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THE POTENTIAL IMPACT OF VIETNAM – UAE CEPA ON VIETNAM'S FRUITS AND NUTS EXPORTS IN THE CONTEXT OF HALAL ECONOMIC AND TRADE DEVELOPMENT

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Abstract
The paper aims to estimate to what extent the Vietnam – UAE Comprehensive Economic Partnership Agreement (Vietnam – UAE CEPA), would influence Vietnam's fruit and nut exports to the UAE. Two scenarios are developed by the UAE's trade liberalization, focusing on Asian countries, including Vietnam. The positive effect of the assumed Vietnam – UAE CEPA on Vietnam's exports would be found in both two scenarios, according to the SMART model results. However, the UAE's deeper engagement with other countries would cause a remarkable decrease in the export turnover of Vietnam's commodities, leading to some short-term and long-term recommendations of the authors to promote Vietnam's exports of fruits and nuts in general and cashew nuts (shelled) in particular not only to the UAE but also worldwide. To develop sustainably in the field of exporting Halal agricultural products, Vietnam needs to take measures to improve the competitiveness of fruits and nuts in this market.

Keywords: Cashew nuts, Exports of fruits and nuts, SMART model, Vietnam – UAE CEPA, Vietnam

JEL Classification: F13, F15, M20,

1. INTRODUCTION

The United Arab Emirates (UAE), with which Vietnam has officially established diplomatic ties since 1993, is one of Vietnam's most important exporting markets. In 2021, the UAE was ranked in the top 15 among approximately 150 Vietnam exporters (ITC Trade Map). Namely, 10 years after creating a framework for bilateral cooperation (1993 – 2003), Vietnam only exported nearly USD66 million of merchandise to the UAE. This figure, however, experienced a more than 70-time increase in 2021, to over USD4.69 billion, making Vietnam belong to the top 10 partners from which the UAE imported the most in 2021. Especially among 10 ASEAN country members, Vietnam showed its dominance regarding trade relations with the UAE as the total value of imports from Vietnam was twofold compared to the one from Thailand in second place and tripled the one from Malaysia, which was placed in third position.

On October 28, 2024, Vietnam and the UAE officially signed the Vietnam-UAE Comprehensive Economic Partnership Agreement (FTA), which is considered a historic milestone in the cooperative relationship, commemorating the 30th anniversary of the establishment of economic and trade relations between Vietnam and the UAE. CEPA not only facilitates the increase of import and export trade but also opens up many opportunities for the development of Vietnam's Halal products, a field that is attracting great attention from the UAE market.

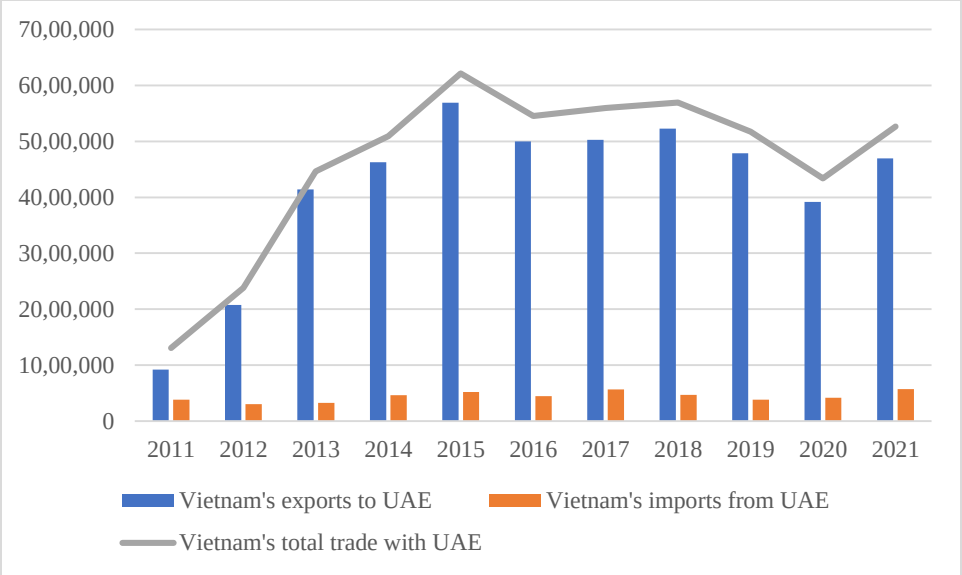

Fig 1. Vietnam and the UAE's bilateral trade

Source: ITC Trade map

The Vietnam – UAE bilateral trade is strongly complementary. The UAE is one of the world's energy powerhouses, the seventh-largest crude oil producer in 2020 (Statistical Review of World Energy 2021). Oil production is a major industry in the UAE, and its economic growth depends on it. The significance of oil in the economic growth of the UAE can be gauged from the fact that mineral fuels (HS27) have always been its most important exports, whose proportion ranged from 16.11% to 35.19% of the UAE's total export value from 2012 to 2019 and even reached more than 50% or 70% in recent years 2020 – 2022. Correspondingly, oil exports witnessed an upward trend in their contributions to the UAE's GDP, from 30.75% in 2012 to 50% and over in 2020 and 2021 (ITC Trade Map and World Bank). As an oil-driven economy, the UAE has unfortunately seen an almost absolute proportion of food imports in its total food consumption (USDA Foreign Agricultural Services (2019)). In trade relations with Vietnam, the UAE focused on exporting plastics (HS39) and mineral fuels (HS27), accounting for almost 50% to more than 71% of the total value of its exports from 2011 to 2021, and importing electrical machinery and equipment (HS85), machinery and mechanical appliances (HS84), footwears (HS64), fruits and nuts (HS08), coffee and tea (HS09), garments (HS61-62-63), fish and fishery products (HS03), cereals (HS10),… which were Vietnam's main exports making up for more than 78% to 90% and over in the whole Vietnam's merchandise delivered to the UAE in particular and more than 53% to 66% and over in the total Vietnam's exports to almost 150 partners in general from 2011 to 2021. The two countries have played to their competitive strengths, and their two-way trade has been highly complementary.

All of the abovementioned bilateral trade achievements have laid the foundations for establishing the CEPA between Vietnam and the UAE, which was initiated in April 2023. The CEPA is expected to create a new era of trade cooperation between the two countries. Vietnam's exports, which are entitled to tariff elimination thanks to CEPA, would further penetrate the UAE's market and vice versa. Regarding Vietnam's fruits and nuts (HS08), the expected CEPA is believed to take off their export value. Firstly, the UAE's agriculture sector, whose percentage in the country's GDP has always been less than 1% since 2011, needs to develop more to meet the domestic food demand (Statista (2021)). Subsequently, food imports have been indispensable to the UAE (USDA Foreign Agricultural Services (2019)), leading to its fear of food security (USDA

Foreign Agricultural Services (2021)) and making Vietnam's fruits and nuts a good supplement. Secondly, Vietnam's fruits and nuts only made up for less than 4% of the total UAE's imports of fruits and nuts from 2012 to 2021 (ITC Trade Map), leading to a potential surge in Vietnam's exporting fruits and nuts to this market due to the expected tariff reduction to 0% of the CEPA.

Based on the preceding reasons, this paper aims to make an ex-ante prediction about the effect Vietnam—UAE CEPA would have on Vietnam's fruit and nut exports to the UAE and then introduce some suggestions to Vietnam on how to take advantage of the CEPA, which is supposed to be signed in 2023 on the occasion of the 30th anniversary of the establishment of diplomatic relations between the two countries. This not only promotes the export value of Vietnamese agricultural products but also contributes to the sustainable development of Halal agricultural products to meet the increasing demand of the UAE market and the region.

2. LITERATURE REVIEW

An impact evaluation involves the whole process of creating and implementing a trade agreement. Namely, in the beginning, what benefits the trade agreement could bring to the parties and, in turn, what sacrifices they will have to make are determined through the impact assessment, which is called ex-ante assessment, helping them to consider how to negotiate the trade agreement's objectives with each other. Then, after coming into effect for some time, the trade agreement will be reviewed to find out to what extent its objectives are achieved or what action should be taken by the parties to improve its implementation in the future. That is where the impact assessment, named ex-post assessment, occurs again.

The latter, mainly based on the gravity model, has been used in many papers evaluating the effect of existing FTAs on Vietnam's exports. For example, Nguyen and Do (2014) applied the gravity model to evaluate the impact of the ASEAN+3 FTAs, including ACFTA, AKFTA, AJCEP, AFTA, and VJEPA, on Vietnam's iron and steel exports and imports. These FTAs were dummy variables in the model, as well as two general variables, GDP a and distance. The findings showed that the AKFTA, AFTA, and VJCEP contributed to promoting Vietnam's iron and steel exports to related member nations. Meanwhile, the ACFTA and AJCEP were not found to affect iron and steel exports significantly. Nguyen (2018) researched the determinants of Vietnam's exports using the gravity model during Vietnam's economic turbulence from 2010 to 2014. Compared to Nguyen & Do (2014), two new variables used in the paper were foreign direct investment and foreign exchange rate. The AFTA was the only FTA considered in the model and defined by a dummy variable. The paper concluded that foreign direct investment and foreign exchange rates were vital in Vietnam's exports. Besides, the AFTA had the same outcome, reflecting that Vietnam's exports to members of the AFTA were 1.14% higher than those to non-members. Nguyen (2017) also wondered whether Vietnam could have its trade flows increase thanks to FTAs or not. Using the gravity model, she realized that Vietnam's bilateral and multilateral FTAs with developed countries such as VJEPA, VCFTA, AKFTA, and AANZFTA successfully promoted Vietnam's exports and imports because they had complementary goods with Vietnam. However, regarding developing-country FTAs, including AIFTA, AFTA, and ACFTA, Vietnam's trade flows could increase or decrease, or there needed evidence to conclude because of the competition among members or trade diversion with non-members. In all the abovementioned papers, Vietnam's FTAs were dummy or control variables in the gravity model, and their influence on Vietnam's exports was measured. However, it is mentioned above that the ex-post analysis is only appropriate to trade agreements valid for a certain period rather than ones under negotiation or newly implemented. The ex-ante assessment is introduced as a complementary method to ex-post evaluation.

The ex-ante evaluation, along with the General equilibrium theory, was used to scrutinize the impact of Vietnam's trade liberalization in some papers such as Fukase & Martin (2001), Nguyen & Ezaki (2005), and Itakura (2013). In the study of Fukase and Martin (2001), Vietnam's participation in the ASEAN free trade area (AFTA) was assessed and showed a modest effect on the output of most industries. However, the apparel industry and its output, estimated to increase by 7 – 10%, were considered the chief beneficiary. Using the CGE model, Nguyen & Ezaki (2005) aimed to discover how Vietnam's regional economic integration, including the ASEAN free trade area and the ASEAN – China free trade area, would influence growth, poverty reduction, and income distribution in Vietnam. The results indicated that Vietnam's welfare and income distribution would positively affect regional economic integration. Poor and rural households were also predicted to be more advantageous than high-income urban ones when gaining benefits from Vietnam's access to the AFTA and ACFTA. Similar results were demonstrated in the research of Itakura (2013) on the impact of ASEAN economic integration on Vietnam. Namely, Vietnam's GDP was expected to increase by 12.1% thanks to the ASEAN+1 FTAs, 12.5% under the ASEAN+3 FTA, and 13.4% because of the RCEP, leading to an improvement of Vietnam's welfare at two percentage points lower than that of GDP. The ex-ante evaluation is based on the general equilibrium theory, which models the economy. It captures the market linkage, leading to its requirement for diverse data and distinguishing it from the ex-ante analysis on the Partial equilibrium theory basis.

The Partial equilibrium theory and the usage of the SMART model consider one market at a time and set aside the interactions between markets. This allows researchers to pay much more attention to changes in key economic variables of interest related to trade agreements, such as the tariff imposed on a commodity, the volume of trade (exports or imports), the tax revenue collected by the importer, and the welfare of customers in the importer. In Vietnam, Ha & Nguyen (2022) recently utilized the SMART model to examine the impact of the UKVFTA on Vietnam's textile and garment exports. The results in all three scenarios showed that Vietnam's goods could exploit the UK even more strongly thanks to their excellent price competition. Applying the same approach compared to Ha & Nguyen (2022), Doan & Nguyen (2021) identified the effect of the EVFTA on Vietnam's exports of agricultural products and concluded that the EU's tariff elimination would cause Vietnam's agricultural product exports to rise significantly. A similar positive impact of the EVFTA was discovered on Vietnam's apparel exports to the EU in the research of Vo et al. (2018), which was also undertaken using the SMART model. Nguyen & Trinh (2020) were also in agreement with Doan & Nguyen (2021) about the useful impact of tariff elimination under the EVFTA on Vietnam's agricultural exports to the EU and four important products witnessing the biggest changes in trade value, according to Nguyen & Trinh (2020) were HS04, HS08, HS09, and HS20. However, in the opinion of Tran et al. (2021), although the trade flows of fruits between the two markets experienced a bounce due to the EVFTA, the flow of export would only inch up by 0.955%, which was rather low compared to the increase in import value by 29.18% in 2021. Vietnam's footwear industry and to what extent the EVFTA influenced it were the main research questions in Vo, Nguyen, and Nguyen's (2018) paper. Their stimulation results finally predicted an upturn in Vietnam's export value thanks to the EVFTA's tariff removal and a remarkable shift in the export structure of products that would enjoy high tariff preference.

The Vietnam – UAE CEPA has not been analyzed in other articles because it has not been implemented yet. Therefore, making use of the Partial equilibrium theory and the SMART model, this paper decides to discover the ex-ante impact of the Vietnam – UAE CEPA, which is an upcoming milestone in the economic relation between the two parties, on Vietnam's fruit and nut

exports to the UAE and then some suggestions are addressed to Vietnam's government and enterprises to take advantages of the Vietnam – UAE CEPA in the context of fierce competition with other trade partners of the UAE in Asia having their CEPAs initiated like Vietnam or even implemented.

3. METHODS AND DATA

3.1. The SMART model

The SMART model is based on the theory of partial equilibrium, which examines the equilibrium state of supply and demand for a specific good and the changes in this equilibrium that arise from various influencing factors, such as the implementation of a 0% tariff preference resulting from a trade agreement. This reduction in tariffs typically leads to a decrease in the import price of the good, which in turn affects the supply and demand dynamics of the market.

Partial equilibrium theory focuses on individual markets while neglecting the interconnections between them. In this study, the SMART model is applied to analyze a single market, specifically, fruits and nuts, and one importing country, the UAE, which sources these products from multiple exporting nations. These exporting countries compete to supply goods to the UAE, and the quantity supplied by each country is influenced by the price of the goods.

Assuming that all exporting countries adhere to the world price, the responsiveness of supply to price changes, ceteris paribus, is characterized by the price elasticity of supply. Within the framework of the SMART model, the elasticity of supply is considered infinite, as the UAE's import demand represents a negligible portion of the overall market for the good in question, while the supply capacity of the exporting countries is substantial.

In contrast, the responsiveness of demand for a good to price changes, ceteris paribus, is defined as the price elasticity of demand. In this context, the product price refers to the import price, which varies by exporting country due to tariffs. For example, with the UAE offering a 0% tariff preference under its free trade agreement with Vietnam, the demand for fruits and nuts from Vietnam is anticipated to increase as the product price becomes more competitive.

However, since Vietnamese fruits and nuts are not perfect substitutes for similar products from other sources, and considering the diverse preferences of consumers in the UAE, the country continues to import these goods from various exporting nations rather than exclusively from Vietnam. Consequently, in addition to accounting for price elasticity of demand, the SMART model incorporates the elasticity of substitution, which measures the relative demand for fruits and nuts from different sources in response to changes in the relative prices of these products.

The SMART model utilizes data on the base-year tariff rates imposed by the UAE on fruits and nuts from each exporting country, as well as subsequent tariff changes (e.g., reductions to 0% as stipulated in a bilateral trade agreement) for several partners. It calculates the changes in the import prices for each exporting country, if applicable. Furthermore, using base-year trade volume data between the UAE and its trading partners for fruits and nuts, the SMART model generates results regarding the changes in bilateral trade flows resulting from price differentials before and after the UAE's tariff reductions under the trade agreement.

All relevant information on tariffs and trade volumes between the UAE and the exporting countries of fruits and nuts for the base year is automatically extracted by the SMART model from the COMTRADE and UNCTAD TRAINS databases. The price elasticity of supply is set to 99% by default, while the price elasticity of demand is calculated automatically. The only parameter that requires careful determination and input into the model is the elasticity of substitution, which is essential for ensuring the reliability of the research findings. In this paper, the author employs

the elasticity of substitution value proposed by Hertel et al. (2007), which is set at 3.7 for fruits and nuts.

3.2. Scenarios

This study employs a scenario-based approach to examine the potential implications of the Vietnam-United Arab Emirates (UAE) Free Trade Agreement (FTA) on Vietnam's exports of fruits and nuts to the UAE. Two distinct scenarios are constructed, with the first scenario considering the Vietnam-UAE FTA in isolation, and the second scenario taking into account the UAE's existing trade agreements with other countries, including India (February 18, 2022), Israel (May 21, 2022), Indonesia (July 1, 2022), Turkey (March 3, 2023), Georgia (October 10, 2023), and Switzerland (July 1, 2014). Under these agreements, the UAE offers preferential tariff rates of 0% for almost all fruit and nut products from Switzerland (68 lines), India, Indonesia, Georgia (86 lines), Turkey (53 lines), and Israel (84 lines), as classified under the 8-digit Harmonized System (HS) code. In light of this analysis, the study seeks to address two key research questions: (i) How can Vietnam maximize the benefits of the Vietnam-UAE FTA, leveraging the competitive advantage in price afforded by tariff preferences for fruits and nuts? and (ii) What other competitive advantages can Vietnam create to differentiate its products from those of rival countries that have benefited from reduced tariffs under their respective trade agreements with the UAE?

Furthermore, the second scenario also takes into account countries that are likely to sign trade agreements with the UAE in the future, including Malaysia and Thailand, which initiated negotiations on a Comprehensive Economic Partnership Agreement (CEPA) with the UAE in 2023, and the Korea-UAE CEPA, which was officially approved in May 2024. Additionally, the GCC-China FTA, which the UAE is part of, is being accelerated to its final stage, with most provisions on trade in goods completed. These countries and their fruit and nut products would be likely to benefit from preferential tariffs from the UAE when these agreements come into effect, similar to how Vietnamese fruits and nuts would benefit from the Vietnam-UAE FTA.

The UAE's strategy of signing trade agreements to consolidate its position as a global trade and logistics hub is expected to increase competitive pressure for Vietnamese fruits and nuts to penetrate the UAE market. Therefore, scenario 2 emphasizes the need for Vietnam to be prepared to exploit the Vietnam-UAE FTA, recognizing that the price advantage afforded by this agreement is not a long-term guarantee, and that a long-term solution is necessary for Vietnam's merchandise to remain competitive in the UAE market and other export markets with which Vietnam maintains trade relations primarily through FTAs.

The study focuses on four key parameters: (i) the pre- and post-tariff incentive export turnover of Vietnam's fruits and nuts under the Vietnam-UAE FTA; (ii) the export turnover of products when Vietnam would enjoy a monopoly advantage in preferential tariffs and when it would share this advantage with 10 other competitors; (iii) the export turnover of fruits and nuts to the UAE from the 10 countries when subject to tariffs and when tariff barriers would be completely removed; and (iv) the export turnover of each product line of fruits and nuts of Vietnam according to the Harmonized System (HS) 6-digit code. The results of the study are generated using the SMART model, which provides a visual demonstration of the potential impact of the Vietnam-UAE FTA on Vietnam's fruit and nut exports to the UAE.

Furthermore, the study examines the trade creation and trade diversion effect of the Vietnam-UAE FTA. The trade creation effect highlights that the agreement would encourage the UAE to utilize imported products from Vietnam to replace or supplement domestic products, which are produced less efficiently. This impact confirms Vietnam's comparative advantage and

higher specialization in the production of fruits and nuts compared to the UAE. In contrast, the trade diversion effect of the Vietnam-UAE FTA demonstrates how the agreement would lead to the UAE preferring Vietnamese fruits and nuts over similar product lines from other exporting countries, resulting in a decrease in the UAE's import value from these countries and an increase in the import value from Vietnam.

A comparative analysis of the two scenarios reveals that the trade diversion effect of the Vietnam-UAE FTA is expected to be lower in scenario 2, as the UAE would partially limit imports from Vietnam and switch to imports from other countries when fruits and nuts from these countries would also be subject to 0% tariffs. In conclusion, the trade creation and trade diversion effect of the Vietnam-UAE FTA underscores the importance of Vietnam exploiting its comparative advantage in the production of fruits and nuts to serve the UAE market, while also promoting its sustainable competitive advantage compared to the price competitive advantage from the agreement.

4. RESULTS

The results of Vietnam's exports of fruits and nuts to the UAE generated by the SMART model, under the two scenarios, are presented below:

Table 1: Vietnam's fruit and nut exports to the UAE under two assumed scenarios

Indicators	Scenario 1	Scenario 2
Initial fruit and nut exports (in 1,000 USD)	76,474.88	76,474.88
Final fruit and nut exports (in 1,000 USD)	87,824.792	82,230.625
Total export value change (in 1,000 USD)	11,349.91	5,755.746
Trade creation effect (in 1,000 USD)	5,446.673	5,446.673
Trade diversion effect (in 1,000 USD)	5,903.237	309.074
Total trade effect (in 1,000 USD)	11,349.91	5,755.746

Source: The author's calculation in the SMART model

The SMART model simulation results indicate that, under scenario 1, the export value of fruits and nuts from Vietnam to the UAE is expected to increase by approximately 11.1 million USD, representing a growth rate of more than 14.84%. This significant growth would be attributed to the Vietnam-UAE FTA, which would enable Vietnamese fruits and nuts to become more competitive in the UAE market.

The export turnover of 87.1 million USD achieved in scenario 1 would be a notable accomplishment, driven by two key factors: (i) the preferential tax rate of 0% granted to Vietnamese fruit and nut products by the UAE, as per the Vietnam-UAE FTA, which would reduce the average import tax rate from 1.91% to 0%; and (ii) the increased competitiveness of Vietnamese fruit and nuts compared to similar products from other countries that would not enjoy preferential tariffs from the UAE. For instance, India, a major competitor in the UAE market, is subject to an average tax rate of 2.35% on its fruit and nut products, making them less competitive than Vietnamese products, which would enjoy a preferential tax rate of 0%. As a result, the UAE would be likely to redirect its imports of fruit and nuts from other countries to Vietnam, as evidenced by the trade diversion value of 5,903.237 thousand USD in scenario 1 (Table 1).

In contrast, under scenario 2, the export turnover of fruits and nuts from Vietnam to the UAE would decrease by approximately 5,594,160 USD compared to scenario 1, corresponding to a decline in the value of trade diversion. This reduction in trade diversion would lead to a less prominent growth rate in total export revenue, reaching only 7.53%. The reason for this decline is that, when the UAE would pursue trade liberalization with the remaining 10 partner countries, fruit and nut products from these countries would also enjoy preferential tariffs from the UAE, similar to Vietnamese products. As a result, the UAE would be likely to shift part of its import structure from Vietnam to these alternative sources of supply (Table 1).

Notably, Vietnam has consistently been among the top 15 fruit and nut key export partners for the UAE since 2018 (ITC Trade map). Therefore, when Vietnamese products would enjoy 0% tariff incentives from the UAE under the Vietnam-UAE FTA, they would be likely to have a competitive advantage in the UAE market. The evidence suggests that the value of trade diversion would account for more than half of the total trade turnover increase in scenario 1. However, the value of trade diversion would exceed the value of trade creation, indicating that competitive prices due to tariff incentives would be the primary advantage of Vietnamese fruits and nuts in the UAE market. This advantage would be lost when the UAE would grant 0% tariff incentives to products from other countries under scenario 2, leading to a decline in the value of trade diversion by nearly 95% compared to scenario 1 (Table 1).

Table 2. Export value of fruits and nuts of 9 partners to the UAE

Partner	**Scenario 1**			**Scenario 2**		
	Initial export value (in 1,000 USD)	Total export value change (in 1,000 USD)	Total export value change (in %)	Initial export value (in 1,000 USD)	Total export value change (in 1,000 USD)	Total export value change (in %)
Vietnam	76,474.88	11,349.91	14.84	76,474.88	5,755.746	7.52
India	267,482.287	-5,410.404	-2.0	267,482.3	21,507.47	8.0
Israel	680.438	-0.001	0	680.438	0.638	0.09
Indonesia	19,300.62	-167.482	-0.86	19,300.62	884.17	4.9
Turkey	54,705.13	-15.039	-0.02	54,705.13	1,852.42	3.4
Georgia	1,087.813	0	0	1,087.813	63.3	5.8
Switzerlad	41.494	-0.002	0	41.494	-4.14	-10.0
Malaysia	2,168.69	-1.555	-0.07	2,168.69	90.394	4.2
Thailand	25,038.73	-30.598	-0.12	25,038.73	601.477	2.4
China	88,786.12	-0.243	0	88,786.12	14,816.46	16.7
South Korea	215.235	-0.001	0	215.235	1.084	0.5

Source: The author's calculation in the SMART model.

The data presented in Table 2 indicates that Vietnam would be the sole beneficiary of the Vietnam-UAE Free Trade Agreement (FTA) in both Scenario 1 and Scenario 2, with its exports of fruits and nuts expected to increase by 14.84% and 7.52%, respectively. However, it is noteworthy that even in the case of the UAE's tariff preference being granted exclusively to Vietnam under the FTA in Scenario 1, the other partner countries would experience only minimal negative effects. For instance, India would be the most severely affected, with its exports declining by more than USD 5.4 million, equivalent to a 2% decrease compared to its initial export turnover in the absence of trade engagement between Vietnam and the UAE. Indonesia, Türkiye, Malaysia, and Thailand would also experience losses, ranging from 1,500 to 170,000 USD, but these losses would be equivalent to less than 1% of their total export turnover to Vietnam.

Interestingly, Switzerland would not be affected by the Vietnam-UAE FTA, as its fruit and nut products have already secured tariff-free access to the UAE market in Scenario 1. Furthermore, it is evident that India, China, and Türkiye have established strong positions in the UAE's fruit and nut market, with India and China ranking 3rd and 4th, respectively, in the list of annual exporters in 2023 (ITC Trade map). As a result, in Scenario 2, when the UAE would deepen its trade linkage with countries in Asia, India and China would experience the greatest absolute and relative changes, respectively, in their export turnover of fruits and nuts. The trade creation effect for India would be more than 11 times higher than the trade diversion effect, while for China, the proportion of its trade creation effect would be 59% of its total trade effect. This suggests that Indian and Chinese fruits and nuts would rely on their competitive strength rather than their competitive price provided by the UAE under its bilateral cooperation with these two nations.

In contrast, Vietnam would rank third in absolute and relative rise in export value, followed by Turkey in fourth place in absolute growth. On the other hand, Israel and South Korea would experience modest absolute upturns in their export value, which can be attributed to the fact that fruits and nuts have been minor exports of these countries in their trade with the UAE. Instead, Israel and Georgia have been known for exporting precious metals and stones (HS71), while South Korea has prioritized exporting electrical machinery and electronics (HS85), mechanical machinery and equipment (HS84), and means of transport (HS87) (ITC Trade map).

Table 3. The impact of the assumed Vietnam – UAE CEPA on the export value of fruits and nuts under 6-digit HS codes from Vietnam to the UAE

Product code (HS code)	**Initial export value (in 1,000 USD)**	**Scenario 1**		**Scenario 2**	
		Export value change (in 1,000 USD)	Proportion in total change (%)	Export value change (in 1,000 USD)	Proportion in total change (%)
080111	1,572.277	329.655	2.904	108.714	1.889
080112	19.687	4.111	0.036	1.223	0.021
080119	1,181.811	250.010	2.203	100.845	1.752
080121	0.339	0.081	0.001	0.073	0.001
080131	143.836	25.191	0.222	24.662	0.428
080132	36,664.340	10,680.370	94.101	5,462.861	94.911
080211	0.044	0.011	0.000	0.011	0.000
080212	162.121	36.339	0.320	36.343	0.631

Product code (HS code)	**Initial export value (in 1,000 USD)**	**Scenario 1**		**Scenario 2**	
		Export value change (in 1,000 USD)	Proportion in total change (%)	Export value change (in 1,000 USD)	Proportion in total change (%)
080290	67.129	14.676	0.129	13.374	0.232
080310	18.825	0	0.000	0	0.000
080390	37.358	0	0.000	0	0.000
080420	0.237	0	0.000	0	0.000
080430	5.497	0	0.000	0	0.000
080440	0.399	0	0.000	0	0.000
080450	7,064.066	0	0.000	0	0.000
080510	0.137	0	0.000	0	0.000
080540	291.734	0	0.000	0	0.000
080550	21,044.470	0	0.000	0	0.000
080590	14.319	0	0.000	0	0.000
080610	0.102	0	0.000	0	0.000
080711	779.636	0	0.000	0	0.000
080719	55.223	0	0.000	0	0.000
080720	5.782	0	0.000	0	0.000
080810	44.281	0	0.000	0	0.000
080940	4.077	0	0.000	0	0.000
081010	3.961	0	0.000	0	0.000
081020	13.088	0	0.000	0	0.000
081040	1.056	0	0.000	0	0.000
081060	505.092	0	0.000	0	0.000
081090	6,729.435	0	0.000	0	0.000
081190	39.070	8.223	0.072	6.978	0.121
081340	3.108	0.692	0.006	0.226	0.004
081350	0.653	0.193	0.002	0.138	0.002
081400	1.685	0.355	0.003	0.3	0.005

Source: The author's calculation in the SMART model

According to Table 3, in Scenario 1, the hypothetical Vietnam-UAE FTA would yield the largest absolute increase in export turnover to the UAE for product lines HS080132, HS080111, and HS080119, collectively accounting for nearly 99% of the total increase in export vale across all 18 product lines. However, in Scenario 2, where the UAE would expand its trade to 10 Asian countries and one additional European country, these three product lines would experience a significant decline, ranging from 50% to 67%. Notably, the product line HS080112 would exhibit the most pronounced decline, plummeting by nearly 3/4 compared to Scenario 1. The remaining product lines would record a lower rate, spanning from 9% to 30%.

In terms of relative change in export turnover, HS080132 would emerge as a standout performer in both scenarios. In summary, product lines HS080132, HS080119, and HS080111 would capitalize on the Vietnam-UAE FTA to achieve impressive growth in export revenue to the UAE, both in absolute and relative terms.

In contrast, Vietnamese fruit and nut products (HS0803 and HS0810) have already benefited from 0% tariff preferences from the UAE, resulting in no change in export volume for these items in both scenarios (Table 3).

5. CONCLUSIONS

The study investigates the potential impact of the Vietnam-UAE FTA on fruit and nut exports from Vietnam to the UAE, using the SMART model to analyze two possible scenarios. These scenarios assume that the UAE would strengthen its trade ties with various Asian countries, including Malaysia, Thailand, South Korea, Vietnam, and China, in addition to its existing agreements with India, Israel, Indonesia, Turkey, Georgia, and Switzerland.

However, the study also highlights the potential risks associated with the UAE's deeper trade integration with other Asian countries, which would lead to a decrease in Vietnam's export revenue by more than $5.5 million in Scenario 2, equivalent to nearly 50% compared to the increase in Scenario 1. In the structure of products exported to the UAE, HS080132, HS080119, and HS080111 are the three product lines that would benefit the most when the UAE would strengthen trade connections with Vietnam through the FTA.

Based on the findings of the study, the following recommendations are made to further promote the flow of fruit and nut exports from Vietnam to the UAE:

Firstly, the negotiation process of the Vietnam-UAE FTA should be accelerated by both sides, as this trade agreement brings positive impacts not only to Vietnam as a fruit and nut exporter but also to the UAE, enabling it to access abundant food supplies from Vietnam. The expansion of trade liberalization through the FTA would further promote the role of Vietnamese goods as a sustainable and reliable solution to the UAE's food security problem.

Secondly, the study emphasizes the UAE's strategic significance as a transit hub for the Middle East region, serving as a vital bridge between Asia, Europe, and Africa. By capitalizing on the UAE's position as a transit hub, Vietnam can expand its export market and enhance its competitiveness in the region. The benefits of the Vietnam-UAE FTA would extend beyond merely increasing the export volume of fruits and nuts to the UAE, as it would also unlock numerous opportunities for Vietnamese products to access markets in the Gulf, Middle East, and Africa.

Thirdly, the competitive pricing of Vietnamese fruits and nuts, facilitated by the tariff preferences under the UAE's commitments in the Vietnam-UAE FTA, would be the primary advantage of these products in the UAE market. However, this advantage would be temporary and would likely be short-lived due to the UAE's ongoing efforts to deepen trade cooperation with other countries.

To capitalize on the benefits of the Vietnam-UAE FTA, Vietnamese businesses engaged in fruit and nut exports must develop a comprehensive understanding of the agreement. This can be achieved through enhanced technical support for market research and business connections between the two nations, which can be facilitated by relevant entities such as the Ministry of Industry and Trade, the Ministry of Foreign Affairs, and the Vietnamese Embassy in the UAE.

The establishment of the Dubai International Chamber of Commerce in Ho Chi Minh City and its recruitment of nearly 150 Vietnamese enterprises as members (Tri Thuc Electronic Magazine, 2024) provides a solid foundation for the two countries to effectively leverage the Vietnam-UAE FTA in the future. However, in the long term, Vietnamese goods will need to identify alternative competitive advantages beyond mere price competitiveness in order to remain competitive in the UAE market.

According to the findings derived from the SMART model, cashew nuts (HS080132) would emerge as a pivotal product among 34 fruit and nutproduct lines exported to the UAE, accounting for nearly 48.0% of total export revenue, even in the absence of an open trade policy between the UAE and Vietnam. Should the UAE enhance its trade relations with Vietnam through the Vietnam-UAE FTA, cashew nuts are projected to experience the highest absolute growth rate among exported items. This indicates that cashew nuts would stand to gain the most from the bilateral trade agreement between the two nations. Consequently, this study recommends that the Vietnamese government and enterprises prioritize the export of cashew nuts to the Middle Eastern market to fully leverage the benefits of the Vietnam-UAE FTA.

Furthermore, the results of the SMART model indicate that India represents Vietnam's most significant competitor in the nut export sector to the UAE. Despite Vietnam's status as the world's leading source of cashew nuts since 2007, India has consistently dominated the UAE market for more than ten years. Notably, the formalization of trade relations between India and the UAE through the India-UAE Comprehensive Economic Partnership Agreement (CEPA) on May 1, 2022, has resulted in Indian cashew nuts being exempted from 100% import duties by the UAE. This development provides India with critical advantages for promoting its cashew nut exports to the UAE market. In order to effectively compete with India, Vietnam must enhance both the quantity and quality of its cashew nut products.

The export quantity of shelled cashew nuts from Vietnam faces a significant challenge due to the country's lack of self-sufficiency in raw cashew nut production. Currently, domestic supply meets only approximately 20-25% of local demand, necessitating substantial imports from Africa and Cambodia. This dependency on external sources has resulted in two critical issues for Vietnam's cashew nut industry: (i) a trade deficit of approximately USD 600 million for the first time in 31 years in 2021, and (ii) an inventory of 1.3 million tons of raw cashew nuts, which incurred considerable storage costs and adversely affects the quality of final products.

The limited domestic supply of raw cashew nuts can be attributed to a declining production area. The area dedicated to cashew cultivation gradually increased from 1990, peaking at 439.9 thousand hectares in 2007, before declining by approximately 20 thousand hectares annually to reach 362.6 thousand hectares in 2011 (Institute of Agricultural Science for Southern Vietnam, 2016). As of 2022, the total cashew nut production area in Vietnam has continued to decrease, now standing at about 305.0 thousand hectares, a figure that was modest compared to India's 1.02 million hectares as of 2020 (Young People’s Newspaper, 2023).

To enhance the export volume of shelled cashew nuts, it is imperative for Vietnam to develop a stable and sustainable production area that can meet domestic raw cashew nut demand, rather than relying on foreign imports. In Vietnam, cashew trees are cultivated from Quang Tri to the southern provinces, forming three primary regions: the Southern region, the Central Highlands, and the South Central Coast. The Southern region offers the most favorable ecological conditions for cashew cultivation, while the other two regions are often affected by irregular droughts. Therefore, the development of cashew cultivation must not only consider natural climatic conditions but also focus on specialized and intensive agricultural practices. This includes investing in new varieties and advanced farming technologies to enhance the productivity and economic efficiency of cashew trees.

Achieving self-sufficiency in raw cashew nuts will enable Vietnam's final products to comply with the rules of origin stipulated in the Vietnam-UAE FTA, thereby facilitating sustainable long-term export growth to the UAE. In terms of export quality, Vietnamese enterprises should prioritize upgrading their cashew nut processing lines to improve both

productivity and product quality. Additionally, attention must be given to food hygiene, safety, and adherence to environmental and social standards to secure access to the UAE market and other high-end markets such as the EU and Japan. This paper also recommends that the Ministry of Industry and Trade support businesses in investing in deeper processing of cashew-related products and diversifying their export offerings. Such initiatives would enhance the value of Vietnam's cashew nuts within the global value chain, providing an additional competitive advantage beyond price competitiveness.

The United Arab Emirates (UAE) is a Muslim-majority country, with the Constitution designating Islam as the official religion. In 2023, the UAE ranked among the top four countries globally in terms of the Islamic economic index and was also listed among the top seven countries for the Halal food index (Sgier, 2023). Consequently, for Vietnamese products to penetrate the UAE market effectively, obtaining Halal certification is essential.

On April 24, 2024, the Vietnam Conformity Certification Center (QUACERT), under the Ministry of Science and Technology of Vietnam, announced the establishment of the National Halal Certification Center (HALCERT). This initiative aims to unify the certification and management of Halal products in Vietnam and facilitate the acceptance of these products by other Halal certification organizations worldwide (Customs Magazine, 2024).

Moreover, it is imperative for Vietnamese enterprises to enhance their understanding of Islam and Islamic culture, particularly the Halal standards specific to the UAE. Strict adherence to these standards in the production of export goods will facilitate easier access for Vietnamese products, especially fruits and nuts, to the UAE market. Given the UAE's strategic position as an international trade hub, it serves as a gateway for Vietnamese goods to enter the global Halal food market, which is projected to experience a compound annual growth rate of 6.1% from 2022 to 2027, reaching an estimated value of USD 1.887 trillion by 2027 (Sgier, 2023).

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