

# Liberalizing Bangladesh's Services Trade: Is Joining Trade in Services Agreement the Way to Go?

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**Susara J. Jansen Van Rensburg<sup>1</sup>**  
**Riaan Rossouw<sup>2</sup>**  
**Wilma Viviers<sup>3</sup>**

## Abstract

Although currently limited, services trade holds great potential for Bangladesh, as services already make a major contribution to GDP and employment. Services represent an important alternative (in the longer term) or complement (in the shorter term) to ready-made garments (RMGs), which have long dominated Bangladesh's export mix. The country is poised to see declining RMG export revenues when the country graduates out of least developed country (LDC) status and loses its trade preferences in global markets. To build domestic capacity with a view to developing its services export sector, Bangladesh needs to open its market to services imports. But what approach would be best? Can a plurilateral trade agreement (PTA) like the Trade in Services Agreement (TiSA), whose members have sought to stimulate their services sectors through more liberalized trade, ever be an option? We use a dynamic computable general equilibrium (CGE) model to simulate the effects of TiSA membership on Bangladesh's economy. The results show that, overall, Bangladesh would derive marginal benefit from TiSA, but employment and exports would suffer. The worst-affected sectors would be agriculture and textiles and clothing, the country's largest employers. To lessen

<sup>1</sup> Senior Lecturer in International Trade, School of Economic Sciences, North-West University, Potchefstroom, South Africa.

<sup>2</sup> Extraordinary Associate Professor, School of Economics, North-West University, Potchefstroom, South Africa.

<sup>3</sup> Research Professor and WTO Chair, Trade Research Focus Area, School of Economics, North-West University, Potchefstroom, South Africa.

## Corresponding author:

Susara J. Jansen Van Rensburg, Senior Lecturer in International Trade, School of Economic Sciences, North-West University, Private Bag X1290, Potchefstroom 2520, South Africa.

E-mails: [11798661@nwu.ac.za](mailto:11798661@nwu.ac.za); [adeliajansenvanrensburg@gmail.com](mailto:adeliajansenvanrensburg@gmail.com)

the impact of increased foreign competition, a regional trade approach is recommended, supported by a sound national services strategy which would include a roadmap for tackling the country's myriad supply-side shortcomings.

**JEL: F13, F14, F15, F16**

### **Keywords**

Bangladesh, computable general equilibrium modelling, trade liberalization, trade in services, trade in services agreement

## **Introduction**

Bangladesh has a vibrant services sector with a great deal of potential. During the 2016–2017 financial year, services contributed an impressive 53 per cent to Bangladesh's GDP, while manufacturing contributed 33 per cent and agriculture 15 per cent (Bangladesh Bureau of Statistics [BBS], 2017). In the same period, services accounted for 38 per cent of the country's total employment (BBS, 2017). The sectors with the most potential included information and communication technology (ICT) and ICT-related services, tourism, accounting and auditing, architecture and engineering and nursing and midwifery (UNCTAD, 2016). Services also constitute valuable inputs in the production of goods—especially ready-made garments (RMGs) which contribute 12 per cent to GDP and are Bangladesh's leading export (BBS, 2017).

The growing importance of services to Bangladesh's economy has also prompted a significant rise in cross-border services trade, with total services trade growing from US\$2.4 billion in 2000 to over US\$13.1 billion in 2017 (ITC, 2018). Imports were dominated by commercial services, transport services, financial services, travel and other business services and exports by commercial and government services followed by telecommunications, computer and information services, other business services and transportation and travel services (ITC, 2018). Bangladesh's services trade with individual countries is, however, difficult to establish because of challenges in the collection of relevant data.<sup>1</sup>

Despite stronger performance on the services trade front, the contribution of services to Bangladesh's total trade remains comparatively small. To illustrate, in 2017<sup>2</sup> Bangladesh's goods imports amounted to US\$47.7 billion and goods exports to US\$40.5 billion, while services imports amounted to only US\$9.2 billion and services exports to only US\$3.8 billion (ITC, 2018). This means services contributed only 14.8 per cent to Bangladesh's total trade basket<sup>3</sup> that year (ITC, 2018). While it is tempting to view the small contribution of services to total trade as a problem, it also signals an opportunity since there is much room for growth. If Bangladesh were to leverage this opportunity, services could provide an effective route towards much-needed diversification in the country's exports.

Bangladesh has an extremely concentrated goods export sector, with RMGs accounting for 82 per cent of total exports. Furthermore, more than 80 per cent of

RMG exports are destined for only two markets—Europe and the USA (Bangladesh Knitwear Manufacturers and Exporters Association [BKMEA], 2016). While Bangladesh has achieved the distinction of being the second largest RMG exporter in the world after China (BKMEA, 2016), its excessive export concentration carries many underlying risks. Various policy documents and academic papers make reference to this problem—see Vision 2021 (Centre for Policy Dialogue, 2007), the Seventh Five-Year Plan (Government of Bangladesh, Planning Commission, 2015a), Export Policy 2015–2018 (Government of Bangladesh, Ministry of Commerce, 2015b) and Rahman (2008).

Although Bangladesh has introduced some notable trade policy reforms since the early 1990s (Rahman, 2008), it has never pursued an aggressive market opening strategy because, as a least developed country (LDC), it has always enjoyed duty-free access into major markets under the Generalized System of Preferences (GSP) scheme. Bangladesh has adopted a modest services trade liberalization approach (Raihan, 2013). Under the General Agreement on Trade in Services (GATS), Bangladesh has unilaterally liberalized only some services sub-sectors and has been actively involved in the negotiation of the services waiver in the World Trade Organization (WTO).<sup>4</sup> The country has also negotiated a number of regional services trade arrangements.<sup>5</sup> However, none of these liberalization efforts has generated any quantifiable trade benefits.

Services trade (and the liberalization thereof) will inevitably be brought into sharper focus when Bangladesh graduates out of LDC status—a phased process spanning the period 2018–2024 (United Nations [UN], 2017). When the transition is complete, the country will no longer enjoy the duty-free/quota-free provisions extended to LDC exporters. Bangladesh will also face a number of additional tariffs in foreign markets, which could result in some export losses due to reduced competitiveness. In addition, for the services sector specifically, Bangladesh will no longer enjoy the special and differential treatment (SDT) provided for in both the LDC services waiver under GATS and certain regional services agreements.

Although the transition to lower-middle-income country status will herald a number of economic and geo-political benefits, it will also subject the country to a much more competitive global trading environment. Without LDC preferences, Bangladesh's flagship RMG export sector will find itself under increasing pressure. Export diversification is clearly a key element in bringing about a smooth transition, with services offering particular potential in this regard. Although the assumed loss of its services-related SDT will present Bangladesh with some challenges in foreign markets, the fact that services are already making such an important contribution to the economy means that they are a strong contender as an export diversification option.

Building a stronger services export base goes hand in hand with driving a more liberal services import agenda, particularly in sectors such as financial services, telecommunications and energy, which are constantly changing and require high levels of investment, technology and expertise. Therefore, if Bangladesh is to give serious attention to building its services export capabilities—both stand-alone services and value-added service inputs—it must also examine its services import regime and liberalization strategy. Of course, the fear of foreign entities taking up

a dominant position in the local market and impeding the development of local service providers is an all-too-common phenomenon in the developing world. Yet, few service sectors these days, especially given their increasingly technological character, can flourish without external influence. Achieving an appropriate blend of foreign influence (and investment) and home-grown expertise—to produce a sustainable, rather than a dependent, local industry—should be the goal.

A number of countries have been negotiating the Trade in Services Agreement (TiSA), which provides for the progressive liberalization of signatory countries' services markets and preferential access for their services exports. Bangladesh is not currently a signatory to TiSA, but as its services sector (including exports) is poised for strong growth in the years ahead, participating in TiSA (or a TiSA-like agreement) could help to fast track its services sector development.

In this article, a dynamic computable general equilibrium (CGE) model is used to provide, via a cost–benefit analysis, a rare glimpse into how Bangladesh would likely be affected if it were to become a signatory to TiSA. As the quantitative approach unpacks the relative value of TiSA to Bangladesh in a systematic manner, it should allow more informed decision-making.

The remainder of the article is arranged as follows: the second section presents the literature review. The third section discusses the data methodology and results are explained in the fourth section. Finally, the concluding remarks are drawn in the fifth section.

## **Literature Review**

From the literature, it is clear that increased openness of trade in services leads to higher economic growth (Mattoo, Rathindran, & Subramanian, 2006; Mattoo, Stern, & Zanini, 2007) and development (Hoekman & Te Velde, 2017), while empirical evidence concludes that the welfare gains from services liberalization are substantial (Saez & Goswami, 2010). This is also true for developing countries and LDCs (Cattaneo, Engman, Sáez, & Stern, 2010; Goswami, Mattoo, & Sáez, 2012).

Services imports can significantly enhance the productivity and competitiveness of local services firms by improving efficiency, performance and quality and lowering prices. They also encourage international best practice and enhanced skills and attract technologies and investment capital (Cali, Ellis, & Te Velde, 2008). Services exports, in turn, can offer dynamic opportunities for countries to expand their exports and improve economic performance (Francois & Hoekman, 2010). They open up both traditional and new export opportunities and represent an important avenue for export diversification (Cattaneo et al., 2010). They are also a key channel through which countries can exploit their comparative advantages (Hoekman, 2017) and often enable countries to 'leap-frog' over manufacturing along the development continuum (Loungani, Mishra, Papageorgiou, & Wang, 2017).

The important role of services in South Asian economies (Bangladesh, India, Nepal, Pakistan and Sri Lanka) has been extensively studied. According to the

World Bank (2010), most of the high and sustained growth and rapid economic development that South Asia has experienced over the past few years has been the result of the ‘services revolution’ and not industrialization as conventionally thought. As a result, many South Asian economies continue to prioritize services, while the liberalization of services trade has become part of a ‘critical economic agenda’ for many (Raihan, 2013). Most studies agree that greater services trade liberalization could deliver significant benefits to South Asia (see e.g., Chanda, 2011, 2015; Kelegama, 2009; Raihan, 2008, 2013; Schott, Lee, & Muir, 2012). Yet, such benefits will only be experienced once domestic services sectors are strengthened through the elimination of major capacity constraints, like inadequate legal provisions, a lack of regulatory structures, shortages of skilled workers, infrastructural bottlenecks and unfriendly administrative structures (Chanda, 2015; Kelegama, 2009).

For Bangladesh in particular, domestic capacity constraints threaten the development of the services sector, particularly services trade. The Services Policy Review of Bangladesh, which was conducted by UNCTAD (2016), revealed that the biggest challenge that the country faces in liberating its services trade is severe domestic capacity constraints in those sectors with the greatest potential (both domestic and export). Empirical studies conducted by Raihan (2008, 2013), which measured the domestic preparedness of South Asian countries to liberalize their services sectors, showed that Bangladesh and Nepal were the least competitive and therefore also the least prepared to liberalize their services trade. Another study by Rahman (2000), which considered Bangladesh’s trade relations with India, confirmed this and showed that if Bangladesh wanted to develop its service trade, it would have to become much more cost-efficient and competitive.

The impact of greater trade openness on Bangladesh’s employment levels must not be overlooked. Although a more liberal approach to services trade often generates new employment opportunities (UNCTAD, 2013), this is not always the case. A study by Rahman, Shadat and Raihan (2007), which examined the effects of trade liberalization on employment in Bangladesh since the early 1980s, revealed (through CGE modelling) that continued liberalization would generate employment in some sectors, such as export-oriented manufacturing, while other sectors, such as non-export-oriented agriculture and services, would witness no—or even a decline in—employment growth.

Another, similar study by Chanda (2011), which looked at the impact of services trade liberalization on the employment and mobility of people in Bangladesh, India, Pakistan and Sri Lanka, revealed that the services sector’s contribution to employment had not kept pace with its growing contribution to output and GDP growth (Chanda, 2011, p. 14). This is cause for concern because if a country wants to expand its services sector and services trade, services-related employment needs to keep pace with the growth rate of the sector. If there is an insufficient number of workers to provide services, services exports will suffer.

Now that a foundation has been laid as to why services trade liberalization is important, we will examine TiSA a little more closely.

TiSA is a plurilateral trade agreement (PTA) whose signatories are Australia, Canada, Chile, Colombia, Costa Rica, the European Union, Hong Kong, Iceland,

Israel, Japan, South Korea, Liechtenstein, Mauritius, Mexico, New Zealand, Norway, Pakistan, Panama, Peru, Switzerland, Taiwan, Turkey and the USA. Together, these countries account for 70 per cent of world services trade (European Commission, 2017). The motivation behind TiSA was to build on signatories' GATS commitments and the liberalization progress made in other preferential agreements (Ecorys, 2017) but also to develop new disciplines and trade rules on services and reduce the trade barriers that constrain services exports (European Commission, 2017).

The TiSA negotiations cover a wide range of services, including financial services, telecommunications and e-commerce, professional services, transport services, delivery services, energy services, temporary entry of business persons and government procurement, as well as new rules on domestic regulations which could act as a barrier to trade (European Commission, 2017). The negotiations are presently on hold due to various political concerns among the negotiating parties (Ecorys, 2017). The idea is to ultimately 'multilateralize' TiSA into a WTO agreement. Precisely, how this will be done remains uncertain, but a number of possibilities exist.<sup>6</sup>

What we know from the available literature on PTAs is that in the past, LDCs have largely been wary of these agreements because: (a) they mostly end up reflecting the interests and practices of the initial signatories, who also define the rules of the game (Nakatomi, 2013); (b) the trade gains become unequally distributed among the signatory parties because of differences in economic size and comparative advantage, which could exclude or marginalize LDCs and (c) the non-reciprocal preferences that are automatically extended to LDCs have left little incentive for these countries to become signatories to PTAs (Dupuy, 2015; Hoekman & Mavroidis, 2015).

This study makes an important contribution to the literature because, while services trade liberalization is by no means a new topic, there have been relatively few studies conducted on this topic from a South Asian perspective. Moreover, little empirical work has been done on the impact—from a quantitative perspective—of liberalization of services trade on LDCs. Bangladesh makes for a particularly interesting case study because it is an LDC at the crossroads, with pressure mounting to reduce its dependence on RMG exports which have benefited greatly from the special trade preferences afforded to LDCs. The services sector, therefore, appears to offer promising alternatives on the export front—or does it? Moreover, how will an agreement like TiSA, given its broad scope, affect a small LDC like Bangladesh?

## **Data and Methodology**

To quantify the potential impact of TiSA on Bangladesh, we use a dynamic CGE model with two policy scenarios: (A) where Bangladesh does not join TiSA and (B) where Bangladesh joins TiSA. We present the modelling results for the period 2016–2025, with 2025 being the date by which we assume TiSA would be fully implemented.

To estimate the size of the shocks modelled, we follow an approach described by Ecorys (2017), where joining TiSA would result in more secure market access by eliminating the ‘binding overhang’—that is, the gap between a country’s market access commitments under GATS and the actually applied policies. Because trade economists (see e.g., Miroudot & Pertel, 2015) often assert that a large binding overhang makes a country’s trade policies less predictable, the approach we used assumes that this unpredictability would, to a large extent, be eliminated when countries joined TiSA. To accommodate for this in the CGE modelling, our first step is to estimate the trade cost reduction equivalents (TCREs) that result from eliminating the binding overhang when Bangladesh joins TiSA, while our second step is to specify the CGE scenarios using the estimated TCREs. This approach is discussed below.

### *Modelling Framework*

We implement the various simulations using the dynamic GTAP model (hereafter called GDyn). The GDyn is a multi-sector, multi-region, recursive dynamic CGE model, developed by Ianchovichina and McDougall (2000). Like the standard GTAP model (Hertel, 1997), it contains bilateral trade flows, a complex consumer demand function and factor mobility across sectors (Ianchovichina & Walmsley, 2012), but it also incorporates dynamic behaviour.

The GDyn replicates the circular flow of funds and in doing so allows the modeller to simulate the core economic interactions in an economy. According to Hertel (1997), an economy has a regional agent that distributes expenses between a private household, global saving and government consumption through an aggregate utility function. The regional agent’s revenues are the sum of taxes, tariffs on imports and exports and income from the ownership of capital and wages paid to labour and from the value of producers’ sales. Domestic private households spend their income on purchasing domestic and imported goods and services, which generates income for national governments in the form of import tariffs, consumption taxes and savings. Producers sell their output to domestic and foreign consumers, with revenues consisting of the total value of the private sector at market prices, the total value of government at market prices, intermediate consumption among producers and exports to foreign consumers. Producers also purchase goods and services for use in production from private agents and in doing so, pay intermediate taxes and import taxes. The GDyn model also assumes zero profit for producers, which means that all revenues generated are spent (Magalhães & Domingues, 2014).

The GDyn model is well suited to this study since TiSA was applied to a relevant market, and its focus is on bilateral trade in services. The core specification of the GDyn is mimicked in the standard GTAP model by including perfect competition and constant returns to scale (Magalhães & Domingues, 2014). Production is explained using a series of nested, constant elasticity of substitution (CES) functions that combined intermediate inputs (i.e., raw materials) and factors of production (i.e., unskilled and skilled labour, capital, land and natural resources),

subject to technological constraints and assuming that all producers were profit maximizers. Demand by each domestic agent (households, governments, firms) is defined by Armington preferences—that is, imperfect substitution between the demand for locally produced goods and services and imports from each sourcing country. (The various elasticities used are discussed in Hertel & Van der Mensbrugghe, 2016.)

Regarding savings, households allocate regional income that maximized per capita utility based on a Cobb–Douglas utility function. An aggregate regional household represents the final demand in each country or region. Final demand is consisted of a Cobb–Douglas combination of private household consumption, savings and government spending. Private consumption maximization is captured through a constant difference of elasticity (CDE) function. The government consumption follows a Cobb–Douglas function, which implies a constant share of public spending on goods and services. Savings is a residual element of the country's income and determines the net investment in the economy (Magalhães & Domingues, 2014).

Regarding trade, the GDyn model determines global markets for products. Therefore, the global trade balance is determined by the supply and demand conditions in all countries. The demand for imports in a country or region is subject to the country's/region's demand for imported inputs and the final consumption of goods and services (Ianchovichina & Walmsley, 2012).

### *Model Database and Data Aggregation*

The GDyn model is calibrated to the GTAP-9 database (see Aguiar, Narayanan, & McDougall, 2016) with full bilateral trade and protection data through intersectoral linkages among regions for the benchmark year of 2011. Production, trade and income elasticities are drawn from the GTAP behavioural database (see Hertel & Van der Mensbrugghe, 2016). The original GTAP-9 database includes 140 regions which were aggregated to 24 regions (23 core TiSA signatories and Bangladesh) and 57 sectors, which are aggregated to 25 sectors, with the services sectors left as individual sectors (see Table 1).

### *Macro Closure*

In the study, we apply a neutral set of macro closure rules. The GDyn model closure relates to the specification of variables that are calculated by the model itself (endogenous) and those defined externally (exogenous) (Hertel, 1997). Like Willenbockel (2013), the current account balances of each region are assumed to be fixed with real exchange rates able to adjust to maintain external equilibrium. It also incorporates the five factors of production. Labour, land and natural resources are assumed fixed and immobile between regions. Labour supply is specified exogenously using historical and forecast data. Land and natural

**Table 1.** Aggregated GTAP-9 Database Sectors

| No. | Aggregated 25* Sectors                                            | 57 Sectors in GTAP-9                                                                                                                                                                                                                                                                                                                     |
|-----|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Agriculture                                                       | 1. Paddy rice. 2. Wheat. 3. Cereal grains <sup>^</sup> .<br>4. Vegetables, fruits, nuts. 5. Oil seeds. 6. Sugar cane, sugar beet. 7. Plain-based fibres. 8. Crops <sup>^</sup> .<br>9. Bovine cattle, sheep and goats, horses.<br>10. Animal products <sup>^</sup> . 11. Raw milk. 12. Wool, silkworm cocoons. 13. Forestry. 14. Fishing |
| 2   | Extraction                                                        | 15. Coal. 16. Oil. 17. Gas. 18. Mineral <sup>^</sup>                                                                                                                                                                                                                                                                                     |
| 3   | Food and beverages                                                | 19. Bovine meat products. 20. Meat products <sup>^</sup> .<br>21. Vegetable oils and fats. 22. Dairy products.<br>23. Processed rice. 24. Sugar. 25. Food products <sup>^</sup> .<br>26. Beverages and tobacco products                                                                                                                  |
| 4   | Textiles, wearing apparel and leather products                    | 27. Textiles. 28. Wearing apparel. 29. Leather products                                                                                                                                                                                                                                                                                  |
| 5   | Wood products, furniture, paper products, printing and publishing | 30. Wood products. 31. Paper products, publishing                                                                                                                                                                                                                                                                                        |
| 6   | Petroleum, chemical, rubber and plastic products                  | 32. Petroleum, coal products. 33. Chemical, rubber, plastic products                                                                                                                                                                                                                                                                     |
| 7   | Motor vehicles and transport equipment                            | 38. Motor vehicles and parts. 39. Transport equipment <sup>^</sup>                                                                                                                                                                                                                                                                       |
| 8   | Electrical and electronic products                                | 40. Electronic equipment. 41. Machinery and equipment <sup>^</sup>                                                                                                                                                                                                                                                                       |
| 9   | Other manufactures                                                | 34. Mineral products n.e.c. 35. Ferrous metals.<br>36. Metals <sup>^</sup> . 37. Metal products. 42. Manufactures <sup>^</sup>                                                                                                                                                                                                           |
| 10  | Utilities                                                         | 43. Electricity. 44. Gas manufacture, distribution.<br>45. Water                                                                                                                                                                                                                                                                         |
| 11  | Construction                                                      | 46. Construction                                                                                                                                                                                                                                                                                                                         |
| 12  | Trade                                                             | 47. Trade                                                                                                                                                                                                                                                                                                                                |
| 13  | Transport <sup>^</sup>                                            | 48. Transport <sup>^</sup>                                                                                                                                                                                                                                                                                                               |
| 14  | Sea transport                                                     | 49. Sea transport                                                                                                                                                                                                                                                                                                                        |
| 15  | Air transport                                                     | 50. Air transport                                                                                                                                                                                                                                                                                                                        |
| 16  | Communication                                                     | 51. Communication                                                                                                                                                                                                                                                                                                                        |
| 17  | Financial services <sup>^</sup>                                   | 52. Financial services <sup>^</sup>                                                                                                                                                                                                                                                                                                      |
| 18  | Insurance                                                         | 53. Insurance                                                                                                                                                                                                                                                                                                                            |
| 19  | Business services <sup>^</sup>                                    | 54. Business services <sup>^</sup>                                                                                                                                                                                                                                                                                                       |
| 20  | Recreation and other services                                     | 55. Recreation and other services                                                                                                                                                                                                                                                                                                        |
| 21  | Public administration, defence, education, health                 | 56. Public administration, defence, education, health                                                                                                                                                                                                                                                                                    |
| 22  | Dwellings                                                         | 57. Dwellings                                                                                                                                                                                                                                                                                                                            |

**Source:** Aggregation by the authors, based on the GTAP-9 database.

**Notes:** \*The 12 service sectors (i.e., 11–22) were left as individual sectors in the model and not aggregated to any group. <sup>^</sup>Not elsewhere specified.

resources are fixed and determined by historical growth rates. Changes in aggregate absorption are assumed to be shared equally among private household consumption, government and investment demands. Regarding the savings–investment balance, real investment is fixed, and the marginal propensity to save in each region equilibrates the account. There are also some data challenges that are needed to be overcome, which are explained below.

### *Trade in Services Data Limitations and the Approach Used in the Dynamic GTAP Model*

Trade in services can be defined in terms of four modes of supply: Mode 1 covers services supplied by one country to another; Mode 2 captures consumers or firms using a service in another country; Mode 3 captures a foreign company setting up subsidiaries or branches to provide services in another country; and Mode 4 constitutes all individuals travelling to another country to supply a service (WTO, 2015).

As services are intangible, non-transportable and non-storable, it makes them difficult to identify, track or trace, and it complicates the application of at-the-border duties. This leads to weak compilation practices and data that is often incomplete, inaccurate and too aggregated (Schott et al., 2012; UNCTAD, 2013). Some GTAP projects have attempted to address the data challenges (see Van Leeuwen & Lejour, 2006) but Mode 3 and Mode 4, which constitute nearly 60 per cent of all cross-border services trade, remain difficult to measure.

### *Simulation Design*

As mentioned, the policy scenarios modelled are built on work by Ecorys (2017). To quantify the potential impact of TiSA, we assume that the outcome of TiSA would be to bind the existing level of liberalization (or current market access commitments of TISA signatories). It might be that some countries would want to improve their commitments to Bangladesh, but these are impossible to predict and simulate because they will flow from the negotiations.

Binding the existing level of market access across TiSA participants is important because there are substantial differences between the market access commitments under GATS and the actually applied policies (the ‘binding overhang’) (Miroudot & Pertel, 2015). The challenge with the ‘binding overhang’ is that countries are allowed to lower or increase their trade measures as they see fit, thereby creating much policy uncertainty which might eventually negatively impact trade (Miroudot & Pertel, 2015).

If the currently applied market access measures are bound, as provisioned for in TiSA, there would no longer be any uncertainty, and this would give services exporters more security. For this to happen, the gap between the GATS commitments and the current market access commitments would need to be closed.

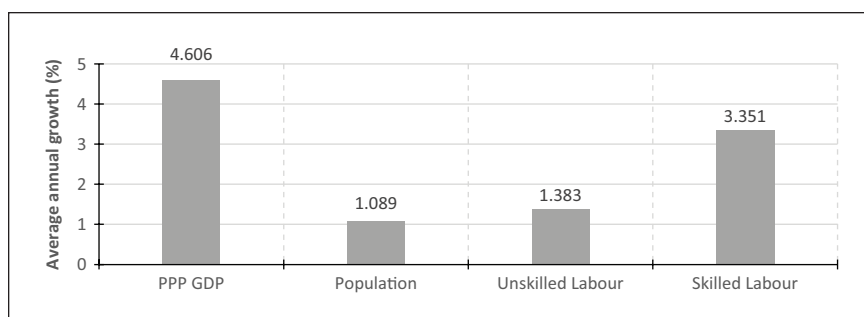
This would require the new commitments to be bound at current market access levels instead of at GATS levels. To depict this, a baseline scenario and two policy scenarios are modelled.

The aim of the baseline scenario is to explain how the situation would evolve without any change in policy and to compare the different policy scenarios with each other. For the baseline scenario, the model draws on historical data for GDP, population and skilled and unskilled labour supply for the period 2012–2025 from the IMF's World Economic Outlook (WEO) database (IMF, 2016) as well as long-run projections from Chappuis and Walmsley (2011), which are derived from Fouré, Bénassy-Quéré, and Fontagné (2013). According to these projections, the GDP (purchasing power parity [PPP] basis) of Bangladesh would grow at an average annual rate of 4.606 per cent, the population at 1.089 per cent, unskilled labour at 1.383 per cent and skilled labour at 3.351 per cent for the period (see Figure 1). As expected, for the services sector, there would also be a noticeable shift from unskilled labour to skilled labour.

The baseline scenario also includes preferential trade agreements (PTAs) that have been concluded among the TiSA signatories, such as the TPP (Trans-Pacific Partnership) and the EU–Singapore, EU–Canada and EU–Korea free trade agreements. It is assumed that these PTAs had achieved a binding of policies at current levels of market access for all sectors (except public services and air transport).<sup>7</sup>

For scenario A (Bangladesh does not join TiSA), we bound the current market access commitments across all current TiSA signatories for all service sectors, except public services and air transport. A fundamental assumption in this scenario is that 90 per cent of the trade costs relating to the new binding would be achieved. Furthermore, the binding of policies at the current level of market access would apply only to those country combinations that did not have any PTA in place, while for the countries that did have PTAs in place, it is assumed that TiSA would not bring further bindings. As a result, no reductions in trade costs are modelled.

For scenario B (TiSA is expanded to include Bangladesh), a key assumption is that TiSA signatories would commit to binding their policies at the current or



**Figure 1.** Baseline Projections for Bangladesh, 2011–2025

**Source:** Authors' calculations based on the WEO database (IMF, 2016) and Fouré et al. (2013).

applied market access levels instead of the GATS commitments. This implies that the gap between the GATS commitments and the actual market access commitments is closed for all TiSA signatories. The rationale here is that there would be a reduction in the cost to trade if more countries reduce their binding overhang. It would, therefore, be necessary to measure the reduction in trade costs brought about by the reduction in the gap between bound policy commitments under GATS and actual applied policy (see Ecorys, 2017).

We use the GDyn variable *ams*—import-augmenting technical change—to simulate the estimated trade cost reduction equivalents by sector. We measure the percentage point trade costs as a share of the cost of producing services for sale in a destination market, for binding at current actual market access levels and the sectors affected by applying a positive shock to the technical efficiency of the trade flow (see Figure 3).

Shocks to the *ams* variable impact trade through the effect of prices and the tradeable quantity of services. Removing the binding overhang impacts the variable costs of services trade (i.e., the cost of exporting services), which has a direct impact on prices. The shock results in a reduction in the effective price of imports, making services from a particular country or region relatively more attractive (Hertel, McDougall, & Itakura, 2001). In contrast to goods trade agreements, which include tariff liberalization, TiSA will not see any tariff liberalization or losses in tariff revenues and, because there are no revenue implications with *ams*, there is no need to recalibrate the benchmark model.

We use the Ecorys (2017) regression results to calculate effectively applied Ad-valorem equivalents (AVE) (or trade costs) for our simulations, using the following equation:

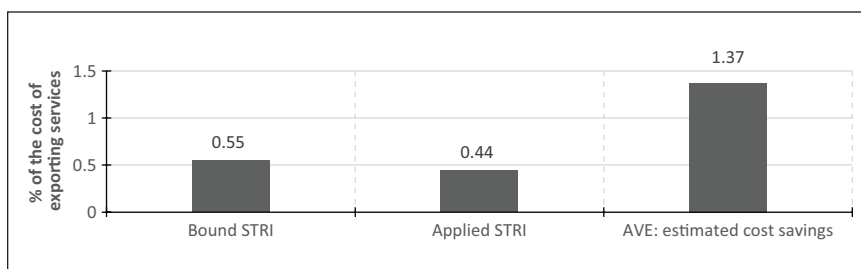
$$AVE_j = \left( \exp \left( \frac{-0.006}{-4.775} \times 15 \right) - 1 \right) \times 100 = 1.90\% \quad (1)$$

where  $-4.775$  is the AVE coefficient or trade price elasticity,  $-0.006$  is a semi-elasticity of the index point change in binding overhang based on the services trade restrictiveness index (STRI) values per cent change in the log value of trade and 15 is the percentage point difference between the bound and applied STRI values.

Using Equation 1, we could calculate the AVE for the various TiSA signatories. The estimated AVE for a 15-point STRI overhang is 1.9 per cent—that is, bringing the bindings in line with actual or current market access yielded estimated trade volume effects in this case that were comparable to a 1.9 per cent reduction in trade costs, measured as a share of the cost of exports. This means that, on average, exporters could be expected to respond as if the cost of producing services for sale in a given TiSA destination market fell by 1.9 per cent, which reflects a response to more secure market access (Ecorys, 2017).

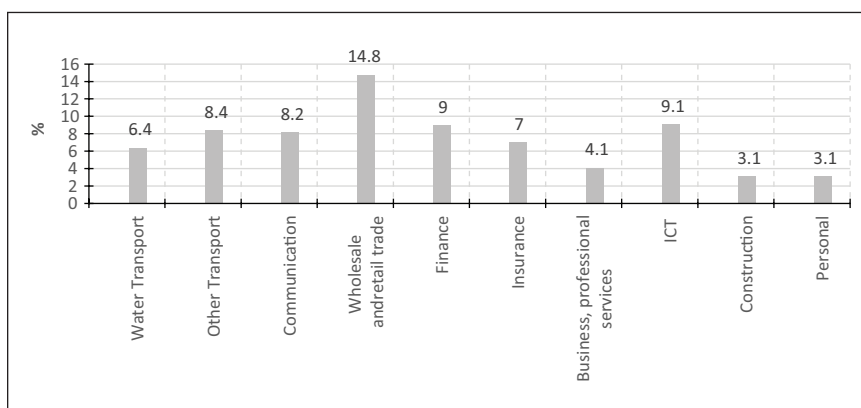
For Bangladesh, the GATS commitments (0.55%) are far less liberal than the actual policy (of 0.44%), and Bangladesh faces a high (142.4%) trade cost ad valorem equivalent (see Figure 2).

By using the STRI values and coefficients from Ecorys (2017) and by moving the services bindings from the bound rate to actual market access, Bangladesh



**Figure 2.** Estimated Trade Cost Savings, in Tariff Equivalent From Eliminating the Binding Overhang

**Source:** Authors' calculations based on WEO database (IMF, 2016) and Fouré et al. (2013).



**Figure 3.** TCRES by Sector as % Points Mapped to GDyn Sectors Based on Full (100%) Binding

**Source:** Authors' calculations based on WEO database (IMF, 2016) and Fouré et al. (2013).

would save 1.37 per cent of all the costs related to services exports (see Figure 2). The sectors that would experience the most reductions in trade costs, when TiSA is fully implemented at a 100 per cent binding, are trade (wholesale and retail trade or distribution), ICT services, finance, communication and other transport services (see Figure 3).

## Discussion of Results

Table 2 provides a summary of the macroeconomic impact that scenario A (not joining TiSA) and scenario B (joining TiSA) would have on the Bangladesh economy for the year 2025. TiSA is expected to have a positive impact on real GDP growth, and even though this estimated impact is small, the growth in GDP would still be more significant than the growth in GDP without TiSA.<sup>8</sup> This is because under TiSA, services would become cheaper and income would rise. Investment

**Table 2.** Projected Impact of TiSA on Key Macroeconomic Variables in Bangladesh in 2025

| GDyn Variables                                    | % Point Change<br>from the Baseline<br>Scenario A<br>(not joining TiSA) | % Point Change<br>From the Baseline<br>Scenario B<br>(joining TiSA) |
|---------------------------------------------------|-------------------------------------------------------------------------|---------------------------------------------------------------------|
| Real GDP                                          | 0.0007                                                                  | 0.0030                                                              |
| Investment                                        | 0.0030                                                                  | 0.0045                                                              |
| Equivalent variation (welfare) (in US\$ millions) | 6.9                                                                     | 16.2                                                                |
| Real national income                              | 0.0049                                                                  | 0.0242                                                              |
| Value of imports                                  | 0.0105                                                                  | 0.0164                                                              |
| Volume of imports                                 | 0.0275                                                                  | 0.0377                                                              |
| Value of exports                                  | 0.0161                                                                  | 0.0236                                                              |
| Volume of exports                                 | 0.0177                                                                  | 0.0125                                                              |
| Terms of trade                                    | 0.0150                                                                  | 0.0306                                                              |
| Factor income                                     | 0.0064                                                                  | 0.0266                                                              |
| Output                                            | -0.0043                                                                 | -0.0095                                                             |
| Unskilled employment                              | -0.0019                                                                 | -0.0111                                                             |
| Skilled employment                                | -0.0027                                                                 | -0.0158                                                             |

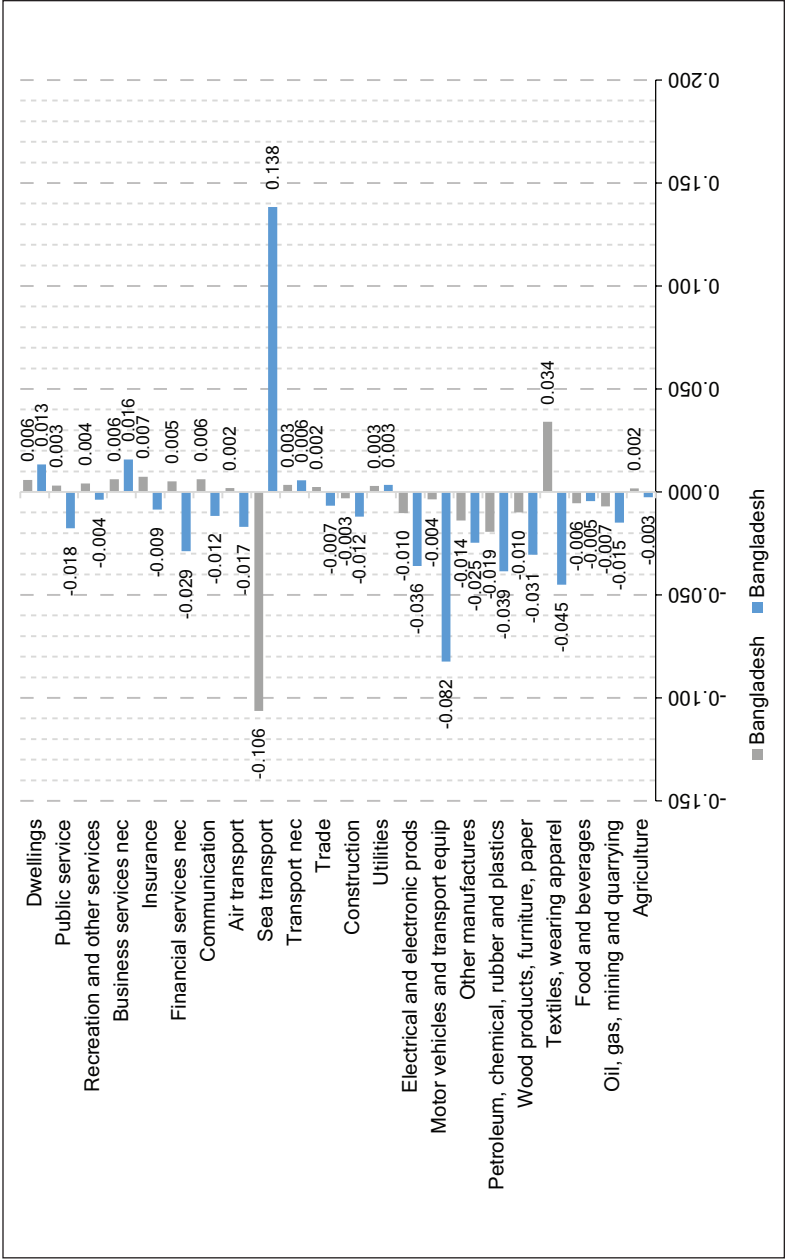
**Source:** Authors' GDyn model results.

would also increase, and this would be driven by an increase in domestic and foreign wealth in domestic assets. Regarding total welfare gains, measured in terms of equivalent variation (EV),<sup>9</sup> Bangladesh would experience a US\$16.2 million increase in welfare if the country joined TiSA versus a US\$6.9 million increase in welfare if the country decided not to join TiSA. Real national income is also projected to increase under TISA but not by very much, given the relatively small share of Bangladesh's services exports relative to GDP.

Under TiSA, both import and export values and volumes are projected to increase. However, when one considers export volumes, Bangladesh would benefit more if the country is decided not to join TiSA. This is to be expected because if TiSA is fully implemented (by 2025, as assumed in the model), foreign services supply would begin to replace domestic services supply and exports would decline. Because import growth would overshadow export growth, the terms of trade would also increase; in fact, they would almost double if Bangladesh has decided to join TISA. Factor income (income derived from the factors of production) is also projected to increase, which is expected because of the associated increase in GDP, investment, welfare and national income.

To summarize, the opportunity cost to Bangladesh of not joining TiSA can be measured by calculating the loss in additional growth in scenario B minus the growth in scenario A (for all variables). If this is done, it becomes evident that there is definitely merit (from an empirical standpoint) in Bangladesh joining TiSA.

Figure 4 provides an overview of the impact that TiSA would have on output or production. If Bangladesh has decided not to join TiSA, output or production



**Figure 4.** Output or Production Changes (% Change From Baseline) for 2025

**Source:** Authors' GDyn model results.

would decline in 9 of the 22 sectors. Sea transport would be the most negatively affected sector, while textiles and apparel would continue to grow. If Bangladesh has decided to join TiSA, output or production would decline in 17 of the 22 sectors, with the most negatively affected sectors being motor vehicles and transport equipment; textiles and wearing apparel; petroleum, chemicals, rubber and plastic; electrical and electronics products; wood products, furniture and paper; and financial services.

The impact on output/production can be explained by the surge in imports because as imports increase, the foreign supply would begin to replace the domestic supply and output, and production would be affected. This is of concern, given the size and importance of these sectors to the economy.

Figure 5 shows the estimated change in import value per sector under both scenarios. If Bangladesh has decided not to join TiSA, imports would decline in 6 of the 22 sectors. If Bangladesh has decided to join TiSA, imports would decline in oil, gas, mining and quarrying; construction; petroleum, chemical, rubber and plastics; and motor vehicles and transport equipment. Eighteen sectors would continue to grow. As explained, the surge in imports would be a direct result of cheaper imports due to the preferential market access provided for under TiSA.

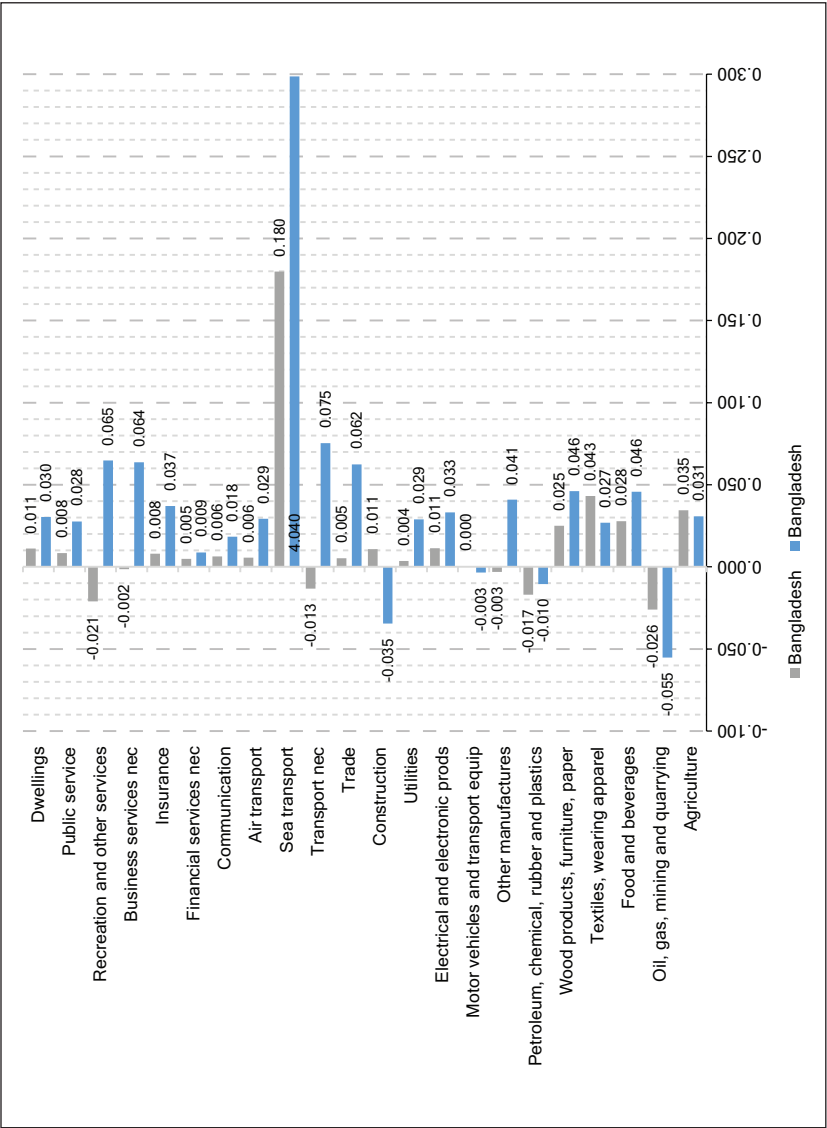
Figure 6 shows the estimated change in sectoral export values under both scenarios. Without TiSA, exports would decline in 6 of the 22 sectors. With TiSA, exports would decline in 15 of the 22 sectors. The sectors that would continue to grow are sea transport; oil, gas, mining and quarrying; agriculture; electrical and electronic products; wood products, furniture and paper; and petroleum, chemical, rubber and plastic. Exports would most likely decline because of the supply-side constraints and the low level of competitiveness of Bangladesh's services sector.

As sectors expand and contract, the demand for labour and specific skill groups in different sectors will also change (see Table 3). By not joining TiSA, the demand for labour (skilled and unskilled) would continue to grow for most sectors. If Bangladesh joins TiSA, the demand for labour (skilled and unskilled) would decline in 18 of the 22 sectors. This is expected because under TiSA, foreign labour would begin to replace domestic labour. The greatest sectoral impacts would be felt in textiles, apparel and agriculture, which is of great concern because the textile and apparel sector employs 5.1 million people, while agriculture employs 25.3 million (42.7% of the economy) (BBS, 2017).

## **Concluding Remarks**

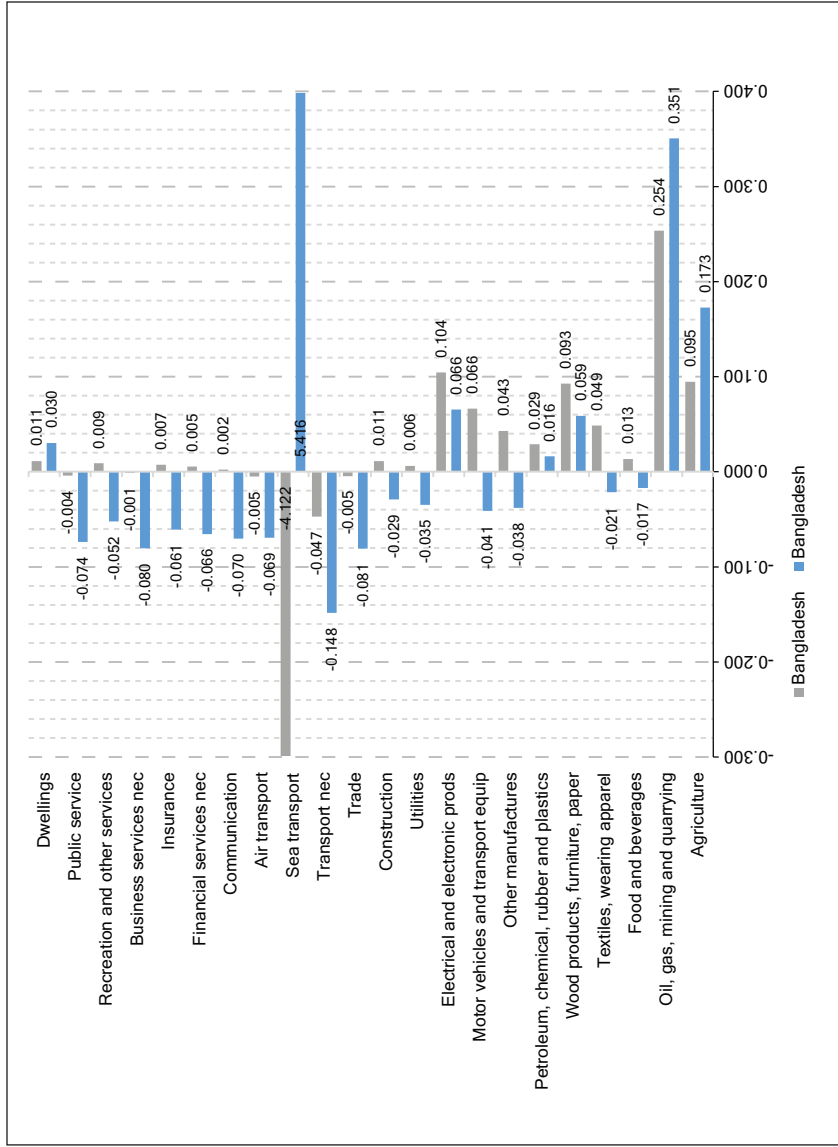
One of the best ways for Bangladesh to determine how it might grow its services trade through liberalization is to start quantifying the impact that different services trade liberalization scenarios would have on its economy. This study represents the first systematic attempt to arrive at such insights.

The quantitative results show that on aggregate, Bangladesh would gain more by joining TiSA. The gains, however, would be marginal. The sectoral impact on output/production would be mostly negative and could be explained



**Figure 5.** Changes in Bangladesh's Sectoral Import Values (% change in the baseline) for 2025

Source: Authors' GDyn model results.



**Figure 6.** Changes in Bangladesh's Sectoral Export Values (% change in baseline) for 2025

**Source:** Authors' GDyn model results.

**Table 3.** Bangladesh Employment per Sector and Skill Group (% change from baseline) for 2025

| GTAP Sectors                             | Bangladesh                |                       |                           |                       |
|------------------------------------------|---------------------------|-----------------------|---------------------------|-----------------------|
|                                          | Skilled                   |                       | Unskilled                 |                       |
|                                          | Scenario A<br>Not Joining | Scenario B<br>Joining | Scenario A<br>Not Joining | Scenario B<br>Joining |
| Agriculture                              | 0.003                     | −0.007                | 0.004                     | −0.006                |
| Oil, gas, mining and quarrying           | −0.013                    | −0.030                | −0.013                    | −0.029                |
| Food and beverages                       | −0.003                    | −0.012                | −0.002                    | −0.007                |
| Textiles, wearing apparel                | 0.035                     | −0.050                | 0.035                     | −0.045                |
| Wood products, furniture and paper       | −0.009                    | −0.035                | −0.008                    | −0.030                |
| Petroleum, chemical, rubber and plastics | −0.016                    | −0.046                | −0.015                    | −0.040                |
| Other manufactures                       | −0.010                    | −0.033                | −0.009                    | −0.028                |
| Motor vehicles and transport equip       | 0.000                     | −0.089                | 0.001                     | −0.083                |
| Electrical and electronic prods          | −0.008                    | −0.042                | −0.007                    | −0.036                |
| Utilities                                | 0.007                     | −0.007                | 0.008                     | −0.002                |
| Construction                             | 0.000                     | −0.019                | 0.001                     | −0.015                |
| Trade                                    | 0.003                     | −0.014                | 0.004                     | −0.008                |
| Transport                                | 0.004                     | 0.000                 | 0.005                     | 0.006                 |
| Sea transport                            | −0.105                    | 0.131                 | −0.101                    | 0.133                 |
| Air transport                            | 0.003                     | −0.023                | 0.003                     | −0.016                |
| Communication                            | 0.008                     | −0.015                | 0.008                     | −0.010                |
| Financial services                       | 0.007                     | −0.032                | 0.007                     | −0.027                |
| Insurance                                | 0.009                     | −0.012                | 0.009                     | −0.007                |
| Business services                        | 0.006                     | 0.014                 | 0.006                     | 0.018                 |
| Recreation and other services            | 0.005                     | −0.007                | 0.006                     | −0.002                |
| Public service                           | 0.005                     | −0.024                | 0.005                     | −0.019                |
| Dwellings                                | 0.010                     | 0.003                 | 0.011                     | 0.007                 |

**Source:** Authors' GDyn model results.

by the likely surge in services imports. As services imports increase, they would begin to replace the domestic supply, which would affect output/production. Also, the changes in sectoral import values would exceed the changes in sectoral export values because as the services market opens up (as a result of TiSA), Bangladesh would import cheaper (or more) services. Exports would decline in most of the sectors because the surge in imports (and increased competition) would drive down local production/supply. Bangladesh would not be able to boost its services exports because of its severe supply-side constraints. Employment would suffer, especially in sectors such as textiles, apparel and agriculture—which together currently employ over 30 million people. This should

not be ignored, especially as the literature on this topic confirms the negative impact of increased trade openness on employment in Bangladesh (see e.g., Rahman, Shadat, & Raihan, 2007).

Given the negative consequences of TiSA on output, production, employment and exports, as well as the significant supply-side constraints in the services sector, Bangladesh would be wise not to open up its services markets on such a comprehensive scale. A more gradual or phased approach appears preferable. Perhaps Bangladesh should first focus on liberalizing its services market to countries in close proximity. This resonates with the findings of Raihan (2008) and Chanda (2015) who called for a careful approach to future liberalization, with a 'regional focus' underpinned by a broad-based, flexible regional services agreement. It also ties in with the findings of Rahman (2000) who called for Bangladesh to pursue a proactive approach to services trade liberalization focusing more on the supply side than the demand side.

Bangladesh might also want to consider developing a national services sector development strategy like that of Vietnam and Barbados (see Hellyer, 2013; UNDP, 2005). The main aim of such a strategy would be to enhance the domestic and export capacity and performance of various service sectors through greater cost-efficiency and better policies, regulations and institutions. The biggest immediate challenge to the design and implementation of this kind of strategy for Bangladesh, however, is that Bangladesh would have to overcome its supply-side or capacity constraints at the domestic level (see UNCTAD, 2016).

TiSA is not out of the question for Bangladesh, but this study has shown that it would be premature to enter into such a liberal agreement at this stage. The quantitative analysis has produced important findings that point to the need for the country to resist casting its net too wide but rather to adopt a narrower, regional focus first and capitalize on existing strengths while progressively tackling weak elements in the country's services sector.

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## **Notes**

1. Despite substantial improvements in the collection of services trade data and the fact that organizations like the World Bank and OECD have this kind of data available, services trade data by category, mode of supply or trade partner are still not available for some countries.

2. 2016 services data were used because at the time of writing, 2017 data were not yet available.
3. Total trade basket refers to the total trade in products and services.
4. The least developed country (LDC) waiver is a legal instrument that affords preferential market access to LDC service providers on a non-reciprocal basis (UNCTAD, 2016).
5. This includes the South Asian Association for Regional Cooperation (SAARC) Agreement on Trade in Services, the Framework Agreement on the Promotion and Liberalization of Trade in Services among participating States of the Asia-Pacific Trade Agreement and the draft agreement on trade in services under the Free Trade Area Framework Agreement of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (UNCTAD, 2016).
6. TiSA signatories could (a) incorporate their new commitments into their existing General Agreement on Trade in Services (GATS) schedules by means of a protocol, and the most favored nation (MFN) benefits would extend to all World Trade Organization (WTO) members, (b) unilaterally improve their GATS commitments via individual certification procedures, (c) adopt the agreement as a PTA where all the benefits will accrue to signatory countries only or (d) remain outside the WTO where other WTO members would be excluded from its provisions and benefits (for more information, see Smeets, 2017).
7. For public services, no changes were modelled because the negotiations do not address most services in this sector, and air transport would not be directly affected.
8. Percentage point changes in GDP were measured as changes in the quantities produced.
9. In the GTAP model, welfare is based on the equivalent variation (EV) which measures what a consumer would be willing to be compensated for to forego the policy change.

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