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THE IMPACT OF INTERNATIONAL AID AND FOREIGN DIRECT INVESTMENT ON ECONOMIC GROWTH IN UKRAINE

Abstract

In wartime, the role of international assistance and foreign direct investment in ensuring Ukraine's economic sustainability has increased. The study examines foreign direct investment (FDI) and international financial assistance as key factors contributing to economic growth. The structure and dynamics of international aid in Ukraine are reviewed. A regression analysis was conducted to determine the impact of international aid (particularly, international development assistance) and FDI on the gross domestic product of Ukraine. The results of the study show a positive impact of both performance parameters, while their values are significant and significantly higher than zero. However, FDI flows have a greater impact on GDP than international development assistance. This suggests

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that international aid is important for maintaining stability, while FDI has a more significant long-term impact on Ukraine's economic development, especially in the context of integration into the global economy and attracting innovation.

Key Words:

International aid, foreign direct investment, economic growth, international trade, security, infrastructure, risks.

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Problem statement

International financial support plays an important role in ensuring the resilience of the Ukrainian economy. Thanks to this assistance, Ukraine has been able to withstand the challenges of the war, maintain macroeconomic stability, increase the NBU's reserves, stabilise the exchange rate of national currency and ensure social payments.

In the context of the ongoing full-scale war, Ukraine is heavily dependent on international assistance, which is critical to maintaining its defence capabilities, economy and humanitarian needs. In fact, the country's own budget revenues cover only defence and security expenditures. Despite the military conflict, Ukraine continues to attract foreign investment, which is essential for the country's economic development and recovery. The international community provides Ukraine with significant military assistance in the fight against the aggressor. From 24 February 2022 to 1 December 2023, Ukraine received more than USD 100 billion in military aid, of which USD 49 billion was provided by the United States and USD 48 billion by the European Union. In 2024, the volume of military aid is expected to grow further, reaching more than USD 50 billion. (Government portal, 2024).

The purpose of this article is to determine the impact of international aid and foreign direct investment on economic growth in Ukraine.

Foreign aid and foreign direct investment (FDI) are important sources of capital inflows for less developed countries, especially in times of acute crisis. The phenomenon of «development aid» became a leitmotif of global programmes after the introduction of the Marshall Plan for the reconstruction of Europe after World War II and continued to be scaled up through multilateral institutions, especially the World Bank (International Development Association – IDA) and the Organisation for Economic Cooperation and Development (Development Assistance Committee – DAC). In particular, IDA, which began operations in 1960 and brought together many donor and recipient countries, played an important role in providing international assistance within a more comprehensive planning framework than earlier programmes.

Foreign grant assistance mainly comes in the form of *Official Development Assistance* (*ODA*) from developed countries and international organisations to promote overall economic development and national welfare or to achieve sectoral objectives. It is believed that international aid not only complements other sources of development finance in low-income countries that cannot attract sufficient FDI, but can also create the necessary domestic and international preconditions for attracting FDI flows (Rao et al., 2023).

International aid has traditionally been aimed at stimulating economic growth by financing health and education infrastructure, strengthening political institutions, providing emergency relief and stabilising economies affected by supply shocks or other crises. Depending on the strength of the governance structure, the extent of market development, trade policy, and the effectiveness of monitoring and evaluation systems, if international aid is directed at generating *social overhead capital* (*SOC*), such as the construction of roads, dams, and energy infrastructure, it can also help to attract investment in the productive sectors themselves (Rao et al., 2023). By providing less developed economies with access to capital and technology, international aid can increase the marginal efficiency of capital and create conditions conducive to greater private investment and thus lead to higher levels of sustainable development (Rostow, 1991).

Despite the conceptual obviousness of this relationship, it is empirically difficult to identify a «catalytic» impact of international aid on FDI flows or economic development dynamics. There is evidence that foreign aid has almost no effect on the economic growth of recipient countries (Rajan & Subramanian, 2008).

Moreover, the role of international aid cannot be viewed from an optimistic or neutral perspective. Despite the unequivocal overall success of aid programmes aimed at stimulating post-war reconstruction in Europe (the so-called Marshall Plan) or the transformation of post-socialist Central European states, the relationship between long-term economic growth and international aid is not clear-cut. There is ample evidence that international aid has a negative impact on less developed states by exacerbating corruption, provoking civil conflicts, creating a dependency syndrome, and reducing domestic production (Djankov et al., 2008; Easterly, 2003).

A common weakness of existing research on international aid is that its effectiveness is studied by aggregating different types of aid, such as humanitarian, military, education, health, agriculture, etc. As a result, it is difficult to draw conclusions about the separate contribution of any particular type of aid to aggregate growth. Nevertheless, such a comparison is important, as it will allow policy makers and international organisations to identify the most effective types of aid to stimulate development. Among the studies that take a disaggregated approach to international aid are Dreher et al. (2008), Maruta et al. (2020), Mishra & Newhouse (2009). While these studies provide some important policy directions, the focus has been on sector-specific outcomes rather than aggregate growth. The results of the sectoral studies do not support a similar impact on the overall level of per capita income in the country.

Literature review

A large number of studies have analysed the impact of international aid on economic growth. There are studies that clearly confirm the existence of a positive relationship between the categories – the so-called «aid optimism» (Askarov & Doucouliagos, 2015; Biçen & Çoban, 2024). It is generally believed that aid is effective for less developed countries if they have an effective system of institutions and policy environment (Sethi et al., 2019). Aid can increase public investment, especially in infrastructure (Feyzioglu et al., 1998). Moreover, there is evidence that international aid is effective in reducing poverty only when combined with active public spending on infrastructure (Hamidu et al., 2020). Gomanee et al. (2005) argue that aid intensifies investment in physical and human capital, increases the ability to import capital goods and technology, and increases capital productivity and promotes endogenous technical change. Arndt et al. (2010) note the positive long-term impact of aid on economic growth, especially if the emphasis is on financing health, education and infrastructure development.

Aid pessimists argue that, contrary to the above views, aid is primarily directed to consumption rather than investment, worsening relative price structures, reducing productivity and external competitiveness, and in societies with weak institutions and excessive corruption, governments squander aid by making extremely risky investments or enriching elites (Radelet et al., 2004; Tekin, 2012). The most significant argument in this regard is that African countries have been the largest recipients of aid for decades, but have demonstrated very low economic development performance. The most important reasons for this situation are corruption and wastefulness in these countries (Asongu & Nwachukwu, 2017). In addition, continuous foreign aid makes countries dependent on it (Dash, 2021).

International aid has a mixed effect on host country FDI due to the presence of numerous channels of influence (Askarov & Doucouliagos, 2015). Kosack & Tobin (2006) argue that aid and FDI are essentially unrelated, as aid is primarily intended to support public finances and is directed towards human capital development, while FDI is directed mainly to the private sector and is more related to physical capital. Only middle-income developing countries with relatively high levels of human capital benefit from the spillovers of local knowledge that FDI can generate through the creation of skilled jobs. Low-income developing countries with relatively low human capital development generally do not benefit from the diffusion of knowledge generated by FDI, as investments are mostly directed to low-skill productive sectors. Thus, foreign aid and FDI in such countries do not replace or complement human capital development.

Many publications are also devoted to the effectiveness of international assistance in Ukraine. An overview of the structure and dynamics of international aid in Ukraine is provided in Antezza et al. (2022); Åslund (2016). The number of such works has especially increased since the beginning of Russia's full-fledged invasion of Ukraine, and the focus of research is primarily on military assistance (Marsh, 2023; Pellicciari, 2022). However, most of the works in this area are descriptive in nature. Antoniuk (2018) notes the ambiguity of the effect of international aid, which manifests itself differently in different sectors.

Research on FDI performance in Ukraine has traditionally faced a number of challenges. The lion's share of FDI is channelled to Ukraine through financial and offshore centres (such as Cyprus or the Netherlands), and thus there is a lack of information on the ultimate owners of capital. Thus, a significant share of FDI flows may be related to the circulation of domestic corporations' internal capital (Yankovyi et al., 2022). Studies on FDI efficiency are few and mostly limited to characterising capital flow trends (Kokko & Kravtsova, 2012; Lutz & Talavera, 2004). At the same time, there is evidence that firms with FDI are larger, have higher labour productivity and factor productivity. However, there is a significant sectoral diversification of efficiency, with significant productivity gains in some sectors (e.g., food and ICT) offset by neutral or even negative productivity gains in other sectors (e.g., metallurgy, mining, machinery, agriculture) (Saha et al., 2018).

Methodology

The main objective of this article is to determine the impact of international aid and foreign direct investment on Ukraine's gross domestic product. The World Development Indicator of the World Bank for the period from 1992 to 2022 was chosen as the database.

The regression model (1) is used to empirically estimate the impact of FDI and international aid:

$$GDP = \alpha_0 + \beta_1.ODA + \beta_2.FDI + \varepsilon_i \quad (1)$$

In particular, the indicator «Net official development assistance and official aid received (USD, current prices)» was used as an indicator of international aid. «Foreign direct investment, net inflows (USD, current prices)» was chosen as an indicator of FDI. The indicator «GDP (USD, current prices)» was used as the outcome variable.

The values of all model indicators were normalised in the range from 0 to 1 according to formula (2):

Normalised value = (Indicator value - Minimum value) / (Maximum value - Minimum value) (2)

A summary of the information on the output and outcome features of model (1) is presented in Table 1.

Table 1

Parameters of the regression model (1)

Model parameter	Name of the indicator in the World Development Indicator database of the World Bank	Indicator code
GDP	GDP (current US$)	NY.GDP.MKTP.CD
ODA	Net official development assistance and official aid received (current US$)	DT.ODA.OATL.CD
FDI	Foreign direct investment, net inflows (BoP, current US$)	BX.KLT.DINV.CD.WD

Source: https://databank.worldbank.org/source/world-development-indicators/

Research Results

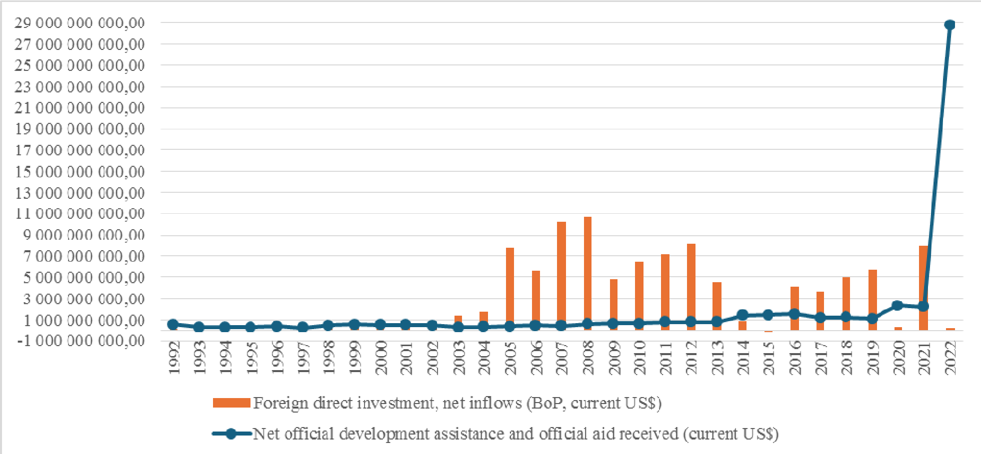
Data on the volume of international aid to Ukraine and foreign direct investment flows differ significantly according to different sources and calculation methodologies. For example, according to the World Bank, during the period of Ukraine's independence, foreign direct investment flows have traditionally exceeded official development assistance. This trend changed only during periods of crisis, when there was a significant outflow of FDI, such as in 2014-15 (the first period of Russian aggression) and 2020 (the aftermath of the Covid crisis). However, since 2022, there has been an unprecedented increase in official development assistance – the amount of aid, which has never exceeded USD 2.5 billion before, has increased by an order of magnitude and reached USD 28.7 billion. (Figure 1).

It is clear that since the beginning of Russia's full-scale aggression, Ukraine has received significant financial assistance from the international community, which has been a key factor in ensuring the resilience of the Ukrainian economy in the face of war (Freyer, 2023). This has allowed Ukraine to increase public spending by 78% in two years: from USD 55 billion in 2021 to USD 82 billion in 2020. USD in 2021 to USD 82 billion in 2022 and up to USD 1.5 billion in 2023. USD in 2022 and up to USD 98 billion in 2023. USD in 2023 (Forbes Ukraine, 2024).

The war has dramatically changed the structure of Ukraine's budget: the share of public spending in GDP has increased from 27% to 54%, with defence spending accounting for a significant portion of this (Figure 2). This underscores the critical role of the state in economic recovery during the war, and this trend is likely to continue.

Figure 1.

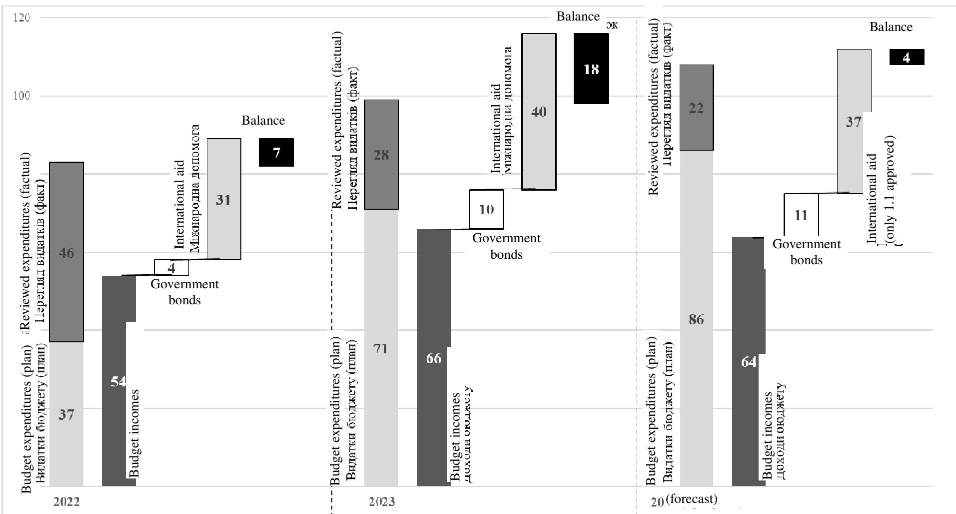
Dynamics of foreign direct investment and international aid flows to Ukraine



Source: authors' compilation based on World Bank data.

Figure 2.

Dynamics of financing the state budget of Ukraine

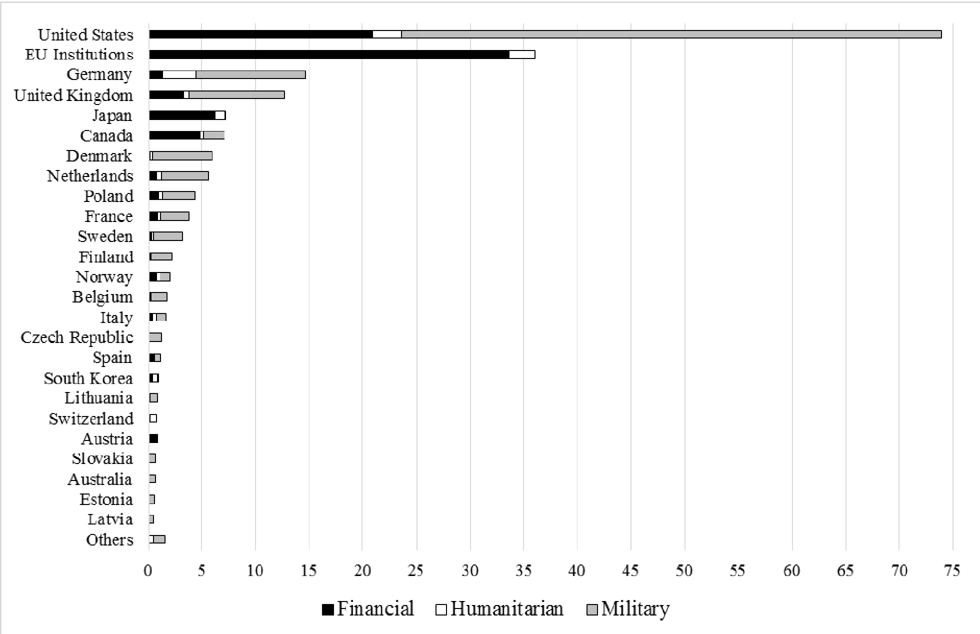


Source: Forbes Ukraine, 2024

The breakdown of official aid to Ukraine by donor and purpose is shown in Figure 3. The information is based on «The Ukraine Support Tracker» of the Kiel Institute for the World Economy for the period from 24 January 2022 to 30 April 2024. The statistics primarily include data on aid to Ukraine under bilateral agreements between the countries. The data does not include statistics on private assistance and assistance from international organisations (excluding EU institutions such as the European Commission and Council, the European Peace Fund, and the European Investment Bank).

Figure 3.

Distribution of financial, humanitarian and military assistance to Ukraine, 24.01.2022 – 30.04.2024 (billion euros)



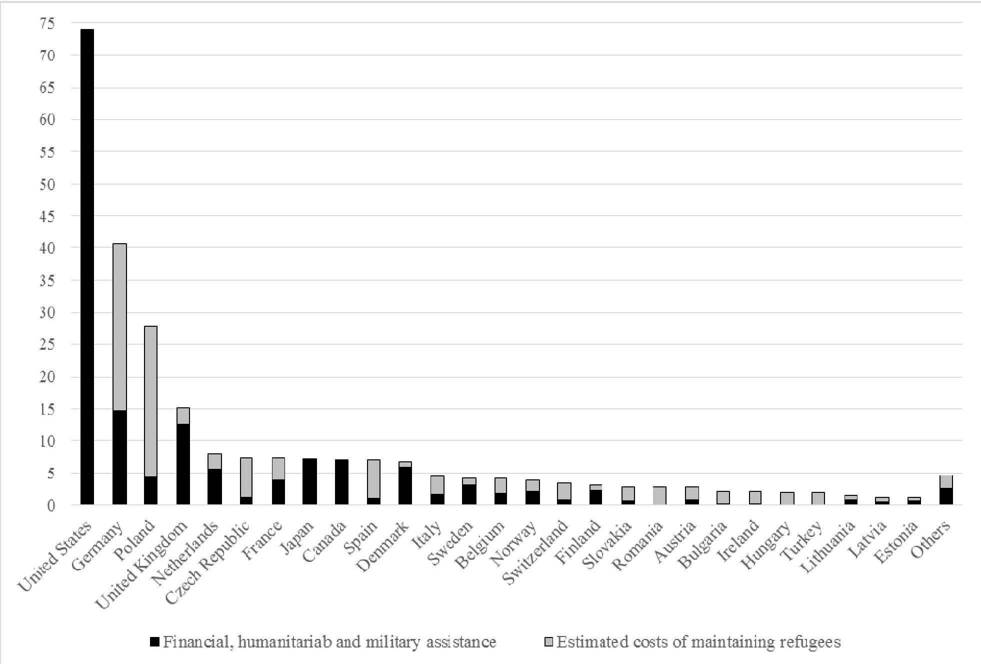
Source: Ukraine Support Tracker Data URL: https://www.ifw-kiel.de/publications/ukraine-support-tracker-data-20758/.

According to the above data, the overall leaders in terms of absolute volumes of aid are the United States (due to the largest volumes of military aid), EU institutions, Germany, the United Kingdom, Japan and Canada. However, the situation is different if we look at the relative ratio of aid provided to Ukraine to the country's GDP. In this case, the undisputed leaders in terms of the share of aid are Estonia (1.64% of GDP in 2021), Denmark (1.61%), Lithuania (1.35%), Latvia (1.29%), Finland (0.82%), and Poland (0.68%).

However, this overview does not include assistance provided to Ukrainian refugees in the host country. The leaders in this indicator are Germany (€25.95 billion), Poland (€23.62 billion), the Czech Republic (€6.15 billion) and Spain (€5.88 billion). The distribution of international bilateral assistance to Ukraine, including assistance to Ukrainian refugees, is shown in Fig. 4.

Figure 4.

Distribution of international assistance to Ukraine, including refugee assistance, 24.01.2022 – 30.04.2024 (billion euros)

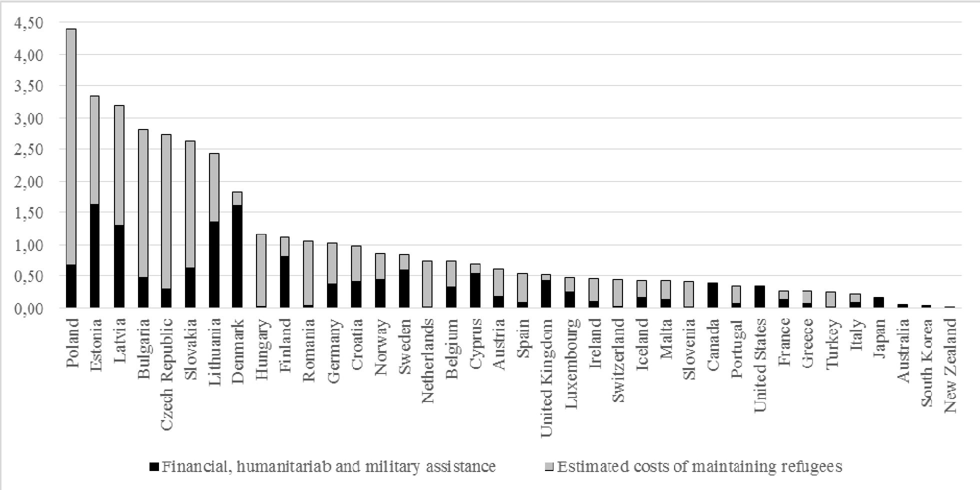


Source: Ukraine Support Tracker Data URL: https://www.ifw-kiel.de/publications/ukraine-support-tracker-data-20758/

Data on the share of international assistance to Ukraine, including refugee assistance, for the period from 24 January 2022 to 30 April 2024 relative to the donor country's GDP for 2021 are shown in Figure 5.

Figure 5.

The share of international aid to Ukraine in the donor country's GDP, %.



Source: Ukraine Support Tracker Data URL: https://www.ifw-kiel.de/publications/ukraine-support-tracker-data-20758/

Table 2 presents the results of estimating the regression model (1), which estimates the impact of FDI flows and official development assistance on the resulting GDP variable.

In general, the formed model (1) is characterised by significance with an acceptable level of standard error and a rather high predictive ability (coefficient of determination $R^2 = 0.63$). The impact of both outcome parameters was positive, significant and significantly higher than zero. In general, it can be concluded that FDI flows have a greater impact on GDP (the coefficient β was 0.8) compared to international development assistance. That is, when developing political programmes under normal conditions, the emphasis should be on stimulating investment in the economy. However, it is quite obvious that in the context of military operations, the financial system of Ukraine becomes completely dependent on the inflow of foreign aid (Lyzun & Lishchynskyy, 2014, 2020).

Table 2

Results of the regression model calculation (1)

Variable	GDP (model 1)	
	1	
	β	*SE*
α_0	0,14**	0,06
ODA	0,68***	0,21
FDI	0,80***	0,12
Multiple R	0,79	
R^2	0,63	
Standard error	0,20	
Number of observations	31	

Notes: *, **, *** - *p-values* less than 0.1, 0.05 and 0.01, respectively; SE - standard error

Thus, international assistance and foreign investment have played a key role in supporting Ukraine during the war and its subsequent recovery. Continued cooperation with international partners and attracting new investments are critical to ensuring Ukraine's economic growth and resilience.

Conclusions

International assistance played a critical role in stabilising the Ukrainian economy after the outbreak of full-scale war. Humanitarian, financial and military assistance has enabled the country to overcome acute social and economic problems, maintain the functioning of state institutions and ensure its defence capabilities. Foreign direct investment is a powerful tool for long-term economic development. They contribute to technological upgrading of production, creation of new jobs, increased competitiveness of Ukrainian enterprises and integration into global production chains.

The study showed that both factors play a significant role in the development of the country's economy, but their impact is different. International aid is usually aimed at stabilising the economic situation and supporting social programmes, while FDI is mainly aimed at developing the manufacturing sector and increasing the competitiveness of the economy. The combination of international aid and foreign direct investment creates a synergistic effect, enhancing the positive impact on economic growth.

Despite significant international assistance and investment, Ukraine is facing numerous challenges, such as the destruction of infrastructure, a decline in economic activity and a humanitarian crisis. Continued support from the international community is therefore essential to overcome these challenges and ensure the country's sustainable development.

Therefore, to achieve sustainable economic growth in Ukraine, a comprehensive policy is needed, including the effective use of international assistance to overcome the crisis and attract foreign direct investment to support long-term development.

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