Исследование механизмов влияния международной торговли на экономический рост

Лу Ли
аспирант, Бакинский государственный университет, wzz6599@gmail.com

Международная торговля является одним из ключевых факторов глобального экономического развития и играет важную роль в трансграничном распределении ресурсов. В условиях экономической глобализации движение товаров, капитала, технологий и знаний усиливает взаимосвязь между международной торговлей и экономическим ростом. В статье рассматриваются основные механизмы влияния международной торговли на экономический рост, включая перераспределение ресурсов, расширение рынка, распространение технологий, усиление конкуренции, накопление капитала и участие в глобальных цепочках создания стоимости. Исследование показывает, что международная торговля способствует более эффективному распределению факторов производства, расширяет рыночные возможности предприятий и ускоряет технологический прогресс за счёт импорта оборудования, промежуточной продукции и международного обмена знаниями. Конкурентное давление стимулирует предприятия повышать производительность и совершенствовать методы управления. Прямые иностранные инвестиции и участие в глобальных цепочках стоимости также способствуют накоплению капитала и технологий. Вместе с тем положительный эффект торговой либерализации зависит от уровня человеческого капитала, структуры экономики, технологической восприимчивости и качества институтов. Поэтому дальнейшее развитие торговли должно быть ориентировано на структурную оптимизацию, инновации и повышение позиции экономики в глобальных цепочках создания стоимости.

Ключевые слова: Международная торговля; Экономический рост; Открытость торговли; Технический прогресс; Глобальные цепочки создания стоимости.

Introduction

International trade plays a significant role in economic development by facilitating the cross-border flow of goods, capital, technology and knowledge. As economic globalisation continues to deepen, the relationship between trade and economic growth is becoming increasingly complex. Trade can influence economic growth through various channels, including resource allocation, market expansion, technology diffusion, competition, capital accumulation and participation in global value chains.

This study examines the primary mechanisms through which international trade influences economic growth and analyses the conditions under which these effects are realised. Furthermore, this study pays particular attention to the potential risks arising from trade dependence and external economic shocks.

Materials and Methods

This study primarily employs methods of literature review, theoretical analysis and comparative analysis. By reviewing relevant theoretical and empirical research on international trade and economic growth, the study identifies the main transmission mechanisms between trade and economic growth. The analysis focuses on resource allocation, market size, technological progress, competition, capital accumulation and participation in global value chains, whilst also taking into account the influences of human capital, industrial structure and institutional conditions.

Literature Review

Traditional trade theory emphasises comparative advantage and factor endowments, arguing that trade can improve resource allocation and enhance production efficiency. New trade theories place further emphasis on economies of scale and market expansion, whilst endogenous growth theories focus on technological diffusion, knowledge spillovers and innovation. Recent research on firm heterogeneity, foreign direct investment and global value chains suggests that trade can also boost productivity by reallocating resources to more efficient firms, attracting capital and promoting industrial upgrading. However, the positive effects of trade depend to a large extent on domestic economic and institutional conditions.

Research Findings

Analyses indicate that international trade can promote economic growth through several key channels. It can improve resource allocation, expand market size, accelerate technology diffusion, enhance competitive pressures, promote capital accumulation and facilitate participation in global value chains. However, these positive effects are conditional. Human capital, technological absorption capacity, industrial structure and the quality of institutions significantly influence the effectiveness of trade liberalisation. Over-reliance on exports and external markets may also increase the economy's vulnerability to global shocks.

Discussion

The Theoretical Foundations of International Trade and Economic Growth

1.Comparative Advantage and the Division of Labour

One of the key foundations of international trade theory is the theory of comparative advantage. Adam Smith put forward the theory of absolute advantage, arguing that different countries should concentrate on producing goods in which they possess a higher level of production efficiency, and obtain goods in which other countries have an advantage through international exchange. Specialisation in production can reduce the waste of resources and increase overall labour productivity [5].

Ricardo further developed the theory of comparative advantage. Even if a country possessed an absolute advantage in the production of all goods, international trade could still generate benefits as long as there were relative differences in production costs between the products of different countries. By producing goods with lower opportunity costs, countries can achieve a more efficient allocation of production factors.

The theory of comparative advantage reveals the fundamental logic by which international trade promotes economic growth, namely that the international division of labour enables labour, capital and other productive resources to be redirected from less efficient to more efficient uses. However, this theory assumes that production technologies and factor conditions remain relatively stable, and is therefore better suited to explaining the static efficiency gains brought about by trade. With regard to long-term economic growth, it is also necessary to examine whether trade can alter technological levels, the rate of capital accumulation and industrial structure [6].

2.Factor Endowment Theory

The Heckscher–Ohlin theory posits that differences exist between countries in terms of production factors such as capital, labour and natural resources; consequently, countries will export goods that are intensive in their relatively abundant factors and import goods that are intensive in their relatively scarce factors.

For labour-abundant developing countries, labour-intensive industries are often the initial sectors through which they participate in the international division

of labour; whereas countries with greater capital and technology are better placed to develop capital-intensive and technology-intensive industries. Through this division of labour, countries can make fuller use of their existing resource advantages.

A country's factor endowments are not fixed. Capital accumulation, improvements in human capital and technological progress all alter existing comparative advantages. Therefore, from the perspective of long-term growth, a country cannot rely solely on its initial resource endowments but must achieve capital and technological accumulation through trade, gradually forming new comparative advantages [7].

3.Economies of Scale and New Trade Theory

Traditional trade theory primarily emphasises differences in resources and productivity between countries; however, in reality, a significant volume of international trade occurs between countries with similar levels of economic development and factor structures. New trade theory provides a new explanation for this phenomenon by introducing economies of scale, product differentiation and imperfect competition.

Once firms enter international markets, they can overcome the constraints imposed by the scale of domestic demand. As output increases, fixed costs—such as those for research and development, equipment and management—can be spread across a larger volume of products, thereby reducing average costs. The expansion of international markets also increases the expected returns on firms' research and development and product innovation, thereby encouraging long-term investment.

Consequently, the benefits derived from international trade stem not only from improved resource allocation but also from the expansion of market size and the realisation of economies of scale. This theory extends the link between trade and economic growth beyond static production efficiency to encompass firms' investment and innovation behaviour.

4.Endogenous Growth Theory and the Dynamic Effects of Trade

Endogenous growth theory emphasises that knowledge, technological innovation and human capital are key sources of long-term economic growth. Within this theoretical framework, international trade can influence long-term growth by facilitating the dissemination of knowledge and the diffusion of technology.

By importing advanced machinery, equipment and intermediate inputs from abroad, firms can directly utilise more advanced production technologies. Furthermore, through collaboration with foreign firms and clients, they gain exposure to new technical standards, management expertise and market information [8]. At the same time, the expansion of international markets can increase the potential returns on R&D investment, thereby stimulating technological innovation.

Consequently, the role of trade in economic growth extends beyond the reallocation of resources, as posited in traditional theories, to encompass technological progress and productivity growth. Only when trade can sustainably influence technological accumulation and innovation capacity can the benefits of trade be transformed from a one-off increase in output levels into a long-term driver of growth.

Mechanisms through which international trade influences economic growth

1. Resource allocation and specialisation mechanisms

The reallocation of resources is the most direct channel through which international trade influences economic growth. In a closed economy, a country must rely on domestic resources to produce a wide variety of goods, some of which may not offer a cost advantage. Following trade liberalisation, countries can reduce the production of relatively inefficient goods whilst expanding industries in which they possess a comparative advantage.

As the structure of trade changes, capital and labour gradually flow towards sectors with higher production efficiency, thereby increasing overall economic output. In addition to the reallocation of resources across industries, trade liberalisation also alters the distribution of resources amongst firms within the same industry. Firms with higher productivity and stronger market competitiveness are better placed to expand their exports and scale of production, whilst less efficient firms may scale back production or even exit the market.

Consequently, the productivity gains from international trade are reflected not only in specialisation across different industries but also in the concentration of production resources within highly efficient firms. This improvement in allocative efficiency forms a crucial foundation for trade-led economic growth [9].

2.Market Expansion and the Mechanism of Economies of Scale

The limited size of domestic markets constrains firms' ability to expand production, whereas international trade can overcome this limitation. Once enterprises enter foreign markets, the number of potential consumers increases, allowing production scale to expand accordingly. As output rises, fixed costs—such as those for premises, research and development, equipment and management—can be spread across a larger volume of products, thereby reducing the enterprise's average production costs. This effect of economies of scale is particularly pronounced in manufacturing and technology-intensive sectors.

Market expansion also influences enterprises' investment decisions. If an enterprise serves only a small domestic market, it may lack the economic incentive to undertake large-scale research and development or technological upgrades. Once products gain access to international markets, the potential market for innovative outputs expands, and the expected returns on investment in R&D and equipment consequently rise. Therefore, international trade not only increases sales volumes of existing products but may also promote capital investment and technological innovation by altering firms' expected returns, thereby generating more sustainable growth effects.

3.Technological Progress and Mechanisms of Technology Diffusion

Technological progress is a vital source of long-term economic growth, and international trade provides a key channel for the cross-border flow of technology.

Firstly, by importing advanced machinery and production equipment, domestic enterprises can directly apply mature foreign technologies. For developing countries with relatively low levels of technological development, importing capital goods often leads to a more rapid improvement in production efficiency than relying entirely on in-house R&D.

Secondly, importing high-quality intermediate goods helps to improve the quality of domestic enterprises' final products and their production efficiency. As the global division of labour becomes increasingly specialised, enterprises need not produce all components themselves but can instead source more suitable intermediate inputs through the international market.

Thirdly, technology diffusion may also occur through international business cooperation. By establishing links with foreign suppliers, customers and multinational corporations, enterprises can learn about international technical standards, production organisation methods, quality control systems and market management experience.

Exporting itself may also generate learning effects. International markets typically have stricter quality and technical requirements; to maintain market competitiveness, exporting enterprises must continuously improve their production processes and management standards. This process of 'learning through exporting' helps to drive the accumulation of enterprise capabilities.

It should be noted that technology input is not synonymous with technology absorption. Whether foreign equipment and technology can ultimately translate into domestic productivity growth also depends on enterprises' human capital reserves and R&D capabilities. Consequently, the technology spillovers generated by trade are clearly conditional [10].

4.Market Competition and the Mechanism of Enterprise Productivity

Trade liberalisation intensifies competition in the domestic market. Enterprises that have long been shielded by trade protection may lack the incentive to reduce costs and improve products in the absence of external competitive pressure. As imported products enter the domestic market, domestic firms must face fiercer competition in terms of price, quality and technology.

To maintain market share, firms need to optimise management, reduce production costs and improve product quality. At the same time, the competitive mechanism will lead to the exit of some low-productivity firms from the market, prompting a gradual reallocation of labour and capital towards more efficient firms.

From a macroeconomic perspective, even if the technological level of individual firms does not improve significantly, the redistribution of market share amongst firms can raise average sectoral productivity.

On the other hand, if competition is too intense or the technological gap is too wide, some domestic enterprises that have not yet become competitive may suffer. Consequently, the productivity gains brought about by trade competition are usually accompanied by short-term industrial adjustment costs.

5.Capital Accumulation and the Mechanism of Foreign Direct Investment

International trade can also influence economic growth through capital formation. Growth in exports increases corporate revenue, helping firms to expand production and invest in equipment. For developing countries with relatively scarce foreign exchange, export earnings can also provide the foreign exchange needed to purchase capital goods and technology from abroad.

There is also a strong link between international trade and foreign direct investment. Multinational enterprises often tend to invest in countries with relatively open trading environments and favourable transport and supply chain conditions, in order to utilise local factors of production and gain access to broader markets [11, P. 35–47].

Foreign direct investment not only increases the stock of capital but may also bring with it technology, managerial expertise and international sales channels. Domestic enterprises can further acquire production experience and technical knowledge in the process of becoming suppliers or partners to multinational enterprises.

However, whether foreign investment can genuinely promote the enhancement of domestic economic capabilities is closely linked to the degree of integration between foreign-invested enterprises and local industries. If foreign-invested enterprises import large quantities of intermediate inputs and carry out only simple processing locally, their role in driving domestic technological and industrial development may be relatively limited.

6.Global Value Chains and the Mechanism of Industrial Upgrading

As the global division of labour continues to deepen, product research and development, component manufacturing, assembly, marketing and sales are often spread across multiple countries. Global value chains enable developing countries to bypass the need to establish a complete industrial system during the early stages of industrialisation, allowing them instead to enter specific production stages at an early stage.

By participating in multinational supply chains, enterprises can secure international orders and gradually gain exposure to foreign technical standards and production management systems. This form of participation lowers the barriers to

entry into international markets and helps to foster the accumulation of industrial capabilities [12].

However, there are significant disparities in returns across different stages within global value chains. Research and development, core technologies, branding and sales typically command higher value added, whilst profit margins for simple assembly and processing stages are relatively low. If a country remains stuck in low-value-added production stages for an extended period, its domestic value creation capacity may not necessarily improve in tandem, even as the scale of its exports continues to expand.

Consequently, the long-term significance of participation in global value chains for economic growth lies in the ability to achieve industrial upgrading. As enterprises' technological capabilities improve, they should gradually move beyond simple production stages to areas such as the manufacture of core components, technological research and development, product design and brand building, thereby increasing the domestic value added within exports.

Conditions and Risks Associated with the Growth Effects of International Trade

International trade has the potential to promote growth, but this effect is not fully realised under all circumstances.

Firstly, human capital and the capacity to absorb technology influence the technology diffusion effects of trade. Only when domestic enterprises possess the appropriate knowledge base and learning capacity can imported technology be transformed into indigenous production capacity. If educational standards and research and development capabilities are weak, the technological benefits derived from trade may be limited to the use of advanced equipment.

Secondly, the industrial structure and the degree of completeness of the industrial system also exert a significant influence. If the export sector has weak links with other domestic industries and relies heavily on imports for raw materials and intermediate goods, the domestic value added generated by export growth may be limited. Conversely, if a relatively well-developed industrial chain has already been established domestically, export expansion can drive the development of more industries through demand from upstream and downstream sectors.

The institutional environment also influences the growth effects of trade. Stable trade policies, robust protection of property rights and high contract enforcement efficiency can reduce the uncertainty faced by enterprises in cross-border operations. Meanwhile, the level of development of financial markets determines whether enterprises have the capacity to bear the costs required to enter export markets, undertake technological upgrades and invest in equipment.

In addition to the above conditions, international trade may also entail certain risks.

Firstly, there is the risk of dependence on external demand. If economic growth relies excessively on exports, a decline in exports may rapidly spill over into domestic production, investment and employment when the global economy enters a recession, demand from major trading partners falls, or trade frictions intensify.

Secondly, there is the risk of industrial restructuring. Trade liberalisation provides more room for development for highly efficient industries and enterprises, whilst simultaneously potentially leading to the exit from the market of some less competitive enterprises. Although such restructuring is beneficial for improving overall efficiency in the long term, it may trigger structural unemployment and put pressure on regional development in the short term.

Thirdly, there is the risk of being locked into the lower end of global value chains. If developing countries rely for a prolonged period on low wages and simple processing to build export advantages, without using trade proceeds to increase investment in education, research and development, and technology, their existing comparative advantages may gradually become obstacles to industrial upgrading.

Fourthly, there is the risk of changes in the external environment. In recent years, uncertainty in the international trade environment has deepened due to factors such as trade protectionism, geopolitics, supply chain security and technological restrictions. Economies that are highly dependent on a single market or a small number of key import sources are more vulnerable to external shocks.

Therefore, when assessing the impact of trade on economic growth, one must not focus solely on the degree of trade liberalisation and the scale of imports and exports; it is also necessary to examine trade structure, domestic value added, technological levels and the capacity to withstand external risks.

Result. There is a close link between international trade and economic growth, but the relationship between the two is not a simple linear causal one. Firstly, international trade can improve the allocation of resources through comparative advantage and the division of labour, enabling factors of production to flow towards more efficient sectors and enterprises. Secondly, the expansion of international markets provides the conditions for enterprises to realise economies of scale and can increase the expected returns on research and development and fixed investment. At the same time, imports of equipment and intermediate goods, as well as international business cooperation, create channels for technology diffusion, whilst competition in export markets also promotes learning and efficiency gains among enterprises. Trade liberalisation can also reallocate resources among enterprises through competitive mechanisms and interact with foreign direct investment and participation in global value chains, thereby promoting capital accumulation and enhancing industrial capacity.

However, the extent to which trade promotes economic growth depends on a country's specific conditions. Human capital, the capacity to absorb technology, financial development, the industrial base and the institutional environment all influence whether the benefits of trade can be translated into productivity growth. If an economy relies for a prolonged period on low-value-added exports or a single external market, an expansion in the scale of trade may also be accompanied by lock-in at the lower end of the value chain and external economic risks.

Overall, international trade can provide markets, capital and technological opportunities for economic growth, but trade liberalisation in itself is not a sufficient condition for long-term economic growth. Only by integrating foreign trade with technological innovation, industrial upgrading, human capital accumulation and the development of domestic markets can the advantages in resource allocation generated by trade be further transformed into sustained productivity growth, thereby enhancing the stability and sustainability of economic development.

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A study on the mechanisms through which international trade influences economic growth

Lu Li

Baku State University

International trade is a major driver of global economic development and plays an important role in the cross-border allocation of resources. In the context of economic globalisation, the movement of goods, capital, technology and knowledge has strengthened the relationship between trade and economic growth. This paper examines the mechanisms through which international trade affects economic growth, focusing on resource allocation, market expansion, technology diffusion, market competition, capital accumulation and participation in global value chains. The study argues that international trade can improve the efficiency of factor allocation, expand market opportunities, promote technological progress through imported equipment and intermediate goods, and encourage firms to improve productivity under competitive pressure. In addition, foreign direct investment and participation in global value chains can accelerate the accumulation of capital, technology and managerial knowledge. However, the growth effects of trade liberalisation depend on conditions such as human capital, industrial structure, technological absorption capacity and institutional quality. Trade openness may also increase exposure to external shocks and export dependence. Therefore, future trade development should place greater emphasis on structural optimisation, innovation and upgrading within global value chains.

Keywords: International trade, Economic growth, Trade liberalization, Technological progress, Global value chains.

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