The pattern of foreign direct investment in the late 2010s and early 2020s: under international externalities

O padrão do investimento estrangeiro direto no final da década de 2010 e início da década de 2020: sob externalidades internacionais

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Abstract
This article aims to discuss to determine the nature of foreign direct investment (FDI) flows in the late 2010s and early 2020s. International externalities affecting the FDI pattern at the global and regional levels. The research method is mainly qualitative through Document analysis. From theoretical and empirical evidence, this study shows that under the influence of international externalities, investors' motives change leading to a change in their investment strategy and thus a change in the direction of FDI inflows. Research results support the view that COVID-19 is not the only factor that changes the FDI pattern. Several key externalities have been identified such as the Sustainable Development Goals initiated by the United Nations, the New Industrial Revolution, the Policy towards Economic Nationalism, and the Coronavirus Prevention Policy as well as the post-pandemic economic recovery policies. Countries need to have strategies to attract external forces that are both consistent with the current pattern of FDI and coordinated with internal resources to develop the country. This study has contributed to the theory of FDI in modern times. Today, motivations such as exploiting factors of production, seeking strategic assets (tangible assets), and seeking efficiency in distant markets (offshoring) have gradually weakened. They are gradually being superseded by seeking efficiency in the near market (onshoring, nearshoring), and investments in service industries that will complement the autonomous motive.

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Keywords: FDI Trend. Motivation of FDI. Pattern of FDI. The 2020s. COVID-19.

Resumo
Este artigo tem como objetivo discutir a determinação da natureza dos fluxos de investimento estrangeiro direto (IED) no final da década de 2010 e início da década de 2020. Externalidades internacionais que afetam o padrão de IED nos níveis global e regional. O método de pesquisa é principalmente qualitativo através da análise documental. A partir de evidências teóricas e empíricas, este estudo mostra que, sob a influência de externalidades internacionais, os motivos dos investidores mudam, levando a uma mudança em sua estratégia de investimento e, portanto, a uma mudança na direção dos fluxos de IDE. Os resultados da pesquisa sustentam a visão de que a COVID-19 não é o único fator que altera o padrão do IDE. Várias externalidades importantes foram identificadas, como os Objetivos de Desenvolvimento Sustentável iniciados pelas Nações Unidas, a Nova Revolução Industrial, a Política de Nacionalismo Econômico e a Política de Prevenção do Coronavírus, bem como as políticas de recuperação econômica pós-pandemia. Os países precisam ter estratégias para atrair forças externas que sejam consistentes com o atual padrão de IDE e coordenadas com recursos internos para desenvolver o país. Este estudo contribuiu para a teoria do IDE nos tempos modernos. Hoje, motivações como explorar fatores de produção, buscar ativos estratégicos (ativos tangíveis) e buscar eficiência em mercados distantes (offshoring) enfraqueceram gradualmente. Eles estão gradualmente sendo substituídos pela busca de eficiência no mercado próximo (onshoring, nearshoring) e investimentos em indústrias de serviços que complementarão o motivo autônomo.


Introduction

"Pattern is a particular way in which something usually happens or is done" (Cambridge dictionary). Many studies use the word "pattern of FDI" under different expressions. It is a flow made by a "owner-specific" to a "location-specific" (Nordås, 2002); capital flows into the fields to find resources to offset the company's comparative advantage (Park, 2003); or simply investment capital flows from source countries into specific industries within a specified period of time (Blanchard et al., 2021; Dutt, 1997; Glaister & Atanasova,
The pattern of foreign direct investment in the late 2010s and early 2020s: under international externalities (Nguyễn Thanh Hoàng et al., 2021). The most common push forces that motivate enterprises to invest abroad are to seek resources, markets, efficiency, and strategic assets (Dunning & Lundan, 2008); create value for businesses, build a network of international relations/alliances, take advantage of social capital, promote core competitiveness, and accumulate international experience (Pu & Zheng, 2015). Parallelly, attractive factors owned by the host country determine the ability to pull FDI. Attractive factors have been identified in many scientific studies, including available natural resources, market size, technological level, macroeconomic environment, and institutional factors (Nguyễn Thanh Hoàng, 2022a).

Foreign direct investment (FDI) is an important strategy of enterprises, bringing in revenue from foreign markets. The global rate of return of FDI in the 10 years before the COVID-19 pandemic was about 7.4%. Which, peaked at 8% in 2010 and 8.5% in 2011; gradually decreased by 6.8% in 2018, and 5.4% and 5.3% respectively in 2020 and 2021 (Statista, 2022). Immediately after the pandemic cooled down, FDI inflows accelerated rapidly, the growth rate was 64% with a value of 1.6 trillion USD in 2021 (UNCTAD, 2022). The rise and fall of FDI flow directly depend on the business strategy of investors. These strategies depend on the internal factors of the enterprise (for example, management capacity, and financial capacity); plus external factors (e.g. government incentives or restrictions; war or global catastrophe (Hoàng & Duy, 2018). These push and pull forces are manifested within an enterprise, region/or country.

In this study, the FDI pattern is considered by FDI inflows into a number of priority sectors and regions according to enterprises’ motivations under the influence of international externalities. Next is the presentation of the research conceptual framework and Research Methods. The fourth and fifth sections are "Patterns of FDI in the Late 2010s" and "Patterns of FDI in the Early 2020s", respectively. The last but not least part is the Conclusion and Policy implications for developing countries.

Conceptual Framework

Recently, under the impact of international trade barriers (specifically, the US-China trade war), the change in the structure of FDI flows depends on the characteristics of the global value supply chain of that industry (for example, capital-intensive versus labor-intensive
industry). Supply chain characteristics include a degree of internationalization, complexity/fragmentation of GVCs; geographical distribution of value-added production (UNCTAD, 2020b). However, international externalities affecting the FDI pattern have not been fully exploited.

Observing reality in recent years, we have found that the ups and downs of FDI at the global and regional levels have been affected by many international externalities. The new industrial revolution, the policy towards economic nationalism (e.g. America first), and the fulfillment of the global sustainable development goals all have an impact on the international production configuration (UNCTAD, 2020b). When the COVID-19 pandemic occurred, many studies have shown the impact of the pandemic on FDI flows into the mode of entry (greenfield/M&A) and the sector (manufacturing/services) (Hayakawa et al., 2022). This effect was more pronounced in the primary and manufacturing sectors in emerging economies (Koçak & Barış-Tüzemen, 2022). The pandemic, to be precise, the prevention and control policies of governments seem to promote a fragmented (Gray, 2020), de-globalized world (Darius, 2021), and national economic protectionist policies. These policies also support the process of de-industrialization, shifting from production to services under the influence of digital technology. As a result, they are the externalities that affect the pattern of FDI. In addition, an uncertain world combined with the response policies to ensure national security by governments has made investors insecure with political and economic risks (Moosa & Merza, 2022). This makes FDI enterprises more cautious in deciding where to invest abroad. Thus, it can be seen that under the influence of externalities, the pattern of FDI has changed in terms of sectors as well as investment locations. This issue requires more specific and comprehensive research to provide a scientific and practical basis for business administrators and policymakers.

This article will clarify the change in FDI pattern under the impact of global externalities. Limit the cases of externalities occurring in the last five years, from the late 2010s to the early 2020s (at the time of this writing). The externalities mentioned are global sustainable development goals (SDGs), the new industrial revolution, policies towards economic nationalism, and policies on response and recovery after COVID-19. Two groups of FDI patterns before and after COVID-19 will be identified. In particular, the group of FDI models in the early 2020s will be analyzed from the academic perspective of researchers and practical evidence from experts.
Methodology

Qualitative studies seek answers to “why” and “how” questions (Kelley et al., 2017). Thus, qualitative methods provide a more thorough analysis of the meaning and trends of an existing phenomenon. One of the qualitative research methods is the synthesis and analysis of documents. This method helps interpret data to understand a phenomenon and develop empirical knowledge (Bowen, 2009; Glaser & Strauss, 2017). Any text document is a potential data source for qualitative analysis (Patton, 2014). Materials include books, newspapers, scholarly articles, and organizational reports (Morgan, 2022).

In this study, the research method is mainly qualitative through Document analysis. The content collected in documents is a useful source of data for description, interpretation, evaluation, and finding of results. Thanks to document analysis, research results have converged, corroborated, and created credibility (Bowen, 2009). The materials used are scientific articles (20 works), reports of relevant authorities (21 works), and news articles published in mainstream journals (6 works).

Patterns of FDI in the Late 2010s

4.1 The Impact of the Global Sustainable Development Goals (SDGs)

In September 2015, 193 member states of the United Nations adopted the 2030 Agenda for Sustainable Development. This program outlines a transformative long-term vision for economic, social, and environmental development (UNO, 2018). The summons is for all nations, whether developed or developing and partners, to join hands for the peace and prosperity of mankind. The focus is on eradicating poverty while improving health, education, equality, and economic growth in addition to preserving the survival of nature in terms of climate, oceans, and forests (UN, n.d.)².

A civilization program that puts dignity and equality at the heart requires the cooperation of many actors such as governments, civil society, academia, and the private sector. In particular, foreign direct investment (FDI), in these global sustainable development

commitments, is considered an important partner of countries in need of capital. FDI is not only a source of capital but also a source of quality investment, especially in technology. In Latin America and the Caribbean, countries have identified targets and indicators to realize GSDs in which the presence of FDI is indispensable. Planned FDI calls for investment in infrastructure and technology development for sustainable development services (Goal 7); encourages investment in the least developed countries, islands, and territories, which are in greatest need of capital (Goal 10); especially in the fields of hard infrastructure (for transportation such as roads, airports, and ports) and soft infrastructure (information and communication) along with advanced technology, and security sustainable energy (Goal 17) (UNO, 2018). These GSDs, on the one hand, push governments to redesign investment attraction policies towards sustainable development such as the OECD toolkit. These policies encourage greener investment, create quality jobs, improve worker skills and promote gender equality (OECD, n.d.). On the other hand, enterprises - the capital sources of the private sector, as the main actors to put policies into practice, have had a policy of prioritizing investment in less developed areas. In Africa, FDI has had a positive impact on the development of basic infrastructure, clean water, sanitation, and renewable energy; but at the expense of negative environmental impacts (Aust et al., 2020).

Thus, it can be seen that GSDs have created a driving force for the Government in attracting FDI as well as investors to invest in regions and fields to promote the realization of these goals. That has an impact on the change of FDI pattern.

4.2 The Impact of the New Industrial Revolution

Modernizing the country through industrialization is a policy that countries have pursued for generations. Over time, these policies have been changed. If industrial policies in the past carried the color of protectionism, today's industrial policies have the color of "blue ocean" or "green" which is very flexible, interactive, and integrated interdisciplinary; thus, comprehensive in solving problems for sustainable development. According to UNCTAD statistics, in the period 2008-2018, 101 countries (accounting for more than 90% of global GDP) adopted new industrial policies for development (UNCTAD, 2018). In these policies, besides the goal of protecting/promoting the growth of one or several industries and transforming their structure, they also aim at more diverse and complex goals such as building industries associated with sustainable development goals, joining/upgrading global value chains, developing the knowledge economy and competitive positioning for the new industrial
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One of the indispensable areas of new industrial policy is digital development along with the improvement of internet connectivity infrastructure and information & communication technology (ICT). Technology is fundamental to the nation's prosperity. Today, Technology is present in almost every industry from manufacturing to providing services. It is not only a tool to increase productivity in a particular industry, but also to foster the development of new industries, connecting complementary and related industries. In these policies, NIR-related applications such as new digital technologies, robotics, 3D printing, big data, and the internet of things are indispensable in the manufacturing supply chain (UNCTAD, 2017).

Of course, to realize these policies, the role of FDI cannot be ignored. FDI is a package from the capital to advanced technology, high-quality human resources, management skills, experience, knowledge, and other skills (Nguyễn Thanh Hoàng, 2022b). FDI not only contributes to capital but most importantly to technology and knowledge transfer. Therefore, host countries will have policies to attract investment in line with their national development strategies. This attraction policy certainly has an impact on the FDI patterns. As mentioned above, FDI has been/is and will be flowing strongly into industries that help increase the global value chain, knowledge economy, and NIR application.

4.3 The Impact of Policies Toward Economic Nationalism

“America First” was used by the 45th president of the United States - Donald Trump as his campaign slogan; after being elected, "America First" became the guideline for the official foreign policy of the Trump administration (Whitehouse.archives, 2017). To say that America is first, invisibly/or intentionally, divides the world into two groups: one group is the United States and the other includes the rest of the world. Consequently, Trump's policy is what scholars call economic nationalism that promotes protectionism (Guliyev, 2020). According to (List, 2011)'s argument, economic nationalism is "how a given country can achieve (under today's world conditions) prosperity, civilization, and power" (Helleiner, 2002). Trump's agenda for advancing American security and prosperity is based on five key pillars: Supporting National Security; Strengthening the US Economy; Negotiate Trade Deals; Aggressive Enforcement of U.S. Trade Law; and Reforming the Multilateral Trading System (USTR, 2018).

These policies have influenced the global FDI model. First, “Trade Policy Supports National Security Policy” with its component policies such as Building a Strong America -
focusing on developing a strong domestic economy; *Preserving National Sovereignty* - emphasizes trade policy to protect national sovereignty; *Responding to economic opponents* - to protect national interests; and *Recognizing the importance of technology* - with the ultimate goal of maintaining America's leading position in research and technology; driving innovation in the digital economy, driving the global market for online platforms. Once the US focuses on developing a strong domestic economy, this means that many macro policies are applied such as controlling inflation/recession, creating jobs, increasing labor productivity, increasing labor income, and expanding industries of production. As such, America needs investment from the private sector. Thus, it can be seen that the flow of US investment capital abroad will be limited in parallel with calling for US companies to return to invest in the home country. In addition, the priority field for investment will be the technology industry, specifically applications related to online trading platforms.

Secondly, the policy of "Strengthening the US economy" with 6 constituent policies is considered to have a direct impact on FDI flows out of the US - which is considered the number one investor in the world. In December 2017, Trump signed the "Tax Cuts and Jobs Act" (TCJA) with four goals: "reduce taxes for middle-income families, simplify for individuals, repatriate overseas income and economic growth by improving competitiveness" (USTR, 2018). Accordingly, corporate tax is cut from 35% to 21%. This tax rate is lower than the average tax rate of OECD countries of 23.9% in 2018 and 22.9% in 2021; as well as the G-20 average corporate tax rate of 26.2% and the EU-22's 22% in 2021 (OECD, 2021). With such a low tax rate, if US enterprises do business in the US, they will have great advantages in terms of cost - price - profit. This has kept companies making investments domestically (instead of investing abroad) while fostering companies that are investing abroad to return home. In addition, the policy encourages the repatriation of profits earned from overseas investments, which were previously reinvested in the host country. As a result, quality investment capital is increased in the heart of the United States, contributing to building a strong domestic US economy. Although there is debate about the effectiveness of TCJA (e.g., reducing equity, increasing benefits for wealthy business owners, and increasing incentives to move profits and operations abroad, (Herzfeld, 2021); however, there is evidence that FDI inflows are returning to the United States as well as reducing the rate of foreign investment of American companies.

“Made in the USA”, tax incentives and high-quality labor were the factors that attract US reshoring companies as well as FDI inflows into the US. Before and after TCJA, reshoring and FDI inflows were on the rise. Recorded in 2018-2019 (i.e. after TCJA comes into effect),
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Top reshoring companies were returning from China (59%), Mexico (18%), and Japan (6%). Meanwhile, leading FDI was from China (19%), Germany (18%), and Japan (15%), up to 14% of reshoring companies and 19% of FDI companies had achieved high product technology (Reshoring Initiative, 2019). In the meantime, global FDI inflows declined by 13% in 2018. One of the main reasons was that US multinational enterprises carried out large-scale repatriation of accumulated income from abroad (UNCTAD, 2019). This empirical evidence is supported by a study by (Albertus et al., 2022) that outbound investment by US multinationals decreased by an average of 15.6%.

Under the umbrella of economic protectionism, barriers in the US-China trade war have contributed to changing the FDI pattern. To avoid the high tariffs imposed by the Trump administration on some products originating from China, many predicted a shift in FDI flows out of China to neighboring countries of the US and China (UNCTAD, 2020a). However, this shift depends on the nature of each industry. Labor-intensive or non-capital-intensive industries have more flexible and diversified production networks that can be easier to move factories from one place to another (e.g. textiles and food processing). Meanwhile, capital-intensive industries such as automobile manufacturing and electronics were relatively stable; enterprises have increased production outputs and promoted domestic consumption (Blanchard et al., 2021). This shows that the pattern of FDI varies by industry and the linkages in the global supply chain of that industry are affected.

**Patterns of FDI in the Early 2020s: Theoretical and Practical Evidence**

5.1 Patterns of FDI Under the Impact of COVID-19 Pandemic Prevention Policies: UNCTAD Assessment

The above presentation shows that the impact of externalities on the FDI pattern is existing, but the COVID-19 pandemic has shaken up the already adjusted global supply chain more strongly in its structural transformation.

The coronavirus disease (COVID-19), which first occurred in China in December 2019, has rapidly spread to all continents. The governments of most countries were forced to close their borders and implement social distancing in the country to prevent and control the epidemic. These drastic measures have disrupted global supply chains; at the same time,

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3 The United Nations Conference on Trade and Development (UNCTAD) is part of the UN Secretariat.
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Global FDI dropped sharply, especially in developing countries. This shows that international economic activities (mainly international trade and investment) are a series of interwoven activities, interacting with each other and dependent on each other. COVID-19 has become a catalyst for the transformation of the international production structure based on the need to increase sustainability, that is, to increase the degree of autonomy, and reduce dependence on partners in order to reduce risk.

With four main strategies of FDI enterprises are reshoring, diversification, regionalization and replication, which will reduce cross-border investment flows (UNCTAD, 2020b); as such, it will affect the FDI model both in terms of investment destination and investment industry.

The policies of the governments of the source country and FDI enterprises are to increase the degree of autonomy and reduce dependence on partners to reduce risks. They aim to build shorter production value chains, including relocating production plants to their home countries or within the same region; focusing more on value-added industries; market access through digital technology platforms. Regionalization makes the supply chain shorter, allocating production to the same area. As a result, the scale of investment changes from a large-scale centralized industrial operation to a smaller, distributed scale, based on lean physical and high-quality digital infrastructure. This also reduces investment in tangible assets and narrows investment in the exploitation of factors of production as well as efficiency-seeking. Diversification leads to a diverse distribution of economic activities and suppliers; therefore, this will mainly affect service industries and GVC-intensive manufacturing industries (UNCTAD, 2020b).

Host countries, due to difficulty in attracting FDI, advocate boosting domestic and regional demand, while encouraging investment in infrastructure and services in the country. On the other hand, some capital funds seek value-creating projects in a number of sectors such as infrastructure, renewable energy, water and sanitation, food and agriculture, and healthcare to invest in (UNCTAD, 2020b).

The problems of the pandemic are still showing, the world is more shaken by Russia's special military operation in Ukraine lasting from February 2022 to the present. This conflict has had a strong impact on oil and food prices, seriously affecting production costs (supply side) as well as people's income (demand side - purchasing power of the market). They also significantly increase the level of risk in international investments, especially in these two countries and their surrounding regions. Economic and political instability makes FDI enterprises afraid to deploy investment (UNCTAD, 2022).
In addition to investment flows pouring into clean energy and renewable energy, in 2022, investment flows into fossil energy and the mining industry have been recorded. On the other hand, a large amount of capital from investment funds has poured into projects that create value in a number of areas such as infrastructure, water and sanitation, health care, and most of all food and agriculture to ensure food security (UNCTAD, 2020b, 2022).

5.2 Patterns of FDI Under the Impact of COVID-19 Pandemic Prevention Policies: Academic Findings

5.2.1 Destination

From the beginning of 2020 onwards, many scholars have started to study FDI flow trends after the COVID-19 pandemic.

As the world's factory, the COVID-19 pandemic has shed light on how deeply the world depends on supply chains from China. To reduce risks, countries and FDI enterprises pursue a strategy of diversifying global supply chains to avoid similar blows in the future (Doytch et al., 2021). Firms aim to diversify their suppliers to increase flexibility and resilience and protect businesses against any eventuality (Sasmita & Amirullah, 2021). This strategy includes building alternative supply chain centers (Nagy & Nguyen, 2020) or setting up a new branch in another country (Deshmukh, 2021). In addition to continuing to cooperate with existing suppliers, businesses seek new suppliers to reduce the risk of depending on a small number of suppliers (Magableh, 2021).

For supply chains with long geographical distances (for example, from the US or Europe to China or Asian countries), when there is an unexpected crisis that severely limits the means of transport, the party "demand side" is completely dependent on the "supply side". Long-distance transportation makes it difficult for businesses to control and intervene in time. Therefore, bringing supply chains back home (reshoring) or within the same region is one way to minimize the disruption of critical goods (Barbieri et al., 2020). Once the production chain returns to the home country, it will form shorter, less fragmented value chains, especially in the high-tech industry (Kalotay & Sass, 2021). Therefore, MNEs tend to establish internal companies to serve the domestic market (Sharma, 2021).

Researchers have shown that the strategy of FDI enterprises today is to diversify supply chains with multi-shoring, including offshoring/outsourcing, onshoring/reshoring, and nearshoring. Their strategy will be "A China Plus one", finding suppliers outside of China.
The alternative supplier could be a country adjacent to China such as Vietnam and some Southeast Asian countries, or neighboring countries such as Mexico and Canada in the case of the United States, and Eastern Europe suppliers for Western European investors. The selection of alternative suppliers will cause FDI to flow into where and which sectors.

5.3 Forms and Sectors

It is forecasted that from 2020, FDI inflows will generally increase in both new forms of investment or cross-border M&A. Investment capital will flow into the technology, digital and service industries; On the contrary, it will reduce investment in tangible assets and GVC intensive production (Moosa & Merza, 2022; UNCTAD, 2020b). In some specific cases, FDI inflows are recorded to increase or decrease depending on the object, region, industry, and period. In the period from the end of 2019 to the first half of 2021, FDI inflows into the host country were negatively impacted in both the manufacturing and service sectors, as well as new investment and M&A. In the opposite direction, capital flows into production from new investment sources increased in the home country (Hayakawa et al., 2022). This supports the argument for reinvesting capital back home. Similarly, in 2020, new investment in manufacturing in Central, Eastern and Southeastern Europe (CESEE) recorded a decrease of 23%. Besides, the auto industry is also forecasted to have to adjust to catch up with the development trend of technology (Adarov & Hunya, 2020). However, in one country, namely Indonesia, new investment in manufacturing increased; while investment in services, utilities, and primary industries will decline in the period 2020-2021 (Syarifuddin & Setiawan, 2022).

Preliminarily recorded in the first quarter of 2022, the number of projects entering the greenfield is 21% lower than the quarterly average in 2021; similarly, M&A is 13% lower. However, the value of cross-border M&A investment increased by 59% compared to last year (UNCTAD, 2022). This predicts in the future that cross-border M&A activities play an important role in FDI flows.

Thus, it can be seen that during the period of tightening of epidemic prevention measures (2020-2021) and after the period of easing of epidemic prevention measures (2021-2022), the pattern of FDI has changed. The most common thing is that the FDI flows differ in each industry and according to the region or can be said to depend on the economic structure of that country and region. Sectors/industries/countries with weaker economic structures (eg primary mining industry, or lack of resilience to external shocks) when unexpected events occur, are more susceptible to FDI enterprises being turned away.
5.4 Patterns of FDI under the impact of COVID-19 pandemic prevention policies: Practical evidence

5.4.1 A China plus one

A survey by Gartner, Inc. A survey of 260 global supply chain leaders in the first quarter of 2020 found that 33% have moved sourcing and manufacturing operations out of China or plan to do so by 2030. The main reasons for regionalization or localization of production are to build a more flexible network. This flexible network brings the company closer to regional supply chain needs, reducing delays and shortages in the event of disruptions (Stamford, 2020). More than two years later, in the second quarter of 2022, Gartner, Inc. conducted a survey of 403 supply chain leaders. The results show that 74% of respondents have changed the size and number of locations in their supply chain network in the past two years. Of these, 51% said the number of locations of their supply chain has increased. Such a network adjustment of the company was in response to COVID-19 restrictions, inflation, SDGs, and national industrial policy. The survey results also recorded no large-scale movement to markets other than China. The approach of FDI enterprises is still "A China Plus One". Most of the existing network in China is intact, maintaining significant sourcing or manufacturing in China; while adding new branches in other markets (Stamford, 2022).

In the case of the US enterprises in China, AmCham Shanghai conducted a survey of 338 member companies in mid-2021. Survey results from 125 manufacturing enterprises about their plans to move supply chains out of China in the next three years show that: up to 72% did not plan to move, 22.4% planned to move some production operations, 4% intended to move more than 30 percent of their production, and 1.6% will move all operations manufacturing. After a year, the 2022 China Business Report recorded the plan to move production out of China in the next three years as follows: about a third of respondents have diverted investment to other destinations, 17% are considered and 19% plan to return to the US locations. All four surveys have in turn provided evidence that although more and more FDI enterprises are looking to markets other than China, the majority still maintain their operations in China and focus on localization strategies.

At the end of 2020 Allianz SE surveyed senior executives of 1,181 companies in the US, UK, France, Germany, and Italy operating in six sectors of IT, technology and telecommunications, machinery and equipment, chemicals, energy and utilities, automotive and agricultural products on their plans to make supply chains more flexible. Survey results
on when to change suppliers, about 55% of enterprises were planning in the next 6 to 12 months and 62% of enterprises were considering the long-term. Regarding new supplier addresses, 1/3 of cases said that they were looking for countries that were already in the top 3 of their current suppliers, and about 20% of companies considered finding a supplier new at home. For business relocation, less than 15% of companies considered moving back home, and about 30% of companies supported moving production to a neighboring country; especially if the country belongs to the same customs union or Free Trade Agreement (Allianz SE, 2020).

5.4.2 Alternative suppliers

China has still great advantages, therefore, FDI enterprises only plan to move a part of their supply chain to other countries. Some destinations have more advantages such as Canada, Vietnam, Brazil, and India (Uetz et al., 2020). According to the latest record of the EU Chamber of Commerce in China in a survey at the end of the first quarter and the beginning of the second quarter of 2022 with member enterprises, about 23% of enterprises responded that they were considering transferring their current investment or planned investments out of China. Among them, the destinations under consideration could be Southeast Asia (16%), Asia-Pacific (18%), return to Europe (19%), North America (12%), and South Asia (11%) (Bloomberg, 2022).

5.4.2.1 Alternative Supply Chain Center: Mexico

Mexico is seen as a promising global manufacturing hub in the 2020s. Mexico has advantages over other countries that are close to the border with the US (near geographical distance) and is a member state of the USMCA agreement (the tax rate according to the USMCA agreement). Therefore, it is understandable that many US FDI enterprises from the US and Asia want to move to Mexico. In the first nine months of 2022, Mexico recorded a 30% increase in FDI inflows compared to the same period last year. Which, up to 44% was reinvestment, 45% was a new investment, and 11% was other transactions. The leading country in terms of investment in Mexico during this period was the US, accounting for 39% of total investment (Mahoney, 2022).
5.4.2.2 Alternative Supply Chain Center: Vietnam

If Mexico got its name due to its border with the US, Vietnam, with its border with China, is also forecasted to have the potential to become a new production center of the world. During the strictest epidemic prevention and control period, FDI inflows into Vietnam did not suffer a serious decline. Registered FDI in Vietnam in 2020 reached 79.7% compared to 2019 and skyrocketed to 125.2% in 2021 compared to 2020. The rate of implementation capital is also quite high, respectively, in 2020, 2021 and the first 9 months of 2022 are 64.9%, 60%, and 82.3%. In particular, the Investment Law 2020 which takes effect on January 1, 2021, is a breakthrough in regulating investment activities in Vietnam. In particular, the new Investment Law supports start-up investment projects and foreign investment projects in start-up activities in Vietnam. For example, large projects are licensed by the People's Committees of provinces and cities instead of the Prime Minister. Foreign investment projects related to innovative start-ups, innovation centers, research, and development centers will not need to carry out investment registration procedures (GSO, 2022).

Vietnam has the advantages of low production and living costs, an available labor force, an attractive business environment, a stable political situation, the ability to withstand shocks, and being a member of many multilateral agreements (Asia Briefing, n.d.). In addition, the macroeconomic policy of the Vietnamese government has been implemented very successfully. Economic growth in the first quarter of 2022 surpassed China at 5.03% compared to 4.8% (ANI Asia, 2022). Vietnam is forecasted to be in the group of countries with the highest growth rates in Southeast Asia in 2022 and 2023 (Forecast rate of international organizations: Moody's (8.5%), WB (7.2%), IMF (7. %), ADB (6.5%) (GSO, 2022). In addition, Vietnam was also the largest US exporter of semiconductor equipment with a value of $3.12B, 24.9% of total imports in 2020 (OEC, 2020).

5.5 Sectors and Industries

Most of the biggest value creators in recent years, regardless of industry, have one thing in common: technology plays a very important role in their business (Crawford, 2018). Based on an assessment of 840 reshoring initiatives (mainly in the US and Europe), it is concluded that robots are generally not the main driver of reshoring processes, but play a more important role when linked associated with product design and innovation (Ancarani et al., 2019; Dachs et al., 2019). Furthermore, most regions are recorded to continue to attract FDI
in the high-tech sector spanning Asia. FDI into the high-tech sector, the country’s manufacturing and service industries are expected to remain robust. Specifically, in 2020, FDI in high-tech industries (hardware, software, e-commerce and research and development in China increased by 11%) (UNCTAD, 2021). The economies of East and Southeast Asia, and India, will also continue to attract foreign investment in high-tech industries, based on market size and technology ecosystems and their cutting-edge digital (UNCTAD, 2021).

Table 1 below summarizes the change of goals and strategies of FDI enterprises under the impact of externalities that change the FDI patterns in terms of location and investment industry as presented in Section 2 and Section 3.

<table>
<thead>
<tr>
<th>Externality</th>
<th>FDI Enterprise’s Goals</th>
<th>FDI Enterprise’ Strategy</th>
<th>FDI Pattern</th>
<th>Preferred location</th>
<th>Preferred Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global sustainable development goals (SDGs)</td>
<td>Support SDGs</td>
<td>-Greener investment -Create quality jobs - Improve worker skills -Promote gender equality</td>
<td>Least developed countries, islands, and territories</td>
<td>-Infrastructure -Clean water -Sanitation -Security sustainable energy</td>
<td></td>
</tr>
<tr>
<td>(2015-2030)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>New industrial revolution (from 2008 to now)</td>
<td>Advanced technology level</td>
<td>New industrial revolution (NIR)</td>
<td>(not specific)</td>
<td>-Digital development - Improvement of internet connectivity infrastructure and information &amp; communication technology (ICT)</td>
<td></td>
</tr>
<tr>
<td>Policies toward economic nationalism (from 2017 to now)</td>
<td>Get advantages in terms of cost, price, profit (especially taxation)</td>
<td>-Reshoring -Nearshoring</td>
<td>-Home country -Same region</td>
<td>-Technology industry -Applications related to online trading platforms</td>
<td></td>
</tr>
<tr>
<td>Pandemic and resilience policy (2020-2021)</td>
<td>-Increase the degree of autonomy -Reduce dependence on partners to reduce risks</td>
<td>-Reshoring -Diversification -Regionalization -Replication</td>
<td>-Home country -Same region -China +1 -New alternative supply chain center</td>
<td>-Service industries -High-tech industries -Cross-border M&amp;A</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Externality, FDI enterprise’s Goals and Strategy, and FDI Patterns
Source: author

**Conclusion and Policy Implications**

This article has shown that over the past five years, international events have had an impact on the FDI pattern. Under the influence of international externalities, the pattern of FDI has changed according to the change in the target of FDI enterprises in their investment strategies compatible with that externality.
Given the externality of the UN agenda in developing the SDGs, FDI enterprises responded by prioritizing investment in less developed territories. Businesses spend their budgets investing in areas that support the achievement of the SDGs such as infrastructure, technology, services, energy, clean water, and sanitation. With externality from the new industrial revolution, FDI flows tend to pour into digital technology fields such as big data, IoT, AI, internet-connected systems, and digital applications. (e.g., robotics and machine learning), while supporting growth in service investment flows. With the effect of the policy towards economic nationalism, specifically in the US, a large amount of investment flows back to the home country. This flow is incentivized to invest in the technology industry, specifically applications related to online trading platforms. When the COVID-19 pandemic broke out, dependence on foreign manufacturers, especially for medical products, led the Government and FDI enterprises to share the same goal: increasing autonomy to reduce dependence and strengthening internal controls to reduce risks. Therefore, their strategy is (1) shortening the supply chain, causing investment flows to return to the country and the region; (2) diversifying the supply chain so that investment flows are distributed to more than one location (e.g China+1); and (3) investment sectors focusing on healthcare - healthcare, food - agriculture, energy, digital technology, infrastructure and service industries such as aviation and hotels. The conflict between Russia and Ukraine has disrupted global food and gas supply chains. This incident reinforces strategies to support national security. And so, the precariousness of the world and national security policy has made the possibilities of world fragmentation increasingly clear.

Research results have provided insights into current and near-future FDI trends in 2020. Understanding the true nature of FDI patterns is necessary to realize the origins of the drivers - specifically, the goals to be achieved in the international economic policies of countries (both home and host) and FDI enterprises. It is these factors that have shifted FDI inflows into which industries and where to go. This is the scientific and practical evidence for the governments to make policies to retain or attract FDI. However, instead of focusing on policies to attract investment, or relying too much on foreign capital, governments should encourage domestic investment; at the same time, focusing on improving the national competitive advantage as well as the country's absorptive capacity, especially the competitiveness of domestic enterprises.

For countries where development requires the contribution of FDI, the strategy of attracting FDI must not forget to target investors in the same region. At the same time, this
policy should invite investment in SDGs, both supporting the country's sustainable development, and in line with the global trend of FDI inflows.

In addition, countries that have been predicted by scholars and experts to benefit from the policy of reducing dependence on China, that factories will leave China to go to India, Southeast Asian countries, or Canada, and Mexico, too, should not continue to "illusion" about catching this wave of displacement.

This study has contributed to the theory of FDI in modern times. Through the overall picture of the FDI pattern in the late 2010s and early 2020s, we are well aware that the determinants of the FDI pattern have changed. Today, motivations such as exploiting factors of production, seeking strategic assets (tangible assets), and seeking efficiency in distant markets (offshoring) have gradually weakened. They are gradually being superseded by seeking efficiency in the near market (onshoring, nearshoring), and investments in service industries that will complement the autonomous motive. The strategy of FDI enterprises is to be market-oriented instead of export-oriented; towards risk reduction instead of market competition. These new orientations may predict the so-called “regional destiny”. When a country in the region is at risk, neighboring countries are also likely to experience contagion effects.

Some emerging issues need further study in the future, such as: will the activities of multinational companies be invisible to the rapid development of digital technology? Can the service industry replace the manufacturing industry? Does the national economic structure have an impact on the investment sector of FDI enterprises? In other words, whether the national economic structure can be one of the determinants of FDI or not.

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The pattern of foreign direct investment in the late 2010s and early 2020s: under international externalities


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Submetido em: 28.07.2023
Aceito em: 29.08.2023