This paper was presented at the 19th International Conference on Sustainable Development, International Conference Center, Sorbonne University, Paris, France on August 26-27, 2024.

Policy Analysis on Border Trade between Indonesia and Malaysia

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OIDA International Journal of Sustainable Development, Ontario International Development Agency, Canada.
ISSN 1923-6654 (print) ISSN 1923-6662 (online) www.oidaijsd.com
Also available at https://www.ssrn.com/index.cfm/en/oida-intl-journal-sustainable-dev/

Abstract: This research aims to: (i). Examining the border trade relationship between North Kalimantan (Indonesia) and Sabah (Malaysia) with bilateral trade between Indonesia and Malaysia; (ii). To Examine and analyze the factors that influence border trade between North Kalimantan and Sabah; and (iii). Analyze public policies that can help increase trade in the North Kalimantan-Sabah border.

The methodology used in this research is a qualitative approach through Focus Group Discussion (FGD) processed with NVivo and a Systematic Literature Review (SLR) approach.

Based on the results of the NVivo and SLR approach, this research found: (i). Lack of infrastructure availability is the main problem that causes the border trade relationship between Indonesia and Malaysia in North Kalimantan and Sabah not equal; (ii). The factors influencing bilateral trade between North Kalimantan and Sabah are the availability of infrastructure, integration of policies between countries, government budget allocation, infrastructure investment, availability of basic goods, development of industrial areas, and development of buffer (border) areas; (iii). To develop the main infrastructures in North Kalimantan, funding on budget constraints can be provided through various investment schemes which will boost the international trade at the border of North Kalimantan and Sabah.

This research recommends: (i). The Indonesian government must focus on infrastructure development policies (electricity, roads, telecommunications, logistics) as well as budget commitments to increase border trade; (ii). Carrying out diplomatic discussions on border trade regulations with Malaysia to avoid disintegrating border trade regulatory policies between countries; and (iii). Public Private Partnership (PPP) investment is needed for the funding of building processing industries in North Kalimantan.

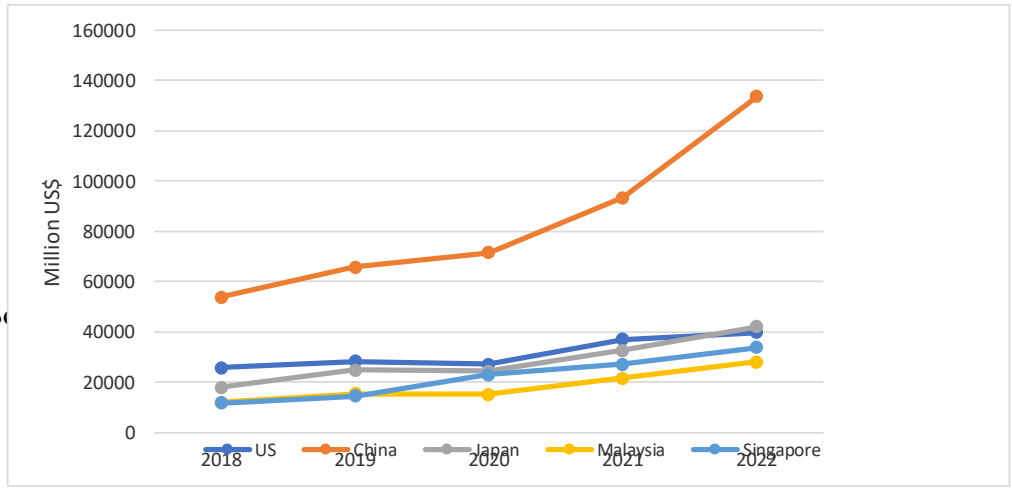
There was vast research on bilateral trade relations between Indonesia and Malaysia where both countries have various bilateral cooperation and agreements to regulate bilateral trade. This research is unique because the research area of this study focuses on the border between North Kalimantan Province (Indonesia) with Sabah (Malaysia) and analyzes using NVivo and SLR approaches.

Keywords: Cross Border Trade, Bilateral Trade Agreement, Infrastructure, Economic Regional Cooperation, Public Private Partnership.

Introduction

Based on data from the Central Statistics Agency (BPS), Indonesia's main trading partner countries in 2022 were China, Japan, the United States (US), Singapore, and Malaysia. Indonesia's international trade with major trading partner countries is depicted in Graph 1 below.

Graph 1: Data on Total Indonesian Trade in Million US$



Source: BPS (2023)

Based on Graph 1 above, there are only two countries members of the Association of Southeast Asian Nations (ASEAN) which are Indonesia's largest trading partners, namely Singapore and Malaysia. Singapore and Malaysia are two neighboring countries to Indonesia which have direct borders with Indonesia. Singapore has sea borders and Malaysia has sea and land borders. In 2022, Indonesia's exports to Malaysia reach US$15,429.6 million, the highest among exports to other ASEAN member countries. Therefore, Malaysia is Indonesia's closest and most important trading partner.

The trend of bilateral trade between Indonesia and Malaysia is by international trade theory starting from the time of Adam Smith who explained the fulfillment of national wealth to David Ricardo about comparative advantage (Schumacher, 2012). The comparative advantage not only refers to the ability to produce goods at low costs but also includes the close distance between countries, thereby reducing transportation costs. Therefore, bilateral trade between Indonesia and Malaysia is important because of its close distance as a comparative advantage. This research is limited to the border trade between North Kalimantan (Indonesia) and Sabah (Malaysia).

North Kalimantan borders directly with Malaysia with a land border of 1,038 km (Antaranews, 2021). North Kalimantan borders two states in Malaysia, namely Sabah and Sarawak, making North Kalimantan a province with a longer land border with Malaysia than West Kalimantan Malaysia. Border trade between North Kalimantan and Sabah has been conducted by communities from both areas before national borders existed. Illustrated in Table 1 the evidence of border trade activities and trade potential on the North Kalimantan – Sabah border:

Table 1. North Kalimantan – Sabah Barter Trade Data (Malaysian Ringgit/RM)

Year	North Kalimantan exports to Tawau	North Kalimantan imports from Tawau
1998	RM 96,532,814	RM 10,893,639
1999	RM 54,009,087	RM 18,651, 246
2000	RM 85,767,302.01	RM 22,747,293.40
2001	RM 361,894,083.56	RM 32,846,965.94
2002	RM 77,632,531.87	RM 59,726,935.4
2002	RM 52,158,309.39	RM 154,337,129.67
2004	RM 57,133,753.76	RM 89,699,335.6
2005	RM 58,409,947.29	RM 92,308,587.06
2011	RM 26,021,593.07	RM 190,813,934.81
2012	RM 31,380,734.65	RM 251,246,524.33
2013	RM 23,071,601.12	RM 103,149,309.27

Source: Sarjono (2020).

Based on Table 1 above, the North Kalimantan - Sabah border trade through the Tawau port experienced an increase in export value until 2013. This data is border trade data issued by the Tawau branch of the Malaysian Customs Department under the name "Barter Trade", while Indonesia enforced the Border Trade Agreement (BTA) in 1970 for the border with Malaysia.

To regulate border trade, the Indonesian and Malaysian governments have border trade regulations that function to help meet the needs of Indonesian people at the border, namely the 1970 Border Trade Agreement (BTA). The 1970 BTA aims to facilitate people in border areas to meet their needs. Basically through direct trade with neighboring countries which is limited to RM600.00. In regulating border trade, the Indonesian Government has issued the Republic of Indonesia Government Regulation Number 34 of 2019 concerning Border Trade. This Government Regulation explains that Border Trade is trade carried out by Indonesian citizens who live in the border areas of Indonesia with residents of neighboring countries to meet their daily needs. Border trade can only be carried out on land and sea borders. In the context of border trade, all activities are excluded from fulfilling export or import documents in the field of trade.

The regulations used in Malaysia's Barter Trade are the 1967 Kastam Deed and also the 1998 Kastam (Prohibition of Importing and Exporting) Directive (Sarjono, 2020) which is used to facilitate international trade of Sabah with other bordering countries with limited value. Trade value data in Table 1, between North Kalimantan and Sabah portrays the activities of border trade at the border area were beyond basic needs fulfillment and have become international trade activities for profitable purposes.

The differences in regulations enforced between North Kalimantan and Sabah have resulted in people on the border having difficulties complying with the regulations imposed by the two countries. This situation has resulted in widespread illegal trade due to the phenomenon of interdependence of communities at the border, especially for daily needs. Therefore, policies are needed to bridge differences in border trade regulations in the region.

Border areas in Kalimantan have various obstacles to regional development. This was explained by Firdaus (2018) that land border areas in Kalimantan face various obstacles, such as lack of infrastructure access, social problems related to poverty and inequality, as well as illegal activities such as illegal logging, illegal fishing, and trafficking. Therefore, the problems in this research are: (i). How does North Kalimantan border trade with Sabah relate to bilateral trade between Indonesia and Malaysia? (ii). What factors influence bilateral trade in the North Kalimantan – Sabah border area? And (iii). How can public policy help increase trade on the North Kalimantan – Sabah border?

The novelty of this research is in studying border trade in North Kalimantan-Sabah by analyzing the effectiveness of border trade policies and infrastructure supporting trade activities. This research hopes that analyzing the effectiveness of border trade policies will provide inputs regarding effective policies at the border which will improve the community's economy as well as increase Indonesian exports to Malaysia and reduce informal or illegal trade activities.

Literature review

Public policy is described by Dye (2013) in his book 'Understanding Public Policy' explaining that Public Policy is whatever the government chooses to conduct or not. The government does many things, such as managing conflict in society; organizing communities to engage in conflict with other communities; distributing various kinds of symbolic rewards and material services to community members; and extracting money from society. Thus, public policy can regulate behavior, regulate bureaucracy, distribute benefits, or extract taxes or all of these things at once.

Based on the results of studies from Dye (2013) and Cochran & Malone (2010), the definition of public policy core is a series of activities that are consciously carried out by the government in a directed, measurable manner, involving interested parties outside the government and oriented towards the welfare of the community with certain goals. The final result of this public policy is the government regulations.

In connection with government policy in the field of international trade, Geraci & Prewo (1977), stated that the basic economic theory in macroeconomics is demand and supply which assumes that the balance of bilateral trade flows is determined by the supply and demand chain. In bilateral trade, import demand and export supply are treated as excess demand and excess supply, respectively.

In a competitive supply and demand framework, world price ratios for the same commodity will differ across countries due to differences in the impact of trade barriers. Trade resistance factors include transportation costs, discriminatory (or preferential) trade arrangements, and nonquantifiable factors such as language barriers, distance,

and political considerations. Trade resistance between two countries may differ in two directions because trade barriers depend on the composition of traded commodities, and trade arrangements are not reciprocal. In short, bilateral trade flows from a country are the result of calculations of supply conditions in the country of origin, demand conditions in the destination country, and trade barriers between countries.

The theory of international trade from Adam Smith is given complete freedom in the economy for every individual. In addition, Adam Smith saw trade as a consequence of human activities for "propensity to truck, barter, and exchange one thing for another". So trading is an activity that has the motive of pursuing profit which will be carried out if there is a profit to be gained from the trade (Blecker, 1997).

David Ricardo's theory on international trade also emphasized the decline in civil salaries and labor costs in England. Adam Smith and David Ricardo both strongly supported free trade as a way to achieve production efficiency at the global level. David Ricardo's thinking regarding comparative advantage is considered very suitable for ensuring profits in international trade by specializing in specific commodities with a comparative advantage in labor time per unit of output (Sen, 2010).

According to Salvatore (2014), Heckscher Ohlin's theorem on international trade can be stated as follows: a country will export commodities whose production requires intensive use of the country's production factors which are relatively abundant and cheap, and import commodities whose production requires intensive use of the country's relatively scarce production factors. and the price is expensive. In short, countries that are rich in labor will export relatively labor-intensive commodities and import commodities that are relatively capital-intensive.

Based on previous theories regarding international trade, several researchers have conducted studies on the factors that influence a country's international trade, including Host et al., 2019, which examined the effect of trade facilitation on international trade using Logistic Performance Index (LPI) data from 150 countries published by LPI. Oh & Selmier (2008) have conducted research using time series data from 1980 – 2021 to explain the unobserved bilateral effect on border trade using a gravity model. The independent variables used are GDP, Distance, Vector of geography, Culture, Institutional Factors, and Diplomatic Relations. The use of cultural and language variables in the gravity model to see the need for a Regional Trade Agreement (RTA) in countries that border and share the same colonialism, has also been carried out by Jámbor et al., (2020), De Sousa et al., (2012), and Chor (2010). The results obtained are that distance is an important variable in forming an RTA, where the closer the distance between two countries, the more necessary an RTA is. Apart from that, there are many other variables used by previous researchers to study border trade, including remoteness, tariffs, port efficiency, trade facilities, consumption level, population size, Free Trade Agreement, taxes, market share, and currency rates.

To increase international trade at borders, several studies have examined the success of cooperation between countries in developing international trade at borders. There are several examples of cooperation that have been successfully implemented by the countries Thailand, China, Russia, Thailand, Laos, Cambodia, Myanmar, and Vietnam. The cooperation carried out by various countries aims to improve the economy and social life of their people in bordering areas. Based on the results of studies by Mikhailova (2015), Sands (2009), Anuar et al., (2018), and Prapinit et al., (2020), cooperation between bordering countries will have a positive impact on directly bordering areas.

Research on the Indonesia-Malaysia border, especially on the North Kalimantan and Sabah border, studied by Idris (2018) has mentioned the effect of a shared border on exports using a gravity model. This research aims to prove whether the land infrastructure connecting the North Kalimantan border with Sabah affects Sabah's exports. Results from this research, by carrying out Ordinary Least Square (OLS) regression on the gravity model using Malaysian export data to 188 countries, it was found that having the same border has a positive effect on international trade so it is expected the opening of the land route between North Kalimantan and Sabah will stimulate exports.

Methodology

This research uses a qualitative methodology with Focus Group Discussion (FGD) analyzed using NVivo and a Systemic Literature Review (SLR) approach. Qualitative methodology according to Nurdin & Hartati (2019) includes, among others: (i). A detailed description of a particular situation, activity, event, or phenomenon, both regarding the human being and relationships with other humans; (ii). Direct opinions from people who have experience; (iii). Excerpts from report documents, archives, and history; and (iv) A detailed description of the person's attitudes and behavior.

Based on the qualitative methodology explanation from Nurdin & Hartati (2016), this research was carried out in two stages, namely:

1. The FGD activity stage involves conducting in-depth interviews with resource persons and processing them using NVivo (qualitative method).
2. The next stage is to use the Systemic Literature Review (SLR) approach to obtain connected study results.

This research uses primary and secondary data. Secondary data was obtained through credible institutions, such as Indonesia's Central Statistics Agency (BPS), the World Bank, and the Ministry of Trade. Meanwhile, primary data was obtained through presentations from informants/relevant agencies through Focus Group Discussions (FGD). In this research, six informants were sources in the FGD.

Furthermore, informants in the FGD were divided into three groups, namely regulators, operators, and associations. The FGD will analyze the potential for border trade between North Kalimantan Province and Sabah, and the public policies that can help increase trade on the North Kalimantan - Sabah border will be analyzed with NVivo.

The following are profiles of the 6 informants:

Table 2. List of Informants

No	Role	Name	Position
1.	Regulators	Doddy Dharma	Ministry of Transportation
2.		Ferdy M. Tanduklangi, SE, M.Sc.	Head of the Border Management Agency, North Kalimantan Province
3.		Muhammad Takdir	Head of the Center for Asia Pacific and African Policy Strategy, Ministry of Foreign Affairs
4.	Operator	Elsie Philip	Senior Manager Tawau Port, Sabah Ports Sdn. Bhd. Malaysia
5		Nasib Sihombing	GM Pelindo Nunukan (North Kalimantan), Pelindo IV
6.	Association	Kilit Laing	Chairman of the North Kalimantan Province Chamber of Commerce and Industry

Source: Author (2023)

NVivo Analysis Results

The results of the FGD with the above informants were processed using NVivo. NVivo assists in information or data analysis and also covers the entire qualitative inquiry process. The aim is to interpret social dynamics using a series of materials such as observation results, narratives, interviews, and analysis of textual, digital, or audiovisual documents (Trigueros et al., 2017).

NVivo is a collection of tools used to analyze various phenomena in qualitative social research. NVivo can also assist in creating hierarchical and branching structures, and conceptual schematics of investigation design elements (Trigueros et al., 2017). The results of the FGD processing by NVivo show that the node system is divided into 3 (three) which refer to the formulation or research objectives that have been developed previously, namely: (i). To analyze the border trade relationship between North Kalimantan and Sabah towards Indonesia's bilateral trade with Malaysia – Nodes 1 System; (ii). To examine the factors that influence bilateral trade in the North Kalimantan and Sabah – Nodes 2 System; To present the hierarchy starts from: (i). Identifying in aggregate which nodes have the highest hierarchy; (ii). Identify nodes with the highest reference in node system 1 to node system 2. Apart from that, node Other will also be shown the highest hierarchy in the node system, this is intended to explore other nodes outside the node system. At least there are 12 nodes with the highest hierarchy, as can be seen in Table 3. The following table describes the aggregate nodes of references:

Table 3: Aggregate Hierarchy Nodes Reference

No.	Nodes	Ref.	Files Coded	Max. Value	Share
1	Infrastructure Availability	4	4	6	67%
2	Policy Integration Between Countries	3	3	6	50%
3	Budget Allocation	2	2	6	34%
4	Infrastructure Investment	2	2	6	34%
5	Infrastructure Availability > Goods Availability	2	2	6	34%
6	Infrastructure Availability > Economic Growth	2	2	6	34%
7	Custom, Immigration, Quarantine, and Security (CIQS) Function Maximization	2	2	6	34%
8	Development of Industrial Areas	2	2	6	34%
9	Buffer Area Development	2	2	6	34%
10	Shipping Activities	2	2	6	34%
11	Regional Disintegration	2	2	6	34%
12	Natural resource potential	2	2	6	34%

Source: Data Processed

These results show that the 12 nodes above have the largest contribution to the overall hierarchy, both in terms of the number of references and data sources (transcripts). The results indicate, that the informants both implicitly and explicitly, frequently mentioned issues regarding border infrastructure. In addition, the “Infrastructure Availability” node has the highest source value (4) with a total contribution of 66%. This indicates that 66% of the informants (6 transcripts) touched on the issue of infrastructure availability in border areas. The other nodes, namely "Intercountry Policy Integration" and "Budget Allocation" have references of 3 (50% contribution) and 2 (34% contribution) respectively. This indicates that there are around 50% of informants associate the need for integration of border policies between Indonesia and Malaysia. Apart from that, 34% of informants also mentioned the need for budget allocation related to infrastructure development. As for other nodes, they have a similar interpretation.

Table 4. Nodes Correlation Coefficient

Code A	Code B	Pearson correlation coefficient
Central Government Intervention in the Budget	*Budget Constraints*	1
Buffer Area Development	Development of Industrial Areas	0.944558
Political Will	Infrastructure Investment	0.802809
Infrastructure Availability - Goods Availability	Infrastructure Availability	0.751409
Sustainability	Policy Integration Between Countries	0.73012
Natural resource potential	*Climate Change*	0.700893
Buffer Area Development	Infrastructure Availability	0.633181
Political Will	Policy Integration Between Countries	0.632747

Custom, Immigration, Quarantine, and Security (CIQS) Function Maximization	Infrastructure Investment	0.580407
Foreign Direct Investment (FDI) Potential	Policy Integration Between Countries	0.579416
National Border Post/ Pos Lintas Batas Negara (PLBN)'s function Overlap	Infrastructure Availability	0.577637
North Kalimantan's hydropower potential	FDI Potential	0.577366
Revitalization of Shipping Routes - Natural Resources Potential	Natural resource potential	0.577184

Source: Data Processed

Based on the table above, it can be seen that:

1. Pair between the nodes "Central Government Intervention on the Budget" and "Budget Constraint" has a positive and high correlation coefficient with value 1. This means that these two things are coded in the same sentence. Apart from that, it can also be said that there is a need for the role of the central government to assist the problem of infrastructure availability when regional fiscal capacity is insufficient.

2. As for pairs between the nodes "Development of Buffer Areas" vs "Development of Industrial Areas" also have a very high coefficient, namely 0.945 on a scale of 1. Apart from being coded in one relatively similar sentence, this also leads to the development of the buffer area (border) into an Industrial Area.

3. As for pairs between the nodes "Sustainability" vs "Policy Integration Between Countries" also has a high coefficient, namely 0.731 on a scale of 1. Apart from being coded in one relatively similar sentence, this also refers to coordination between the governments of the two countries (Indonesia-Malaysia) towards Forestry, Fishery, and Energy aspects, which can have an impact on achieving Sustainability Goals, especially for Indonesia.

4. Still related to the Sustainability aspect, the pair between the "Natural Resources Potential" vs "Climate Change" nodes also has a moderate correlation coefficient of 0.70 on a scale of 1. This can also implicitly be linked to the forest potential of North Kalimantan which can influence the level of global climate change.

5. As for pairs between National Border Post (PLBN) nodes "PLBN*'s Function Overlap*" vs "Infrastructure Investment" also has a moderate coefficient of 0.57 on a scale of 1. This also refers to the secondary (Economic) function of PLBN which is considered more dominant compared to the primary function of Customs, Immigration, Quarantine, and Security (CIQS). This dominance has an impact on the size of infrastructure investment carried out in the PLBN area.

6. As for pairs between the nodes "Hydroelectric Potential" vs "Foreign Direct Investment (FDI) Potential" also has a moderate coefficient, namely 0.57 on a scale of 1. This also refers to the potential of hydropower in North Kalimantan which can bring in capital inflow (FDI Inflow).

Systematic Literature Review (SLR) Approach Analysis

Hadi et al., (2020) explained that literature reviews and evidence synthesis are important research products to help the development of science, by building on the results of previous research. In the last two decades, health sciences have developed a special approach to this process called Systematic Literature Review (SLR).

Keywords that were used for input in searching for articles and data sources derive from Publish or Perish (PoP) software with publication time criteria between 2019-2023. Keywords used are: (i). Cross Border Trade; (ii). Bilateral Trade Agreement; (iii). Indonesia Malaysia Border; (iv). Cross Border Infrastructure; and (v). Bilateral Economic Trade.

This study used 274 data published in the form of articles and not in other forms such as chapters in books, reviews, books, and notes. Those kinds of data (chapters in books, reviews, books, and notes) tend to have minimal or even no keywords. The process of filtering articles through several inclusion and exclusion criteria is carried out with the help of the Preferred Reporting Items for Systematic Reviews and META Analysis (PRISMA).

In the second stage, partial network mapping was carried out for each keyword, the analysis will be assisted by Vosviewer software.

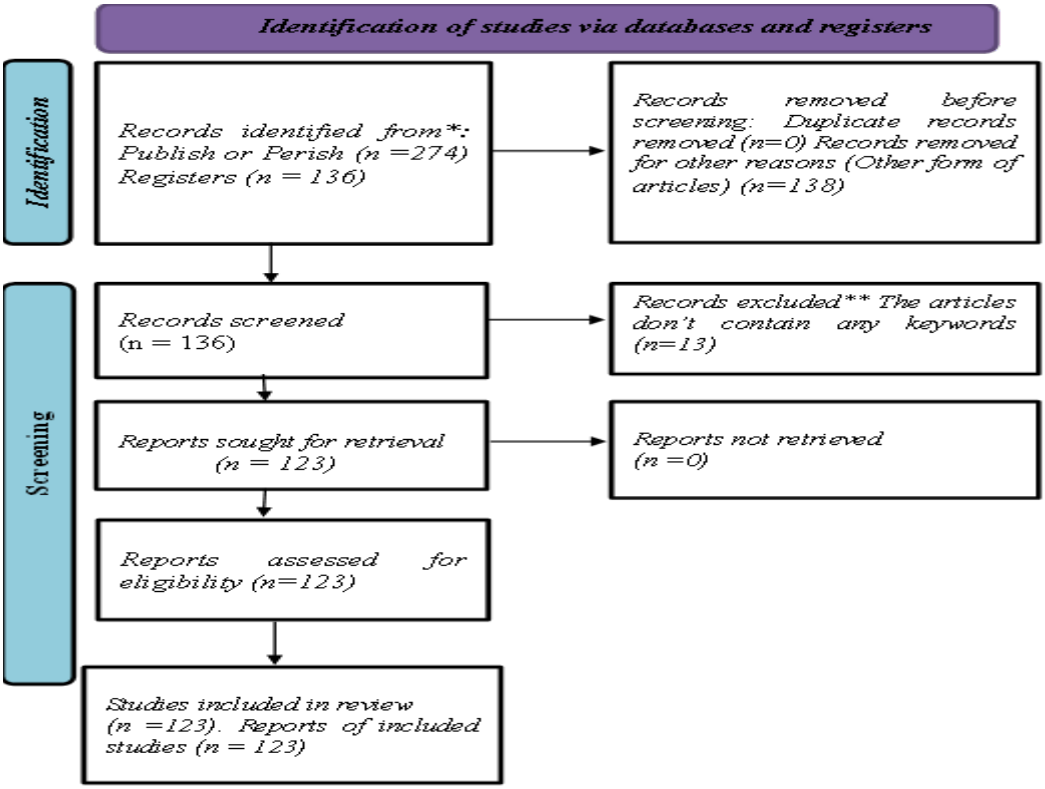
Table 5: Data Source Inclusion & Exclusion Tabulation

2019-2023	Keywords Used (Publish or Perish)				
	Cross Border Trade	Bilateral Trade Agreement	Indonesia Malaysia Border	Cross Border Infrastructure	Bilateral Economic Trade
Recorded	167	40	24	25	18
Gross Total	274				
Excluded	95	19	9	17	11
Included	72	21	15	8	7
Total Articles Included	123				

Source: Data Processed

The results of the articles' identification with PRISMA in filtering the inclusion and exclusion criteria for the data sources are based on Figure 2 below.

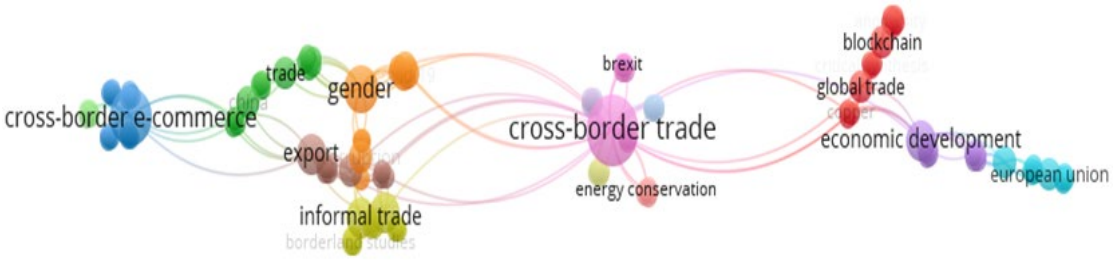
Figure 2. PRISMA Filtering and Identification



Source: Data Processed

The second stage partial network mapping is carried out for each keyword. First, the mapping results show keywords that have the most reference articles, namely Cross Border Trade (n = 72) to map the kinds of keywords that will appear. The following is the image of the mapping:

Figure 3. Keywords Cross Border Trade



Source: Data Processed

The processing results have mapped 10 main clusters in the Cross Border Trade keyword network. Cluster 1 (Red) consists of 14 items/nodes, namely: Anonymity, Blockchain, Copper, Critical Synthesis, Cryptocurrency, Decentralized Condition, Early Modern Period, Global Trade, Logistics, Norway, Privacy, Regulation, Smart Contract, and Supply Chain Management. Cluster 2 (Green) also consists of 14 items/nodes, namely: Belt & Road, Border Effects, China, Ecowas, Goods Trade, Household, Nigeria, Poverty, Regional Integration, Service Trade, Sustainability, Trade, Trade Inefficiency, and Welfare. Furthermore, Cluster 3 (Blue) consists of 13 items/nodes: Collaborative Paths, Cross-Border E-Commerce, Dalian Area, Financial Services, Free Trade Area, Hypothesis Testing, Industrial Clusters, Multi-dimensional Distance, Multidimensional Teaching, One Belt One Road, Spatial Durbin Model, Teaching Practice, and Trade Major.

Furthermore, partial network mapping was carried out on the keyword Bilateral Economic Trade (n = 7) to further map the general type of keywords that will appear related to bilateral trade. The following is the image that shows the mapping:

Figure 4. Keywords Bilateral Economic Trade

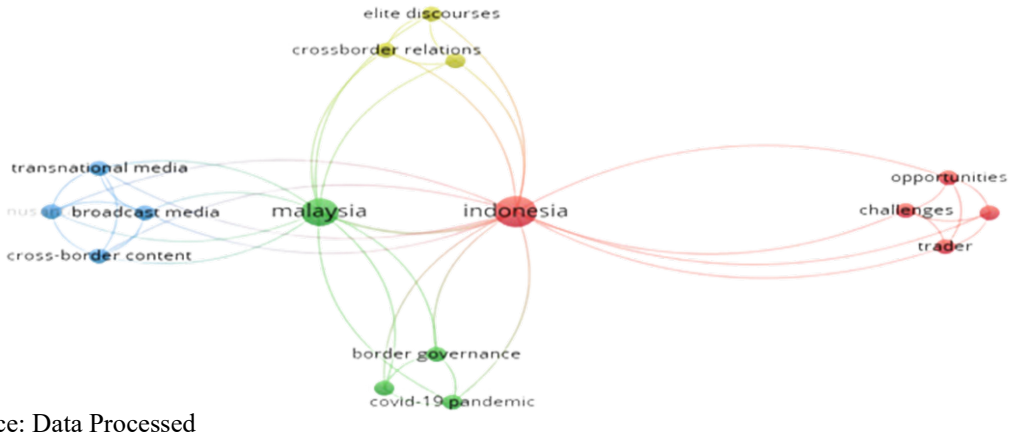
Source: Data Processed

In mapping the keyword of Bilateral Economic Trade, 3 main clusters are mapped, namely: Cluster 1 (Red) consists of 7 items/nodes, namely: China, Economic Distance on Foreign Trade, Economic Regional Cooperation, Economic Regional Integration, GDP on Foreign Trade, Kazakhstan, and Kazakhstan Gravity Model of Foreign Trade. Cluster 2 (Green) also consists of 5 items/nodes, namely: Africa, Economic Growth, Eurasian Integration, Gravity Model, and International Trade. Furthermore, Cluster 3 (Blue) consists of 4 items/nodes: Bilateral Investment Treaties, Economic Cooperation, Free Trade Agreements, and Western Balkans.

The mapping results above are also implicitly related to infrastructure aspects. A study conducted by Choi et al., (2019) tried to examine border trade relations between China and Kazakhstan. One of the results of the study concluded that infrastructure aspects greatly influence fluctuations in the availability of goods. The mapping results for this keyword are also in accordance with the previous keyword (Cross Border Trade).

Next, partial network mapping was carried out on the keyword of Bilateral Trade Agreement (n = 21) to further map in general what keywords appeared in the bilateral trade theme. The following is the image that shows mapping:

Figure 5. Keywords Bilateral Trade Agreement



Source: Data Processed

In general, there are 3 main clusters mapped in the Bilateral Trade Agreement keyword network. Cluster 1 (Red) consists of 6 items/nodes, namely: Aggregation Bias, Ceta, Computable General Equilibrium, Sensitive Products, Tariff Line Analysis, and Trade Policy. Cluster 2 (Green) also consists of 6 items/nodes, namely: Chile, China, Costa Rica, Peru, Preconditions, and Non-Traditional Economy. Furthermore, Cluster 3 (Blue) consists of 4 items/nodes: Bilateral Investment Treaties, Economic Cooperation, Free Trade Agreements, and Western Balkans. The mapping results above also support the conclusions related to coding analysis relating to foreign direct investment.

Using the keywords Indonesia – Malaysia Border (n = 15) to map studies related to diplomatic relations between Indonesia and Malaysia, especially in economic terms. The following is the image that shows the mapping:

Figure 6. Keywords Indonesia - Malaysia Border

Source: Data Processed

The keywords are mapped in 4 main clusters in the Indonesia-Malaysia Border keyword network. Cluster 1 (Red) consists of 5 items/nodes, namely: Challenges, Cross Border Migration, Indonesia, Opportunities, and Trader.

Cluster 2 (Green) also consists of 4 items/nodes, namely: Border Governance, the Covid-19 Pandemic, Cross-Border Integration, and Malaysia. Furthermore, Cluster 3 (Blue) consists of 4 items/nodes: Crossborder Relations, Elite Discourses, and Everyday-defined Social Reality. The mapping results above also support the conclusions related to analysis relating to foreign direct investment which also related to aspects of infrastructure availability.

Following up on the connection with infrastructure aspects, below we carry out network mapping on the keyword Cross Border Infrastructure (n = 8) to further map keywords related to border trade infrastructure. The following is the image that shows mapping:

Figure 7. Keywords Cross Border Infrastructure

Source: Data Processed

Two main clusters have been mapped in the Cross Border Infrastructure keyword network. Cluster 1 (Red) consists of 9 items/nodes, namely: Connectivity, Development Finance Institution (DFI), FDI, Guarantees, Joint Venture, Large Infrastructure, PPPs, Project Finance, and Regional Cooperation. Cluster 2 (Green) also consists of 8 items/nodes, namely: Ecowas, Gender, Household, Nigeria, Poverty, Sustainability, Trade, and Welfare. The mapping results above also show that the infrastructure aspect is related to infrastructure financing issues.

Discussion

Based on the results of analysis from NVivo and the SLR approach, this research found that the lack of infrastructure availability is the main problem that causes border trade relations between Indonesia and Malaysia in North Kalimantan and Sabah to be unbalanced. Most of the informants raised the problem of the lack of main infrastructure such as roads, electricity, and telecommunications in North Kalimantan Province which causes local communities to be dependent on areas bordering Malaysia.

Apart from that, the informants emphasized several issues that become obstacles in border trade, namely the disintegration of policies between the center and the regions, illegal trading, investor behavior which has an impact on the welfare of local communities (North Kalimantan), economic dependence on neighboring countries, limited infrastructure development, and policies that ineffective.

Regarding influencing factors of border trade between Indonesia and Malaysia, the results of data processing with NVivo showed that the dominant factor influencing bilateral trade between North Kalimantan and Sabah is the availability of infrastructure. According to informants, the availability of main infrastructure such as roads, telecommunications, and electricity is still insufficient, especially to improve the economy of North Kalimantan Province. Other factors that influence border trade are policy integration between countries, government budget allocation, infrastructure investment, availability of basic materials, development of industrial areas, and development of buffer areas (border). These factors need to be developed by the Indonesian government to create equal border trade relations between Indonesia and Malaysia

These in line with the results of SLR and NVivo which concluded that to help increase the North Kalimantan-Sabah border trade, policy synergy is needed and reduce policy disintegration between the central government and the North Kalimantan regional government, especially in providing the budget for the main infrastructure development in North Kalimantan. Funding for budget constraints shall be provided through various investment schemes that will increase international trade on the borders of North Kalimantan and Sabah.

Improving logistics infrastructure in border areas can encourage export and import activities as well as reduce illegal trade activities and inflation in the prices of basic commodities. In developing infrastructure in border areas, the Indonesian Government must also prepare its development budget commitments, such as the results of NVivo processing, limited infrastructure funding has resulted in hampering the economy of border areas.

Conclusions and recommendations

North Kalimantan - Sabah border trade is related to bilateral trade between Indonesia and Malaysia. Border trade activities are not only to meet the basic needs of the people at the border but have been expanding into the international trade gateway between Indonesia and Malaysia. Apart from that, bilateral trade at the border areas was influenced by various factors that characterize the border. Several previous researchers have researched various factors that influence border trade, including trade facilitation, strong diplomatic relations which will increase bilateral trade, distance, remoteness, tariffs, port efficiency, trade facilities, consumption levels, population size, Free Trade Agreement, taxes, market share, and currency exchange rates, the economic size of a country or province. Research on border activities between countries has been carried out by previous researchers to analyze government policies in overcoming problems in border areas. Several research results show that working together to develop border areas shall be a development solution.

Based on the results of the analysis in this study, several recommendations for the Indonesian Government are as follows:

1. The Indonesian Government shall focus on infrastructure development. Infrastructure must be a priority, apart from main infrastructure such as roads and electricity, logistics connectivity infrastructure is one of the necessities to be provided. Infrastructure development shall increase community productivity and reduce logistics costs.

2. Based on the results of the SLR approach, shows that one of the challenges in Cross Border Trade in North Kalimantan is the disintegration of border trade policies between countries. To overcome this obstacle, carrying out diplomatic discussions on border trade regulations with Malaysia to avoid disintegrating border trade regulatory policies between countries.

3. To improve infrastructure in border areas, the Indonesian Government can use Public Private Partnership (PPP) financing.

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