



## RESEARCH ARTICLE

### OPPORTUNITIES AND CHALLENGES FOR ENHANCING LAOS' AGRICULTURAL PRODUCTS COMPETITIVENESS IN THE CHINA MARKET

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#### ABSTRACT

This research study specifically studies the competition in the Lao PDR-PRC agricultural market by studying what the disadvantages and advantages are (Revealed Comparative Advantage: RCA) and also sets out the detailed methodology for the research by using secondary data from the National Statistical Center, Department of Import and Export, Ministry of Industry and Trade, Trade Map database, International Trade Statistics and ASEANstatsDataPortal. The additional, the results of this study also show the analysis of the Lao-Chinese agricultural market competition by looking at the analysis index value of the Lao PDR in exporting goods to China by looking at the RCA value. If the RCA value is negative (-), this indicates a trade disadvantage for the exporting country. In addition, the results of the study also show the problems and obstacles to exporting goods in depth, especially in the cost of document circulation, increased transportation costs due to the impact of the delayed clearance of goods, especially the clearance of goods.

## INTRODUCTION

Currently, the situation in the global community has affected economic growth, especially in the economic sector, as the rate of foreign direct investment (FDI) in the world has decreased by 58%, while investment inflows into ASEAN countries have decreased by 25%, amounting to 136 billion US dollars. In addition, the situation for the Lao PDR is also accompanied by difficulties in moving raw materials and goods, which has led to a decrease in foreign imports and a direct impact on the Lao PDR's exports, especially in labor-intensive sectors and linked to production chains with regional and international markets. Laos and China have been exporting and importing a large number of agricultural products and many of them are imported. The Lao PDR will import agricultural products of winter fruits from China and the Lao PDR will export agricultural products of summer fruits to the Chinese market. (Inthaboualy & Raman, n.d.) Meanwhile, the trade competition in the Lao-China market has been going on for more than 10 years, and the largest market for Lao agricultural exports is China. The Ministry of Agriculture and Forestry announced that the largest market for Lao agricultural products, 80%, is China. The Lao PDR has completed technical negotiations on market opening and has finalized the

sanitary and phytosanitary conditions for the export of Lao agricultural products and agricultural products to China for 6 crops (rice, corn, cassava, banana, watermelon and sweet potato) and 24 crops under the project to replace soybeans. Currently, the Chinese side has issued a bar code for 16 Lao products that can be exported to China, including: Pomegranate, betel nut, long nut, fresh betel nut, green nut, black nut, fresh chili, cashew nut, peanut, dried, peanut, groundnut, cardamom, mango, peanut, wild mango, medicinal plants. (Inayoshi, 2025) In addition, Laos has also received an export quota of 50,000 tons of rice per year and 500,000 cattle per year to China. However, the cooperation of the Lao PDR and the People's Republic of China for economic development as competitors in production and direct export to the ASEAN market is inevitable and still has a high growth rate due to important economic drivers including future export growth. (Rodyu, n.d.) Statistics show that exports are of great importance to the economy of the Lao PDR, especially in the ASEAN market, where the export rate to the ASEAN market is higher, which helps to increase the country's income. (Laosutsan *et al.*, 2017) The Lao government has set out several trade promotion policies, including creating an enabling environment for the business sector, including trade facilitation by increasing transparency, simplifying import-

export documentation, reducing non-tariff barriers to trade, and bringing trade-related legislation into line with the fundamental principles of regional and international conventions to which the Lao PDR is a party. (Maqbool *et al.*, 2021)All of this is to ensure the international and regional competitiveness of the business sector in the Lao PDR.

1.Literature review of Revealed Comparative Advantage: RCA

**Definition of RCA:** (Bekerman *et al.*, 1976) Definition of RCA analysis: To analyze the RCA value by finding the index of increase and decrease in commercial competition based on the definition of RCA analysis of Asean which can be seen from the analysis results as follows:

**Increased index value: (increased export advantage)**

**Positive growth:** This is the export of the studied country that has a positive trend and has increased exports faster than the import growth rate of the target market. **Cross-border:** The exports of the studied country tend to have better export capacity but the imports into the target market have a lower import growth rate. **Adjustment:** This is the study country's exports in declining capacity, with the study country's export capacity falling more slowly than the decline in imports in the target market.

**Index value decreases: (export advantage decreases)**

**Disadvantages:** Exports to the target market tend to be better and the exports of the exporting country are able to increase, but the exporting capacity of the exporting country is growing slower than the growth rate of the target market's imports. **Loss of opportunity:** Exporting to a target market where imports are growing but the exporting capacity of the target country is declining, thereby reducing the exporting advantage of the target country.

**Decline:** Exports to the target market and exports from the studied country tend to decline and exports from the studied country have the potential to export with a decrease in imports from the target market.

Table1. Definition of export by analyzing RCA value

Trend of change in RCA value	Changing trends			Definition
	Exports of the studied country		Exporting to target markets	
Increase	↑	<	↑	Good increase
	↑	<=	↓	Parting ways
	↓	>	↓	Adjustment
Decline	↑	<	↑	Disadvantage
	↓	<=	↑	Loss of opportunity
	↓	>	↓	Decline

**The Theory of Comparative Advantage and Disadvantage:**

The study of trade advantage presents the basic concepts and principles of international trade theory through the study of absolute advantage theory.(Tanasritunyakue, 2008)However, free trade has led to a division ofwork between countries and can allow countries to focus exclusively on producing goods that can be produced at low cost or with high productivity, which is a key determinant of the capital used to produce those

goods.(Ahuja, 2020) This advantage is based on the advantages that are created, such as natural advantages and production techniques, which will result in the country being able to compete more effectively than its trading partners.(Stellian& Danna-Buitrago, 2019)Therefore, each country will export goods that are produced at a lower cost than other countries or have a complete advantage.(Lee, 2020)It has beensaid that beneficial trade requires each country to be efficient in producing at least one good that can be exported to trading partners.(ekonomickáuniverzita v bratislave economic, political and legal issues of international relations 2021, n.d.)To understand the importance of trade, each country is more efficient than its trading partners in all newly traded goods and will have a complete trade advantage (Abebe, 1995).

The theory of comparative advantage studies trade that occurs when a country has a complete advantage in all goods compared to other countries, but each country has one good that it can have the most comparative advantage in compared to all other goods it can produce.(Erokhin *et al.*, 2021)However, the theory of comparative advantage is controversial because the theory shows that the abundance of factors of production (Factor Endowment) is a key factor in creating comparative advantage in the theory of international trade.(Export Performance, Comparative Advantage and Factors Determining Comparative Advantage of Manufacturing Industries in Thailand, n.d.)At the same time, finding a way to study comparative advantage using a model of 2 countries and 2 factors of production, which has 2 types of production factors: capital and labor, and both countries have different factors of production that give rise to international trade.(De Melo & De Carvalho, 2024)For a country to export goods by focusing on factors of production that are comparatively diverse, and a country to import goods that focus on factors of production that are comparatively scarce.(Thelia Sari, n.d.) For example, if a country is a labor-abundant country, it will focus on producing and exporting labor-intensive goods, and a country with a lot of capital-abundant goods will produce and export capital-intensive goods.(Danna-Buitrago &Stellian, 2022) It can be seen that the theory does not only consider comparative advantages arising from labor efficiency, but also takes into account comparative advantages arising from other factors of production.(Su, 2018)

**Fixed market share model theory:** In analyzing export growth, it can be analyzed using the Constant Market Share Model (CMS).The CMS model is based on the assumption that the export of a product is determined by two factors: supply and demand, which largely depend on the conditions of the importing country.(Oelgemöller, 2012)For a given country's exports, they may not be able to grow as fast as the world average for two main reasons:1) Exports will focus on goods with low demand and low growth rates, (2) Exports will be directed to markets with low growth rates, and countries with exports that do not want to compete with producers or exporters from other countries.(Khai *et al.*, 2016)The analysis principle under the CMS model is to consider the exports of a country compared to the case where the country could maintain its market share in the world market or a given market at the same level.(Adigwe, 2022) The difference between the size of the actual export growth and the size of the export growth in the case where the market share of the exporting country in the market or market is fixed can be divided into the results of competition, the results of product

composition and the results of market distribution. (Mendoza *et al.*, 2015)The research model is widely used in various research works at the international level. (Bender & Li, n.d.)In the analysis of the list of products and countries, we will study the factors that affect the changes in export data by analyzing the constant market share (Poramacom, 2002) (Constant Market Share Analysis of Export Growth) consisting of 3 main factors: (1) The growth in imports resulting from the overall growth of the market (Growth Effect) is that higher market demand means more exports because the market has an increased demand for various products, but the market share remains the same and will also affect the growth of imports in that market. (2) The growth of imports caused by the growth of the commodity market or changes in consumer preferences (Commodity Effect) which indicates the growth of a country's exports that have a growth rate of exports at the average rate of the market and the result of the composition of the export goods is positive if the country's exports consist of goods with a growth rate higher than the average rate of the market in question and will be negative if the country's exports have a growth rate lower than the average growth rate of the market and will affect the growth of imports in that market. (3) The growth in import demand resulting from increased competitiveness (Competitiveness Effect) is the difference between the growth in exports that would occur if the country maintained its export market share for each product in each market, which would increase the country's market share and would result in increased import growth in that market.

## METHODOLOGY

To address the objectives proposed above, this research paper will combine two research methods:

**Method 1:** Document and secondary data research or Desk Research by compiling data on trade between the Lao PDR and the People's Republic of China by studying and reviewing through research papers, reports, proposals, analyses and strategies to summarize the problems and methods of study for this analysis.

**Method 2:** This is a research study by searching for statistical data that will be used in the analysis from domestic and foreign sources such as: Ministry of Industry and Trade, National Statistical Center, database from the Trade Map – International Trade Statistics website, and ASEANstatsDataPortal database. For the analysis, the method used is studying the advantages of international trade detailed analysis the most common method used is the Revealed Comparative Advantage (RCA) method. It is a consideration of the quality of a country's export goods by comparing them with the quality of the goods in the market and the RCA value that is calculated will be explained in detail that if the value is greater than 1, it indicates that the goods of a country have an advantage in the world market. The calculation of the comparative advantage value can be calculated from the formula below:

The apparent comparative advantage index analysis: To measure comparative advantage, the Revealed Comparative Advantage (RCA) index is used, comparing Laos with other ASEAN Plus Three countries, using the following calculation equation:

$$RCA_{ij} = \frac{X_{ij}/X_{tj}}{X_{iw}/X_{tw}}$$

Analysis details:  $RCA_{ji}$  = Comparative advantage of country j in good i

$X_{ij}$  = The value of exports of product i of country j to country or group of countries

$X_{ij}$  = Total export value of country i to countries or groups of countries

$X_{iw}$  = The value of i-goods exports to countries or groups of countries in the world

$X_{tw}$  = Total world export value

i = The target product is under consideration.

J = The country is considering

The analysis shows that among global exporters to the markets of trading partners, regardless of the type of product, product i of country j has an advantage or disadvantage. The RCA value is as follows:

> 1 Comparative advantage

RCA = 1 Comparable to the world average

< 1 Comparative disadvantage

1. Market share: Market share is derived from the ability to sell a particular product in a given market. It is the proportion of the value of a country's exports to the value of the world's exports to the market. Laos is calculated by comparing Thailand with other ASEAN+3 countries using the following equation:

$$MS_{ki} = \frac{X_{ki}}{M_k}$$

$MS_{ki}$  = Market share of product k in country i

$X_{ki}$  = The value of exports of product k from country i to market n

$M_k$  = The value of world exports of k goods to n markets

**Key Finding the Competitiveness in Lao PDR-China Agricultural Market:** This chapter presents the results of a study and analysis of agricultural export data from secondary sources for nine types of agricultural products to examine the comparative advantage of Laos' agricultural exports to China. The Revealed Comparative Advantage Index (CPI) is used to study China's comparative advantage index. A value more than 1 indicates a comparative advantage in exporting that agricultural product; a value less than 1 indicates a comparative disadvantage. A value of 1 indicates a market share of the country's agricultural exports equals the world's total agricultural exports. The market share of Laos' agricultural products is also studied, with a high market share indicating a strong ability to dominate the export market for that product, while a low market share indicates a weaker market share. The market share for exporting these types of products is small. The study is divided into two parts: a comparison of Lao's agricultural exports to China, and a comparison of the annual export of nine different types of products to China, as follows:

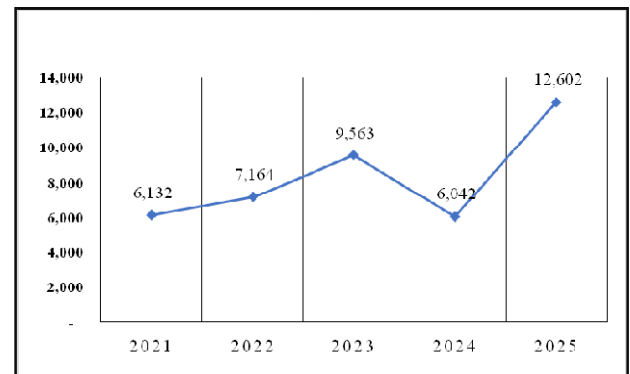
**Laos' Agricultural Exports to China:** The export values of key agricultural and livestock products over the period 2021–2025, showing clear differences in performance and trends across products. Corn is the leading export product, recording the highest total value of 12,523USD, with strong growth particularly from 2022 onward and consistently high levels through 2025. Rice ranks second with a total value of 8,448 USD, driven mainly by a sharp surge in 2024, indicating a significant expansion in that year. Tea also performs strongly, totaling 7,029USD, with steady increases from 2021 to a peak in 2024 before a slight decline in 2024. Rubber exports show gradual growth over time, reaching their highest value in 2025 and totaling 3,595USD. Cassava exports remain modest until a sharp rise in 2023, contributing to a total of 2,557USD. Vegetables and plant products show fluctuating but generally declining trends toward 2024. Banana exports remain relatively stable across years, while livestock exports are concentrated mainly in 2021 and 2024, indicating irregular trade patterns.

**Table 2. The value exported Laos to China market 2020-2024 (USD million)**

Product	2021	2022	2023	2024	2025	Total value
Rubber	109	895	105	1,070	1,417	3,595
Banana	206	219	228	202	225	1,080
Vegetable	524	785	138	138	27	1,611
Rice	322	14	155	6,903	1,054	8,448
Cassava	4	24	44	2,049	437	2,557
Corn	253	3,862	2,112	2,509	3,786	12,523
Tea	392	978	1,399	2,313	1,947	7,029
Plant products (bamboo, rattan, cotton)	690	106	169	125	77	1,167
Livestock	3,011	-	-	411	-	3,422

Source: Autor analysis 2026.

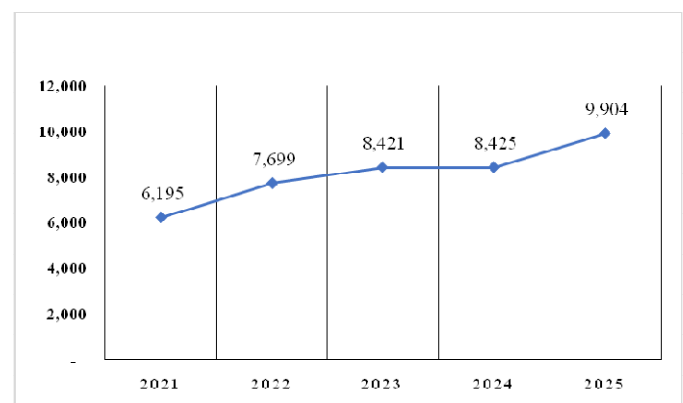
The graph illustrates the trend in Laos' export value to the world between 2021 and 2025, showing notable fluctuations over the five-year period. In 2021, total export value stood at about 6,132, reflecting the impact of global economic uncertainty and disruptions to trade flows. In 2022, exports increased to approximately 7,164, indicating a gradual recovery as international markets began to stabilize and demand improved. The upward trend continued in 2023, when export value rose significantly to around 9,563. This increase suggests stronger external demand, improved production capacity, and possibly higher commodity prices or expanded market access. However, in 2024, exports declined sharply to about 6,042. This drop points to renewed challenges, such as global economic slowdown, price volatility, or logistical constraints affecting Laos' export performance. In 2025, the graph shows a strong rebound, with export value surging to approximately 12,602, the highest level in the period. This sharp increase highlights a substantial recovery and strengthening of Laos' export sector, possibly driven by improved competitiveness, diversification of export products, or stronger regional and global demand. (detail is showed Figure1) (Figure 2) The provided line graph depicts a significant upward trend in data values over a five-year period from 2021 to 2025. Overall, the metric experienced substantial growth, rising from an initial value of 6,195 to a peak of 9,904, representing a total increase of approximately 60%. The growth was most consistent during the first two years. In 2021, the figure stood at 6,195 and climbed sharply to 7,699 by 2021a gain of over 1,500 units. This positive momentum continued into 2023, reaching 8,421.



Source: Ministry of Industry and Commerce, Laos Statistic Bureau, Trade Map.org, 2026.

**Figure 1. Laos total value exported to world 2021 - 2025**

However, the trajectory then hit a notable plateau. Between 2023 and 2024, the value remained virtually stagnant, increasing by only four units to 8,425. This period of stability was followed by a final surge in 2025. The data rose dramatically by nearly 1,500 units in a single year, the second-largest jump in the series, to reach its highest point of 9,904. In summary, while the data experienced a brief mid-period lull, the overarching trend is one of robust expansion, with the most aggressive gains occurring at the very beginning and the end of the timeframe.



Source: Ministry of Industry and Commerce, Laos Statistic Bureau, Trade Map.org

**Figure 2. Laos total value exported to China 2021 - 2025**

**Result of RCA value Laos Exported to China:** The RCA trends across products from 2021 to 2025 indicate generally low levels of comparative advantage, with all RCA values remaining well below 1. This suggests that none of the listed products demonstrate strong revealed comparative advantage in international markets during the period, although relative performance differs by product. Rubber, banana, and vegetables show consistently low and declining RCA trends. Rubber fluctuates slightly, peaking in 2024 before falling again in 2025, while banana and vegetable RCA values steadily weaken over time, indicating diminishing competitiveness. Rice exhibits a distinct trend, with very low RCA values from 2021 to 2023, followed by a sharp spike in 2024 (0.34) and a subsequent decline in 2025. This suggests a temporary improvement in rice export competitiveness, possibly due to short-term market opportunities or policy interventions. Cassava and corn display moderate improvements in certain years. Cassava peaks in 2024, while corn shows relatively higher RCA values from 2022 to 2025 compared to other products, reflected in its highest average RCA (0.0906). Tea

**Table 3. The RCA of Laos exported**

Product	RCA 2021	RCA 2022	RCA 2023	RCA 2024	RCA 2025	Average
Rubber	0.005	0.04	0.003	0.05	0.029	0.0254
Banana	0.011	0.01	0.007	0.01	0.004	0.0084
Vegetable	0.028	0.03	0.004	0.006	0.0005	0.0137
Rice	0.017	0.0006	0.005	0.34	0.021	0.07672
Cassava	0.0002	0.001	0.001	0.1	0.009	0.02224
Corn	0.013	0.18	0.07	0.12	0.07	0.0906
Tea	0.021	0.04	0.04	0.11	0.04	0.0502
Plant products (bamboo, rattan, cotton)	0.04	0.01	0.01	0.01	0	0.014
Live stock	0.16	0	0	0.02	0	0.036

Source: Autor analysis 2026

**Table 4. Comparative RCA and MS of Laos exported to China market**

Product	2021		2022		2023		2024		2025	
	RCA	MS	RCA	MS	RCA	MS	RCA	MS	RCA	MS
Rubber	0.005	3.67%	0.046	25.49%	0.003	2.78%	0.05	29.70%	0.029	38.36%
Banana	0.011	22.32%	0.01	19.39%	0.007	18.47%	0.01	17.86%	0.004	21.96%
Vegetable	0.028	38.50%	0.03	46.18%	0.004	7.36%	0.006	6.74%	0.0005	1.21%
Rice	0.017	3.79%	0.0006	0.11%	0.005	0.99%	0.34	75.83%	0.021	19.29%
Cassava	0.0002	0.18%	0.001	0.80%	0.001	1.12%	0.1	78.39%	0.009	19.50%
Corn	0.013	4.80%	0.18	22.89%	0.07	14.11%	0.12	18.30%	0.07	39.90%
Tea	0.021	7.17%	0.041	14.63%	0.04	18.41%	0.11	33.09%	0.04	26.70%
Plant products (bamboo, rattan, cotton)	0.04	60.83%	0.01	7.98%	0.01	13.39%	0.01	11.34%	0	6.47%
Live stock	0.16	88.64%	0	0.00%	0	0.00%	0.02	11.36%	0	0.00%

Source: tutor analysis 2026; Note: RCA = Revealed Comparative Advantage Index and MS = Market Share.

RCA average ranking 1	MS average market shares ranking 1
RCA average ranking 2	MS average market shares ranking 2
RCA average ranking 3	MS average market shares ranking 3

shows a gradual strengthening trend, particularly from 2023 onward, indicating improving export performance. Plant products and livestock exhibit declining or unstable trends, with RCA values approaching zero in recent years. Overall, the trends highlight weak but uneven competitiveness, with corn, rice, and tea showing relatively better prospects compared to other agricultural products.

**The Average Revealed Comparative Advantage Index and Market Share of Laos' Agricultural Exports to China:** The table 4 will be presented the Revealed Comparative Advantage (RCA) and Market Share (MS) of Lao PDR agrifood products exported to China from 2021 to 2025. Each product shows changes in competitiveness (RCA) and export presence (MS) over the five-year period. So, during the period, Vegetables, Corn, Tea, and Live Stock initially showed stronger market shares in 2021–2022, with vegetables reaching the highest MS at 46.18% in 2022, followed by live stock at 88.64% in 2021. However, many of these products experienced a substantial decline in later years. By contrast, Rice and Cassava saw significant jumps in market share in 2024, recording 75.83% and 78.39% respectively, indicating a notable shift in export focus or market demand. RCA values for all products remained relatively low, indicating weak comparative advantage in most years, although some improvements were visible. Corn and tea show gradual RCA increases peaking in 2024 (corn RCA=0.12, tea RCA=0.11). Plant products (bamboo, rattan, cotton) had strong early performance with 60.83% MS in 2021, but declined in subsequent years. Banana and rubber remain consistently present but with modest values across both RCA and MS.

## DISCUSSION

**Indicators in the analysis of trade between Laos and China these two indices are important:** This is an in-depth analysis of the advantages and disadvantages of exporting Lao agricultural products to the Chinese market, based on RCA (Revealed Comparative Advantage) and Market Share (MS) index data from 2021–2025 to provide a long-term overview:

**RCA (comparative advantage):** If the RCA value >1, it means that the country has a high advantage in exporting that product. However, from the table, most of Laos' RCA values are lower than 1 (0.00x to 0.3x), which reflects that Laos does not yet have a structural advantage compared to other competitors in the world market that exports to China. **MS (market share):** It is the proportion of Lao products in the Chinese market. High numbers (such as 70-80%) in some years indicate specific needs or special quotas.

### Analysis of High Potential Products

**Rubber:** Rubber is the product with the most stable growth, with changes: Market Share (MS) increasing from 3.67% (2021) to 38.36% (2025). However, the analysis shows that RCA will still be low (0.029), but the continuous increase in MS indicates that Lao rubber is becoming more desirable and has a certain export system. This may be the result of Chinese companies investing in Laos and starting to harvest their products.

**Rice & Cassava:** These two products are characterized by "short-term exponential growth". It can be seen that in 2024,

rice has an RCA of 0.34 and an MS of 75.83%. Cassava has an MS of 78.39%. The results of the analysis show that the 2023 figures show that Laos has the capacity to meet the Chinese market's huge demand if managed well. However, in 2024 these figures drop to around 19%, reflecting production uncertainties or changes in China's import policies.

### Analysis of Challenging Products

**Vegetables:** Vegetables are a group that has suffered a serious disadvantage over the past 5 years. Overall, in 2021-2022, Laos had an MS of 38-46%, but in 2024 it was only 1.21% and the RCA value was almost 0. This may be due to China's stricter sanitary and phytosanitary standards (SPS) and competitors from other countries (such as Vietnam, Thailand) having more efficient production and transportation costs.

**Live stock:** Volatility: In 2021, the MS was as high as 88.64% (almost dominating the market), but in 2022, 2023 and 2025 it was 0.00% because in 2022 to 2023, the Covid-19 pandemic caused a suspension of exports to the Chinese market. The results of this analysis are a clear example of the lack of sustainability. Live animal exports are often plagued by licensing and disease problems. A score of 0 indicates a complete cessation of exports in that year.

### 4SWOT Analysis

**Strengths:** There is a certain supporting market (China is a major consumer) where some products (corn, rubber, tea) have good growth trends and good market share in the long term.

#### Weaknesses:

Very low RCA value: Reflects the production that still lacks technology, Productivity per area is still low compared to the international. However, instability, especially export volume, depends too much on external factors, and there is no continuity in the supply of goods (Supply Chain Instability).

**Opportunities:** The Laos-China railway: is a key to reducing transportation costs and increasing the advantages of perishable goods (vegetables and fruits). The RCEP agreement: will help reduce customs barriers and facilitate trade more.

**Threats:** Quality standards: China is constantly upgrading the standards of imported goods (GAP, GMP, Organic). Competition: Neighboring countries (Vietnam, Cambodia, Thailand) are also competing for market share in the same product category.

## RECOMMENDATIONS

creating future advantages: Transforming agriculture: (1) We must shift from exporting "raw materials" to "processed products". For example: Instead of exporting raw cassava, we should export cassava flour to add value and increase RCA. (2) Establishing a cold chain: To maintain the quality of vegetables and fruits (bananas) to be competitive in the Chinese market. Branding: Especially Lao "tea" and "rice" with their unique characteristics should be added value through certification of origin (GI) so that they can be sold at higher prices. (3) Sustainability of supply: The public and private sectors must work together to plan for continuous production, avoiding the

situation of having too much in one year and not enough in another (as is the case with live animals).

**Competing Interest declaration:** The authors declare that there is no duplication with any other author's paper and no financial or personal relationships that could have influenced the work presented in this paper.

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### Authors contribution

Conceptualization & Design was by Mr. Vongphachanh XAYALATH: Initiated the topic of Comparative Advantage Analysis (RCA) of Lao agricultural products, set the time frame (2021-2025) and selected the target market (China), Data Collection & Curation, searched and selected import-export statistics from reliable sources (e.g. UN Comtrade or Ministry of Industry and Trade), organized the data into tables to facilitate the calculation of RCA and market share (MS), Formal Analysis & Interpretation, Quantitative Analysis: calculated RCA and MS values for each product each year, Qualitative Analysis: interpreted the fluctuating figures (e.g. in the case of vegetables and live animals) in relation to the actual situation and trade policies, Writing - Original Draft & Editing. For Zhang Yang is Check the accuracy of the language and the consistency of the data in the table with the content described, such as: verification and approval, checking the accuracy of the research method (Methodology), and checking the final research paper before presentation or publication.

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## REFERENCES

- Abebe, B. (1995). Advantage from Asia to Africa.
- Adigwe, E. O. (2022). A Comparative Analysis of Competitive Trade in a Cluster Market of the European Union: The Revealed Comparative Advantage (RCA) Index. *NašeGospodarstvo/Our Economy*, 68(1), 14–24. <https://doi.org/10.2478/ngoe-2022-0002>
- Ahuja, R. (2020). Lal Bahadur Shastri Institute of Management, Delhi LBSIM Working Paper Series Revealed Comparative Advantage: A Study of India and ASEAN economies.
- Bekerman, M., Dulcich, F., Gaitte, P., Stellan, R., Paola, J., - Buitrago, D., López, R. E., & Sepúlveda, K. A. (1976). The effect of broadband on economic growth in Latin America: an approach based on a simultaneous equations model María Verónica Alderete 7 Argentina's economic relations with China and their impact on a long-term production strategy Which revealed comparative advantage index to choose? Theoretical and empirical considerations The

- effects of domestic demand shocks on inflation in a small open economy: Chile in the period 2000-2021. [www.issuu.com/publicacionescepal/stacks](http://www.issuu.com/publicacionescepal/stacks)
- Bender, S. ;, & Li, K.-W. (n.d.). The changing trade and revealed comparative advantages of Asian and Latin American manufacture exports Standard-Nutzungsbedingungen. Retrieved <https://hdl.handle.net/10419/39343>
- Danna-Buitrago, J. P., & Stellian, R. (2022). A New Class of Revealed Comparative Advantage Indexes. *Open Economies Review*, 33(3), 477–503. <https://doi.org/10.1007/s11079-021-09636-4>
- De Melo, T. M., & De Carvalho, E. G. (2024). An analysis of the competitiveness of developing countries based on the foreign added value of exports: the use of revealed comparative advantage index for the period 1995 to 2018. *Brazilian Journal of Political Economy*, 44(1), 63–83. <https://doi.org/10.1590/0101-31572024-3514>
- Ekonomická univerzita v Bratislave ECONOMIC, POLITICAL AND LEGAL ISSUES OF INTERNATIONAL RELATIONS 2021. (n.d.).
- Erokhin, V., Tianming, G., & Ivolga, A. (2021). Cross-country potentials and advantages in trade in fish and seafood products in the rcep member states. *Sustainability (Switzerland)*, 13(7). <https://doi.org/10.3390/su13073668>
- Export Performance, Comparative Advantage and Factors Determining Comparative Advantage of Manufacturing Industries in Thailand. (n.d.).
- Inayoshi, N. (2025). Lao PDR's Competitiveness in the Global Goods Export Market.
- Inthaboualy, P., & Raman, R. (n.d.). How Can National Competitiveness of Less Developed Countries be Enhanced? : A Case Study of Laos.
- Khai, \*, Ismail, & Sidique, M. M. (2016). Consistency tests of comparative advantage measures: An empirical evidence from the Malaysian and selected Asian shrimp products. In *International Food Research Journal* (Vol. 23, Number 6).
- Laosutsan, P., Shivakoti, G. P., & Soni, P. (2017). Comparative advantage and export potential of Thai vegetable products following the integration into the ASEAN Economic Community. *International Food and Agribusiness Management Review*, 20(4), 575–590. <https://doi.org/10.22434/IFAMR2016.0029>
- Lee, S. M. (2020). Revealed Comparative Advantage of selected ASEAN countries' crustacean export to Japan. *IOP Conference Series: Earth and Environmental Science*, 414(1). <https://doi.org/10.1088/1755-1315/414/1/012010>
- Maqbool, M. S., Bashir, F., Rehman, H. ur, & Ahmad, R. (2021). Revealed Comparative Advantages and Exports Competitiveness of ASEAN-5 Countries in the Global Market. *Review of Economics and Development Studies*, 7(2), 267–276. <https://doi.org/10.47067/reads.v7i2.360>
- Mendoza, R. U., Chua, K. C., & Melchor, M. M. (2015). Revealed Comparative Advantage, International Production Chain and the Evolving ASEAN-China Trade Linkages. In *J. Asian Dev. Stud* (Vol. 4).
- Oelgemöller, J. (2012). Standard-Nutzungsbedingungen. <https://hdl.handle.net/10419/68239>
- Poramacom, N. (2002). Revealed Comparative Advantage (RCA) and Constant Market Share Model (CMS) on Thai Natural Rubber. In *Kasetsart J. (Soc. Sci)* (Vol. 23).
- Rodyu, S. (n.d.). An Analysis of the Comparative Advantage of Thai Tourism with Chinese Tourists Compared to Other ASEAN + 6 Countries.
- Stellian, R., & Danna-Buitrago, J. (2019). Revealed comparative advantages and regional specialization: Evidence from Colombia in the Pacific Alliance. *Journal of Applied Economics*, 22(1), 349–379. <https://doi.org/10.1080/15140326.2019.1627722>
- Su, J. Bin. (2018). How do financial features affect volatility forecasts? Evidence from the oil market and other markets. *Asia Pacific Management Review*, 23(2), 95–107. <https://doi.org/10.1016/j.apmr.2016.11.003>
- Tanasritunyakue, A. (2008). Measuring Comparative Advantage In Thailand's Industrial Sectors By Using The Cai Index.
- Thelia Sari, E. (n.d.). Revealed Comparative Advantage (RCA) and Constant Market Share Model (CMS) of Indonesian Palm Oil in ASEAN Market.

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