



CHANGES IN SECONDARY INCOME ACCOUNTS IN CENTRAL AND EAST EUROPEAN COUNTRIES

MONIKA ANDRZEJCZAK^a

^a *Poznań University of Economics and Business, Poland*

ABSTRACT

Personal transfers, an important part of secondary income, are the result of temporary or permanent people's movement to other economies. They have a significant role in the process of income distribution among the economies. European integration process led to the creation of an internal common market, which affected people's migration and the amount of personal transfers. There is a need to verify the direction and the extent of this phenomenon, especially in the case of joining countries with different domestic income levels. The examination covered Central and East European countries, the scope of the research covered the changes in secondary income accounts according to factors pointed in literature: levels of domestic income and migration, and additional, membership in Europe-an Union and exchange rate regimes. The aim of this research is to find the rules and pat-terns of their relations.

INTRODUCTION

The rules according to which the balance of payments is created base on a double-entry basis. Each transaction is recorded as consisting of two equal and opposite entries – credit and debit. These entries reflect the inflow and outflow element of each exchange (IMF, 2009a, p. 10).

Transactions showed in the balance of payments are the result of an exchange or transfer. An exchange encompasses providing something of economic value in return for a corresponding item of economic value. A transfer is a kind of entry that involves providing something of economic value without the corresponding return (IMF, 2009a, p. 207). These make transfers specific entries in balance of payments - without corresponding exchange. The double-entry rules impose the opposite entry and this creates the recorded transfer in the balance of payments. Sometimes it is not easy to draw a line

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between transfers and exchanges: some transactions which qualify as transfers may include a promise of future benefits, like nonlife insurance premiums.

According to the International Monetary Fund (IMF) rules, all balance of payments transfers are categorised as either capital (recorded on the capital account) or current (recorded on the primary or secondary account). The scope of this article is focused on transfers creating the secondary income, especially the personal transfers (IMF, 2009a, pp. 207-210).

The secondary income account shows current transfers between residents and non-residents in cash or in kind. They, with the gross domestic product, affect gross national disposable income through their role in the process of income distribution between the economies (IMF, 2009a, p. 80). They directly influence the consumption of goods and services. The main components of the secondary income account (IMF, 2009a, pp. 208-215):

- personal transfers, including all paid or receivable household's current transfers in cash or in kind, regardless of the kind of income and relationships, made between residents and non-residents,
- other transfers, like current taxes on income, wealth, etc.; social contributions and benefits, net premiums on nonlife insurance and standardized guarantees, nonlife insurance claims and calls under standardized guarantees, current international cooperation and miscellaneous current transfers.

The balance of secondary income account is counted as the difference between total credits (inflows) and total debit (outflows).

Personal transfers are an important component of the secondary income account, their significant part are workers' remittances (Capelli & Vaggi, 2016, pp.223-239).

Table 1. The share of workers' remittances in the secondary income credits in CEE countries in years 2011-2017

Country	2011	2012	2013	2014	2015	2016	2017
Bulgaria	0.35	0.30	0.28	0.36	0.35	0.38	0.47
Croatia	0.48	0.48	0.46	0.45	0.42	0.41	0.36
Czech Rep.	0.23	0.25	0.20	0.19	0.20	0.26	0.34
Estonia	0.15	0.20	0.26	0.22	0.22	0.23	0.20
Lithuania	0.72	0.75	0.80	0.79	0.73	0.75	0.74
Latvia	0.57	0.57	0.58	0.56	0.59	0.55	0.52
Poland	0.46	0.45	0.46	0.46	0.54	0.55	0.50
Romania	0.46	0.48	0.39	0.44	0.38	0.49	0.63
Slovakia	0.00	0.00	0.00	0.43	0.52	0.68	0.37
Slovenia	0.02	0.03	0.05	0.06	0.08	0.07	0.06
Hungary	0.18	0.23	0.23	0.27	0.28	0.41	0.32

Source: own calculations based on the Eurostat data.

Workers' remittances in some countries constituted the majority of the secondary income credits (Table 1). Funds sent abroad by individuals, which can be recorded as a personal transfer, are the result of temporary or permanent migration. These funds are composed of payments made formally, like bank deposits, or informally, like cash or things which can be transported abroad. There are many economies in which personal transfers can represent the major source of funds and be higher than formal subsidies or financial flows from direct investments. Personal transfers can also have an impact on poverty reduction and constitute a source of financing economy growth in countries re-

ceiving them (IMF, 2009a, p. 272). Migrants invest in their country of origin regardless of whether they are willing to be back or not. Sometimes this kind of relationship between migrants and their countries spreads further on the following generation of migrations. Funds sent abroad can have various forms, like financial investments or property. Financial investments are a part of the financial account in the balance of payments, but they can be an implication of previous and future personal transfers, like personal remittances sent by workers residing abroad, who have joint bank accounts with relatives in their home countries enabling them to invest abroad, or when a non-resident buys the flat where his or her relatives live rent-free (IMF, 2009a, p. 294). The aforementioned arguments show the important role of secondary income transfers, especially personal transfers, in creating the future balance of payments accounts and national income.

Justification and the aim of the research

The changes in secondary income account affect, together with the changes in the gross domestic product, the changes in national income level (IMF, 2009a, p. 209; Lequiller & Blades, 2014, pp. 129-164; NBP, 2017, p. 19; Błaszczuk & Sawicki, 2017, pp. 20-39). There is a feedback among them. Migrants arriving from poorer countries to richer ones make transfers sending their income to relatives staying in the countries of their origin. These transfers are the result of labour migration (Taslim, 1996, pp. 7-11; Reinke, 2007, p. 7; Felbermayr, Grossmann & Kohler, 2012, pp. 31-69). This phenomenon seems to be very interesting in the case of integration between poorer and richer countries. Hence the choice of the area – the Central and Eastern Europe Countries having accessed the European Union. These are: Czech Republic (CZ), Estonia (EE), Lithuania (LT), Latvia (LV), Poland (PL), Slovakia (SK), Slovenia (SI) and Hungary (HU) since 2004, then - Bulgaria (BG) and Romania (RO) in 2007 and Croatia (HR) in 2013, referred to as the CEE-11. Mentioned countries became not only members of the EU, but also a part of the European common market which guarantees free movement of goods, capital, services and labour (Treaty on European Union and the Treaty on the Functioning of the European Union). The change of rules concerning the international exchange after the date of accession undeniably had an impact on the balance of payments accounts. This is the reason why also the EU accession has been taken into consideration as a factor which can change the secondary account balance (Wyżnikiewicz, 2007, pp. 32-53; Śliwiński, 2011, pp. 79-182; Hegedus & Kiss, 2014, pp. 87-94).

The EU integration process was extended in the case of some CEE-11 countries into monetary integration - their exchange rates were at first fixed to euro, then exchanged. In fixed exchange regimes the external balance of economy is restored through the change of official reserve assets. In floating exchange rate regimes the external balance is restored through the change of the exchange rate. Hence, the countries outside the euro zone, which functioned with the floating exchange rate, had more possibilities to use their exchange rate to react during the crisis or an external imbalance (Polański, 2014, pp. 86-87; Brzozowski, Śliwiński & Tchorek, 2014, pp. 40-57). This could have an impact on their secondary income balance and this factor has also been taken into consideration.

To sum up, the research object concerns the changes of secondary income accounts, such as credit – inflow of the transfers, debit – outflow of the transfers and balance – the difference between credit and debit. The subject of the research are the CEE-11 countries. The aim of this research is the identification of relationships between the changes of secondary income accounts and the following: country's income level (measured with gross domestic product per capita), net migration balance, UE membership and the exchange rate regime. Three hypotheses have been posed:

H1: countries with a lower income level have a higher migration outflow and receive higher personal transfers, which results in a positive balance of the secondary income and vice versa;

H2: economy integration process (resulting from UE membership) had an impact on the change of the relation presented on the H1;

H3: monetary integration process had an impact on the change of the relation presented on the H1.

The time scope of research tests in the case of CEE-11 are years 2004-2017, but in the case of the Czech Republic, Croatia, Latvia, Romania, Slovenia and Hungary there was an access to previous (older) data. The source of the statistical data was Eurostat, annual period. The following data have been gathered:

- the value of inflows (credit) - sicr, outflows (debit) – sidt and balance - sibal of secondary income (in EUR) and the ratio composed of each data in relation to their GDP: sicr_gdp, sidt_gdp, sibal_gdp;
- the value of gross domestic product - gdp (in EUR) and gross domestic product per capita - gdp p.c. Gross domestic product is a basic measure of overall size of a country's economy. Gross domestic product per capita is expressed in relation to the EU (EU28=100). A country with a lower/higher index than 100 means that the level of GDP per head of this country is lower/higher than the EU average (Eurostat);
- net migration ratio - nm_ap. Net migration is the difference between the number of immigrants and the number of emigrants. In the context of the annual demographic balance, Eurostat produces net migration figures by taking the difference between total population change and natural change; this concept is referred to as net migration plus statistical adjustment. This study has used the ratio calculated as the quotient of net migration plus statistical adjustments to average population (Eurostat).

Domestic income level and the secondary income accounts

As the measure of domestic income level GDP per capita has been chosen. This quotient is published by Eurostat as a ratio comparing the level of income of all the EU countries. In this article the research subject covers only the CEE-11 countries. Because of this, the average of all CEE-11 ratios have been calculated and used as a benchmark. This way of deduction responds to the aim of the research: enables us to rank the CEE-11 countries in relation to the EU average and position them.

Table 2. GDP per capita above the CEE-11 average in the period of 14 years (2004-2017)

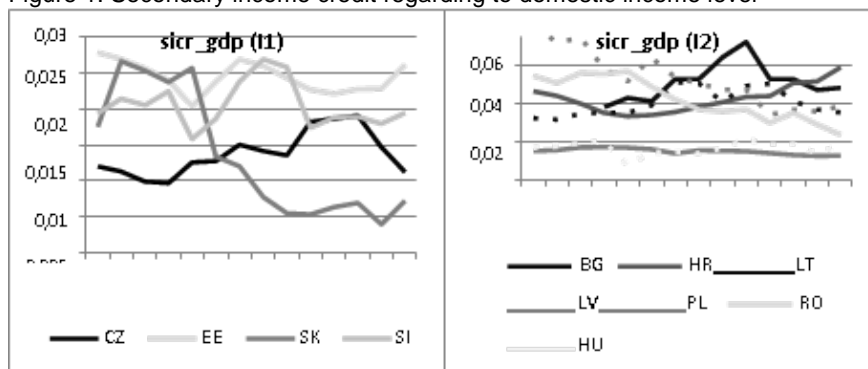
Country	Higher GDP p.c.	Rating
Bulgaria	0	(I2)
Croatia	6	(I2)
Czech Republic	14	(I1)
Estonia	14	(I1)
Hungary	4	(I2)
Latvia	2	(I2)
Lithuania	5	(I2)
Poland	0	(I2)
Romania	0	(I2)
Slovakia	11	(I1)

Slovenia	14	(I1)
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Source: own calculations based on the Eurostat data.

Table 2 shows how many the GDP per capita of each CEE-11 country was higher than the average GDP per capita in the CEE-11 region during the analysis period. Data comprised in Table 2 enable us to divide the CEE-11 countries into two groups: (I1) – GDP per capita higher than the CEE-11 average: Czech Republic, Estonia, Slovakia, Slovenia; (I2) – GDP per capita lower than the CEE-11 average: Bulgaria, Croatia, Hungary, Latvia, Lithuania, Poland, Romania. According to this division the trends of the secondary income have been showed in the figures below (1-3).

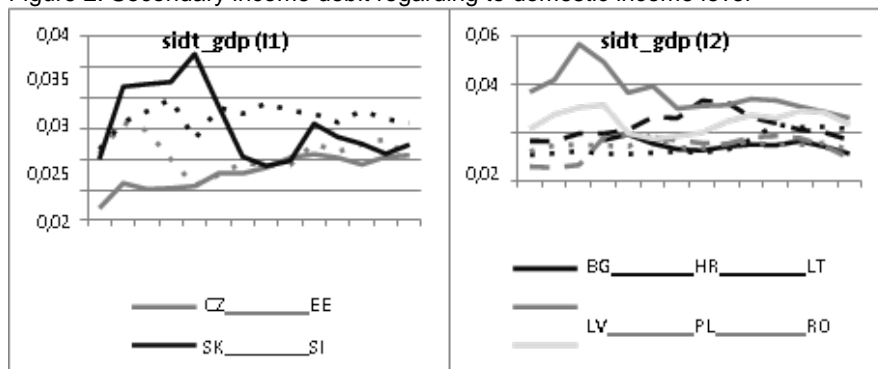
Figure 1. Secondary income credit regarding to domestic income level



Source: own work.

Secondary income inflows (credit) ratios were higher in the case of lower domestic income countries (except: Hungary and Poland). There was a lack of tendency pattern among these groups of countries (see: figure 1).

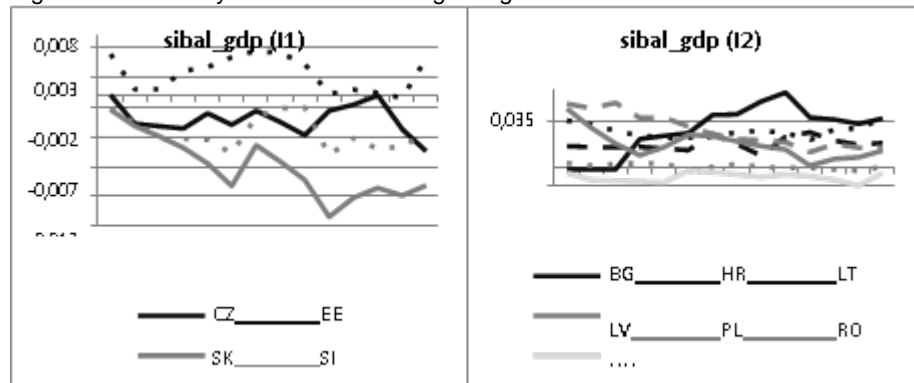
Figure 2. Secondary income debit regarding to domestic income level



Source: own work.

There was a lower spread of current transfers outflows (debit) ratio in the case of the higher domestic income level (0.015-0.37 versus 0.007-0.057). There was a lack of one coherent pattern among these groups.

Figure 3. Secondary income balance regarding to domestic income level



Source: own work.

Countries belonging to group I1 - GDP per capita higher than the CEE-11 average had a negative secondary income balance (except Estonia). That means outflows of current transfers exceeded the inflows. There was an opposite situation in the case of group I2 (except Bulgaria since 2006, Hungary and Poland).

Migration and secondary income tendency

Opening labour markets among the EU countries resulted facilitations in the labour migration area. As a consequence personal transfers have been made – a major component of secondary income (see: table 1.). This is one of the reasons why one should take into account migration when considering the changes of secondary income accounts. The table below shows the people flow and the number of years with a negative net migration ratio (people outflow).

Table 3. The percentage of years with people outflow in the CEE-11 during 2004-2017

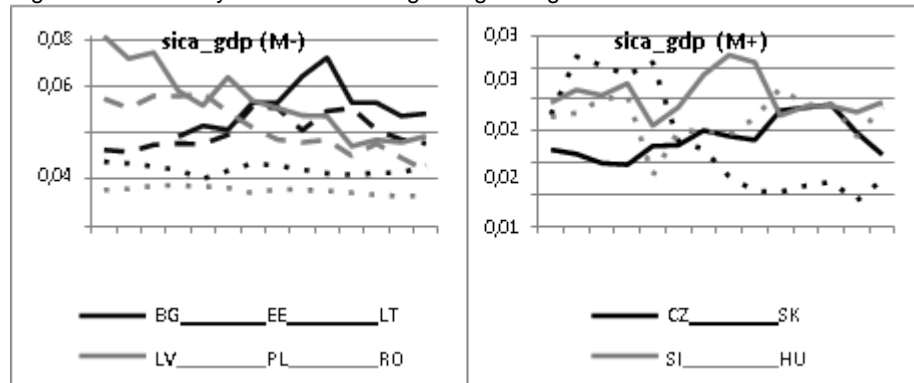
Country	People outflow	Rating
Bulgaria	100,00%	M-
Croatia	57,14%	M-
Czech Republic	7,14%	M+
Estonia	78,57%	M-
Hungary	7,14%	M+
Latvia	100,00%	M-
Lithuania	100,00%	M-
Poland	78,57%	M-
Romania	100,00%	M-
Slovakia	35,71%	M+

Source: own calculations based on the Eurostat data.

Basing on Table 3, all the CEE-11 countries can be divided into three groups: (M-) covering these with a negative net migration ratio predominance (people outflow),

Bulgaria, Estonia, Latvia, Lithuania, Poland, Romania; (M+) covering countries with a positive net migration ratio predominance (people inflow) – the Czech Republic, Hungary, Slovakia, Slovenia; (M?) – countries which cannot be allocated clearly – Croatia. According to the aforementioned division a presentation of the secondary income ratio shape have been made (figures 4-7).

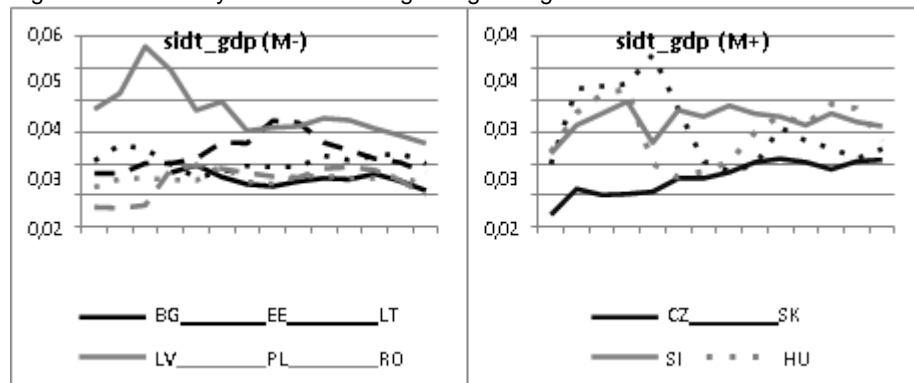
Figure 4. Secondary income credit regarding to migration



Source: own work.

The countries with the predominant outflow of people usually had a higher level of the secondary income credit ratio than the countries with the inflow of people predominance.

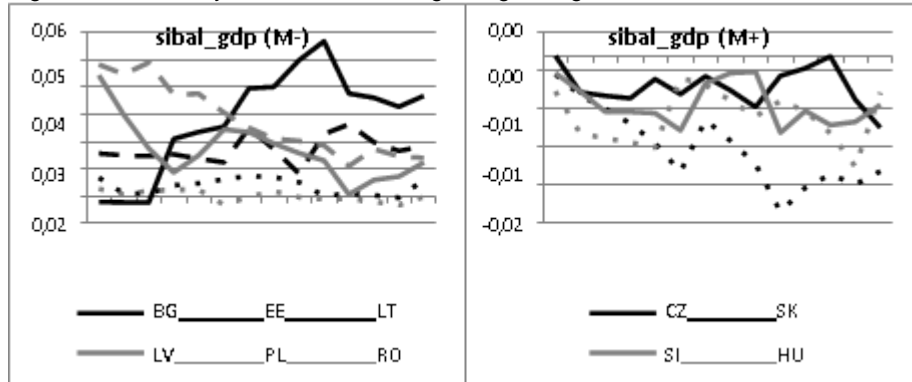
Figure 5. Secondary income debit regarding to migration



Source: own work.

In the case of current transfer outflows, countries with a negative migration ratio predominance usually had a lower level of the secondary income debit ratio than the second group (except the Czech Republic and Latvia).

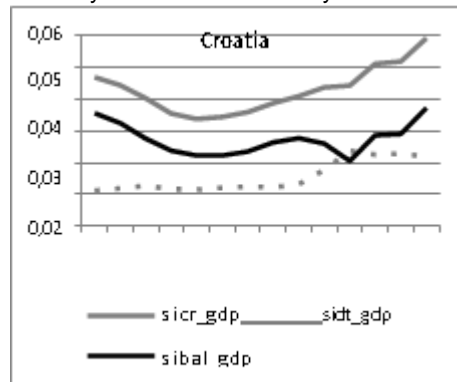
Figure 6. Secondary income balance regarding to migration



Source: own work.

The flow of people breakdown has shown differences between the countries regarding to the secondary income balance. The countries with people outflows predominance usually had a negative secondary income balance (except Bulgaria until 2006, Estonia in 2016, Poland in 2009-2010, 2012-2017), whereas the countries with people inflows predominance usually had a positive balance (except the Czech Republic in 2004).

Figure 7. Croatia's secondary income accounts in years 2004-2017



Source: own work.

In the case of Croatia there were two opposite periods: in years 2004-2009 the country had a positive migration balance, in years 2010-2017 – a negative one. This is the reason why Croatia should not be allocated to any of the aforementioned groups of countries. The balance of the secondary income was positive and seemed to be closely connected with the secondary income credit – inflow of current transfers. The secondary income balance did not fit the tendency of balances of negative migration countries.

The tendency of secondary income accounts and the European Union membership

Regarding to the lack of statistical data there was no possibility to verify the impact of the EU membership in the case of all CEE-11 countries. Bulgaria, Estonia, Poland, Slovakia had information in Eurostat database covering only the period from their EU accession date. Table 4 shows a list of available information. A verification of hy-

pothesis of the EU membership impact on the secondary balance account has been carried out only for this group of countries.

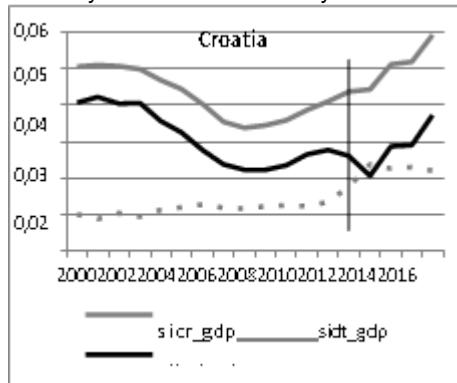
Table 4. Countries with statistical data outreaching their EU membership year

Country	EU membership year	Availability of the data
Croatia	2013	2000
Czech Republic	2004	1995
Hungary	2004	1999
Latvia	2004	2000
Romania	2007	1999
Slovenia	2004	1995

Source: own calculations based on the Eurostat data.

The secondary income accounts ratio of countries pointed in Table 4, before the EU accession year, have been shown in the figures below (8-13). The year of accession has been marked with the vertical black line.

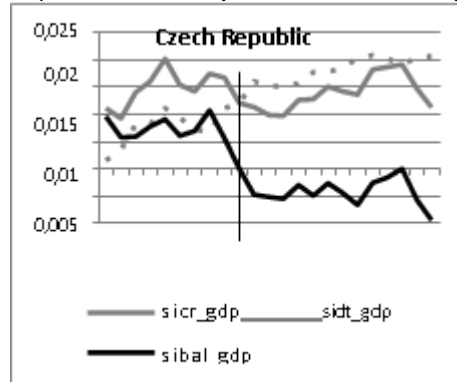
Figure 8. Croatia`s secondary income accounts in years 2000-2017



Source: own work.

After the EU accession year, in Croatia`s case, there was a visible increase of credit (current transfer inflows) and debit (current transfer outflows). The growth of outflows had the secondary income balance decreased in 2014, later, however, the balance kept growing being still positive.

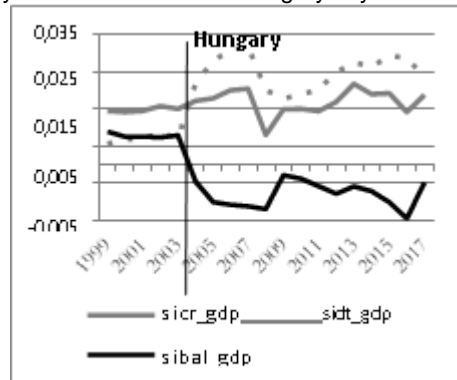
Figure 9. The Czech Republics secondary income accounts in years 1995-2017



Source: own work.

In the accession year the Czech secondary income balance became a negative one. The outflows started to exceed the inflows and this tendency persisted until 2017.

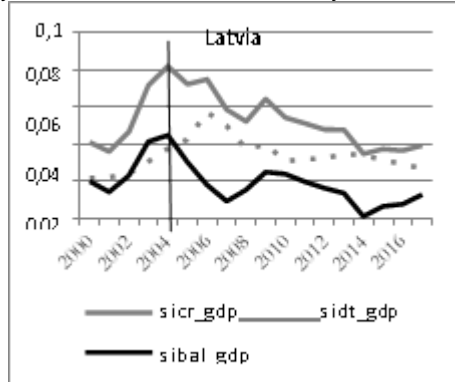
Figure 10. Secondary income accounts of Hungary in years 1999-2017



Source: own work.

There were similar tendencies in the case of Hungarian secondary income accounts as in the case of the Czech Republic. EU membership period coexisted with a negative balance of secondary income.

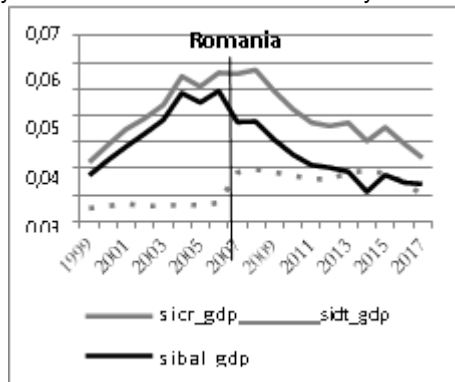
Figure 11. Secondary income accounts of Latvia in years 2000-2017



Source: own work.

Latvia's EU membership coexisted with an increase of current transfer inflows and outflows. As a result, the secondary income balance until 2014 was decreasing, but still positive. The situation changed in 2015 – the inflows were rising with declining outflows and secondary income balance started to grow.

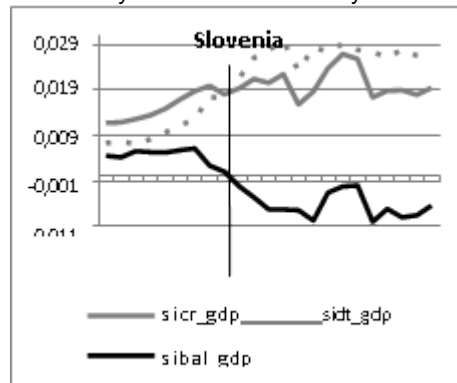
Figure 12. Secondary income accounts of Romania in years 1999-2017



Source: own work.

In the case of Romania there were changes of secondary income accounts coexisting with the EU membership. After 2007 the inflows of current transfers started to decrease, outflows - increase and, as a result – until 2014 the balance kept declining while being still positive.

Figure 13. Slovenia's secondary income accounts in years 1995-2017



Source: own work.

In the case of Slovenia there were similar tendencies as in the case of the Czech Republic and Hungary concerning secondary income accounts. The EU membership period coexisted with a negative balance of the secondary income. The lack of complete data makes it impossible to verify the second hypothesis. However, basing on the aforementioned tendencies it is possible to say that EU accession year coexisted with important changes within secondary income accounts. These changes assumed various forms:

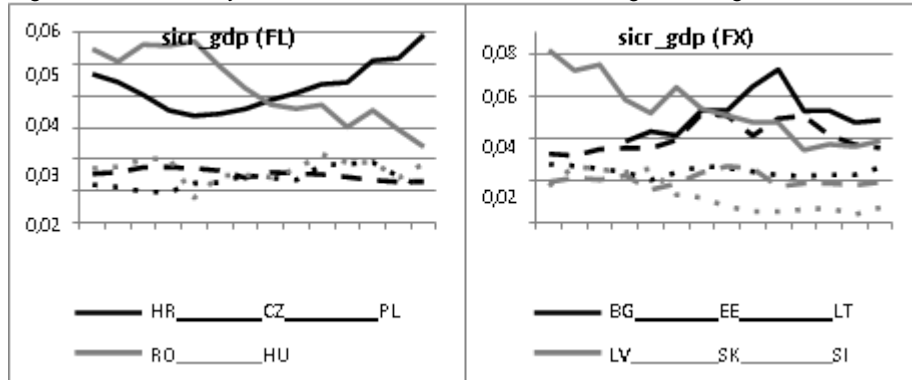
- in the case of the Czech Republic, Hungary and Slovenia - the secondary income balance started to be negative;
- in the case of Latvia and Romania - the secondary income credit was growing until the accession year and decreased, the balance kept decreasing while still being positive;
- Croatia did not match these patterns, yet this country has the shortest time of EU membership.

Exchange rate regime and secondary income accounts

Monetary integration, which was a consequence of economic integration within the EU, led to the change of exchange rate regimes. Slovenia (in 2007), Slovakia (in 2009), Estonia (in 2011), Latvia (in 2014) and Lithuania (in 2015) became a part of the euro zone. Croatia, the Czech Republic, Hungary, Poland and Romania had a kind of floating exchange rate regimes in this period. Bulgaria has been applying a currency board regime since 1999.

Substituting euro for national currency was connected with taking part in European Exchange Rate Mechanism II which meant at least two years of the fixed regimes in relation to euro. Regarding the way of calculating of the Bulgarian currency (Bulgarian lev is fixed to euro), Bulgaria and countries constituting the euro zone have been qualified as the fixed regime countries (FX). Croatia, the Czech Republic, Hungary, Poland and Romania constitute the other group – the floating regime countries (FL). The patterns of the secondary income account regarding this division have been shown in the figures below (14-16).

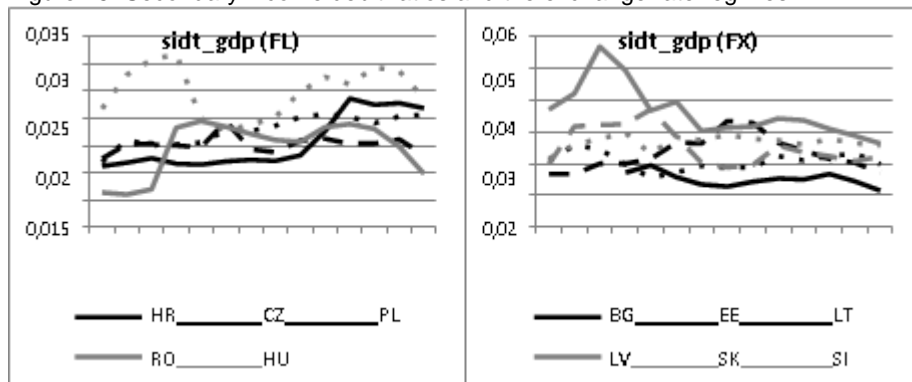
Figure 14. Secondary income credit ratios and the exchange rate regimes



Source: own work.

It is difficult to find a common pattern in the shape of the phenomenon presented in the Figure 14. The fixed regime countries usually had a higher level of current transfers inflow in relation to their GDP (except Slovakia).

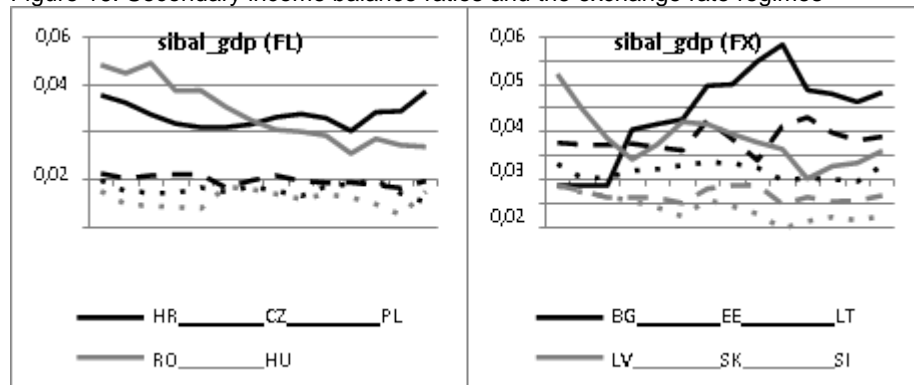
Figure 15. Secondary income debit ratios and the exchange rate regimes



Source: own work.

A similar situation as in the previous case – it is difficult to find a major pattern of shape in each group. The current transfers outflow ratios were usually at a higher level in the fixed regime countries: 0.011-0.057 versus 0.005-0.035 in the floating regime countries.

Figure 16. Secondary income balance ratios and the exchange rate regimes



Source: own work.

The secondary income balances (relating to GDP) were more similar to each other in the floating regime countries than in the euro zone plus Bulgaria. The gap between the minimum and the maximum value was similar in these two groups of countries. The only clear conclusion is that the same currency (here: euro) does not make the secondary income balance more similar (Czarny, Śledziwska, 2011, p. 63).

Conclusion

The changes in the tendency of the secondary income accounts seem to be very interesting, especially in the perspective of similarities and differences in the new EU members and the nature of current transfers, which affect not only disposable national income but also the other balance of payments accounts. Finding common patterns can be an important source of knowledge in further research in this area.

Three hypotheses have been posed. Adoption of the first one implicates the scheme connecting domestic income, migration and secondary income balance. Adoption of the second and third does not exclude the first hypothesis, but implicates some exceptions or modification in it and can extend the scheme. To verify the hypotheses, the previous conclusions have been collected in Table 5. Only the EU membership has not been taken into consideration in this table. This element has been omitted due to the incomplete data and its nature, as well as the fact that all the CEE-11 countries have become EU member states and, as such, enjoy a uniform status. When the secondary income balance was positive 8 times or more in the 14-year analysis period, a country has been marked as +, when negative -.

Table 5. The set of conclusions in this research

Source: own work.

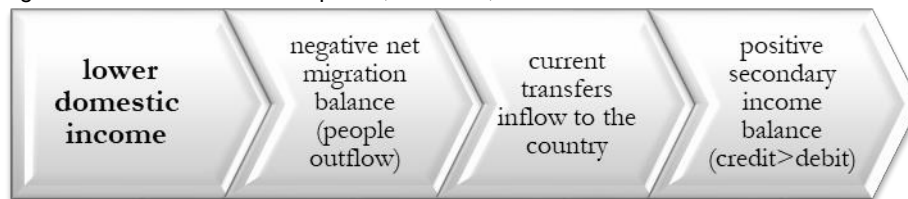
The gathered information does not allow to reject the first hypothesis. It is possible to create a model basing on the connections among domestic income, people flows and current transfers. Model 1 concerns Bulgaria, Croatia, Latvia, Lithuania and Romania – countries with a relatively lower domestic income among the CEE-11 (Figure 17) and Model 2 concerns countries with a relative higher domestic income among the CEE-11: Czech Republic, Slovakia, Slovenia (Figure 18).

Figure 17. Model 1: Bulgaria, Croatia, Latvia, Lithuania, Romania

Country	Research area			
	GDP per capita	Migration	ER regime	Secondary income balance
Bulgaria	(I2)	M-	FX	+
Croatia	(I2)	M-	FL	+
Czech Republic	(I1)	M+	FL	-
Estonia	(I1)	M-	FX	+
Hungary	(I2)	M+	FL	-
Latvia	(I2)	M-	FX	+
Lithuania	(I2)	M-	FX	+
Poland	(I2)	M-	FL	-
Romania	(I2)	M-	FL	+
Slovakia	(I1)	M+	FX	-
Slovenia	(I1)	M+	FX	-

Source: own work.

Figure 18. Model 2: Czech Republic, Slovakia, Slovenia



Source: own work.

There also are exceptions, which should constitute a base for further research: Estonia with a relative higher GDP per capita but simultaneous outflow of people and a positive secondary income balance, Hungary with a relative lower GDP per capita, positive migration balance and negative secondary income balance and Poland with a relative lower GDP per capita, outflow of people and a negative secondary income balance. The economy integration process coexisted with the change of the secondary income accounts relations but this phenomenon took various forms and did not influence the rejection of the first hypothesis.

The monetary integration process has not changed the schemes presented in the first hypothesis and has not resulted in the change of the secondary income relationships among the CEE-11 countries.

Results of research have enabled to verify the relations which are important in the external imbalance and economic and monetary union. They point out the need of further research, especially in the case of Estonia, Hungary and Poland.

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