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Development of the balance of payments in the Czech Republic since 1993 with the emphasis on current account

Abstract. Foreign trade relations have always been considered extremely important and were always attached great attention. By studying these relationships, we see signs of development or decline in the national economy. Balance of payments is recognized as a tool which provides one of the best analyses of external economic relations of a certain country. The main objective of this article is to analyze the balance of payments of the Czech Republic during 1993-2012 with an emphasis on current account and forecast of future development of the current account until 2020. We come to conclusion that the balance of payments of the Czech Republic and its specific component current account play a crucial role in the development of the Czech economy. Based on our analysis, we predict possible further deterioration of the current account mainly because of the income balance worsening. However, mentioned negative development will be counterbalanced by positive development of trade balance and balance of services. Nevertheless, these positive impacts on the current account will not be able to provide support for current account surplus achieving, which may lead to worsening of the external economic balance of the Czech Republic in medium term period.
Keywords: Balance of Payments; Balance of Services; Current Account; Czech Republic; Trade Balance
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Розвиток платіжного балансу Чеської Республіки з 1993 року з акцентом на поточний рахунок платіжного балансу
Анотація. Основною метою цієї статті є дослідження платіжного балансу Чеської Республіки з 1993 по 2012 рік. Особлива увага приділяється поточному рахунку платіжного балансу і прогнозу його майбутнього розвитку до 2020 року. Ми дійшли висновку, що платіжний баланс Чехії і його компонент – поточний рахунок платіжного балансу, грає вирішальну роль у розвитку чеської економіки. Ми спрогнозували можливе подальше зниження показника поточного рахунку платіжного балансу здебільшого через погіршення балансу доходів. Позитивна динаміка торгового балансу й балансу послуг не забезпечить досягнення профіциту поточного рахунку платіжного балансу, що може призвести до погіршення ряду показників платіжного балансу Чеської Республіки в середньостроковому періоді.
Ключові слова: платіжний баланс; баланс послуг; поточний рахунок платіжного балансу; Чехія; торговий баланс.

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Развитие платежного баланса Чешской Республики с 1993 года с акцентом на текущий счет платежного баланса
Аннотация. Основной целью этой статьи является исследование платежного баланса Чешской Республики с 1993 по 2012 год. Особое внимание уделяется текущему счету платежного баланса и прогнозу его будущего развития до 2020 года. Мы пришли к выводу, что платежный баланс Чехии и его компонент – текущий счет платежного баланса, играет решающую роль в развитии чешской экономики. Мы спрогнозировали возможное дальнейшее снижение показателя текущего счета платежного баланса в основном из-за ухудшения баланса доходов. Позитивная динамика торгового баланса и баланса услуг не обеспечит достижения профицита текущего счета платежного баланса, что может привести к ухудшению ряда показателей платежного баланса Чешской Республики в среднесрочном периоде.
Ключевые слова: платежный баланс; баланс услуг; текущий счет платежного баланса; Чехия; торговый баланс.

Introduction. In earlier times, the balance of foreign trade in goods was deemed unmistakable indicator of growth or decline in the economy of a particular state. The excess of exports over imports of goods (active trade balance) represented a positive state of the economy and the excess of imports over exports of goods (trade deficit) was considered unfavorable economic condition. However, view of this issue has gradually evolved.

With the development of society and knowledge in the field of economics, it was concluded that the external economic balance or imbalance lies not only in the relationship between nominal volume or volume growth (in real terms) of exports and imports of goods (Slany, 2003) [1].

With the development of economic theory, the existence of other than foreign commodity operations was confirmed, which must be taken into account in the assessment of international economic transactions. It meant that the international movement of goods, i.e. the trade balance, must be associated with other economic terms: first only the international movement of services and ultimately the international movement of income, unilateral transfers, long-term and short-term capital, as well as the change in foreign exchange reserves (Jilek, 2013) [2]. Specifically, this meant counting in international economic relations transactions (items) such as international tourism, international transport and communication services, insurance, interest on foreign loans, dividends, profits and other income from foreign investment, gifts and cash, goods or services with no consideration (unilateral transfers), foreign direct investment, foreign trade in securities, international loans (loans and borrowings), purchases and sales of monetary gold and other capital transfers. The slow and gradual transition from the balance of trade (commodity) to the wider concept of economic relations with foreign countries represents an important step in the international economic theory. Such a concept of inclusion of all international economic transactions led initially to the concept of the balance sheet. For statistics dealing with surveys and compilation of income balance of certain state from abroad and expenses of that state abroad, which should include all payments regardless of the reasons for which they were created (where she had to work with very specific statistical indicators), this term was rather vague and unclear. It was therefore necessary either to redefine or replace the nebulous concept of balance sheet. It also meant finding a way to make the best and most rational method to proceed with the survey documents of all international economic activities and in the preparation of such reports, which would include all foreign economic transactions (CNB, 2015) [3].

The problem, therefore, lays in the terminology. It was obvious that a statistical report with all foreign economic operations, including movement of money, which are believed to have the same meaning (goods, services, capital, money), should replace the current terms (trade balance, balance sheet). Moreover, there was a need to find the concept from which it was clear that it encompasses all economic values (items) transferred from one country to another country. Crucial was the recognition that, in all foreign economic transformations, money are used as a means of payment. Everything that has been the subject of supply from one country corresponds to the agreed amount of money from other country (Jilek, 2013) [2]. Mutual flow of goods and service on one side corresponding to foreign payments on the other side is maintained between countries.

From today's perspective, it is important that the international economy permeates all parts of the national (domestic) economy of any modern state. National (domestic) economy is affected by production, costs of production, employment, wages, pensions, prices, interest etc., which is related to the ability to conduct foreign economic operations, i.e. the ability to trade and invest abroad (Tuleja, 2011) [4].

The basic indicator of external economic balance of the country is its balance of payments. It represents all external relations that take the form of cash, financial or commodity flows between the national economy and the outside world. Balance of payments, from the economic point of view, affects key macroeconomic variables such as gross domestic product, employment, interest rate, exchange rate and the level of prices

of goods and services; and vice versa, these variables affect the balance of payments. Financial managers and investors can get important information for decision-making process from the balance of payments of a country (Liska, 2008) [5].

We usually define the balance of payments as a statistical report organizing economic transactions between economic subjects of one country and those of other countries. Well-arranged statistical tables show important results of foreign transfers of economic values of the country during a given period (month, quarter, and year). The balance of payments not only provides the basic foundation and analysis tool of international economic relations, but also constitutes a framework for improving already developed theories of international trade and for study of international trade impact on the internal and external management of individual countries (Vyvoj makroekonomie, 2008) [6].

It is widely recognized that there are no better tools for analyzing balance (imbalance) in international economic relations than provided by the balance of payments (Kubisa, 2009) [7].

The balance of payments is an integrated aggregate; a change in one part has to be followed by changes in its other parts (Dornbusch, & Fischer, 1994) [8].

The notion of balance of payments can be defined, thus, in two ways:
• The balance of payments in the «narrow sense» – known as foreign exchange (simple) balance of payments,
• The balance of payments in the «broad sense» – i.e. economic balance of payments.

Foreign exchange balance of payments can be defined as a systematic review of foreign exchange receipts and payments made between foreign currency domestic residents and foreign currency non-residents for a selected period (usually one year).

In the Czech Republic, according to the Foreign Exchange Act, foreign currency residents are perceived as legal entities based in the Czech Republic, and natural persons who have their residence in the Czech Republic or reside in the Czech Republic for at least one year. Other than the above-mentioned persons are considered as foreign currency non-residents. Differences between the legislations in the definition of foreign currency residents and non-residents in various countries may occur especially in the case of students, foreign workers, diplomats, affiliates of domestic companies abroad and branches of foreign companies in the home country.

Methodology. The main base for drawing information on the balance of payments during the period 1993-2012 was the Czech National Bank (CNB, 2015)[3]. We used information from official website of this institution, its archival materials and especially the statistical files depicting in detail all the information on macroeconomic development in the Czech Republic in observed period.

Mainly used files included in particular monetary and financial statistics, balance of payments, financial accounts statistics, general economic statistics and government finance statistics. Used statistics included both data, and commented publications referring to the relevant regulations at both national, and European and international levels. We used the data from the system for collecting and processing statistical data – SDNS. For data collection, we also used the system ARAD (CNB, 2015) [3], which is important in terms of publishing a unique system of time series of statistical data, supplemented with selected data from external sources.

Additionally, we have also used the SDDS site containing economic and financial data of the Czech Republic according to the methodology of the International Monetary Fund in order to analyze the balance of payments of the Czech Republic in observed period.

For empirical analysis of the development of balance of payments for the period 1993-2012, we used data from the sources listed above.

We observe the development of each economic indicator, including the balance of payments, through time series data. We understand the time series as a sequence of values of statistical characteristic physically and spatially comparable and arranged in time, usually in the direction past to present (Skalska, 2013) [9].

We subjected data collected by the above procedures to statistical processing in order to predict the development of selected monitored macroeconomic variables until 2020. We consider given set of selected values integral time series, where year (x) represents the independent variable. For forecasting of its values, we used the method of ordinary least squares with linear trend (Mala, 2013) [10]. Other regression curves may meet the criteria for a description of known data in some cases (e.g. quadratic, exponential, logarithmic, etc.). However, our intention was a long-term estimate of the expected evolution of the time series, therefore best for this purpose is to use the aforementioned linear trend.

Purpose. To analyze the balance of payments of the Czech Republic in 1993-2012 with an emphasis on current account and forecast of its future development until 2020.

Literature Review. Literature concerning the balance of payments from the theoretical point of view of both domestic and foreign authors is quite extensive.

Speaking of domestic authors dealing with the problem of balance of payments, we especially mention Slany (2003) [1], Jilek (2004, 2013) [11; 2], Tuleja (2011) [4], Liska (2008) [5], Holman (2005) [12], Mandel and Tomsik (2008) [13]. However, empirical study is not common, and therefore we analyzed the balance of payments, and especially current account, from practical point of view to determine possible future development of external economic relations of the Czech Republic.

Results. Generally, we note that the Czech Republic's balance of payments was in surplus in the observed period, with the exception of the years 1996, 1997, and 2011, mainly due to the financial account surplus, which covered a current account deficit of the balance of payments. In a later development, these preconditions were prerequisites for improved trade balance, which was in deficit during the years 1993-2004.

The year 1996 was characterized by a relatively intricate economic development, characterized by weak economic growth in major trading partners of the Czech Republic, mainly from Europe. Weaker economic growth in these countries resulted in pressure on the depreciation of the single currency and the strengthening of the Czech crown. Weak demand for Czech goods, the stronger koruna and strong domestic demand, caused by culminating growth in real wages in combination with insufficient domestic production capacities that were not reflected in labor productivity, were key factors in trade deficit and external imbalance.

An improving trade balance, short-term speculative capital outflows and currency turbulences characterized development in 1997. Improved trade balance resulted from declining domestic demand and improvement in the competitiveness of Czech production due to the newly built production capacities of enterprises with foreign capital participation. The Asian crisis and the deteriorating situation of the Czech economy has led to a speculative attack on the koruna. There was an outflow of short-term speculative capital and depreciation of the koruna.

Third balance of payments deficit was achieved in 2011. The overall weakening of the economy has resulted, mainly in the 3rd and 4th quarters, in the technical recession, when the gross domestic product growth declined by 0.1% in each quarter. Reducing the financial account balance was not able to cover the deficit of the current account, although there has been improvement of the trade balance and the income balance.

Account of balance of payments and its components

Current account, along with the financial account, is the most important component of the balance of payments of the Czech Republic. The inflow of foreign capital after the country joined the EU contributed to improving the business environment, increase of Czech companies competitiveness and opened up new markets. This fact has been positively reflected in the gradual reduction of the trade deficit, which in 2005 reached surplus for the first time. On the other hand, however, the growth of foreign direct investment manifes-

ted in the widening of income deficit, which occurred due to the disbursement of profits to foreign owners of capital. Table 1 shows major development of the current account in 1993-2012, demonstrating its negative balance (deficit) throughout the whole observed period with the exception of 1993, when it recorder surplus of 13,287 million CZK.

Four separate balances compose the current account:
- Balance of trade showing the difference in value between exported and imported goods.
- Balance of services showing the difference between the value of the services provided by domestic entrepreneurs to foreign residents and vice versa, services provided by foreign entrepreneurs to domestic residents.
- Income balance showing movements of return on capital and labor between domestic and foreign country.
- Balance of current transfers recording transfer transactions between the domestic economy and foreign entities.

Following text provides the analysis of the individual components of the current account. Figure 1 charts all these partial components and confirms the comment above on the development of permanent deficit of the current account.

In small open economies, which might also include the Czech Republic, trade balance plays an extremely great importance. Trade balance captures the volume of exported and imported goods, which is an essential prerequisite for a stable economy for strongly export-oriented economies. In terms of volume, the trade balance is one of the most dominant components of the whole balance of paymentswith turnovers having the highest weight on the overall balance. Trade balance was negative throughout the 90's of the 20th century. The economy was faced with many problems, mainly structural problems in the industry, low production capacity, weak competitiveness and weak foreign demand.

The most pressing problem was the need to deal with inefficient, expensive, non-ecological, energy-consuming and generally inappropriate structure of the Czech industry. Through foreign investment inflow to the Czech Republic, the Czech production improved the competitiveness in following years; the main export commodities became production of engineering industry, especially the car industry. Thanks to the efforts of the Czech Republic to join the European Union, property and business linkages between domestic and foreign enterprises evolved, which had a positive impact on the trade balance in 2005. For the first time the value of exports exceeded the value of imports and since 2005, the trade balance recorded a surplus value (CNB, 2015) [3]. Dynamics of export exceeded import dynamics also in the coming years. Member states of the EU became the main trading partners of the Czech Republic, with Germany in the lead. In the last quarter of 2008, emerging financial crisis fully manifested, which was associated with a decline in global demand, liquidity crisis and overall issues of global finance and trade (CNB, 2015) [3]. Falling demand was reflected by a slump in exports and imports in 2009. However, the volume of imports has fallen significantly more than the fall of exports. Therefore, in 2009, despite the negative developments in global markets, the trade surplus reached record highs. The surplus was 90.32 billion CZK.

Another component in the current account is the balance of services. It ended in all years of the period 1993-2012 in surplus. A considerable decrease in surplus occurred only in 2002-2004. Appreciation of koruna was the main reasons for the decline causing cheaper tours for Czech residents to abroad. Floods in 2002, hitting the most attractive tourist site of the Czech Republic – Prague, also caused the decline in tourism. The third cause

Tab. : **Current account development, million CZK**							
Year	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Value	13 287	-22 643	-36 331	-116 511	-100 106	-40 492	-50 596	-104 877
Year	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Value	-124 478	-136 378	-160 615	-147 456	-30 851	-67 082	-156 860	-81 252
Year	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**		
Value	-89 281	-146 644	-103 959	-94 018	-21784	26100		

Source: Authors' own calculations based on CNB (2015)

of declining income may be associated with the terrorist attacks on the US in September 2001 (CNB, 2015) [3]. In the last 3 years, dynamics of income from tourism declined in favor of other revenues. In 2012, total revenues in balance of services amounted to 431.9 billion CZK, tourism revenues 137.8 billion CZK and other income of 193.3 billion CZK (CNB, 2015) [3]. Regarding the sub-components of balance of services, we note that the balance of revenue and expenditure for tourism generates a surplus, as well as the difference between the revenue and expenditure on transport. The only sub-component for the balance contributing to a negative balance is the difference between revenue and expenditure in the category «other services».

Balance of income represents the greatest burden for the overall development of the current account deficit in transition economies. For the transition economies in Central Europe, foreign capital inflow was typical. At first, it showed a positive effect on the production competitiveness and rising exports. However, subsequently, foreign investors conducted reinvesting growing profits and payments in form of dividends. Dividends paid then began increasingly to flow abroad and deepened the income balance deficit. This situation corresponds exactly to the conditions in Czechia. Growing income balance deficit caused in recent years deficit of the current account. On the cost side of the balance sheet of income balance are the costs associated with direct investment amounting to 78%.

Another component, balance of current transfers, includes transfer payments, which do not create a right to transfer consideration. They include the gifts, grants or payments to international organizations. The balance of current transfers makes up the smallest portion of the total current account balance. Transfers with the European Union have the largest share on balance of current transfers.

The overall current account balance is extremely important indicator for the evaluation of external economic imbalances of the country. The current account balance was deficit with the exception of 1993; balance of income deficits contributed to this development by the largest share. Year 2005 recorded the improvement in the current account deficit; Czech Republic recorded a positive trade balance for the first time in the history (CNB, 2015) [3]. In 2005, the current account deficit fell to 30.8 billion CZK. The highest deficits in recent years were achieved in 2007 and 2010. In 2007, rapid growth of costs from reinvested profits in balance of income, which almost doubled comparing to 2006, influenced the current account balance. Current account balance in 2010 was mainly affected by a significant decline in the trade balance (CNB, 2015) [3].

One of the most common indicators for monitoring the external economic balance of the country is the current account deficit of the balance of payments, which must be weighed against the nominal gross domestic product produced in a given year. Economists suggest such a deficit to be lower than 5% of nominal gross domestic product. Larger deficits could threaten the country's economic balance, which may be unsustainable in the long term. The deficit of the current account to nominal gross domestic product over the past five years did not exceed this level; therefore, we note that the external balance of the country is not disturbed. The current level of deficit is not considered a threat now for the Czech Republic because the recommended values are safely met; bigger threat may be seen in the structure of the deficit.

Statistical analysis

As mentioned above, our goal was a long-term estimate of the time series' expected development. The most suitable method to meet this purpose is the linear trend; therefore, we used the method of predicting the values of ordinary least squares with linear trend (Skalska, 2013) [9]. Equation trend lines were obtained in a standard manner, when sets (x) of the known data were, in order to easier calculation, transformed into sets of small integers (t) with mean of zero (Levin-Rubin, 1991) [14].

In Figure 2, ring-points are the known values of time series; a full line is the linear trend, where all estimates lie; dashed curves are the confidence intervals. We interpret that estimates at times $(n+k)$ are dependent on the trend, but with 95% confidence they remain within specified confidence intervals.
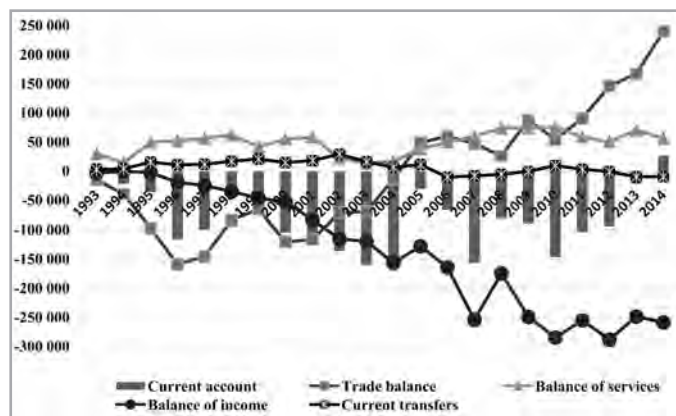

Fig. 1: **Development of the current account and its components, million CZK**
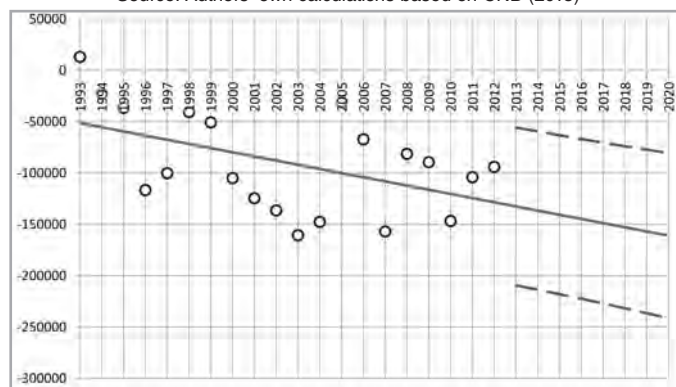Source: Authors' own calculations based on CNB (2015)

Fig. 2: **Forecasted development of current account until 2020**
Source: Authors' own calculations

Conclusion. Based on our analysis, we conclude that even though the overall balance of payments of the Czech Republic recorded surplus in the era of independent Czechia (except 1996, 1997, and 2011), the problem is its component represented by the current account. With the exception of 1993, the current account balance was deficit, mainly caused by the balance of income which deficit deepened for the whole observed period (with exception in 2008). This subpart of the current account was not balanced by other subparts composing the current account that recorded surplus in observed period, mainly trade balance (since 2005) and balance of services.

Concerning our prediction of future trends in the current account development, we conclude, based on our analysis, that there will be possible further deterioration of the current account balance in medium period until 2020 as shown in Figure 2.

Since our analysis covered only part of the balance of payments – current account, we propose for further research to investigate more thoroughly other components of the balance of payments of the Czech Republic, which may be based on our research of the current account.

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