



The Impact of Investment, Inflation, and Exchange Rates on Rubber Exports in Indonesia

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Abstract. This study analyses the relationship between inflation, investment, and exchange rates on Indonesia's rubber exports. The research adopts a quantitative approach, utilising secondary data from 2015 to 2023. The findings reveal a positive correlation between inflation and rubber exports, where rising domestic prices for goods and services lead to the depreciation of the national currency. This depreciation makes rubber exports more competitive in international markets, attracting foreign buyers. Additionally, foreign investment positively impacts rubber exports, with increased investment contributing to improvements in infrastructure, production capacity, and access to the latest technology. Research and development also play a crucial role in fostering product innovation, leading to a broader range of value-added rubber products that expand export opportunities. On the other hand, the study found that the depreciation of the Indonesian rupiah harms exports, implying that when the rupiah depreciates, the volume of exports tends to increase. This is attributed to the lower rubber prices in foreign currencies, enhancing the appeal of Indonesian rubber products in global markets. The study indicates that these economic factors are interrelated and significantly impact Indonesia's rubber export volumes.

Keywords: Exports, Inflation, Investment, Exchange Rate

1 Introduction

As one of the largest rubber producers in the world, Indonesia plays a crucial role in the global rubber export market. Rubber exports are one of the primary commodities that significantly contribute to the country's economic growth. Over the past few years, Indonesia has optimised its rubber exports, albeit in limited quantities. One of the primary reasons for this limitation is the inability to create added value. So far, Indonesia has relied heavily on the export of raw rubber, which has a lower market value compared to processed rubber products. Ideally, Indonesia should focus on developing its rubber processing industry to produce higher value-added products that can compete in the global market.

The Indonesian rubber industry faces several complex challenges, such as fluctuating global demand, which impacts exporters' revenues. Other issues, such as the large investment required to increase production capacity and processing technology, also contribute to the decline in rubber exports. Rising production costs

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(inflation) reduce profit margins, and fluctuations in exchange rates affect the competitiveness of this commodity [1]. Moreover, the lack of innovation and product diversification in rubber products is another factor that hinders the potential of this industry [2,3]. Many competing countries have successfully developed high-quality processed rubber products, such as tyres, medical gloves, and industrial components [4–7]. Therefore, Indonesia needs to follow similar steps by enhancing research and development to create new products that are in high demand in international markets. Government support in the form of incentives and policies favouring the rubber processing industry is essential for maximising the potential of natural resources and reducing reliance on raw rubber exports [8–10].

The plantation industry also plays a critical role in Indonesia's economy, especially in increasing state revenue through the export of key commodities. With abundant natural resources, particularly in the agriculture and plantation sectors, the availability of fertile land and a favourable climate allows for the production of various top commodities, making it one of the strategic sectors in the national economy. However, this potential has not been fully optimised. Challenges such as inadequate infrastructure, outdated processing technology, and reliance on raw material exports remain significant barriers. Collaborative efforts between the government, the private sector, and society are needed to strengthen this industry by increasing investment, research and development, and product diversification to enhance competitiveness in the global market. These challenges have led to a decline in Indonesia's export volumes to its destination markets.

Indonesia's rubber exports to several countries saw a significant decline between 2019 and 2023. In 2023, exports dropped to 1,713 tons, a decrease of 13.83% compared to 2022, when exports reached 1,988 tons. This trend has been consistent since 2018, coinciding with disruptions in the global economy. During this period, global demand for export commodities also weakened as global purchasing power contracted. As a result, demand for Indonesian rubber exports has yet to recover, even today.

In addition to the factors mentioned above, other variables contributing to the decline in Indonesia's rubber exports include investment, inflation, and exchange rates. The high tariffs imposed by the United States on Chinese rubber exports from Southeast Asia have also contributed to the decline in rubber exports from Southeast Asian countries, including Indonesia [11–14]. This tariff penalty has also affected countries such as Malaysia [15,16] and Thailand, one of the world's largest rubber exporters. [17,18]

Investment plays a crucial role in driving rubber exports, particularly by increasing production capacity and the quality of products. Investment from both the government and the private sector enables the rubber industry to utilise more advanced processing technology and improve production efficiency. This allows rubber producers to create value-added products that can compete in global markets [16,19]. Furthermore, investment helps open new markets, strengthen distribution networks, and improve internationally recognised quality standards, ultimately boosting rubber export volumes [20].

Additionally, inflation has a significant impact on rubber exports, especially in terms of production costs and competitiveness in international markets. When inflation rises, domestic costs for raw materials, labour, and transportation also

increase, ultimately reducing the profit margins of rubber producers [21]. This makes Indonesian rubber less competitive compared to other rubber-producing countries with lower inflation rates. High inflation also often triggers exchange rate fluctuations, which can further erode the competitiveness of rubber products in the global market. As a result, demand for rubber exports may decrease, and the rubber industry faces greater challenges in maintaining export volumes [22–24].

Lastly, exchange rate fluctuations have a direct impact on rubber exports because they affect the price competitiveness of rubber in international markets. When the domestic currency depreciates against foreign currencies, the price of rubber in foreign currencies becomes more competitive, which can increase export demand [25,26]. However, currency depreciation can also raise the cost of importing raw materials or equipment needed by the rubber industry, which ultimately increases production costs [27–30]. Conversely, if the domestic currency appreciates, the price of rubber in international markets becomes more expensive, reducing demand and negatively impacting export volumes. Therefore, exchange rate stability is crucial to maintaining a balance between the price competitiveness of rubber in global markets and the production costs borne by producers.

2 Literatur Review

Indonesia is one of the largest rubber producers in the world, playing a vital role in the global rubber export market. However, its rubber export industry faces various challenges, including investment constraints, inflationary pressures, and exchange rate fluctuations. The relationship between these economic variables and rubber exports has been the subject of extensive research. This literature review examines existing studies on investment, inflation, and exchange rates and their impact on Indonesia's rubber exports.

Investment is a crucial determinant of rubber export performance, as it influences production capacity, technological advancements, and product quality. Studies have shown that foreign direct investment (FDI) plays a significant role in boosting the competitiveness of Indonesia's rubber industry by enabling the adoption of modern processing technologies. Increased investment leads to improved infrastructure, better access to global markets, and enhanced production efficiency (OECD, 2020). Furthermore, government incentives and private sector investment in research and development (R&D) contribute to product innovation, allowing Indonesian rubber manufacturers to produce high-value rubber products such as tires, medical gloves, and industrial components (World Bank, 2021).

Inflation affects the cost structure of the rubber industry, influencing production expenses and export competitiveness. Rising inflation increases the cost of raw materials, labor, and logistics, thereby reducing profit margins for rubber exporters (Hidayat, 2021). Higher production costs make Indonesian rubber less competitive compared to rubber-exporting countries with stable inflation rates (Santoso, 2022). On the other hand, inflation-induced currency depreciation can enhance the competitiveness of rubber exports by lowering the price of Indonesian rubber in foreign currencies, making it more attractive to international buyers

(Setiawan, 2019). However, prolonged inflationary pressure may also create economic instability, discouraging investment in the rubber sector (OECD, 2020).

Exchange rate fluctuations play a pivotal role in determining the competitiveness of rubber exports. Studies indicate that currency depreciation can boost exports by making Indonesian rubber more affordable for international buyers (World Bank, 2020). However, excessive depreciation also raises the cost of imported raw materials and machinery, which may offset the benefits of a weaker currency (Santoso, 2022). Conversely, currency appreciation reduces export competitiveness by making rubber products more expensive in global markets, leading to a decline in export demand. Given these dynamics, exchange rate stability is essential to maintaining an optimal balance between production costs and export competitiveness (Setiawan, 2019).

Despite being a leading rubber producer, Indonesia faces significant challenges in optimising its rubber exports. The country has historically relied on raw rubber exports, which have lower market value compared to processed rubber products (OECD, 2020). Many competing nations, such as Malaysia and Thailand, have successfully developed high-quality processed rubber products, enhancing their competitiveness in the global market (World Bank, 2021). Indonesia must follow suit by increasing investment in processing technology and R&D to create high-value-added rubber products. Government support plays a crucial role in fostering the growth of the rubber industry. Policies that encourage investment, stabilize inflation, and maintain exchange rate stability can significantly improve Indonesia's rubber export performance (Hidayat, 2021). Additionally, strengthening trade agreements and exploring new markets can help mitigate the impact of fluctuating global demand (Setiawan, 2019).

3 Methodology

This study employs a quantitative research approach, utilising secondary data. The data analysis method used is multiple linear regression, a statistical technique that is useful when dealing with more than one independent variable. The following formula was applied to test the general hypothesis of this study:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e \quad (1)$$

Subsequently, the model was transformed into a logarithmic equation, resulting in the following equation:

$$\log Y = \log(\alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e) \quad (2)$$

Where:

Y = Value of Rubber Exports

α = Constant

- β = Regression Coefficients
 X_1 = Investment Value
 X_2 = Inflation Rate
 X_3 = Exchange Rate
 e = Error term (tolerance for error)
 Log = Semi-logarithmic transformation

4 Results

Sample Heading (Forth Level). The contribution should contain no more than four levels of headings. Table 1 below gives a summary of all heading levels.

Table 1. Results of the Coefficient of Determination Test (R^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.927a	.859	.788	.06298	1.946

Source: SPSS 22 output, secondary data processed, 2024

Based on the table above, the R^2 value is 0.859, indicating that inflation, as an independent variable in this study, along with investment and exchange rate values, has an 85.9% influence on the dependent variable, which is the value of rubber exports. Meanwhile, the remaining 14.1% is influenced by other factors that are not relevant to this study. After performing calculations and simultaneous and partial testing, the regression coefficients for each variable were obtained as follows:

$$Y = 3,099 + 0,127 X_1 + 2,301 X_2 - 2,940 X_3$$

From this equation, it can be concluded that the constant value of 3.099 indicates that if inflation, investment, and exchange rates remain unchanged or equal to zero (0), the value or effectiveness of rubber exports will still be at that level.

In this study, the regression coefficient for the inflation variable is 0.127, meaning that for every one-unit increase in inflation, the effectiveness of rubber exports will increase by 0.127. The regression coefficient for investment is 2.301, meaning that for every one-unit increase in investment, the value of rubber exports will increase by 2.301. The exchange rate variable has a regression coefficient of -2.940, indicating a negative relationship in this study. This suggests that for every one-unit increase in the exchange rate, the effectiveness of rubber exports will decrease by 2.940.

The Impact of Inflation on Rubber Export Value in Indonesia

The data analysis shows that inflation has a positive correlation with Indonesia's rubber exports. This finding differs from several previous studies, which demonstrated a negative correlation, such as the research by [31,32]. However, it aligns with earlier studies [33] on Indonesia's non-oil exports and [34] in the case of Nigeria.

Inflation can have a positive impact on rubber exports because the increase in domestic prices for goods and services often leads to a weakening of the currency (depreciation). When the domestic currency depreciates, the price of exported rubber becomes more competitive in international markets. This attracts foreign buyers, as they can purchase rubber at a lower price compared to similar products from other countries [1,35,36]. Additionally, moderate inflation can increase the income of rubber farmers, which, in turn, encourages them to increase production. With the rise in export volume and competitive pricing, the rubber sector can benefit from the existing inflationary conditions.

However, it is important to note that the effect of inflation on rubber exports also depends on the magnitude of inflation. If inflation becomes too high, it can lead to economic instability and increase production costs, which could negatively affect the rubber sector [37,38]. Moreover, prolonged inflation can create uncertainty in the market, which may reduce investment interest and innovation in the rubber industry. Therefore, while inflation may offer short-term benefits in terms of price competitiveness, sustaining export growth requires careful economic management to keep inflation within reasonable limits, thus supporting long-term growth without negative repercussions.

In this context, the government and stakeholders must implement appropriate policies to manage inflation. Efforts such as price stabilisation, controlling production costs, and improving productivity can help maintain a balance between export growth and economic stability. Additionally, diversifying export markets and advancing technology in rubber production can be crucial strategies for enhancing the competitiveness and resilience of the sector against economic fluctuations. With a well-planned approach, the rubber sector can not only capitalise on inflationary periods but also build a strong foundation for sustainable growth in the future.

The Impact of Foreign Direct Investment on Rubber Export Value

Investment has a positive relationship with rubber exports in Indonesia, meaning that an increase in foreign investment will be followed by a rise in rubber exports. Increased foreign investment often leads to the development of better infrastructure, such as roads, ports, and storage facilities. Improved infrastructure facilitates the transportation and distribution of rubber to international markets, thereby increasing export volumes [39,40]. Moreover, investment enhances production capacity and technology in the rubber industry [16,41]. Companies receiving investments generally have access to modern technologies and best practices, which can improve the efficiency and the quality of rubber products. Higher-quality rubber is more attractive to international buyers.

Additionally, investment brings growth in research and development (R&D) efforts focused on product innovation [42,43]. This can lead to the creation of more diverse and value-added rubber products, expanding export opportunities to a broader market. Furthermore, foreign investment can boost market confidence in the stability and potential of Indonesia's rubber industry. When foreign investors perceive growth potential, they are more likely to invest, which, in turn, drives export growth. Overall, these factors demonstrate that increased foreign investment directly contributes to the rise of rubber exports.

Moreover, the growth of foreign investment can create new jobs within the rubber sector, contributing to higher incomes for local communities. With increased income, rubber farmers and local workers have more resources to improve the quality and quantity of their production. In addition, collaboration between foreign investors and local producers can facilitate the transfer of knowledge and technology, thereby enhancing the competitiveness of Indonesian rubber products in the global market. All of these factors work together to create a favourable ecosystem for rubber export growth, promoting long-term sustainability for the industry.

The Impact of Exchange Rates on Rubber Export Value in Indonesia

In theory, export performance is largely determined by the stability of exchange rates. When the exchange rate rises, it tends to cause a decline in a country's exports, as domestic goods become more expensive compared to foreign goods. Conversely, when the exchange rate weakens, it leads to a decrease in the price of domestic goods in foreign markets, making them cheaper. The findings of this study reveal that the probability value of the exchange rate is 0.010, indicating a significant impact on Indonesia's rubber export value.

The results of this research are consistent with the findings of [44] those who concluded that exchange rates have a significant negative effect on exports in Indonesia, Malaysia, and Singapore. Similarly, [45] found similar effects were found in China, Indonesia, Malaysia, Thailand, and Singapore. When the rupiah depreciates, the volume of exports [46–48] increases. This means that products priced in rupiah become cheaper for foreign buyers. For example, if the price of rubber in Indonesia remains the same but the rupiah depreciates, the price of rubber in foreign currencies becomes lower. This makes Indonesian rubber more attractive in international markets, as foreign buyers can obtain the product at a more competitive price.

Rupiah depreciation can also encourage producers to increase their export volumes due to rising demand from abroad. With lower export costs from a foreign currency perspective, companies are likely to maximise production to meet the increased demand. Additionally, depreciation strengthens the competitiveness of domestic products compared to those from other countries, driving more international trade transactions. Ultimately, increased exports contribute to Indonesia's economic growth as more foreign currency flows into the economy. In other words, rupiah depreciation creates opportunities for producers to expand their markets, thereby boosting the overall volume of exports.

Conclusion

The inflation variable has a positive correlation with Indonesia's rubber exports. Inflation can have a positive impact on rubber exports because rising domestic prices for goods and services often lead to the depreciation of the national currency. When the domestic currency weakens, the price of exported rubber becomes more competitive in international markets. This attracts foreign buyers, as they can obtain rubber at a lower price compared to similar products from other countries.

Additionally, investment has a positive relationship with rubber exports in Indonesia, meaning that an increase in foreign investment will be followed by a rise in rubber exports. Increased foreign investment leads to improvements in infrastructure, such as roads, ports, and storage facilities. Better infrastructure facilitates the transportation and distribution of rubber to international markets, thus increasing

export volumes. Moreover, investment has the potential to enhance production capacity and technology within the rubber industry. Companies receiving investments typically have access to modern technologies and best practices, which can improve the efficiency and the quality of rubber products. Furthermore, increased research and development contributes positively to product innovation, creating more diverse and value-added rubber products thereby expanding export opportunities to broader markets.

The findings of this study also reveal that the exchange rate variable negatively affects exports in Indonesia. In other words, when the rupiah depreciates, the volume of exports increases. This is because products priced in rupiah become cheaper for foreign buyers. If the price of rubber in Indonesia remains the same while the rupiah depreciates, the price of rubber in foreign currencies decreases. This makes Indonesian rubber more attractive in international markets, as foreign buyers can obtain products at more competitive prices. In addition, rupiah depreciation encourages producers to increase export volumes due to rising foreign demand. With lower export costs from a foreign currency perspective, companies tend to maximise production to meet the higher demand.

References

- [1] Tanielian AR. Sustainability and competitiveness in Thai rubber industries. *Copenhagen J Asian Stud* 2018;36.
- [2] Van Beilen JB, Poirier Y. Establishment of new crops for the production of natural rubber. *TRENDS Biotechnol* 2007;25:522–9.
- [3] Lysek M. Disguising diversification for innovation. *Int J Innov Sci* 2019;11:119–38.
- [4] Somboonsuke B, Wetayaprasit P, Chernchom P, Pacheerat K. Diversification of smallholding rubber agroforestry system (SRAS) Thailand. *Kasetsart J Soc Sci* 2011;32:327–39.
- [5] Doner R, Abonyi G. Upgrading Thailand's rubber industry: Opportunities and challenges. *Thammasat Econ J* 2013;31:44–66.
- [6] Conceição EV, Sanches A, Santos DFL. Valuation of an innovation strategy in the diversification of products in the agricultural auto parts sector. *Agric Financ Rev* 2019;79:519–36.
- [7] Jin S, Min S, Huang J, Waibel H. Falling price induced diversification strategies and rural inequality: Evidence of smallholder rubber farmers. *World Dev* 2021;146:105604.
- [8] Rudner M. Development policies and patterns of agrarian dominance in the Malaysian rubber export economy. *Mod Asian Stud* 1981;15:83–105.
- [9] Enters T, Durst P, Brown C. What does it take? The role of incentives in forest plantation development in the Asia-Pacific region. *Unasylyva* 2003;54:11–8.
- [10] Athukorala P. Trade policy reforms and the structure of protection in Vietnam. *World Econ* 2006;29:161–87.
- [11] Magee CSP, Magee SP. The United States is a small country in terms of world trade. *Rev Int Econ* 2008;16:990–1004.
- [12] Xiong B. The implications of US punitive tariffs on Chinese tires for rubber

- exports from Southeast Asia. *J Asia Pacific Econ* 2017;22:575–86.
- [13] Aslam M. US-China trade disputes and its impact on ASEAN. *Translate Corp Rev* 2019;11:332–45.
- [14] Handoyo RD, Ibrahim KH, Wahyuni T, Muhammad FR, Baraya A-AS. Trade margins of rubber exporters: The case of Indonesia. *PLoS One* 2023;18:e0292160.
- [15] Ratnasingam J, Ioras F, Wenming L. Sustainability of the rubberwood sector in Malaysia. *Not Bot Horti Agrobot Cluj-Napoca* 2011;39:305–11.
- [16] Ali MF, Akber MA, Smith C, Aziz AA. The dynamics of rubber production in Malaysia: Potential impacts, challenges, and proposed interventions. *For Policy Econ* 2021;127:102449.
- [17] Kaiyoorawong S, Yangdee B. Rights of rubber farmers in Thailand under free trade 2006.
- [18] Nidhiprabha B. Impacts of the US-China trade war on ASEAN: Case of Thailand. *Asian Econ Pap* 2019;18:166–88.
- [19] Barham BL, Coomes OT. Reinterpreting the Amazon rubber boom: investment, the state, and Dutch disease. *Lat Am Res Rev* 1994;29:73–109.
- [20] Ansonfino A, Zusmelia Z, Dahan LD, Puteri YE. Diamond model and competition of rubber export markets: Evidence from Sumatra economic growth center. *AGRIS On-Line Pap Econ Informatics* 2021;13:15–28.
- [21] Reinhardt N. Back to basics in Malaysia and Thailand: The role of resource-based exports in their export-led growth. *World Dev* 2000;28:57–77.
- [22] Nissanke M. Commodity markets and excess volatility: Sources and strategies to reduce adverse development impacts. Brussels, Common Fund Commod. (CFC), Conf. 'Promoting Benef. Glob. Financ. Commod. Mark. Synergy. 9th-10th December, 2011.
- [23] Khin AA, Wong HC, Yean UL, Ooi CK, Bin RLL. Examining between exchange rate volatility and natural rubber prices: engle-granger causality test. *Int J Econ Financ Issues* 2017;7:33.
- [24] Nakatani R. Adjustment to adverse price shocks by a commodity-exporting economy: Does exchange rate flexibility resolve a balance of payments crisis? *J Asian Econ* 2018;57:13–35.
- [25] Keyfitz R. Currencies and commodities: modeling the impact of exchange rates on commodity prices in the world market. Washington DC, World Bank, *Dev Prospect Gr* 2004.
- [26] Gopinath G. The international price system. National Bureau of Economic Research; 2015.
- [27] Woo WT, Hooper P. Exchange rates and the prices of nonfood, nonfuel products. *Brookings Pap Econ Act* 1984;1984:511–36.
- [28] Burstein A, Eichenbaum M, Rebelo S. Large devaluations and the real exchange rate. *J Polit Econ* 2005;113:742–84.
- [29] Akram QF. Commodity prices, interest rates, and the dollar. *Energy Econ* 2009;31:838–51.
- [30] Towbin P, Weber S. Limits of floating exchange rates: The role of foreign currency debt and import structure. *J Dev Econ* 2013;101:179–94.
- [31] Hamid Z, Masih M. The lead-lag relationship between the rubber price and inflation rate: evidence from Malaysia 2017.

- [32] Fatahillah F, Andriyani D, Rahmah M, Syafira S. Effect of Rubber Production, Dollar Exchange Rate and Inflation on Rubber Export in Indonesia. *J Malikussaleh Public Econ* 2022;5:1–8.
- [33] Uremadu SO, Onyele KO. The impact of selected agricultural exports on the growth of the domestic economy. 2016.
- [34] Alegwu FO, Aye GC, Asogwa BC. Effect of absolute exchange rate volatility on agricultural products export in Nigeria. *AGRIS On-Line Pap Econ Informatics* 2018;10:3–15.
- [35] Shigetomi S. The transmission of information in the transacting of primary products: the case of quality improvement in Thailand's natural rubber production. *Dev Econ* 1995;33:219–21.
- [36] Gordon A. Dynamics of labor transformation: Natural rubber in Southeast Asia. *J Contemp Asia* 2004;34:523–46.
- [37] Belcher B, Imang N, Achdiawan R. Rattan, rubber, or oil palm: cultural and financial considerations for farmers in Kalimantan. *Econ Bot* 2004;58:S77–87.
- [38] MacBean A. *Export instability and economic development*. Routledge; 2012.
- [39] De P. *Regional Cooperation for Regional Infrastructure Development: Challenges and Policy Options for South Asia*. Research and Information System for Developing Countries; 2009.
- [40] Chanchaichujit J, Saavedra-Rosas J, Quaddus M, West M. The use of an optimization model to design a green supply chain: A case study of the Thai rubber industry. *Int J Logist Manag* 2016;27:595–618.
- [41] Weerathamrongsak P, Wongsurawat W. The rubber industry of Thailand: a review of past achievements and prospects. *J Agribus Dev Emerg Econ* 2013;3:49–63.
- [42] Jung S, Kwak G. Firm characteristics, uncertainty and research and development (R&D) investment: The role of size and innovation capacity. *Sustainability* 2018;10:1668.
- [43] Carboni OA, Medda G. Linkages between R&D, innovation, investment, and export performance: evidence from European manufacturing firms. *Technol Anal Strateg Manag* 2020;32:1379–92.
- [44] Pino G, Tas D, Sharma SC. Investigating the effects of exchange rate volatility on exports in East Asia. *Appl Econ* 2016;48:2397–411.
- [45] Wong HT. Exchange rate volatility and bilateral exports of Malaysia to Singapore, China, Japan, the USA, and Korea. *Empir Econ* 2017;53:459–92.
- [46] Fang W, Lai Y, Miller SM. Export promotion through exchange rate changes: Exchange rate depreciation or stabilization? *South Econ J* 2006;72:611–26.
- [47] Andersson A, Styf S. How does a depreciation in the exchange rate affect trade over time? 2010.
- [48] Berman N, Martin P, Mayer T. How do different exporters react to exchange rate changes? *Q J Econ* 2012;127:437–92.

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