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Economic divergence between Poland and Ukraine from the perspective of their balances of payments

Introduction

The history of the economic divergence of two neighbouring countries, Poland and Ukraine, is the subject of many studies, especially since Poland and Ukraine had seen similar economic performances before starting their transition (Hartwell, 2014). In 1991, both countries had comparable economic potential, measured in GDP at current prices (USD 85.5 bln in Poland vs USD 77.4 bln in Ukraine), and at purchasing power parity (PPP), Ukraine's GDP was even higher than the Polish GDP (Fig. 1).

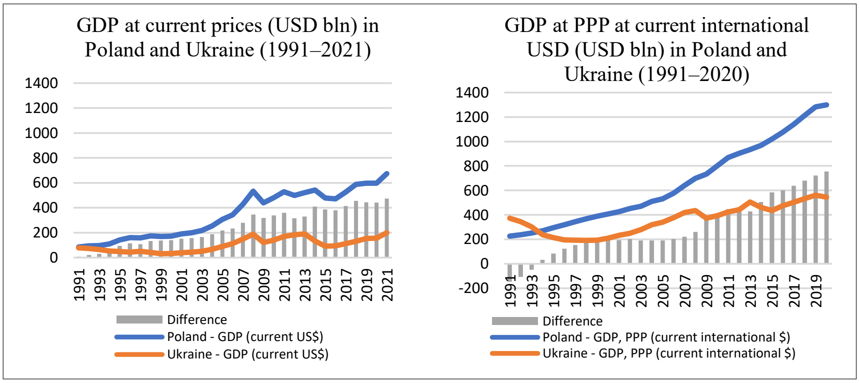

Figure 1. Dynamics of GDP at current prices and PPP in Poland and Ukraine

Source: own elaboration based on WDI (http).

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After 30 years, in 2021, final goods and services worth USD 674.1 bln were produced in Poland, while in Ukraine it was only USD 198.3 bln. This roughly corresponded to the GDP measured in current prices in Poland twenty years ago, that is, in 2002. The Polish economy has grown to be three times larger than the Ukrainian economy. Taking into account the purchasing power parity does not fundamentally change the picture, although the gap between the Polish and Ukrainian economies is narrowing. The Ukrainian GDP at PPP was lower than the Polish GDP at PPP by 58% in 2020, not over 70% as in the case of the GDP in current US dollars.

In simple terms, the strength of economies translates into the well-being of the citizens, especially since the populations of Poland and Ukraine are in general comparable[2]. Assuming that the ratio of GDP to the average population in a specific year translates roughly into the average income of the citizens, one can see rising income inequalities between the average inhabitants of the two countries. The GDP per capita in Poland, measured in current dollars, which in 1991 amounted to USD 2,235.50, had increased sevenfold by 2020 to USD 15,742.50. In Ukraine, the GDP per capita in 2020 was USD 3,523.30 (slightly less than in Poland in 1995) amounting to only 22% of the GDP per capita in Poland, while in 1991 this indicator was over 2/3 of the Polish one (Fig. 2).

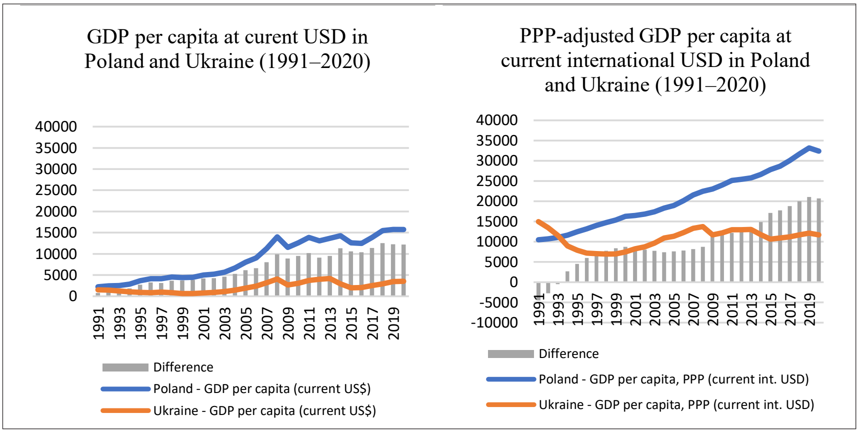

Figure 2. Dynamics of GDP per capita at current prices and PPP in Poland and Ukraine

Source: own elaboration based on WDI (http).

The GDP per capita in current prices shows, in simplified terms, the purchasing power of the population in the international arena and does not necessarily

[2] Although in 1991 there were almost 14 million more citizens of Ukraine than Polish citizens (52 million vs 38.2 million), this difference is constantly decreasing, and in mid-2021, it amounted to about 3 million (41.4 million vs 38.2 million). Data for 1991: WDI, for 2021: Eurostat and GUS (Central Statistical Office).

reflect the quality of life in a given country. The PPP-adjusted GDP per capita shows the increasing inequality between Poles and Ukrainians in income that can be spent in the local markets. Although until 1993, the GDP per capita at PPP in Ukraine was higher than in Poland, since 1994, the scissors have begun to spread to the disadvantage of Ukraine. In 2020 in Poland, the GDP per capita at PPP was 277% of this indicator in Ukraine, which meant that the Ukrainian GDP per capita in US dollars calculated based on PPP was only 36% of that in Poland.

The causes of the divergence in the economic development of Poland and Ukraine have been analysed in the literature from various perspectives. It is emphasised that the pace of restructuring of the economy and delays in institutional changes are the main reasons for the economic divergence between Poland and Ukraine (Åslund, 2013; Hartwell, 2016; Smits et al., 2019; IMF, 2021). Low investments are also a factor contributing to this divergence. Arii and Pula (2021) underline that investment in Ukraine is held back not only by the lack of strong, independent institutions but by regulated and often state or oligarch monopolised markets. Other factors that influenced the divergence of Poland and Ukraine's economic development are differences in (i) efficiency and effectiveness of financial systems (Rushchyshyn et al., 2021), (ii) R&D expenditures (Baszczak, 2020), (iii) economic, political, and geopolitical stability (Sutela, 2012; Wisła et al., 2020), and (iv) demographic trends (Smits et al., 2019; Vakhitova, Fihel, 2020). Another perspective in the literature emphasises the role of Poland's accession to the EU in the accelerated economic development of Poland (Belka, 2013; Bartz, 2015).

The paper aims to analyse the phenomenon of economic divergence between Poland and Ukraine from the perspective of the dynamics of the balances of payments. It is assumed that the differences in the paths of economic development will be reflected in current and financial flows, which are recorded in the balance of payments of both countries. The hypothesis, which is examined with the use of the econometric method, assumes a greater external openness of the Polish economy that significantly contributed to the increasing economic divergence between the two countries. The model for testing the potential determinants of the economic divergence between Poland and Ukraine resulting from their balances of payments was based on univariate linear regressions. The study was carried out based on the annual data collected from the World Bank (WDI, http) for the period 1995–2021.

The structure of the paper is as follows: After the introduction, Section 2 reviews the literature on the determinants of the economic divergence between Poland and Ukraine, then an analysis of the balances of payments of both countries is presented in the context of their different development paths, while Section 4 presents the results of the econometric studies, and Section 5 provides conclusions.

Causes of economic divergence between Poland and Ukraine – literature review

The reasons for the divergence between Poland's and Ukraine's economic activities have been the subject of many analyses. At the time of the collapse of centrally planned economy, Poland and Ukraine were characterised by a similar level of economic development, measured by GDP or GDP per capita, but there were **significant differences between Poland and Ukraine**. Ukraine is more richly endowed in terms of natural resources, climate, and soil. It had a better industrial base and far lesser foreign debt. However, Ukraine was directly under Soviet rule for much longer than Poland, which helped maintain Poland's individuality and some economic and political independence (Baszczak, 2020). For example, agriculture in Poland was less collectivised than in Ukraine, and Polish foreign trade was less dependent on the Russian market. In 1992, only 7 percent of Polish trade was related to Russia compared to over 40 percent in the case of Ukraine in 1994 (Tilford, 2019). An energy-inefficient economy was also a legacy of the past. Ukraine grew dependent on oil and gas imports from Russia[3] and remained one of the most energy-inefficient economies in the world (Sutela, 2012). Unlike Poland, Ukraine did not have its own currency or central bank. The heritage of the Soviet system also included the destruction of social capital (Kowalski, Shahmurove, 2018). Although the countries differed in many aspects at the beginning of the collapse of the Soviet system, these differences do not explain the later economic divergence between Poland and Ukraine.

The pace of restructuring the economy from centrally planned to a market economy in Poland and Ukraine is often presented as an example of the two extremes (Åslund, 2013). Poland introduced its market reforms very quickly at the end of 1989 through the beginning of 1990. Their goal was to increase the competitiveness (marketisation) of the economy through, inter alia, acceleration of privatisation, deregulation of economic activities, and opening to foreign goods and investors. Despite the economic downturn in the initial period, Poland had already returned to economic growth by the third year of its transition, i.e. in 1992. In contrast, Ukraine avoided radical reforms in the early years in favour of "fire fighting" against continuous political and macroeconomic crises (Hartwell, 2014). The reforms in Ukraine have been delayed (Smits et al., 2019), beginning on a larger scale in 1994/1995 when Ukraine managed, e.g., to cut state subsidies and liberalise prices, exchange rates, and trade. Gradual reforms were accompanied by ten years of economic decline. The reforms accelerated after 1998 when the economic imbalances were reinforced by the Russian financial crisis. Ukraine and

[3] On the other hand, Ukraine's strong position in gas transit to Europe could provide some bargaining power regarding transit fees (Sutela, 2012).

other former Soviet republics had to complete economic reforms in the neoliberal spirit (Åslund, 2009).

The economic divergence between Poland and Ukraine is often analysed from the perspective of their **institutions**. Economic liberalisation in Poland, unlike in Ukraine, was accompanied by the creation of new, effective market institutions (Bilenko, 2013). However, the economic model in Ukraine has made it possible for several regional oligarch groups to accumulate business, mass media, and political power (Lukanienko, 2013). This had some consequences in creating a poor institutional environment in the economy. Hartwell (2016) emphasises that institutions, and, more specifically, the evolution or neglect of particular institutions needed for a market economy, explain the economic divergence between Ukraine and Poland. For example, Ukrainian problems with the protection of property rights are undermined by a high level of corruption and a weak judicial system (Arii, Pula, 2001; Sutela, 2012). Even though the institutional reforms were enforced in recent years, according to the IMF (2021), they still lacked independent, transparent, and accountable institutions to contribute to the sustainability of Ukraine's advancements in anti-corruption and rule of law.

The lack of strong and independent institutions was accompanied by **low investment rates**[4]. In the 1995–2020 period, Ukraine's investment to GDP rates averaged at 20.0% and were below the average of Poland (21.3%). Arii and Pula (2021) underline that investment in Ukraine is held back by the lack of strong, independent institutions, lack of competition, and regulated and frequently monopolised markets by the state or oligarchs. This contributes to the misallocation of resources, does not create incentives to accumulate capital or attract foreign investment, and reorients exports away from commodities. According to EBA (2020), the top-five most important impediments to foreign investment are: (i) lack of trust in the judiciary, (ii) widespread corruption, (iii) monopolisation of markets and state capture by oligarchs, (iv) cumbersome and frequently changing legislation, and (v) oppressive law enforcement agencies. An effective fight against corruption was viewed as a top priority for improving the investment climate by all investors, followed by a relaunch of the judiciary and the appointment of credible reformers to top positions. According to Smits *et al*. (2019), the reasons for low investments in Ukraine are (i) low levels of FDIs, (ii) debt overhang discouraging capital formation, and (iii) large public sector imbalances that crowd out and divert limited resources.

Another factor that contributed to the divergence between the Polish and the Ukrainian economies was the **higher stability of the Polish economy**. Mykhenko

[4] Part of the difference between the investment rates in Poland and Ukraine, and the other countries of the region, can also be explained by the sectorial structure of these economies (Wisła et al., 2020).

(2007) notices greater success in achieving relatively low fluctuations in the level of prices and the exchange rate in Poland. Along with the **political and geopolitical instability** that often happened in Ukraine, it was a factor holding back domestic and foreign investment in Ukraine (Setula, 2012).

An important condition influencing economic growth, apart from access to capital accumulation, is productivity. The innovative potential of the economy in Ukraine, as measured by **R&D investment expenditure**, is deteriorating. Research and development expenditure (% of GDP) in Ukraine was higher than 1% until 2005 but it successively decreased to just 0.47% in 2018. Poland saw the opposite trend. Polish R&D investment expenditure increased from 0.5–0.6% to 1.2% in that period. Based on this data, some researchers see the fading potential of technological progress and growth in productivity as one of the factors contributing to the weaker development of the Ukrainian economy (Sutela, 2012; Wisła et al., 2020; Baszczak, 2020).

Rushchyshyn *et al.* (2021) show that Ukrainian economic convergence also depends on the **efficiency and effectiveness of its financial system**, in particular the banking sector. The results obtained in their research confirmed the large discrepancy in the development of Ukraine's banking sector and that of Poland. Chugaievska *et al.* (2020) emphasise the role of the capital market to mobilise savings and channel them into investments. The capital market was also significantly more involved in the process of the ownership transformation of the economy in Poland. Research by Mykhnenko (2007) confirms that the level of development of the financial system in Ukraine, as measured e.g. by the sum of domestic assets of commercial banks to GDP, and stock market capitalisation to GDP, was lower as compared to Poland.

Bartz (2015) highlights that Poland owes a significant portion of its economic success to its process of approaching the EU. Greater stability in Poland was achieved through costly reforms that preceded **Poland's accession to the EU** on May 1, 2004. Poland has also achieved considerable financial flows that stabilised the currency market and changed the infrastructure. The Polish EU accession also meant access to the labour, capital, and goods markets. This contributed to the inflow of FDI to Poland and a significant increase in trade with the European Union. Unlike Poland, Ukraine has faced an anti-dumping policy and protectionism from the European Union. Western European countries were afraid to enter into competition with cheaper products from Ukraine, which was a big producer of agricultural products and steel (Bartz, 2015). As a result, while Poland increased its political and economic ties with Western Europe, Ukraine was still doomed to cooperate on a larger scale with the countries of the former Soviet Union. Apart from EU membership, Poland is also a member of the North Atlantic Treaty Organization, which to a large extent frees Poland from problems related to **military security**. Over the last 25 years, Poland has spent 2% of GDP on defence per annum, on average. Ukraine maintained a similar level of spending until 2014, but along with Russia's annexation of Crimea and the fight against pro-Russian separatists in eastern Ukraine was forced to divert its resources towards the military and enlarged its military spending up to almost 4% in recent years.

The **worsening demographics**, i.e. the shrinking of population and population ageing, has a profound impact on economic growth in Ukraine (World Bank, 2019). A sharp decline in the birth rate and a huge net migration outflow have also decreased the domestic labour supply. Similar demographic processes could also be observed in Poland, especially at the time of Poland's accession to the European Union when extreme immigration liberalisation occurred. However, in recent years, we could see a transition from the trend of emigration to immigration to Poland, with Ukraine being the largest country of immigrants to Poland (Vakhitova, Fihel, 2020). The declining population results in a decline in the human capital wealth of Ukraine. One must remember, however, that human capital wealth, apart from the population size, is also a function of a population's skills, knowledge, experience, habits, and health. Human capital understood in this way is the most important resource for sustainable economic growth (Smits et al., 2019). Ukraine is worse than Poland in the statistics in many fields here, e.g. in health care and patent applications.

Poland's and Ukraine's development paths in their balances of payments

A balance of payments is a record of all current and financial transactions carried out between residents of a given country and non-residents. Current transactions include foreign trade transactions (in goods – TB, and services – SB), income associated with the production process and property income (primary income – PI), and current transfers between residents and non-residents (secondary income – SI). A capital account records transfers detailing acquisition or disposal of an asset, in which the ownership of an asset is transferred or liability is forgiven to the creditor. A financial account shows the acquisition and disposal of financial assets and liabilities. Two categories of financial transactions are classified by type of investment: foreign direct investment (cross-border investment associated with control or significant influence over the enterprise) and portfolio investment (cross-border transactions involving debt and equity securities which are not classified as FDI). Financial instruments aimed at risk transfer are included in financial derivatives and employee stock options. Foreign reserves record central bank transactions and other investments and comprise all financial transactions other than those included in FDI, portfolio investment, financial derivatives, and foreign reserves.

The concept of the balance of payments is based on accounting principles, according to which each credit entry has an opposite debit entry. Consequently, the balance of payments must always be balanced:

$$CA + CPA + EO = FA \tag{1}$$

where CA is the current account, CPA – capital account, EO – errors and omissions, and FA – financial account.

In turn, the current account and the financial account are expressed as:

$$CA = TB + SB + PI + SI \tag{2}$$

$$FA = FDI + POI + OI + DER + RES \tag{3}$$

where TB denotes the trade account, SB – service account, PI – primary income, SI – secondary income, FDI – foreign direct investment, POI – portfolio investment, OI – other investment, DER – derivatives, and R – foreign reserves[5].

Table 1 shows the development of the balances of payments of Poland and Ukraine in 1995–2021[6] and four sub-periods: (i) 1995–2000, (ii) 2001–2008, (iii) 2009–2014, and (iv) 2015–2021. The values for the individual periods are cumulative and measured in billions of current US dollars.

Table 1. Balances of payments of Poland and Ukraine in 1995–2021 (USD bln)

	UKRAINE					POLAND				
	1995–2000	2001–2008	2009–2014	2015–2021	1995–2021	1995–2000	2001–2008	2009–2014	2015–2021	1995–2021
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
CA	-2.0	-2.8	-50.4	-8.2	**-63.4**	-37.9	-121.4	-117.4	-2.1	**-278.8**
TB	-14.3	-35.4	-84.1	-60.4	**-194.1**	-59.1	-110.7	-71.7	11.1	**-230.4**
SB	12.5	19.2	33.4	14.3	**79.4**	24.0	26.3	54.5	157.6	**262.4**
PI	-4.3	-7.4	-15.8	8.1	**-19.4**	-13.9	-47.1	-98.6	-157.8	**-317.4**
SI	4.2	20.8	16.0	29.7	**70.7**	11.1	10.1	-1.7	-12.9	**6.6**
CAP	0.0	0.1	1.3	0.6	**2.0**	0.6	15.2	61.9	71.7	**149.4**
EO	-2.5	-1.5	4.0	4.7	**4.7**	3.4	-2.5	-47.1	-38.3	**-84.5**
X+M	203.0	558.2	725.9	673.1	**2,160.2**	457.3	1,549.3	2,190.1	3,454.7	**7,651.4**

[5] Detailed definitions of the individual components of the balance of payments are included in IMF (2009).

[6] The choice of the analysis period is determined by the availability of data for both countries. Although WDI has provided data for both countries since 1994, the year 1994 was omitted from further analysis due to debt forgiveness in Poland, which made it difficult to compare the balance of payments in both countries this year.

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
	UKRAINE					POLAND				
	1995–2000	2001–2008	2009–2014	2015–2021	1995–2021	1995–2000	2001–2008	2009–2014	2015–2021	1995–2021
FA	-4.4	-4.2	-45.2	-2.9	**-56.7**	-33.9	-108.7	-102.6	31.3	**-213.9**
FDI	-3.2	-37.0	-29.0	-23.9	**-93.1**	-35.5	-70.6	-53.8	-87.2	**-247.2**
FDIA	0.1	1.9	3.0	2.0	**6.9**	0.7	30.5	25.0	43.5	**99.7**
FDIL	3.2	38.9	32.0	25.9	**100.0**	36.2	101.1	78.9	130.7	**346.9**
POI	-1.9	-14.0	-15.2	-9.9	**-41.0**	-8.8	-15.8	-79.1	29.4	**-74.2**
OI+	6.2	19.6	23.5	12.1	**61.5**	-13.0	-46.2	-18.2	18.0	**-59.4**
RES	-5.6	27.2	-24.6	18.8	**15.8**	23.4	23.9	48.5	71.1	**166.9**

OI+ – other investment plus derivatives

Source: own elaboration based on WDI (http).

The analysis of the data contained in Table 1 shows that there are some significant differences in the balances of payments of Poland and Ukraine, which say a lot about their paths of economic development.

Exports and imports. The foreign trade turnover in Poland (USD 7,651 bln) proves greater openness of Poland's economy and its ability to compete on international markets, especially in the European Union. In the case of Ukraine, the values of exports and imports were lower (USD 2,160 bln) and more volatile due to its structure, greater share of the former Soviet Union countries, and greater sensitivity to price changes on world markets.

Two periods are of great importance in the comparative analysis of the foreign trade between Poland and Ukraine. First, the period in which Poland's accession to the European Union took place was characterised by a sharp increase in Polish foreign trade. In 2001–2008, Polish exports and imports were three times higher than the exports and imports of Ukraine. Second, in the period of increased geopolitical risk as a result of Russia's annexation of Crimea and the beginning of an armed conflict in the Donbas, Ukraine's foreign trade turnover decreased, while in Poland, foreign trade was developing very fast. As a result, in 2015–2021, the foreign trade turnover in Poland was five times higher than in Ukraine.

When analysing the dynamics of foreign trade in Poland and Ukraine, attention should also be paid to their balances of goods and services. Despite some similarities in the aggregate values for 1995–2021 (surpluses in the services accounts and deficits in the trade accounts in both countries), it is worth paying attention to (i) improving foreign trade balances in Poland after the outbreak of the global financial crisis, and (ii) cumulative surplus in the balance of goods and services in Poland for the whole period (USD 42 bln) as opposed to Ukraine (USD -114.7 bln). These trends are clearly visible in Figure 3, where the dynamics of all components of the Polish and Ukrainian current accounts in relation to their GDPs are presented.

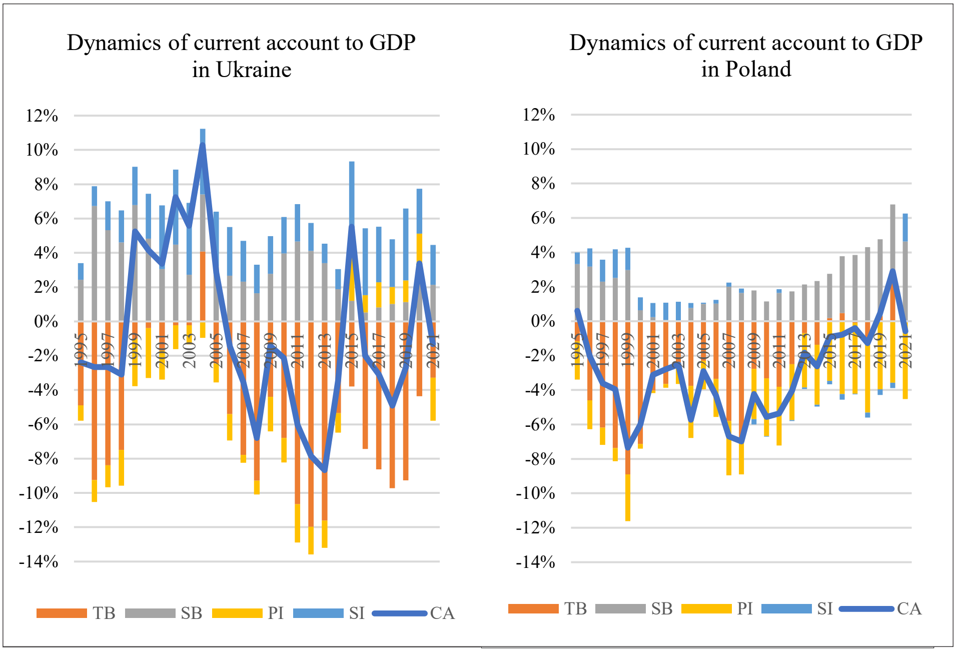

Figure 3. Dynamics of current accounts in relation to GDP in Poland and Ukraine in 1995–2021

Source: own elaboration based on WDI (http).

Primary account. Poland's primary income was negative and was decreasing throughout the entire period. Net income paid to non-residents amounted to USD -317.4 bln and was more than 16 times higher than in Ukraine. What is more, the primary income in Ukraine shifted even to a surplus in 2015–2021. This was largely due to a significant decrease in dividend and interest outflows as a result of a ban on dividend repatriation and the currency crises starting in late 2014 (Balabushko et al., 2017). The primary income is largely a function of the international investment position (IIP) which reflects the accumulated value of resident-owned foreign assets and residents' liabilities to residents of other countries. Table 2 shows the IIPs of Poland and Ukraine at the end of 2021. The net international investment position of Poland was negative at USD -257 bln, whereas in Ukraine, it was only USD -24.6 bln.

Table 2. International investment positions of Poland and Ukraine at the end of 2021 (USD bln)

2021	Poland	Ukraine
Net foreign assets	**378.860**	**159.099**
FDI – Assets	79.922	3.885
Reserves	166.049	30.941
Net foreign liabilities	**636.308**	**183.710**
FDI – Liabilities	322.682	68.343
Net International Investment Position	**-257.448**	**-24.611**

Source: own elaboration based on WDI (http).

Secondary account. For Ukraine, transfers from abroad have become the primary source of external capital, especially since the beginning of the Russian aggression against Ukraine in 2014. The cumulative inflows of transfers in 1995–2021 was USD 70.7 bln but only in 2015–2021 it was USD 29.7 bln. In the case of Poland, although the accumulated value of secondary accounts is positive, this account shows a constant deficit in recent years. Higher current transfers of the government sector related to settlements with the European Union are mainly responsible for the change in the trend.

Capital account. The aggregate balances of the capital account in Poland amounted to USD 149.4 bln against only USD 2 bln in Ukraine. The capital account in Poland was dominated by transfers of funds from the EU related to the acquisition and disposal of non-produced and non-financial assets (Andrzejczak, 2019). The EU funds recorded in the capital account finance investments into roads, highways, bridges, schools, hospitals, etc. (NBP, 2018).

Financial flows. Foreign capital was flowing into Poland in greater amounts than into Ukraine, especially until 2014. The cumulative balance of the financial accounts in 1995–2014 in Poland amounted to USD -245.2 bln, while in Ukraine it was USD -59.6 bln. The lower inflow of investments into Ukraine in 2015–2021 was related mainly to the increased geopolitical risk and a weaker economic situation in that country. In Poland, in turn, as a result of a significant improvement in the current account balances in parallel with the inflows of EU funds, the financial account switched to a positive balance (a total of USD 31.3 bln). However, the main Polish investor investing abroad was the National Bank of Poland (NBP), which invested its foreign currency reserves. The dynamics and directions of the financial flows in Ukraine and Poland versus the behaviour of their current accounts are shown in Figure 4.

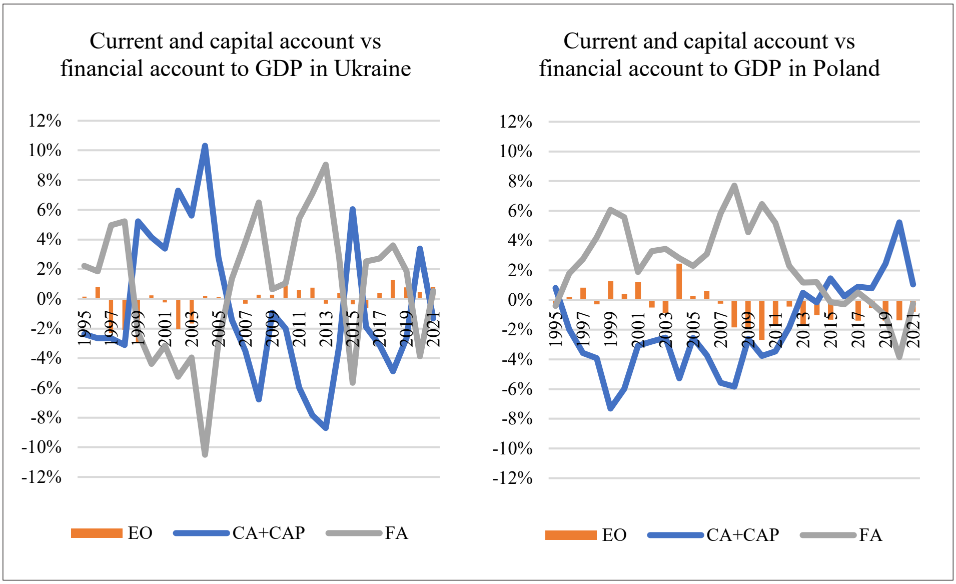

Figure 4. Dynamics of current and capital account vs financial account in Poland and Ukraine in 1995–2021

Source: own elaboration based on WDI (http).

Foreign direct investments. FDIs played a greater role in Poland than in Ukraine. The FDI account prevailed in the structure of the Polish financial account. The net balance of FDI cumulated in 1995–2021 amounted to USD 247.2 bln in Poland, compared to USD -93.1 bln in Ukraine. The cumulative value of FDI liabilities (a proxy for FDI inflows) in Poland reached USD 346.9 bln, whereas in Ukraine it was USD 100 bln; more than three times less. While the investments of Ukrainian residents were insignificant (the cumulative balance of FDI assets – a proxy for FDI outflows, was USD 6.9 bln in 1995–2021), Polish residents invested USD 99.7 bln abroad in the same period. The differences in the scale of FDI investments in both countries are confirmed by the data from the International Investment Position presented in Table 2.

In the analysis of the FDI dynamics, the phase of the transformation process (1995–2000) is particularly noteworthy, where the cumulative FDI inflows to Ukraine amounted to only USD 3.2 bln. In Poland, it was nearly 12 times more (USD 36.2 bln). Capital in the form of FDI began to flow into Ukraine in a wider stream in the years 2001–2008. However, most FDI went to closed-sector services such as retail trade and finance, and real estate, which suffered heavy losses during the Global Financial Crises[7]. A higher geopolitical risk

[7] In 2009, there was a sharp recession in Ukraine. GDP fell then by nearly 15%.

and economic slowdown[8] further enhanced by the depreciation of the hryvnia (UAH) chilled foreign investments in 2015–2020. In Poland at that time, investments were flowing in a wide stream. In 2015–2020, the inflow of direct investments to Poland amounted to USD 130.7 bln, while in Ukraine it was only USD 25.9 bln.

Portfolio investments and other investments, in which debt investments predominate, are often called "hot money" due to their often short-term nature and greater volatility. They played a smaller, but also different role than FDI in the financial account in both countries. In Poland, the accumulated portfolio investments and other investment accounts totalled USD -133.6 bln. In 2015–2021, both portfolio investments and other investment accounts had surpluses related to a large extent to non-resident divestments in Poland. In Ukraine, non-resident portfolio investments flowed generally throughout the entire period (except for periods of increased tensions in the Ukrainian economy, such as in 2008 and 2014), largely financing state budget deficits. Other investments, mostly including deposits, loans, and credits, behaved in the opposite way, outflowing from Ukraine practically throughout the entire analysed period (exceptions are 2007–2008, 2013, and 2017–2018). Table 2 confirms that for Poland net foreign liabilities consist mainly of FDI (USD 322.7 bn). In Ukraine, however, most of them are less stable portfolio and other investments. As a result, Ukraine's economy is much more vulnerable to changes in market sentiment.

Foreign reserves. At the end of 2021, Poland's foreign reserves amounted to USD 166 bln, while in Ukraine it was USD 30.9 bln. As a result of the stable inflows of capital to Poland, largely in the form of EU transfers and FDI, the Polish central bank was gradually increasing its foreign reserves, which stabilised the economy and, in particular, made it possible to control the exchange rate risk. This could be seen at times of greater pressure on the depreciation of the zloty (e.g. in 2001 and 2008), when the NBP was forced to intervene in the exchange market for a short time, resulting in a reduction in its foreign reserves.

In Ukraine, the balance of foreign exchange reserves was unstable. The largest value of Ukraine's foreign exchange reserves was in August 2008 (USD 37.3 bln). In 2021, it was USD 6.4 bln less. Given the frequent UAH crises, foreign exchange reserves were used more often and on a larger scale by the Ukrainian Central Bank than by the NBP to intervene in the forex market. For example, in 2008–2009, the hryvnia weakened by 60%, and, due to high external indebtedness, the National Bank of Ukraine spent 36% of its foreign reserves to support its currency. Against the depletion of its foreign reserves, Ukraine was forced to request exceptional access to financing from the IMF.

[8] GDP in Ukraine fell cumulative by 16% in 2014–2015.

Economic divergence between Poland and Ukraine and the dynamics of their balances of payments – econometric research

This part of the paper presents the results of econometric research, the aim of which was to identify the correlation between the dynamics of the balances of payments and the economic divergence between Poland and Ukraine. The study was carried out based on the annual data collected from the World Bank (WDI) for the period 1995–2001.

The model for testing the potential determinants of economic divergence between Poland and Ukraine resulting from their balances of payments is based on univariate linear regressions measuring the relationship between a dependent variable representing differences in GDP measured in current USD between Poland and Ukraine, and one independent variable taken from a set of components of the balance of payments. Given the dataset of dependent variables, y_i, and the explanatory variables, x_i, the model applied is a simple linear regression.

$$y_i = \alpha + \beta x_i + \varepsilon_i \tag{4}$$

where ε_i is the random component of the regression and x_i represents a dataset of i independent variables which are the components of the balance of payments according to Formulas (2–3). The ordinary least squares method (OLS) was taken to estimate the parameters α (the constant term) and β (the coefficient term). The regression results are presented in Table 3. First, the estimated coefficients are depicted, second, *T*-statistic to test that a coefficient is equal to zero is shown in brackets, and next, *P*-values which are evidence to reject the hypothesis of a zero coefficient are marked with asterisks depending on the significance level (*** – p<0.01, ** – p<0.05, * – p<0.10).

Table 3. Regression results

Independent variables	β Coefficients
1	*2*
CA/PL – CA/UKR	**2.716 (1.073)**
X+M/PL – X+M/UKR	**0.839 (21.580) *** **
TB/PL – TB/UKR	**7.293 (3.819) *** **
SB/PL – SB/UKR	**10.957 (6.462) *** **
PI/PL – PI/UKR	**-12.983 (-16.494) *** **
SI/PL – SI/UKR	**-38.304 (-9.967) *** **
CAP/PL – CA/PUKR	**22.345 (11.361) *** **

1	*2*
FA/PL – FA/UKR	2.839 (1.319)
FDI/PL – FDI/UKR	-7.073 (-1.603)
FDIA/PL – FDIA/UKR	**16.584 (3.05) *****
FDIL/PL – FDIL/UKR	**10.575 (3.379)*****
POI/PL – POI/UKR	2.642 (1.001)
OI+PL – OI+UKR	0.031 (0.013)
RES/PL – RES/UKR	4.637 (1.649)
n	27

Source: own elaboration.

The regression analysis generally confirms the observations made in the third section. There is a significant relationship between the size of the economic divergence between Poland and Ukraine and the openness of the economy described by the sum of exports and imports. All components of the current account are also highly significant at 1%. The increasing differences in the trade and services balances between Poland and Ukraine favoured the increasing economic divergence between these countries. In turn, the differences in primary and secondary accounts between both countries were negatively correlated with the level of divergence between Poland and Ukraine. This confirms previous observations that the greater differences between the GDP of Poland and Ukraine occurred despite the deteriorating primary account in Poland and despite the large inflows of current transfers recorded in the secondary account in Ukraine. The inflow of EU transfers into Poland recorded on the capital account is also statistically significant. It accompanies the increasing economic divergence between Poland and Ukraine. As for the inflow of foreign capital, which is recorded in the financial account of the balance of payments, attention should be paid to the statistical significance of the direct investment flows and, in general, the insignificance of other financial account balances. The higher economic divergence between Poland and Ukraine is accompanied by a higher difference in FDI flowing to these countries, but also by a growing disproportion in FDI by Polish and Ukrainian residents abroad.

Conclusion

Since the collapse of the Soviet Union, the two neighbouring countries have been developing in two different ways. The Polish economy has become more export- and foreign investment-oriented. Foreign capital was used as leverage for development, supplementing insufficient domestic savings with foreign savings, which resulted in an increase in domestic investments. The majority of FDI was directed to export-oriented industries and Poland has become a kind of production platform for exports. As a consequence, Poland achieved more sustainable development, but at the cost of a higher dependence on foreign investors. The Polish development path is presented in Figure 5 and is very visible in the balance of payments. It is characterised by (i) an increasing value of exports and imports (X+M), (ii) an improving balance of trade in goods and services (TB, SB), (iii) relatively large capital account surpluses in which EU transfers allocated to infrastructure are recorded (CAP), (iv) a growing inflow of foreign capital mainly in the form of FDIs (FDI), and (v) practically constantly growing foreign exchange reserves (RES). A consequence of the adopted development path is an increase in foreign liabilities and the deteriorating primary account (PI). However, this is not a significant problem concerning the external stability of the Polish economy, as long as the primary income is largely related to dividends and retained profits of foreign FDI companies that have invested in Poland, of which a very large number are export-oriented.

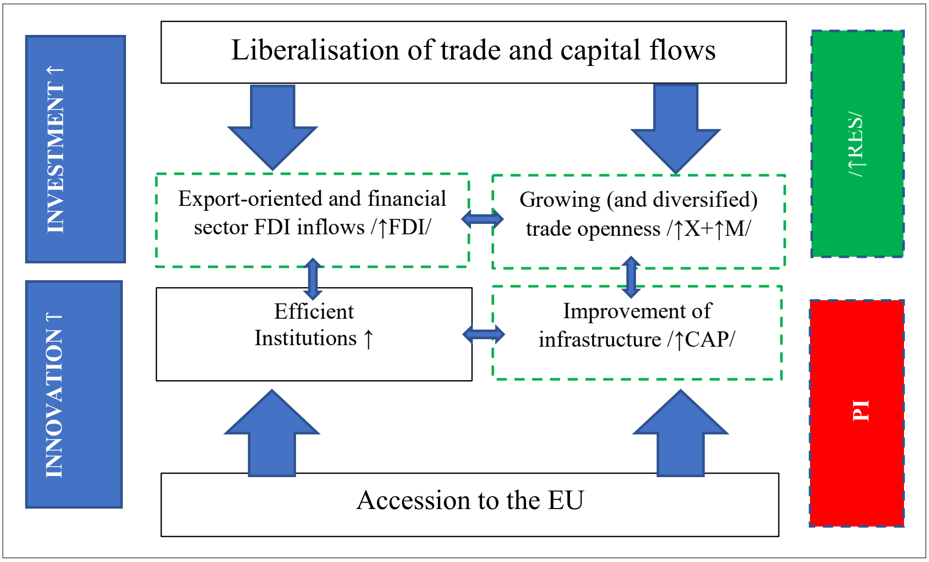

Figure 5. Poland's development strategy

Source: own elaboration.

The shock that hit Ukraine with the escalation of the war in 2022 offers an opportunity for political and social consent to broad reforms and greater ties with foreign capital. There is no need to invent a new recipe for success. Ukraine can, in principle, follow the Polish economic path.

First, the strategy for development in Ukraine should be based more on FDIs which should facilitate modernisation of its economy[9]. Unlike Poland, in the past, Ukraine relied more on short-term capital flows (POI) which were increasing the frequently unsustainable public and private consumption. FDIs should improve access to capital, supplementing limited domestic savings and leading to increasing investment[10]. The oligarchic- and state-favoured non-market structure of the economy can also be counterbalanced by an economy more exposed to foreign competition and investment.

Second, sustainable growth, which has seen a high growth rate over a long period, also needs an institutional umbrella and preparation for accession to the EU. The European Union should be a particularly important economic partner for Ukraine. Previous attempts to strengthen ties with the EU led to a Russian-Ukrainian trade and energy war, and then military aggression against Ukraine. Let us hope that this time, after the war with Russia, Ukraine will take advantage of the geopolitical situation and the sympathy of the entire democratic world, and will strengthen ties with the European Union[11], and then repeat Poland's economic success which took place with the significant support of foreign capital.

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[9] Apart from external factors on which Ukraine has a limited influence, i.e. geopolitical situations, an increase in capital and trade flows is also only possible if certain internal conditions are met. With the exception of the media, foreign capital in Ukraine is more restricted than in Poland (Smits et al., 2019). Lowering the restrictions on foreign capital would contribute to a greater opening of the large consumer market in Ukraine, and also to an increase in competitiveness.

[10] More on the potential economic impact of FDI on Ukraine: (Saha et al., 2018).

[11] Ukraine's integration with the EU has many advocates both in Ukraine and abroad. A few days after Russia invaded Ukraine in 2022, Ukraine applied for EU membership. In June, 2022, the European Council granted Ukraine the status of a candidate for the European Union accession.

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Summary

The paper aims to look at the phenomenon of the economic divergence between Poland and Ukraine from the perspective of the dynamics of the balances of payments in both countries. It is assumed that the differences in the paths of economic development are reflected in the current and financial flows, which are recorded in their balances of payments.

The model for testing the potential determinants of economic divergence between Poland and Ukraine resulting from their balances of payments was based on univariate linear regressions. The study was carried out based on the annual data collected from the World Bank (WDI) for the period 1995–2001.

A significant positive relationship between the dynamics of the economic divergence between Poland and Ukraine was found in the dynamics of (i) trade openness, (ii) trade and services balances, (iii) capital transfers, (iv) FDI liabilities – a proxy for FDI inflows, and (v) FDI assets – a proxy for direct investments carried out by residents. The dynamics of the differences in the primary and secondary accounts between both countries were negatively correlated with the level of divergence between Poland and Ukraine. The larger differences between the GDPs of Poland and Ukraine occurred despite the deteriorating primary account in Poland and despite the large inflows of current transfers recorded in the secondary account in Ukraine.

Keywords: Poland-Ukraine economic divergence, economic growth of Poland and Ukraine, balance of payments, FDI.

Dywergencja gospodarcza Polski i Ukrainy z perspektywy ich bilansów płatniczych

Streszczenie

Artykuł ma na celu analizę zjawiska dywergencji gospodarczej Polski i Ukrainy z perspektywy dynamiki bilansów płatniczych obu krajów. W artykule zakłada się, że różnice w ścieżkach rozwoju gospodarczego znajdują odzwierciedlenie w przepływach bieżących i finansowych, które są rejestrowane w bilansach płatniczych.

Testowanie potencjalnych determinant dywergencji gospodarczej pomiędzy Polską a Ukrainą wynikających z ich bilansów płatniczych zostało oparte na jednowymiarowych regresjach liniowych. Badanie przeprowadzono na podstawie rocznych danych pozyskanych z Banku Światowego (WDI) za lata 1995–2001.

Stwierdzono istotny pozytywny związek między dynamiką dywergencji gospodarczej między Polską a Ukrainą a dynamiką (i) otwartości handlowej, (ii) sald handlu i usług, (iii) transferów kapitałowych, (iv) zobowiązań z tytułu bezpośrednich inwestycji zagranicznych oraz (v) aktywów z tytułu bezpośrednich inwestycji zagranicznych. Dynamika różnic w rachunkach pierwotnych i wtórnych między obydwoma krajami była z kolei ujemnie skorelowana z poziomem dywergencji między Polską a Ukrainą. Większe różnice między PKB Polski i Ukrainy wystąpiły pomimo pogarszającego się stanu rachunku pierwotnego w Polsce i pomimo dużego napływu transferów bieżących odnotowanych na rachunku wtórnym na Ukrainie.

Słowa kluczowe: dywergencja ekonomiczna pomiędzy Polską i Ukrainą, wzrost gospodarczy Polski i Ukrainy, bilans płatniczy, inwestycje bezpośrednie.

JEL: F43, F21, F15.