

Latin American Economy

The Impact of Capital Account Opening on Total Factor Productivity ——— Research based on the background of Latin American middle-income trap*

Li Ping Yang Cuihong

Abstract: This article is based on the data of Latin American countries from 1970 to 2015, taking the total factor productivity as the starting point, and using the fixed effects model to study the relationship between the capital account opening and the middle-income trap in Latin American countries. The study shows that the legal capital account opening in Latin American countries has a positive impact on the whole world. The improvement of factor productivity has a significant promoting effect, while the opening of the de facto capital account inhibits the improvement of total factor productivity. The decline of total factor productivity is one of the reasons why Latin American countries fall into the middle-income trap. The opening of the de facto capital account hinders the industrial structure by Upgrading inhibits the improvement of total factor productivity. Classification of de facto capital account openness reveals that direct investment openness, equity investment openness and debt investment openness all have a negative impact on the total factor productivity of Latin American countries. The threshold test found that the trade of Latin American countries The degree of openness, financial development level, institutional quality and exchange rate system are not within the corresponding threshold range, resulting in the de facto capital account opening not playing a role in improving total factor productivity, causing Latin American countries to fall into the middle-income trap for a long time. This article verifies The economic benefits of capital account liberalization in Latin American countries provide evidence for China to learn from the experiences and lessons of capital account liberalization in Latin American countries.

Keywords: capital account opening, total factor productivity, middle-income trap, industrial structure, threshold effect About

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According to the definition of the World Bank, the middle-income trap refers to the phenomenon that when an economy reaches the middle-income level after rapid growth, economic growth becomes relatively stagnant, and the per capita national income is difficult to break through the upper limit of the middle-income level, and cannot continue to climb to the high-income stage. In 2001, China's per capita gross national income was US\$1,010, entering the ranks of low- and middle-income countries. In 2010, China's per capita gross national income had reached US\$4,340, and it entered the ranks of high-middle-income countries. In 2020, China's per capita gross national income exceeded US\$10,000, which is close to high-income countries. Income-level countries, The "14th Five-Year Plan" period is a critical stage for China to move towards a high-income country, and it is also an important period for high-level financial opening up. However, in recent years, the rise of trade protectionism, the world economic downturn and the impact of the new coronavirus pneumonia epidemic have intensified The uncertainty of China's entry into the ranks of high-income countries. Against this background, improving total factor productivity (TFP) has an important impact on transforming the economic development model and surmounting the middle-income trap.

In 2020, the "Recommendations of the Central Committee of the Communist Party of China on Formulating the 14th Five-Year Plan for National Economic and Social Development and the Long-term Goals for 2035" pointed out that it is necessary to promote two-way opening up of finance and build a new dual-circulation development pattern at a higher level. Level of financial openness to cope with the increasingly complex and severe international environment. Capital account openness, as the core content of financial openness, theoretically helps achieve financial liberalization and the effective flow of production factors, and is crucial to improving a country's total factor productivity and social welfare. Important. With the help of capital account opening, Singapore has used foreign capital to promote the country's capital accumulation and increase total factor productivity. It has successfully overcome the middle-income trap and entered the ranks of developed countries. In contrast, Latin American countries have begun to relax capital controls since the 1970s. However, economic growth has stagnated and has been stuck in the middle-income trap for a long time. In 1960, the per capita GDP of Latin America, represented by Brazil, was US\$2,520, reaching the middle-income level. However, by 2020, the per capita GDP of Latin America was less than US\$6,500. After It has still not crossed the middle-income trap in more than 60 years. 5. Compared with Singapore, why did Latin American countries fall into the middle-income trap when they opened their capital accounts? What impact does capital account opening have on total factor

productivity? This article focuses on the research perspective of people who are in the same situation as China. Middle-income Latin American countries, through return

[US] Written by Indermit Gill and Homi Kalas, translated by Huang Zhiqiang: "East Asia Renaissance: Perspectives on Economic Growth", Beijing: CITIC Publishing

House, 2008, page 18, data from the World Bank, // data.worldbank.org/CN/indicator/NY.GNP.PCAP.CD?view=chart

02 - 24] Recommendations of the Central Committee of the Communist Party of China on formulating the 14th Five-Year Plan for National Economic and Social Development and Long-term Goals for 2035», Xinhua News Agency, November 3, 2020, http://www.gov.gov.cn/zhengc/e/2020-11/03/content_5556991.html [2022 - 02 - 24]

Hao Hongmei: «Attracting foreign capital and overseas investment: the two wings of Singapore's economic development», published in «International Economic Cooperation», 1997 Issue 7, pages 41-43.

The data comes from the World Bank. <http://data.worldbank.org/cn/indicator/NY.GDP.PCAP>

Taking into account the process of capital account opening since the 1970s, this paper explores the relationship between capital account opening, total factor productivity and the middle-income trap in Latin American countries. It aims to learn from the experiences and lessons of capital account opening in Latin American countries and explore China's progress in capital account opening. Feasible paths and ways to overcome the middle-income trap under certain conditions.

A literature review

The literature related to this article is divided into two categories. The first category of literature is about the economic benefits of capital account opening. In the neoclassical theoretical framework, the opening of the international capital market causes capital to flow from capital-rich countries to capital-poor countries, improving It increases the marginal product of capital and promotes economic growth. However, academic research on the impact of capital account opening on economic growth has not reached consistent conclusions. Existing research has found that there is a positive correlation between capital account opening and economic growth, and a negative relationship. Correlation relationship, inverted U-shaped relationship and threshold effect.

Total factor productivity is the most important channel for economic growth. Therefore, some scholars have studied the relationship between capital account openness and total factor productivity. One study used data from 70 countries from 1975 to 1999, and for the first time examined the two ways in which capital account openness affects economic performance. There are two main channels - total factor productivity and investment. It is found that capital account opening only has a significant positive impact on total factor productivity growth. Some scholars have done relevant research on specific economies such as Venezuela and found that after the country's capital account is opened, The inflow of capital did not improve the productivity of domestic enterprises. Some studies examined the impact of EU capital account opening on economic growth, productivity growth and investment in the context of European integration from 1990 to 2007. They found that statutory capital account opening had an impact on the growth of total factor productivity. significant positive impact, while the actual capital account

Abdullahi D Ahmedy "Integration of Financial Markets in Africa: Different?" in Journal of International Financial Markets 14(2) 2016 pp 43-59 Lei Wenni and Jin Ying: «Capital account opening and economic growth

Research based on cross-national panel data», Published in "International Finance Research", Issue 1, 2017, Pages 59 - 67. Hu Yanan: "Research

on the Threshold Effect and Path of Capital Account Opening", Published in "World Economic Research" 2020 Issue 1, No. 68 - 81 pages

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The impact of opening up is not obvious. Some scholars used national data from Turkey and Côte d'Ivoire respectively and found that capital account opening now has a significant positive impact on a country's total factor productivity growth. In addition, for different ways of measuring capital account openness, Coase et al. used statutory capital account openness and de facto capital account openness. Using two measures of account openness, it is found that statutory capital account opening has a significant impact on total factor productivity growth. There is a significant positive impact, but the impact of de facto capital account opening is not significant. It is different from the previous research conclusions. At the same time, some scholars believe that capital account liberalization will trigger speculative hot money flows and increase the possibility of a financial crisis. capability and has no obvious positive impact on production efficiency. Some scholars have found that if the flow of foreign goods into a country "Economic overheating" caused by excessive credit creation by international capital will produce a huge output gap and inflation. Expansion will intensify its damage to the real economy, thereby adversely affecting total factor productivity.

The second type of literature related to this article is about the causes and determinants of the middle-income trap. Some studies Research shows that increasing export complexity is very important for middle-income countries to avoid the middle-income trap. However, it will have little effect on high-income countries and low-income countries. Some scholars pointed out that improving infrastructure construction and modernizing a labor market, improved quality of property rights protection system, and strengthened R&D and innovation determine whether a country can avoid the middle-income trap. Some studies have found that the decline in total factor productivity growth explains the reason for the middle-income trap. The economic growth slowdown in the income stage is about 85%, while the impact of the decline in labor and capital growth rates is relatively small. It can be ignored for the time being. Domestic scholars pointed out that capital account liberalization is a major factor in the financial development of middle-income countries. One of the important reasons for the crisis is that frequent crises cause unstable economic growth and fall into the middle-income trap. Although the long-term average economic growth rate of middle-income countries is greater than that of high-income countries, their short-term economic

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The phenomenon of low growth rate. By constructing cross-national panel data of 115 countries from 1960 to 2015, some scholars found that the interaction between urbanization and education is conducive to preventing economies from falling into the middle-income trap. In particular,

the study found that it affects Latin American countries. The reasons for falling into the middle-income trap include political instability, large income gaps, failure to adjust the "import substitution" strategy in a timely manner, lack of technological innovation and institutional defects. Among them, total factor productivity is The decline is considered to be one of the key reasons. Some scholars have used cross-country panel data and confirmed that the decline in total factor productivity growth rate is the main factor in the lower economic growth of Latin American countries compared with other economies. Some studies have shown that the economic growth of Latin American countries is The poor growth performance is mainly due to negative total factor productivity growth, rather than changes in factor accumulation. Other studies have found that the growth slowdown in Latin American countries is mainly due to the sharp decline in total factor productivity growth, while the "Four Little Dragons" in Asia The high growth of total factor productivity can be explained by stable total factor productivity growth. As can be seen from

the above research, the relationship between total factor productivity and the middle-income trap has basically reached a consistent conclusion, that is, the continuous decline of total factor productivity has caused a country to remain in the middle income trap for a long time. Income trap. However, the use of cross-country panel data to study the relationship between capital account openness and total factor productivity has not yielded consistent conclusions, and no scholar has yet studied the relationship between capital account openness and total factor productivity in Latin American countries. Therefore, the possible marginal contribution of this article is There are: (1) The study is based on panel data from 15 Latin American countries from 1970 to 2015, using different measurement methods of capital account openness, trying to comprehensively analyze

Yao Zhizhong: «Financial Crisis and the Middle-Income Trap», published in «International Economic Review», Issue 6, 2015, pp. 33-42. Zhang Huan, Xu Kangning, Sun Wenyan: «Urbanization, Education Quality and the Middle-income Trap—— Empirical analysis based on cross-national panel data Analysis», published in "Research on Quantitative Economy and Technological Economics", Issue 35, 2018, Pages 40-58.

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Fan Gang, Zhang Xiaojing: « "Welfare catch-up" and "growth trap": Lessons from Latin America », published in "Managing the World", Issue 9, 2008, pp. 12-24. Du

Chuanzhong and Liu Yingji: «Latin American Countries "Medium" "Income Trap" and a warning to our country», published in "Theoretical Learning", 2011 Issue 6, Pages

Xu Lihong: "Insights on China's response to the "middle-income trap"", published in "Social Scientists", Issue 5, 2011, No. 106 - 50-54

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Reflect the real situation of capital account opening in Latin American countries in recent decades, (2) Analyze the differential impact of capital account sub-project opening on total factor productivity in Latin American countries, (3) Study how capital account opening affects total factor productivity through changes in industrial structure, Enrich the mechanism by which capital account opening affects total factor productivity. (4) In order to explore the impact of the macroeconomic environment of Latin American countries on the economic benefits of capital account opening, the threshold test was used to further analyze the differences in trade openness, financial development levels, and institutional quality of Latin American countries. and the impact of capital account openness on total factor productivity under the exchange rate system.

Two characteristic fact analysis

The research time of this article is from 1970 to 2015, which is a long time span. A simple empirical regression test cannot comprehensively reflect the characteristics and relationship between capital account opening and total factor productivity in Latin American countries under the background of the middle-income trap. Therefore, here we examine the characteristics and relationship between capital account opening and total factor productivity in Latin American countries. Accurately grasp the typical characteristics of capital account openness and total factor productivity.

(1) Overview of capital account opening in Latin American

countries From 1970 to 2015, the overall capital account of Latin American countries showed a trend of gradual opening. Although affected by the Latin American debt crisis in the 1980s, the Mexican peso crisis in 1995, the Asian financial crisis in 1997, and the Brazilian financial crisis in 1999, Due to the impact of the turmoil, the 2001 Argentine economic crisis and the 2007-2008 global financial crisis, Latin American countries have adopted temporary control measures on the opening of capital accounts. However, in general, the gradual opening of capital accounts is one of the mainstream trends in the financial development of Latin American countries. \bar{y}

Beginning in the 1970s, some countries represented by Argentina and Uruguay began the first financial liberalization in Latin America. After that, from 1976 to 1981, small countries such as Bolivia, Ecuador, and Costa Rica achieved complete capital account opening. \bar{y} In this way, Before the outbreak of the Latin American debt crisis in 1982, most Latin American countries completely relaxed controls on capital projects. During this period, the total capital inflows into Latin America continued to increase.

Since Mexico declared its inability to repay its foreign debt in 1982, some countries (Bolivia, Ecuador, etc.) have stopped repaying their debts one after another, causing the Latin American sovereign debt crisis in the 1980s and interrupting the capital account opening process of Latin American countries that began in the 1970s. Eventually, This resulted in a significant decrease in the total amount of capital flowing into Latin America. In order to prevent excessive capital outflows, many countries implemented capital account controls. Therefore, the opening of statutory capital accounts showed a sharp downward trend during this period compared with the 1970s.

\bar{y} Huang Zhilong: «Capital Account Openness and Financial Stability: Experience and Enlightenment from Latin American Countries», Beijing: China Economic Press, 2012, page 53.

During this period, countries such as Argentina and Mexico implemented a radical capital account opening model and completely lifted temporary controls on capital projects at once, which led to the subsequent financial crisis. Latin American countries were unable to repay their foreign debts, resulting in an expansion of debt scale. As a result, the de facto capital account openness continued to increase in the 1980s. The direct investment openness in the capital account sub-item was obviously at a lower level than before, and the equity investment openness has always been at a low level. In the 1990s, with the end of the debt crisis

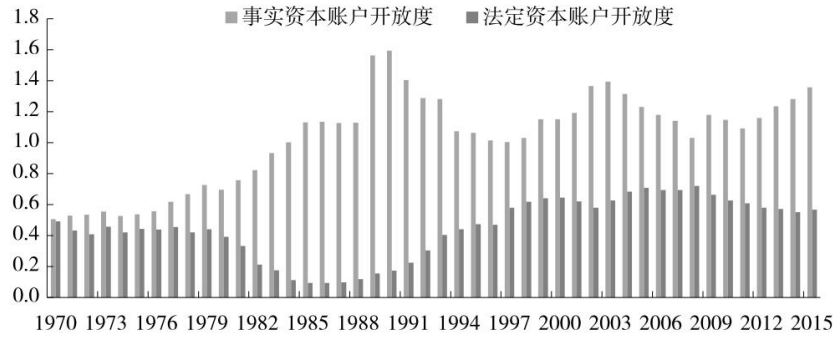
and capital inflows returning to normal, Latin American countries have learned lessons and reduced their total debt. The sharp decline in foreign debt has led to a downward trend in de facto capital account opening. Latin American countries have relaxed restrictions on capital account opening again, and statutory capital accounts have. The degree of openness has increased significantly. Before the late 1980s, the channels for capital account opening in most Latin American countries were mainly to accept foreign direct investment or to introduce capital from the international capital market through the issuance of bonds. The development of equity investment lagged behind. From 1988 to 1994, equity investment in Latin American countries developed rapidly and reached its peak. At the end of 1989, Argentina and Mexico took the lead in deregulating equity investment, allowing foreign capital to freely enter and exit the stock markets of the two countries. During this period, many Latin American countries not only issued their first national fund also relaxed the access restrictions for foreign financial institutions, and a large amount of foreign capital entered the banking industry. After 1995, the scale of foreign direct investment received by Latin American countries increased. During this period, Latin American countries basically realized opening up to the outside world. With the Argentine financial

crisis in 2001 with the end of the crisis and the improvement of the economic situation in Latin American countries, international capital has returned to Latin America, and the degree of openness of statutory capital accounts has increased. During the period from 2002 to 2007, equity investment increased significantly, and direct investment still dominated. The foreign debt burden of the entire region. The scale of foreign debt investment has continued to decline, and the scale of foreign debt investment has shown a gradual downward trend. Although the outbreak of the international financial crisis in 2008 caused a temporary decline in the Latin American economy, due to the effectiveness of previous structural

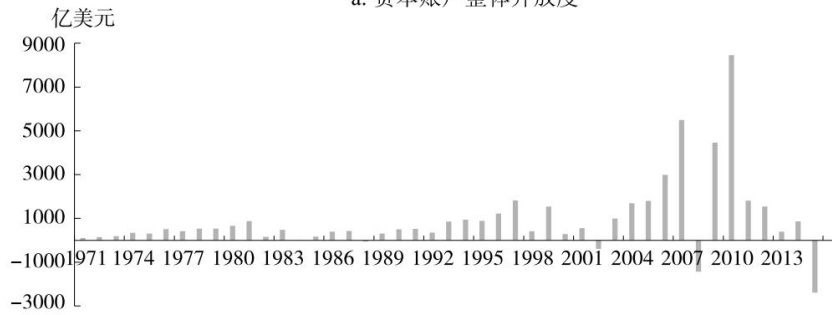
reforms, the Latin American economy recovered strongly in 2010. Finally, compare the capital account sub-items. In terms of changing trends, the growth trend of direct investment is relatively stable, followed by the fluctuation of debt investment, and the growth of equity investment changes more drastically. In terms of changes in proportion, the openness of direct investment and equity investment continues to increase, and debt investment. The overall degree of openness has been on a downward trend since the 1980s.

Written by a staff group led by Shogo Ishii and Karl Habermeier, translated by Zhao Yao: «Capital Account Liberalization and Financial Sector Stabilization Set» Beijing: China Financial Press, 2006, page 76.

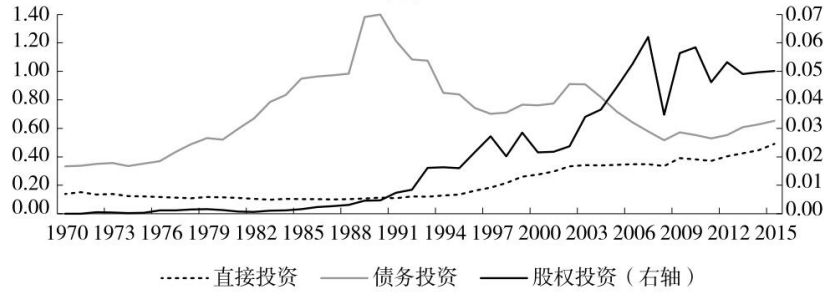
The data on the openness of capital account sub-projects come from the EWN database, where direct investment openness = (foreign FDI assets + external FDI liabilities) / GDP; equity investment openness = (foreign equity investment assets + external equity investment liabilities) / GDP; debt investment Openness = (external debt investment assets + external debt investment liabilities) / GDP



a. 资本账户整体开放度



b. 资本流入总量



c. 资本账子项目开放度

Figure 1 Capital account openness

Data source: Compiled, calculated and drawn based on data from Chinn-Ito database, Lane and Milesi-Ferretti database. http://web.pdx.edu/~ito/Chinn-Ito_website.htm <http://link.springer.com/article/10.1057/s41308-017-0048-y> [2022-02-10]

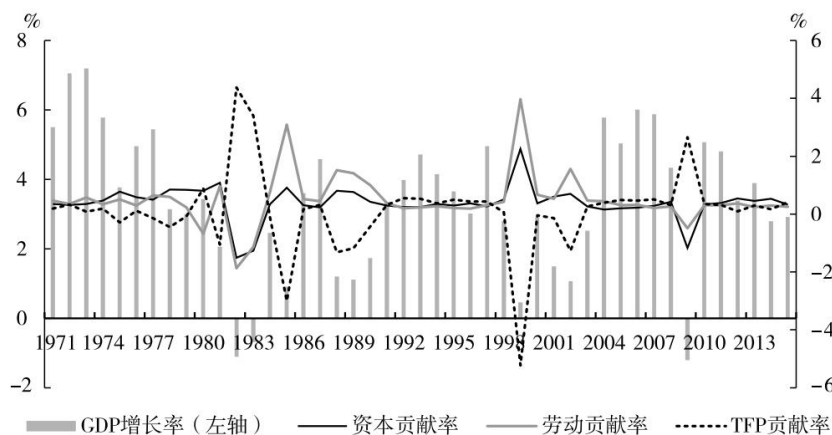
(2) Factor contribution rate and middle-income trap \bar{y} Affected

by the Latin American debt crisis in 1982 and the global financial crisis in 2009, the contribution rate of capital and labor were the same.

\bar{y} Capital contribution rate = Capital output elasticity \times Capital input growth rate / GDP growth rate \bar{y} Labor contribution rate = Labor output elasticity \times Labor input growth rate / GDP growth rate \bar{y} TFP contribution rate = 1 - Capital contribution rate - Labor contribution rate \bar{y}

GDP growth rate has consistently shown a downward trend. The contribution rate of total factor productivity has increased but total factor productivity has declined. It can be seen that the decline in total factor productivity during these two periods has led to a decline in GDP growth rate. The 1985 Mexican financial crisis and During the financial crisis in Argentina in 1999, the contribution rate of capital and labor increased, and capital and labor input increased, but the GDP growth rate declined. Therefore, changes in capital and labor were not the fundamental cause of changes in GDP growth rate. The decline in total factor productivity was the reason for the change in Latin America. The reason why the national GDP growth rate has been stagnant. In addition to this, during the sample period, the contribution rate of total factor productivity was basically consistent with the trend of GDP growth rate. During the period when the contribution rate of total factor productivity declined, the GDP growth rate also showed a decline. Trend. Overall, changes in total factor productivity are the main reason for changes in GDP growth rate.

In 1970, the per capita GDP of Latin American countries and Chile had reached US\$ 4,000. Until the mid-1980s, Chile's per capita GDP was significantly lagging behind the Latin American average, and there was also a large gap between total factor productivity and the regional average. With the advancement of Chile's export-oriented reforms in the 1990s, the level of economic development has increased rapidly. The per capita GDP has already surpassed other Latin American countries, and the total factor productivity has surpassed it after 1994. Chile's per capita GDP exceeded US\$10,000 in 2003. Since then, it has maintained steady growth and entered the ranks of high-income countries in 2008, successfully surmounting the middle-income trap. Similar to Chile, Compared with other Latin American countries, the growth rate seriously lags behind. The continuous decline in total factor productivity has led to economic stagnation. In summary, total factor productivity is closely related to GDP growth and the middle-income trap. Total factor productivity has an important impact on whether a country can overcome the middle-income trap.



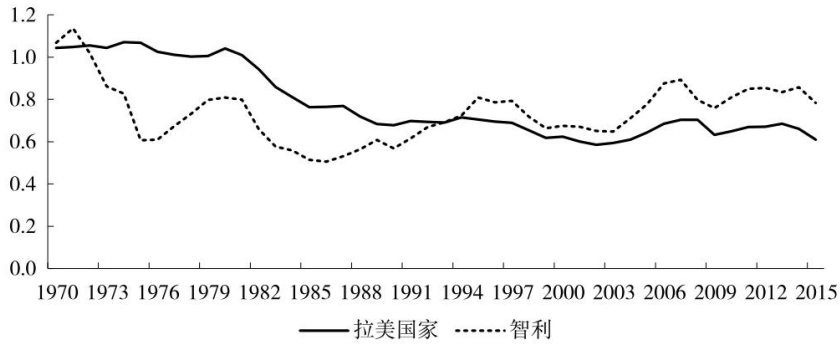
a. GDP增长率和要素贡献率

According to statistics from the Organization for Economic Co-operation and Development (OECD) National Accounts Data File, capital investment in Latin American countries has increased year by year. Except for a decline in 1981, labor input has gradually increased in the remaining years. <http://dataworldbank.org/CN/indicator/NE.GDI.TOTL.ZS?view=chart> [2022-02-24]

The data comes from the World Bank. <http://data.worldbank.org> Y GDP PCAP KD ?

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b. 跨越中等收入陷阱的TFP比较

Figure 2 Factor contribution rate and middle-income trap

Data source: Compiled, calculated and drawn based on data from WDI database and PWT10.0 database. <https://data.world>
 数据源: 编译、计算和绘制基于 WDI 数据库和 PWT10.0 数据库的数据。<https://data.world>

Three models and empirical analysis

Below, we select major countries in Latin America as research samples to analyze the impact of capital account opening on total factor production.

The impact of

productivity. (1) Model setting

In order to test the relationship between capital account openness and total factor productivity in Latin American countries, the empirical model is constructed as follows:

$$tfp_{it} = \alpha + \beta_1 open_{it} + \beta_2 gdprate_{it} + \beta_3 popit_{it} + \beta_4 lifeit_{it} + \beta_5 hcit_{it} + \beta_6 invest_{it} + \beta_7 inflation_{it} + \gamma_i + \gamma_t + \epsilon_{it} \quad (1)$$

Among them, i and t represent the country and year respectively, tfp_{it} represents total factor productivity, $open_{it}$ represents the degree of capital account openness, which is the core variable of this article. The control variables include GDP growth rate ($gdprate_{it}$), population growth rate ($popit_{it}$), life expectancy ($lifeit_{it}$), human capital level ($hcit_{it}$), investment rate ($invest_{it}$) and inflation ($inflation_{it}$), γ_i and γ_t are represented respectively Country and time fixed effects, ϵ_{it} represents the random

error term. (2) Variable description and

data source 1 Explanatory variables

The original data of total factor productivity (tfp) comes from the Payne World Table (PWT10.0). This table provides two types of total factor productivity data, one is horizontally comparable ($USA = 1$), and the other is vertically comparable ($2011 = 1$)

1) Horizontally comparable data is the total factor productivity of each country based on purchasing power parity exchange rates.

It is the relative level of productivity between each country and the United States. The vertically comparable data is the total factor productivity of each country calculated at the constant price of the country. It is the relative value between each country and its own productivity in 2011. Drawing on the previous practice, based on the actual situation of the United States, the total factor productivity is based on the total factor productivity of each country in 2011. The total factor productivity of each country priced at the purchasing power parity exchange rate is multiplied by the country's constant price price. The national total factor productivity is finally obtained by comparing the actual total factor productivity of each country across countries.

2 explanatory variables

The measure of capital account openness is divided into statutory capital account openness (open_jure) and factual capital account openness (open_fact). The statutory capital account openness uses the Chinn-Ito index. Originated from the International Monetary Fund (IMF) «Exchange The data in the "Annual Report on Arrangements and Exchange Restrictions" measures the degree of capital account openness of a country by examining the degree of political restrictions on international capital flows and capital transactions, reflecting the attitude and willingness of the country's government in the field of capital account liberalization. De facto capital account openness refers to the actual flow of international capital in a country. According to the "National External Wealth" database (EWN Database), it is measured by the proportion of a country's external assets and liabilities in GDP. It truly reflects a country's capital account openness. The depth and breadth of

Research shows that there is a significant difference between statutory capital account opening and de facto capital account opening. The former considers whether there are legal restrictions on capital transactions, but in fact the capital flow of a country may not be like this. Some international capital bypasses supervision and enters and exits a country. In addition, the statutory capital account opening indicator will not change within a period of time and cannot reflect the accurate impact of capital control changes on macroeconomic variables in a timely manner. The main purpose of this article is to identify the impact of actual flowing capital on a country's macroeconomic variables. Therefore, in addition to the benchmark regression, the de facto capital account openness indicator is used in the subsequent empirical analysis to measure the openness of a country's capital account. 3 Other control variables Other control

variables include: (1) GDP

growth rate (gdprate), which measures economic growth Situation, (2) Population growth rate (pop), expressed as annual population growth rate, (3) Life expectancy (life), from health

Xu Yonghui, Li Yue: "The role and comparison of total factor productivity in crossing the middle-income trap", published in "World Economic Research" Issue 2, 2017, pages 88-98.

“总要素生产率在跨越中等收入陷阱中的作用与比较”

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It measures a country's human capital stock from a health perspective. (4) Human capital (hc), expressed in terms of the average years of education of a country's labor force, reflects the overall knowledge level and skill accumulation of a country's labor force. (5) Investment rate (investment), expressed as the ratio of capital formation to GDP, (6) Inflation rate (inflation)

4 Data sources

The data of total factor productivity (tfp) come from Payne's World Table (PWT10 0), the data of factual capital account openness (open_fact) come from EWN database, and the legal capital account openness (open_lj ure) data comes from Chinn-Ito database, other variable data mainly From the World Development Indicators (WDI) of the World Bank. Based on the availability of the above data, panel data from 15 countries in Latin America³ from 1970 to 2015 were selected as the research sample. At the same time, in order to eliminate the impact of prices, this article uses the 2010 data. Data denominated in U.S. dollars.

(3) Baseline regression

First, this paper uses the fixed effects model to analyze the impact of capital account opening on total factor productivity in Latin American countries. The estimation results are shown in Table 1. Column (1) is the regression result of de facto capital account opening on total factor productivity. De facto capital The coefficient of influence of account opening on total factor productivity is significantly negative, indicating that the fact that capital account opening inhibits the improvement of total factor productivity. Column (2) is the regression result of statutory capital account opening on total factor productivity, indicating that the statutory capital account Opening up has significantly improved the total factor productivity of Latin American countries. In addition, the coefficients of the control

variables are basically in line with expectations. In the years after the outbreak of the Latin American debt crisis in 1982, International Monetary Fund documents show that Latin American countries adopted strict measures to open their capital accounts. It is a legal control in the sense of preventing the entry of speculative capital and the large-scale withdrawal of capital. But in fact, after the debt crisis broke out in 1982, a large amount of capital fled Latin America. Some studies pointed out that in most Latin American countries, the real capital The flow exceeds the legal capital flow⁴. Therefore, the de facto capital account opening of Latin American countries has inhibited the improvement of total factor productivity, causing them to fall into the middle-income trap for many years and unable to drive long-term stable economic growth.

³ Includes Brazil, Mexico, Argentina, Colombia, Peru, Venezuela, Bolivia, Costa Rica, Dominica, Canada, Ecuador, Guatemala, Honduras, Jamaica, Nicaragua, Paraguay

⁴ According to the Chinn-Ito index data derived from IMF documents, before the outbreak of the debt crisis, the legal capital account openness of Latin American countries was 0.4. In the past 10 years after the outbreak of the debt crisis, the legal openness was only 0.1. http://web.pdx.edu/~ito/Chinn-Ito_website.htm [2022-02-24]

⁵ According to data from the EWN database, capital outflows before the outbreak of the Latin American debt crisis in 1982 were US\$38.4 billion. In the year after the outbreak of the crisis, capital outflows Outflows reached US\$46.7 billion. <https://link.springer.com/article/10.1057/s41308-017-0048-y> [2022-02-24]

⁶ $\bar{y} = \frac{1}{n} \sum_{i=1}^n y_i$, $\bar{y} = \frac{1}{n} \sum_{i=1}^n y_i$, $\bar{y} = \frac{1}{n} \sum_{i=1}^n y_i$, $\bar{y} = \frac{1}{n} \sum_{i=1}^n y_i$, $\bar{y} = \frac{1}{n} \sum_{i=1}^n y_i$, $\bar{y} = \frac{1}{n} \sum_{i=1}^n y_i$, $\bar{y} = \frac{1}{n} \sum_{i=1}^n y_i$, $\bar{y} = \frac{1}{n} \sum_{i=1}^n y_i$, $\bar{y} = \frac{1}{n} \sum_{i=1}^n y_i$, $\bar{y} = \frac{1}{n} \sum_{i=1}^n y_i$

Table 1 Regression results

	y _t		y _{t-1} y _{t-2}	
	(y)	(y)	(y)	(y)
y _{t-1} y _{t-2}	y _{t-1} y _{t-2} *** (y y)		y _{t-1} y _{t-2} *** (y y)	
y _{t-1} y _{t-2}		y _{t-1} y _{t-2} * (y y)		y _{t-1} y _{t-2} ** (y y)
y _{t-1} y _{t-2} y _{t-3}	y _{t-1} y _{t-2} ** (y y)	y _{t-1} y _{t-2} *** (y y)	y _{t-1} y _{t-2} *** (y y)	y _{t-1} y _{t-2} *** (y y)
y _{t-1}	y _{t-1} *** (y y)	y _{t-1} *** (y y)	y _{t-1} *** (y y)	y _{t-1} *** (y y)
y _{t-2}	y _{t-2} * (y y y)	y _{t-2} ** (y y y)	y _{t-2} ** (y y y)	y _{t-2} ** (y y y)
y _{t-3}	y _{t-3} *** (y y)	y _{t-3} *** (y y)	y _{t-3} *** (y y)	y _{t-3} *** (y y)
y _{t-4}	y _{t-4} *** (y y)	y _{t-4} *** (y y)	y _{t-4} *** (y y)	y _{t-4} *** (y y)
y _{t-5}	y _{t-5} *** (y y y)	y _{t-5} *** (y y y)	y _{t-5} *** (y y y)	y _{t-5} *** (y y y)
y _{t-6}	y _{t-6} *** (y y y)	y _{t-6} *** (y y y)	y _{t-6} *** (y y y)	y _{t-6} *** (y y y)
y _{t-7}	y _{t-7} *** (y y)	y _{t-7} *** (y y)	y _{t-7} *** (y y)	y _{t-7} *** (y y)
y _{t-8}	y _{t-8} *** (y y)	y _{t-8} *** (y y)	y _{t-8} *** (y y)	y _{t-8} *** (y y)
y _{t-9}	y _{t-9} *** (y y)	y _{t-9} *** (y y)	y _{t-9} *** (y y)	y _{t-9} *** (y y)
y _{t-10}	y _{t-10} *** (y y)	y _{t-10} *** (y y)	y _{t-10} *** (y y)	y _{t-10} *** (y y)
y _{t-11}	y _{t-11} *** (y y)	y _{t-11} *** (y y)	y _{t-11} *** (y y)	y _{t-11} *** (y y)
y _{t-12}	y _{t-12} *** (y y)	y _{t-12} *** (y y)	y _{t-12} *** (y y)	y _{t-12} *** (y y)
y _{t-13}	y _{t-13} *** (y y)	y _{t-13} *** (y y)	y _{t-13} *** (y y)	y _{t-13} *** (y y)
y _{t-14}	y _{t-14} *** (y y)	y _{t-14} *** (y y)	y _{t-14} *** (y y)	y _{t-14} *** (y y)
y _{t-15}	y _{t-15} *** (y y)	y _{t-15} *** (y y)	y _{t-15} *** (y y)	y _{t-15} *** (y y)
y _{t-16}	y _{t-16} *** (y y)	y _{t-16} *** (y y)	y _{t-16} *** (y y)	y _{t-16} *** (y y)
y _{t-17}	y _{t-17} *** (y y)	y _{t-17} *** (y y)	y _{t-17} *** (y y)	y _{t-17} *** (y y)
y _{t-18}	y _{t-18} *** (y y)	y _{t-18} *** (y y)	y _{t-18} *** (y y)	y _{t-18} *** (y y)
y _{t-19}	y _{t-19} *** (y y)	y _{t-19} *** (y y)	y _{t-19} *** (y y)	y _{t-19} *** (y y)
y _{t-20}	y _{t-20} *** (y y)	y _{t-20} *** (y y)	y _{t-20} *** (y y)	y _{t-20} *** (y y)
Hansen J			y _{t-20} *** (y y)	y _{t-20} *** (y y)

Note: ***, **, * and * represent 1%, 5% and 10% significance levels, the values in brackets are T statistics.

Data source: Calculated and drawn by the author.

(4) Endogeneity treatment In

order to overcome the estimation bias problem caused by endogeneity, the instrumental variable two-stage least squares method (2SLS-IV) is used for estimation, using the one- and two-period lags of the explanatory variables as instrumental variables. Table 1, Part (Column 3) and column (4) report the estimation results of the instrumental variable 2SLS. The K-Prk LM test and the K-Prk Wald F test are used respectively. The statistical test results all show that the null hypothesis is rejected, and Ha nsen J test value is 0.914 and 0.331, indicating that the instrumental variable is exogenous. All the above statistical tests show the rationality of the instrumental variable, so the model setting is reliable. Compared with the fixed effects model, this paper finds that after using instrumental variables to control endogeneity, The absolute value of the estimated coefficient of de facto capital account opening rose from 0.029 to 0.035, and the estimated coefficient of statutory capital account opening rose from 0.054 to 0.076, which is an improvement from the original, and it passed the 1% significance level test, which fully demonstrates that within Genetic problems cause significant

downward bias in estimates.

(5) Heterogeneity analysis There are differences in the impact of capital flows of different natures on total factor productivity. Therefore, the overall capital account opening is divided into direct investment (fdi), equity investment (equity) and debt investment (debt). Table 2 reports the regression results of different types of capital account openness on total factor productivity. The results show that the coefficients of direct investment openness, equity investment openness and debt investment openness are all significantly negative. Three Different types of capital account opening have had an adverse impact on the total factor productivity of Latin American countries, and because of the different nature of capital, the impact on total factor productivity is different.

1 Opening up to direct investment

Numerous documents have proven that direct investment can improve total factor productivity. However, direct investment in Latin American countries has had a significant negative impact on total factor productivity. This is significantly different from the benefits of open direct investment in other countries. Latin American countries have received The benefits brought by direct investment are far from enough to offset the negative impact of crowding out domestic investment. Latin America's early "import substitution" strategy protected the development of local enterprises, resulting in enterprises lacking independent R&D and innovation capabilities, and their competitiveness was relatively weak. Foreign enterprises It has a large technological advantage and is more competitive than domestic enterprises. It can quickly occupy and control the local market and seize its share.

Direct investment refers to the capital of one country investing in the industrial sector of another country and establishing an enterprise in order to obtain long-term profits, and having economic management control over it. Equity investment refers to the investment by one country in the stocks of companies in another country. Debt investment refers to the credit provided by a bank of one country to a bank or enterprise in another country, the holding of long-term debt bonds of another country's government, etc.

Edited by the United Nations Center for Transnational Corporations: «Revisiting the Transnational Corporations in the Development of the World», Beijing: Commercial Press, 1982, 55%

Page 323. Taking Brazil as an example, in 1978, 100% of the automobile industry and 51% of the , 61% of the basic steel industry , of the non-electrical machinery industry and chemical industry were controlled by multinational corporations.

Investment opportunities have resulted in Latin American companies being squeezed out and suppressed. Some studies have used the data from 1970 to 1996 in Asia.

Based on the panel data of 32 countries in Asia, Africa and Latin America, it was found that foreign direct investment has a negative impact on domestic capital in Latin America.

The formation of a strong "crowding out" effect has had a significant negative impact on total factor productivity.

In addition to being squeezed out of domestic investment, Latin American countries are more dependent on foreign investment due to their weak competitiveness.

technology and lacks corresponding technological innovation. Singapore's R&D in 2000, 2010 and 2018

The proportion of investment in GDP was 182% respectively, showing a steady growth trend from 2010 to

The average proportion of R&D investment in Latin American countries was only 0.36% , 0.42% and 0.35% ,

During 2018, it did not even rise but fell. Singapore increased its R&D investment while relying on foreign investment to improve its own

Main innovation level, total factor productivity continues to improve, successfully crossing the middle-income trap, and Latin American countries

Low R&D investment severely inhibits the improvement of total factor productivity.

2 Opening up of equity investment

Latin American countries, represented by Argentina and Mexico, opened up their equity investments later, focusing on

Around 1990, after the opening up of equity investment, foreign capital could freely enter and exit the stock market. With the opening up of equity investment, foreign capital could freely enter and exit the stock market.

The short-term capital obtained has strong liquidity and speculative nature, and usually enters the stock market with a relatively high return rate.

and real estate markets, which can easily lead to increased economic volatility in recipient countries. Political instability in Latin American countries

5. Once speculators with short-term capital inflows begin to short the economy, a large amount of capital outflows will easily trigger a financial crisis.

Unrest and financial crisis. Therefore, the opening up of equity investment is more likely to bring false short-term results to domestic financial institutions.

long-term prosperity and short-term profit growth. These short-term capital flows have an important impact on the total factor productivity and economic growth of Latin American countries.

The stabilizing effect may do more harm than good. In addition, large inflows of short-term capital will also lead to real exchange rate appreciation.

When a large inflow of capital is converted into local currency, the money supply increases and inflation rises, leading to

As a result, the real appreciation of the local currency has increased. As the real exchange rate rises, export competitiveness has declined. In addition, Latin American countries have

Wu Dejin, Chen Jie: «Comparison of the dynamic mechanisms of economic growth in East Asia and Latin America—from the perspective of capital accumulation», published in «Jiangxi Social Sciences», Issue 9, 2009, Pages 95-100.

The data comes from the UNESCO Institute of Statistics. <https://data GB XPD RSDV GD ZS? view chart> [2022-02-24]

«Capital Account Opening and Financial Stability: Experience and Enlightenment from Latin American Countries» Beijing: China Economic Press, 2012, page 59

«Capital Account Opening and Financial Stability: Experience and Enlightenment from Latin American Countries» Beijing: China Economic Press, 2012, page 59

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The shortage of high-quality and high-tech talents makes it difficult to achieve technological upgrading.

3 Opening up debt investment

Coase and others pointed out that debt investment cannot solve certain agency problems. If the host country's bank supervision is weak, it may lead to inefficient capital allocation and create moral hazard because debt is held by governments or international financial institutions. Implicit guarantees. In addition, short-term debt, especially short-term bank loans, are procyclical and highly unstable. In this nature, it may amplify the adverse impact of negative shocks on productivity growth.

Latin American countries have low savings and investment rates, lack of domestic capital, and weak capital accumulation capabilities, so they need to increase sources of funds for production and consumption, promote domestic investment, and ease economic pressure. With the help of international capital to make up for the domestic capital shortage, in theory, moderate borrowing of foreign debt can support domestic production. However, Latin American countries borrow the scale of foreign debt is too large. Although it can make up for the lack of funds in economic development in a certain period of time, it will not last long. Judging from the above, it has had a serious negative impact on the domestic economy. Judging from the proportion of total foreign debt to GDP, in 1970 it accounted for 33%. In the 1970s and 1980s, the proportion of Latin American countries' foreign debt increased significantly. Large-scale foreign debt and debt unreasonable asset investment, coupled with weak domestic supervision, lack of negative effects on the inflow of foreign debt funds. Preventive measures have led to irrational capital allocation in Latin American countries. Foreign debt funds are not invested in production departments. Instead, it is used for non-productive purposes, unable to create debt solvency in a timely manner, inhibiting total factor production. Increase in productivity

Table 2 Different types of capital account liberalization

	(i)	(ii)	(iii)
iii	ii		
	(i ii)		

According to data available from the UNESCO Institute for Statistics, between 1996 and 2018, the research rate per 1 million people in Latin American countries was 200, while the number in developed countries during the same period was 1,000. <http://dataworldbank.org/>

According to the National Economic Accounts data of the World Bank, the savings rate of Latin American countries from 1970 to 2019 was 18%, and developed countries and new Asian

that of emerging economies was 26% and 28%. During the same period, the investment rate of Latin American countries was 21%. Developed countries and emerging economies in Asia are 25% and 28%.

Calculated based on data from EWN database. <https://link.springer.com/article/10.1057/s41308-017-0048-5>

β_1		β_1	
		(β_1)	
β_2			β_2
		(β_2)	
β_3	β_3	β_3	β_3
	(β_3)	(β_3)	(β_3)
β_4	β_4	β_4	β_4
	(β_4)	(β_4)	(β_4)
β_5	β_5	β_5	β_5
	(β_5)	(β_5)	(β_5)
β_6	β_6	β_6	β_6
	(β_6)	(β_6)	(β_6)
β_7	β_7	β_7	β_7
	(β_7)	(β_7)	(β_7)
β_8	β_8	β_8	β_8
	(β_8)	(β_8)	(β_8)

Note: ****, *** and * represent 1%, 5% and 10% significance levels, the values in brackets are T statistics.

Data source: Calculated and drawn by the author.

4. Mechanism analysis and testing with industrial structure as the intermediary

The foreign capital introduced by the opening of the capital account will affect the production input and operating efficiency of a country's industries, and thus to a certain extent, changes in its industrial structure will be affected, and changes in a country's industrial structure will have an impact on its overall factor productivity. The following is a detailed analysis of how the capital account opening of Latin American countries affects their industrial structure, and finally affects it through the intermediary effect model.

Channel inspection

(1) Mechanism analysis

According to the theory of industrial structure change, industrial structure upgrading mainly has two characteristics: First, the proportion of the primary industry relative to the secondary and tertiary industries continues to decline. Second, when development reaches a certain stage, the proportion of the secondary industry decreased, and the proportion of the tertiary industry increased and became the leading industry. Since the 1980s, Latin American countries have since the "import substitution" strategy of the 1990s shifted to neoliberal reforms, the proportions of the three industries have changed significantly.

Industrial structure change is a process of continuous upgrading and transformation. The process of industrial structure change is a process of continuous upgrading and transformation. The process of industrial structure change is a process of continuous upgrading and transformation. The process of industrial structure change is a process of continuous upgrading and transformation. The process of industrial structure change is a process of continuous upgrading and transformation.

There have been significant changes. In 1980, the proportion of the three industries in Latin America was 17.2%, and in 2000, the proportion was 10.1%.

The changes in industrial structure in Latin American countries show a development trend of industrial structure upgrading, but from its perspective

Judging from the economic development since the 1980s, the reason for this change in industrial structure is the second

The decline of the industry, rather than the upgrading and transformation to the tertiary industry, presents a state of "de-industrialization" development.

In the process of adjustment to the export-oriented Latin American economy, the manufacturing industry is tilted towards the resource processing industry. At the same time, competitiveness is fragile.

Weak national industrial sectors have withdrawn from the market due to the fierce competition brought about by the liberalization of capital accounts, causing Latin America to

The industrial layout of the region has changed, leading to a certain degree of "de-industrialization"

1 Limited technological spillover

Foreign investment is mainly concentrated in the export processing industry, communications and finance sectors of Latin American countries. The impact on the Latin American economy

The spillover effect of economic development is limited. Latin American countries have sluggish domestic investment and low levels of human capital, and have little regard for technology.

The absorption capacity of spillovers is limited. The advanced technology brought by foreign investment can only interact with the absorptive capacity of the host country.

Only when technology spillovers are used can they be truly absorbed and contribute to the technological upgrading of domestic industries. The innovation of enterprises in Latin American countries

New capabilities are weak and competitiveness is insufficient. Foreign capital gradually occupies the local market, causing domestic enterprises to lose their original capabilities.

Market. While Latin American domestic companies have lost their original domestic markets, they have also not gained technology spillover from foreign investment.

The development of enterprises is restricted. In this case, if the enterprise chooses to enter the supply chain of foreign companies, it will

Forming technological dependence and market dependence, it is difficult to achieve technological upgrading, and foreign investment is locked into low-tech and low-dependency industries.

Value-added industries cannot be transferred to high value-added industries, resulting in the inability to upgrade the industrial structure and inhibiting the overall development of the industry.

Increase in factor productivity

2 Insufficient correlation effect

Multinational companies establish relationships with upstream and downstream enterprises through industrial affiliations, purchasing or providing intermediate products or services, thereby forming a forward and backward relationship with enterprises in the host country. Multinational companies investing in Latin American countries have

In the process, the purchase rate of intermediate goods from the host country is relatively low, and most of them are imported from foreign companies.

The data comes from the World Bank. <http://dataworldbankorg.cn / indicator/ NV IND TOTL ZS? view y chart y>

Qiao Xiaonan, Yang Chenglin: «The occurrence mechanism and economic performance of deindustrialization: a classification and comparative study», in "China Industrial Economy" Economic», Issue 6, 2013, Pages 5-17.

Zhao Xuemei: «A brief analysis of the expansion trend of multinational corporations in the Latin American economy», published in «Latin American Studies», Issue 2, 2003, Pages 37 - 39

Yue Yunxia: "Research on the Economic and Social Results of Latin America's Export-oriented Development Model", published in "Latin American Studies", Issue 2, 2003, Issue, pages 23-28.

Downstream enterprises have limited relevance in terms of technology, management and services. A sample survey of subsidiaries of Argentinian multinational corporations showed that the assets purchased in the host country accounted for only a small part of the total investment. Therefore, the investment of multinational corporations does not stimulate the improvement of the production and technical level of upstream and downstream enterprises, shortens the industrial chain of multinational companies in the host country, reduces the radiation effect on Latin American industries, and has a limited stimulating effect on the upgrading of the industrial structure of Latin

American countries. 3. Unreasonable flow of foreign capital

Latin American countries have used foreign capital to solve the problem of low domestic investment rates to a certain extent, but they have not made full use of foreign capital to solve the problem of a single industrial structure. Too much foreign capital has flowed into the non-productive tertiary industry, which is incompatible with the primary and secondary industries. There is a lack of organic connections, which results in the production layout being restricted by foreign capital. The excessive expansion of capital in the field of commodity circulation and the financial sector stimulates consumption and purchases, without investing in the production sector and converting it into productivity. As a result, the industrial structure has not been driven to upgrade,

which is detrimental to

Productivity has had a negative impact. (2) Mechanism test In order to verify the impact of capital account opening on total factor productivity through industrial structure, this paper uses the intermediary effect model to test. The mechanism test model is as shown in formula (2) and formula (3) Among them, Mit represents the intermediary variable industrial structure (IS). Referring to previous research, the industrial structure is measured by the ratio of the added value of the service industry to the added value of industry.

$$\Delta Y = \Delta Y_1 + \Delta Y_2 \tag{2}$$

$$\Delta Y = \Delta Y_1 + \Delta Y_2 \tag{3}$$

The test results report is shown in Table 3. Judging from column (1) of Table 3, the impact of capital account liberalization on industrial structure

The estimated coefficient of is significant and negative at the 1% level, indicating that the capital account opening of Latin American countries has inhibited the upgrading of industrial structure. The regression coefficient of industrial structure in column (2) is significantly positive, indicating that the upgrading of industrial structure

Impact of Multinational Enterprises on Employment and Income in Jamaica Preliminary Report International Labor Organization 1976 https://ideas.repec.org/p/ilo/lowps/9916618534_0267_6.html [2022-04-02]. Take Jamaica as an example. Although the country has the raw materials needed to refine bauxite into aluminum, but multinational corporations have been supplying these raw materials

from the United States to their domestic subsidiaries in Jamaica. D Chudnovsky A López and F Por ta Argentina: Privatización e Mercado Interno e Integración Region Mericana de Desarrollo: Departamento de Desarrollo

“ ”

“ ”

can promote the improvement of total factor productivity, confirming that capital account opening in Latin American countries has not promoted
 The upgrading of industrial structure has led to a decline in total factor productivity in Latin American countries, making it impossible to overcome the middle-income trap.

Table 3 Mediation effect test

	(y)	(y)
	yy	yy
yyyy yyy	y y yy *** (y y yy)	y y yy *** (y y yy)
yy		y yy *** (y yy)
yyyyyy	y yy *** (y yy)	y yy ** (y yy)
yyyyyy	yy	yy
yyyyyy yy	yy	yy
yy yy	yy	yy
y ²	y yy	y yy
yyyyyy	yy	yy

Note: ****, ***, ** and * represent 1%, 5% and 10% significance levels, the values in brackets are T statistics.
 Source: Calculated and drawn by the author

5 Further research

Capital account liberalization is not a question of "if", but a question of "when" and "how"

The liberalization of capital accounts in Latin American countries has inhibited the improvement of total factor productivity, causing their economies to stagnated and fell into the middle-income trap for a long time. The reason is not that capital account opening itself brings about

The negative impact is caused by the fact that the macroeconomic environment of Latin American countries does not meet the requirements and they cannot enjoy the capital account benefits.

The benefits brought by the opening of capital accounts. Some studies have found that the positive effects of capital account opening are limited to the financial system.

Countries that are relatively developed, have relatively strong creditor's rights, and have a relatively complete rule of law must develop their systems and economies.

yy yyyyyyy "yyyyyy yyyyyyy yyy yyy yyy: y yyy"y yy yyy
 yyyyyyy yy yy yy yy yy yy yy

Only when a certain threshold has been reached in terms of development can we expect to benefit from capital

account liberalization. The macroeconomic background for capital account liberalization in Latin American countries is not good, which can be explained by problems such as macroeconomic instability in the region, insufficient domestic financial development, and low savings rates. Whether capital account opening can have a positive impact on total factor productivity depends on whether it has an excellent absorptive capacity system. Therefore, this article uses the threshold regression model to further examine the impact of macroeconomic fundamentals in Latin American countries on the economic benefits of capital account opening.

(1) Threshold model setting

This article is based on the Hansen threshold regression model, taking a single threshold as an example to build a model:
$$\ln y_{it} = \beta_0 + \beta_1 \ln x_{it} + \beta_2 I(q_{it} > \tau) + \beta_3 I(\tau > y_{it})$$
 When $\beta_1 \neq \beta_2$, it means that there is a threshold characteristic, that is, when the initial conditions are in different intervals, the impact of capital account opening on total factor productivity is different. $I(\cdot)$ is an indicator function, when the condition of $q_{it} > \tau$ in the brackets is met, $I(\cdot) = 1$, otherwise it is 0. In view of the situation where there is a single threshold, on this basis, double threshold and triple threshold regression models are established.

(2) Threshold variable selection and data explanation

This article selects 4 indicators representing macroeconomic fundamentals as threshold variables for research, including trade openness (Trade), financial development level (FD), institutional quality (Ins) and exchange rate system (ER), measure trade openness by the proportion of total import and export to GDP, measure the level of financial development by the proportion of domestic private sector credit to GDP, measure the level of official corruption, the soundness of laws and regulations, the efficiency of administrative agencies, government credibility and investor protection. A comprehensive index to measure the quality of the system was constructed based on 5 indicators. Among them, the degree of official corruption, the soundness of laws and regulations, and the efficiency of administrative agencies were assigned a value of 0 - 6, and the government credibility and investor protection were assigned a value of 0 - 12. The specific method is to combine these 5 The weighted average of each indicator value is used. The larger the value, the higher the quality of the system. The data range of the exchange rate system indicator is 1 - 15. The larger the value, the greater the exchange rate flexibility. The data on trade openness and financial development come from the World Development Indicators (WDI) Institutional quality data comes from the Country Risk Guide Database (ICRG), Exchange rate regime comes from

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Finally, comparing the threshold estimates in Table 4 with the actual values of Latin American countries, it is found that the trade openness, financial development level, institutional quality and exchange rate system of Latin American countries are all within the unfavorable range, and their economic fundamentals do not meet the requirements brought about by capital account opening. Therefore, the opening of capital accounts in Latin American countries has inhibited the improvement of total factor productivity, leading to long-term falling into the middle-income trap.

Six Conclusions and Enlightenment

In the context of economic globalization, this article studies the relationship between capital account opening, total factor productivity and the middle-income trap in Latin American countries. The main conclusions include: (1) The fact that capital account opening inhibits the improvement of total factor productivity is a long-term problem for Latin American countries. One of the important reasons for falling into the middle-income trap: (2) The liberalization of capital account sub-projects has had a negative impact on the total factor productivity of Latin American countries. Direct investment has a "crowding-out effect" on Latin American domestic enterprises, and equity investment has brought false positive results. Short-term prosperity and short-term profit growth, the use of debt investment is inefficient, and debt solvency cannot be created in a timely manner. (3) The opening of capital accounts in Latin American countries has had a negative impact on the upgrading of industrial structure, which is not conducive to the improvement of total factor productivity. (4) With Macroeconomic fundamentals represented by trade openness, financial development level, institutional quality and exchange rate system are not within the dividend range of open capital accounts. Therefore, the opening of capital accounts in Latin American countries has failed to boost total factor productivity.

Based on the conclusions of this article, the following enlightenments are obtained. First, actual capital flows and statutory capital account controls should maintain consistent coordination and give full play to the positive role of capital in economic operations. Financial risks should be actively prevented, supervision of international capital should be strengthened, and control of international capital should be strengthened. Capital flow information is required to ensure that the positive impact of capital account liberalization achieves the expected results. Second, the liberalization of various capital projects should be treated with caution, and foreign capital should be reasonably guided into industries that will promote future economic development and transformation. Effective absorption of foreign capital will bring about Advanced technology, expand the radiating role of foreign investment, improve capital use efficiency, and enable capital account opening to promote the upgrading of industrial structure. Third, capital account opening must meet the basic conditions of a country. When and how to open the capital account must be Adapt to a country's macroeconomic environment and mitigate the negative impact of international capital flows.

(Editor Huang Nian)