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A Literature Survey Trade Policy Dynamics: Insights for Assessing Poverty and Inequality Impacts

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Abstract
The paper embarks on a critical exploration of the intricate relationship between trade liberalization, poverty alleviation, and income distribution in the context of developing countries. Recognizing the nuanced and often divergent empirical findings in existing literature, the study seeks to offer a comprehensive review of the methodologies employed and the resulting insights gleaned from diverse research endeavors. Central to the paper's objective is the examination of the impact of trade liberalization on poverty and income inequality, acknowledging the multifaceted nature of this relationship and the varied outcomes observed across different countries and contexts. By synthesizing the findings of numerous studies, the paper aims to distill key insights and discern common trends amidst the diversity of empirical evidence. In particular, the study focuses on two prominent methodologies employed in the assessment of trade liberalization: computable general equilibrium models and micro-simulation techniques. These methodological approaches have been widely utilized by researchers and policymakers alike, offering valuable insights into the complex interplay between trade policy, economic growth, and social welfare outcomes. Through a meticulous examination of existing literature, the paper seeks to shed light on the strengths and limitations of these methodological approaches, providing guidance for future research endeavors and policy formulation efforts. By elucidating the factors influencing the impact of trade liberalization on poverty and income distribution, the study endeavors to offer actionable insights for policymakers in Laos and other developing countries grappling with trade policy decisions. Ultimately, the literature survey conducted in this paper serves as a vital resource for researchers, policymakers, and stakeholders seeking to navigate the complex terrain of trade liberalization and its implications for poverty reduction and income inequality. By synthesizing diverse perspectives and methodological approaches, the study aims to contribute to a deeper understanding of the nexus between trade policy and inclusive development, thereby informing evidence-based policy formulation and implementation strategies in Laos and beyond.
Keywords: Trade Liberalization, Poverty Alleviation, Income Distribution, Developing Countries
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1. INTRODUCTION

The relationship between trade liberalization, economic growth, and poverty reduction is a complex and widely debated topic among scholars and policymakers. While some studies suggest that trade liberalization can stimulate economic growth and alleviate poverty by promoting efficiency, innovation, and access to international markets, others argue that it may exacerbate income inequality and have adverse effects on vulnerable groups. The outcomes of trade liberalization policies can vary depending on factors such as the type of liberalization measures implemented, the structure of the economy, the level of development, and the policy environment of the country. For instance, while reducing tariffs and trade barriers can enhance competitiveness and export opportunities for industries with comparative advantage, it may also expose domestic industries to increased competition from foreign producers, leading to job losses and income disparities, particularly in sectors with low productivity or limited capacity to adjust. Moreover, the distributional impacts of trade liberalization are crucial considerations. While some segments of the population may benefit from expanded trade opportunities through higher wages, lower prices, and increased consumer choices, others, particularly those in vulnerable sectors or regions, may face challenges such as displacement, income loss, and reduced access to essential goods and services (Imran et al., 2021).

The effects of trade liberalization on growth and poverty reduction are context-specific and multifaceted. Policymakers need to carefully assess the potential benefits and risks associated with trade liberalization measures and implement complementary policies to mitigate adverse effects and ensure that the gains from trade are equitably distributed across society. Additionally, robust monitoring and evaluation mechanisms are essential to assess the impact of trade policies over time and make informed adjustments to promote inclusive and sustainable development. Empirical studies have indeed highlighted the importance of trade in driving economic growth and facilitating structural transformation. Researchers such as Winter (2004) and Dollar (1992) have provided valuable insights into the relationship between trade and economic development. Trade serves as a catalyst for economic growth by promoting specialization, efficiency, and innovation. By engaging in international trade, countries can capitalize on their comparative advantages, allocate resources more efficiently, and access a wider range of goods and services. This process fosters productivity gains, enhances competitiveness, and stimulates overall economic expansion. Moreover, trade can facilitate structural

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change within economies by influencing the composition of output, employment, and investment. Through trade, countries can shift resources from traditional and low-productivity sectors towards more dynamic and high-value-added industries, thereby promoting industrialization, technological upgrading, and diversification. The empirical evidence presented by Winter (2004) and Dollar (1992) underscores the positive impact of trade on economic growth and structural transformation. Their studies highlight how increased trade openness is associated with higher levels of productivity, income growth, and industrial development. By embracing trade liberalization and integration into the global economy, countries can unlock new opportunities for growth, innovation, and prosperity.

However, it's essential to recognize that the benefits of trade are not automatic and may vary depending on factors such as the policy environment, institutional quality, and external market conditions. Therefore, policymakers need to adopt complementary measures to maximize the gains from trade while addressing potential challenges and ensuring that the benefits are widely shared across society. The impact of trade liberalization on poverty, particularly in developing countries like those in the ASEAN region, remains a subject of debate and scrutiny. While trade liberalization has the potential to spur economic growth and development, its effects on poverty alleviation are nuanced and contingent on various factors. Proponents of trade liberalization argue that it can benefit poor households by creating new opportunities for employment, income generation, and access to cheaper and diverse goods and services. By promoting export-oriented industries and attracting foreign investment, trade liberalization can stimulate job creation and increase wages, thereby lifting people out of poverty. Additionally, increased competition from imports can lead to lower prices for consumer goods, benefiting low-income households by improving their purchasing power. However, critics raise concerns about the potential negative consequences of trade liberalization on poor households. They argue that liberalization may exacerbate income inequality by favoring capital-intensive industries and skilled workers over labor-intensive sectors and unskilled workers. Moreover, trade liberalization could lead to job displacement in certain sectors, particularly agriculture and traditional manufacturing, where developing countries often have a comparative advantage. This can result in structural unemployment and income loss for vulnerable populations, pushing them deeper into poverty. Furthermore, the ability of poor households to benefit from trade liberalization depends on their access to education, skills, infrastructure, and social safety nets. Without adequate support mechanisms in place, marginalized groups may struggle to compete in liberalized markets and may face increased economic vulnerability.

In the context of ASEAN countries, where economic structures and levels of development vary widely, the impact of trade liberalization on poverty is likely to differ across countries and regions. Policymakers need to carefully consider the distributional effects of trade policies and implement complementary measures to ensure that the benefits of liberalization are inclusive and reach those most in need. This may involve investing in education and training, strengthening social protection programs, and promoting inclusive growth strategies that prioritize the needs of poor and marginalized communities. The impact of trade liberalization on poverty is multifaceted and can vary depending on various economic factors and market conditions. Dollar and Kraay (2004) emphasize this complexity by highlighting that the effects of trade liberalization on poverty are contingent on changes in household income, factor markets (such as labor and capital), and household and commodity markets. On one hand, trade liberalization can lead to increased income opportunities for households through various channels. For example, expanded access to international markets can boost exports, create new job opportunities, and attract foreign investment, all of which can contribute to higher household incomes. Moreover, increased competition from imports can lead to lower prices for consumer goods, benefitting households by improving their purchasing power and reducing their cost of living.

However, trade liberalization can also have adverse effects on poverty, particularly in the short term or for certain segments of the population. For instance, sectors that face increased competition from imports may experience job losses or declining wages, leading to income reductions for affected households. Additionally, trade liberalization can exacerbate income inequality if the benefits disproportionately accrue to wealthier individuals or regions, leaving marginalized groups behind. Furthermore, changes in factor markets, such as labor mobility and capital flows, can influence poverty dynamics. For instance, increased capital mobility resulting from trade liberalization may lead to capital flight or disinvestment in certain sectors, affecting employment opportunities and incomes for workers in those industries. Similarly, changes in commodity markets, such as fluctuations in prices for agricultural products or natural resources, can impact the livelihoods of rural and resource-dependent communities, potentially exacerbating poverty. Dollar and Kraay's (2004) observation underscores the importance of considering the broader economic context and market dynamics when assessing the poverty impacts of trade liberalization. Policymakers need to carefully evaluate the potential trade-offs and distributional consequences of liberalization policies to ensure that they contribute to inclusive and sustainable development goals. The study described presents a significant contribution to the literature on trade and poverty in the ASEAN region. By conducting a literature survey focused specifically on ASEAN countries, the authors aim to fill an important gap in research. Understanding how trade liberalization affects poverty in this context is crucial for policymakers and stakeholders in the region. The emphasis on exploring simulation scenarios of trade liberalization and their impact on poverty, considering country-specific factors, adds depth to the analysis. This approach allows for a nuanced understanding of the potential outcomes of trade policy changes, taking into account the diverse economic, social, and institutional contexts of ASEAN member countries. The study has the potential to provide valuable insights into the complex relationship between trade liberalization and poverty alleviation in the ASEAN region. It can inform policy discussions and decision-making processes aimed at promoting inclusive and sustainable development in the region.

2. COMPUTABLE GENERAL EQUILIBRIUM (CGE) MODEL

Larger models are indeed utilized to analyze the impact of trade liberalization on poverty, with the Computable General Equilibrium (CGE) model being one of the most popular and widely-used tools for this purpose. The CGE model integrates economic theory with empirical data to create a comprehensive economic framework for policy analysis, particularly regarding changes in tariffs and their effects on entire economic systems. In essence, the CGE model simulates the behavior of various economic agents, including producers, consumers, and government entities. It also considers different sectors of the economy, such as industry, agriculture, and services, along with the factors of production, namely labor, capital, and land. This holistic approach enables policymakers to assess the potential impacts of trade liberalization on different segments of the economy and various socio-economic groups. There are two primary types of CGE models: multi-regional computable equilibrium (CEG) models and single country-CGE models. These models provide valuable insights into the potential consequences of trade policy changes, allowing policymakers to make informed decisions that consider the complex interactions within the economy. The Global Trade Analysis Project (GTAP) model, being a multi-region computable equilibrium (CGE) model, stands out as one of the most widely-used tools for assessing the impact of trade policies. Its popularity can be attributed to several advantages. Firstly, given its multi-regional nature, the GTAP model offers a comprehensive perspective on world production and trade, allowing for a thorough analysis of the overall trade implications of agreements like AFTA while also considering the effects on third-party countries. Secondly, the model incorporates a detailed database encompassing various sectors, enabling researchers to examine the trade implications for specific sectors of interest with precision and granularity. This comprehensive approach makes the GTAP model a valuable tool for policymakers and researchers seeking to understand the complex dynamics of international trade agreements and their potential impacts on different sectors and regions. In the GTAP model, markets are assumed to be perfectly competitive, meaning that the zero profit condition prevails and all markets are cleared. Within this framework, regional households allocate their expenditure across three main categories: private household consumption, government spending, and savings. These households earn income by selling primary factors to producers, who then combine these factors with domestically produced and imported intermediate goods to manufacture final goods. These final goods are subsequently sold domestically to private households and the government, as well as being exported to other regions worldwide. Additionally, both the government and private households have the capacity to import consumer goods from other regions around the globe.

In the GTAP model framework, as outlined by Hertel (Eds, 1997), a global bank acts as a mediator between global savings and regional investments. It constructs a portfolio of regional investment goods and offers shares in this portfolio to regional households to fulfill their savings needs. This mechanism enables the transfer of savings from households to investments in different regions.

Moreover, the model incorporates a global transport sector, essential for facilitating international trade. This sector aggregates regional exports of trade, transport, and insurance services. It then produces composite goods necessary for transporting merchandise trade between various regions. This element reflects the logistical infrastructure and services crucial for the movement of goods across borders in the global economy. In CGE modeling, the choice of model closure and free parameters significantly impacts simulation outcomes. Within the GTAP model framework, macro closure plays a pivotal role in shaping simulation results. This closure mechanism categorizes variables in the model as either endogenous or exogenous. Endogenous variables are determined by the model itself, reflecting internal economic dynamics, while exogenous variables originate from external sources. Macro closure, in particular, is tailored to the specific characteristics of the economy under examination. It encompasses key features and behaviors of the target country's economic structure. The "Neo-classical" closure serves as a foundational framework within the GTAP model, offering a simplified yet comprehensive approach to understanding the dynamics of international trade and its implications for various economic variables. By assuming flexible prices and perfect competition, it provides a basis for analyzing how changes in trade policies affect market outcomes, production decisions, and welfare across regions.

Within this closure, the assumption of zero pure profits reflects the idea of firms operating in competitive markets, where prices adjust to ensure that firms earn only a normal rate of return on their investments. This assumption underpins the model's depiction of market behavior, allowing for the examination of trade policy impacts on industries and sectors. Moreover, the assumption of full employment and factor mobility within regions implies that labor and capital are efficiently allocated across sectors, reflecting a state of economic equilibrium. This assumption facilitates the analysis of trade shocks and policy changes on factor markets, including wages, employment levels, and capital flows. The linkage between investment expenditure and the savings rate highlights the importance of savings behavior in determining investment levels, which in turn influence economic growth and structural change. By incorporating this relationship into the closure, the model captures the dynamic interplay between savings, investment, and trade policies. Finally, the assumption of fixed tax rates provides a stable policy environment for analyzing the effects of trade liberalization or protectionism on government revenues, consumer welfare, and overall economic performance. This simplification allows researchers to focus on the core mechanisms driving the impact of trade policies without the added complexity of varying tax regimes.

In essence, the "Neo-classical" closure in the GTAP model offers a structured and tractable framework for studying the effects of trade liberalization and other policy interventions on economic outcomes, thereby informing policymakers and stakeholders about the potential implications of different trade policy scenarios. The importance of parameters in a CGE model cannot be overstated, as they dictate the behavior of economic agents, the functioning of markets, and the overall dynamics of the model. Research by Abler et al. (1999) underscores the significance of parameters in shaping

policy outcomes, highlighting the need for careful calibration and sensitivity analysis in CGE modeling. Parameters in a CGE model encompass a wide range of variables, including elasticities of substitution, production functions, consumption patterns, and behavioral parameters governing saving and investment decisions. Each parameter reflects underlying economic relationships and assumptions about agent behavior, technology, and market structure. For example, the elasticity of substitution between capital and labor influences firms' production decisions and factor allocations, while the elasticity of substitution between different goods determines consumers' responsiveness to changes in relative prices. These parameters play a crucial role in determining the magnitude and distribution of welfare gains or losses from trade liberalization, tax reforms, or changes in technology. Additionally, parameters related to government policies, such as tax rates, subsidies, and trade barriers, shape the incentives facing economic agents and affect resource allocation and market outcomes. Changes in these parameters can have significant implications for economic efficiency, income distribution, and overall welfare. Given the importance of parameters in CGE modeling, researchers often conduct sensitivity analysis to assess the robustness of results to variations in parameter values. Sensitivity analysis helps identify key parameters driving model outcomes and provides insights into the uncertainty surrounding policy recommendations. International trade dynamics are intricately linked through the Armington substitution framework, which captures the preferences of consumers for goods differentiated by their country of origin. The elasticity of substitution in the Armington framework plays a crucial role in determining the responsiveness of consumers to changes in relative prices of domestically produced and imported goods. As highlighted by Zhan (2006), the Armington elasticities are pivotal in trade liberalization simulations, as they can lead to varying impacts on welfare, trade flows, and sectoral production patterns.

In empirical studies employing computable general equilibrium (CGE) models, it is essential to consider not only the Armington elasticities but also the impact of model closure and free parameters. The model closure determines the treatment of endogenous and exogenous variables, influencing the behavior of economic agents and market outcomes. Free parameters, on the other hand, encompass a wide range of variables, including elasticities of substitution, production functions, and behavioral parameters, which govern the functioning of the model. By carefully calibrating the model closure and free parameters, researchers can ensure that the CGE model accurately reflects the economic structure and policy environment of the studied economy. Sensitivity analysis of these parameters can shed light on the robustness of model results and help identify key drivers of policy outcomes. Overall, considering the impact of model closure and free parameters is essential for producing reliable and policy-relevant empirical findings in CGE modeling studies of trade liberalization and its effects on welfare and economic outcomes.

3. POVERTY AND TRADE

Empirical studies have consistently underscored the pivotal role of trade in stimulating economic growth across both developed and developing nations. Scholars such as Winter (2004), Dollar (1992), and Frankel and Rose (1999) have contributed to this body of research, highlighting the positive association between trade openness and economic growth. Winter's work emphasizes the dynamic interplay between international trade and economic development, illustrating how trade liberalization can serve as a catalyst for enhancing productivity, fostering innovation, and promoting specialization. Dollar's research delves into the empirical evidence supporting the growth-enhancing effects of trade, particularly in the context of developing economies, where access to global markets can facilitate technology transfer, capital accumulation, and knowledge spillovers. Furthermore, the seminal work by Frankel and Rose (1999) provides valuable insights into the relationship between trade openness and economic performance, drawing on empirical analyses to demonstrate the significant contributions of trade to income growth, poverty reduction, and overall welfare improvement. Their findings underscore the multifaceted benefits of trade integration, ranging from expanded market access and increased competitiveness to enhanced resource allocation and efficiency gains. The relationship between trade liberalization and poverty is multifaceted, with diverse channels through which it can influence poverty dynamics. Scholars such as Winter (2004), Ravallion (2006), and Dollar and Kraay (2004) have shed light on these complex interactions, highlighting the nuanced pathways through which trade liberalization can impact poverty outcomes. Winter's research underscores the role of trade liberalization in driving economic growth and stability, emphasizing how expanded trade opportunities can stimulate investment, enhance productivity, and foster overall macroeconomic development. By fueling economic growth, trade liberalization can create new employment opportunities, boost household incomes, and contribute to poverty alleviation.

Ravallion's work delves into the microeconomic implications of trade liberalization, exploring how changes in market dynamics and household welfare can affect poverty levels. Through empirical analysis, Ravallion highlights the importance of considering household-level impacts, such as changes in prices, wages, and access to markets, in assessing the poverty effects of trade policy reforms. Additionally, Dollar and Kraay (2004) provide valuable insights into the relationship between trade liberalization, wages, and employment. Their research suggests that while trade openness can lead to structural adjustments and shifts in employment patterns, the overall impact on poverty depends on the extent to which gains from trade are equitably distributed across different segments of the population. Moreover, trade liberalization can have implications for government revenue and public spending, which in turn can affect poverty reduction efforts. By expanding trade and increasing economic activity, trade liberalization may generate additional tax revenues that can be directed towards social programs and poverty alleviation initiatives. Household characteristics and their ability to adapt to changes induced by trade liberalization are crucial factors in understanding the link between trade policies and poverty outcomes. The resilience of households in responding to both positive and negative shocks

resulting from trade liberalization can significantly influence the impact on poverty levels. For example, households reliant on agricultural income may stand to benefit from trade liberalization if it leads to increased prices for agricultural products. In such cases, trade policy reforms that enhance market access or reduce trade barriers in agricultural markets can result in higher incomes for farming households, thereby lifting them out of poverty or improving their overall welfare.

Conversely, households engaged in industries or sectors that face increased competition from trade liberalization may experience negative impacts on their livelihoods. For instance, workers in industries that face import competition may face job losses or wage reductions, potentially exacerbating poverty levels within affected households. Moreover, the ability of households to diversify their income sources and adapt to changing market conditions can also influence the poverty effects of trade liberalization. Households with access to education, skills training, and alternative employment opportunities may be better equipped to withstand economic shocks and capitalize on new opportunities arising from trade policy reforms. Furthermore, the availability of social safety nets and support mechanisms can play a critical role in mitigating the adverse effects of trade liberalization on vulnerable households. Policies aimed at providing income support, access to healthcare, education, and other essential services can help cushion the impact of economic transitions and protect vulnerable populations from falling into poverty. Understanding the heterogeneity of household responses to trade liberalization and implementing targeted policies to support vulnerable groups are essential for ensuring that the benefits of trade are shared equitably and contribute to poverty reduction efforts. By addressing household-level dynamics and vulnerabilities, policymakers can design more effective and inclusive trade policies that promote sustainable development and poverty alleviation.

The dynamics of how changes in world prices, tariffs, and exchange rates affect household welfare within a country can be complex and multifaceted. When a shock occurs, such as a change in the world price of a single good, it reverberates through various channels to impact the welfare of households. One of the key mechanisms through which such shocks are transmitted to households is through changes in prices at the consumer level. For instance, if the world price of a particular commodity decreases due to trade liberalization, this may lead to lower prices for imported goods in the domestic market. As a result, consumers may experience a decrease in the cost of living, which can have positive effects on household welfare, particularly for those with limited income. Moreover, trade reforms that open up new markets or increase market access can create opportunities for producers to expand their businesses and access higher-paying export markets. This can lead to increased incomes for households engaged in export-oriented sectors, thereby lifting them out of poverty or improving their standard of living. However, the analysis of the poverty impact of trade liberalization is not solely determined by changes in trade restrictions across countries. It also involves examining the distributional effects of trade policy changes within countries, including how different segments of the population are affected by shifts in prices, wages, and employment opportunities. For example, while trade liberalization may benefit certain sectors or regions of the economy, others may face increased competition or displacement, leading to job losses or income declines. Vulnerable groups, such as low-skilled workers or those employed in import-competing industries, may be particularly susceptible to negative impacts on their livelihoods. Therefore, understanding the nuanced effects of trade policy reforms on household welfare requires careful consideration of both the direct and indirect channels through which these policies operate. By conducting comprehensive analyses that account for the diverse impacts on different segments of society, policymakers can develop strategies to mitigate negative consequences and maximize the potential benefits of trade liberalization for poverty alleviation and inclusive growth.

4. DISCUSSIONS

It sounds like a comprehensive review of the literature on the impact of trade liberalization on poverty in the ASEAN region has been conducted, focusing specifically on CGE and micro-simulation models. By synthesizing the findings from over 40 articles, the study categorized the impact of trade liberalization into three broad outcomes: positive, negative, and mixed effects on poverty. This structured approach allows for a clearer understanding of the diverse impacts that trade liberalization can have on poverty across different contexts within the ASEAN region. By systematically analyzing the findings from various studies, patterns, trends, and factors that contribute to the observed outcomes can be identified. This summary will be invaluable for policymakers, researchers, and practitioners interested in understanding the nuanced relationship between trade liberalization and poverty alleviation in the ASEAN context. It provides a comprehensive overview of the existing literature, highlighting key findings and areas for further research and policy intervention. In the reviewed literature comprising more than 40 articles, approximately 13 studies affirm that trade liberalization has positive impacts on poverty. These investigations predominantly center on ASEAN countries and ASEAN Free Trade Agreements (FTAs). The simulations primarily examine tariff reductions and the removal of non-tariff barriers, although some studies also consider the impact of investment and productivity resulting from trade liberalization. Conversely, among the findings, approximately 5 articles contend that trade liberalization exerts a negative impact on poverty. These studies typically analyze Free Trade Agreements (FTAs), with simulations focusing solely on tariff reduction. Moreover, we identified 18 articles suggesting that trade liberalization has both positive and negative impacts on poverty (refer to Table 4-3). Most studies employed the CGE model, although we found 4 articles utilizing both the CGE model and micro-simulation model. The types of trade liberalization varied, encompassing Free Trade Agreements (FTA), ASEAN integration, ASEAN+3, and WTO accession. The model's shocks were also multidimensional, reflecting various aspects of trade liberalization such as tariff reduction, removal of non-tariff barriers, investment, productivity, and trade facilitation.

Indeed, in this model where households are divided into various groups, the impact of trade liberalization can vary significantly among different household groups. While some groups may experience positive impacts from trade liberalization, others may face negative consequences. As mentioned earlier, the nature of this impact hinges greatly on the type of trade liberalization undertaken. Specifically, trade liberalization initiatives that promote investment, enhance productivity, and facilitate trade tend to have positive effects. However, the ultimate outcome is also influenced by the specific characteristics of the economy and households involved in the analysis. These factors collectively shape the overall impact of trade liberalization on poverty and household welfare. The impact of trade liberalization on poverty is indeed mixed and contingent upon various factors. Key determinants include the type of trade liberalization measures implemented, such as tariff reductions, removal of non-tariff barriers, or participation in free trade agreements. Additionally, indirect effects stemming from trade liberalization, such as improvements in productivity, increased domestic and foreign direct investment, and enhanced trade facilitation, also play crucial roles. Furthermore, the characteristics of household expenditure, income, and production patterns further shape the overall impact on poverty levels. Thus, a comprehensive understanding of these multifaceted dynamics is essential for assessing the true implications of trade liberalization on poverty alleviation efforts.

4. CONCLUSIONS

In the past two decades, the examination of the impact of trade liberalization on poverty has emerged as a focal point for both researchers and policymakers. A variety of methods have been employed to analyze this impact, but one of the most comprehensive and widely utilized approaches is the Computable General Equilibrium (CGE) model. The CGE model offers a powerful framework for assessing the intricate interactions between trade policy changes and poverty outcomes within an economy. By integrating economic theory with empirical data, CGE models enable researchers and policymakers to simulate the effects of trade liberalization on various macroeconomic and microeconomic variables, including household incomes, employment levels, and welfare indicators. One of the key strengths of the CGE model lies in its ability to capture the complex linkages between different sectors of the economy and to account for both direct and indirect effects of trade policy reforms. For instance, the model can analyze how changes in trade barriers impact production patterns, factor markets, and consumer behavior, thereby influencing overall economic growth and income distribution. Moreover, the CGE model allows for the examination of differential impacts across different segments of the population, such as urban versus rural households or skilled versus unskilled workers.

This disaggregated analysis helps to identify potential winners and losers from trade liberalization and to design targeted policy interventions to mitigate adverse effects on vulnerable groups. By simulating various policy scenarios and comparing their outcomes, researchers and policymakers can gain valuable insights into the potential trade-offs and synergies between trade policy objectives and poverty alleviation goals. This evidence-based approach enables informed decision-making and facilitates the design of trade policies that promote inclusive and sustainable development. In the realm of CGE modeling, various types of models exist, each tailored to specific objectives of analysis and the characteristics of the countries under examination. Among these, the Global Trade Analysis Project (GTAP) model stands out as a popular choice due to its ability to capture the intricate linkages between multiple countries and sectors, as well as its user-friendly interface.

The results of CGE modeling studies on the impacts of trade liberalization on poverty have shown mixed outcomes. Depending on factors such as the nature of the trade liberalization measures undertaken—whether it's ASEAN integration, WTO accession, bilateral trade agreements, or others—the effects on poverty can vary significantly. Moreover, the characteristics of individual countries and their households play a crucial role in determining the impact of trade liberalization on poverty outcomes. Factors such as household income levels, sectoral employment patterns, and access to social safety nets can all influence how changes in trade policy affect the welfare of different segments of the population. Additionally, the transmission of price changes and adjustments in factor markets further shape the poverty impacts of trade liberalization. Changes in international prices can affect the cost of living and the profitability of certain industries, thereby influencing household welfare. Similarly, shifts in factor markets, such as labor and capital mobility, can alter income distribution patterns within an economy. Government policies, including taxation and spending decisions, also play a significant role in shaping the poverty impacts of trade liberalization. Effective fiscal policies can help mitigate adverse effects on vulnerable populations and promote inclusive growth. Furthermore, the presence of shocks, risks, and vulnerabilities—such as natural disasters, economic downturns, or sudden changes in global market conditions—can exacerbate or mitigate the poverty impacts of trade liberalization.

Lastly, considerations related to economic growth and technological change, as well as short-term adjustment processes, must be taken into account when assessing the poverty implications of trade liberalization. While trade liberalization may foster economic growth and technological advancement in the long run, short-term adjustment costs and disruptions can pose challenges for vulnerable households. While there exists a substantial body of literature examining the impact of trade liberalization on poverty in Asian countries using CGE models, there remains a notable gap in research focused specifically on the impact of the ASEAN-Korea Free Trade Agreement (AKFTA) on poverty in Laos. Despite the significance of trade agreements such as the AKFTA in shaping economic dynamics and welfare outcomes in the region, the specific implications for poverty alleviation in Laos have received limited attention in the literature. Given Laos' status as a member of ASEAN and its participation in regional trade agreements, understanding the poverty implications of such agreements is crucial for informing policy decisions and fostering inclusive growth strategies. Moreover, as Laos undergoes economic transformation and integration into global value chains, the effects of trade

liberalization on poverty may vary across different sectors and segments of the population. Therefore, conducting targeted studies that assess the poverty impacts of the AKFTA in the Laotian context can provide valuable insights for policymakers seeking to maximize the benefits of trade while addressing the needs of vulnerable groups. By filling this research gap, scholars can contribute to a more comprehensive understanding of the poverty dynamics associated with trade liberalization in Laos and inform evidence-based policy interventions aimed at promoting sustainable and inclusive development in the country.

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