

THE IMPACT OF SAUDI ARABIA'S ACCESSION TO THE BRICS BLOC ON THE PERFORMANCE OF SAUDI EXPORTS

Mahmoud Magdy Barbary¹²

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¹ Department of Finance, College of Business Administration in Hawtat bani Tamim, Prince Sattam bin Abdulaziz University, Saudi Arabia

² Department of Economics and foreign trade, faculty of commerce and business administration, Helwan University, Egypt

Corresponding Author:

Mahmoud Magdy Barbary

Email:

mahmoudmagdy@commerce.helwan.edu.eg

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ABSTRACT

This study aims to analyze the expected impacts of Saudi Arabia's accession to the BRICS bloc, which is intergovernmental organization comprising Brazil, Russia, India, China, and South Africa. By analyzing the intra-trade flows of Saudi Arabia with the BRICS countries from the implementation of the bloc until 2023 and measuring the impact of Saudi exports and imports with BRICS on the balance of merchandise trade, and to discuss the extent of the impact of the net intra-trade situation of Saudi Arabia with BRICS on the balance of merchandise trade. The most prominent Saudi export sectors were diagnosed, and their corresponding customs tariff averages in the BRICS countries were analyzed to determine the expected effects of implementing a regional trade agreement (RTA) between the BRICS bloc. The study is based on the ARDL model and Saudi data from (2003-2022), using three models by applying on exports, imports, and trade balance of Saudi Arabia, the findings suggests that there is no significant relationship between Saudi Arabia's trade balance on the one hand, and exports, imports and the trade balance with BRICS on the other hand, which reduces the impact of Saudi Arabia's accession to BRICS on Saudi exports. which requires further negotiation of mutual obligations and potential gains between the member states of BRICS.

Keywords: Balance of Payments, BRICS, Merchandise Trade, Regional Trade Agreement, Exports

1. INTRODUCTION

The BRICS group is considered one of the active powers in the global economic system. Since its founding, it has been trying to form an economic and political bloc that belongs to the concept of new regionalism according to an integration approach that does not recognize geographical borders as an obstacle to integration. Since the bloc was established in 2009, it has been seeking to achieve its primary goal, which is to create a multipolar world that does not controlled by a single country or a single bloc, along with the coordination of global economic issues among the members of the bloc [Stuenkel \(2020\)](#), and although the BRICS member states has not reached any stage of the recognized economic integration stages that begins with preferential trade areas, the economic cooperation between them is clear in terms of coordinating common interests between them and the rest of the world. The five founding countries of BRICS bloc represent about 30% of the world's land, and 40% of the world's population.

From the beginning of 2024, the membership of the BRICeconomy andcially expanded to include new members such as Egypt, Ethiopia, United Arab Emirates, Iran, and Saudi Arabia, thus becoming a major economic power that includes a group of emerging economies, each of which is characterized by a set of distinctive features, but in general they agree in being emerging economies seeking to gain a larger role in the global economy, and possesses the necessary elements to transform into industrial economies. Most member states possess abundant oil reserves and have a high population density that enables them to attract labor-intensive investments, in addition to low wage rates in most of them, besides the fact that most of them are members of many regional trade agreements that grant these countries many exemptions and preferential treatment in international trade transactions. Making these countries a primary destination for attracting foreign direct investments.

With the pursuit of expansion in the BRICS group, the need arises to deepen economic cooperation between the member states of the bloc in a more institutional manner that passes through the natural progression of the stages of economic integration, even if it does not reach the final stages of integration. However, starting to implement a preferential trade area (PTA) or free trade area (FTA) may be an important first step to enhance cooperation among member states and achieve common gains for all, as the primary goal of participating in blocs is to achieve additional gains for the members of the bloc so that the net benefits of the bloc are positive for the continuation of the bloc and not its cancellation, So that the results of trade creation and trade diversion between bloc members emerge.

Since achieving economic benefits for member states is the most important reason for joining economic blocs, this prompts an analysis of the performance of the Saudi economy to determine the feasibility of joining BRICS or not from an economic point of view of course, as increasing Saudi exports or increasing foreign direct investment inflows into Saudi Arabia are among the most important objectives of Saudi vision 2030, and therefore joining BRICS must aim to further increase Saudi exports, otherwise it will be nothing more than a trade agreement that opens the Saudi market to more imports from BRICS members, especially in light of Saudi Arabia's membership in a limited number of trade agreements. WTO (2021)

Accordingly, the study will examine the feasibility of Saudi Arabia joining BRICS, and the benefits resulting from this accession regarding the performance of the trade balance in general, and exports in particular, which can be expanded to study the feasibility of other countries joining BRICS or developing countries joining economic blocs in general. As making the decision to join economic blocs or not requires a set of studies related to the common obligations between the parties of the bloc, which must be balanced and achieve benefits for all parties in a fair manner.

This paper is divided into seven sections. After the introduction, the second section covers the literature review in a separate two sub-sections, the first focused on the historical background of regionalism whether old or new regionalism and its evolving over time, while the second briefed the previous studies related to the impact of RTAs on exports performance. The third section focused on the analysis of Saudi's economy. The following sections were methodology followed by results, findings, and discussion. Then conclusion of the study. Then the study recommendations was the last section.

2. LITERATURE REVIEW

This chapter consists of two main parts. The first is historical background of the emergence of RTAs and its development from old regionalism to new regionalism. The second part deals with previous applied studies that were related to studying the relationship between regional trade

agreements and their impact on exports.

2. 1. HISTORICAL BACKGROUND

The effects of regional trade agreements (RTA) on exports may be positive or negative, so no country or region can take the benefits of the RTAs for granted, as it depends on the design and the commitment of the member states to implement the RTA.

For the RTAs itself, low trade barriers is the fastest way to enhance the intraregional trade between RTA's member states, as the exemption from tariffs and other trade barriers encourage RTA's member states to increase their intra-trade between them, whether in new products that were not part of trade exchange between member states of the RTA before, which is known as the trade creation effect, or by transferring trade from countries that are not members of the RTA to member states of the RTA, which is known as trade diversion effect. [Flatters and Kirk \(2003\)](#)

The concept of RTAs has developed a lot, as trade agreements are no longer limited to trade policy objectives only, but rather their objectives extend to include political and social dimensions, and these agreements no longer depend on geographical proximity as a justification for integration, as geographical distance is no longer an obstacle to integration according to the theory of new regionalism. [Söderbaum and Shaw \(2003\)](#)

Traditional RTAs arise as a result of the availability of a group of motives, such as economic, social, political and geographical motives [Aksoy, et al. \(1997\)](#). With the emergence of the concept of new regionalism, geographical and social motives no longer have a significant impact on the establishment of an economic bloc, and the economic benefits may cover any political obstacles between member states of economic blocs established according to the concept of new regionalism.

The emergence of the new regional theory dates back to the post-Cold War period, as this concept differed from the traditional regional theories that appeared in the mid-1950s in a number of aspects, including the focus on comprehensive economic integration and not just trade transactions which was the basis for the launch of a number of regional agreements such as ASEAN, SADC, NAFTA and APEC, in a way that confirmed that the new regional tendency will be different from what it was after World War II, and the reason for this change may be due to the fact that the world is no longer bipolar, but rather is heading towards becoming a multi-power world, which provides an additional incentive to the emerging countries to unite and bloc to represent a new effective force in the global economic system away from conflicts and political blocs.

Another important difference between old and new regionalism is the behavior of the bloc member towards the countries outside the bloc, as in the old regionalism blocs trade between bloc members was encouraged, but trade transactions with other countries from outside the bloc was discouraged by imposing new trade barriers, while in new regionalism trade transactions was more open to all countries in or outside the bloc.

Another feature of new regionalism is its orientation toward interactions between states and nonstate actors, as globalization affected the shape of new regionalism with an impact on restructuring of the social, political, and economic aspects of regions.

So, the new regionalism emerged as a new product of the forces of economic and political change shaping the post-cold war world, as the new multipolar world regime had a new structure specially after 9/11, this transformation was even expedited after world financial crisis in 2008. However, despite the differences between old regionalism and new regionalism, they are similar in that they are affected by international politics [Yuzhu \(2020\)](#), and therefore the ruling element in formulating the terms of any trade or economic agreement is the national interest,

which gives the major regional powers the upper hand in formulating regional trade agreements compared to its counterparts.

The BRICS bloc has emerged since 2009 to be a strong to the G7, and despite the absence of any form of traditional economic integration stages, the BRICS bloc has begun implementing a number of economic initiatives, such as: New Development Bank, the BRICS Contingent Reserve Arrangement, the BRICS pay, the BRICS Joint Statistical Publication, and the BRICS basket reserve currency. Raimondi (2023)

Although the President of South Africa announced that Saudi Arabia, along with another group of countries, would join the BRICS bloc, Saudi Arabia announced that it had not joined, even though it was seriously considering joining, which increases the importance of studying the feasibility of Saudi Arabia joining the BRICS bloc, especially on Saudi exports, As the bloc can develop later and proceed through the stages of economic integration, which means granting member states preferential advantages with regard to intra-trade between them.

2. 2. PREVIOUS STUDIES

A group of applied studies have examined the impact of preferential trade agreements on export performance in a group of countries.

Kaushal (2022) examined the impact of regional trade agreements on export performance in India. The study concluded that the trade agreements to which India is a party, such as ASEAN, Mercosur, and SAFTA, did not achieve the desired positive impact on export performance, but it remains better than its counterparts with non-member countries. The study also found that foreign direct investment inflows by the member countries of the agreements did not affect India's export performance. The study also found that the distance factor did not affect India's exports, especially services exports such as computer services, financial services, insurance, and various technical support services that operate under the outsourcing system.

Kpodar and Imam (2015) assessed how RTAs impact the growth volatility on 170 countries from 1978 to 2012, the study concluded that trade openness through RTAs can increase exposure to macroeconomic shocks, but in general, benefits of joining RTAs outweigh the costs, as RTAs might be associated with lower growth volatility if trade openness is controlled through trade policy measures. Also, the study concluded that countries with high growth volatility are more likely to join RTAs to enhance the stabilization of macroeconomic environment.

Lima, Aguiar, & Ronzheimer (2021) assessed the impact of Regional Comprehensive Economic Partnership (RCEP) on Latin America and the Caribbean bloc (LAC), on both macro and micro levels, the study also assessed the possible effects of a bi-regional free trade agreement between the two regions as a response to RCEP. On macro level, the study concluded that positive effects for LAC and RCEP can be expected in terms of foreign trade transactions but on the expenses of the rest of the world. On micro level, it is estimated that the partnership between the two blocs could boost the exports of LAC's MSMEs by 5%, and increase the exports of LAC large companies exports by 4%.

Masunda and Mhonyera (2024) examined the effects of COMESA free trade area on the bilateral export efficiency of COMESA member states over the period (1997-2021), the results showed a positive effect of the COMESA free trade area on export efficiency. Also, the study found that FTAs stimulate exports efficiency in the FTA's member states.

Mukwaya (2019) analyzed the impact of RTAs on intraregional African manufacturing exports from 1990 to 2015 using data for 45 countries, the study found that a RTA led to a 72% increase in the African manufacturing exports.

Nguyen (2019) examined the impact of 18 RTAs on the intra-bloc trade, and on the trade with

the rest of the world, from 1960 to 2014 using gravity model, and the study found that establishing these RTAs had a significant impact on trade diversion in American and African RTAs, but on trade creation in European and Asian RTAs.

Sedrakyan (2023) examined the impacts of RTAs on trade in Indonesia from 1989 to 2019, the study concluded that the Indonesian exports didn't utilize the benefits of AFTA. On the contrary, Indonesian imports increased as a result of the exemptions granted to AFTA member states, which might affect the Indonesian balance of payments in a negative way.

Sun, et al. (2022) studied the impacts of RTAs on the Quality of export products in Chinese manufacturing industry and found that establishing RTAs with high-income and mid-income countries could improve the quality of Chinese manufacturing exports. Also, the studies differentiated between RTAs focusing on Quantities and RTAs focusing on Quality, as the first one could generate Spaghetti bowl effect, while the latter could improve the quality of Chinese exports.

Yang and Zheng (2022) examined the impact of the digital trade agreement between Japan and a set of countries, the study concluded that the existence of digital trade agreement between Japan and other countries could enhance Japan's digital exports, taking into consideration the demands of other contributing countries, seeking common grounds to promote the development of digital trade.

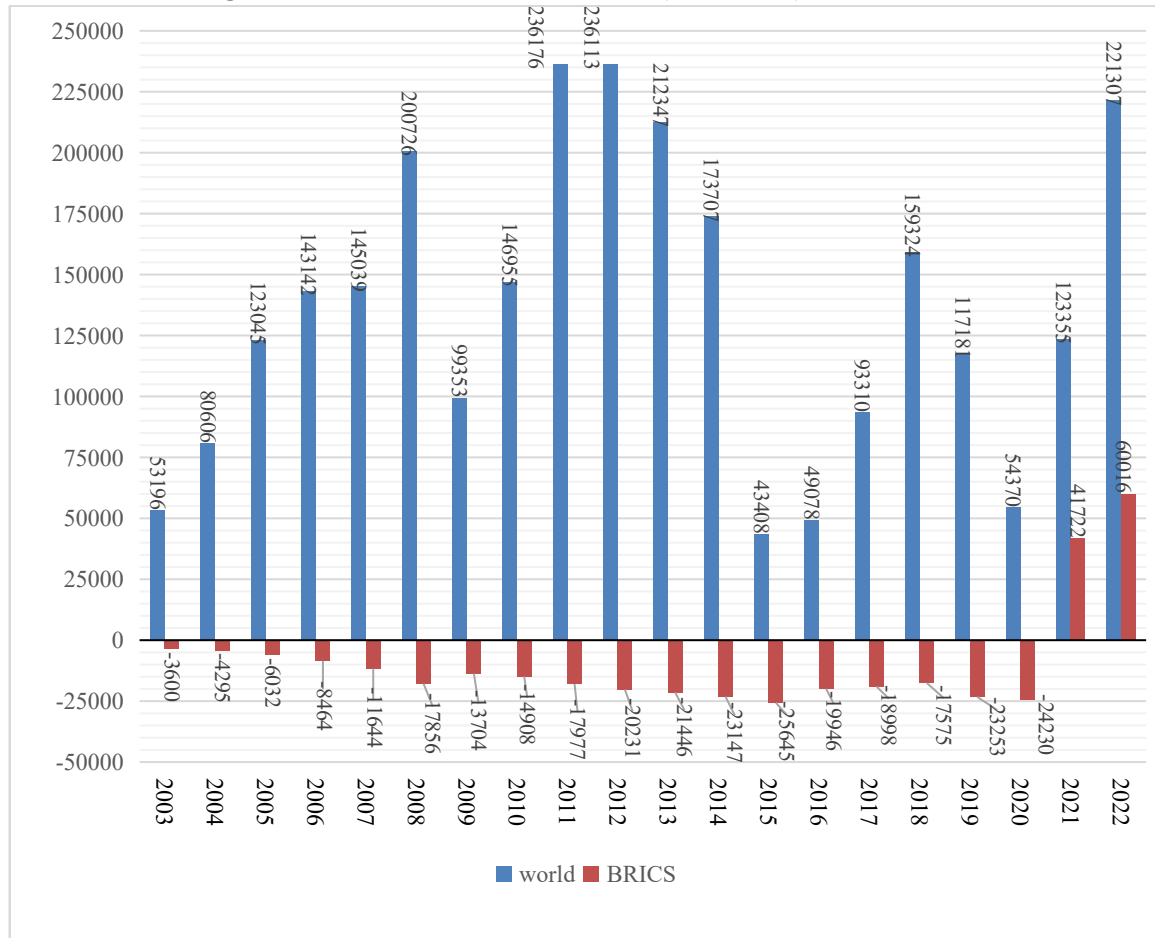
Krajišnik and Žutić (2017) examined the effects of economic blocs' enlargement on the international trade and economic development of new member states in the European Union (EU), the study found that joining EU will have a positive impact on exports of newly members, which in turn, would enhance the process of economic development.

3. SAUDI ARABIA'S ECONOMY ANALYSIS

Saudi Arabia is the largest economy in the middle east, as the world's second largest proven oil reserves, so it's clear that Saudi Arabia's economy is oil-based with around 70% of exports came from petroleum sector, and oil industry represents about 45% of Saudi Arabia's GDP, also the Saudi economy relies on the foreign labor which represents 80% of private sector labor force. **IMF (2022)**

Saudi Arabia always achieves a surplus in its trade balance as a result of its huge oil exports, although this surplus is volatile as a result of the continuous fluctuation in global oil prices and business cycles. Saudi Arabia's trade balance can be observed in the following figure:

By sectoral analysis of Saudi exports, we find that the oil (Mineral fuels, mineral oils and natural gas) sector tops the list, as Saudi exports from this sector in 2022 reached \$327 billion out of a total export value of \$411 billion, meaning that petroleum exports represented 79.5% of total exports. Also, the rest of the export sectors represented only a small percentage of the total Saudi exports, such as the (Plastics and articles thereof) sector, (organic chemicals), and (fertilizers). Saudi exports to the world and to the BRICS countries can be noted in the following table.

Figure 1. Saudi Arabia's trade balance (2003-2022) USD millions

Source: ITC calculations based on UN COMTRADE statistics (2024)

Note: Although the overall trade balance of Saudi Arabia always achieves a surplus, the trade balance with the BRICS countries achieved a deficit during the period from 2003 to 2020 and did not achieve a surplus except in the years 2021 and 2022 as a result of both China and India importing oil from Saudi Arabia.

Table 1. Saudi Arabia's top exports (2012-2022) USD Billions

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total exports	World	387.3	375.3	341.9	213.3	178.8	220	294.5	261.5	185.6	276.2	411.1
	BRICS	9.58	10.8	12	9.31	7.14	9.3	14.5	14.7	12.3	84.7	117.3
	Percentage of BRICS to Total exports	2.4	2.8	3.5	4.3	3.9	4.2	4.9	5.6	6.6	30.6	28.5
Mineral fuels, mineral oils and natural gas (Ch. 27)	World	337.4	321.9	284.7	164.0	134.9	170.2	231.5	205.9	132	202.2	327
	BRICS	0	0	0	0	0	0	0	0	0	68	97.1
	Percentage of BRICS to Total exports	0	0	0	0	0	0	0	0	0	33.6	29.6
Plastics and articles thereof (Ch. 39)	World	15.4	17	18.9	15.2	14.4	17	21	19	16.3	23.7	23.1
	BRICS	2.5	3	3.2	2.3	2.1	2.8	3.8	4.1	3.8	4.7	5.1
	Percentage of BRICS to Total exports	16.2	17.6	16.9	15.1	14.5	16.4	18	21.5	23.3	19.8	22
Organic chemicals (Ch. 29)	World	13	13.2	13.9	10.2	7.6	9.7	14.3	12.7	9.7	14.3	16.2
	BRICS	5.5	5.9	6.1	4.7	3.5	4.7	7	6.7	4.9	6.6	6.8
	Percentage of BRICS to Total exports	42.3	44.6	43.8	46	46	48.4	48.9	52.7	50.5	46.1	41.9
Fertilisers (Ch. 31)	World	1.6	1	1.1	1.1	0.9	0.9	1.3	1.1	1.2	3.6	7.3
	BRICS	0.24	0.08	0.142	0.143	0.106	0.148	0.204	0.196	0.286	1.6	3.38
	Percentage of BRICS to Total exports	15	8	12.9	13	11.7	12.8	15.6	17.8	23.8	44	46
Ships, boats and floating structures (Ch. 39)	World	1.5	2.2	2.2	2.5	2.3	2.2	2.6	2.6	3.5	3.8	3.7
	BRICS	0.028	0.037	0	0	0.03	0.005	0.012	0.082	0.16	0.14	0
	Percentage of BRICS to Total exports	1.8	1.8	0	0	1.3	0.22	0.46	3.1	4.5	3.6	0

Source: Authors calculations based on ITC calculations based on UN COMTRADE statistics (2024).

Note: it is observed from the table that the Saudi's exports to BRICS represents a small percentage of total Saudi's exports, and this percentage didn't improve until 2021 and 2022 due to oil exports to China and India while the percentage of Saudi exports to the BRICS did not exceed 6.6% in 2020, which is the highest percentage reached by Saudi exports to the BRICS countries. As for Saudi exports to BRICS in other sectors, they are relatively small, as Saudi Arabia's total exports from those sectors are small. Therefore, even if the percentage of Saudi exports to BRICS from these sectors is high, the nominal value of the exports will be very low and does not represent a reliable percentage to the total Saudi exports.

The important question regarding Saudi exports to the BRICS is: "Will Saudi Arabia's accession to the BRICS bloc lead to an improvement in Saudi exports in the event of establishing a FTA between the BRICS countries?" To answer this question, we must first review the trade restrictions imposed by the BRICS countries on imports. Especially in the sectors that Saudi Arabia exports, and whether these customs restrictions are high in a way that gives Saudi Arabia an advantage if the restrictions are reduced. To analyze this matter, we note the following table.

Table 2. Imports duties imposed by BRICS countries on top Saudi exports (Average %)

	Crude oil HS: 270900	Plastics and articles thereof (Ch. 39)	Organic chemicals (Ch. 29)	Fertilisers (Ch. 31)	Ships, boats and floating structures (Ch. 39)
Brazil	0	18	2	4	4
Russia	5	6.5	3	6.5	0
India	0	15	2.5	7.5	7.5
China	0	10	2	3	6.5
South Africa	0	15	0	0	0

Source: Market Access Map based on ITC calculations based on UN COMTRADE statistics (2024).

Note: it is noted from the previous table that the tariff imposed on crude oil is zero in both China and India, which are the two BRICS countries that import oil from Saudi Arabia. As for the Organic chemicals, Fertilizers, and Ships, boats and floating structures sectors, the imposed tariff is low and Saudi exports of these sectors are also low. As for the Plastics and articles thereof sector, which has a somewhat high tariff. Saudi Arabia's exports to the BRICS countries did not exceed \$5.1 billion in 2022 representing about 1.22% of total Saudi exports for the same year. Therefore, granting preferential benefits to Saudi Arabia in this sector may not affect Saudi exports.

Based on the foregoing, it can be claimed that the establishment of a FTA or PTA for Saudi Arabia with the BRICS countries may not affect Saudi exports due to the low tariff applied by the BRICS countries on the oil sector on the one hand, and the low relative weight of Saudi exports in other sectors in a way that makes reducing customs tariffs have no effect on trade exchange between Saudi Arabia and the BRICS countries, noting that most of Saudi Arabia's exports from other sectors represent bulk goods that have a relatively high cost in international shipping and insurance, especially with the geographical distance between Saudi Arabia and most of the BRICS countries.

As for Saudi Arabia's imports from the BRICS countries, the situation is completely different from exports. Despite achieving a trade surplus with the BRICS countries in the years 2021 and 2022, the reason for this surplus was Saudi Arabia's oil exports to both China and India, while Saudi Arabia achieved a trade deficit with the BRICS countries before these two years. Saudi imports from the BRICS countries represent a large percentage of total imports and are diverse in a group of sectors such as machinery, equipment, cars, and electrical appliances. Saudi imports from the BRICS countries can be noted in the following table.

Table 3. Saudi Arabia's top Imports (2012-2022) USD Billions

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total imports	World	151.3	163	168.2	170	129.8	126.7	135.2	144.3	131.3	152.8	189.8
	BRICS	28.9	31.7	34.7	35.2	28	28	31.5	37.2	36.5	41.3	54.9
	Percentage of BRICS to Total imports	19.1	19.4	20.6	20.7	21.5	22	23.2	25.7	27.7	27	28.9
Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof (Ch 84)	World	24.3	25.9	26.3	26.8	17.7	16.5	15.4	16.8	15.4	16.5	21.2
	BRICS	4.6	4.9	5.3	5.5	3.6	3.7	3.4	4.4	5	5.4	7.2
	Percentage of BRICS to Total imports	18.9	18.9	20.1	20.5	20.3	22.4	22	26.19	32.4	32.7	33.9
Vehicles other than railway or tramway rolling stock, and parts and accessories thereof (Ch 87)	World	22.7	23.4	23.2	25	17.7	12.9	11.8	15	14.1	15.2	19.2
	BRICS	0.88	1	1.3	1.38	1.05	0.8	1.1	2	2.6	3	4.9
	Percentage of BRICS to Total imports	3.87	4.2	5.6	5.52	5.9	6.2	9.3	13.3	18.4	19.7	25.5
Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television (Ch 85)	World	16.2	17.6	18.8	19.5	14.3	14.2	13.6	14.3	12.7	13.8	15.6
	BRICS	5.2	5.6	5.9	6.4	4.8	6	6.7	8.1	7.5	8.3	9.1
	Percentage of BRICS to Total imports	32	31.8	31.3	32.8	33.5	42.2	49.2	56.6	59	60	58.3
Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral (Ch 27)	World	0.66	2.1	2.5	1.2	0.74	2.7	4	3.9	4.3	7.3	14.2
	BRICS	0.054	0.64	0.412	0.137	0.135	0.108	0.610	0.438	0.437	1.4	1.8
	Percentage of BRICS to Total imports	8.1	30.5	16.5	11.4	18.2	4	15.25	11.2	10.16	19.17	12.7
Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad (Ch 71)	World	2.9	5	5.1	5.7	2.9	3.4	4.1	3.6	1.9	5.4	7.4
	BRICS	0.11	0.4	0.6	0.74	0.32	0.56	0.3	0.43	0.43	0.58	1
	Percentage of BRICS to Total imports	3.7	8	11.7	12.9	11	16.4	7.3	11.9	22	10.7	13.5
Pharmaceutical products (Ch 30)	World	4.3	5.1	5.2	5.5	4.8	5.1	5.5	5.3	5.6	6.9	7.3
	BRICS	0.047	0.052	0.057	0.053	0.039	0.075	0.151	0.149	0.163	0.221	0.239
	Percentage of BRICS to Total imports	1	1	1	0.9	0.81	1.4	2.7	2.8	2.9	3.2	3.21
Iron and steel (Ch 72)	World	7.8	6	5.6	4.7	3.2	2.5	3.1	4.2	4.5	5.4	6.9
	BRICS	1.5	1.2	1.7	1.4	1.2	0.85	1.12	1.04	0.874	1.32	2.2
	Percentage of BRICS to Total imports	19.2	20	30	29.7	37.5	34	36.1	24.7	19.4	24.4	31.8

Source: Authors calculations based on ITC calculations based on UN COMTRADE statistics (2024).

Note: As it shown in the previous table, Saudi imports from BRICS countries reached about 28.9% of total imports in 2022, as these imports diversified to include a large number of sectors, although the largest percentage was for Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof Sector, then Vehicles other than railway or tramway rolling stock, and parts and accessories thereof Sector, and Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television Sector, Therefore, the BRICS countries represent an important supplier to the Saudi market in a large number of products.

By analyzing the average customs tariff applied to Saudi Arabia's imports from the BRICS countries, especially consumer goods such as vehicles and electrical appliances, we find that the customs tariff applied to vehicles is equal to 5% on average and the tariff applied to electrical appliances is equal to 6.77% on average, and where China and India are among the countries that supply these products to Saudi Arabia, granting customs exemptions to Saudi imports from BRICS countries in the event of establishing any form of economic integration between Saudi Arabia and BRICS would lead to an increase in Saudi imports, the tariff applied on Saudi's imports from BRICS can be noted in the next table.

Table 4. Imports duties imposed by Saudi Arabia on top BRICS countries exports (Average %)

	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof (Ch 84)	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof. (Ch 87)	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television (Ch 85)	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral (Ch 27)	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad. (Ch 71)
Brazil	5.8	5	6.77	6.25	2.5
Russia	5.8	5	6.77	6.25	2.5
India	5.8	5	6.77	6.25	2.5
China	5.8	5	6.77	6.25	2.5
South Africa	5.8	5	6.77	6.25	2.5

Source: Market Access Map based on ITC calculations based on UN COMTRADE statistics (2024)

4. METHODOLOGY

The model of the study aims to analyze the relationship between the Saudi's exports and the Saudi's trade balance, also we expand the analysis to include the impacts of Saudi's imports from BRICS on the Saudi's trade balance during (2003-2022) using ARDL model, so the model is based on three hypotheses as follow:

First hypothesis: There is a cointegration relationship between Saudi's trade balance and Saudi's exports to BRICS.

second hypothesis: There is a cointegration relationship between Saudi's trade balance and Saudi's imports from BRICS.

third hypothesis: There is a cointegration relationship between Saudi's trade balance and Saudi's trade balance with BRICS.

Regarding the methodology, Autoregressive distributed lag model is a combination between the distributed lag model and autoregressive model because it includes not only the present value, but also the past values of the explanatory variables (X's) and include one or more value of the past (lag) of the dependent variable (Y) as explanatory variables.

The study uses the method of Autoregressive Distributed Lag to clarify the existence of the long run relationships during the study period (2003-2022), starting with stationarity tests, then testing the existence of cointegration relationship in three different models as in the three previous hypotheses, using EViews 12 software.

5. RESULTS, FINDING, AND DISCUSSION

5.1. STATIONARITY TESTS

The stationary of the time series is one of the necessary and required characteristics when studying the cointegration of the model variables. To judge the stationary of the data, the Unit Root Test was used using the Augmented Dickey Fuller Test. The following table shows the results of this test:

Table 5. Results of the unit root test using the Augmented dickey fuller (ADF) test

Variables	ADF test	
	t-Statistic	Sig. (P-value)
Trade balance	-3.592602**	0.0178
Inflation rate	-6.878213**	0.0000
GDP growth rate	-3.452732*	0.0217
Exports to BRICS	-4.507730**	0.0027
Imports from BRICS	-4.477789**	0.0028
Trade balance with BRICS	-3.585255***	0.0212

Source: Authors calculations

* Stable at the level

** Stable at the first level of differences

*** Stable at the second level of differences

The results indicate that the GDP growth rate variable is stable at the origin level I (0), using the Intercept constant, while the trade balance world, the inflation rate, the exports to BRICS, and imports from BRICS are stable at the first level of differences I (1), using the intercept constant, and Trade balance with BRICS are stable at the second level of differences I (2), using the intercept constant, which indicates the validity of using the Bounds Test approach and the ARDL model to clarify the long run level of cointegration between the variables.

5. 2. COINTEGRATION TEST BETWEEN THE VARIABLES OF THE STUDY

5. 2. 1. FIRST HYPOTHESIS: “THERE IS A COINTEGRATION RELATIONSHIP BETWEEN THE SAUDI’S TRADE BALANCE WITH WORLD AND THE SAUDI’S EXPORTS TO BRICS.

The ARDL model used to study and determine the cointegration relationship between the Saudi’s trade balance with world as a dependent variable and the inflation rate, GDP growth rate, and Saudi’s exports to BRICS as an independent variables in the long term, Thus, the model after stability is as follows:

$$\text{DTRADE_BALANCE_WORLD}_{it} = a_0 + a_1 \text{INFLATION_RATE}_{it} + a_2 \text{GDP_GROWTH_RATE}_{it} + a_3 \text{DEXPORTS_TO_BRICS_PERCENTAGE}_{it} + e_{it} \quad (1)$$

Where:

$\text{DTRADE_BALANCE_WORLD}_{it}$: represents the Saudi’s trade balance with world.

$\text{INFLATION_RATE}_{it}$: represents the inflation rate.

$\text{GDP_GROWTH_RATE}_{it}$: represents the GDP growth rate.

$\text{DEXPORTS_TO_BTICS_PERCENTAGE}_{it}$: represents the Saudi’s exports to BRICS.

a_0 : the model constant, a_1, a_2, a_3 is the coefficients of the independent variables.

e_{it} : random error term.

Table 6. Results of estimation of the ARDL model for the first hypothesis

Dependent Variable: DTRADE_BALANCE_WORLD

Method: ARDL

Date: 06/07/24 Time: 07:09

Sample (adjusted): 2005 2022

Included observations: 18 after adjustments

Maximum dependent lags: 1 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (1 lag, automatic): DINFLATION_RATE

GDP_GROWTH_RATE DEXPORTS_TO_BRICS_PERCENTAGE

Fixed regressors: C

Number of models evaluated: 8

Selected Model: ARDL(1, 0, 1, 0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
DTRADE_BALANCE_WORLD(-1)	0.291174	0.252521	1.153071	0.2713
DINFLATION_RATE	5000.340	4893.224	1.021891	0.3270
GDP_GROWTH_RATE	10595.21	3618.105	2.928387	0.0126
GDP_GROWTH_RATE(-1)	-6403.500	5266.720	-1.215842	0.2474
DEXPORTS_TO_BRICS_PERCENTAGE	647.8413	2874.389	0.225384	0.8255
C	-9532.129	25441.17	-0.374673	0.7144
R-squared	0.532031	Mean dependent var		7816.722
Adjusted R-squared	0.337044	S.D. dependent var		64246.56
S.E. of regression	52310.91	Akaike info criterion		24.82900
Sum squared resid	3.28E+10	Schwarz criterion		25.12579
Log likelihood	-217.4610	Hannan-Quinn criter.		24.86992
F-statistic	2.728545	Durbin-Watson stat		1.629847
Prob(F-statistic)	0.071620			

*Note: p-values and any subsequent tests do not account for model selection.

Source: Authors calculations

It is clear from the table that

The value of the coefficient was 647.8413, which indicates that there is a positive relationship between the Saudi's exports to BRICS and the Saudi's trade balance with world, and the result of the t-test indicates that this relationship is insignificant, as the level of Sig. (Prob.) reached 0.8255, which is greater than the significance level of 0.05.

Hence reject the First hypothesis: "There is a cointegration relationship between the trade balance world and the exports to BRICS at level 5%

5. 2. 2. SECOND HYPOTHESIS: "THERE IS A COINTEGRATION RELATIONSHIP BETWEEN THE SAUDI'S TRADE BALANCE WITH WORLD AND THE SAUDI'S IMPORTS FROM BRICS

The ARDL model used to study and determine the cointegration relationship between the Saudi's trade balance with world as a dependent variable and the inflation rate, GDP growth rate,- Saudi's imports from BRICS as an independent variables in the long term, Thus, the model after stability is as follows:

$$DTRADE_BALANCE_WORLD_{it} = B_0 + B_1 INFLATION_RATE_{it} + B_2 GDP_GROWTH_RATE_{it} + B_3 DIMPORTS_FROM_BRICS_PERCENTA_{it} + e_{it} \quad (2)$$

Where:

$DTRADE_BALANCE_WORLD_{it}$: represents the Saudi's trade balance with world.

$INFLATION_RATE_{it}$: represents the inflation rate.

$GDP_GROWTH_RATE_{it}$: represents the GDP growth rate.

$DIMPORTS_FROM_BRICS_PERCENTA_{it}$: represents the Saudi's imports from BRICS.

B_0 : the model constant, B_1, B_2, B_3 is the coefficients of the independent variables.

e_{it} : random error term.

Table 7. Results of estimation of the ARDL model for the second hypothesis

Dependent Variable: DTRADE_BALANCE_WORLD

Method: ARDL

Date: 06/07/24 Time: 08:48

Sample (adjusted): 2005 2022

Included observations: 18 after adjustments

Maximum dependent lags: 1 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (1 lag, automatic): DINFLATION_RATE

GDP_GROWTH_RATE DIMPORTS_FROM_BRICS_PERCENTAGE

Fixed regressors: C

Number of models evaluated: 8

Selected Model: ARDL(1, 0, 1, 0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
DTRADE_BALANCE_WORLD(-1)	0.293128	0.262113	1.118327	0.2853
DINFLATION_RATE	4810.690	5219.056	0.921755	0.3748
GDP_GROWTH_RATE	10685.88	3600.915	2.967545	0.0118
GDP_GROWTH_RATE(-1)	-7140.903	4481.803	-1.593310	0.1371
DIMPORTS_FROM_BRICS_PERCENTAGE	-863.4271	13293.68	-0.064950	0.9493
C	-5589.151	26647.10	-0.209747	0.8374
R-squared	0.530215	Mean dependent var		7816.722
Adjusted R-squared	0.334471	S.D. dependent var		64246.56
S.E. of regression	52412.30	Akaike info criterion		24.83287
Sum squared resid	3.30E+10	Schwarz criterion		25.12966
Log likelihood	-217.4958	Hannan-Quinn criter.		24.87380
F-statistic	2.708721	Durbin-Watson stat		1.626631
Prob(F-statistic)	0.073021			

*Note: p-values and any subsequent tests do not account for model selection.

Source: Authors calculations

It is clear from the table that

The value of the coefficient was -863.4271, which indicates that there is a negative relationship between the imports from BRICS and the trade balance with world, and the result of the t-test indicates that this relationship is insignificant, as the level of Sig. (Prob.) reached 0.9493, which is greater than the significance level of 0.05.

Hence reject the second hypothesis: “There is a cointegration relationship between the Saudi’s trade balance with world and the Saudi’s imports from BRICS. at level 5%.

5. 2. 3. THIRD HYPOTHESIS: “THERE IS A COINTEGRATION RELATIONSHIP BETWEEN THE SAUDI’S TRADE BALANCE WITH WORLD AND THE SAUDI’S TRADE BALANCE WITH BRICS.

The ARDL model used to study and determine the cointegration relationship between the Saudi’s trade balance with world as a dependent variable and the inflation rate, GDP growth rate, and Saudi’s trade balance with BRICS as an independent variables in the long term, Thus, the model after stability is as follows:

$$\text{DTRADE_BALANCE_WORLD}_{it} = \alpha_0 + \alpha_1 \text{INFLATION_RATE}_{it} + \alpha_2 \text{GDP_GROWTH_RATE}_{it} + \alpha_3 \text{DDTRADE_BALANCE_WIDTH_BRICS_USDMILLIONS}_{it} + e_{it} \quad (3)$$

Where:

$\text{DTRADE_BALANCE_WORLD}_{it}$: represents the Saudi's trade balance world.

$\text{INFLATION_RATE}_{it}$: represents the inflation rate.

$\text{GDP_GROWTH_RATE}_{it}$: represents the GDP growth rate.

$\text{DDTRADE_BALANCE_WIDTH_BRICS_USDMILLIONS}_{it}$: represents the Saudi's trade balance with BRICS.

α_1 : the model constant, $\alpha_1, \alpha_2, \alpha_3$ is the coefficients of the independent variables.

e_{it} : random error term.

Table 8. Results of estimation of the ARDL model for the third hypothesis

Dependent Variable: DTRADE_BALANCE_WORLD

Method: ARDL

Date: 06/07/24 Time: 08:50

Sample (adjusted): 2005 2022

Included observations: 18 after adjustments

Maximum dependent lags: 2 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (2 lags, automatic): DINFLATION_RATE

GDP_GROWTH_RATE DDTRADE_BALANCE_WITH_BRICS_USDMILL

IONS

Fixed regressors: C

Number of models evaluated: 54

Selected Model: ARDL(1, 0, 0, 0)

Note: final equation sample is larger than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
DTRADE_BALANCE_WORLD(-1)	0.137842	0.211567	0.651529	0.5261
DINFLATION_RATE	7660.520	4344.690	1.763191	0.1013
GDP_GROWTH_RATE	7946.188	3572.592	2.224208	0.0445
DDTRADE_BALANCE_WITH_BRICS_USDMILLIONS	0.936543	0.502659	1.863176	0.0852
C	-26620.58	16379.59	-1.625229	0.1281
R-squared	0.547701	Mean dependent var		7816.722
Adjusted R-squared	0.408532	S.D. dependent var		64246.56
S.E. of regression	49410.09	Akaike info criterion		24.68383
Sum squared resid	3.17E+10	Schwarz criterion		24.93116
Log likelihood	-217.1545	Hannan-Quinn criter.		24.71793
F-statistic	3.935506	Durbin-Watson stat		1.586520
Prob(F-statistic)	0.026257			

*Note: p-values and any subsequent tests do not account for model selection.

Source: Authors calculations

It is clear from the table that

The value of the coefficient was 0.936543, which indicates that there is a positive relationship between the Trade balance with BRICS and the trade balance world, and the result of the t-test

indicates that this relationship is insignificant, as the level of Sig. (Prob.) reached 0.0852, which is greater than the significance level of 0.05.

Hence reject the third hypothesis: “There is a cointegration relationship between the trade balance world and Trade balance with BRICS. at level 5%.

5. 3. FINDINGS AND DISCUSSION

The study focused on analyzing the structure of total Saudi exports and imports with world and with the BRICS countries to analyze the extent to which Saudi exports are affected by any potential launch of a regional trade agreement established between the BRICS countries, by presenting Saudi most prominent export sectors and the share of the BRICS countries in those sectors, in addition to analyzing the import restrictions imposed by The BRICS countries focused on those sectors to determine the extent to which Saudi Arabia would benefit from any possible reduction in these restrictions.

From the previous results it could be concluded that there isn't a significant relationship between the Saudi's trade balance and Saudi's exports to BRICS, of Saudi's Imports from BRICS, This is consistent with Saudi Arabia's heavy dependence on oil exports and the absence of import restrictions on oil in most BRICS countries, which makes Saudi Arabia's accession to BRICS and any potential launch of trade agreements between BRICS countries completely ineffective on Saudi Arabia's exports to BRICS countries.

As for Saudi imports from the BRICS, the situation is not much different, as Saudi Arabia does not place many import restrictions, especially since it achieves a huge annual surplus in its trade balance, and with it being a high-income country, its entry into the BRICS will not lead to a significant increase in its imports from the BRICS countries, as the imports restrictions expected to be reduced were not an obstacle to imports before.

6. CONCLUSION

This paper analyzed the expected impacts of Saudi Arabia's joining the BRICS on the Saudi's exports, using ARDL model over 2003-2022, the empirical findings suggest that there is no significant relationship between the Saudi's trade balance with world and the Saudi's exports to BRICS, which reduces the impact of Saudi Arabia's accession to BRICS on Saudi exports, and this is due to a number of reasons, including that most of Saudi exports come from oil sector, a sector on which most BRICS countries do not impose high import restrictions, in addition to the fact that Saudi oil exports to BRICS countries were in favor of China and India, and they were not in large values except in 2022, Which means that the possibility of inaugurating a regional trade agreement whether PTA or FTA between the BRICS countries will not lead to reducing restrictions on importing oil, as they are already reduced, and therefore Saudi Arabia's exports may not improve as a result of this measure. As for the rest of Saudi exports, they did not represent high values in general. Therefore, Saudi Arabia's accession to BRICS and the possibility of establishing an RTA between BRICS countries may not lead to an increase in Saudi exports. As for Saudi imports from BRICS, they may also not be affected because of the high income in Saudi Arabia, in addition to not imposing exaggerated import restrictions on imports from abroad in general.

7. RECOMMENDATIONS

The study recommends the following:

1. The need to adopt a long-term strategy to encourage export orientation production for value-added sectors, as an alternative to traditional primary sectors and raw materials,

before joining new blocs.

2. The necessity of initial review of the schedules of mutual obligations on a partial basis (single product) not sector basis, so that trade agreements do not contribute to facilitating more imports, without having an impact on the performance of exports.
3. The motive for joining any economic bloc, including BRICS, must be to achieve mutual benefits for all members, as the Saudi focus could be on attracting Chinese and Indian FDI in the field of oil exploration and petrochemicals production, the vehicles industry, and agriculture, to compensate for any negative impact on the trade balance resulting from joining the bloc.

About the study limitations, the econometric analysis was limited to the period of data availability which wasn't a long period as a lot of data regarding customs and tariffs was not available from reliable sources. The previous empirical studies didn't give the impacts of BRICS on the exports of the bloc members the proper attention as most of the empirical studies regarding BRICS focused on overall economic performance or financial aspects, and this may be because the export performance of the BRICS countries is basically high, and being members of the BRICS bloc has nothing to do with this matter.

Regarding the future studies, it should focus on the microeconomic analysis, or sectoral analysis instead of macroeconomic analysis, as there are customs restrictions on importing or exporting a specific products that could affect the results or gains of joining blocs. Also, it could be more useful to include the group of countries that recently joined BRICS (Egypt, UAE, Ethiopia, Iran), to reach the expected economic gains these countries could achieve, and to ensure that this expansion of BRICS wasn't for political aspects only.

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