastic products, iron and steel products, detergent, building materials and tobacco.

¹⁶ 'Trade Revenue and Welfare Effects of East African Community Customs Union Principle of Asymmetry on Uganda, 2011.

¹⁷ We have taken the major part of the discussion in this sub section from WITS/SMART manual. Available from <https://wits.worldbank.org/>

from different countries are perfect substitutes and export supply elasticity is taken to (99%) which implies upward-sloping export supply curves (UNCTAD, Partial Equilibrium Trade-Policy Simulation). The model assumes that all countries face fixed world prices and the domestic price is the direct function of tariff changes (refer to figure 4.2). Trade creation (trade effect) is calculated as a direct increase in imports due to the tariff reduction. The elasticity of imports demand for a particular good (k) is assumed to be the same for all source countries (suppliers). The following equation establishes this relationship:

$${}^{18}TC_k = \sum_{i=1}^n TC_k^i = \sum_{i=1}^n \varepsilon_k M_k^i P_k^i \frac{\Delta t_k^i}{1 + t_k^i}$$

Where, TC_k stands for total trade creation for good (k), which is the sum of total trade created from countries ($l = 1, 2, 3, \dots, n$); Δt_k^i stands for the change in tariffs for product (k) imported from country (i). The total trade creation is a function of elasticity of import demand (ε_k), import commodity (k) from each country (M_k^i), landed price (P_k^i) and tariff changes (Δt_k^i). The last factor in the RHS of the equation ($\frac{\Delta t_k^i}{1 + t_k^i}$) represents the trade diversion effects, which represents the amount of trade diverted away from other suppliers to a particular supplier as a result of preferential tariff reduction for that country's exports. In other words the diversion effect in trade flows is the increase in imports from a preferred source that substitutes imports from MFN sources (UNCTAD). In SMART trade diversion is calculated from the following equation:

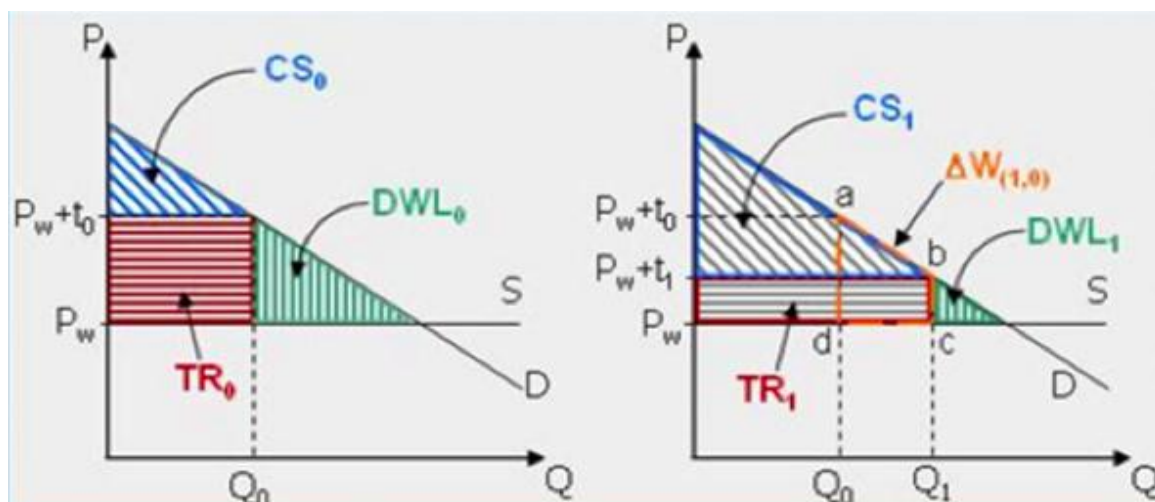
$$TD = \left\{ \left(\frac{M_k^i M_k^l}{M_k^i + M_k^l} \right) \sigma \frac{dt_k^i}{t_k^i} \text{ if } -dM_k^l \leq M_k^l \text{ or } M_k^l \text{ otherwise} \right\}$$

Where, TD is the trade diversion effect and M_k^l is the initial level of MFN imports. The trade diversion effect is an increasing function of elasticity of substitution (σ); the amount of trade diversion effect cannot be larger than the initial value of imports from all countries. The above and many more complicated equations for calculating the trade creation effect, revenue effect, consumer surplus and welfare effect of tariff reduction have been programmed into the World Integrated Trade Solution (WITS), which enables us to feed our data through the system and run our analysis. It is important to note that the WITS/SMART Model does not calculate producers' surplus precisely as explained in the Partial Equilibrium Model, it rather considers the reduction/increase in the deadweight loss as improvement/reduction of welfare (figure 3.1).

¹⁸ Source: WITS/SMART User Manual. Available from <https://wits.worldbank.org/>

Figure 3.1: Impact of reducing tariffs

Source: WITS/SMART User Manual, Smart Framework, page 171



When tariffs are reduced from t_0 to t_1 the prices fall by the same amount, imports increase from Q_0 to Q_1 (trade creation effect), and government revenues decrease, where consumer surplus increases; but the efficiency loss (Deadweight Loss) falls from DWL_0 to DWL_1 . The latter is considered to be welfare gains in our analysis.

3.5. Applying SMART simulation for Afghanistan and analysis of the results

We have utilized the COMTRADE and TRAINS data to run the simulation. In cases where the data was not available, the mirror effect was used, where data was taken from the exports of partner to Afghanistan. It is important to note that the simulation is run by taking the whole world as one exporting entity and Afghanistan as the importing country. A cost-benefit analysis for each major trading partner of Afghanistan is beyond the scope of this paper and can be undertaken in a separate study using the same model.

Table 3.1: Top 25 products with the greatest trade effect (\$ million)

Rank	HS Code	at 10% tariff cut	at 5% tariff cut
1	87	39.70	19.85
2	11	35.49	17.75
3	12	23.71	11.85
4	27	10.97	5.49

5	85	2.83	1.41
6	84	1.91	0.96
7	93	1.84	0.92
8	86	1.82	0.91
9	7	1.81	0.90
10	4	1.79	0.90
11	10	1.61	0.80
12	90	1.49	0.00
13	16	1.49	0.74
14	25	1.44	0.72
15	57	1.38	0.69
16	39	1.37	0.68
17	24	1.36	0.68
18	72	0.98	0.49
19	44	0.95	0.48
20	8	0.91	0.12
21	73	0.77	0.39
22	63	0.72	0.36
23	88	0.65	0.32
24	18	0.64	0.10
25	34	0.57	0.28
Total of 97 Chapters		145.01	89.81
Total of Top 25 Items		137.64	67.51
Percentage in total		94.92	75.17

In our model we consider the products from Nomenclature HS2 which includes 97 chapters across industries and sectors. The vast amount of products under each chapter has made it difficult to form an analysis of each product, we have therefore taken the weighted average of

each chapter. Among the 97 chapters, the top 25 chapters constitute for more than 75% of the total effect (table 3.2). A detailed analysis of all 97 chapters can be found in appendix 1.

Table 3.2: Top 25 Products with greatest revenue effect (\$ million)

Rank	HS Code	at 10% tariff cut	at 5% tariff cut
1	87	-3.79	-1.88
2	11	-3.73	-1.84
3	12	-3.16	-1.50
4	27	-2.68	-1.34
5	85	-2.19	-1.09
6	84	-1.70	-0.85
7	93	-1.41	-0.70
8	86	-0.88	-0.44
9	7	-0.87	-0.44
10	4	-0.83	-0.42
11	10	-0.79	-0.39
12	90	-0.70	-0.35
13	16	-0.67	-0.01
14	25	-0.65	-0.32
15	57	-0.61	-0.30
16	39	-0.51	-0.10
17	24	-0.49	-0.01
18	72	-0.47	-0.02

19	44	-0.42	-0.21
20	8	-0.39	-0.19
21	73	-0.38	-0.15
22	63	-0.35	-0.17
23	88	-0.35	-0.17
24	18	-0.22	-0.11
25	34	-0.22	-0.10
Total of 97 Chapters		-31.15	-15.27
Total effect of Top 25 chapters		-28.25	-12.99
Percentage in total		90.70	85.09

If a tariff cut of 10% is applied, the 25 chapters represented in the table above will generate \$137 million worth of trade, out of a total of \$145 million across all 97 chapters; whereas if the tariff cut is 5% the products included in these 25 chapters will generate \$67.17 million extra trade. The product category which ranks highest on the list is aircraft, spacecraft, and parts thereof. This can potentially be explained by the expensive nature of the products and can arguably be seen as an outlier. Domestically produced commodities, such as product groups HS11, HS12 and HS07 also rank high in the table. These items also yield high revenues; tariff rates for these products will have a detrimental effect on the total trade amount, careful consideration must therefore be taken. In addition, other domestically produced products such as cereals, textiles and dairy products require special focus. Interestingly, the product groups with greatest trade effect have the greatest revenue effect as well.

Table 3.3: Top 25 Products with the greatest consumer surplus effect (\$ million)

Rank	Product Code	at 10% tariff cut	at 5% tariff cut
1	87	3.15	1.62
2	11	1.57	0.81
3	12	0.98	0.50
4	27	0.65	0.33
5	85	0.24	0.12
6	84	0.21	0.11
7	93	0.17	0.09
8	86	0.16	0.08
9	7	0.15	0.08
10	4	0.13	0.07
11	10	0.12	0.06
12	90	0.10	0.05
13	16	0.10	0.05
14	25	0.09	0.01
15	57	0.08	0.04
16	39	0.08	0.04
17	24	0.06	0.03
18	72	0.06	0.03
19	44	0.06	0.03
20	8	0.05	0.02
21	73	0.04	0.02
22	63	0.04	0.00
23	88	0.04	0.01
24	18	0.03	0.00
25	34	0.03	0.02
Total effect of 97 Chapters		8.80	5.34
Total of Top 25 Items		8.38	4.21

Percentage in total	95.1620714	78.89283802
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If tariffs are reduced to 10%, a total revenue loss of \$31.15 million will be incurred, 90% of that loss, \$28 million, is attributed by the top 25 chapters. On the other hand if tariffs are cut to 5% the corresponding revenue loss will be half. Consumer surplus has a relatively similar relationship, where trade creation and greater revenue loss leads to more consumer gains (table 3.3).

Table 3.4: Top 25 products with the greatest welfare effect (\$ million)

Rank	HS Code	at 10% tariff cut	at 5% tariff cut
1	87	10.638	5.459
2	11	2.121	1.089
3	12	1.686	0.865
4	27	0.944	0.484
5	85	0.291	0.149
6	84	0.220	0.113
7	93	0.203	0.010
8	86	0.194	0.099
9	7	0.174	0.089
10	4	0.161	0.083
11	10	0.138	0.071
12	90	0.130	0.067
13	16	0.128	0.066
14	25	0.118	0.060
15	57	0.106	0.054
16	39	0.091	0.047
17	24	0.078	0.040
18	72	0.069	0.010

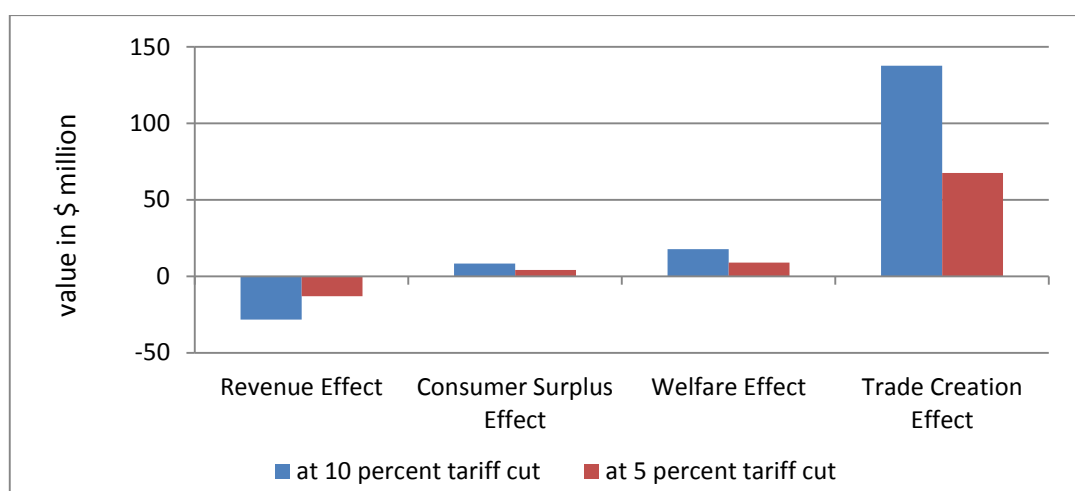
19	44	0.063	0.032
20	8	0.056	0.029
21	73	0.053	0.027
22	63	0.047	0.024
23	88	0.045	0.002
24	18	0.043	0.022
25	34	0.035	0.000
Total effect of 97 Chapters		18.27	10.14
Total of Top 28 Items		17.79	8.99
Percentage in total		97.39	88.67

The results are consistent with the theory, goods will flow in domestic markets with lower prices and the consumer will be in a better position to demand more goods and services at a cheaper price. The country's total consumer surplus will be \$8.8 million and \$5.34 million at either 10% or 5% tariff cuts respectively; these tariff cuts correspond to a consumer welfare effect of \$8.38 million and \$4.21 million for the top 25 product groups, which makes up 95% and 78.89% of total trade respectively. Table 4.4 shows the result of the SMART simulation for 25 chapters with greatest welfare effect. The total welfare that is going to be generated from trade liberalization will be 18.27 million USD and 10.14 million USD at 10% and 5% tariff cut respectively. These products contribute to 97% and 88% of the total welfare effect among all imported goods.

However, one can infer that this should not be the case if domestic production is taken into account. When domestic production is relatively higher than that of its imported substitutes it places them at a disadvantage. The result of simulation is only geared towards the revenue, consumer surplus and efficiency and fails to include domestic producers into its calculations. According to theory, welfare is the sum of consumer welfare, producer welfare and government revenue. If consumer surplus, government revenue and welfare are given, we can calculate the producer's surplus/loss; however in our model the WITS/SMART simulation does not calculate welfare as the Partial Equilibrium Theory predicts, it considers welfare in terms of efficiency gain/loss. Therefore, we cannot derive the effect of tariff cuts on the producers directly.

Agriculture is the most important sector of the Afghan economy and has the potential to satisfy domestic demand. It is also the largest sector in terms of employment (World Bank, 2012); but due to inefficiencies and high cost of production, and the cheap influx of imported substitutes producers in this sector might incur losses and may act as a disincentive for future domestic agricultural production. Therefore, the long term development goals of Afghanistan, as stipulated in the ANDS, requires such sectors to be protected which requires freedom of interchangeable import policies.

Figure 3.2: Partial equilibrium result of top 25 tariff schedules (\$ million)



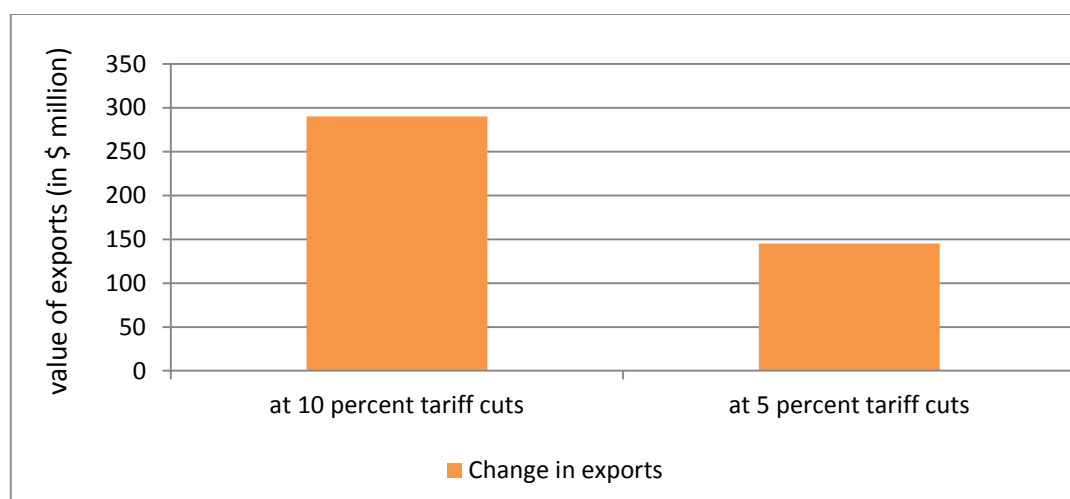
Furthermore, small industries such as textile, leather, edible oil, cement, soap, pharmaceuticals, coal, fertilizers and construction materials have the potential to grow. However, our analysis indicates that consumer surplus, revenue loss and trade creation for these products is high and increased tariff cuts could lead to a loss in competitiveness for producers. Given that the tariff cuts may not take place for the reason we pointed out above, our findings suggest that the binding rate for these commodities should be kept higher. Hence, maintaining a policy space which allows import policies to be modified accordingly is very important for an LDC like Afghanistan.

Table 3.5: Comparative costs and benefits of tariff cuts (\$ million)

Effect of tariff cut	At 10% tariff cut	At 5% tariff cut
Revenue Effect	-28.25	-13.00
Consumer Surplus	8.38	4.21
Effect		
Welfare Effect	17.79	8.99
Trade Creation Effect	137.64	67.52

As illustrated in figure 3.1, Afghanistan and its suppliers of goods and services are likely to have disproportionate welfare and consumer gains, as exporters' revenue will increase by \$290 million and \$145 million at 10% and 5% tariff cut respectively.

Figure 3.3: Change in export revenues, Afghanistan's trading partners (\$ million)



Our analysis in this chapter clearly indicates that when more tariff cuts are observed, the flow of goods and services in that country increases. Afghanistan is not an industrial country and relies heavily on imported industrial products. One may argue that imports will benefit from an increased focus on trade liberalization. However, it is worth mentioning that despite Afghanistan's lack of domestic industrial manufacturers, foreign competition might not be considered as a threat to its domestic industrial producers in the short run, evidence shows

that small scale industries have difficulty remaining competitive. In the long run it may pose a threat for its emerging industrial market.

We should also keep in mind that Afghanistan's current applied tariff rates are already below the average of other LDCs, hence running the model using tariff cuts is a limitation of the this study.

4. Post-accession challenges

4.1. Development challenges: support of agriculture and infant industries

Our empirical analysis in the previous section highlights the expected benefits and costs in terms of consumer welfare, efficiency and revenue. Consistent with the theory, our results show that at 10% and 5% tariff cuts consumers will gain, government revenue will fall and imports will increase. But the SMART simulation does not incorporate producers in the calculation of cost and benefits, while the theory suggests that small farmers lose as a result of trade liberalization (Reddy, 2007). Our motivation is to assess the cost and benefits of accession, yet our results, except for the revenue loss, do not explain other implications on the economy. An important aspect of development in all schools of thoughts is economic growth, where GDP growth is a necessary condition for development. Therefore, for an economy to grow it has to produce more goods and services, export more and gain more market share in global markets. Neoliberal economists argue that increased market share can be obtained by uninterrupted market forces and liberalization of the economy. This is exactly what the WTO promotes: in order to have growth we need to produce more, production requires larger market (demand) and this can be obtained through international trade; and trade can grow in a free trade regime which brings efficiency in the international allocation of resources. This regime is facilitated by WTO agreements. The acceding member has to harmonize its national laws with the WTO trade laws and abide by MFN treatment of all WTO members with whom the country has signed the MFN agreement. This implies that the country loses policy space for its national development strategies with the WTO accession.

This section analyses the production sector in Afghanistan and assesses how it will likely be in the post-accession; and secondly we will highlight the necessity of maintaining a broader and more nationally favourable policy space in support of the production sector for long term development purposes.

As mentioned previously, agriculture is the most important production sector of the Afghan economy (20% of GDP, 2013). Due to its significance the sector has on the Afghan economy, the government has announced that the agricultural sector and industries in general are the top priority investment sectors in the country (Government of Afghanistan, 2013). This was further reiterated through the placement of incentives including tax exemption, ease of land acquisition, license provision and export facilitation for domestic and international investors (AISA, 2013); Yet liberal import policies have been adopted to support consumers, making Afghanistan more accessible for imported substitutes and placing a larger burden on domestic manufactures and producers to remain price competitive (MoCI, 2013).

This report uses two products to assess the potential effect of liberalization in both the agricultural and industrial sector. Wheat has been used as an example for the agricultural sector, mainly because of its importance in the domestic market and its historical significance. The textile industry is as an example for the industrial sector as it is considered to have great potential for future growth.

a) Wheat production

Wheat is an important food staple in Afghanistan and almost all farmers allocate part of their land (70% of cropped area) or a season of production for wheat cultivation, either for household consumption or for commercial purposes (FOCUS, 2007). In 1978, Afghanistan was self-sufficient in its food production for its 14 million populations¹⁹, but nearly two decades of war damaged or destroyed irrigation canals, storage facilities and market infrastructures. Consequently, severely decreasing the productive capacity of the wheat sub-sector. Consecutive years of drought further constrained agricultural production. Furthermore, numerous policies and programs on wheat within the region created significant obstacles and disincentives to investment in the subsector. For example, the few mills that were established in Afghanistan with the help of foreign assistance have difficulty competing with Pakistani mills that receive subsidized credit and other forms of assistance.

In 2003, the total quantity of domestically produced wheat that was marketed roughly amounted to 25% of the country's production (Chabot and Dorosh, 2007). In a normal year, the northern region of Afghanistan accounts for the vast majority of the relatively small quantity of wheat that is marketed. In drought years, marketed surpluses are even lower (Suresh Persaud, 2010). However, there are no studies which quantify the relationship between wheat

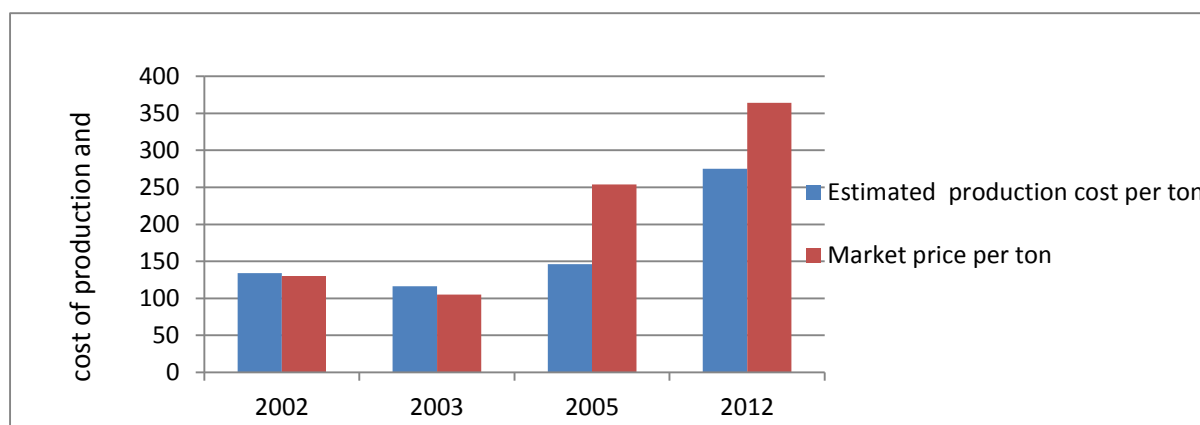
¹⁹ Afghanistan Research Newsletter, January/February 2011, Afghanistan Research and Evaluation Unit.

yields and wheat prices in Afghanistan, and formal estimates of wheat area elasticity are not available in the literature. According to Persaud, recent trends in Afghanistan's limited available data are consistent with an own-price elasticity of 0.20, that is, a 1% increase in the real price of wheat is associated with a 0.20% increase in wheat area in the following year, everything else remaining the same. Persaud indicated that based on within-sample predictions, this elasticity is plausible because it fits recent historical data reasonably well. He further concludes that: "improved irrigation, rather than higher wheat prices, could be the key factor spurring growth in wheat area as well as in yields. Lack of water, on the other hand, could constrain farmers' purchases of fertilizer and improved seed, even with higher farm prices of wheat". Hence, from these findings one can infer that there is a likely relationship between the prices and production of wheat.

The USAID Report (2007), concludes that a continuous inflow of wheat to Afghan markets is important for food security and price stability, but does not address the impact of extended wheat imports on the local wheat production. Afghan flour producers face challenges from inadequate domestic supplies of wheat and competition from imported flour (flour can be a proxy for wheat), much of it from neighbouring Pakistan where wheat producers and flour millers benefit from Government support. Efforts to support Afghanistan's wheat production by increasing border protections, would lead to higher prices which could harm consumers. Similarly, efforts to boost domestic production of wheat for milling through import policies would require a difficult-to-enforce combination of flour and wheat tariffs or other restrictions that would also impose costs on consumers. Hence according to the report, free trade, entailing unhindered wheat imports, may lead to a stronger growth in domestic wheat production and consumption, with relatively small losses in farm production.

In this paper two studies on cost of wheat production in the Northeast region of Afghanistan by Hector Maletta (2004) and FAO (2013) have been used to find out the cost of wheat production and then compare it with the market prices of wheat. The result is then argued in the context of liberal import policies. Figure 5.1 shows results based on the aforementioned sources. The data for prices has been collected from MAIL (2012), FAO (2003, 2012) and MoCI (2013). As illustrated in the table, 2002 and 2003 are roughly on par in terms of the cost of production and their respective current market prices. Prices from 2001 to 2005 were very low, this was due to a change in regime, a large influx of food aid, currency appreciation (introduction of new Afghani currency) and tariff free imports.

Table 4.1: Production costs and market prices of wheat at the northeast region



Source: Mallela (2004) and FOA (2013). Both sources have used primary survey data for their estimation

However, in 2005 the government decided to encourage the development of the agricultural sector through the ANDS development goal and introduced tariff and non-tariff barriers. Afghanistan's trade policies have played a limited role in protecting domestic wheat producers. In the case of the wheat, Afghanistan's import policies have been relatively liberal where; the government has not established countervailing policies to Pakistan's²⁰ domestic grain market interventions. In 2007, import tariffs on wheat and flour were 3.5 percent (Schulte, 2007). In response to the 2008 price hikes, Afghanistan eliminated its import tariffs on wheat and flour in February of that year (World Bank, 2010). In 2009, Afghan wheat production rose, and growing conditions continued to be favourable in 2010. In an attempt to protect producers from falling prices, the Afghan Government set tariffs on wheat and flour imports at 10% (GoIRA, 2010; FAO, 2010). The following year (2011) brought a combination of poor growing conditions in Afghanistan and rising domestic and international prices. Accordingly, the Afghan Government reduced the tariff on imported wheat flour from 10% to 5% (USAID, 2011). However, the degree to which Government border policies have restricted movements of wheat and flour is uncertain. We observe in the figure that the margin has fallen due to reduction in tariffs, which implies that a further reduction would make the condition even worse. When the country loses policy space to modify the tariff rates when needed it becomes a matter of concern.

Furthermore, as the country was proceeding to its negotiations for the WTO accession, it was encouraged to further lift all non-tariff barriers, lower tariffs and make its trade laws consistent with the WTO rules. It is worth noticing that due to a lack of data on sales cost in our calculations, marketing costs have not been taken into account. If we add these costs, the

²⁰ Pakistan and Kazakhstan are the largest exporters of wheat to Afghanistan.

farmer either loses out or the margin will be negligible. Furthermore, in the calculation of the cost of production we have to note that personal labour and land is also included. Given that Afghanistan was once a food sufficient economy (1970), the disincentive of low prices in comparison to the cost of production might discourage farmers to either forgo leisure and increase productivity or shift to alternative sources of income.

b) Textiles

In line with the constitution and the Afghanistan National Development Goals (ANDS), the government has transformed all the laws from a centrally planned economy to a market led system in the last decade. Since 2001 telecommunications, construction, banking and other services have made significant progress; but the industrial production's contribution to GDP was only 22.5%. The Textile industry has played a significant role in the country's history and culture, owed in part to Afghanistan's central location on the Silk Road, connecting the east and west. In the 1980s during the soviet regime the country was producing 350000 metric tonnes of processed cotton per year, in 2013 it was a meagre 36300 metric tonnes (AISA, 2013). The country has 4 main cotton and textile companies located in four major cities, namely Gulbahar Textile Plant (Kabul), Kandahar Cotton Textile Enterprise, Herat Textile Project and the Balkh Cotton Textile Enterprise. Currently 66% of the total textile production is sold regionally, 27% nationally and 7% is exported to other countries. While cheap labour and raw materials, and a growing domestic market have been promising factors for the growth of this sector; the industry is still plagued by low productivity, the lack of modern equipment and efficiency, and the tendency to export raw materials. These weaknesses place domestic firms at a disadvantage and make them vulnerable towards foreign competitors and cheaper imports. Out of 350 factories in the Herat Industrial Park, only 100 remain due to international competition (AISA, 2013). In pursuance of Afghanistan's WTO accession, tariffs rates have been kept as low as 2.5% (OTEXA, 2011).

Commitment to the WTO agreements may further leave domestic small scale producers vulnerable against cheap international imports. A study on experience of industrialization after liberalization of economies shows that premature liberalization during the 1980s and early 1990s was accompanied with de-industrialization of most LDCs (Shafaeddin, 1995 and 1996). Similarly long term industrial development in the country not only requires strong initial support of the government in establishing domestic firms through flexible trade policies, but also constant protection against foreign companies. A loss of policy with the WTO accession makes it impossible for the country to align its development goals with liberal policies.

Hence, for the reasons argued above both sectors require state support and protection against foreign imports.

4.2. Institutional challenges

The WTO accession is not necessarily the end, rather it is the beginning of a process of reforms and adjustments. Benefits from membership to the WTO can be feasible only if competent institutions are in place to enable an economy to utilize its advantages for economic growth. Institutions for this matter include both public and private stakeholders who are involved in an interdisciplinary task for the economic performance of a country (San José, 2007). Currently, the Ministry of Commerce and Industries (MoCI), Afghanistan Investment Support Agency (AISA), the Customs and Revenue Department, the Chamber of Commerce and Industries, the Ministry of Finance, the Ministry of Economy and the Ministry of Foreign Affairs are the concerned parties and independent agencies which work coherently towards facilitating international trade in Afghanistan. The efforts of AISA have been tremendous in terms of supporting the private sector and the establishment of industrial parks. Afghanistan has modified major laws, institutions and legal frameworks for compliance purposes (WTO, 2013). However, the country's existing institutions are not capable of reaping the benefits of free trade under the WTO-based trading system. Institutional capacity is one of the major concerns for all LDCs and Afghanistan in particular. In order for Afghanistan to protect its interest in international trade under the WTO regime, it needs to increase the capacity of its institutions in order for it to position itself strongly when negotiating terms of trade and dispute resolution with the trading partners. Furthermore, the WTO agreements are highly technical, legal text requires a specialized understanding of the terms and conditions, contexts, and cases. Afghanistan needs to train highly competent human resources in international trade and trade lawyers who are able to translate and interpret the text to the concerned authorities. Identification of possible areas for trade-related capacity building is the main objective of this section. The following subsections present major challenges which fall under the purview of institutional challenges. The section contains opinions from the Ministry of Commerce and Industries of the Islamic Republic of Afghanistan.

a) Complex interdisciplinary relations

Decision making in Afghanistan is a slow and untidy process. In order to enforce an international commitment in legislation, even an action plan should go through various rigorous processes which sometimes takes years (Baraimal Jerian, MoCI, 2014²¹). One of the reasons

²¹ The interview was conducted by the author at MoCI.

for the delay in the final accession of Afghanistan to the WTO is considered to be due to delays in passing the Law of Industrial Design; Law on Food; Law of Foreign Trade; and Patent Law, which is caused by institutional complexity in decision making. A proposal of legislation, policy or action plan for example concerning foreign trade in goods is viewed and commented on by various line ministries and independent bodies for final approval by the Ministry of Justice and then sent to Parliament. This issue remains a challenge in the post-accession as well. Each LDC is given a transition period to reform the remaining Laws to conform to the WTO regulations. Any delay in such decisions brings negative consequences to the country. Therefore, decision making should become localized and subject-specific.

b) Human resources capacity building

The WTO negotiations, dispute settlements and continuous development and reformation of laws requires the engagement of highly specialized and expert professionals in various areas law, economics, international trade, etc. Attaining long term development goals requires a holistic approach to Human Capital development which would encompass acquisition of knowledge and skills in science and technology alongside practical entrepreneurial capabilities (ANDS, 2008). Currently, the mission of human resources development is coordinated by the Human Resources Development Board which includes the harmonization of strategic plans of sectoral ministries and donors (MoHE, 2013). However, such efforts should be strengthened so that a generation of highly specialized human capital takes over the decision making and economic planning in the country. Policy makers, advisors, and executives in various government bodies, especially those which concern the management of international trade, should be capable enough to understand and implement reformed laws. This includes the development of action plans which are in conformity with both international commitments and the country's sustainable development path. Research & Development in various scientific and social issues in Afghanistan is a rare phenomenon. Research is the intellectual eye for every development project, but in Afghanistan think tanks and research organizations are at very primitive stage. Currently, the Afghanistan Research and Evaluation Unit (AREU), Afghanistan Institute of Strategic Studies (AISS), AISA, CSO and a few donor funded organizations are engaged in research, but their products are limited to reports and fail to cover economic and trade issues. The Afghanistan National Customs Academy (ANCA) is an example of a training institution which is working towards building capacity of officers for its Customs Department. Similar training institutions need to be established for stakeholders dealing with trade. For this purpose, the country can apply for WTO/UNCTAD Technical Assistance to train experts and researchers on international trade. Researchers and students

from Afghanistan should be admitted to the WTO University and other international universities which specialize in international trade and trade law.

c) Business capacity

Public and private businesses are at the core of every economic planning. An export-led growth under the WTO regime requires standard products and services for international markets. SPS agreements under WTO oblige the members to abide by standardization in quality and packing. All countries impose certain technical regulations and standards on their imports of goods and services, those that do not meet the necessary quality standards shall be restricted from imports. The WTO Agreements on Technical Barriers has recognized this right and states that all members have the right to set quality standards to protect its human and animal lives. This right however comes with the condition that technical regulations should not create unnecessary obstacles to trade and should treat goods and services from all member countries equally²². Therefore, Afghan exporters should have the capacity to standardise their merchandises and meet international quality standards. Given the state of technology and capacity in Afghanistan, complying with such standards is a challenging task for the country's government and private sector. Unless Afghanistan can align its exports and adhere to international standards, it will not be able to benefit from free international trade under the WTO regime.

These challenges can be addressed through technical assistance by other WTO members. WTO membership will provide Afghanistan with the opportunity to modernize its institutional systems, improving the safety and quality of goods and services, through capacity building programmes of the UNCTAD, WTO, UNESCAP and other development organizations and partner countries. To increase the country's exports Afghanistan could seek aid for trade facility. However, during both pre- and post-accession negotiations the country should consider to maintain maximum policy space in order to protect its sensitive sectors.

4.3. Legal challenges

The country's legal framework is the body that will aim to instil trust in doing business within the country and with Afghan trading partners. The WTO's emphasis on making business and trade laws consistent with the WTO regulations is of paramount importance. Afghanistan's current legal gaps could be one of the reasons for Afghanistan's delayed accession (Afghanistan WP report, 2013). Currently 22 laws have yet to be endorsed by the Afghan

²² For further reading the reader can refer to Article 1 through Article 5 of WTO Agreements on Technical Barriers.

Parliament in order to make all legislations in conformity with the WTO requirements (table 4.1). Afghanistan has been given a transitional period of three years to enforce the legal reforms illustrated in table 4.1.

Table 4.1: Laws which are yet to be enacted

Serial No	Legislation	WTO Agreement	Main Responsibility	Current Status	Location in Documentation	Date of Projected		
						Submission to Cabinet of Ministers	Submission to Parliament	Enactment
1	Law on Plant Protection and Quarantine (new Law)	SPS	Ministry of Agriculture, Irrigation, and Livestock (MAIL)- Plant Quarantine Directorate	Draft at the Ministry of Justice (MOJ)	WT/ACC/AF G/19	First half of 2013	Third quarter of 2013	Fourth quarter of 2013/First quarter of 2014
2	Law on Animal Health and Veterinary (new Law)	SPS	MAIL- General Directorate of Animal Health	Draft at MOJ	WT/ACC/AF G/19	First half of 2013	Third quarter of 2013	Fourth quarter of 2013/First quarter of 2014
3	Law on Food Safety (new Law)	SPS	MPH and MAIL-General Directorate of Animal Health	Draft at MOJ	WT/ACC/AF G/19	First half of 2013	Third quarter of 2013	Fourth quarter of 2013/First quarter of 2014
4	Law on Standards and Technical Regulations (new Law)	TBT	Afghan National Standardization Agency (ANSA)	Draft at MOJ	WT/ACC/AF G/19	First half of 2013	Third quarter of 2013	Fourth quarter of 2013/First quarter of 2014
5	Amendments to the 2005 Customs Law	CVA ROO	Afghan Customs Department (ACD)	Draft at MOJ	WT/ACC/AF G/22	First half of 2013	Third quarter of 2013	Fourth quarter of 2013/First quarter of 2014
6	Regulations on Customs Valuation (incl. interpretative notes and software and interest charge valuation)	CVA	ACD	Draft has been prepared	WT/ACC/AF G/20	First half of 2013	N/A	As soon as Amendments to Customs Law are adopted
7	Amendments to the Law on Supporting the Rights of Inventors and Discoverers of 31 April 2009 (Patents Law)	TRIPS	Ministry of Commerce and Industries (MoCI)	Draft at MOJ	WT/ACC/AF G/21	First half of 2013	Third quarter of 2013	Fourth quarter of 2013/First quarter of 2014
8	Amendments to the Law on Trade Marks Registration of 1 September 2009	TRIPS	MoCI	Draft at MOJ	WT/ACC/AF G/22	First half of 2013	Third quarter of 2013	Fourth quarter of 2013/First quarter of 2014
9	Amendments to the Law on Supporting the Right of Authors, Composers, Artists, and Researchers of 26 July 2008 (Copyrights Law)	TRIPS	Ministry of Information and Culture (MoCI)	Draft at MOJ	WT/ACC/AF G/21	First half of 2013	Third quarter of 2013	Fourth quarter of 2013/First quarter of 2014

Serial No	Legislation	WTO Agreement	Main Responsibility	Current Status	Location in Documentation	Date of Projected		
						Submission to Cabinet of Ministers	Submission to Parliament	Enactment
10	Law on Geographical Indications (new)	TRIPS	MoCI	Draft at MOJ	WT/ACC/AFG/21	First half of 2013	Third quarter of 2013	Fourth quarter of 2013/First quarter of 2014
11	Law on Industrial Designs (new)	TRIPS	MoCI	Draft at MOJ	WT/ACC/AFG/21	First half of 2013	Third quarter of 2013	Fourth quarter of 2013/First quarter of 2014
12	Draft amendments to the Civil Procedure Code (Chapter Three) of 22 August 1990	TRIPS	MoCI	Draft at MoCI	WT/ACC/AFG/7/Add.1	First half of 2013	Third quarter of 2013	Fourth quarter of 2013/First quarter of 2014
13							First half of 2014	2014
14	Law on Topography of Integrated Circuits (new)	TRIPS	MoCI	Drafting is being finalized	To be submitted to the WTO during first quarter of 2013	Second half of 2013	First half of 2014	2014
15	Law on Optical Disks (new)	TRIPS	MoCI	Drafting is being finalized	To be submitted to the WTO during first quarter of 2013	Second half of 2013	First half of 2014	2014
16	Law on Plant Variety Protection (new)	TRIPS	MAIL	Drafting has been initiated	To be submitted to the WTO during second quarter of 2013	Second half of 2013	First half of 2014	2014
17	Amendments to the Law on Publication and Enforcement of Legislation of 1998	General - Transparency	MoCI/Ministry of Justice	Draft at MOJ	WT/ACC/AFG/20	First half of 2013	Second half of 2013	2014
18	Amendments to the Regulation on Drafting Procedure and Processing of Legal Acts	General - Transparency	MoCI/Ministry of Justice	Draft at MOJ	WT/ACC/AFG/20	First half of 2013	II.	2014
19	Law on Foreign Trade in Goods (new)	GATT and Import Licensing Procedures	MoCI	Draft has been prepared	WT/ACC/AFG/23	Second half of 2013	First half of 2014	2014
20	Law on Safeguards (new)	Agreement on Safeguards	MoCI	Draft has been prepared	WT/ACC/AFG/23	Second half of 2013	First half of 2014	2014

Source: WT/ACC/AFG/9/Rev.2 (2012).

The forthcoming legal agenda includes laws on plant protection and quarantine, regulations on customs valuation, patents law and law on foreign trade in goods²³. After accession the legal reforms shall still remain a challenge for Afghanistan. The WTO trade regime works with full compliance of legal and institutional framework of member countries.

4.4. Environmental challenges

With the desire for growth and short term development, an unsustainable development path may be adopted, where resources are extracted precariously leading to unsustainable resource depletion and environmental degradation. Afghanistan's natural resources have the most potential to attract FDI. This could potentially be extremely beneficial to the Afghan economy, as it will likely improve the country's GDP growth perspective and increase employment. However, given the institutional and legal weaknesses of Afghanistan, privatization of water, soil, mineral resources, flora and fauna could potentially lead to extremely challenging environmental issues both from pollution generation and scarce resource exploitation. Evidence of deforestation and pollution in countries such as India, Nepal, Indonesia and South Africa highlight these dangers for any other country in search of FDI from facilitated the WTO commitments. Currently the National Environmental Protection Agency (NEPA) is the only organization which works for environmental sustainability in the country. Multinational Corporations in pursuit of minimized cost often choose developing and leased developed countries for the purpose of production and resource extraction. In light of this, Afghanistan should establish competent legal and institutional frameworks to address these challenges derived from the desire for short term economic growth. The WTO has set up Sanitary and Phytosanitary measures (SPS Agreement) which allows members to take all the necessary measures to protect human and animal lives in their territory (WTO). Under this agreement Afghan authorities can establish laws for necessary environmental measures.

Recommendations for capacity building to deal with challenges

Based on the analysis presented in this paper the following recommendations are suggested for policy purposes:

1. Trade as an instrument of development is mainstreamed in the Afghanistan National Development Strategy and the WTO accession is considered as an important step towards attaining this goal. However, despite the emphasis on a central role of trade in economic development, operational objectives and action plans for trade have yet been established. Strategies and plans relevant to trade either do not exist or are in the form of various sectoral

²³ Refer to WT/ACC/AFG/9/Rev.2

strategies such as MoCI strategy, Private Sector Development Strategy, Export Promotion Policy, Industrial Policy, etc. These strategies need to be integrated into one single trade development strategy document, encompassing all trade-related priorities across the different government departments.

2. The Diagnostic Trade Integration Study (DTIS) and Action Matrix still do not reflect the Afghan Government trade strategy. Instead, Afghanistan was accepted as a beneficiary country to EIF²⁴ process in 2008 by the EIF board²⁵. Afghanistan needs to fully prioritize its needs to get full access to EIF. Furthermore, since EIF is one of the programs that can be designed under DTIS and Action Matrix, the need for such a study is crucial to provide intellectual input based on concrete empirical and contextual studies. The study can be undertaken by engaging a large number of stakeholders in government, the private sector, academia and the development community with the purpose of understanding the country's context, critical issues affecting private sector development and trade in Afghanistan. This study would provide on-going and planned programmes, analytical work, and it would provide

²⁴ Enhanced Integrated Framework (EIF): To access Aid for Trade, developing countries must clearly prioritize their needs. In return, their development partners need to provide trade-related assistance and capacity building to meet the demand with a supply of resources. To bridge the gap between demand and supply as effectively as possible, developing countries need to mainstream their demand for Aid for Trade into their national development strategies, such as the Poverty Reduction Strategy Papers (PRSPs), since these form the platform on which donors base their aid planning.

The EIF is the main mechanism through which LDCs access additional Aid for Trade resources. The EIF provides a procedure for:

- Clearly mapping out and prioritizing key needs for trade-related assistance and capacity building, including trade infrastructure, supply and productive capacity
- Submitting these demands to the donor community of each country for accessing funding beyond the resources available in the Framework's own Trust Fund.

LDCs can channel their demand for Aid for Trade through the EIF process (involving Diagnostic Trade Integration Studies). The supply of resources is coordinated through local EIF institutions, such as the EIF Focal Point, the National Implementation Unit and the Donor Facilitator.

Predictable, sustainable and effective financing is fundamental for fulfilling the Aid for Trade mandate. The EIF process not only assists LDCs in mainstreaming trade into their national development strategies but also provides LDCs with the platform for leveraging additional funding from their development partners. This allows them to translate their trade-related needs into funded and deliverable projects.

The EIF's Trust Fund is not sufficient on its own to fund many of the activities that LDCs need to boost their trade capacity. Additional funds sought through the EIF process over and above the EIF Trust Fund represent a significant proportion of Aid for Trade. The EIF therefore forms a key pillar within the much larger edifice of Aid for Trade.

Tier 1 of the EIF Trust Fund provides funding to strengthen LDCs' capacity to manage the benefits of Aid for Trade. This funding helps to incorporate trade into national development plans and to translate trade priorities into bankable projects for broader Aid for Trade funding.

Available from http://www.wto.org/english/tratop_e/devel_e/a4t_e/enhance_if_e.htm

²⁵ The first EIF Awareness workshop was held in the Ministry of Commerce and Industry in May 2008. As an outcome of this workshop the National Steering Committee chaired by the Deputy Minister for Trade, National Focal Point and the Donor Facilitator were appointed by the Minister of Commerce and Industry. Afghanistan is still waiting for the EIF Board to assist with the establishment of the National Implementing Unit in order to start the process.

relevant inputs regarding potential areas to cover in the report. In such a study prioritization in the following areas are recommended:

- i. Building productive capacity through the support of the private and public sector to enhance their competitiveness, export diversification and value chains.
- ii. Building an economic infrastructure such as transport facilities, cross-border infrastructure, power, raw material, springhouses, etc.
- iii. Increase the availability of complementary services such as credit facilities, insurance and consultancies.
- iv. Trade policy and regulations: trade facilitation; trade policy analysis, negotiations and implementation.

Currently the operational strategy in Afghanistan has prioritized infrastructural projects within the annual budget as prescribed by the ANDS. However, other priority areas should receive focus as well and be presented in the DTIS to receive aid for trade facilities from donors and development organizations. To prepare concise and justifiable financial needs in the DTIS, the Afghan government should engage in a bilateral and multilateral dialogue with the donor community, private sector, civil society and other major stakeholders, both regionally and internationally. The IMF, World Bank, UNCTAD and other development organizations and donor countries should be approached to discuss and formulate a financial aid plan for the aforementioned priority areas.

3. Most of the major development projects that have taken place in the last 13 years have been engineered and run by Afghanistan's donor parties. This has created multiplicity in the system and failed to yield the desired results despite the large investments. Trade is one of the important development goals which may attract similar financial support from the international community. Trade strategies should be coordinated, monitored and evaluated by the government of Afghanistan under the leadership of the Ministry of Commerce and Industries. In other words, trade development, prioritization and implementations should be an Afghan-initiated and Afghan-led process, rather than multiple donors operating independently. A national committee comprising of various stakeholders inside the government could be initiated to oversee and coordinate trade-related activities, directing international funds based on the country's priority agenda. Moreover, the Afghan government should establish a mechanism to discuss the impact of trade-related programmes with donors and other stakeholders.

4. Though the Ministry of Commerce and Industries (MoCI) of Afghanistan develops and strategizes trade policies, formulation of action plans and legal proposals specifically for the WTO requirements brings in various stakeholders of the economy, which makes the process longer than it should be. To address this challenge, various agencies and ministries should be brought together in a single platform to decide on trade-related issues and oversee the performance.

5. The Afghan government needs to prioritize the aid for trade programme implementation in order for it to succeed. Secondly, it needs to develop a monitoring and evaluation mechanism to assess and oversee the performance of various donors and players who are engaged in the process of trade facilitation in Afghanistan. Finally, the aid for trade programme should be designed and implemented by the government, instead of individual donors.

5. Conclusion

Consistent with the theory, our ex-ante cost-benefit analysis results indicate that the WTO accession and undertaking further tariff cuts will have negative impact on the country's revenue, yet it will have a positive impact on consumers and the welfare gain, which signals efficiency improvement, will be positive. However, the model does not allow for the assessment of the production sector and hence an important sector remains out of the purview of the simulation. Nevertheless, from the arguments made in chapter 6 one can infer that due to a lack of competence and efficiency in domestic production, sensitive production sectors become vulnerable and less competitive compared to international competition. Our analysis started with a clear assumption that Afghanistan's tariff schedules were already consistent with the WTO requirements and may not need to commit to further tariff cuts. A 10% and 5% cut simulation can be used as a helpful proxy to project the extent of the effect of tariff cuts. This will also aid in identifying sectors which are more sensitive to tariff cuts and will enable Afghanistan to negotiate for the maintenance of the least possible binding and highest possible tariff rates. The policy space concept allows an LDC to preserve some freedom, which would facilitate the division of policies in regards to long-term development goals. Agriculture, textile, cement and services are among important sectors of the economy that require consideration. Further research on the trade potential could be done by applying the same simulation or by using gravity models.

The real challenges start after accession. Afghanistan would benefit from creating necessary capacity to enable the country to adhere to all the international quality requirements and standards. In doing so, Afghanistan will be able to compete more competitively as an international trading partner. This will only be possible if the country establishes capable

institutions to manage its trade and investments in a rule based trading system. A Legal framework remains a challenge that will take long parliamentary engagements in the country.

The paper is concluded by a quotation from Professor Joseph Stiglitz²⁶ who said pointing at India “you have not used all the flexibilities available at the WTO, you could do a lot more; and if you sign some of the agreements you will be much harmed. So you have to use all the flexibilities you have and be very careful in not signing some of the agreements.”

²⁶ Notes from ‘Annual High-level Seminar on The Future of the World Economy and Globalization in the aftermath of Global Financial Crisis: Implications for Developing Economies’, organized by UN ESCAP, 14 January 2014.

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Appendix I: Tariff Structure of Afghanistan

Appendix I, Table (a): Tariff structure of Afghanistan for all products

Year	Simple Average (MFN Applied)	Duty Free (MFN Applied)	Non ad valorem duties (MFN Applied)	Duties>15% (MFN Applied)	Duties > 3 * AVG	Maximum duty	Number of distinct duty	Coefficient of variation	Number of MFN applied tariff lines
2006	5.7	0.5	0.8	3.2	0.3	25	53	61	5,376
2007	5.7	0.5	0.8	3.2	0.3	25	61	61	5,376
2008	5.7	0.5	0.8	3.2	0.3	40	12	65	5,208
2009	5.6	0.5	0.9	3.2	0.3	40	12	65	5,207
2010	5.6	0.5	0.9	3.2	0.3	40	12	65	5,207
2011	5.6	0.5	0.9	3.2	0.3	40	12	65	5,207
2012	5.9	0.5	0.9	4.6	1.1	50	14	69	5,331

Appendix I, Table (b): Tariff structure of Afghanistan for non-agricultural products

Year	Simple Avg (MFN Applied)	Duty Free (MFN Applied)	Non ad valorem duties (MFN Applied)	Duties>15% (MFN Applied)	Duties > 3 * AVG	Maximum duty	Number of distinct duty	Coefficient of variation	Number of MFN applied tariff lines
2006	5.7	0.4	0.1	2.4	0.2	25	14	59	4668
2007	5.7	0.4	0.1	2.4	0.2	25	14	59	4668
2008	5.5	0.4	0	2.3	0.2	25	11	61	4524
2009	5.5	0.4	0.1	2.3	0.2	25	11	61	4524
2010	5.5	0.4	0.1	2.3	0.2	25	11	61	4523
2011	5.5	0.4	0.1	2.3	0.2	25	11	61	4523
2012	5.7	0.4	0.2	2.8	6	50	13	69	4571

Appendix I, Table (c) : Tariff structure of Afghanistan for agricultural products

Year	Simple Average (MFN Applied)	Duty Free (MFN Applied)	Non ad valorem duties (MFN Applied)	Duties>15% (MFN Applied)	Duties > 3 * AVG	Maximum duty	Number of distinct duty	Coefficient of variation	Number of MFN applied tariff lines
2006	5.5	1.2	5.6	8	0.7	20	46	75	708
2007	5.5	1.2	5.6	8	0.7	20	46	75	708
2008	5.8	1.2	0	9	0.8	40	8	87	684
2009	5.8	1.2	5.7	9	0.8	40	8	87	684
2010	5.8	1.2	5.7	9	0.8	40	8	87	684
2011	5.8	1.2	5.7	9	0.8	40	8	87	684
2012	7.1	1.3	5.4	15.6	3.1	25	9	81	760

Appendix II: Details of the analysis of the WITS/SMART model

HS Code	Old Weighted Rate III. IV.	Import Demand Elasticity		New Weighted Rate		Trade Effect (\$ million)		Revenue Effect (\$ million)		Consumer Surplus (\$ million)		Welfare Effect (\$ million)	
		10% cut V.	5% cut 1.	10% cut VI.	5%cut VII.	10% cut VIII.	5%cut 1.	10% cut IX.	5%cut X.	10%cut XI.	5%cut XII.	10%cut XIII.	5% cut XIV.
01	3.21	0.015	0.015	2.89	3.05	0.31	0.15	0.02	0.01	0.01	0.00	0.007	0.004
02	2.64	0.001	0.001	2.37	2.5	0.44	0.22	0.16	0.08	0.01	0.01	0.018	0.009
03	3.9	0.001	0.001	3.51	3.71	0.04	0.01	0.00	0.00	0.00	0.00	0.001	0.000
04	9.17	0.002	0.006	8.25	8.71	1.81	0.90	0.65	0.32	0.16	0.08	0.161	0.083
05	3.75	0.020	0.001	4.27	3.56	0.00	0.00	0.00	0.00	0.00	0.00	NA	0.000
06	4.75	0.001	0.001	8.92	4.51	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000
07	9.91	0.011	0.006	15.11	9.41	1.82	0.91	0.88	0.44	0.17	0.09	0.194	0.099
08	16.79	0.001	0.001	5.77	15.95	0.95	0.48	1.41	0.70	0.15	0.08	0.128	0.066
09	6.41	0.001	0.003	2.25	6.09	0.18	0.09	0.09	0.04	0.01	0.01	0.008	0.004
10	2.5	0.002	0.001	4.2	2.38	1.79	0.90	0.35	0.17	0.04	0.02	0.043	0.022
11	4.67	0.002	0.019	2.3	4.43	35.49	17.75	0.38	0.15	1.57	0.81	1.686	0.865
12	5	0.001	0.000	4.5	4.75	0.19	17.74	0.02	0.16	0.00	0.86	0.004	0.865
13	2.56	0.001	0.001	4.5	2.43	0.00	0.10	0.00	0.01	0.00	0.00	0.000	0.002
14	5	0.000	0.001	2.16	4.75	0.01	0.00	0.01	0.00	0.00	0.00	0.000	0.000
15	5	0.002	0.001	7.73	4.75	1.49	0.00	0.67	0.01	0.03	0.00	0.035	0.000
16	2.39	0.001	0.004	5.63	2.28	0.20	0.75	0.03	0.33	0.02	0.02	0.019	0.018
17	8.59	0.001	0.001	8.23	8.16	0.64	0.10	0.49	0.01	0.04	0.01	0.069	0.010
18	6.25	0.005	0.001	8.79	5.94	0.05	0.32	0.05	0.24	0.00	0.02	0.005	0.035
19	9.15	0.002	0.002	6.21	8.69	0.45	0.03	0.47	0.02	0.04	0.00	0.045	0.002
20	9.76	0.006	0.002	9.84	9.28	0.23	0.23	0.20	0.24	0.02	0.02	0.019	0.023
21	6.9	0.000	0.001	4.38	6.55	0.91	0.12	0.51	0.10	0.09	0.01	0.203	0.010
22	4.87	0.001	0.001	4.78	4.63	0.48	0.24	0.15	0.07	0.02	0.01	0.091	0.047
23	5.31	0.001	0.033	9	5.04	0.11	0.06	0.04	0.02	0.01	0.00	0.008	0.004
24	10	0.001	0.002	7.81	9.5	1.37	0.68	0.02	0.02	0.13	0.07	0.130	0.067
25	8.68	0.002	0.001	2.25	8.25	1.49	0.74	2.68	1.34	0.12	0.06	0.078	0.040
26	2.5	0.001	0.027	3.92	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000
27	4.36	0.004	0.001	3.75	4.14	23.71	11.85	3.73	1.84	0.98	0.50	2.121	1.089
28	4.17	0.001	0.010	4.05	3.96	0.01	0.01	0.01	0.01	0.00	0.00	0.001	0.000
29	4.5	0.001	0.003	2.25	4.27	0.02	0.01	0.01	0.01	0.00	0.00	0.001	0.000
30	2.5	0.001	0.001	1.97	2.38	0.19	0.09	0.18	0.09	0.00	0.00	0.004	0.002
31	2.19	0.001	0.001	1.69	2.08	0.05	0.03	0.00	0.00	0.00	0.00	0.001	0.001
32	1.88	0.001	0.001	10.64	1.79	0.11	0.05	0.07	0.04	0.00	0.00	0.003	0.001
33	11.82	0.001	0.001	4.59	11.23	0.19	0.09	0.22	0.11	0.02	0.01	0.025	0.013

HS Code	Old Weighted Rate	Import Demand Elasticity		New Weighted Rate		Trade Effect (million USD)		Revenue Effect (million USD)		Consumer Surplus (million USD)		Welfare Effect (million USD)	
		10% cut	5% cut	10% cut	5%cut	10% cut	5%cut	10% cut	5%cut	10% cut	5% cut	10% cut	5%cut
XV.	XVI.	XVII.	1.	XVIII.	XIX.	XX.	1.	XXI.	XXII.	XXIII.	1.	XXIV.	XXV.
34	5.1	0.003	0.001	4.5	4.85	0.57	0.28	0.19	0.09	0.03	0.01	0.027	0.014
35	5	0.005	0.001	8.1	4.75	0.11	0.05	0.00	0.00	0.01	0.00	0.005	0.003
36	9	0.001	0.001	5.46	8.55	0.04	0.02	0.09	0.04	0.00	0.00	0.003	0.001
37	6.07	0.001	0.001	4.28	5.77	0.01	0.00	0.01	0.00	0.00	0.00	0.000	0.000
38	4.76	0.001	0.002	5.41	4.52	0.07	0.04	0.05	0.03	0.00	0.00	0.004	0.002
39	6.01	0.001	0.001	5.84	5.71	1.38	0.69	0.83	0.42	0.08	0.04	0.118	0.060
40	6.49	0.001	0.001	4.5	6.17	0.28	0.14	0.42	0.21	0.02	0.01	0.016	0.008
41	5	0.003	0.003	9.72	4.75	0.13	0.07	0.00	0.00	0.01	0.00	0.006	0.003
42	10.8	0.001	0.001	2.25	10.26	0.05	0.03	0.07	0.04	0.01	0.00	0.006	0.003
43	2.5	0.001	0.018	5.39	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000
44	5.99	0.000	0.001	4.05	5.69	0.98	0.49	0.70	0.35	0.06	0.03	0.047	0.024
45	4.5	0.002	0.001	8.46	4.27	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000
46	9.4	0.001	0.001	4.5	8.93	0.02	0.01	0.00	0.00	0.00	0.00	0.002	0.001
47	5	0.001	0.001	4.13	4.75	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000
48	4.59	0.002	0.002	5.14	4.36	0.35	0.18	0.14	0.07	0.02	0.01	0.030	0.015
49	5.72	0.008	0.001	2.25	5.43	0.10	0.05	0.05	0.03	0.01	0.00	0.008	0.004
50	2.5	0.001	0.001	1.97	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000
51	2.19	0.059	0.001	3.75	2.08	0.00	0.00	0.04	0.02	0.00	0.00	0.000	0.000
52	4.17	0.002	0.002	2.25	3.96	0.01	0.01	0.01	0.00	0.00	0.00	0.000	0.000
53	2.5	0.002	0.004	2.25	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000
54	2.5	0.009	0.001	2.25	2.38	0.02	0.01	0.01	0.00	0.00	0.00	0.001	0.000
55	2.5	0.001	0.004	7.7	2.38	0.02	0.01	0.00	0.00	0.00	0.00	0.000	0.000
56	8.55	0.001	0.001	13.76	8.12	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000
57	15.29	0.000	0.001	4.95	14.52	1.44	0.72	0.22	0.10	0.21	0.11	0.220	0.113
58	5.5	0.001	0.003	5.34	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000
59	5.94	0.001	0.001	4.5	5.64	0.01	0.01	0.01	0.01	0.00	0.00	0.001	0.000
60	5	0.002	0.001	8.87	4.75	0.01	0.00	0.00	0.00	0.00	0.00	0.000	0.000
61	9.85	0.004	0.000	8.91	9.36	0.20	0.10	0.14	0.07	0.02	0.01	0.018	0.009
62	9.9	0.001	0.000	8.28	9.4	0.25	0.13	0.14	0.07	0.02	0.01	0.024	0.012
63	9.2	0.001	0.001	4.57	8.74	0.72	0.36	0.39	0.19	0.06	0.03	0.056	0.029
64	5.08	0.001	0.001	7.5	4.82	0.10	0.05	0.09	0.04	0.00	0.00	0.005	0.002
65	8.33	0.003	0.001	9	7.92	0.01	0.00	0.01	0.01	0.00	0.00	0.001	0.000
66	10	0.002	0.001	14.4	9.5	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000

HS Code	XXIX. Old Weighted Rate XXX.	Import Demand Elasticity		New Weighted Rate		Trade Effect (million USD)		Revenue Effect (million USD)		Consumer Surplus (million USD)		Welfare Effect (million USD)			
		10% cut XXXI.	5% cut 1.	10% cut XXXII.	5%cut XXXIII.	10% cut XXXIV	5%cut 1.	10% cut XXXV.	5% cut 1.	10% cut XXXVI.	5%cut XXXVII.	10% cut XXXVIII	5%cut 1.		
67	16	0.001	0.001	10.09	15.2	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000		
68	11.21	0.001	0.001	8.46	10.65	0.21	0.11	0.08	0.04	0.02	0.01	0.022	0.012		
69	9.4	0.000	0.003	7.4	8.93	0.18	0.09	0.07	0.03	0.02	0.01	0.015	0.008		
70	8.23	0.000	0.001	5.19	7.82	0.15	0.08	0.13	0.06	0.01	0.01	0.013	0.007		
71	5.77	0.001	0.002	4.41	5.48	0.03	0.01	0.01	0.00	0.00	0.00	0.003	0.001		
72	4.9	0.001	0.017	2.97	4.65	1.36	0.68	0.35	0.17	0.06	0.03	0.063	0.032		
73	3.3	0.001	0.004	6.14	3.13	0.77	0.39	0.87	0.44	0.02	0.01	0.020	0.011		
74	6.82	0.001	0.011	6.75	6.48	0.08	0.04	0.01	0.01	0.01	0.00	0.007	0.004		
75	7.5	0.000	0.001	5.78	7.13	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000		
76	6.42	0.000	0.008	5.4	6.1	0.33	0.17	0.07	0.03	0.02	0.01	0.030	0.015		
77	XXXIX.	0.000	0.000	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000		
78	6	0.000	0.001	9	5.7	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000		
79	10	0.001	0.001	6.3	9.5	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000		
80	7	0.001	0.001	6.3	6.65	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000		
81	7	0.001	0.001	8.37	6.65	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000		
82	9.3	0.001	0.001	5.36	8.83	0.12	0.06	0.11	0.06	0.01	0.01	0.011	0.006		
83	5.96	0.001	0.001	3.49	5.66	0.05	0.03	0.04	0.02	0.00	0.00	0.002	0.001		
84	3.87	0.001	0.031	5.61	3.68	2.83	1.41	1.70	0.85	0.10	0.05	0.138	0.071		
85	6.24	0.002	0.001	4.95	5.93	10.9	7	5.49	3.79	1.88	0.65	0.33	0.944	0.484	
86	5.5	0.001	0.009	7.51	5.22	1.84	0.92	0.05	0.03	0.10	0.05	0.174	0.089		
87	8.35	0.000	0.001	4.3	7.93	39.7	0	19.85	3.16	1.50	3.15	1.62	10.63	8	5.459
88	4.77	0.001	0.001	7.33	4.53	0.65	0.32	0.79	0.39	0.03	0.02	0.028	0.014		
89	8.14	0.002	0.001	4.74	7.74	0.05	0.02	0.00	0.00	0.00	0.00	0.004	0.002		
90	5.27	0.001	0.001	7.51	5.01	1.61	0.80	2.19	1.09	0.08	0.04	0.106	0.054		
91	8.35	0.001	0.002	8.36	7.93	0.03	0.02	0.03	0.01	0.00	0.00	0.002	0.001		
92	9.29	0.001	0.004	11.92	8.82	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000		
93	13.25	0.001	0.013	9.62	12.59	1.91	0.96	0.07	0.03	0.24	0.12	0.291	0.149		
94	10.69	0.001	0.001	9.37	10.15	0.46	0.23	0.61	0.30	0.05	0.02	0.053	0.027		
95	10.41	0.000	0.000	0	9.89	0.00	0.03	0.00	0.03	0.00	0.00	0.000	0.003		
96	7.69	0.001	0.002	6.92	7.3	0.02	0.01	0.02	0.01	0.00	0.00	0.002	0.001		
97	16	0.001	0.001	14.4	15.2	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000		

Appendix III: HS product code and product name

HS code	Name of products
01	Live animals
02	Meat and edible meat offal
03	Fish and crustaceans, molluscs and other aquatic invertebrates
04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included
05	Products of animal origin, not elsewhere specified or included
06	Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage
07	Edible vegetables and certain roots and tubers
08	Edible fruit and nuts; peel of citrus fruit or melons
09	Coffee, tea, mate and spices
10	Cereals
11	Products of the milling industry; malt; starches; inulin; wheat gluten
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder
13	Lac; gums, resins and other vegetable saps and extracts
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included
15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes
16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates
17	Sugars and sugar confectionery
18	Cocoa and cocoa preparations
19	Preparations of cereals, flour, starch or milk; pastrycooks' products
20	Preparations of vegetables, fruit, nuts or other parts of plants
21	Miscellaneous edible preparations
22	Beverages, spirits and vinegar
23	Residues and waste from the food industries; prepared animal fodder
24	Tobacco and manufactured tobacco substitutes
25	Salt; sulphur; earths and stone; plastering materials, lime and cement
26	Ores, slag and ash
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes
29	Organic chemicals
30	Pharmaceutical products
31	Fertilisers
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks

33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations
34	Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing or scouring preparations, candles and similar articles, modelling pastes, "dental waxes" and dental preparations with a basis of plaster
35	Albuminoidal substances; modified starches; glues; enzymes
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations
37	Photographic or cinematographic goods
38	Miscellaneous chemical products
39	Plastics and articles thereof
40	Rubber and articles thereof
41	Raw hides and skins (other than furskins) and leather
42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut)
43	Furskins and artificial fur; manufactures thereof
44	Wood and articles of wood; wood charcoal
45	Cork and articles of cork
46	Manufactures of straw, of esparto or of other plaiting materials; basketware and wickerwork
47	Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard
48	Paper and paperboard; articles of paper pulp, of paper or of paperboard
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans
50	Silk
51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric
52	Cotton
53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn
54	Man-made filaments
55	Man-made staple fibres
56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof
57	Carpets and other textile floor coverings
58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery
59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use
60	Knitted or crocheted fabrics
61	Articles of apparel and clothing accessories, knitted or crocheted
62	Articles of apparel and clothing accessories, not knitted or crocheted
63	Other made up textile articles; sets; worn clothing and worn textile articles; rags
64	Footwear, gaiters and the like; parts of such articles
65	Headgear and parts thereof
66	Umbrellas, sun umbrellas, walking-sticks, seat-sticks, whips, riding-crops and parts thereof

67	Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles of human hair
68	Articles of stone, plaster, cement, asbestos, mica or similar materials
69	Ceramic products
70	Glass and glassware
71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof; imitation, jewellery; coin
72	Iron and steel
73	Articles of iron or steel
74	Copper and articles thereof
75	Nickel and articles thereof
76	Aluminium and articles thereof
77	(Reserved for possible future use in the Harmonized System)
78	Lead and articles thereof
79	Zinc and articles thereof
80	Tin and articles thereof
81	Other base metals; cermets; articles thereof
82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal
83	Miscellaneous articles of base metal
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles
86	Railway or tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signalling equipment of all kinds
87	Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof
88	Aircraft, spacecraft, and parts thereof
89	Ships, boats and floating structures
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof
91	Clocks and watches and parts thereof
92	Musical instruments; parts and accessories of such articles
93	Arms and ammunition; parts and accessories thereof
94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated nameplates and the like; prefabricated buildings
95	Toys, games and sports requisites; parts and accessories thereof
96	Miscellaneous manufactured articles
97	Works of art, collectors' pieces and antiques
98	(Reserved for special uses by Contracting Parties) 99 (Reserved for special uses by Contracting Parties)



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