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IMPACT OF TRADE ON ECONOMIC GROWTH IN THE CZECH AND SLOVAK REPUBLICS

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ABSTRACT. This paper examines the relationship between trade and economic growth in the Czech and Slovak Republics. The situation after the Velvet revolution in 1989 is discussed at first. The change of the structure of the trade and the orientation of the trade in both republics are explained and illustrated on available data.
The empirical part proved an analysis of the relationship between trade and GDP growth, using econometric analysis. Theory of cointegration, the vector error correction model and Granger causalities are employed. A long-term equilibrium among the investigated variables is identified in both countries. The empirical findings also indicate important role of exports in the economic growth in both republics. We conclude that economic growth in both of the countries can be identified as export-led.

JEL Classification: F15, C32 ***Keywords***: Czech and Slovak trade, export-led growth, cointegration, VAR model.

Introduction

The size and orientation of Czechoslovak trade before 1989 was a consequence of the economic system used at that time. The economy was generally closed and eastward orientated and economic trade was planned just like all the other parts of the economy. One of the key aspects of economic transformation after 1990 was quick (and brave) opening of the domestic market to international competition. At the same time, trade with Eastern markets sharply declined and the weight of the trade shifted towards western markets. Integration into the world economy dramatically increased in the following years and the Czech and Slovak economies became one of the most open in the world. The overall shape of trade experienced a fundamental change.

The goal of this article is to determine the impact of trade on economic growth in both of the countries (the Czech Republic and the Slovak Republic). Economic theory generally considers export led growth as one of the growth strategies. We will try to prove whether or not the Czech and Slovak Republics can be regarded as examples of this form of growth.

An econometric analysis (cointegration, the vector error correction model and Granger causalities) is used to find out whether a long-run equilibrium between trade (exports and imports) and domestic economic growth exists. The direction of causalities between the variables is also examined. Quarterly data from 1996 to 2014 for the Czech Republic and

from 1997 to 2014 for the Slovak Republic are used. The limited time series is due to insufficient data from the previous period.

The structure of the paper is following: firstly, the theory and methodology of the research is described. Then the situation at the end of the 1980s and development of the main aspects of trade in the following years are analysed. The model is introduced in the third chapter.

1. Economic theory and methodology

Many studies have concluded that export growth has made substantial contributions to export-oriented economies (Balassa, 1978; or Stancheva-Gigov and Poposka, 2014; Bilan, 2009; Balitskiy *et al.*, 2014). There are many arguments in favour of an export-oriented strategy. Trade expansion may increase long-run growth by allowing the economy to specialize in sectors with economies of scale that arise from research, development, and human capital accumulation. Increased competition provides incentives for technological progress and better management and this effects spill over into the non-export sectors. Increased exports enable import of goods, especially intermediate and capital goods. Exports have a positive impact on productivity due to better allocation of resources through specialization based on comparative advantage (Alhahoj, 2007). Some anti-trade economists also emphasize some negative aspects of trade but the positive view is prevailing among the scholars.

Three basic relationships between exports and GDP can occur: export-led growth, growth-driven exports and a two-way causal relationship (feedback hypothesis). Most recent studies use the VAR approach to identify this relationship, e.g. Alhahoj (2007), Baharumshah (1999), and Ahmet Ugur (2008).

Our paper uses the VAR approach to test a long-term relationship between GDP and exports, using theory of cointegration. Granger causality tests enable us to determine whether exports cause GDP growth or whether GDP growth causes exports or whether the relationship is two-way. This approach is similar to the methodology presented in Alhahoj (2007) and Baharumshah (1999).

2. Development of international trade after 1989

International trade in Czechoslovakia before 1989 was subject to central planning just like any other aspect of the economy. The planners designed export, import as well as trade balance. There were 50 monopolistic organizations of international trade (Dillon, Wykoff, 2002) and only these were authorised to sign international contracts. Individual producers could not trade on their own account.

The openness of the trade was at that time generally small if we consider the small size of Czechoslovak economy (turnover to GDP was just around 40). A considerable majority of trade (around 70%) was directed towards Eastern markets. Trade among the centrally planned economies was organized by the Council of Mutual Economic Assistance (COMECOM) that worked as a platform for organizing bilateral trade agreements. Trade with the Western countries was limited. Low quality of Czechoslovak production was expressed in the commodity structure of Czechoslovak trade as well. Imports from the Eastern Bloc were generally in the form of raw materials and semi-manufactured goods. Exports towards the other centrally planned economies were in the form of goods with higher added value – machinery, vehicles and, for example, shoes. On the other hand, the country imported goods with higher added value from developed countries while not being able to export similar goods to Western markets where the export generally consisted of less sophisticated goods

and semi-manufactured products (Michal, 1994). The consequence of low quality production (and thus inability to export to Western markets) was a general lack of convertible currencies in the economy (Jirges and Plchová, 1996). This shortage limited import possibilities from developed countries and was expressed in a widespread demand for western products. In addition, there were many distortions in the system – there were, for example, multiple exchange rates, systems of surcharges and subventions, below-market prices of imported raw materials, etc. Generally, prices on the domestic market were entirely separated from the world prices.

Situation of international trade radically changed after 1989. The Czechoslovak reformers believed in improvement of the economic environment via competition that they tried to bolster (Jonáš, 1997). This view was expressed by opening of the domestic market to international competition. It was one of the first and crucial steps of the radical reform program that was applied at the beginning of 1991. The Czechoslovak crown became convertible for transactions on the current account – it meant that businesses were able to gain unlimited access to convertible currencies that they needed for imports. This measure was de facto the cornerstone of the domestic market opening that allowed entrance of foreign competition on the Czechoslovak market and integration of the economy into the world economy. Tariffs declined and were generally set low at the same time (Jonáš, 1997).

On the other hand, the reformers were naturally worried about the state of competitiveness of the companies (trade balance) and thus tried to soften the environment for them. The crown was sharply devaluated already in 1990 and it was fixed to a basket of five convertible currencies. A 20 percent import surcharge was applied at the beginning of 1991 as well. Both of these measures were only temporary. Gains of the nominal crown devaluation were disappearing in the following months and years due to real appreciation. Import surcharge was gradually dismantled during following two years. To sum up, the reformers bravely opened the domestic market and allowed foreign competition access to it. They believed that competition was the only way to increase competitiveness of Czechoslovak production and its approximation to the world standards, which was a necessity for the small, open economy.

The opening of the economy had a direct impact on further integration into the world economy, but this trend was not without interruptions. The main problem appeared on the Eastern markets which broke as a consequence of several factors – transformation recession taking place in all former centrally planned economies, requirements from all sides to use convertible currencies for the transactions, general hunger for Western products and formal disintegration of COMECOM. This slump contributed to quick re-orientation of trade from Eastern towards Western markets, which went hand in hand with deepening integration into the world economy. In response, the post-communist countries tried to reverse the negative trend in the territorial trade and founded the Central European Free Trade Area (CEFTA) in 1992.

Splitting of Czechoslovakia at the beginning of 1993 had a limited negative impact on mutual trade (Soukup, 1995). At the same time, it increased trade of both of the countries in nominal expression because inner trade became international. Mutual trade was safeguarded by a tariff union that was preserved until the countries' accession to the EU in 2004.

One should emphasize that all Czech as well as Slovak governments kept liberal economic policy of low tariffs regardless of their other political views. The EU accession process played the key role in the development of trade. The first treaties were signed already in 1991 and they applied a principle of asymmetric liberalization. It meant that the European Community (later the EU) opened its market in a quicker way than the Czechoslovak market (Lavigne, 1999). Regardless of the pace of the opening there were no trade barriers between the Czech and Slovak Republics and the EU after 2000. It means that trade was free and the

countries were prepared for integration into the EU markets before the accession. Czech trade balance switched to surplus after 2004 and it can be considered as a proof of Czech products competitiveness on the European market. Slovakian net exports went to positive values at the end of 2011 (see *Figures 1* and *2*).

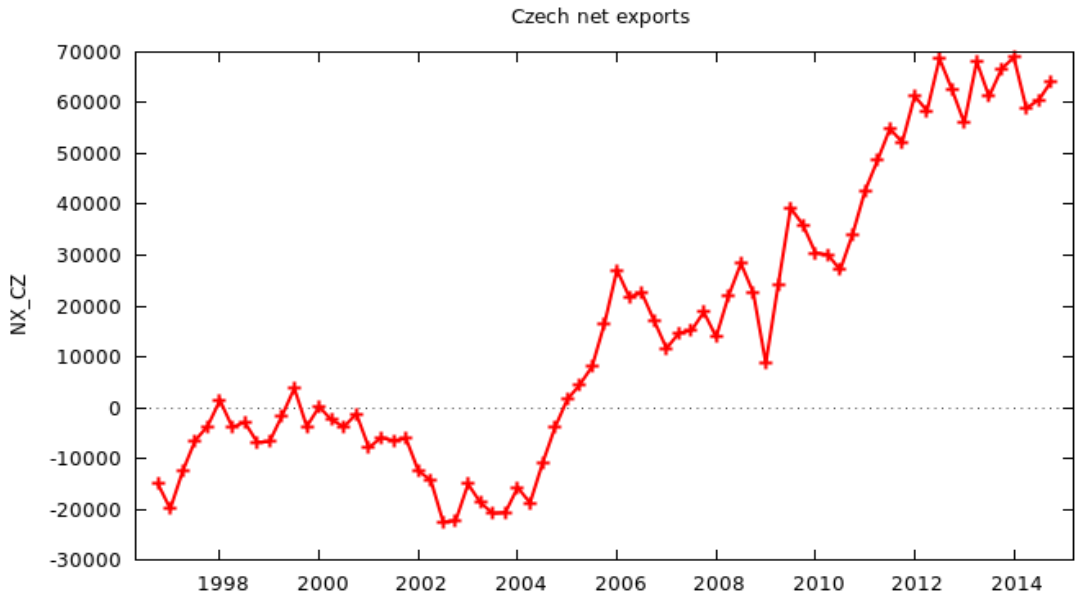

Figure 1. Czech net exports
Source: Own results.

Figure 2. Slovak net exports
Source: Own results.

Both economies progressively integrated into the world economy – the shares of exports (as well as the shares of imports) to GDP were continuously increasing – see figures below. At present, both economies are among the most open economies (measured as exports to GDP) in the world.

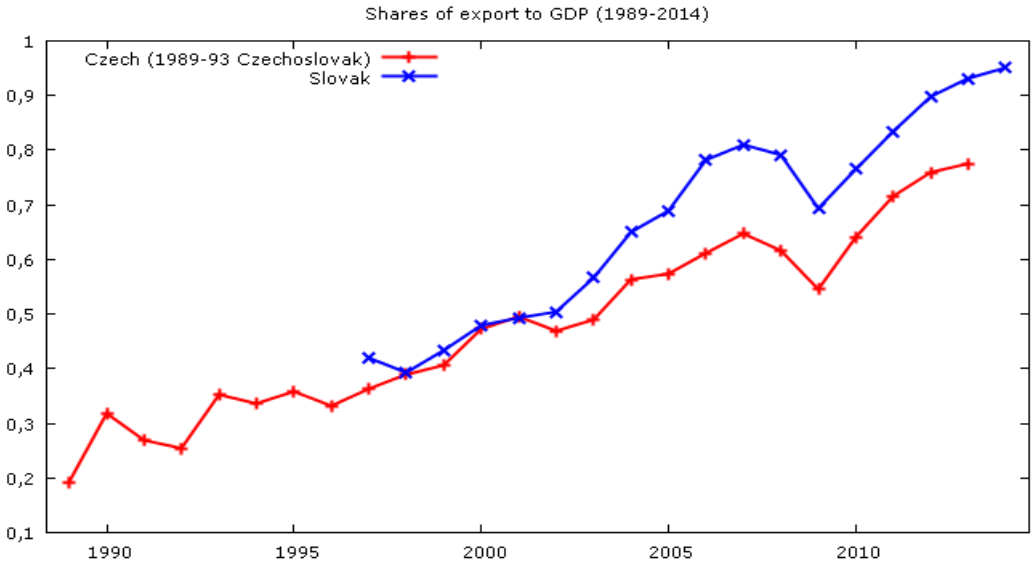

Figure 3. Share of exports to GDP, 1989-1990, in the Czech (1989-1993 Czechoslovak) and Slovak Republic
Source: Own results.

The commodity structure of exports returned to vehicles and machinery as the main commodities after the decline of these groups in the first years of the transformation – see *Figure 5*. SITC groups 5-8 form over 90 percent of all exports in both republics (group 5 – chemicals and related products; 6 – manufactured goods classified chiefly by material; 7 – machinery and transport equipment; 8 – miscellaneous manufactured articles), the largest volume of exports (55%) is from the machinery and transport equipment group in both countries. The commodity structure of imports is nearly constant during the whole period. Group 7 forms about 40 percent of all imports, group 6 some 20 percent and groups 3, 5 and 8 about 10 percent.

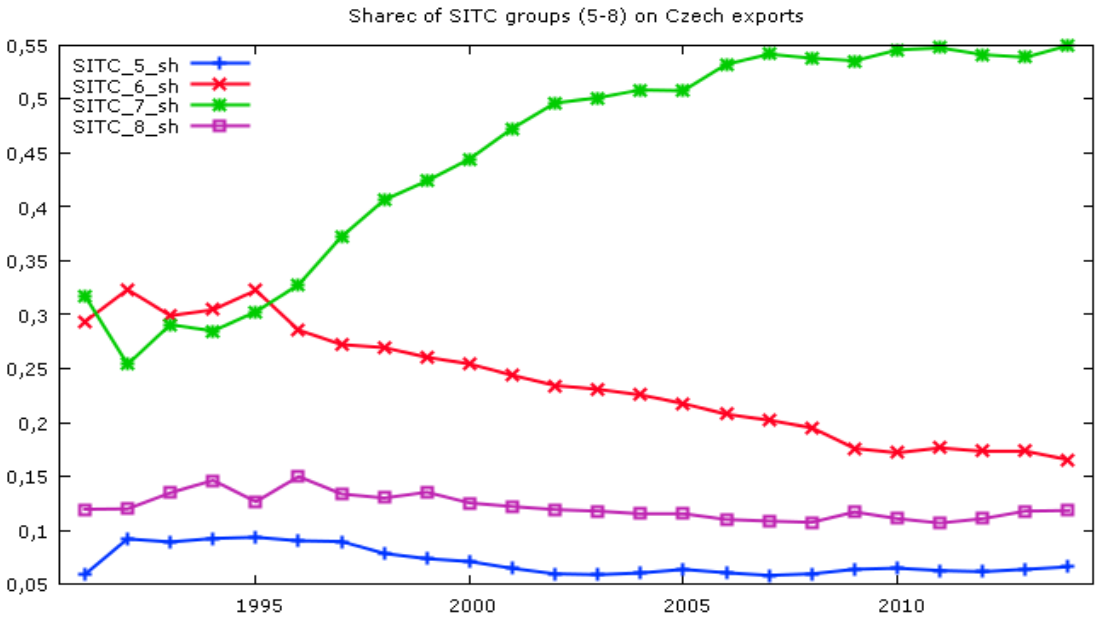

Figure 4. Commodity structure of Czech exports, groups 5-8 (shares of other groups are between 0 and 6%)
Source: Own results.

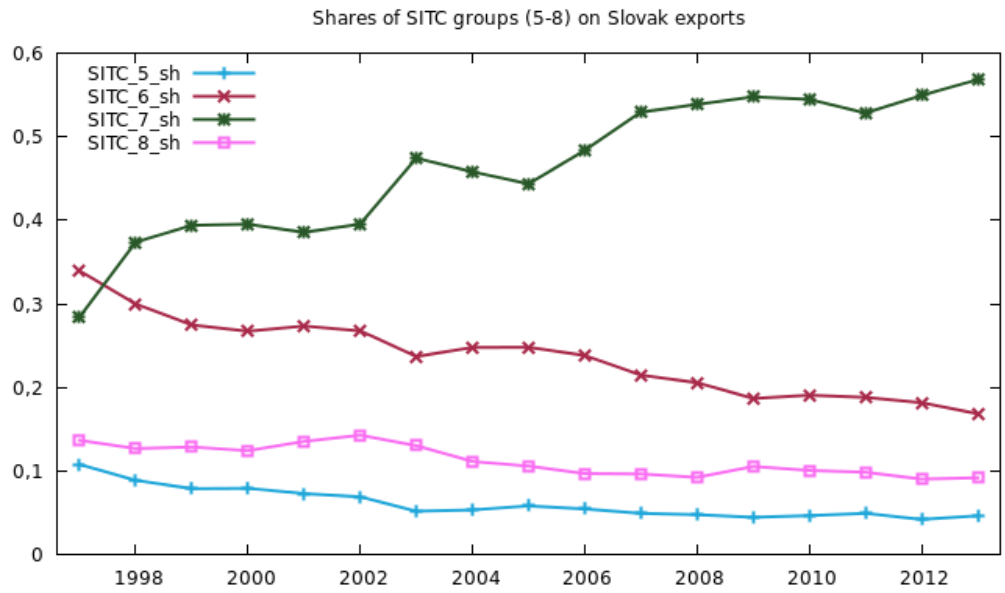

Figure 5. Commodity structure of Slovak exports, groups 5-8 (shares of other groups are between 0 and 6%)
Source: Own results.

The economies were, on the other hand, increasingly dependent on the outside world – especially on the developed (European) markets – see *Figure 7*. The Slovak Republic's integration into the EU was deepened by joining the Eurozone at the beginning of 2009. Conversely, negative aspects of the integration to the world markets appeared in response to the great world recession after 2008 when the world trade sharply slumped even thought individual countries did not apply protectionist measures.

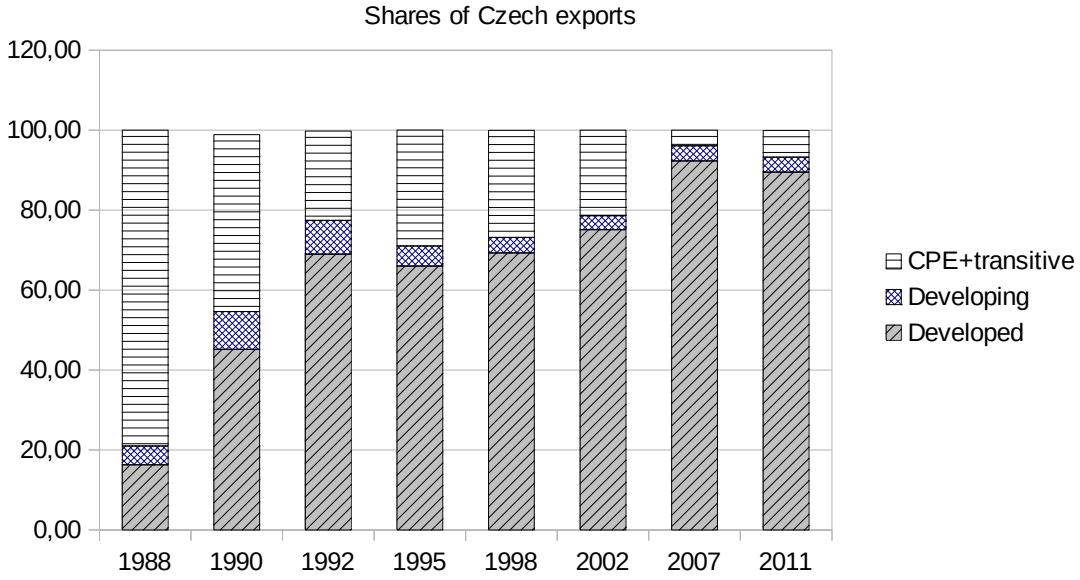

Figure 7. Shares of Czech exports to developed, developing and centrally planned + transitive economies
Source: Own results.

Four main export partners for the Czech Republic are: Germany (over 30%), Slovakia, Poland, and France (5-10%). Five main import partners are: Germany (26%), Poland (8%), Slovakia (5%), France, and Austria.

Nowadays, exports to the EU form over 80 percent of Czech exports while imports from the EU record a steady decline (about 65% of all imports), especially due to the growing imports from south-east Asia.

The Slovak Republic's main trading partner is also Germany, but the Slovak share of trade with Germany is lower than in the Czech Republic (about 22%). The Slovak Republic's other important partners are the Czech Republic (13%), Hungary (6-7%) and Austria (6%).

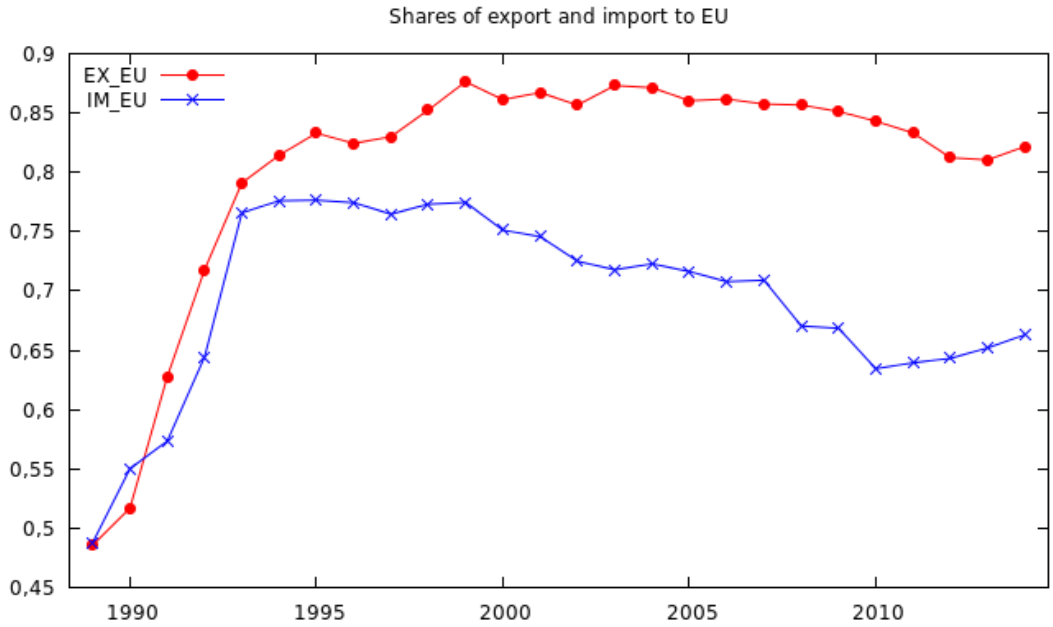

Figure 8. Share of Czech exports to the EU to total exports (1989-2014)
Source: Own results.

Our conclusion regarding economic development in the Czech and Slovak Republics after 1989 is that both of the economies have radically opened and integrated into the world economy in the course of the last 25 years. At the same time, the orientation of trade re-directed from Eastern to Western markets. The economies are also contemporarily able to export goods with higher added value.

Consequently, using an econometric analysis we intend to find out whether international trade can be considered as a source of economic growth – if the Czech and Slovak economies can be regarded as examples of export-led growth.

3. Econometric analysis

This section presents the data used for the econometric analysis, tests of stationarity, the VAR model, tests of cointegration and Granger causalities. The results of the estimation of the final VEC model are presented in the concluding part.

All the computations were performed using the GRETL (Gnu Regression, Econometrics and Time-series Library), software for econometric analysis available at http://gretl.sourceforge.net.

3.1. The data

Data used for the econometric analysis are from the Czech National Bank (Time Series Database ARAD) and from the National Bank of Slovakia (Macroeconomic Database). The data for the Czech Republic are quarterly data from 1996 Q1 to 2014 Q4, in constant prices (2010), seasonally adjusted, in millions of CZK, and include 76 observations. The data for the Slovak Republic are quarterly data from 1997 Q1 to 2014 Q4, in constant prices (2010), seasonally adjusted, in millions of Euro, and include 72 observations. Quarterly data from the previous periods are not available. Note: GDP denotes real gross domestic product; EX denotes real exports; IM denotes real imports, letter "l" stands for natural logarithm, symbol "Δ" means first differences.

Figures 10 and *11* show a co-movement between exports and imports (and also GDP) in both countries. It indicates a possibility of a long-term relationship between the variables.

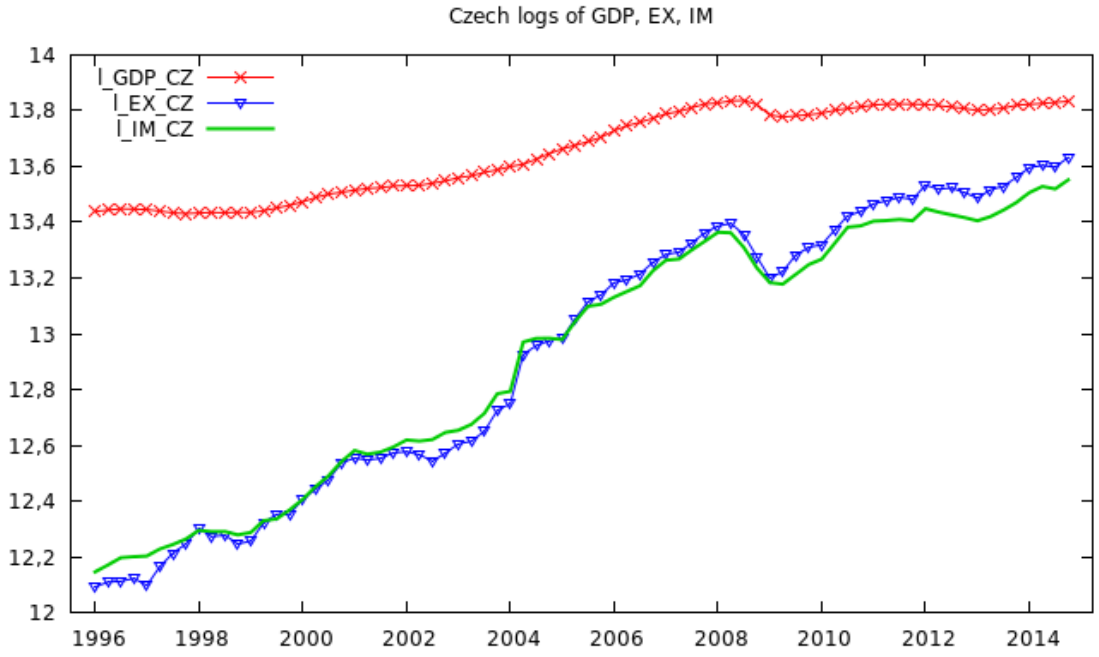

Figure 10. Logarithms of Czech GDP, exports and imports (1996-2014)
Source: Own results.

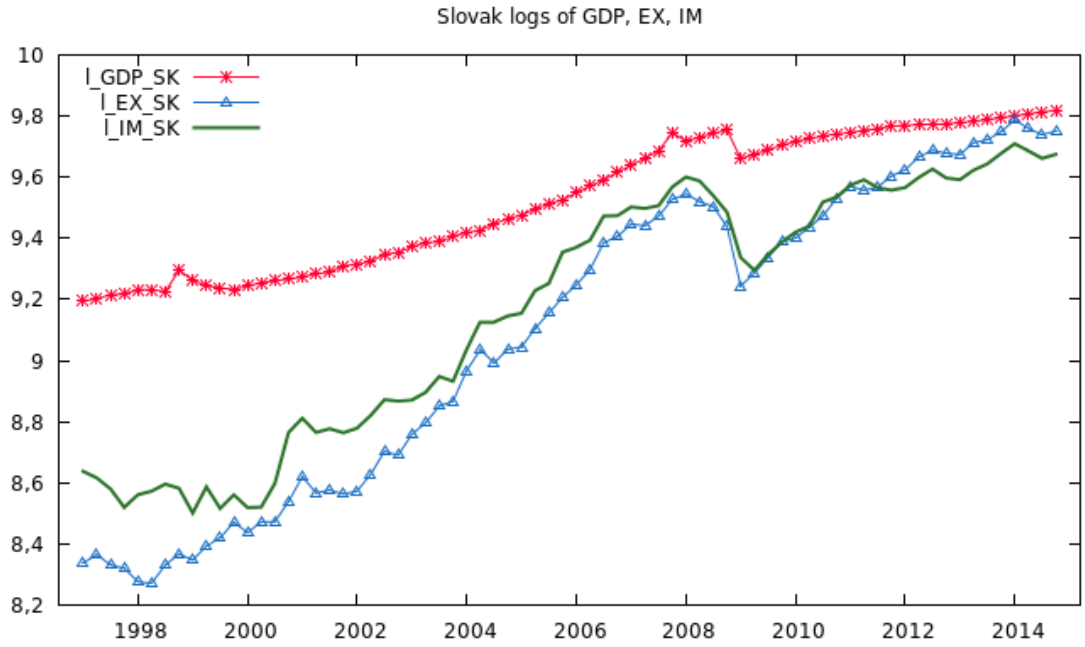

Figure 11. Logarithms of Slovak GDP, exports and imports (1997-2014)
Source: Own results.

3.2. Tests of stationarity

It is crucial for the cointegration and causality analysis to test the variables for stationarity and the order of integration. Stationarity of the variables was tested applying the Augmented Dickey-Fuller (ADF) test.

The ADF test for a unit root is based on the following regression model:

$$\Delta Y_t = \beta_0 + \alpha t + \delta Y_{t-1} + \gamma_1 \Delta Y_{t-1} + \gamma_2 \Delta Y_{t-2} + \ldots + \gamma_p \Delta Y_{t-p} + \nu_t \qquad t = 1, \ldots, T \qquad (1)$$

where Y is the dependent variable, "Δ" is the first difference operator, α, β_0, γ_1, …, γ_p are estimated parameters, *t* denotes deterministic trend (not compulsory, it can be added into the model in case of a presence of a linear deterministic trend), ν_t is white noise, and *T* is the number of observations.

The null hypothesis is stated as:
H0: $\delta = 0$ (it indicates that *Y* has a stochastic trend, i.e. it is non-stationary);
H1: $\delta \neq 0$ (it indicates that *Y* is stationary).

ADF tests were applied to test each variable for stationarity. Optimal lag length based on the Akaike's criterion, the Bayessian criterion and on the t-test, including constant and constant and constant + trend, gave qualitatively the same results, for both Czech and Slovak data.

The results indicate that the null hypothesis proposing non-stationarity in the logarithms of the time series couldn't be rejected for both countries at conventional levels of significance. It means that the series are not stationary (as it is apparent from the previous figures). The ADF test applied on the first differences of the logs of the data indicates that the null hypothesis of a presence of a unit root is rejected for all the time series, i.e. the growth rate of the examined variables can be regarded stationary. It is important for the following analysis that all the variables are of the same type, i.e. that they are integrated processes of order 1 (their first differences are stationary).

3.3. VAR model

The aim of the econometric analysis is to test the relationship between GDP and exports for the Czech and Slovak Republics. If the structure of the examined system is not known, the VAR (Vector Auto-Regression) approach presents a possibility to describe the dynamics of the system (Pindyck, Rubinfeld, 1997). The VAR technique presents a useful way of summarizing empirical regularities and suggesting predominant channels through which relations between the variables function. The VAR model treats every endogenous variable in the system as a function of the lagged values of all endogenous variables in the system.

The VAR system can be written as:

$$Z_t = \mu + \sum_{i=1}^{p} \beta_i Z_{t-i} + \varepsilon_t, \qquad t = 1, \ldots, T \qquad (2)$$

where Z_t is the vector of endogenous variables, μ is a constant, β_i are parameters of the VAR system related to the lag i, ε is the (zero mean) vector of IID normally distributed error terms, and T is the number of observations.

The VAR model was estimated to analyse the relationship between economic growth and trade. The model includes 3 endogenous variables (i. e. $p=3$ in eq. (3)): real gross domestic product (GDP), real exports (EX) and also real imports (IM); all the variables are in logarithms. Imports are included to check other influences of international trade (Alhahoj, 2007), because they may play an important role given the fact that imported intermediate goods are usually necessary for the production of export goods.

For the Czech data, the Akaike Information Criterion (AIC), the Schwarz Bayesian Information Criterion (BIC) and the Hannah-Quinn Criterion (HQC) are minimized for the order of VAR model equal to 2. Nearly the same value is reached by the AIC for the order 10. Both versions were tested for the existence of a cointegration relationship. For the Slovak data, BIC and HQC are minimized for the order of VAR model equal to 1 (the second best order is 2). AIC chooses lag length 12 (the second best is order 2). All these versions were estimated and tested.

3.4. Cointegration tests

If the non-stationarity of one variable corresponds to the non-stationarity of another variable, there exists a linear combination between them that becomes stationary. Therefore the co-integrated relationships can be interpreted as long-term economic steady-state relationships. If the series are integrated of the same order, cointegration test can be carried out. It is the case of the data used in this analysis.

The theory of cointegration was applied to decide whether there exists a long-term relationship between trade and GDP. This relation cannot be deducted only from correlation of the variables, which may arise from a short-term relationship. The VECM (Vector Error Correction Model) model was constructed to verify the existence of a long-term equilibrium relationship among the variables and to find the direction of the causalities of the model variables.

A hypothesis about a cointegrating relationship can be tested using the approach proposed by Johansen (1988) and Johansen and Juselius (1990). This approach, based on a maximum likelihood procedure, is mostly preferred to the Engel and Granger (1987)

regression-based procedure. The optimal length of the level VAR model was determined by minimizing information criteria in the preceding section.

Equation (2) can be rewritten (to distinguish between stationarity by linear combinations and by differencing) in the following way:

$$\Delta Z_t = \mu + \sum_{i=1}^{p-1} \Gamma_i \Delta Z_{t-i} + \Pi Z_{t-p} + \varepsilon_t, \qquad t = 1, \ldots, T \qquad (3)$$

Where Z_t is the vector of endogenous variables (logarithms of GDP, EX, IM), μ is a constant, ε is the vector of IID normally distributed error terms, "Δ"is the first difference operator, T is the number of observations and Γ_i and Π are matrices of parameters. The matrix Π contains information about the long-run relationship between the variables in the vector Z. Information about the number of cointegrating vectors is found in the rank of matrix Π. If the rank is zero, there are no cointegrating relationships.

Cointegration of the Czech variables was tested using the Johansen cointegration test. According to the optimal lag length of the VAR model, models with lag length equal to 2 and 10 should be tested, but for the lag length equal to 2 only marginal results for presence of cointegration were detected. For this reason, the lag 10 was used in the following analysis. All the three model variables enter the detected cointegrating relationship (no zero elements in cointegrating vectors).

Cointegration of the Slovak variables was also tested using the same models. Presence of a cointegration relationship was detected for all the lags from 1 to 12. According to the optimal lag length of the VAR model, models with lag length equal to 1, 2 and 12 were examined.

3.5. Granger causalities

Tests for causality between two variables were introduced by Granger (1969). This test is utilized to determine whether prediction of the present value of one variable (y) is enhanced by using past values of the second variable (x). If it is, then x is said to Granger-cause y. If the variables are cointegrated, there exists a causal relation among the variables. However, the direction of causality can be either one-sided or two-way. The Granger causality test can be expressed as follows:

$$Y_t = \alpha + \sum_{i=1}^{p} \varphi_i Y_{t-i} + \sum_{i=1}^{q} \delta_i X_{t-i} + \eta_t, \qquad t = 1, \ldots, T \qquad (4)$$

$$X_t = \beta + \sum_{i=1}^{p} \pi_i X_{t-i} + \sum_{i=1}^{q} \lambda_i Y_{t-i} + \xi_t, \qquad t = 1, \ldots, T \qquad (5)$$

where α and β are constants, φ, β, π and λ are estimated coefficients of lagged variables, p and q are the optimal lags of the series Y and X.

The null hypothesis states that all coefficients $\delta_1 = \delta_2 = \ldots \delta_q = 0$ for eq. (4) and that all coefficients $\lambda_1 = \lambda_2 = \ldots \lambda_q = 0$ for eq. (5). If the null hypothesis is rejected using the F-test, it forms an evidence that X Granger-causes Y in equation (4) and that Y Granger-causes X in equation (5). The results of this testing are summarized in the following part.

3.6. VEC model

VEC model (Vector Error Correction) allows us to distinguish between short-run and long-run causalities. A VEC model is a form of VAR, applicable where the variables in the model are individually integrated of order 1 (i.e. they are random walks, with or without drift), but exhibit cointegration. VEC model estimation contains estimation of the error correction terms, their number depends on the rank of the cointegration matrix. These error correction terms (ECT) relate to the long-run relationship between the examined variables.

The F-test of the explanatory variables (which are in first differences, i.e. in a stationary form) relates to the short-run effect, the significance of ECT relates to the long-run relationship.

The final VEC model for the Czech data was estimated for the lag length of VAR equal to 10 and a cointegration relationship of rank 2. Significant lags in the export and import equations are not very high, on the other hand, GDP equation contains quite high values of significant lags (for all the three variables). The results of the causality tests are presented in following *Table 1*.

Table 1. Granger causality results based on VECM – the Czech Republic

dependent variable	F-statistics (p-values in parentheses)			t-statistics (p-values in parentheses)	
	□□log(GDP)	□□log(EX)	□□log(IM)	ECT 1	ECT 2
□□log(GDP)	4,01*** (0,001)	3,05*** (0,008)	3,17*** (0,006)	-3,39*** (0,002)	4,028*** (0,0003)
□□log(EX)	1,46 (0,20)	0,85 (0,57)	1,27 (0,29)	-2,58** (0,01)	2,89*** (0,007)
□□log(IM)	1,91* (0,08)	0,52 (0,85)	0,99 (0,46)	-1,26 (0,22)	1,79* (0,08)

Note: P-values in parentheses, symbols *, **, *** imply that we can reject the null hypothesis about no causality (F-statistic) or no adjustment (error correction term ECT) at 10, 5 and 1% significance level, respectively.
Source: Own results.

As the table shows, development of exports cannot be explained with a contribution of lagged values of any variables. Development of imports is only dependent on the GDP growth for the significance level of 10 percent. GDP growth can be explained by its previous development, as well as by the development of exports and imports, all for the level of significance equal to 1 percent in the short run, as well as in the long run according to the significance of the error correction adjustment coefficients.

The results of the estimation support the hypothesis that export growth Granger-causes economic growth Therefore the Czech economy's growth can be considered as export-led. The opposite direction of the causality between the economic growth and growth in exports was not detected (p-value is 0,20). It can be only deduced that increased trade (exports and imports) produces more income (higher GDP) and higher GDP enables higher imports. GDP behaviour is quite persistent. Nearly all the error correction terms are statistically significant, which represents the existence of an adjustment process of the variables to reach a long-run steady state.

The impact of several exogenous variables was also tested (CZK/EUR and CZK/USD exchange rate, real exchange rate, world price of oil, productivity of labour, economic growth

in Germany). GDP growth in Germany was found in a strong positive relation with all the model variables. CZK/EUR exchange rate had a slight impact on export and import equation. The final VECM for the Slovak data was estimated for the lag length 12 and cointegration of rank 1. The results of the causality tests are presented in *Table 2* (VECM 1 and VECM 2 do not record any significant relationship between the variables and the other characteristics of the model are not very good). As in the Czech case, the GDP equation contains quite high significant lags (for all the three variables), but the export and import equations do not.

Among the exogenous variables, GDP growth in Germany had a positive effect on exports (and slightly also on imports) and implementation of the euro into the Slovak economy had a statistically significant negative (but slight) effect on GDP (not shown in the table).

Table 2. Granger causality results based on VECM – the Slovak Republic

dependent variable	F-statistics (p-values in parentheses)			t-statistics (p-values in parentheses)
	□□log(GDP)	□□log(EX)	□□log(IM)	ECT1
□□log(GDP)	3,13*** (0,009)	3,22*** (0,008)	2,14* (0,06)	-4,43*** (0,0002)
□□log(EX)	2,94** (0,01)	1,93* (0,08)	1,86* (0,09)	-2,85*** (0,009)
□□log(IM)	2,11* (0,06)	1,73 (0,25)	0,71 (0,72)	-1,88* (0,07)

Note: P-values in parentheses, symbols *, **, *** imply that we can reject the null hypothesis about no causality (F-statistic) or no adjustment (error correction term ECT) at 10, 5 and 1% significance level, respectively.
Source: Own results.

Table 2 shows that export growth can be explained by the lagged values of GDP growth and for the level of significance 10 percent also by imports growth and by its own lagged values. Imports development seems to depend only on the previous development of the GDP growth (and only for the level of significance 10%). GDP growth could be explained by its previous development and by the growth in exports, for the level of significance 10 percent also by imports.

The results of the estimation support the hypothesis that export growth Granger-causes economic growth, as well as that GDP growth Granger-causes exports, so that there is a two-way relationship between economic growth and exports. A slighter, similar two-way causality was detected for imports and GDP (for the level of significance 10%).

It means that increased trade (exports and imports) produces more income (higher GDP) and higher GDP causes higher trade (both exports and imports). GDP behaviour is quite persistent (strong dependence on its lagged values) similarly to the Czech economy. The existence of a feedback relationship is the main difference between the two examined economies.

Conclusions

The paper shows that the trade policy implemented at the beginning of the transformation process in the Czech a Slovak Republics has led to the countries' intensive integration into the world economy. During the period of the communist regime the economies were closed and orientated towards Eastern markets. As the available data reveal,

the economies have completely changed and become ones of the most opened economies in the world. The economies reoriented their trade relations to developed Western countries where about 90 percent of export is directed at present. Exports consist mostly of goods with high added value. This result is a consequence of an enormous increase in the quality of production.

Important relationships between economic growth and trade in both the Czech Republic and the Slovak Republic were identified in the practical part of this paper. Using cointegration tests, a long-term relationship between the model variables was found, which means that a long-term steady state can be reached in the long run. Short run dynamics of the systems was analyzed using Granger causalities. In the case of the Czech Republic, export-led growth was identified. The Slovak economy is characterized by a feedback relationship between economic growth and trade, which means that trade stimulates economic growth, and growing income is an incentive for growing volume of trade.

International trade has both positive and negative effects. During the period of economic transformation of both Czech and Slovak economies it was probably a crucial factor of the economic growth.

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