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The Influence of CNY in RCEP Countries Based on the Trade Pricing

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Abstract

The Regional Comprehensive Economic Partnership (RCEP) would conduce to increasing the investment and trade dependence of member countries. With the increasingly close economic and trade relations in East Asia, the dependence of East Asian countries on the United States and the European Union would decrease to a certain extent. Meanwhile, it would also affect the status of the U.S. dollar, euro and sterling in Asia. The China Yuan (CNY), by contrast, would be more widespread. This would further accelerate the process of CNY internationalization. The purpose of this paper is to test whether the CNY could serve as a trade invoicing currency in RCEP countries in the context of China's deep involvement in the Asian value chain. Thus, it could provide a basis for China to enhance the regional influence of the CNY through the trade channel in the short term. Based on the structure of the Asian value chain and the role of CNY in Asia, this article would focus on the pricing paradigm framework of intra-regional trade in RCEP countries. Taking trade pricing as the entry point, this article would study the influence of CNY exchange rate fluctuations on intra-regional trade in RCEP countries. In addition, this article would discuss whether it could enhance the influence of CNY in RCEP countries through trade channels, so as to provide a foothold for promoting the internationalization of CNY in the short term.

Keywords: Regional Comprehensive Economic Partnership (RCEP), Trade Pricing, China Yuan (CNY), Invoicing Currency, Asian value chain.

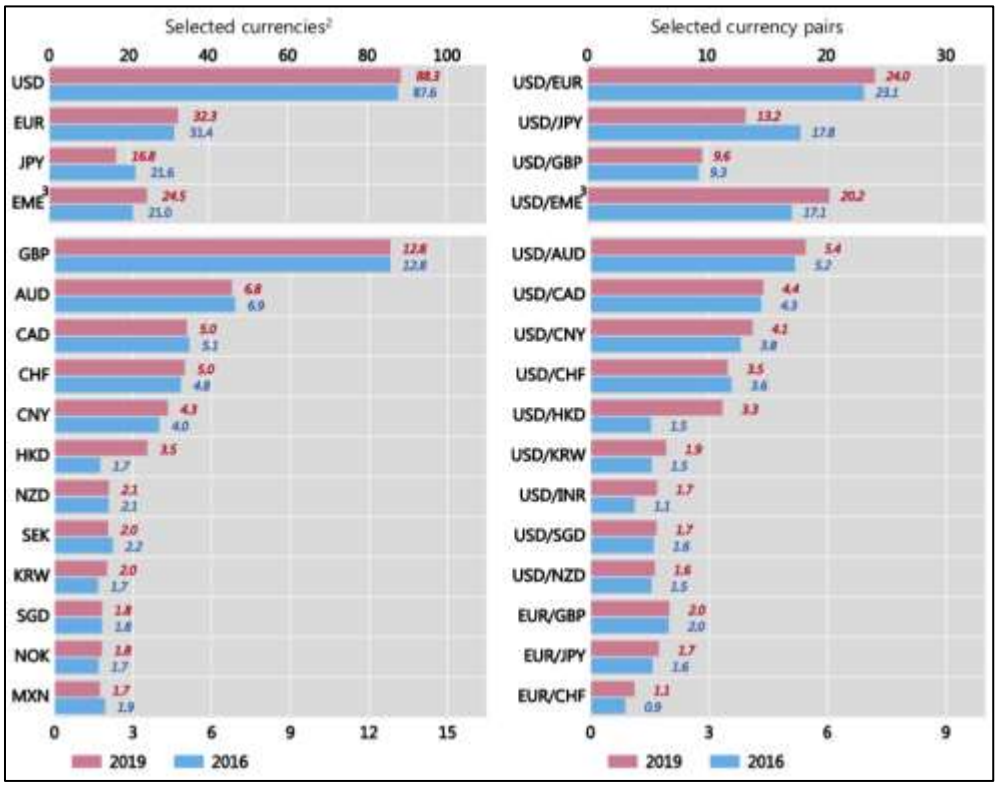
Introduction

After the Great Depression of 1929, the global gold standard was completely wiped out, the United Kingdom completely withdrew from the center stage of the global economy, and the United States replaced it as the center of the Bretton Woods System (Li, 2018). Since then, the United States, with its sound financial system and huge financial markets, has hosted the world's largest foreign exchange, stock and gold markets. At the same time, the dollar in international trade and international foreign exchange reserves and other aspects of a huge scale advantage. Although the Jamaica system does not provide a standard currency, the US dollar still holds a monopoly position in the international financial payment system (Li, 2018). As the era of sovereign credit currency, the currency issuance of each country lacks supervision and restriction. Especially now, in the face of the COVID-19 pandemic, central banks are adopting quantitative easing monetary policies to boost their

economies and rescue them. The different monetary systems adopted by different countries bring high costs and complexity between currency exchanges (Zhang et al., 2019). The current complex international political and economic environment promotes the reconstruction of international financial system.

Nowadays, with the trend of diversification of global economic and trade structure, problems have emerged in the international monetary system dominated by the US dollar. From the financial perspective, the international monetary system dominated by a single currency is difficult to meet the liquidity needs of the international market, thus resulting in the Triffin dilemma (Bordo & McCauley, 2019). This is reflected in the higher demand for dollars in the international market, and the increase in the supply of dollars would further catalyze financial bubbles and increase systemic financial risks. Meanwhile, from the perspective of trade, the US dollar as the currency of international trade pricing and settlement has obvious disadvantages (Rey, 2001). According to Majd (2018), the US would be able to use the SWIFT settlement system to collect information on the use of dollars by countries around the world and impose sanctions on other countries. Some countries have started to set up their own payment and clearing systems to avoid American domination. For instance, financial regulator of China has launched the Cross-border Interbank Payment System (CIPS) in 2012 to serve the settlement of international bulk commodity transactions, mainly for wholesale transactions (Poeniech, 2016). Therefore, it would be an inevitable trend for the international monetary system to change from being dominated by the US dollar to being diversified.

Despite there are many problems in the mismatch between the international monetary system and the global economic and trade structure, the US dollar still plays a significant role in international trade. According to the BIS' survey on foreign exchange turnover by currency in April 2019 (Figure 1), US dollar transactions accounted for about 44.2 percent of global foreign exchange turnover, indicating that nearly half of global financial and trade transactions are settled in the US currency. In terms of trade settlement, the US dollar has strong network externalities, meanwhile, its convertibility and liquidity are higher than other international currencies. On the other hand, from the perspective of trade pricing, the US dollar still performs the function of a trade currency denomination on a global scale. Specifically, the traditional denomination currency includes the currency of the exporting and importing countries as well as the third country. In addition, these correspond to the three paradigm frameworks for currency pricing: PCP (producer currency pricing), LCP (local currency pricing) and VCP (vehicle currency pricing) respectively (Sokolova, 2015). On this basis, Gopinath et al. (2020) proposed the DCP (dominant currency pricing paradigm) pricing framework based on the dominant currency of a third country, and pointed out that the US dollar was the dominant currency of trade pricing.



Source: BIS Triennial Central Bank Survey, Net-net basis, daily average in April, 2019.

Figure 1. Foreign exchange market turnover by currency and currency pairs

This paper would focus on the perspective of trade pricing, mainly based on two aspects. Firstly, from the conceptual perspective, trade pricing and trade settlement are two different concepts, which respectively belong to the functions of the unit of account and the medium of exchange of international currency (Blinder, 1996). The currency of denomination is the currency specified in the contract between the trading parties for settlement, and the settlement currency might be one or more currencies for the actual settlement of the transaction (Blinder, 1996). Therefore, the currency in which trade is denominated and settled is not necessarily the same currency, taking into account factors such as market supply and demand and exchange rate risk. Secondly, from the perspective of application, the potential of China Yuan (CNY) as a trade denomination currency in Asia has a broader scope for research than trade settlement. In the meantime, compared to trade pricing, the research space for trade settlement is relatively narrow. On the one hand, it is an established fact that the US dollar performs the function of trade settlement in the Asian region. On the other hand, the use of CNY in international trade settlement faces more constraints (Wong, 2020). For instance, the settlement and sale of foreign exchange in CNY adheres to the principle of real demand and is based on book receipts and payments, which in turn reduces the degree of free convertibility and liquidity of CNY foreign exchange. Meanwhile, cross-border trade settlement in CNY is subject to policy direction and other factors, and its correlation with market demand remains to be verified (Wong, 2020).

Significance of the Study

The Regional Comprehensive Economic Partnership (RCEP) had been formally signed in November 2020 (Shen, 2021). This marks the official birth of the world's largest free trade area, which is dominated by Asian economies. The population, economic aggregate and intra-regional trade of RCEP members account for about 30% of global trade volume, which on the basis of the ten ASEAN countries, plus China, Japan, South Korea, Australia and New Zealand (Shen, 2021). It is the largest free trade area in the world and of great significance to the economic integration of Asia (Shen, 2021). In the meantime, several scholars (i.e., Zhang, 2021; Shen, 2021) noted from their studies that as the main export target of southeast Asian economies, China runs a huge economic deficit against the whole of Southeast Asia every year.

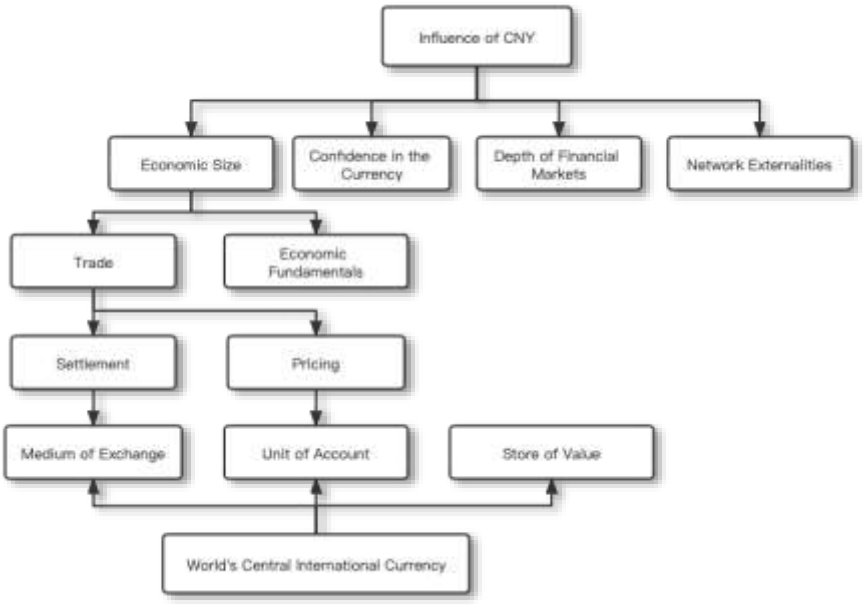
The RCEP signing marks that China will be the dominant and influential voice in southeast Asia's free trade. With the Belt and Road Initiatives proposed and built earlier, the world's largest free trade zone will break away from the dominance of the United States for the first time. It will be dominated by China, the single largest player of regional economy and market. In the face of a large number of trade settlement demands in the region, China Yuan (CNY) will gradually dominate the whole process. And to reduce the substantial trade costs incurred in the region's international trade as a result of the use of the United States dollar as the intermediary currency.

The formation of a large integrated RCEP market has increased the frequency of investment and trade exchanges in the region, and the huge market potential should be tapped and unleashed (Chang, 2020). Meanwhile, such a large trade scale will be conducive to the wider popularity of CNY in the Asia-Pacific region and the process of CNY internationalization. The influence of RCEP on trade in goods, trade in services and industrial chain could promote the recognition of CNY in regional trade. RCEP would facilitate the development of regional trade through tariff-free, thus advancing the process of CNY internationalization.

However, the low level of CNY use in international markets is a clear mismatch with China's share of international trade. Against this backdrop, it is worth studying whether China could take advantage of its trade volume to promote the internationalization of the CNY. In terms of the entry point for CNY internationalization, market-driven use of the CNY relies mainly on financial and trade channels (Figure 2).

In comparison to the short term, it is more reasonable and feasible to enhance the influence of the CNY through the trade channel than through the financial channel. In the long term, the establishment of financial markets with depth, breadth, and liquidity is necessary to increase the international use of the CNY and achieve internationalization of the CNY. At present, there is a large gap between China's capital market openness and that of countries and regions such as the United States, Japan and the European Union (Wong, 2020). This suggests that China still needs to further improve its financial system, develop the offshore market for CNY, increase exchange rate flexibility and loosen capital controls. In the short term, the trade channel should be a reasonable and viable way to increase the influence of the CNY.

All the while, the capital markets of China have been less open to the outside world and CNY foreign exchange transactions adhere to the principle of real demand, with traders being the main counterparties (Wong, 2020). At the same time, China has a clear advantage in terms of trade volume and market size, which provides a good basis for promoting the international use of trade-based CNY.



Source: Frankel, J. (2012). & Blinder, A. S. (1996).

Figure 2. Framework for the Influence of CNY Internationalization

Given China's geographical proximity and close trade links with RCEP countries, it is more feasible to increase the influence of the CNY in RCEP countries than with major trading partners such as the US and EU. In terms of the path chosen for the internationalization of the CNY, there are mainly German and US models to follow (Frankel, 2012). According to Frankel (2012), the German model represents the currency of a country to form a currency union within the region through currency regionalization. Moreover, realize currency internationalization in the form of a unified currency. However, the US model represents a country's currency bypassing the process of currency regionalization and becoming a fully independent international currency directly. Currently, the international use of the US dollar still has strong network externalities, and it is difficult to promote the international use of the CNY on a global scale (Frankel, 2012). Therefore, it is of high practical significance to promote the use of the CNY in RCEP countries.

From the perspective of the relationship between the internationalization of the CNY and trade pricing, the influence of the CNY in the international market through the lens of trade pricing has highly practical significance. Firstly, China plays a significant role in the trade of Asian value chain and the bargaining power of Chinese companies is relatively strong, which in turn provides good conditions for the CNY to become a trade invoicing currency. RCEP (2019) has declared that the tariff-free and Rules of origin would ultimately benefit the entire RCEP member countries in this region. The combination of tariff-free and rules of origin could stabilize the industrial, supply and value chains in the region, thus promoting industrial upgrading. The industrial chain, from research to manufacturing, could produce high value in multiple fields (Bettiol, 2017).

For production capacity that is still in low value-added areas, joining RCEP would enable regional countries to carry out production capacity cooperation in multiple fields. The removal of tariff barriers in the RCEP region and the increase of regional trade dependence would promote reshape the industrial chain in East Asia. A more complete industrial chain would bring more space for CNY internationalization. At the same time, if the CNY could play a role in intra-regional trading pricing in Asian value chains, China could expect to leverage its trade deficit with RCEP countries to increase the influence of the CNY in the region.

Secondly, if the CNY has the potential to be used as an invoicing currency for intra-regional trade in RCEP countries, it would largely drive the use of the CNY as an intra-regional trade settlement currency. This, in turn, would promote the development of the internationalization of the CNY. When China's bilateral trade with RCEP countries is mainly denominated in CNY, RCEP countries are exposed to higher exchange rate risk, whether they settle in their own currency or in a third country's currency. Consequently, the trade pricing function of CNY could in the long run drive the use of CNY as a trade settlement currency.

Study on Currency Internationalization

The research on currency internationalization mainly tests the influence of international currency and the process of currency internationalization. According to the types of international currencies examined in the existing literature, the global economic pattern gradually formed three economic blocs around the United States, the European Union and Japan in the 1990s. Therefore, the early literature on currency internationalization mainly focused on the Japanese yen and the euro. In addition, the impact of the exchange rate fluctuations of the Japanese yen and euro on other countries within the economic bloc has become the focus of academic attention. Specifically, in terms of the impact of the Japanese yen exchange rate on Asia, many researchers believe that although Japan plays a leading role in the Asian economic bloc, the US dollar is still the main anchor currency in Asia (Frankel, 1992; Kawai & Akiyama, 1998). Simultaneously, in terms of the impact of the euro exchange rate, Chinn and Frankel (2005) believed that the influence of euro depended on the degree of European integration and the stability of US dollar value. From the entry point of existing literature, relevant studies mainly examine the process of currency internationalization from the study of the optimum currency area. The optimum currency area refers to the adoption of a fixed exchange rate system or common currency by sovereign countries in the region, which is a further relinquishment of the power of monetary policy making. Through different models and methodologies, scholars discuss the conditions for the formation of optimum currency areas and the non-institutional monetary cooperation of countries within the region.

As early as the 1940s, academic circles began to study the fields related to the optimum currency area (Nurkse, 1947; Friedman, 1953). However, the core research of the optimum currency area theory, namely, what characteristics should be possessed by potential members of a monetary union, was proposed by Mundell (1961), McKinnon (1963), and Kenen (1969). Mundell (1961) defined the optimum currency area as a geographical area, indicating that the exchange rate system of a country determines whether the country should join the monetary union. He points out that a region meets the criteria for being an optimum currency area if its countries have high labor mobility and wage flexibility and its nominal exchange rate can float freely. McKinnon (1963) further studied the preconditions of the optimum currency area from the perspective of economic openness. In addition, it is found that if the countries in a region have a high degree of economic openness and close trade with each other, then the formation of the optimal currency area is beneficial to the region. Kenen (1969) believed that the degree of fiscal integration should also become the standard to judge the optimum currency area. Meanwhile, regions with highly diversified products are more suitable for monetary union, because product diversification within a region could reduce the impact of industrial shocks on the currency area and the fluctuation of terms of trade. In the framework of the New Keynesian model, Dellas and Tavlas have sorted out the necessary conditions for the optimal currency area in 2009. They discussed the optimum exchange rate regime proposed by existing literature in the face of asymmetric shocks, capital flows, fiscal policies, and differences in economic development levels among member countries.

The theoretical research on optimum currency area is mainly based on the social welfare analysis of general equilibrium model. Early literature mainly tests whether a region could become an optimum currency area through general equilibrium model based on different assumptions, such as regional differences in commodities and incomplete asset markets (Bayoumi, 1994; Neumeyer, 1998). From the perspective of the conditions of the optimum currency area, Ricci (1997) tested whether a country was suitable to join the monetary union from the aspects of the correlation between the real and monetary shocks of each country, the liquidity of international factors, fiscal adjustment, economic openness, difference in inflationary biases, and transaction costs by constructing a two-country monetary model with nominal rigidities. From the perspective of the equilibrium of the optimum currency area, Corsetti and Pesenti (2002) constructed an equilibrium model with two equilibria. The first is that, given monetary policy rules, exporters will choose the pass-through degree of exchange rate to export prices. The second is that, given the degree of exchange rate pass-through, monetary authorities will choose the optimal policy rules. In the first equilibrium, firms set their prices in domestic currencies and set the foreign currency prices through the law of one price. Meanwhile, the optimal policy rules target domestic output gaps, and countries adopt floating exchange rates to ensure price elasticity. In the second equilibrium, firms are priced in local currency, and a currency union is the optimal policy option for all countries. Therefore, even if the use of a common currency does not promote economic integration and intraregional trade, the optimum currency area could still self-improvement according to the equilibrium point at which the country is located.

Existing literature has proposed many empirical models to test the optimum currency area, and the research direction is focused on the main regions such as America, Europe, and Asia. On the whole, a currency union could promote trade within the region. Frankel and Rose (2000) used cross-sectional data from more than 200 countries and a trade gravity model to compare the impact of joining the currency union on trade and per capita income from economic and geographical perspectives. It found that members of a currency union trade more than twice as much with each other as they do with non-members. In addition, each percentage point increase in the ratio of trade to GDP could increase per capita income by about a third of a percentage point over a 20-year period. In the case of the Americas, there is a debate about whether America should form an optimum currency area. On the one hand, based on the vector autoregression model proposed by Blanchard and Quah (1989), Bayoumi and Eichengreen (1998) further introduced inflation and economic growth to test for asymmetries

in supply-side shocks across countries, and thus found that the US and Canada, as well as European countries, have the potential to become optimum currency areas. On the other hand, Carr & Floyd (2001) studied the sources of real exchange rate fluctuations between the US dollar and the Canadian dollar. They found that there were a large number of asymmetric shocks causing the fluctuations in the real exchange rate in both countries, whereas there was no significant evidence supporting the impact of currency shocks on the real exchange rate. Given that exchange rate movements are based on real rather than monetary factors, a common currency is unfavorable to the economic development of both Canada and the United States. As far as Europe is concerned, the establishment of the euro zone provides data and empirical facts for academic research on optimum currency area. Artis (2003) used the euro zone as a research context and showed that optimum currency area theory could provide criteria for assessing the optimality of monetary union arrangements through business cycle synchronization data and the data produced by SVAR analyses. Aizenman (2016) examines the history of the Euro Monetary Union (EMU) and pegged exchange rate regimes in recent decades, showing that monetary union members with strong financial ties may accumulate asymmetric balance sheet exposures, making them more vulnerable to financial crises. Chari et al. (2020), on the other hand, use a classical sticky price model to answer the question of why less credible southern European countries would choose to join the euro zone.

The question of whether Asia could become an optimum currency area has also been the focus of academic research. On the whole, the Asian region has the potential to become an optimum currency area. In terms of the conditions for the formation of an optimal currency area, Eichengreen & Bayoumi (1996) compare the economic, trade and investment levels of the Asian region with those of Western Europe and find that the Asian region is mainly a small open economy with high levels of intra-regional trade and investment, which met the conditions for the formation of an optimal currency area. However, they also point out that the financial systems of Asian countries are much less developed than those of Western Europe and that giving up monetary autonomy could affect the effectiveness of government intervention in their banking systems. Banik et al. (2007) conducted an empirical study on the feasibility of establishing an optimal currency area in South Asia using a state space time series model and found that countries in the region have similar economic structures and their dynamic responses to external shocks are largely consistent. Thus, the South Asia has the potential to form an optimum currency area. Using a general purchasing power parity model, Gao (2007) examines the degree of monetary cooperation in the ASEAN region plus China, South Korea and Japan from 1994 to 2003. Meanwhile, Gao (2007) finds that the general purchasing power parity theory is generally valid in the region, providing empirical support for the formation of an optimum currency area in Asia.

Based on the optimum currency area theory, some studies have discussed the use of the CNY in the Asian region. On the one hand, some of the studies show that a CNY bloc has been initially formed in Asia. Fratzscher and Mehl (2014) test the "China dominance hypothesis" by referring to the "German dominance hypothesis" of the 1980s and 1990s, i.e., whether the CNY has become the dominant currency in Asia and whether CNY exchange rate fluctuations would have an impact on other countries' exchange rates and monetary policies. They found that the CNY has become a key driver of currency movements in emerging markets in Asia and that CNY exchange rate movements are also influenced to some extent by other Asian countries. This finding suggests that the international monetary system has emerged as a tri-polar system centred on the US dollar, the euro and the CNY. On the other hand, some studies have shown that the US dollar remains the dominant currency in Asia, but the use of the CNY is also increasing within the region. Shimizu et al. (2019) claim that despite the high level of intra-regional trade in the ASEAN region plus China, South Korea and Japan, the use of the US dollar still dominates the foreign exchange market, trade settlement and foreign reserve composition in Asia due to network externalities in the use of international currencies. As a result, while the US dollar remains the dominant currency for international investment, the CNY has gradually begun to play a significant role in intra-regional trade and financial transactions in Asia. In summary, the Asian region basically meets the conditions of an optimum currency area, and the influence of the CNY in the region is constantly improving. This suggests that there is a strong theoretical basis and research value for promoting the use of the CNY in the region, starting with the Asian region.

Trade Pricing and Exchange Rate Movement

It is common for academics to test the framework of the pricing paradigm that trade conforms to through exchange rate pass-through and exchange rate elasticity of trade. Specifically, exchange rate pass-through and exchange rate elasticity of trade are the effects of exchange rate movements on trade prices and trade volumes. This section aims to clarify the mechanisms by which trade and exchange rate movements affect each other. Given the inclusion of Asian value chains in the analyses framework of this paper, this section first discusses the literature related to global value chains and focuses on the use of value-added trade data to inform the use of data for stylized facts analysis and empirical studies. Then, this section focuses on sorting out the channels of interaction between exchange rate fluctuations and trade. In addition, it discusses exchange rate pass-through and exchange rate elasticity of trade by studying the channels of interaction between exchange rate fluctuations and trade.

Trade and Global Value Chains

With the advance of globalization, international trade increased significantly at the end of the 20th century, and complex global value chains were formed. In the early literature on global value chains, studies were mainly based on the perspective of tariff structure (Corden, 1966; Balassa, 1967). Among them, there is a vertical production structure in international trade; that is, raw materials are first made into intermediate products, and then processed with those intermediate products into final products. In contrast to earlier studies, Dixit and Grossman (1982) relaxed the assumptions and extended specialized production from the original two stages to a multistage based on factors of production and comparative advantage. In the 1990s, the focus of research on global value chains changed to the international division of labor in goods and services, and the outsourcing of manufacturing as a result of specialized production. Globalization creates conditions for manufacturing outsourcing, increases the proportion of imported products in intermediate goods and raw materials. It also promotes industrial upgrading, and could affect the employment and wage levels of a country (Lawrence, 1994; Feenstra, 1998). However, the relationship between manufacturing outsourcing and industrial upgrading is controversial. Slaughter (2000) studied the restructuring of production in parent-subsidiary US multinationals and found that the transition of parent companies to high-tech product manufacturing did not lead to industrial upgrading in the US.

Following China's accession to the WTO, China's position in the global value chains has been rising, and the research on the value added of China's trade has gradually increased. Earlier, Feenstra et al. (1999) pointed out that the trade data between China and the United States released by the United States was biased. The United States subsumes the value added of Hong Kong into Mainland China's exports to the United States, resulting in the United States statistics for imports from China being significantly higher than those for exports from China. As China becomes more embedded in global value chains, the share of foreign value added in China's export trade rises. Thus, traditional border statistics that do not take value added into account could significantly overestimate the real value of China's exports. Koopman et al. (2010) found that for China's trade surplus with the United States and European countries, the trade surplus in terms of value added decreased by 41% and 49% respectively, compared to the traditional calculation method. This is because China is a producer of final goods in the global supply chain, with a higher share of China's trade surplus coming from East and Southeast Asian countries.

Trade and Exchange Rate Movement

There is a mutual influence between international trade and exchange rate fluctuation. On the one hand, the exchange rate reflects the relative price of products traded by various countries, that is, trade is the influencing factor of exchange rate movement. Adjustments in the comparative advantage of countries and the structure of export and import trade could change the relative prices of traded goods, which in turn could affect exchange rate movement. On the other hand, exchange rate movement could increase the risk exposure to the exchange rate and affect the decisions of traders, which in turn could change the price and volume of trade in imports and exports. Therefore, this sub-section would provide a review of the existing literature to clarify the relationship between trade and exchange rates, and to provide a basis for the next study on the influence of the CNY in RCEP countries from a trade perspective.

The exchange rate is the ratio of one country's currency to another, reflecting the value of that country's currency. Depending on the measurement perspective, exchange rates are divided into nominal, real and real effective exchange rate, where the real effective exchange rate is a weighted rate based on the trade weight of each country. In terms of the calculation of the real effective exchange rate, trade competitiveness is the main indicator used to construct the effective exchange rate. Early literature shows that financial market opening would expand the impact of nominal shocks on the real effective exchange rate, meanwhile, ease the impact of real shocks on the real effective exchange rate (Sutherland,1996). The opening of import and export trade would reduce the impact of nominal and real shocks on real effective exchange rate movements (Hau, 2002). By studying the relationship between trade and the exchange rate in Asian developing countries, Dumrongrittikul and Anderson (2016) believed that trade liberalization would promote permanent depreciation of the exchange rate, while the improvement of labor productivity of tradable goods would only lead to temporary appreciation of the exchange rate. Calderón and Kubota (2018) examined the impact of trade structure and financial openness on real exchange rate movements, using data for 82 countries from 1974 to 2013. They found that trade in manufacturing helps stabilize real exchange rate movements, while trade in non-manufacturing increases the magnitude of real exchange rate movements. As China's proportion of international trade increases, there is a significant impact of trade on the CNY exchange rate.

There are various channels through which exchange rate movements affect trade. At the macro level, the impact of exchange rate fluctuations, the relationship between exchange rates and the balance of payments, and the impact of exchange rate changes on the structure of trade are the main areas of research. There is no unanimous conclusion on the impact of exchange rate fluctuations on export and import trade. Moreover, the existing empirical studies are insufficient to demonstrate that exchange rate fluctuations significantly affect international trade (McKenzie, 1999; Clark et al., 2004). In terms of the

impact of CNY exchange rate fluctuations on China's bilateral trade, An and Huang (2009) found a co-integrating relationship between CNY exchange rate fluctuations and China-US and China-Japan trade income. Cao and Lin (2017) argue that exchange rate fluctuations would significantly affect China's bilateral trade with Southeast Asian countries. At the micro level, the exchange rate affects the decisions of exporters and importers, which in turn affects trade volumes and prices. The first is the impact of exchange rate adjustment on the pricing behavior of trading firms.

The concept of " pricing to market" was first proposed by Krugman (1986). Some theoretical studies add firm pricing strategies into the new open macroeconomic model and point out that the optimal pricing mechanism of firm is to set different prices in different markets (Devereux & Engel, 1998; Bacchetta & Van Wincoop, 1998). Chen et al. (2016) found that in trade with ASEAN countries, the pricing power of Chinese exporters was generally stronger, while the pricing power of Chinese importers varied across trading partners. The second is the impact of exchange rate changes on the prices of imported and exported products, i.e., exchange rate pass-through related studies. In addition to the theoretical research on the pricing paradigm framework, the academic community has expanded on the existing theoretical framework. Floden and Wilander (2006) examined the extent of exchange rate pass-through of imports based on different pricing paradigms and different forms of cost and demand functions. In view of the fact that large exporter often has a large amount of imports, Amiti et al. (2014) incorporated the import level of a country into the theoretical framework and pointed out that enterprises with a higher proportion of imports and a higher market share were relatively less affected by exchange rate pass-through. In addition, as international trade flows have increased and the complexity of global value chains has increased, some studies have discussed exchange rate pass-through in the context of global value chains. By examining the relationship between trade and exchange rates in China, Japan and South Korea, Bang and Park (2018) found that the higher the participation in global value chains, the lower the elasticity of exports to exchange rates. Shi et al. (2018) found that the degree of intermediate goods exchange rate transmission has a significant effect on policy by examining the relationship between trade in intermediate goods and consumer goods and the CNY exchange rate in China.

Trade Pricing and Pricing Paradigm

The direction of research on trade pricing could be broadly divided into two areas: the study of mechanisms at the micro level and the discussion of phenomena at the macro level. In terms of the micro-foundations, trade pricing is the optimal currency choice for firms to maximize their profits. Specifically, the choice of currency for trade pricing is influenced by both trade and financial factors, which affect the profitability of the enterprise through the asset side and the liability side respectively (Xia, 2020). On the asset side, the choice of denomination currency depends on the pricing capacity of countries as well as manufacturers in various industries, which is influenced by trade factors in terms of production costs for companies (Chen et al., 2016). Chen et al. (2016) state that the use of the PCP pricing paradigm helps the exporting company to reduce its exposure to exchange rate risk as its production costs are predominantly in the local currency, making the local currency the optimal choice for the company. Similarly, the currency of choice for maximizing the profit of the importing firm is also the local currency of the country in which the importing firm is located, i.e., the LCP pricing paradigm is used. This shows that on the asset side, the choice of invoicing currency is mainly the local currency of both parties to the trade and depends to a large extent on the pricing capacity of the firm, i.e., following the PCP and LCP pricing paradigms. For the liability side, the choice of invoicing currency depends on the currency of the company's financing, which is influenced by the financial factors of the company's financing costs. Some companies need to finance their production process, and the currency in which that company borrows funds would, to some extent, influence their choice of invoicing currency. At present, the US financial system is well established and US dollar financing is more available and convenient. Thus, dollar financing constraints would have a significant impact on the production and operation of traders (Bruno & Shin, 2019). In particular, for multinational companies with high financing needs, where the cost of financing is higher than the cost of production, the use of the US dollar as an invoicing currency could reduce the company's exposure to exchange rate risk and maximize its profits, i.e., the use of the DCP pricing paradigm in trade (Bruno & Shin, 2019). In addition, the degree of economic development of a country and the size of its market could also influence the currency of denomination chosen by companies (Bruno & Shin, 2019). Smaller countries with slowly developing financial markets and inefficient financing are likely to adopt the US dollar as their invoicing currency. That is because they have a greater reliance on US dollar financing. Firms in larger countries have stronger pricing capacity and relatively lower domestic financing costs, which in turn would make them less dependent on US dollar financing. There for, the firms are likely to choose the local currency as their invoicing currency.

In terms of the macro impact of trade pricing, different regions and industries would follow different pricing paradigms based on the choice of the invoicing currency. Thus, the exchange rate fluctuations will have different impacts on trade. Depending on the scope of the study, global trade and intra-regional trade are likely to use different pricing paradigm frameworks. In addition, there are differences in the magnitude of the role of exchange rate fluctuations between the US dollar and the local currency of the trading country on trade. Gopinath et al. (2020) found through empirical analysis that, on a global scale, international trade conforms to the DCP pricing paradigm with the US dollar as the dominant currency. This

indicates that the US dollar plays a major role in the pricing of international trade, with the cost of financing on the liability side having a higher impact on firms' choice of an invoicing currency than the cost of production on the asset side. As a result, fluctuations in the US dollar exchange rate could significantly affect the bilateral trade of other countries. However, after narrowing the scope of the study to the Asian region, it is worth examining whether changes in the US dollar exchange rate still significantly affect the bilateral trade of other countries. This is because the intra-regional trade structure of Asian value chains, compared to global value chains, has two characteristics. Firstly, with the close trade relations between countries in Asian value chains and the inclusion of major trading countries such as China and Japan, the impact of production costs on the choice of the invoicing currency is stronger. Secondly, production in Asian value chains is mainly concentrated in low- and medium-technology products. Compared to the research costs of high-technology products, the financing needs of low- and medium-technology product production are lower, and thus the financing costs have a weaker impact on the choice of the invoicing currency. Therefore, intra-regional trade in Asian value chains is likely to follow the PCP or LCP pricing paradigm framework, with exchange rate movements in the local currencies of both trading parties being the main factor affecting trade.

Conclusion and Limitation

The purpose of this article is to investigate whether the CNY could serve as a trade invoicing currency in RCEP countries in the context of China's deep involvement in Asian value chains. Thus, it could provide a basis for China to enhance the regional influence of the CNY through the trade channel in the short term. Taking trade pricing as the entry point, this article studies the influence of CNY exchange rate fluctuations on intra-regional trade in the Asian value chain. In addition, this article discusses whether it could enhance the influence of CNY in RCEP countries through trade channels, so as to provide a foothold for promoting the international use of CNY in the short term.

In summary, this article examines the influence of the CNY in RCEP countries through the lens of the macro impact of trade pricing, with the aim of answering the question of whether the CNY could play a role in trade pricing in RCEP countries. This article argues that, based on China's strong trade power in RCEP countries, the CNY is likely to play a role as the invoicing currency for intra-regional trade in RCEP countries, thereby increasing the influence of the CNY in the region. Accordingly, it is reasonable and feasible to promote the internationalization of the CNY through trade channels starting from RCEP countries. However, considering the complexity of Asian value chains, the future research could focus on the pricing paradigm framework of intra-regional trade in the Asian value chain. As such, it would further explore the extent and potential of the CNY to fulfill the function of trade invoicing currency in RCEP countries.

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