Strengthening Indonesia-Botswana Economic Relations: A Partial Equilibrium Free Trade Simulation Analysis

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Abstract

Indonesia and Botswana have cordial friendship, but the economic relations are still below potentialities. The Indonesian government has endorsed Indonesia-SACU PTA proposal. Using TINA partial equilibrium model, the Indonesia-Botswana bilateral free trade scenario findings revealed trade creation effects, opening Indonesian export to Botswana such as tyres, wood products, papers and vehicles. Meanwhile, Botswana's potential export to Indonesia are: diamonds, sugars, and metal keys. For the trade diversion, Botswana would import less mainly from South Africa and China, while Indonesia would import less mainly from Japan and United Kingdom. The study suggested both countries need to expedite the Indonesia-SACU PTA.

Keywords: Indonesia-SACU Preferential Trade Agreement, Economic Diplomacy, Partial Equilibrium Analysis, Free Trade Agreement

Fortalecimiento de las Relaciones Económicas entre Indonesia y Botsuana: Análisis de Equilibrio Parcial de una Simulación de Libre Comercio

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Resumen

Indonesia y Botsuana mantienen lazos de amistad, pero sus relaciones económicas aún están por debajo del potencial. El gobierno indonesio ha endorsado la propuesta de un Acuerdo Comercial Preferencial Indonesia-SACU. En este artículo, se utiliza el modelo de equilibrio parcial TINA para evaluar el escenario de libre comercio bilateral entre ambos países, incluyendo la desviación del comercio que produciría en sus economías. El estudio sugiere que se debe agilizar el Acuerdo Comercial Preferencial Indonesia-SACU.

Palabras clave: Acuerdo Comercial Preferencial Indonesia-SACU, diplomacia económica, análisis de equilibrio parcial, tratado de libre comercio.

1. Introduction

Indonesia and Botswana established its diplomatic relations on 28th March 2012, in which both countries signed "Joint Communique Concerning the Establishment of Diplomatic Relations between the Government of the Republic of Indonesia and the Government of the Republic of Botswana" in New York (Kemlu, 2025). Since its diplomatic establishment, the Indonesian Embassy in Pretoria is officially assigned and accredited for diplomatic relations with Botswana. Apart from that, Indonesia has also appointed Honorary Consul in Gaborone, Botswana[2]. Meanwhile, the Botswana's High Commission accredited to Indonesia is concurrently managed from the Botswana's Canberra office.

Over the years the diplomatic relations between Indonesia and Botswana are warm, cordial and harmonious, and growing over time. This was mainly reflected in the high-ranked official visits including the visit of the President of Botswana, Festus Gontenbanye Mogae at the 50th Anniversary of the Asian-African Conference in Indonesia, April 2005, and the visit of the Minister of Foreign Affairs of Botswana, Pandu T.C. Skelemani, at the 16th Non-Aligned Movement (NAM) Ministerial Meeting in Bali, May 2011. Both countries have cooperated in the multilateral fora, including the United Nations (UN) and Non-Aligned Movement (NAM).

Within the economic realm, since the diplomatic establishment, over the years the bilateral trade relations have been very low, in 2012 the bilateral trade volume amounted US$196211, and in 2024 the bilateral trade increased to US$772000 in which Indonesia recorded a trade surplus of US$378000 (Trade Map, 2025). In 2024, Indonesian export valued US$575000 and consists of mainly concentrated on three products: Parts for boring or sinking machinery of subheading 8430.41 or 8430.49, n.e.s. (HS 843143) amounted US$432000, Doors and their frames and thresholds,

of wood (excl. of tropical wood) (HS 441829) amounted US$78000, and Soap and organic surface-active products and preparations, in the form of bars, cakes, moulded (HS 340111) amounted US$61000. These 3 products accounted for 99.3 % of the total Indonesian export to Botswana. Other products among others are: medicaments consisting of mixed or unmixed products for therapeutic or prophylactic purposes (HS 300490) amounted US$3000, and Paper and paperboard, surface-coloured, surface-decorated or printed, coated, impregnated or (HS 481159) amounted US$1000.

Meanwhile Indonesian import from Botswana amounted US$197000 and comprises of only three products: Beet molasses resulting from the extraction or refining of sugar (HS 170390) amounted US$115000, Essential oils of citrus fruit, whether or not terpeneless, incl. concretes and absolutes (excl..) (HS 330119) amounted US$55000, Industrial diamonds unworked or simply sawn, cleaved or bruted (HS 710221) amounted US$26000. These 3 products accounted for 99.4 % of the total Indonesian import from Botswana.

In 2017, the Indonesian government took the initiative to endorse the Indonesia-Southern African Customs Union (SACU) Preferential Trade Agreement (PTA) as Indonesia's economic diplomacy effort to enhance the bilateral relations. But up till now the proposed proposal is still waiting response from the SACU member states (Ministry of Trade of the Republic of Indonesia, 2018).

Within the socio-cultural realm, over the years the Indonesian government offers scholarships and capacity building programs to the Botswana citizens. It is recorded there are at least 8 (eight) Botswana citizens received Kemitraan Negara Berkembang (KNB) and Darmasiswa scholarships, and various Botswana citizens received training programs from the Indonesian government.

Based on the given facts, the current bilateral relations have been low and thus, needs to search ways to strengthen and elevate the relations into a higher level. Botswana is one of the countries with the highest economic growth, relatively high GDP per Capita reaching US$7695 in 2024 (World Bank Open Data, 2025), and arguably among the most politically stable and democratic country in Africa. Thus, the opening of the diplomatic relations between the two countries since 2012 should encourage increased opportunities for cooperation between the two countries, including economic, socio-cultural, and other areas.

The World Bank classifies Botswana as an "upper middle income" country and is the highest in the Southern African region (among the SACU

members) ahead of South Africa, Namibia, and well ahead of Eswatini (previously Swaziland) and Lesotho. In 2024, GDP in Botswana reached US$19.4 billion and a total of population of 2.52 million. Botswana gained its independence as a sovereign state 30th September 1966 and at the beginning became one of the world's poorest countries, but the country rapidly become one of the world's development success stories. The country achieves this with significant mineral (diamond) wealth, good governance, and prudent economic management. Botswana has a vision to become a high-income country by 2036. The country has a highly trade dependent economy and is a fairly open economy particularly from trading perspective, and this has been so before and after independence. In 2022, Botswana ranked 4th among the least corrupt countries on the African continent (Gappy, 2022).

In spite of this positive outlook having maintained positive political and economic levels over the years, challenges remain. Botswana is a landlocked country in the southern part of the African continent, and Botswana's reliance on diamonds and a public sector-driven model makes the economy vulnerable to external shocks, as diamonds contribute over 80 % of total exports and are a major source of fiscal revenues. Botswana faces structural challenges such as a lack of diversification, high unemployment rates, and high income inequality that continue to weigh on the economy. This vulnerability was evident during the COVID-19 pandemic when the economy contracted by 8.7 % in 2020 and fiscal pressures rose. Economic growth rebounded to 11.9 % in 2021, but the World Bank projects a contracted economy of about -3 % in 2024.

Botswana is blessed with an abundance of natural resources and has strong competitiveness in several industries including mining products (diamonds, nickel, copper, soda ash, coal, iron), livestock processing, textiles, plastics and mineral fuels. The mining industry is the major contributor to the economy of the country. This is an opportunity for Indonesia that could be explored in Botswana. Botswana is a gem hidden in Africa and has great potentials that has yet to be discovered. Relatively few researches have been done so far concerning Indonesian economic relations with Botswana. This study attempts to ultimately identify and find ways forward to strengthen Indonesia-Botswana bilateral economic relations with a strong emphasis in commercial relations.

2. Data and Research Methodology

The study attempts to enhance Indonesia-Botswana bilateral economic relations, particularly the trade relations aspect. One way to enhance the bilateral trade relations is through the Indonesia-SACU PTA in which still pending waiting for the response from the SACU member states. General international trade theory states that gain from trade come from specialization in a country's area of comparative advantage, for instance, products or sectors in which a country produces relatively more efficiently or lower opportunity cost (Plummer et al, 2010, p. 38). And by trading based on country's comparative advantage, it is predicted that it will benefit all trading partners and ultimately through specialization, it will result in a higher world output. Thus, this Indonesia-SACU PTA proposal is a potential breakthrough between Indonesia and the SACU member states to enhance bilateral trade relations based on their respective country's comparative advantage products. Apart from that, this proposed initiative could also become a breakthrough to increased cooperation in other fields such as investment, tourism, and technical cooperation, and as well to strengthen global south cooperation (South-South Cooperation).

Under President Prabowo Subianto's administration for the 2024-2029 period, economic diplomacy still remains as one of the priority agendas in Indonesia's foreign policy to support the achievement of the *Asta Cita* grand vision and National Long-Term Development Plan (*RPJPN*) 2025-2045 towards Golden Indonesia 2045 Vision. Indonesia's trade relations with partner countries is one of the important economic intelligence information to support Indonesian economic diplomacy. The Minister of Foreign Affairs of the Republic of Indonesia Decree No. 04/B/PR/08/2024/01 of Year 2024 stated the definition of Economic Intelligence Data (DEI). DEI refers to the information and analytical studies in the economic sector, which includes the trade, investment, tourism, services, finance and development, related to the accredited country or region, which are strategic for decision-making, policy formulation, and the advancement of country's economic diplomacy efforts. Therefore, DEI serves as a critical component in supporting country's economic diplomacy initiatives.

This paper attempts to discuss the potential impact of Indonesia-Botswana bilateral free trade agreements scenario. The study uses Trade Intelligence and Negotiation Adviser (TINA) dashboard, which a partial equilibrium free trade simulation analysis to assess the potential economic impact of the bilateral free trade scenario between the two countries. The

bilateral trade simulation will use full tariff dismantlement (zero tariff for all products). TINA is a partial equilibrium model and a market access simulation package and has been used by policymakers to evaluate the impact of change in the trade policy on the trade effects (See Note 3 for the TINA Theoretical Framework[3]).

The main advantage using the TINA model is its minimal data requirement and the dashboard is user-friendly. TINA only requires data for the trade flows, the trade policy (tariff), and a couple of behavioral parameters (elasticities). Another advantage is that it permits an analysis at a fairly disaggregated (or detailed) level uptill HS 6 Digits level and it resolves a number of "aggregation biases" where within the framework of a general equilibrium model, the level of aggregation is neither convenient nor possible. However TINA as a partial equilibrium model likewise some other partial equilibrium dashboards[4] does have its own disadvantages among others: TINA neglects the interactions and feedbacks between the various markets or the inter-sectoral input/output linkages that are the basis of general equilibrium model; the analysis is done on pre-determined number of economic variables, as a result this makes it very sensitive to a few (badly estimated) behavioral elasticities; and it also misses the constraints applied to the various factors of production and their movement across sectors (Ahmed, 2010).

Next, the paper also discusses the Indonesia-SACU PTA initiative as a potential opportunity to broader economic cooperation between Indonesia and Botswana. Both countries have a common interest in their economic diplomacy agenda within foreign policies to promote bilateral economic relations to support national development agenda.

Finally, this paper attempts to suggest the appropriate Indonesian and Botswana's economic diplomacy measures in order to elevate the economic relations between the two countries. The scope of this research covers: a) The number of countries observed are only between Indonesia and Botswana; b) For the trade data, a 6 Digits Harmonized System (HS) will be used in order to analyze at the more disaggregated level (product level) based on the data obtained from UN COMTRADE; and c) Free trade scenario (zero tariff simulation) will be based on trade data year 2023 (the latest data available at TINA) and only covers primary and manufactured goods (excludes services).

3. Results and Discussion

3.1 Indonesia-Botswana Bilateral Free Trade Scenario: A Partial Equilibrium Analysis

In this section, the study attempts to analyze the potential impact of the Indonesia-Botswana bilateral free trade scenario in 2023. The objective is to analyze the impact on the trade creation effects. To analyze the bilateral FTA scenario, the paper uses the HS 6 Digits Code and a complete tariff dismantlement scenario (extreme scenario) in order to assess the full potential the effects of trade liberalization. The bilateral free trade TINA simulation reveals trade creation for Indonesia (increased in Indonesian export to Botswana) amounted US$571750, an increase of 63.61 % (by trade value) of imports of selected commodities by Botswana from Indonesia, representing an increase of 36.08 % in total imports of Botswana from Indonesia in 2023. There are 126 simulated goods, in which trade of 126 commodities impacted with none (0) commodity not impacted. Also, there are 90 trade partners of Botswana affected as a result of trade diversion with a total amount US$161360.

On the other hand, the bilateral free trade TINA simulation also reveals trade creation for Botswana (increased in Botswana's export to Indonesia) amounted US$878, an increase of 16.75 % (by trade value) of imports of selected commodities by Indonesia from Botswana, representing an increase of 16.75 % in total imports of Indonesia from Botswana in 2023. There are 4 simulated goods, in which trade of 4 commodities impacted, and 0 (none) commodity not impacted. Also, there are 25 trade partners of Indonesia affected as a result of trade diversion with a total amount US$698.

3.2. The Potential Impact of Indonesia-Botswana Bilateral Free Trade Scenario on the Trade Creation Effect

The TINA simulation results revealed Indonesian trade creation effect amounted US$571750, meaning the tariff dismantlement opens Indonesian export to Botswana amounted US$571750 (the results are reported in table 1). The bilateral free trade would open Indonesian potential export products including rubber; new pneumatic tyres, wood; doors and their frames, wooden furniture, statuettes and other ornaments of wood, uncoated paper and paperboard, vehicles, builders' joinery and carpentry of wood, buildings; prefabricated, wood; non-coniferous, wood; posts and beams, wood; windows, and iron.

Specifically, the top 5 Indonesian potential export products to Botswana are: Rubber; new pneumatic tyres, of a kind used on motor cars (including station wagons and racing cars) (HS 401110) which contributed the highest potential increase of Indonesian export to Botswana by US$129766, followed by Wood; doors and their frames and thresholds (HS 441820) amounted US$100623, Furniture; wooden, other than for office, kitchen or bedroom use (HS 940360) amounted US$91645, Wood; statuettes and other ornaments of wood (HS 442010) amounted US$91394, and Uncoated paper and paperboard (not 4801 or 4803); and printing, writing or graphic, 10 % or less by weight of mechanical or chemi-mechanical processed fibre, weight 40-150g/m2, n.e.c. in item no. 4802.55 or 4802.56 (HS 480257) amounted US$56412.

Table 1
The Potential Impact of RI-BOT FTA Scenario on Indonesia's Export to Botswana (Trade Creation Effects) (Top 10)

Product Code	Product Name	Trade Creation Effects in USD
401110	*Rubber; new pneumatic tyres, of a kind used on motor cars (including station wagons and racing cars)*	129766
441820	*Wood; doors and their frames and thresholds*	100623
940360	*Furniture; wooden, other than for office, kitchen or bedroom use*	91645
442010	*Wood; statuettes and other ornaments of wood*	91394
480257	*Uncoated paper and paperboard (not 4801 or 4803); and printing, writing or graphic, 10 % or less by weight of mechanical or chemi-mechanical processed fibre, weight 40-150g/m2, n.e.c. in item no. 4802.55 or 4802.56*	56412
870421	*Vehicles; compression-ignition internal combustion piston engine (diesel or semi-diesel), for transport of goods, (of a gvw not exceeding 5 tonnes), n.e.c. in item no 8704.1*	39576
441890	*Wood; builders' joinery and carpentry of wood n.e.c. in heading no. 4418*	34427
940600	*Buildings; prefabricated*	34125

440929	*Wood; non-coniferous other than bamboo (including unassembled strips and friezes for parquet flooring), continuously shaped along any edges, ends or faces, whether or not planed, sanded or end-jointed*	22970
441860	*Wood; posts and beams*	11877

Source: Authors Estimation from TINA (2025).

Meanwhile, on the other hand the tariff dismantlement would also open Botswana's export to Indonesia amounted US$1580 (the results are reported in table 2). Botswana's potential export to Indonesia consists of 4 products: Diamonds; industrial, unworked or simply sawn, cleaved or bruted, but not mounted or set (HS 710221) amounted US$984, Diamonds; non-industrial, (other than unworked or simply sawn, cleaved or bruted), but not mounted or set (HS 710239) amounted US$473, Sugars; molasses, from sugar beet, resulting from the extraction or refining of sugar (HS 170390) amounted US$82, and Keys; presented separately, of base metal (HS 830170) amounted US$35.

Table 2
The Potential Impact of RI-BOT FTA Scenario on Botswana's Export to Indonesia (Trade Creation Effects) (Top 10)

Product Code	Product Name	Trade Creation Effects in USD
710221	*Diamonds; industrial, unworked or simply sawn, cleaved or bruted, but not mounted or set*	984
710239	*Diamonds; non-industrial, (other than unworked or simply sawn, cleaved or bruted), but not mounted or set*	473
170390	*Sugars; molasses, from sugar beet, resulting from the extraction or refining of sugar*	82
830170	*Keys; presented separately, of base metal*	35

Source: Authors Estimation from TINA (2025).

By understanding those-above potential products from the bilateral free trade scenario, Indonesia has more diverse products to be exported to Botswana, meanwhile Botswana has only 4 potential export product to Indonesia. Indonesia could customize its export strategy based on the trade creation product results in the Botswana market including promotion strategies (i.e. participating in trade fairs, trade mission, business matching and business forum) that focus on those suggested products. Meanwhile Botswana should emphasize on their main suggested products which are diamonds, but needs to diversify its economy.

Over the years, Botswana's economy heavily relies on one commodity: diamonds, and Botswana is the biggest producer of diamonds in the world, by value. As a proportion of total exports, diamonds constituted roughly 63.86 % of total exports in 2024. In 2024, Botswana exported diamonds to the world (HS 7102) amounted US$2.5 billion, and copper ores and concentrates (HS 2603) amounted US$736 million. The heavy reliance on exports of one or two commodities renders the economy vulnerable to commodity terms of trade and external shocks. Mogotsi (2022) wrote that as Botswana is a monolithic economy, the country needs to diversify the economy away from diamonds, by creating new growth poles and new comparative advantages.

4. The Potential Impact of Indonesia-Botswana Bilateral Free Trade Scenario on the Trade Diversion

The bilateral free trade TINA simulation results revealed 90 trade partners of Botswana affected as a result of trade diversion with a total amount US$161360. For the top 5 Indonesian potential export products to Botswana are Rubber; new pneumatic tyres, of a kind used on motor cars (including station wagons and racing cars) (HS 401110) amounted US$29097, followed by Furniture; wooden, other than for office, kitchen or bedroom use (HS 940360) amounted US$22512, Wood; doors and their frames and thresholds (HS 441820) amounted US$19760, Uncoated paper and paperboard (not 4801 or 4803); and printing, writing or graphic, 10 % or less by weight of mechanical or chemi-mechanical processed fibre, weight 40-150g/m2, n.e.c. in item no. 4802.55 or 4802.56 (HS 480257) amounted US$17997, and Wood; statuettes and other ornaments of wood (HS 442010) amounted US$5069.

The tariff dismantlement made Indonesia gets lower tariffs from Botswana for the 126 simulated goods. As a result, Botswana may import

more from Indonesia and less from other economies (i.e., trade diversion) leading to decreased exports of the 126 simulated commodities to Botswana for the 90 trade partners. The main countries affected are: South Africa, China, Hong Kong (China), India, and Japan.

Table 3
The Potential Impact of RI-BOT FTA Scenario on Trade Partners of Botswana Affected as a Result of Trade Diversion (Top 10)

Product Code	Product Name	Trade Diversion in USD	Top 3 Countries Affected
401110	*Rubber; new pneumatic tyres, of a kind used on motor cars (including station wagons and racing cars)*	29097	South Africa, China, Hong Kong (China)
940360	*Furniture; wooden, other than for office, kitchen or bedroom use*	22512	South Africa, China, India
441820	*Wood; doors and their frames and thresholds*	19760	South Africa, China, Zimbabwe
480257	*Uncoated paper and paperboard (not 4801 or 4803); and printing, writing or graphic, 10 % or less by weight of mechanical or chemi-mechanical processed fibre, weight 40-150g/m2, n.e.c. in item no. 4802.55 or 4802.56*	17997	South Africa, China, Thailand
441890	*Wood; builders' joinery and carpentry of wood n.e.c. in heading no. 4418*	10343	South Africa, China, Hong Kong (China)
940600	*Buildings; prefabricated*	8692	South Africa, China, Japan

440929	*Wood; non-coniferous other than bamboo (including unassembled strips and friezes for parquet flooring), continuously shaped along any edges, ends or faces, whether or not planed, sanded or end-jointed*	5965	South Africa, China
870421	*Vehicles; compression-ignition internal combustion piston engine (diesel or semi-diesel), for transport of goods, (of a gvw not exceeding 5 tonnes), n.e.c. in item no 8704.1*	5138	South Africa, Japan, Namibia
442010	*Wood; statuettes and other ornaments of wood*	5069	South Africa, China, Ukraine
732429	*Iron (other than cast) or steel; baths*	3117	South Africa, China, India

Source: Authors Estimation from TINA (2025)

Meanwhile, there are 25 trade partners of Indonesia affected as a result of trade diversion with a total amount US$698. These consist of 4 Botswana potential export products to Indonesia are: Diamonds; industrial, unworked or simply sawn, cleaved or bruted, but not mounted or set (HS 710221) amounted US$469, Diamonds; non-industrial, (other than unworked or simply sawn, cleaved or bruted), but not mounted or set (HS 710239) amounted US$173, Sugars; molasses, from sugar beet, resulting from the extraction or refining of sugar (HS 170390) amounted US$31, and Keys; presented separately, of base metal (HS 830170) amounted US$22.

The tariff dismantlement made Botswana gets lower tariffs from Indonesia for the 4 simulated goods. As a result, Indonesia may import more from Botswana and less from other economies (i.e., trade diversion) leading to decreased exports of the 4 simulated commodities to Indonesia for the 25 trade partners. The main countries affected are: Japan, United Kingdom, United States, India, Hong Kong (China), China, Egypt, Singapore, Malaysia, and Republic of Korea.

Table 4
The Potential Impact of BOT-RI FTA Scenario on Trade Partners of Indonesia Affected as a Result of Trade Diversion (Top 10)

Product Code	Product Name	Trade Diversion in USD	Top 3 Countries Affected
710221	*Diamonds; industrial, unworked or simply sawn, cleaved or bruted, but not mounted or set*	469	Japan, United Kingdom, United States
710239	*Diamonds; non-industrial, (other than unworked or simply sawn, cleaved or bruted), but not mounted or set*	173	India, Hong Kong (China), Singapore
170390	*Sugars; molasses, from sugar beet, resulting from the extraction or refining of sugar*	31	Egypt, Malaysia, China
830170	*Keys; presented separately, of base metal*	22	Japan, China, Republic of Korea

Source: Authors Estimation from TINA (2025)

5. Potential Opportunities for Broader Economic Cooperation between Indonesia and Botswana: Indonesia-SACU PTA Initiative

Economic theory states that trade liberalization increases efficiency, economies of scale, competition, productivity factors and trade flows, thus, ultimately enhance economic growth (Barro and Sala-i-Martin, 1995). Knowing the potential benefits of the trade liberalization, both countries have vast experiences in pursuing trade agreements, including Economic Partnership Agreement (EPA), Preferential Trade Agreement (PTA), and the Free Trade Agreement (FTA). Both countries view economic diplomacy is a priority within the foreign policy agenda, thus, establishing trade agreements are crucial for both countries to support enhancing national welfare.

As of September 2025, Indonesia itself has at least 46 initiatives which are currently in the process of studies, negotiations or have entered into force. With the African counterparts, among others there are Indonesia-Mozambique PTA (signed 2019 and enforced 2022), Indonesia-Morocco PTA (negotiation lauched), Indonesia-Kenya FTA (proposed/under consultation and study), Indonesia-Tunisia PTA (negotiation lauched),

Indonesia-Angola PTA (proposed/under consultation and study), Indonesia-Nigeria PTA (proposed/under consultation and study), Indonesia-Tanzania PTA (proposed/under consultation and study) and Indonesia-SACU PTA (proposed/under consultation and study). The Indonesia-Mozambique PTA (IM-PTA) is Indonesia's first free trade agreement on the African continent (Larasati, 2021). Both countries signed a PTA cooperation on 27th August 2019 and has been enforced in both countries since 6th June 2022. This success story can be a reference to realizie the Indonesia-SACU PTA.

Meanwhile, Botswana recognizes the problems that its small domestic market ultimately poses for investors. Thus, Botswana's economic diplomacy tends to emphasize in promoting trade by pursuing free trade agreements with its neighbors as well as other developed and developing countries (ITA, 2024). Botswana is a WTO member since 1995, following its accession to the General Agreement on Tariffs and Trade (GATT) and the country has joined several regional trade agreements, including SACU, Southern African Development Community (SADC), and African Continental Free Trade Agreement (AfCFTA).

First, Botswana is a member of SACU, and SACU is a customs union consisting five countries of Southern Africa: Botswana, Eswatini, Lesotho, Namibia and South Africa. All member states adhered to the SACU agreement which was signed in 2002, and entered into force on the 15th July 2004. Its aim among others are to maintain the free interchange of goods between member countries.

Like other customs unions, a key feature of SACU is the application of a single tariff regime – the Common External Tariff (CET) and common excise tariff to this common customs area. This means the member states form a single customs territory which provides for a free movement of goods where tariffs and other barriers are eliminated on all trade between them (SACU Secretariat, 2025). The CET and common excise tariff apply to goods imported from all territories that are not members of SACU. SACU itself engages trade agreements with: SACU-European Free Trade Association (EFTA) FTA (signed in 2006 and entered into force in 2008), SACU-Southern Common Market (MERCOSUR) PTA (signed in 2009 and entered into force in 2016), and SACU-U.S. Trade, Investment and Development Cooperation Agreement/TIDCA (signed in 2008) (Sjahril, 2022). Further, recently there are SACU-Mozambique with the United Kingdom of Great Britain and Northern Ireland Economic Partnership Agreement/EPA in October 2019 and enter into force 1 January 2021 (Elago, 2021).

Next, Botswana is also a member of SADC and agreed on the SADC Free Trade Protocol. SADC is a sub-regional inter-governmental organization in the Southern African region with the main focus on integration of economic development (or to spearhead economic integration of Southern Africa). The SADC's goal also aims to further regional socio-economic cooperation and integration as well as political and security cooperation among 16 countries in Southern Africa region. Although its primary objectives are development, economic growth, and poverty alleviation, peacekeeping has also become increasingly important to the SADC.

The SADC Protocol on Trade was signed in 1996 seeking to further liberalise intra-regional trade in goods and services and establish FTA in the region, and in 2009 was the launch of SADC FTA resulting in gradual tariff reductions of over 85 percent intra-regional trade among member states (SADC Secretariat, 2025). In March 2022, the SADC EPA was signed to further strengthen trade links, deepen and encourage economic and trade relations between the member states. Further, SADC has also adopted SADC Industrialisation Strategy and Roadmap (2015-2063) to fast-track industrialisation and increase intra-regional trade among member states to produce goods for competitive trade in the region and beyond. SADC has trade agreements with the external partners including: SADC-Common Market for Eastern and Southern Africa (COMESA) and the East African Community (EAC) signed Memorandum of Understanding (MoU) on Regional Cooperation and Integration, which later, resulted in the Tripartite Free Trade Area in 2008.

Botswana is also engaged with the AfCFTA which came into force as of May 30, 2019 and the commencement of trade under the AfCFTA scheme as of January 1, 2021. For this, Botswana has signed the AfCFTA in February 2019 and ratified the AfCFTA agreement in February 2023, followed by other SACU member states (ITA, 2024). The AfCFTA seeks to establish a single continental market for goods and services, free movement of businesspersons and investments, paving the way for accelerating the establishment of the Continental Customs Union and the African customs union. AfCFTA covers cooperation in free trade in goods and services, investment, intellectual property rights, and competition policy.

Botswana is also a beneficiary of the U.S. African Growth and Opportunity Act (AGOA), benefiting from preferential market access to the U.S. (ITA, 2024). Since its inception in 2000 by the Bill Clinton administration, AGOA has granted duty-free access and quota-free access

more than 6,500 product categories of goods to the U.S. market to over 41 African countries, currently 32 of which are eligible. The AGOA has boosted U.S.-Africa trade from approximately $24 billion in 2002 to over $104.9 billion in 2024. AGOA is a strategic component of US economic statecraft to foster economic ties with the African nations, while countering the dominance of China and Europe in the African region. But AGOA is set to expire in 2025 and the continuity of AGOA remains unclear (Boakye and Abankwa, 2025).

Based on the above facts, given the common interests in their economic diplomacy agenda to foster economic relations, then, it is suggested both countries to expedite the initiative Indonesia-Southern African Customs Union (SACU) Preferential Trade Agreement (PTA) as economic diplomacy effort to enhance the bilateral economic relations. It is also viewed that establishing Indonesia-SACU PTA is not only about strengthening bilateral economic relations but also strengthening friendships between the two countries and SACU, as well as the global south (South-South Cooperation).

6. Conclusion and Policy Recommendations

Indonesia and Botswana have cordial friendship, but the economic relations are still below potentialities. Since the diplomatic establishment, over the years the bilateral trade relations have been very low, and the trading are limited to few products. Indonesian export to Botswana are mainly concentrated on three products: Parts for boring or sinking machinery of subheading, Doors and their frames and thresholds, of wood (excl. of tropical wood), and Soap and organic surface-active products and preparations, in the form of bars, cakes, moulded. Meanwhile Indonesian import from Botswana comprises of only three products: Beet molasses resulting from the extraction or refining of sugar, Essential oils of citrus fruit, whether or not terpeneless, incl. concretes and absolutes (excl..), and Industrial diamonds unworked or simply sawn, cleaved or bruted.

The study attempts to search ways to strengthen and elevate the relations into a higher level. Botswana is one of the potential partner in Sub-Sahara Africa with a strong emphasis in commercial relations. The country enjoyed as one of the countries with the highest economic growth, relatively high GDP per Capita reaching US$7695 in 2024 (classified as an “upper middle income” country), and among the most

politically stable and democratic country in Africa. Botswana is a gem hidden in Africa and has great potentials that has yet to be discovered. In 2017, the Indonesian government took the initiative to endorse the Indonesia- SACU PTA as Indonesia's economic diplomacy effort to enhance the bilateral relations, but still waiting response from the SACU counterparts.

The study analyzes the potential impact of the Indonesia-Botswana bilateral free trade scenario on the trade creation effects and trade diversion using TINA, a partial equilibrium analysis dashboard. Using a complete tariff dismantlement scenario, the free trade simulation revealed the trade creation for Indonesia (an increase in Indonesian export to Botswana) with the main products: rubber; new pneumatic tyres, wood; doors and their frames, wooden furniture, statuettes and other ornaments of wood, uncoated paper and paperboard, vehicles, builders' joinery and carpentry of wood, buildings; prefabricated, wood; non-coniferous, wood; posts and beams, wood; windows, and iron. Meanwhile, Botswana's potential export to Indonesia are: diamonds; industrial, unworked or simply sawn, cleaved or bruted, but not mounted or set, diamonds; non-industrial, (other than unworked or simply sawn, cleaved or bruted), but not mounted or set, sugars; molasses, from sugar beet, resulting from the extraction or refining of sugar, and keys; presented separately, of base metal.

As for the trade diversion, the tariff dismantlement made Botswana to import more from Indonesia and less from other economies (trade diversion). The main countries affected are: South Africa, China, Hong Kong (China), India, and Japan. Meanwhile as a result of tariff dismantlement, Indonesia is expected to import less from Japan, United Kingdom, United States, India, Hong Kong (China), China, Egypt, Singapore, Malaysia, and Republic of Korea.

The study also suggests both countries should fast-track the Indonesia-SACU PTA to enhance the bilateral economic relations. Both countries view economic diplomacy is a priority within the foreign policy agenda, thus, establishing trade agreements are crucial not only to enhance trade relations, but also to support enhancing national welfare. Both countries have vast experiences in pursuing trade agreements. Further, the realization of the Indonesia-SACU PTA will not only strengthen the bilateral economic relations, but also strengthening friendships between the two countries and SACU, as well as the global south (South-South Cooperation). Ultimately, the PTA could also be a stepping stone elevating

Indonesia-Botswana friendly relations from being an ordinary partner to be a dynamic mutually beneficial partnership.

The global economy is facing a new set of challenges, as inflation, war and geopolitical tensions,, and technological disruption continue to affect countries worldwide. Indonesia and Botswana are no exception, both economies may face challenges, but there are opportunities for growth if both countries cooperate together for shared prosperity. Last but not least, a strong political will is needed to elevate their economic partnership into a higher stage.

Notes

1 This paper represents the opinion of the authors and is not meant to represent the position or opinion of the official position of any institution members. Direct correspondence to Sulthon Sjahril Sabaruddin (Email: sulthon.sjahril@kemlu.go.id).

2 On 5-7 August 2019, the Indonesian Ambassador handed over a Letter of Commission and Exequatur which marked the official commencement of Piyush Sharma's duties as the Honorary Consul in Gaborone, the capital of Botswana. Mr. Sharma is a seasoned lawyer who's expected to support the tasks of Indonesian Mission abroad. Mr. Sharma believes that Indonesia can grow together and find synergy with Botswana in job creation and skills transfer. The new Honorary Consul believes in the vast opportunities of Indonesia-Botswana cooperation in the infrastructure, tourism, mining and energy sectors.

3 Trade Intelligence and Negotiation Adviser (TINA) is an online tool designed to assist trade policymakers, researchers or consultants carry out the analytical tasks using state of the art methodologies and technologies in preparation for trade agreement negotiations. Among the many features, TINA offers the potential impact of tariffs change simulations using an integrated partial equilibrium model simulation analysis. TINA is an ex-ante evaluation of trade policy changes at a detailed level, without considering interactions between different markets. The partial equilibrium model has at least two main advantages over the general equilibrium model. First, the results are straightforward to interpret (e.g., the price of imports decreases, the demand for imports increases, with the magnitude depending on elasticities). Second, it requires less data—only information from the specific sector is needed, such as trade flows, tariff changes,

and elasticities (adjusting export supply elasticity, import substitution elasticity, and import demand elasticity) (Bacchetta et al., 2016).

The setup of TINA is that, for a given good, different countries compete to supply (export to) a given home market. The focus of the simulation exercise is on the composition and volume of imports into that market. The TINA model assesses the effect of trade policy changes (tariff changes) on trade creation (or loss) and trade diversion effects. The potential trade creation and trade diversion effects depend on the magnitude of elasticities. In TINA model, there are 3 elasticities taken into account: export supply elasticity, import substitution elasticity, and import demand elasticity. First, the export supply elasticity measures the responsiveness of supply from the exporter to the price the exporter faces, calculated as the percentage increase in supply given a one percent increase in price. The supply elasticity can either be positive (for instance, an increase in the price leads to an increase in the number of exports) or infinite, in which with infinite supply elasticity, the exporter is willing to sell any numbers of products at any given prices. Second, import substitution elasticity measures the level of responsiveness of demand to relative price, or the degree to which products from different countries are interchangeable. Some products, such as commodity products have a low level of country-of-origin differential, and higher substitution elasticity may be used. Third, the import demand elasticity measures the responsiveness of overall imports to the price index (Graham et al., 2018, pp. 24-25).

The TINA model is based on the following assumptions:

1) Partial Equilibrium: no income effects.
2) Armington Assumption: the import substitution elasticity and import demand elasticity follow the Armington Assumption, which states that the import country imports different and not perfect substitutable varies of a good from different exporters. Goods imported from different countries are imperfect substitutes, i.e., copper from Indonesia are an imperfect substitute to copper from Botswana. Using the Armington assumption, a preferential trade agreement does not produce a big bang solution, where all imports demand would shift to the beneficiary of the preferential tariff. In TINA, the import substitution elasticity is considered to be 1.5 for each good. Higher values indicate a greater degree of interchangeability between products from different countries. Meanwhile as for the import demand elasticity, the default values are the same for all reporters but may vary by product. The current set includes over 100 distinct values that can be changed but the elasticity value is unique for a given product (import demand elasticity is irrespective of the partner). The values of import demand elasticity for over 180 economies are estimated according to Utoktham et al. (2020).

Export supplies are perfectly elastic: export supply curves are flat and world prices of each variety (e.g. palm oil from Indonesia) are exogenously given. This is often called the price taker assumption or that exporters are price takers. By default, TINA uses a supply elasticity value of 999, an indicative infinite supply elasticity for all products and partners (perfectly elastic supply). This means that an increase in demand for a given good will always be matched by the producers and exporters of that good, without any impact on the price of the good, or if demand increases, quantity supplied increases without affecting the world price.

Trade Creation

The trade creation (or loss) is caused by the changed amount of domestic demand for an import good from a country, because the price of this good changes due to tariff change or varied relative price to domestic produced substitutes. The formulation of trade creation is:

Where M_{ijk} is the imports of good i in country j from country k. Em and Ex are elastici $TC_{ijk} = M_{ijk}.E_m.\frac{dt_{ijk}}{(1+t_{ijk}).\left(1+\frac{Em}{Ez}\right)}$ty of import demand with respect to domestic price and elasticity of export supply with respect to export price, respectively. t_{ijk} denotes the tariff rate or non-tariff measures in country j to good i from country k.

Trade Diversion

Meanwhile, the trade diversion is defined as the substitution of products from some foreign exporters for products from other exporters. The reason for trade diversion is that the changes in the tariff rates are different for various countries and lead to changes in relative prices of goods from different suppliers. This can arise through changes in the MFN rate, the preference rate, or both. The mathematical expression is as follows:

$$TD_{ijk} = \frac{\frac{M_{ijk}}{\sum M_{ijk}}.\sum M_{ijk}.E_s.\frac{d\left(\frac{P_{ijk}}{P_{ijK}}\right)}{\left(\frac{P_{ijk}}{P_{ijK}}\right)}}{\sum M_{ijk} + \sum M_{ijK} + \sum M_{ijk}.E_s.\frac{d\left(\frac{P_{ijk}}{P_{ijK}}\right)}{\left(\frac{P_{ijk}}{P_{ijK}}\right)}}$$

Where Es is the elasticity of substitution with respect to relative prices of the same product from different sources of supply, P_{ijk} is the price of good i in country j from country k. k notates one (group) of foreign supplier(s) and K notates other (group) of foreign supplier(s). The summation considers only across country group k or K, not across product i or importer j (Laird and Yeats, 1986, p.1 and pp. 20-23).

4 There are other partial-equilibrium model dashboards (Dashboards for Trade Policy Diagnostics): SMART model (Single Market Simulation Model), Global Simulation Analysis of Industry-Level Trade Policy (GSIM), Tariff Reform Impact Simulation Tool (TRIST), Agricultural Trade Policy Simulation Model (ATPSM), and TRADESIFT (United Nations Trade and Development, 2025) and (de Melo, 2020).

References

Ahmed, S. (2010). India-Japan FTA in Goods: A Partial and General Equilibrium Analysis. *Paper Presentation at the Thirteenth Annual Conference on Global Economic Analysis, Trade for Sustainable and Inclusive Growth and Development.* https://www.gtap.agecon.purdue.edu/resources/download/4839.pdf

Asian Development Bank (2025). Free Trade Agreements. *Asia Regional Integration Center*. https://aric.adb.org/fta-country

Bacchetta, M., Beverelli, C., Cadot, O., Fugazza, M., Grether, J., Helble, M., Nicita, A. & Piermartini, R. (2016). *A Partial Guide to Trade Policy Analysis.* UNCTAD and WTO publications.

Barro, R., and Sala-I-Martin, X. (1995). *Economic Growth.* McGraw-Hill.

Boakye, B. A. P. & Abankwa, D. (2025). AGOA Ending without an Immediate Extension? What are the Potential Implications for US-Africa Trade Relations? *Australian Institute of International Affairs*. https://www.internationalaffairs.org.au/australianoutlook/agoa-ending-without-an-immediate-extension-what-are-the-potential-implications-for-us-africa-trade-relations/

De Melo, J. (2020). A Dashboard for Trade Policy Diagnostics. *Working Paper Development Policies*, 275. https://ferdi.fr/dl/df-9qeugDRDiw34ZoCPP6PdA8mZ/ferdi-p275-a-dashboard-for-trade-policy-diagnostics.pdf

East African Community. (2025). *African Continental Free Trade Area (AfCFTA) Agreement.* https://www.eac.int/trade/international-trade/trade-agreements/african-continental-free-trade-area-afcfta-agreement

Elago, P. M. (2021). Entry Into Force of the Economic Partnership Agreement Between the SACU Member States, Mozambique and the United Kingdom Of Great Britainand Northern Ireland. *SACU Secretariat*. https://www.sacu.int/docs/pr/2021/Press-Release-SACUM-UK-EPA-Entry-into-Force.pdf

Gappy, V.. (2022). Seychelles Maintains Status as Least Corrupt Country in Africa. *Seychelles Nation*. https://www.nation.sc/articles/16207/seychelles-maintains-status-as-least-corrupt-country-in-africa #:~:text=Published%20recently%20by%20the%20Swiss,is%20in%20the%20third%20position

Graham, L., Kravchenko, A., Ratna, R., & Mikic, M. (2018). A Simple Analytical Method Using Trade and Tariff Data for Identifying an Offensive List When Negotiating a Free Trade Agreement: An Example of Sri Lanka-China Free Trade Agreement Negotiations. *ESCAP Working Paper Series*.

International Trade Administration [ITA]. (2024). *Botswana-Trade agreements.* https://www.trade.gov/country-commercial-guides/botswana-trade-agreements

Ministry of Forign Affairs of the Republic of Indonesia [Kemlu]. (2025). *Daftar Perjanjian Internasional Indonesia dengan Botswana.* https://treaty-room.kemlu.go.id/daftar-perjanjian

Laird, S. and Yeats, A. (1986). The UNCTAD Trade Policy Simulation Model: A Note on the Methodology, Data and Uses. United Nations Trade and Development, Geneva.

Larasati, L., & Aseilla, D. (2021). Upaya Diplomasi Ekonomi Indonesia di Afrika Melalui Preferential Trade Agreement Indonesia Mozambik. *Keluwih: Jurnal Sosial dan Humaniora*, *2*(2), 49-57.

Ministry of Trade of the Republic of Indonesia. (2025). *Neraca Perdagangan dengan Mitra Dagang. Satu Data Perdagangan.* https://satudata.kemendag.go.id/data-informasi/perdagangan-luar-negeri/neraca-perdagangan-dengan-mitra-dagang

Mogotsi, I., Sekwati, L., & Narayana N. (2022). *Economic Diversification in Africa: Lessons from Botswana.* Windhoek.

Plummer, M.G., Cheong, D., & Hamanaka, S., (2010). *Methodology for Impact Assessment of Free Trade Agreements, Mandaluyong City.* Asian Development Bank. http://aric.adb.org/pdf/FTA_Impact_Assessment.pdf

SACU Secretariat. (2025). *History of SACU.* https://www.sacu.int/about-sacu/history-of-sacu

SADC Secretariat. (2025). *Historical Timeline.* https://www.sadc.int/pages/history-and-treaty

Sekretariat RPJPN 2025-2045. (2025). *Rancangan Akhir RPJPN 2025-2045.* https://indonesia2045.go.id/aspirasi

Sjahril, S. S. (2022). Penjajakan Indonesia-Southern African Customs Union Preferential Trade Agreement Dalam Upaya Memperluas Peluang Pasar Non-Tradisional dan Studi Simulasi Perdagangan Bebas Bilateral RI-Namibia. *Cendekia Niaga: Journal of Trade Development and Studies*, *6*(1), 42-60. https://jurnal.kemendag.go.id/JCN/article/view/675/361

Trade Intelligence and Negotiation Adviser. (2025). About TINA. https://tina.trade/

Trade Intelligence and Negotiation Adviser [TINA]. (2025). *User Guide and Explanatory Note for TINA.* United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and United Nations Economic Commission for Africa (UNECA). https://www.unescap.org/kp/2025/user-guide-and-explanatory-note-tina-trade-intelligence-and-negotiation-adviser

Trade Map. (2025). Bilateral Trade between Indonesia and Botswana. https://www.trademap.org/

United Nations Trade and Development [UNCTAD]. (2025). *Chapter 4: Partial-Equilibrium Trade-Policy Simulation.* https://unctad.org/system/files/official-document/gds2012d2_ch4_en.pdf

United Nations Economic and Social Commission for Asia and the Pacific [UNESCAP]. (2025a). *User Guide and Explanatory Note for TINA: the Trade Intelligence and Negotiation Adviser.* https://www.unescap.org/kp/2025/user-guide-and-explanatory-note-tina-trade-intelligence-and-negotiation-adviser

United Nations Economic and Social Commission for Asia and the Pacific [UNESCAP]. (2025b). *E-learning Course on Using Trade Intelligence and Negotiation Advisor (TINA).* https://www.unescap.org/our-work/trade-investment-innovation/training/tina

United States Trade Representative [USTR]. (2025). *African Growth and Opportunity Act (AGOA).* https://ustr.gov/issue-areas/trade-development/preference-programs/african-growth-and-opportunity-act-agoa

Utoktham, C., Kravchenko, A. & Duval, Y. (2020). *New Global Estimates of Import Demand Elasticities: A Technical Note.* United Nations Economic and Social Commission for Asia and the Pacific Report.

World Bank Open Data. (2025). *GDP per Capita (current US$) – Botswana.* https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=BW

World Trade Organization [WTO]. (2012). *Regional Trade Agreements*. http://www.wto.org/english/tratop_e/region_e/region_e.htm