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Transition Impact on Foreign Trade Growth in the Czech Republic

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TRANSITION IMPACT ON FOREIGN TRADE GROWTH IN THE CZECH REPUBLIC

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Introduction

In 1989 the former Czechoslovakia had one of the smallest private sectors in the communist world, employing only about 1.2% of the labor force and producing a small fraction of the national output. Since 1948 the country had evolved in the command system. Moreover, since the government had followed a hard-line socialist approach, no real attempt to reform the economy or question its underlying political system occurred prior to 1989. Within five-year plans quantity was preferred to quality, and mainly put on the production of machinery while consumer goods and services were in shortage and of low quality.

In the early 1990s, countries of Central and Eastern Europe (CEE) started with remarkable economic transition from a centrally planned system to one based on decentralized decision-making and markets. The process of transition attempts to decentralize, stabilize, and restructure these economies. Within first five years of transition the outcomes was varied, with all countries decentralizing but only few achieving notable success in macroeconomic stabilization and restructuring. Czech Republic was one of the successful countries, which experienced the economic transition. Moreover, the Czech policy makers have transformed a highly centralized and mostly state owned economy into one based almost completely on market principles and private ownership. The Czechs have gone further than other countries; they also pursued restrictive macroeconomic policies and succeeded in maintaining a relatively stable economy.

Hanousek and Kocenda, (2005), stated that the economic transition leads to privatization process in the Czech Republic, this process carried out in the first half of 1990s three different kinds of privatization: restitution, small-scale privatization, and large-scale privatization. The first two kinds started in 1990 and were important for during the early years of transition, and large scale privatization which is the most important kind, began in 1991 and was completed in early 1995.The ownership of privatized firms reduces the unit of labor cost and increases productivity and then the amount of profit. The major development in the transformation of the industrial sector was the entry of foreign firms or foreign investment either through FDI or through contract agreements. The importance of FDI for the transition economies are likely to bring in new capital and new technology, then to increase employment and gross domestic product and to improve in the longer run the host country balance of payment.

Some of these positive effects of FDI are supposed to have the indirect positive effects that can have on the rest of the economy, especially on the related upstream and downstream industries. This positive effects from FDI leads to: in one hand, increases the productivity which increases the level of wages for employment and then increasing the aggregate demand for domestic and foreign goods as well which means increasing import goods. In the other hand, FDI will give the transition country new technology, which increases the production in both quality, and quantity, this increase in production will increase the level of exports especially for the EU members because of the improvement in the quality rather than quantity.

The evolution of exports and imports in the Czech Republic has two basic components: the common macroeconomic background (GDP at home and the real exchange rate) and industry-specific technology, factor supply, market structure and barriers to trade. The analysis of the Czech foreign trade addresses both the macroeconomic and the microeconomic factors of growth and quantifies their general impact on industries or even enterprises. While the macroeconomic variables assumed main drivers of overall trade growth, the microeconomic variables are associated with structural developments Vladimír, Jiří, and Ladislav, (2005).

In the case of Czech Republic, opening and liberalization of Czech economy lead up to new specialization patterns according to comparative advantages relative to the new trade policy. Moreover, Czech exports rely mainly on sales of standardized goods where the price is the most dominant criterion of choice. Czech Producers would therefore force to rely their production to the relative factor proportions of the economy, employing the most productive people and cheapest production factors. The most advanced Czech industries embark upon a process of catching up advanced technological market economies, and they will be likely increasingly to conduct intra-industry rather than inter-industry trade, Bohata and Ficher, (1995).

The objective of this dissertation work is to analyze the Czech foreign trade after the economic transition in the Czech Republic, the hypotheses of the research is; the impact of economic transition in the Czech Republic is positive on foreign trade. The aim of this dissertation work is to analyze which sector and exactly which commodity of the economy have more impacts on foreign trade by using the Input-Output analyze method, and to show which macroeconomic variable contributing more than the other variables in the growth of foreign trade in the Czech Republic by using the Econometric Multiple Regression Model.

1. Czech Economy Before the Transition Process

The Collapse of the command system in the economies of Central Europe and the following disintegration of the former Soviet empire have brought unexpected changes to nations in Central and Eastern Europe. The Czech Republic embarked on an uneasy path of reform from plan to market economy in 1990 and even at such an early stage it became clear that switching regimes would entail more than a single reform. It is more precise, to speak of regime transformation as consisting of several reforms executed in a parallel or subsequent fashion, often determined by political rather than economic forces. Many conditions have determined the reform path taken in years following the break-up of the command system. Difficulty of the reform process itself has involved a strong path-dependency of outcomes as well as various steps complementing major reforms that were taken later on as the transformation progressed. In 1989 the former Czechoslovakia had one of the smallest private sectors in the communist world, employing only about 1.2% of the labor force and producing a small fraction of the national output. Since 1948 the country had evolved in the command system. Moreover, since the government had followed a hard-line socialist approach, no real attempt to reform the economy or question its underlying political system occurred prior to 1989. Within five-year plans quantity was preferred to quality, and mainly put on the production of machinery while consumer goods and services were in shortage and of low quality. Specialization within the former Soviet bloc was on heavy industry, for which the Czech economy did not possess any comparative advantage. Information about the economy administrated by setting prices that conveyed very limited information about cost structure. Over-employment was part of the command system and effectively meant a waste of human resources. Due to the above pre-conditions, self-reliance among the population was extremely low and economic structures over centralized, Hanousek, Kocenda, and Lizal, (2004).

The pre-war economic level of Czechoslovakia was quite comparable with such countries as Germany, France, Belgium and Austria. According to the statitical data on industrial production, before World War II Czechoslovakia was one of the ten industrialized countries in the word. However, during the post-war period up to 1989, the allocation of resources through central planning rather than the market mechnism

resulted in a longe-term slowdown in productivity and the standard of living, as well as in the last 20 years of central planning in particular, czechoslovakia's economic performance has been disappointing.

After the exhaustion of extensive source of growth, clear tendencies towards stagnation and decline in production were already appearing. The disintegration of the market of the former CMEA hastened the inevitable collapse of the socialist system. The transition to a market economy has been,given this situation,the only effective way of tackling the problems which have accumulated.

Table 1: Basic macroeconomic indicators of the CSFR*

Indicators (in constant prices)	**Average annual change, in %**	
	1970-1980	**1980-1990**
Gross domestic product	4.77	1.50
Net material product produced	4.66	1.31
Gross meterial product produced	4.84	1.81
Gross meterial product distributed	4.30	1.98
Personal consumption	3.22	1.69
Material social consumption	5.52	4.84
Gross fixed investment	5.77	0.89
Consumer price index	1.14	2.17
Average nominal wages	3.13	2.08
Average real wages	1.99	-0.09
Labor productivity on material sector	4.48	1.65
Fixed capital productivity in material sector	10.95	-2.89
Imort intensity of gross material product	-0.37	-0.07
Indicators corrected for hidden inflation		
Gross domestic product	2.7	-0.7
Net material product	2.1	-1.5
Personal consumption	1.5	0.4
Gross fixed investment	3.1	-5.1
Consumer prce index	2.8	3.5
A verage real wages	0.3	-1.4

Source: Statistical yearbook of Czechoslovakia

* Czech and Slovak Federative Republic

The cosiderable decline of the Czechoslovak economy during the eighties, as compared with the previous decade, is shown from table 1. The average annual growth rate of real GDP contarcted from 4.8 to 1.5%. a similar slowdown occurred in other macroeeconomic indicators including average wages, productivity of labour and productivity of fixed capital. On the other hand,inflation (expressed by the CPI) speed up. According to the Czech Statistical Office, the real macroeconomic growth rate indicators in the CEMA countries given by official statistics were systematically overvaluated as a corresponding deflators were undervaluated. The last six rows in table 1 contain the growth rates corrected for estimated hidden inflation. In the period of 1970-1980 they were just about a half of the official estimates and between 1980-1990 they were negative or close to zero. The most severe decline occurred in gross fixed investment. Corrected average real wages were in stagnation during the the seventies and decline during the eighties.

Sujan and Sujanova (1993) steted that, the serious problem was deformation of the industrial structure of the czechosolvak economy. According to the author's econom tric analysis cnvering 20 industries in 10 countries during 20 years, the industrial structure in developed market economies depends primarily on the economic level and size of the country. Using estimated parameters from this analysis and actual data on czechoslovakia's economic level (real GDP per capital) and size (volume of real GDP), the shares of mining, metallurgy, machinery and production of transport equipment in total industrial production were too high, while the shares of the food industry,furniture, printing and the energy industry were too small. These differences cannot be explained by specific natural conditions. They are just deformations following from central planning and the CEMA system.

The difficult task of the reform path from central plan to market has been redesigning the role of the state. Prior to 1989, state authorities regulated virtually all, not only economic, activities in the society. It was obvious at the beginning of the transition that the scope of the state’s activities needed to be heavily reduced but simultaneously its efficiency in providing standard public services needed to be strengthened. On the one hand, the direct state role in the economy by central planning to be reduced, trade and exchange regime control, and direct control of enterprises and banks was supposed to fade away. On the other hand, the state could not give up its rules setting and enforcement role or its role in ensuring the citizens’ access to public goods and services,

La Porta (1997). In this part we are concerning in some macroeconomic indicators before the transition process and to camper it later with the Czech economy after the transition process:

1.1 GDP Growth

The implementation of economic transition from the Soviet-type economy to a free market one, the stabilization of macroeconomic policies and the collapse of intra-CMEA trade were followed by a steep decline in economic activity from 1990 to 1992 (measured by real GDP and industrial production). However, this change was preceded by a decade of economic stagnation, Klacek and Hajek (1989). This economic decline or transformational recession is an unavoidable for closed economy to a more efficient, open one. The depth of the transformational recession also depends on the overall transformation strategy and the nature of economic policy, Winiecki (1993).

The real GDP of the Czech Republic In 1990, decreased by 1.2% over the previous year, by 14.2% in 1991 and by a further 6.4% in 1992 as shown in table 2 . This economic decline continued through the first half of 1993, while in the third quarter some faint signals of recovery appeared. This decrease in industrial output is not so large if measured in value-added terms. A detailed analysis reveals that during the 1991-1992 periods, all elements of aggregate demand declined. The fall in domestic aggregate demand was accompanied by the dramatic collapse of the CMEA market (compensated partly by increasing exports to the West European markets, especially to the European countries). The deep transformational recession in the 1990-1992 periods, was not accompanied by a corresponding decline in employment. A very low rate of unemployment has been a specific feature of the Czech economy as compared to other economies in transition as well as to developed market economies. This striking difference between the tendencies in the development of output and unemployment cannot, however, last for long and may be explained mainly by the slow restructuring at the micro level, Novotny (1993).

Table 2: Real GDP Growth Rates (in %), in selected transition countries

year	Czech Republic	Hungary	Slovenia	Slovakia	Poland
1990	-1.20	-3.5	-4.7	-2.5	-11.6
1991	-14.20	-11.9	-8.1	-14.5	-7.0
1992	-6.40	-3.1	5.4	-6.5	2.6
1993	-0.94	-0.6	1.9	-3.7	3.8
1994	2.62	2.9	4.9	4.9	5.2
1995	4.84	1.5	3.5	7.4	7.0
1996	4.70	2.1	3.2	6.3	6.9

Sources: CNB, UNO, 1996 CERGE estimates

According to Sojka (1994), in the second half of 1992 and in 1993 the co-existence of both the symptoms of recession and some signs of economic recovery become visible. Industrial output fell by 10.6%, (large state-owned enterprises experienced a further decrease in output, while in smaller ones and in the private sector the output rose). In 1992, output in construction increased by 22.0% (this being due mostly to contracts abroad). The upturn in economic activity was located in the private sector, but because of its low share in GDP formation thus far its dynamics were overbalanced by declining trends in the state sector. In 1993, the GDP stagnated, while industrial production decreased further (preliminary data shows a decrease of about 5% with some decrease in construction as well).

Table 3 shows that, since the beginning of the transformation the service sector has experienced the largest boom, especially in tourism sector. Services currently contribute to more than half of the GDP. The service sector has increased its share by more than 30% since 1991. Agriculture has declined slightly responding to a weakness in the government agricultural policy. At first look, construction is not exactly having a large increase. However, its steady share following its original decline and eventual increase in the growth of output suggests yet unexplored possibilities of this sector. Industry paid the heaviest toll due to structural changes and the breakup of long-lasting manufacturing and trade patterns. Its continuously declining share should not leave us in good macroeconomic descriptions, because not only theoretical macroeconomics has its foundations in microeconomics.

Table 3: Shares of Sectors on GDP (in %), in the Czech Republic

Year	Agriculture	Industry	Construction	Services
1991	6.0	47.4	6.8	39.8
1992	6.1	42.9	5.3	45.8
1993	6.5	37.0	5.2	51.3
1994	5.8	34.8	5.9	53.5
1995	5.3	34.6	6.2	54.0
1996	5.1	34.7	6.6	53.6

Source: CNB, 1996, CERGE estimate

1.2 Private Sector

After the Economic stabilization, the transformation reforms were launched. The reform was important to increase the share of private ownership (state ownership is connected with low efficiency) via privatization and support for small and medium enterprises. Creation of the institutional and legal framework that would support entrepreneurial activities and smooth the transition from the command towards the market was to complement the transformation process as a non-economic reform, was extremely the important one. Yet privatization was not the only way of creating private sector output. Throughout the early transition period new private firms were also being created. While early on credit to small firms may have been generous, retained profit was a major determinant of new investment. Small firms were apparently the force behind low Czech unemployment. Survey evidence suggests that new small private firms were responsible for almost all of the Czech job creation during early reforms, such that five years into transition small firms offered more jobs than both the state and privatized firms combined, Svejnar (1995).

The economic growth is not possible without private investments. After some periods, connected with the beginning of the transformation, investments started to rise steadily. Fixed investments have recently grown at a very high rate. The rate of gross investments has been even higher, indicating a substantial positive increase in stocks. New investments in machines and equipment have been more frequent than those in buildings and construction. However, the largest investment increases have been registered in communications and mining. An especially promising revitalization has recently occurred in the manufacturing industry. Strong investment activity has emerged, particularly, in the paper industry, metallurgy and electrical engineering. Textile, food, and chemical industries have recorded some investment acceleration as

well; and a decline was registered in non-financial firms: construction, catering and accommodation, CERGE-EI, (1996).

The first registrations of private entrepreneurs took place in mid-1990 due to the new trades licensing Act. The district statistical bodies were responsible for the share of identification numbers. This agenda accounted for about 20% of their working capacity in 1990 and 1991. It was difficult to distinguish between real entrepreneurs and those who only posses identification numbers. According to Czech statistical office, only 788653 out of 1119400 registered entrepreneurs in December 1993 were really doing businesses, about 30% of the statistically registered were 'dead souls', mainly in construction, retail trade and other business service. Table 4 shows Private Sector Contribution to GDP (in %), in selected transition countries, Jilek (1994).

Table 4: Private Sector Contribution to GDP (in %), in selected transition countries

Year	Czech Republic	Bulgaria	Hungary	Poland	Romania
1990	12	9	25	31	16
1991	17	12	30	42	24
1992	28	18	42	45	26
1993	45	25	50	48	32
1994	56	30	60	70	39
1995	64	32	68	75	45
1996	74	34	75	78	50

Source: IMF, 1996 CERGE estimates

1.3 Foreign Trade

In the Czech Republic, Foreign trade has played a fundamental role for the Czech economy during the post- 1989 period. Foreign trade liberalization implemented at the very beginning of the transition was important for both the reorientation from traditional CMEA trading partners towards the EU and for increasing competition on domestic markets. Following a major decline in exports in 1990-91 primarily caused by the dismantling of the CMEA and the collapse of the Soviet market, exports of the Czech Republic have risen steadily. This was facilitated by the Association Agreement with the EU, signed by Czechoslovakia in 1991 which subsequently, after the split with Slovakia, was transformed into two separate agreements in October 1993. The Association Agreement enabled duty-free access for most industrial goods from the Czech Republic to EU markets, thus greatly facilitating the very quick reorientation of

its foreign trade towards primarily EU countries. Whereas in the past, about two-thirds of Czechoslovakia's foreign trade has been carried out with CMEA countries (one-third with the USSR alone), by 1993 the share already dropped to 20 per cent. During the 1990s, foreign trade became a modest engine of growth, when Germany had replaced Russia as the main trading partner. The composition of Czech foreign trade has radically changed. The share in exports of machinery and transport equipment has doubled since 1993, while raw materials and semi-finished products have shrunk in similar proportions, Svejnar (1995).

The transition of Czech foreign trade, by diverting its flows from the East to the West, was completed already in 1994. The geographic trade pattern in 1995 is not very different from the pattern in 1928. With German-speaking countries scoring a 50% share of total Czech exports, there is no doubt about what the center of gravity of the Czech external economic orientation is. Similar picture can be given by analyzing the inflows of foreign direct investment. Czechs originally looked upon the separation from Slovakia as a move to free their hands from a totally unsuccessful Eastern legacy and to concentrate on a speedy Western convergence. Surprisingly, this sacrifice has given hardly any advantage to the Czech political scene. The opposite is true: the disintegration of Czechoslovakia was detrimental to both countries due to their shrinking market size and increasing transaction costs in their mutual trade. Also, by decreasing the domestic Czecho-Slovak competition, the pressure for efficiency in both the Czech government and domestic firms has declined, Zemplinerova and Benacek (1997).

During the first wave of the transformation processes a radical adjustment of trade, services and capital flows began to materialize. This process should implement the shift from the distorted structures, which arose under the Soviet-type economy framework, to standard market-determined patterns of trade and capital flows, reflecting underlying comparative advantages. A substantial percentage of Czech exports are resource-based, low value-added products and standard labour intensive and relatively low-skill manufactures. After the heavy devaluations of the Czechoslovak crown in 1990, iron-metallurgy, basic chemicals and similar intermediate products were able to find new export markets relatively quickly, as their competitively increased. The prospect of further increases in the export of these products are only modest, as in these branches international demand is weaker, the competition between developing countries particularly strong and all accompanied by strong pressures in favor of protectionism in

response to overproduction and/or unemployment. The existing patterns of the Czech exports can only change in the medium and long-run in connection with the new rebuilding of the Czech economy, which will bring about an upgrading of production and export structures. This process could create conditions for a recovery of the Czech Republic's share in world markets, Hrneir (1993).

The breakdown of the foreign trade state monopoly in mid-1990 and the expanding number of foreign trade license holders contributed to substantial changes in the surveying of foreign trade. Previously, about 50 specialized state organizations (joint stock companies) were authorized for foreign trade operations and therefore these were respondents who were able to inform on the operations, in all their stages-agreement, delivery, cash. Regular custom statistics were introduced from January 1, 1991. the nominal price indices for exports, as for imports, based on data collected from specialized foreign trade firms, were used up to the end of 1991.after that, unit value indices were introduced because the custom statistics methodology made this possible, and because it was difficult to follow the current role of many newly engaged firms in foreign trade, Jilek (1994).

1.4 Unemployment

The rate of unemployment and the situation in the labour market are the outcome of a number of mutually intertwined factors The present tendencies encountered in unemployment data (a relatively modest increase in 1991, a decrease in 1992 and a moderate increase in 1993) are the result of the very specific conditions existing in the present stage of the transition process in the Czech national economy. The most important of these being, Hajek (1992):

1. before the transformation process, a behavioral pattern encountered frequently in state-owned enterprises. In this sector, even under changing conditions, we can observe a tendency towards an increase in social over-employment in 1991-1992. Large enterprises with more than 1000 employees have had the decisive share in output - over 70% in 1992.
2. The absent disciplining of enterprises through bankruptcies until April 1993.
3.The changes in institutional conditions for granting unemployment benefits.
4. The high devaluation of the Czechoslovak crown at the end of 1990 creating suitable conditions for competitiveness, mostly in traditional industries, and helping reorientate Czechoslovak foreign trade to Western markets.

5. The increasing economic activity in the private sector, especially in services, construction and transport.
6. The growing efficiency of labour offices and active employment policies alleviating the situation, especially for young people.
7. The migration for jobs abroad (especially in Western Bohemia).

Due to all the above mentioned factors, unemployment has, been quite low in the Czech Republic; however, some important regional differences exist. As empirical data show, unemployment tends to increase from the western regions to the eastern regions of the Czech Republic. The parts hit hardest by unemployment are Northern and Southern Moravia, with respective unemployment rates of 4.57% and 2.93%, as well as Northern Bohemia with 3.11%. In Prague, the rate of unemployment was about 0.24% while in all other Bohemian regions it moves between 1.89 and 2.76%. These unemployment data are from June 30, 1993, when the unemployment rate in the Czech Republic reached 2.63%. At the end of 1993 the unemployment rate reached 3.2%, Sojka (1994).

1.5 Exchange Rate

In the period of the planned regime the domestic markets were almost completely isolated from economic impact of external markets; free foreign trade did not exist. There were three different exchange rates under this regime. An official exchange rate; first for external use; second for domestic business, the state businesses and its co-operatives and a third for citizens. In 1990 there were the first preparatory steps taken in moving towards a market economic system. For the exchange rate, the national bank devaluated 24 Czechoslovak crowns (CSK) to 1 USD and it immediately changed to 28CSK/1USD, this in hopes of helping international trade. Development after 1991 marked a period of currency appreciation in real terms year after year. The cause of the real appreciation under the stable nominal exchange rate regime was due to the differences in inflation between the rate in the Czech Republic and that of the Western European countries. It made it harder for exporters to make a profit after the decline in the favorable economic conditions that were created after the devaluation in 1990 and the reduction in demand affected their biggest trade partners most. Any situation that made it harder to trade with Germany (43% of exports in1999) or any of the EU countries (59.9% of exports in 1997) would have adverse affect on the entire Czech economy, Blaikie (2001).

According to Blaikie (2001), the Slovak crown has faced much of the same challenges at being stable as the Czech currency. It clearly followed the same policies when the currency was the CSK and since 1993 until October 1998 the National Bank of Slovakia (NBS) was fixing the currency. The Slovak crown from July 1994 until October 1998 was pegged on a basket of two currencies, 60% consisted of the DEM and 40% USD. The difference between the resulting rate and its theoretical value, calculated according to that currency basket was not to exceed 7%. In April of 1996 the NBS stopped publishing multiple exchange rates as under the totalitarian regime of the past. In October of 1998 the fluctuation band and currency basket of the SKK was abolished. The exchange of the SKK is now determined by demand and supply on the inter-bank FX market only. On January 1, 1999 the Euro was established as an anchor currency, this as a part of one of the many steps in accession into the EU.

2. Transition and Economic Growth in Czech Republic (Theoretical framework)

2.1. Privatization and Outcomes in Transition Process

The economic transition in central and Eastern Europe (CEE) started in the early 1990's. Most of the researchers believed that it will begging with a recession caused by both the restrictive macroeconomic policies and by the restructuring of the economy required by the shift from socialism to the market economy. It was not clear how long this recession will continue and when the economic growth would begin. That would depend of initial conditions facing the economy including external influence, foreign direct investment (FDI), economic policies and internal shocks, Fischer, Sahay, and Vegh, (1996).

Zinnes, Eilat, and Sachs (2001) suggest that gains from privatization at the level of macroeconomic performance depend on complementary policies, and not just those related to appropriate institutions. While privatization means the ending of subsidies, which drain state finances, privatization also means the state will lose its share of enterprise profits unless complementary reforms create an adequate tax code and administration. The potential for efficiency gains from privatization requires price and wage liberalization in order to create a price system that reflects economic performance. In the same time, unless privatization accompanied by reforms to liberalize the current and capital accounts, maybe the newly privatized domestic firms are not able to gain access to foreign markets, skills, and necessary financing for their economic success, which means kind of challenges. Another negative impact from privatization on economic performance, unemployment may increase over and above what expected from the resource reallocation associated with enterprise restructuring suggested by the microeconomic perspective. This may occur if privatization leads to decrease employment rate, as managers are free from political interference and return to profit maximization as their principal objective.

2.1.1. The Process of Privatization:

Tirole (1991) states that the goal of all transition countries is the market economy, these countries cannot function without significantly large private sectors. The literature concerned with the modeling of privatization as recommendation for transition countries. Tirole breaks the privatization process into four periods. The first called

definition period, where firms rationalized, a social safety net created, a new system of laws implemented and holding companies (funds, which will play the role of institutional owners) created. The second is the private restructuring period, during which holding companies restructure firm; the government sets a timetable for trade liberalization and completes the legal system. Firms put modern accounting structures in place and foreign capital is attracted. The third period is the inception of the stock market where holding companies, newly created firms, other institutional investors, and possibly foreigners bite on each firm. The last is the market period; markets for the firms, holding companies, stocks are open to all citizens, foreigners and other investors. Trade liberalization is completed and the government loses its right to vote on the board of directors of holding companies. Thus, the domestic capital market starts to function.

2.1.2. Positive Outcomes:

According to Gomulka (1994), major achievements of the countries concerned during the transition process would be as follows:

- Disappearance of shortages as a result of price liberalisation:

One of the remarkable outcomes of the reforms has been the very high speed at which microeconomic equilibrium were restored once administrative price controls were lifted. Kornai (1993) stated that shortages are an imminent feature of any economy with a predominant state sector subject to soft budget constraints, whatever the price regime, has apparently turned out to be wrong. A further consequence has been the disappearance of various shortage-related phenomena: forced substitution in consumption and production, monitory overhang, forced saving, excessive inventories, the humiliation and cost of long quests, and shortage-related bribes.

- Higher dollar wages and better access to import.

After ending, the problem of shortage in economy there has been an improvement in the choice and quality of the domestically produced goods and services. Moreover, real wages declined, the reforms have typically brought an increase in the dollar wage and consequently improved access of consumer's foreign goods.

- Better access to foreign technology.

The higher dollar purchasing power and increased FDI have insured the countries access to foreign technology and skills. Large benefits from this access can be seen in telecommunications, banking, trade and the mass media.

- Improvement in skills.

Incentives to acquire or improve the right skills and work hard have become much stronger. There is consequently a better use of technology especially in private sector.

- Improved product composition.

The structure of the transition economies output in terms of the broad sectoral pattern and products within sectors, has changed substantially in the required direction.

- Increased external creditworthness.

Most of the transition countries have increased international reserves and lowered their debt/export ratios. The combined benefits listed above vary among the post communist countries because of a rapid growth of the private sector in these countries.

2.1.3. Privatization in Czech Republic:

The Czechoslovak (later Czech) government began the process of privatizing companies, this privatization started into two schemes; small privatization and large privatization. The basic principle of small privatization is that all domestic and foreign firms and all domestic and foreign individuals can make privatization proposal to every state-owned firm, or some part of it, or a proposal to join several state owned firms together. The proposal of privatization judged by the privatization committee established on the local base from deputies of municipalities, employers associations, and financial offices. Public auctions were the main methods applied in small privatization and it was more than 85% of the property, direct sales to predetermined investors, and transfers to municipalities.

According to Kotrba (1994), small-scale privatization contains small firms, which sold in public auctions. Law for small privatization adopted after restitution legislation, and the first auctions started in second quarter of 1991 and the last one in late 1993. Small-scale privatization used for privatization of whole companies and some property separated from state owned enterprise and sold separately; table1 shows liberalization and small-scale privatization in 25 countries. The income, which is coming from privatization, deposited at special accounts of fund of national property.

Hanousek and Kroch (1998) stated that, voucher privatization took place in Czech Republic in two waves. The first wave involved shares in 988 firms. The second included shares in an additional 676 firms plus unsold shares in 185 firms carried over from the first wave. Each wave involved several rounds of bidding. To prevent strategic endgame behavior, the exact number of rounds was not announced until just prior to the final round (round 5 in the first wave and round 6 in the second wave). Share prices

announced by the administrative authorities and participants submitted bids for the number of shares desired at the announced price.

All Czech citizens over the age of 18 were eligible to acquire 1000 voucher points; each unit of demand is 1 coupon that equals 100 points. The money value of 100 points is 100 Czech crowns (CZK). Approximately 75 percent of eligible Czechs participated in each wave, making the book value of the shares available slightly more than $1,400 per participant in the first wave and $1,000 in the second wave. The total book value of the equity privatized through vouchers was more than $14 billion, about 10 percent of the Czech Republic's national wealth, Hristova (2002).

2.2. Transition and Structural Reforms

After the collapse of communist system, the overall strategy of transition and reform policies appear and influenced by economic and institutional constraints and the long-term political and economic aims of the reforms, rather than by the usual short-term concern to gain and preserve political power. Most of these constraints are systematic and common to all countries undergoing the transition. In addition, economic, institutional and political reforms have a feedback effect on the constraints. These economic and political reforms have positive outcomes, which tend to decrease some of these constraints, and discuss the effect of negative outcomes, such us sever recessions and fiscal problems, which tend to produce new economic and political systems.

2.2.1 Economic and Political Support for Reforms

During transition, a change of economic system requires major structural shifts in terms of institutions, ownership, modes of interpersonal behavior, attitudes to work, and laws. Some institutions have to be closed or cut in size which is not going with this transition process, at the same time new institutions have to be created (stock exchange, securities commission, investment and pension funds, unemployment office, foreign exchange dealers), all these with new political parties. Moreover, other institutions have to be expanded (banks, business schools, customs and other tax offices, business consulting). These institutional changes superimposed on large changes in the pattern of price and foreign trade relations, which imply major shifts in the requirement of increasing outputs. Reforms in transitions are revolutionary and bring large changes in the economic and social circumstances and opportunities of individuals and businesses. The

changes for the better are large enough to sustain broad public support for the reform process, as the high popularity ratings of many of the new political leaders showed. In contrast, there are also large costs that influence the political process as well, Gomulka (1994).

2.2.2. Reform Characteristics in Transition Countries

Majority of the authors found that structural reforms in transition have a significant positive impact on economic growth. DeMelo (2001) find a nonlinear effect over time with reforms initially causing a decline in growth rates, presumably due to adjustment costs, but this decrease is less than a positive effect in the year after the reforms that introduced. Berg (1999) challenges this conclusion and provides evidence of a nonlinear effect of reforms across sectors of the economy. These authors show that a smaller negative impact on state sector performance offset by a much larger positive impact on private sector growth. They argued about the positive impact of reforms and once initial differences in reform levels controlled for subsequent reform efforts called the speed of reform; have no significant additional impact on average growth.

2.2.3. Reforms in Czech Republic

The importance of the reforms from central plan to free market has been redesigning the role of the state in the Czech Republic. After 1989, state authorities regulated not only the economy, but also most of the activities in the society. It was clear that at the beginning of transition the scope of the state's activities needed to be heavily reduced but in the same time to promote its efficiency in providing standard public services. On the one hand, the direct state role in the economy, trade and exchange regime control, and direct control of enterprises and banks was supposed to be decreased. On the other hand, the state could not give up its rules setting and enforcement roles for private enterprises to ensure the citizens' access to public goods and services.

Hanousek, Kocenda, and Lizal, (2004) stated that The Czech Republic government liberalized almost all the prices, privatized most of the economy, decentralized the wage setting, and opened the country to the foreign trade with nearly balanced budget. Further more, they pointed out that starting with the privatization process unemployment rate was below 4% till 1995, low inflation, and GDP per capita level of over 5000 USD and remains high in comparison with other transition countries. By 1995, the past recession and the negative impact of the split of Czechoslovakia had

finished and the economic growth started with 6% in 1996 and continuing this robust growth of 5%, but in 1997 it was becoming clear that the macroeconomic success was not because of the good performance of microeconomic foundations. The growth of wages more than productivity led to a higher demand of durable goods imported by consumers and increasing foreign trade and current account deficits, this deficits solved by inflowing foreign capital attracted by high interest rates .

2.3. Transition Impact on Economic Performance

The policymakers in Czech Republic formulated transition strategies that focused on macroeconomic stabilization and microeconomic restructuring, along with institutional and political reforms. The implementation of these strategies was different across countries in speed and significance, but almost all the transition countries plunged ahead in rapid style of transformation of economy. The transition countries have not performed as many had expected, and economic performance varied across countries, but at least central European countries performed better than the Baltic States, and Baltic stated performed better than Russia and Ukraine. Here we are interested on focusing the macroeconomic performance in Czech Republic after the transition process, Jan Svejnar, (2002).

2.3.1. GDP Growth

During the last several years, GDP in the Czech Republic has been very satisfactory and this trend looks likely to continue in the future. This indicator shows domestic production including the service sector, general consumption, and public expenses. The entry of a large investor or a willingness on the part of consumers to spend is positive economic performance. By illustrating table 5 below, we can see between 1996 and 2006 the Czech economy as a whole underwent some significant structural changes. Generally, the GDP increased all of the years except year 1998. This phenomenon occurred, with varying degrees of intensity it was in all regions of the country. One of the important economic indicators used to gauge a given country's economic performance is GDP growth, especially in year 2006.

Table 1: Macroeconomic indicator's after transition in the Czech Republic

Years	GDP growth % base year=1999	Inflation rate %	Nominal exchange rate CZK/EUR	Unemployment rate %	FDI CZK/M	Real wage[1]	Exports Real term % y/y[2]	Imports Real term % y/y
1996	102.7	8.8	34.45	1.1	38,775	108.7	5.5	12.1
1997	100.4	8.5	35.80	1.3	41,251	102.3	8.4	6.9
1998	95.5	10.7	36.16	1.9	119,965	98.6	10.4	8.3
1999	100.0	2.1	36.88	3.1	218,812	106.2	5.4	4.9
2000	103.2	3.9	35.61	4.1	192,421	102.4	16.5	16.3
2001	101.2	4.7	34.08	4.2	214,585	103.8	11.2	12.8
2002	102.3	1.8	30.81	3.7	277,689	105.4	2.1	5.0
2003	103.3	0.1	31.84	3.8	59,316	106.5	7.2	8.0
2004	103.0	2.8	31.90	4.2	127,844	103.7	20.7	17.9
2005	104.0	1.9	29.7	4.2	279,181	103.3	11.8	5.0
2006	108.8	2.5	29.2	3.9	135,948	103.8	14.4	13.8

Sources: CZSO, CNB

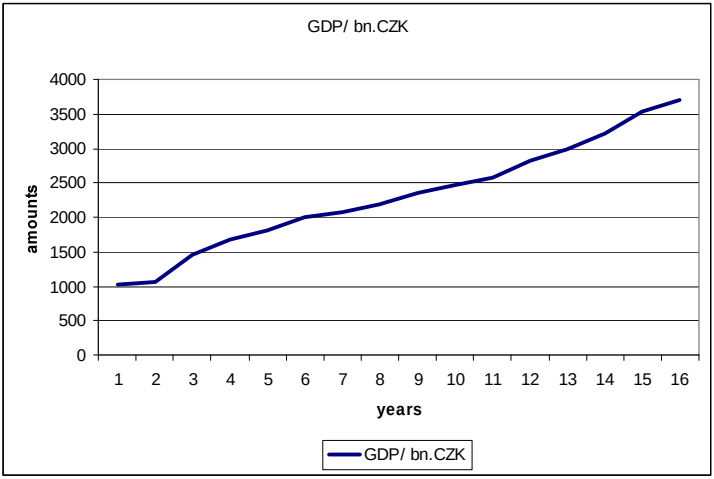

Figure 1: Czech GDP from 1993 to 2008/ bn.CZK

2.3.2. Exchange Rate

Many transition countries devalued their currency as means of export protection and adopted a fixed exchange rate as part of macroeconomic stabilization. They also renewed their foreign trade away from the old council for mutual economic Assistance arrangements and toward market economies. However, as domestic inflation rate

[1] Index corresponding of base year 1993=100
[2] y/y = year-by-year chang

exceeded world inflation rate in the 1990s, the fixed exchange rate became invaluable, leading in some countries to substantial current account deficits. For example, Russia, Kazakhstan, Albania and Bulgaria all had at least one year current account deficits 10 percent of GDP or greater between 1990 and 1993. Most transition economies responded by devaluing their currencies again and adopting more flexible exchange rate regimes, although Bulgaria, Estonia and Lithuania have fixed their exchange rate through currency boards as a means of long-term economic stabilization, Svejnar, (2002).

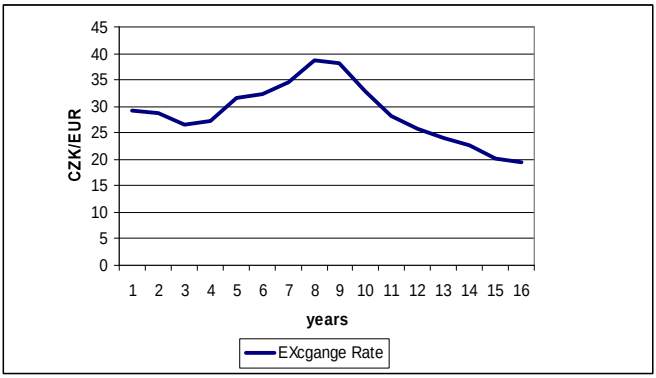

Figure 2: Czech Exchange Rate between CZK/EUR from 1993 to 2008

2.3.3. Unemployment Rate

The problem of unemployment known before the process of transition in many countries, but it emerges rapidly in central and eastern European countries, except for the Czech Republic. After two years of transition, the unemployment rate rose into double digits in most economies of central and Eastern Europe. For instance, in 1993 the unemployment rate reached 16 percent in Bulgaria and Poland, 12 percent in Hungary and Slovakia, 10 percent in Romania, 9 percent in Slovenia, but only 3.5 percent in the Czech Republic. The high unemployment rate explains high rates of inflow into unemployment as firms laid off workers and relatively low outflow rates from unemployment as the unemployed found it hard to find new jobs. The Czech Republic labor market was a successful model of transition labor market, characterized by high inflows as well as outflows, with unemployment representing a transition state

between old and new jobs, (Ham, Svejnar and Terrell, 1998, 1999; Svejnar, 1999; Boeri, 2000). Unemployment rate rose more slowly in the Commonwealth of Independent States and the Baltic countries as firms were slower to lay off workers and used wage declines and arrears as devices to hold on to workers. Foe example, in 1993 unemployment rate in Russia and Estonia was near 6 percent.

2.3.4. Foreign Direct Investment

In the Czech Republic, on average during 1996–2006, the FDI inflow was 6.5% of GDP annually, but there were big differences among years caused by large privatization deals. The growth of FDI flows accelerated only in 1995 and continued to increase thanks to the privatization of three big banks between 1998 and 2002. On the other hand, 2003 and 2004 saw no major large-scale investment projects and the increase in the stocks of FDI was lower.

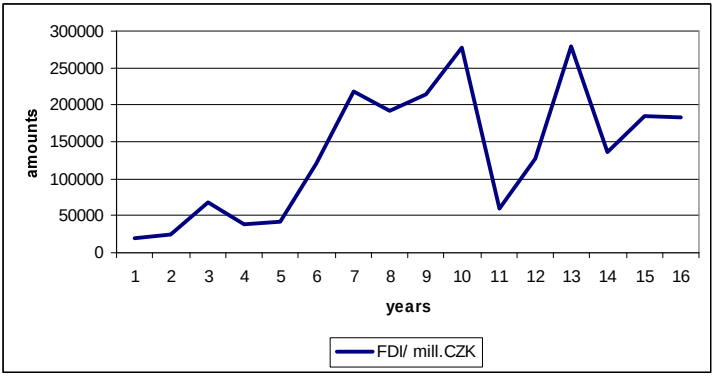

Figure 3: Czech Inflow of Foreign Direct Investment from 1993 to2008

According to Katuscak and Zemcik (2007) the structure of FDI dominated by manufacturing with its share reaching 38% on total stock. In the end of 2006, FDIs has been playing an important role in manufacturing and foreign owned manufacturing firms estimated to produce 65% of total sales, providing employment for 45% of the labor force, and produce about 80% of total exports. Finally, they found out that FDI is an important component of transformation in the Czech economy and helps to facilitate rapid change. Table 1 show the positive relation between FDI and GDP growth as well as the growth of export rate in the same time.

2.3.5. Exports and Imports

In the case of the Czech Republic, opening and liberalization of the Czech economy lead up to new specialization patterns according to comparative advantages relative to the new trade policy. Moreover, Czech exports rely mainly on sales of standardized goods where the price is the most dominant criterion of choice. The Czech Producers would therefore force their production to the relative factor proportions of the economy, employing the most productive people and cheapest production factors. The most advanced Czech industries embark upon a process of catching up advanced technological market economies, and they will be likely increasingly to conduct intra-industry rather than inter-industry trade, Bohata and Ficher, (1995).

Figure 4: Czech Total Exports and Imports from 1993 to 2008/ Mill. CZK

One of the most important issues in the Czech economies has been the liberalization of foreign trade and reduction of tariffs and non-tariff barriers. The state monopoly of foreign trade eliminated at the beginning of reforms, and fixed exchange controls replaced by free convertibility of the Czech crown for current transactions. The rapid shift from transferable fixed exchange rate trade to trade based on freely convertible currencies brought about a drastic reduction of trade among the Central and East European countries (CEECs) and increasing economic exchange between the Czech Republic and west European countries, Aiginger, Peneder and Stankovsky, (1994).

3. The Evolution of Foreign Trade in Czech Republic

3.1. Adjustment of Foreign Trade Flows during the Transition Period

3.1.1. Foreign Trade during the Transition Period

Most of the transition economies faced a huge supply of labor but a shortage of capital, although some OECD publications suggest that capital was not generally scarce, for example, in the case of Czech Republic the ratio of capital investment to GNP was very high, particularly for heavy industries defense-related sectors. However, having the central administration of economic activities, including foreign trade, and control of prices, real factor proportions were not fully reflected in the structure of production. Thus, we cannot expect that Czech exports and imports were significantly determined by natural labor or by capital endowments. The important factor of trade seems to be the fact that relative factor abundance changed radically through economic transition. The regulation of princes, a subsequent increase of capital costs and a continuous decrease of real wages, one would expect to become exports more labor-intensive and imports more capital-intensive. In the beginning of the transition process, the technology gap between transition countries and west European countries was wide and the labor force was used inefficiently. After the implementation of economic reforms and the organizational restructuring of firms the abundance of skilled labor was used in a more efficient manner and technology gap narrowed by increasing FDI and joint venture activity in transition countries, Frank, (1997).

Czech Foreign Trade after the Accession of EU

Accession of Czech Republic to the EU on 1 May 2004 did not upset the Czech economy. Real GDP growth, year-on-year, rose to 4.4% in the first quarter of 2005, thanks mostly to greater gross fixed investment and favorable foreign trade results. Both export and import growth rates experienced an upswing during the accession period. Year-on-year, export growth rose from 13% in the first quarter of 2004 up to 33% in the second quarter, while export growth leapt from 11% to 31% over the same period. Later on, this growth gradually decelerated; by the first quarter of 2005, it had dropped back to pre-accession levels. Exports, however, have grown faster than imports throughout; in the first quarter of 2005, the Czech Republic achieved an overall trade surplus

amounting to 500 millions of EUR. April 2005 likewise ended with a trade surplus and the same held true for the period May 2004 to April 2005 as a whole. This improvement occurred despite accelerated GDP growth (which generally tends to boost import growth) and regardless of the 9% appreciation of the Czech koruna from Q1 2004 to Q1 2005 (3.04 against 3.33 EUR per 100 CZK), Poschl (2005).

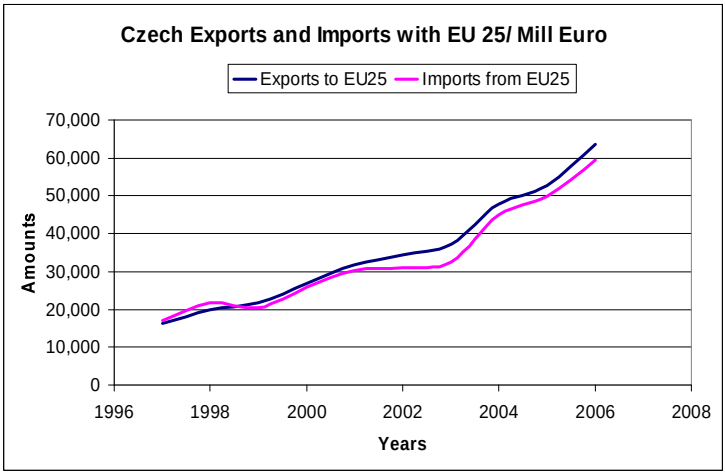

Figure 5: Czech Exports and Imports with EU 25/ Mill Euro

Table 2: Balance of trade in Czech Republic with EU25 and EU27/Mill euro

Years	Exports to EU25	Exports to EU27	Imports from EU25	Imports from EU27	Balance of trade with EU25	Balance of trade with EU27
1997	16,354	16,485	17,139	17,139	-758	-654
1998	19,832	20,070	21,574	21,574	-1742	-1504
1999	21,582	21,800	20,396	20,396	1186	1,360
2000	26,775	27,063	25,958	25,958	817	1,040
2001	31,811	32,184	30,131	30,131	1680	1,959
2002	34,467	34,893	31,068	31,068	3399	3,703
2003	37,156	37,588	32,481	32,481	4675	4,930
2004	47,687	48,330	44,966	44,966	2721	3,171
2005	52,800	53,702	49,810	49,810	2990	3,636
2006	63,568	64,789	59,387	59,387	4181	5402

Source: Eurostat, yearly statistical book, 2006.

3.2. Impact of FDI on Foreign Trade in the Czech Republic

3.2.1. FDI and it's Impact on the Economy in the Czech Republic

Dusek and Kresimir (2005) stated that, the importance of FDI for the Czech Republic economy seems clear, FDIs, among other things, are likely to bring in new capital, new technology, increase employment and gross domestic product and to improve in the longer run the host country balance of payment. Some of these positive effects of FDI are supposed to magnify through so-called technological spillovers, which broadly defined as the indirect positive effects that FDI can have on the rest of the economy, especially on the related upstream and downstream industries. In addition, FDI can have a significant effect on firms' quality goods and industries' restructuring and the change of the structure of the whole economy. Despite the fact that the empirical quantification of the above effects is rather difficult and, at the moment, very incomplete, it can be argued with a high degree of certainty that FDI inflow in the Czech Republic has contributed to all of the above positive effects. However, it is also worth noting that inducing desirable FDI has its social costs in the form of the incentives schemes (investment in infrastructure, tax holidays, financial support for the creation of new jobs, etc.) as well as the costs associated with the displaced domestic firms that cannot survive foreign competitiveness.

3.2.2. FDI and Foreign Trade in Czech Republic

In the Czech Republic there were strategic factors influencing the trade structure and dynamics: changes in endowments of physical and human capital, inflows of FDI, developments in productivity and wages, enterprise pricing policies and the nature of Czech economic competitiveness vis-à-vis the world markets. This includes the switching from competition in prices to competition in quality, and the rising role of differentiated products and intra-industry trade. There are also the positive effects of lifted tariffs, accelerating inflows of FDI and exceptionally fast changeover in Czech exports towards products with higher unit prices. While exports and FDI inflows offer growth and employment, accelerating import penetration requires the downsizing of many industries, which burdens the completely Czech economy with high adjustment costs. Now, in a period of economic structural stabilization and EU accession, the prospects for accelerated economic growth are much higher, Vladimir, Ladislav and Jan, (2003).

3.3. Exchange Rate and Growth in Foreign Trade

The stability of the exchange rate and a type of its regime are important elements in the overall monetary policy of each country. The significance of the matter even more accentuated in the case of transition economies because international lending institutions like the International Monetary Fund, the World Bank, and the European Bank for Reconstruction and Development provide credit subject to macroeconomic stability and a stable exchange rate. This is true no matter what kind of regime adopted. Any country in transition must undergo a stage of macroeconomic stabilization, which inevitably accompanied by large shocks to macroeconomic fundamentals, and the success of the stabilization programs in transition economies is especially important for policymakers. The necessity of close economic relations among transition economies in Central and Eastern Europe and between these countries and the European Union, the exchange rate and the exchange rate regime play an important role in economic development.

3.3.1. Appreciation of Czech Currency

In the case of Czech Republic when analyzing changes in exchange rates, it is necessary to differentiate between the position of the Euro and other currencies. The position of the Euro is specific because of the high share of the EU and the Euro zone as it shown in table 6. In Czech foreign trade and exchange rates between CZK and all other (non-Euro) currencies depend on the exchange rates of these third currencies and the Euro, and changes in the CZK/EUR exchange rate. A large part of the appreciations caused by the declining value of the U.S. dollar (and of currencies directly or indirectly tied to the dollar). Two causes can explain the long-run trend towards real appreciation as a natural and equilibrium phenomenon. Firstly; gradual improvement in the marketability of Czech products in foreign markets mainly quality upgrades, improved marketing and distribution networks; Secondly, a higher growth of productivity in the tradable sectors. These two effects explain why currencies of successful transition and emerging economies should appreciate in the long period and predict that this type of real appreciation does not endanger the price competitiveness and external balance of the economies.

3.3.2. Exchange Rate and Foreign Trade in Czech Republic

The Czech Republic following floating exchange rate regime system since May 1997, and according to (Johnson, 1969), flexible exchange rate regime would reduce protectionist tendencies and promote foreign trade. Moreover, floating exchange rates would provide macroeconomic independence, by bearing the burden of adjustment vis-a-vis imbalances in the 'current' and 'capital' accounts of the balance of payments. Johnson (1969) stated that exchange rate volatility associated with the floating exchange rate regime did not pose any potential threat to the growth of international trade and macroeconomic stability partly because hedging facilities would protect one against risk. In addition, exports remain an important factor for economic growth (Balassa, 1989) and hence a competitive exchange rate may be a useful possible anchor for export growth. In contrast to the above, some literature suggests that exchange rate variability under the floating exchange rate regime may be detrimental to exports because of risk averseness hypothesis; this is partly because markets may be imperfect particularly in less developed countries, Doroodian, (1999).

For the exchange rate in the Czech Republic, in 1990 the national bank devaluated the crown to 24 Czechoslovak crowns (CSK) to 1 USD and it immediately changed to 28CSK/1USD, this in hopes of helping international trade. Development after 1991 marked a period of currency appreciation in real terms year after year. The cause of the real appreciation under the stable nominal exchange rate regime was because of the differences in inflation between the rate in the Czech Republic and that of the Western European countries. It made it harder for exporters to make a profit after the decline in the favorable economic conditions that created after the devaluation in 1990 and the reduction in demand affected their biggest trade partners most. Any situation that made it harder to trade with Germany (43% of exports in1999) or any of the EU countries (59.9% of exports in 1997) would have adverse affect on the entire Czech economy. In the second quarter of 1997, the central bank of the Czech Republic was no longer able to face pressures on the Czech currency. In addition, they changed their foreign exchange rate regime from a stable nominal exchange rate to a floating one. This helped trade conditions immediately and the new floating exchange rate would move depending on the market conditions and give a better picture of how the economy was doing, Blaikie, (2001).

The opening of the economy in the Czech Republic, its initial relative low competitiveness and the resulting need to invest led to a sustained balance of trade deficit. This changed in 2005 and 2006, the Czech Republic is likely to remain a net exporter in the near future, and attributed to the pro-export orientation of the inflow of foreign investment motivated by accession to the EU. The accession and recent economic history defined the position of the Czech Republic as a country with full member status which means that trade barriers with the EU have been removed and cannot be reintroduced combined with lower labor costs, CERGE-EI (2007).

4. Econometric Method to Analyze Transition Impact on Foreign Trade in the Czech Republic (Empirical Framework)

4.1. Econometric Analysis

In the Econometric analysis of The Czech foreign trade, the empirical results discussed in the following section in three parts; the first part will discuss the overall effect of selected macroeconomic variables on foreign trade both (Exports and Imports) in the Czech Republic for the period of 1993 to 2008. The method used is Multiple Regression Analysis to estimate the relationship between dependent variables (Exports and Imports) and independent variables (GDP, FDI, WAGES UNEMPLOYMENT, EMPLOYMENT, EXCHANGE RATE, PRODUCTIVITY and INFLATION RATE). For the one-equation models, the ordinary least squares method used to obtain estimates of the regression parameters.

A great number of regression estimates conducted in an attempt to find the most suitable value for explanatory and dependent variables. Furtheremore, statistical programm (MINITAB) version 13 used to verify several estimates for example; **F-Test** to explain the significance of estimated function, also it can be used to test two hypotheses (null-hypotheses which illustrates the real value of coefficients are equivalent and equal to zero) and (alternative hypotheses refers that the real value of the coefficients are not equal to zero, or the independent variables together have an significance effect on dependent variables. **T- Test** to explain the statistical credibility of each coefficient singularly or knowing the statistical significance of each independent variable on dependent variable. **R^2-Test** used to distinguish the important explanatory variables from those of little significance, such as variables with sudden effect on the dependent variable, and the coefficient of determination value is lying between zero and one ($0 \leq R^2 \leq 1$). **D.W-Test** is used to inform the existence of significant correlation in which they occur in our data file or not among random variables on primary degree. Again by this test, the two hypotheses will be examined. The null-hypotheses which inform no relationship between (et-1, et), in reverse to alternative hypotheses.

The second part will present and discuss Input-Output analyze as a Simple Econometric Model for analyzing Exports and Imports in the Czech Republic by using sector shears in both exports and imports for the period of 1999 to 2008. Sectors are starting with

(Food and live animals; Beverages and tobacco; Crude materials, inedible, except fuels; Mineral fuels, lubricants and related materials; Animal and vegetable oils, fats and waxes; Chemicals and related products; Manufactured goods classified chiefly by material; Machinery and transport equipment; Miscellaneous manufactured articles and Commodities and transactions) in the SITC system of classification. The final part will discuss foreign trade by commodities, in this part 97 commodities are accounted starting with live animals (code 01) and ending with Works of art, collectors pieces and antiques (code 97) showed in the table 1 in the Appendix. In addition, these commodities are contributing to exports and imports for the period of 1999 to 2008 in the Harmonised System (HS) of classification.

4.2. Regression Analysis of Exports

The analyze of Czech exports distributed into three parts; the first part discuss the relationship between exports and selected macroeconomic variables which illustrated in table 3, in other word, which macroeconomic variable have more impact on exports rather than others, more than 10 regression estimates conducted in an attempt to find the most suitable macro explanatory variable for exports. The second part will discuss the sector shares of exports in the Czech economy for the period of 1999 to 2008. In this part Czech economy distributed into 10 sectors, starting with food and live animals and ending with Commodities and transactions. In addition, explaining which sector taking a big share of exports during that period, and then arranging all sectors depending on their contribution of exports. The final part will present Czech exports by commodity for the period of 1999 to 2008 and shows which commodity taking a big share of exports during that period by arranging all commodities depending on their contributions of exports.

Table 3: Macroeconomic Indicators and Foreigh Trade in the Czech Republic from 1993 to2008[3]

years	Ex	IM	GDP	FDI	LW	UR	ER	EC	LR	IR
1993	146212.4	157621.5	1020000.3	19050	5904	4.4	5056000	29.15	-	20.8

[3] Exports refere to anuual export of goods and services, Imports of goods and services, inflow of FDI, nominal wages in current prices, unemployment rate as a percentage of civilian labour force, total employment as a thouthands of persons engaged, exchange rate as national currency units per US dollar, Inflation (average consumer price index change %).

									1.6	
1994	163264.5	177799.8	1056000.7	24994	7004	4.3	5111000	28.78	2.1	10
1995	201694	223306.5	1466000.5	67993	8307	4.1	5148000	26.54	4	9.1
1996	217294.1	251586.7	1683000.3	38775	9825	3.9	5195000	27.14	3	8.8
1997	271124.8	290910.8	1811000.1	41251	10802	4.8	5205000	31.7	-1	8.5
1998	257458.5	278552.5	1996000.5	119969	11801	6.4	5125000	32.28	0.4	10.7
1999	310265.9	334475	2080000.8	218812	12797	8.6	4949000	34.57	4.2	2.1
2000	384807.2	416283.3	2189000.2	192421	13614	8.7	4940000	38.6	3.5	3.9
2001	398192.8	419985.8	2352000.2	214585	14793	8	4963000	38.1	6.5	4.7
2002	383962.7	413355.1	2464000.4	277689	15866	7.3	4991000	32.74	2.3	1.8
2003	422545	453456	2577000.1	59316	16917	7.8	4923000	28.21	5.3	0.1
2004	525751.9	530085.5	2814000.8	127844	18041	8.3	4940000	25.7	3.3	2.8
2005	579122.7	566834.9	2984000	279181	18992	7.9	4992000	23.96	4.3	1.9
2006	672123.8	650480.2	3222000.4	135948	20207	7.2	5072000	22.6	5.2	2.5
2007	748684.3	710866.9	3535000.5	185274	21692	5.3	5207000	20.29	3.7	2.8
2008	664212.8	652919.7	3696000.4	182976	22531	5.5	5268000	19.35	1.6	6.3

Sources: CZSO, OECD, CNB, ministry of labour and social affairs in CR, ministry of finance in CR, Economy
Watch,economy, investment and Finance Reports, for more information see
http://www.economywatch.com/economic-statistics/country/Czech-Republic.

Table 4: Discribtion of the Variables

Abbreviation	variables	Discribtion of the variables
Ex	**EXPORTS**	Czech Total Export of Goods and Services/ mill.CZK
IM	**IMPORTS**	Czech Total Import of Goods and Services / mill.CZK
GD	**GDP**	Czech Gross Domestic Product/ mill.CZK
FD	**FDI**	Czech Inflow of Foreign Direct Investment/ mill.CZK
LW	**WAGES**	Czech Nominal Wages at current Price/CZK
UR	**UNEMPLOYMENT**	Czech Unemployment Rate/As a Percentage of Civilian Labour Force
ER	**EMPLOYMENT**	Czech Total Employment / Thouthands of Persons Engaged
EC	**EXCHANGE RATE**	Czech Exchange Rate/National Currency Units per US dollar
LR	**PRODUCTIVITY**	Czech Labour productivity growth/% y/y
IR	**INFLATION**	Czech Inflation rate

4.2.1. Exports and Macroeconomic Variables

In the regression analysis of both exports and imports we are facing the problem of measurement of the data that we are using for testing the export and import as an independent variables with dependent variables. That is why we used the staddarization method for the real data to extract this effect and to distinguish the important

explanatory variables from those of little significance. Furtheremore, a great number of regression estimates conducted in an attempt to find the most suitable value for explanatory and dependent variables.

Table 5: Standarized table of Exports and Macroeconomic Indicators in the Czech Republic from 1993 to 2008

Ex	GDP	FDI	LW	UR	ER	EC	LR	IR
-1.30525	-1.59353	-1.33315	-1.62192	-1.1396	-0.10319	0.07291	-2.03138	2.84152
-1.21638	-1.54903	-1.26576	-1.40989	-1.19641	0.37727	0.00839	-0.37036	0.76095
-1.01611	-1.04219	-0.77822	-1.15873	-1.31001	0.70049	-0.3822	0.48259	0.58757
-0.93481	-0.77393	-1.10951	-0.86612	-1.42362	1.11107	-0.27758	0.03367	0.52977
-0.65427	-0.6157	-1.08143	-0.6778	-0.91239	1.19843	0.51756	-1.76202	0.47198
-0.72549	-0.38701	-0.18891	-0.48523	-0.00355	0.49957	0.6187	-1.13353	0.8958
-0.45029	-0.28317	0.9318	-0.29324	1.24611	-1.03791	1.01801	0.57238	-0.76095
-0.06182	-0.14842	0.63258	-0.13576	1.30291	-1.11653	1.72073	0.25813	-0.41419
0.00794	0.05308	0.88388	0.0915	0.90529	-0.91561	1.63355	1.6049	-0.26007
-0.06622	0.19153	1.59937	0.29833	0.50767	-0.67101	0.69891	-0.28058	-0.81874
0.13485	0.33122	-0.87661	0.50092	0.79169	-1.26504	-0.091	1.06619	-1.14624
0.6727	0.6242	-0.09962	0.71758	1.0757	-1.11653	-0.52868	0.16835	-0.6261
0.95084	0.83435	1.61628	0.90089	0.84849	-0.66228	-0.83209	0.61727	-0.79948
1.43551	1.12857	-0.00773	1.13509	0.45087	0.03658	-1.06923	1.0213	-0.68389
1.83451	1.5155	0.55154	1.42133	-0.62838	1.2159	-1.47203	0.34792	-0.6261
1.39429	1.71452	0.52549	1.58306	-0.51477	1.74878	-1.63594	-0.59482	0.04816

Source: the table standarized depending on the table 3

The general export model that will be used in our empirical tests can be expressed by these following equations:

Regression Analysis: Ex versus GD; FD; LW; UR; ER; EC; LR; IR

The regression equation is:

Ex = 0.0000 + 0.20 GDP + 0.016 FDI + 0.80 LW - 0.038 UR - 0.034 ER - 0.086 EC + 0.091 LR + 0.148 IR (3.1)

Table 6: Estimation of Equation (3.1), Regression Analysis of Exports and Macroeconomic Variables

Predictor	Constant	GD	FD	LW	UR	ER	EC	LR	IR
Coefficient	0.0000	0.20	0.016	0.80	- 0.04	- 0.034	- 0.09	0.091	0.148
T-test	0.00	0.13	0.13	0.51	-0.1	-0.1	-0.5	0.70	0.78
F-test	22.81								
R^2	96.3%								
D.W	1.96								

The regression analysis of Czech exports in equation 3.1 shows that the exports depending on **GD; FD; LW; UR; ER; EC; LR; IR** Simultaneously. We have summarized the values of the main regression coefficients of Czech exports analysis in Table 6. The above model of Czech exports was able to explain **96.3** percent of the variation in Czech exports, which is a strong result. The signs of the coefficients for

GD; FD; LW; UR and LR were correct, corresponding to the theoretical discussion of the export function. but the sign of **EC; IR and ER** did not correspond to theoretical expectations. Furtheremore , in this case, their coefficients were statistically not significant. An interesting result was found with regard to **EC** which indicate the minus sign and it can be interpret this result by the nature of the exchange rate, even with the appreciation of Czech currency still Czech exports increased year-by-year, or even with the appreciation of Czech crown still Czech goods which exported cheaper than foreign goods specially for EU members. About the **ER** and depending on the real data in table 3 it can be seen there is no improvement in the number of employment to correspond the real increase in exports year by year, which means that the exports not depending on the number of employees but depending on the labor wages **LW**. That is quit normal results for the transition economies like Czech Republic, because many foreign companies are investing by **FDI** in the Czech Republic and they are using foreign employee or skilled Czech employee and they are getting higher wages instead of unskilled Czech employee.

The **T-test** results are statistically not significant which shows that these independent variables seperatly not significant but all together explaining **96.3** of the variance of Czech expors. This results can be proved by **F-test** which shows that the accounted **F** is **22.81** which is grater than **F** scheuled (3.12). This means that we are accepting alternative hypotheses which refers that the real value of the coefficients are not equal to zero and independent variables together have a significance effect on dependent variables. In addition, the intercept is zero in this equation which indicate that without dependent variables exports should be zero, which is normal in our empirical work. The Durbin-Watson (D.W) statistic tests the residuals to determine if there is any significant correlation based on the order in which they occur in our data file. Since the D.W value is greater than **1.4**, there is probably not any serious autocorrelation in the residuals. The value of the **LW** (80 percent) and **GD** (20 percent) coefficients and their statistical significance indicate a strong correlation between Czech exports with **LW** and **GD**.

4.2.2. Exports by Sectors

This part will present and discuss Exports in the Czech Republic by using sector shears for the period of 1999 to 2008. Sectors are starting with (Food and live animals; Beverages and tobacco; Crude materials, inedible, except fuels; Mineral fuels, lubricants and related materials; Animal and vegetable oils, fats and waxes; Chemicals

and related products; Manufactured goods classified chiefly by material; Machinery and transport equipment; Miscellaneous manufactured articles and Commodities and transactions) in the SITC system of classification. Table 20 shows codes of the sectors in the Czech economy:

Table 7: Czech Exports by Sectors from 1999 to 2008/ Mill.CZK

	0	1	2	3	4	5	6	7	8	9
1999	2471672	691724	3165051	2763636	80853	6008525	19467755	34535345	9820254	65685
2000	32998209	8395926	39565341	34246285	1253617	79596203	285138983	498401672	140486348	1016356
2001	34397577	8743866	38608489	38151687	1429670	81862002	309131509	599705881	154835568	1283006
2002	31135864	8557686	35093736	35952354	977884	74740961	294000341	622998225	149506736	1896414
2003	36398700	8193627	38421629	39434251	1004953	80579033	316410260	687200832	161509106	1777563
2004	47429746	8923857	47314618	49937627	1042826	103951385	388539970	876137606	198492304	887359
2005	61061935	10609211	47193113	57393486	1759457	118974531	406323755	949152489	215575314	542545
2006	61972373	10689074	54974991	61822426	1573745	129939273	445260227	1141747397	235930821	663058
2007	71873767	14457315	64864315	67542129	2042001	144162494	501110830	1343396028	268955472	829502
2008	77566820	16401290	64471776	84543322	2775883	145930142	482382148	1327412680	265283640	1310714

Source: CZSO External trade database

Table 8 shows Czech Exports by Sector shares and it's Importance from 1999 to 2008. The first and the more important sector for the czech exports during thr period of study is Machinery and transport equipment. in year 1999, 43.7 percent of total exports come from this sector and in 2008 rose to 53.8 percent, which is more than half of the Czech exports during the period of 1999 to 2008. In this context we could take into consideration the dependence of exports of this sector, factors such as, for example, privatization followed by the modernization of the firms' production equipment, or the inclu sion of the Czech machine and automobile industry in the international business networks, which results in greater cooperation in deliveries and subdeliveries for their own industrial production. An example of such cooperation is Volkswagen's investment into Skoda Mlada' Boleslav, where, after the merger with VW, this company started not only to modernize its assembly lines for the production of new cars but also to export many components to abroad.

Table 8: Czech Exports by Sector Shares and it's Importance from 1999 to 2008

Cods	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
7	43.677	44.457	47.290	49.647	50.127	50.860	50.795	53.239	54.186	53.783
6	24.621	25.434	24.377	23.429	23.080	22.555	21.745	20.762	20.212	19.545
8	12.420	12.531	12.210	11.914	11.781	11.522	11.537	11.001	10.848	10.749
5	7.599	7.100	6.455	5.956	5.878	6.034	6.367	6.059	5.815	5.913
2	4.003	3.529	3.044	2.865	2.876	2.899	3.268	2.890	2.899	3.425
3	3.495	3.055	3.008	2.797	2.803	2.753	3.071	2.883	2.724	3.143
0	3.126	2.943	2.712	2.481	2.655	2.747	2.526	2.563	2.616	2.612
1	0.875	0.749	0.689	0.682	0.598	0.518	0.568	0.498	0.583	0.665
4	0.102	0.112	0.113	0.151	0.130	0.061	0.094	0.073	0.082	0.112
9	0.083	0.091	0.101	0.078	0.073	0.052	0.029	0.031	0.033	0.053
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Own Calculation depending on table 7

4.2.3. Exports by Commodity

This part discuss Czech exports by commodities, in this part 97 commodities are accounted starting with live animals (code 01) and ending with Works of art, collectors pieces and antiques (code 97) showed in table 1 in the Appendix. In addition, these commodities are contributing to exports for the period of 1999 to 2008 in the Harmonized System (HS) of classification. The first and the more important commodity contributed in Czech exports during the period of study is (Nuclear reactors, boilers, machinery and mechanical appliances; parts, Code 84) which is shown in table 24. The amount of exports for this commodity is 2974686004 millions of CZK, and it is about 19 percent of total exports in the Czech Republic.

Table 9: Czech Exports by the most important 10 Commodity Shears from 1999 to 2008.

Cods	Exports	Shares
84	2974686004	18.8622
87	2541509282	16.1154
85	2466860175	15.6421
73	801179258	5.0802
72	587846164	3.7275
39	542915227	3.4426
94	471420441	2.9892
27	467002990	2.9612
40	375106948	2.3785
70	348464354	2.2096

4.3. Regression Analysis of Imports

The analyze of Czech imports distributed into three parts; the first part discuss the relationship between imports and selected macroeconomic variables which illustrated in standardized table 10, in other word, which macroeconomic variable have more impact on imports rather than others, more than 10 regression estimates conducted in an attempt to find the most suitable macro explanatory variable for imports. The second part will discuss the sector shares of imports in the Czech economy for the period of 1999 to 2008. In this part Czech economy distributed into 10 sectors, starting with food and live animals and ending with Commodities and transactions. In addition, explaining which sector taking a big share of imports during that period, and then arranging all sectors depending on their contribution of imports. The final part will present Czech imports by commodity for the period of 1999 to 2008 and shows which commodity taking a big share of imports during that period by arranging all commodities depending on their contributions of imports.

4.3.1. Imports and Macroeconomic Variables

In this part macroeconomic variable used as an independent variables such as **GD; FD; LW; UR; ER; EC; LR; IR** with imports as dependent variable. a great number of regression estimates conducted in an attempt to find the most suitable value for explanatory and dependent variables from those of little significance.

Table 10: Standarized table of Imports and Macroeconomic Indicators in the Czech Republic from 1993 to 2008

IM	GDP	FDI	LW	UR	ER	EC	LR	IR
-1.42518	-1.59353	-1.33315	-1.62192	-1.1396	-0.10319	0.07291	-2.03138	2.84152
-1.31034	-1.54903	-1.26576	-1.40989	-1.19641	0.37727	0.00839	-0.37036	0.76095
-1.05134	-1.04219	-0.77822	-1.15873	-1.31001	0.70049	-0.3822	0.48259	0.58757
-0.89039	-0.77393	-1.10951	-0.86612	-1.42362	1.11107	-0.27758	0.03367	0.52977
-0.66658	-0.6157	-1.08143	-0.6778	-0.91239	1.19843	0.51756	-1.76202	0.47198
-0.73692	-0.38701	-0.18891	-0.48523	-0.00355	0.49957	0.6187	-1.13353	0.8958
-0.41864	-0.28317	0.9318	-0.29324	1.24611	-1.03791	1.01801	0.57238	-0.76095
0.04696	-0.14842	0.63258	-0.13576	1.30291	-1.11653	1.72073	0.25813	-0.41419
0.06803	0.05308	0.88388	0.0915	0.90529	-0.91561	1.63355	1.6049	-0.26007
0.03029	0.19153	1.59937	0.29833	0.50767	-0.67101	0.69891	-0.28058	-0.81874
0.25852	0.33122	-0.87661	0.50092	0.79169	-1.26504	-0.091	1.06619	-1.14624
0.69465	0.6242	-0.09962	0.71758	1.0757	-1.11653	-0.52868	0.16835	-0.6261
0.9038	0.83435	1.61628	0.90089	0.84849	-0.66228	-0.83209	0.61727	-0.79948
1.37986	1.12857	-0.00773	1.13509	0.45087	0.03658	-1.06923	1.0213	-0.68389
1.72354	1.5155	0.55154	1.42133	-0.62838	1.2159	-1.47203	0.34792	-0.6261
1.39374	1.71452	0.52549	1.58306	-0.51477	1.74878	-1.63594	-0.59482	0.04816

Source: the table standarized depending on the table 3

The general import model that will be used in our empirical tests can be expressed by these following equations:

Regression Analysis: IM versus ; GD; FD; LW; UR; ER; EC; LR; IR

The regression equation is:

IM = 0.0000 + 0.48 GDP - 0.0135 FDI + 0.58 LW - 0.106 UR - 0.101 ER - 0.015 EC + 0.071 LR + 0.081 IR **(3.2)**

Table 11: Estimation of Equation (3.2), Regression Analysis of Imports and Macroeconomic Variables

Predictor	Constant	GD	FD	LW	UR	ER	EC	LR	IR
Coefficient	0.0000	0.48	- 0.02	0.58	- 0.11	- 0.10	- 0.02	0.071	0.081
T-test	0.00	0.36	-0.14	0.45	-0.34	-0.35	-0.11	0.66	0.52
F-test	33.88								
R^2 adj	97.5%								
D.W	1.96								

The regression analysis of Czech imports in equation 3.2 shows that the imports depending on **GD; FD; LW; UR; ER; EC; LR; IR** Simultaneously. We have summarized the values of the main regression coefficients of Czech import analysis in Table 11. The above model of Czech inports was able to explain **97.5** percent of the variation in Czech imports, which is a strong result. The signs of the coefficients for **GD; FD; LW; UR; LR; EC and IR** were correct, corresponding to the theoretical discussion of the export function. but the sign of **ER** did not correspond to theoretical expectations. Furtheremore , in this case, the coefficient was statistically not significant. An interesting result was found with regard to **FD** which indicate the minus sign and it can be interpret this result by the nature of foreign direct investment in transition economies like Czech Republic, because foreign direct investment means opning more companies inside the country and production of more goods and services, which lead to the decrease of imported goods. Furtheremore, we have tried to explain this negative relation by the possible overly optimistic impact of foreign direct investment on the economy, assuming that the foreign capital will support the production of domestic goods and services, which previously had to be imported and that such investments do not encourage imports. About **LW** and its coeeficient is significan, for example, 1 percent incraese in imports its caused bt 0.58 percent increase in labor wages I ech republic. In addition, as we illustrated in export part of this study, labor wages have

been more significant in export regression as well, becaue by increasing the labor wages in Czech Republic means incrasing the perchasing power for majority of the labor force in the society nad leading to an incraese in demand for goods, part of these goods can be impotrted from abroad.

The **T-test** results are statistically not significant which shows that these independent variables seperatly not significant but all together explaining **97.5** of the variance of Czech impors. This results can be proved by **F-test** which shows that the accounted **F** is **33.88** which is grater than **F** scheuled (3.12). This means that we are accepting alternative hypotheses which refers that the real value of the coefficients are not equal to zero and independent variables together have a significant effect on dependent variables. In addition, the intercept is zero in this equation which indicate that without dependent variables exports should be zero, which is normal in our empirical work. The Durbin-Watson (D.W) statistic, test the residuals to determine if there is any significant correlation based on the order in which they occur in our data file. Since the D.W value is greater than **1.4**, there is probably not any serious autocorrelation in the residuals. The value of the **LW** (58 percent) and **GD** (48 percent) coefficients and their statistical significance indicate a strong correlation between Czech imports with **LW** and **GD**.

4.3.2. Imports by Sectors

This part will present and discuss imports in the Czech Republic by using sector shears for the period of 1999 to 2008. Sectors are starting with (Food and live animals; Beverages and tobacco; Crude materials, inedible, except fuels; Mineral fuels, lubricants and related materials; Animal and vegetable oils, fats and waxes; Chemicals and related products; Manufactured goods classified chiefly by material; Machinery and transport equipment; Miscellaneous manufactured articles and Commodities and transactions) in the SITC system of classification.

Table 12 : Czech Imports by Sectors from 1999 to 2008/ Mill.CZK

years	0	1	2	3	4	5	6	7	8	9
1999	4392325	737856	2844986	7958718	212055	10768243	18235175	39098910	11846221	29962
2000	50198838	7386292	3938086 5	11993655 6	264012 7	13910174 4	25787052 0	496702715	12828689 4	419267
2001	53656554	7268045	4003044 2	12573884 4	314244 3	15102219 6	28009122 5	584414394	13985455 8	345384
2002	54167867	6598492	3818876 6	10024812 1	302817 5	14840630 8	27297399 0	561745090	14004242 6	271731
2003	57086800	7530015	4095596 1	10778856 3	376402 8	16443536 8	28983805 3	616257956	15270766 3	358731
2004	72149704	1066751 2	5291554 6	12214577 8	416211 0	19483336 2	36075737 7	739946498	19067621 3	841179
2005	81647879	1178128 4	5135554 3	16761436 1	362596 8	20147614 2	37431905 7	736902547	19997923 2	125983 7
2006	88991947	1299125 1	5731650 7	20079057 3	372666 9	21909535 2	42854586 1	870733502	22150364 9	111706 1
2007	10293405 8	1572314 4	5831574 2	19131551 8	332696 2	24845790 5	50023688 0	102804523 6	24165394 1	130918 4
2008	10479411 2	1265842 1	6400937 0	24998284 2	451618 8	24568593 0	47345687 9	992997365	25048735 2	202910 2

Source: CZSO External trade database

Table 12 shows Czech exports be sector shares from 1999 to 2008 starting with sectors of Food and live animals and ending with Commodities and transactions in the SITC Classification. Sector shares are different from sector to sector, and the bigeest share is for Machinery and transport equipment, and the smallest share is for Commodities and transactions. This result shows the big improvement of the industrial sector in Czech republic especially the modernization of the firms' production equipment such as the Czech machine and automobile industry in the international business networks. In addition, the improvement of this sector will lead to an increase in needs for the eqipment and sparparts for machinery sector which lead in the end to an increase in imports.

Table 13: Czech Imports by Sector Shares and it's Importance from 1999 to 2008

	1999	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
7	40.675	39.995	42.179	42.374	42.774	42.305	40.269	41.369	42.991	41.364
6	18.97	20.764	20.215	20.591	20.118	20.625	20.455	20.36	20.919	19.722
8	12.324	10.33	10.094	10.564	10.599	10.901	10.928	10.524	10.105	10.434
5	11.202	11.201	10.9	11.195	11.413	11.139	11.01	10.409	10.39	10.234
3	8.28	9.657	9.075	7.562	7.482	6.983	9.159	9.54	8.00	10.413
0	4.569	4.042	3.873	4.086	3.962	4.125	4.462	4.228	4.304	4.365
2	2.96	3.171	2.889	2.881	2.843	3.025	2.806	2.723	2.439	2.666
1	0.768	0.595	0.525	0.498	0.523	0.61	0.644	0.617	0.658	0.527
4	0.221	0.213	0.227	0.228	0.261	0.238	0.198	0.177	0.139	0.188
9	0.031	0.034	0.025	0.02	0.025	0.048	0.069	0.053	0.055	0.085
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Own Calculation depending on table 30

The second important sector which contributed by 18.97 percent in 1999 and 19.722 percent in 2008 is Manufactured goods classified chiefly by material. Again this result

prove a big development in industrial sector in Czech economy. The third important sector for imports in Czech economy during 1999 t0 2008 is Miscellaneous manufactured articles which contributed by 12.32 percent in 1999 and 10.43 percent in 2008. The range of the rest of sectors and their importance in Czech imports it is as follows; Chemicals and related products; Mineral fuels, lubricants and related materials; Food and live animals; Crude materials, inedible, except fuels; Beverages and tobacco; Animal and vegetable oils, fats and waxes and Commodities and transactions in the SITC Classification.

4.3.3. Imports by commodity

This part present Czech imports by commodities, in this part 97 commodities are accounted starting with live animals (code 01) and ending with Works of art, collectors pieces and antiques (code 97) showed in table 1 in the Appendix. In addition, these commodities are contributing to imports for the period of 1999 to 2008 in the Harmonized System (HS) of classification. The first and the more important commodity contributed in Czech imports during the period of study is (Nuclear reactors, boilers, machinery and mechanical appliances; parts, Code 84) which is shown in table 14. The amount of imports for this commodity is 2708392883 millions of CZK, and it is about 16.968 percent of total imports in the Czech Republic during the period of study.

Table 14: Czech imports by the most important 10 Commodity Shears from 1999 to 2008

Cods	Imports	Shares
84	2708392883	16.968
85	2505183967	15.695
27	1394067700	8.734
87	1377228803	8.628
39	875338873	5.484
72	692536174	4.339
73	497357893	3.116
30	404202169	2.532
90	377876761	2.367
48	312105328	1.955

Source: own calculation depending on table

5. Conclusion

1. The pre-war economic level of Czechoslovakia was quite comparable with such countries as Germany, France, Belgium and Austria. According to the statitical data on industrial production, before World War II Czechoslovakia was one of the ten industrialized countries in the word.

2. during the post-war period up to 1989, the allocation of resources through central planning rather than the market mechnism resulted in a longe-term slowdown in productivity and the standard of living, as well as in the last 20 years of central planning in particular, czechoslovakia's economic performance has been disappointing.

3. In 1989 the former Czechoslovakia had one of the smallest private sectors in the communist world, employing only about 1.2% of the labor force and producing a small fraction of the national output.

4. The cosiderable decline of the Czechoslovak economy during the eighties, as compared with the previous decade, is shown from table 1. The average annual growth rate of real GDP contarcted from 4.8 to 1.5%. a similar slowdown occurred in other macroeeconomic indicators including average wages, productivity of labour and productivity of fixed capital. On the other hand,inflation (expressed by the CPI) speed up.

5. since the beginning of the transformation the service sector has experienced the largest boom, especially in tourism sector. Services currently contribute to more than half of the GDP. The service sector has increased its share by more than 30% since 1991.

6. After the Economic stabilization, the transformation reforms were launched. The reform was important to increase the share of private ownership (state ownership is connected with low efficiency) via privatization and support for small and medium enterprises.

7. Before the transition process, the substantial percentage of Czech exports are resource-based, low value-added products and standard labour intensive and relatively low-skill manufactures. During the 1990s, foreign trade became a modest engine of growth, when Germany had replaced Russia as the main trading partner. The composition of Czech foreign trade has radically changed. The share in exports of machinery and transport equipment has doubled since 1993, while raw materials and semi-finished products have shrunk in similar proportions, Svejnar (1995).

8. The economic transition in central and Eastern Europe (CEE) started in the early 1990's. The Czechoslovak (later Czech) government began the process of privatizing companies. Voucher privatization took place in Czech Republic in two waves. The first wave involved shares in 988 firms. The second included shares in an additional 676 firms plus unsold shares in 185 firms carried over from the first wave.

9. The transition economies implemented economic and political liberalization simultaneously. After 1989, state authorities regulated not only the economy, but also most of the activities in the society. The Czech Republic government liberalized almost all the prices, privatized most of the economy, decentralized the wage setting, and opened the country to the foreign trade with nearly balanced budget. In the Czech Republic liberalization index was 0.68 in years 1990/93 and 0.83 in years 1994/98 that is why there is improvement in economic growth during these two periods to be positive by 2.28 percent.

10. In general, the transition impact on economic performance in the Czech Republic was positive. For example, between 1996 and 2006 the GDP increased all of the years except year 1998; inflation slowed down from 8.8 in 1996 to 2.5 year 2006.

Appreciation of Czech currency in camper with Euro even with the USD, and it is even not threatening the foreign trade as well. That means increasing in foreign trade and increasing the purchasing power for the domestic consumers as well; foreign trade have boosted both exports and imports during 1996 to 2006

11. In the beginning of the transition process in the Czech Republic, the regulation of princes, a subsequent increase of capital costs and a continuous decrease of real wages, become exports more labor-intensive and imports more capital-intensive.

12. After the accession of the Czech Republic to the EU on 1 May 2004, both export and import growth rates experienced an upswing during the accession period, especially the strengthen with the new Toyota-Peugeot-Citroen plant in Kolín having started production process.

13. In the Czech Republic FDI has been a main source of necessary investment for renewing the industrial structure, bringing modern technology, improving management skills, and improving the quality of the goods produced in the economy and then facilitating access to the international market competition.

14. The appreciation of Czech currency continues year-by-year does not affect negatively on the foreign trade, which is due to the comparative price of Czech goods

and improvement in the quality of the goods, which exported especially to the EU members.

15. The most important determinants of Czech trade with the EU members are the level of aggregate demand, the real exchange rate, liberalization of tariffs and the evaluation of unit prices of exports and imports.

16**.** In the empirical work, the regression analysis of Czech exports shows that the exports depending on **GD; FD; LW; UR; ER; EC; LR; IR** Simultaneously. This model of Czech exports was able to explain **96.3** percent of the variation in Czech exports, which is a strong result. In addition, the two significant variables, which have a big relationship with exports, are labor wages and gross domestic product.

17. The first and the more important sector for the Czech exports during the period of study is Machinery and transport equipment. In year 1999, 43.7 percent of total exports come from this sector and in 2008 rose to 53.8 percent, which is more than half of the Czech exports during the period of 1999 to 2008.

18. The first and the more important commodity contributed in Czech exports during the period of study is (Nuclear reactors, boilers, machinery and mechanical appliances; parts, Code 84). The amount of exports for this commodity is 2974686004 millions of CZK, and it is about 19 percent of total exports in the Czech Republic

19. The regression analysis of Czech imports shows that the imports depending on **GD; FD; LW; UR; ER; EC; LR; IR** Simultaneously. This model of Czech imports was able to explain **97.5** percent of the variation in Czech imports, which is a strong result. In addition, the two significant variables, which have a big relationship with imports, are labor wages and gross domestic product.

20. The first and the more important sector for the Czech imports during the period of study is Machinery and transport equipment. In year 1999, 40.6 percent of total imports come from this sector and in 2008 rose to 41.3 percent, which is a big share of the Czech imports during the period of 1999 to 2008.

21. The first and the more important commodity contributed in Czech imports during the period of study is (Nuclear reactors, boilers, machinery and mechanical appliances; parts, Code 84). The amount of imports for this commodity is 2708392883 millions of CZK, and it is about 16.968 percent of total imports in the Czech Republic during 1999 to 2008.

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Abstract

Economic transition in the Czech Republic started in the early 1990s and privatized most of the firms, the ownership of privatized firms reduce the unit of labor cost and increases productivity and then the amount of profit. The Czech Republic government liberalized almost all the prices, privatized most of the economy, decentralized the wage setting, and opened the country to the foreign trade with nearly balanced budget. In general, the transition impact on economic performance in the Czech Republic was positive. In the empirical work, the regression analysis of Czech foreign trade during 1993 to 2008 shows that the exports and imports depending on GD; FD; LW; UR; ER; EC; LR and IR Simultaneously. This model of Czech foreign trade was able to explain 96.3 percent of the variation in Czech exports and 97.5 percent of imports, which is a strong result. In addition, the two significant variables, which have a big relationship with exports and imports, are labor wages and gross domestic product. In addition, the first and the more important sector for the Czech foreign trade share during 1999 to 2008 is Machinery and transport equipment. The first and the more important commodity contributed in Czech foreign trade during the period of study is (Nuclear reactors, boilers, machinery and mechanical appliances).

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