



**93<sup>rd</sup> DGINS Conference**  
**20–21 September 2007, Budapest, Hungary**



DGINS 2007/93/I/6

## **Globalisation - its impact on statistical measurements**

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# Globalisation (its impact on statistical measurements)

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The impact of globalisation processes on statistics is characterized by the following two groups of problems: how to statistically measure the contents and scope of globalisation, and the impact of the on-going globalisation on the hitherto used statistical methods of measurement of economic and social development. The improvement of methodology concerning statistical measurements on the international level should be regarded as a priority. This applies especially to the International Financial Reporting Standards and methodologies prepared by international institutions. In this respect, there is a whole number of issues which should be dealt with, such as e.g. problems of interconnection of industries, externalization of expenses, property appraisal, transfer prices, price packages, national accounting indicators, etc.

## **1. Introduction**

The concept of globalisation plays an important role in the assessment of current international and domestic economic relations. From among various characteristics and definitions I focused mainly on the growing number and importance of giant international economic groups (global concerns, holdings), increasing volume of foreign investment, increasing volume of external trade and the change in positions of national states. The main globalisation techniques include location of production in the most convenient regions, purchase of raw materials in the cheapest territories, sale in the biggest markets while these processes are significantly supported by fast technical development leading to shrinking of distances and acceleration of processes of changes. However, the process of globalisation is not free of problems and is accompanied, in addition to general and obvious growth of welfare, also by limited control over big organizations, change of responsibility terms between the owners and the managers and search for new mutual positions between national states and global concerns (national patriotism).

The impact of globalisation processes on statistics is characterized by the following two groups of problems: how to statistically measure the contents and scope of globalisation (Annex 1 includes current data on the entry of foreign investors to the Czech economy and, in contrast, data on investment of the Czech enterprises abroad in the period 1993-2006) and the impact of the on-going globalisation on the hitherto used statistical methods of measurement of economic and social development.

## **2. How do the processes of globalisation affect statistical measurements?**

The global economic groups formation leads to *system and institutional changes including the interconnection of industries*. Reorganization within the groups of enterprises results in profound division of labour, building of plants belonging solely to one industry (e.g. car assembly, computer assembly, etc.) and, in contrast, entails centralization of cross-sectional activities (investment, supply, wholesale and retail trade, etc) for the whole global group. Expanding of market structure of the economy causes that work currently performed either in households (e.g. cooking, cleaning, etc.) or as public services provided by the state (infrastructure investment, social services, etc.) are offered in the market (chain stores) or in form of PPP (public private partnerships). Unbundling in the energy sector (the separation of production, distribution and sales in the bookkeeping) causes, along with the above-mentioned changes, that it is difficult to monitor efficiency in individual fields of production (distribution of revenues and expenses within the group of enterprises), statistical quantification of expanding market structures, and statistical measurements using the PPP method.

Newly formed global business groups, when implementing their business plans, break down a significant volume of business activity expenses between municipalities (localities, regions) and the state (*externalisation of expenses*). This applies mainly to expenses relating to ecology, education, property protection, etc. As a consequence, individual economic sectors show a markedly different development which gives birth to rich enterprises and indebted municipalities and the state. These processes raise issues how to measure optimum distribution of expenses between the sectors of the economy and whether the very good results of enterprises are really that good (cost-effective).

Global economic groups operate with various intensity in economic environments of different countries in which identical methods of appraisal are applied. This holds for *property appraisal* as well. In aggregate economic data for global economic groups the appraisals by purchase price (historical prices) blend with replacement purchase price (current market price) and the price based on expert appraisals (administrative price). This creates a mixed base for calculation of capital cost-

effectiveness, makes difficult the assessment of enterprise's business activity compared to other enterprises and other industries and leads to over-valuation of property during organizational changes which complicates the tracking of the property.

The emergence of global economic groups leads to elimination of standard market relations between related enterprises within the group. Movements of products between these enterprises are based on *transfer prices*, i.e. prices agreed between the enterprises and market effects are excluded. Being aware of this process individual states and the OECD prepared guidelines how to cope with this problem. It should be noted that these are very profound and time intensive guidelines which are lacking single interpretation (they mostly involve agreements between related enterprises and tax authority).

Many enterprises and their groups are entering the market not with a price per product or service but with a *price package* which includes, as a rule, more than one product or service or a combination thereof (e.g. combined offer for fixed telephone line, internet access and digital TV or offer of transport package includes fare for city passenger transport, suburban transport and service in form of a customer card, etc.). These facts complicate correct measurements of price development, calculation of necessary deflators or quantification of real value added produced in an enterprise.

Global economic groups work in dependence on time in compliance with standard calendar while, considering specific features of respective industry or certain tradition and for the purpose of observation and assessment of their activities they introduce in addition to a calendar year also an *economic year* (e.g. from 1 March 2007 to 28 February 2008, etc.). Moreover, global economic groups realize large-scale projects across the countries and continents with the term of implementation significantly longer than a year while continuous data supplied do not provide quite a true picture of the project implementation progress. This negatively affects seasonality in a number of industries (in fact, in many cases seasonality has been erased) and accrual reports of expenses and revenues for respective time period and thereby realistic description of current situation. .

Global economic groups entering the territories and regions with minimum costs and high rate of profit bring the *latest technical and technological know-how* to these regions. This fact completely changes the hitherto production structures in target countries including the demand for sources and their procurement (e.g. skilled labour force, energy stability, outsourcing, facility management,

etc.). These processes lead to increasing demand for maintaining comparability of time series whilst dynamic change of structures takes place and to increasing demand for measurement of technical and technological changes (innovations statistics).

Activity of global economic groups markedly decreases the significance of space and, in contrast, it increases the significance of time flow which it associates with flexibility and mobility (Zygmunt Baumann's "*Liquid company*"). This leads to the restriction of the state power within its own territory and global groups try to accept minimum of local commitments. Free movement of persons, capital and labour is accompanied by free movement of corporate profits. As a result, responsibility towards respective economic space decreases. The question of how to provide correct statistical description of the region including its economic and social position remains open-ended.

Due to the increasing globalisation of economic activities in relation to deregulation of the movements of the goods, services and capital flows the share of multinational companies in the performance of individual economies has been increasing. This entails a growing fragmentation of the production chain across the economies when its separate parts are located in the countries offering a competitive edge. A significant growth of the volume of imports and exports take place while it does not correspond with the increase of value added in the economy. This markedly affects the *national accounting* indicators. The situation is complicated by the fact that to intra-EU trade are authorised non-residential units registered only with tax authorities as the VAT payers (holders of identification number). External trade is then realized mostly through these units, i.e. the share of indirect exports considerably increases. Prices which are declared in exports differ markedly from the prices at which the goods are delivered from factories. A disproportion appears between resources and uses of the economy (exports of certain commodity groups exceed production, and, analogically, the imports exceed domestic consumption). Besides the impact on nominal values this phenomenon tends to distort the real GDP growth because the share of domestic output designed for domestic or external market is difficult to estimate. Analogically, it is hard to estimate the share of consumption of domestic products and imported products. The deflator of production, i.e. intermediate consumption and final use, is thereby distorted and the same applies to the total GDP deflator. The problem of deflation, however, appears already in the stage of the price indices building due to the impact of artificial (non-market) price setting within the groups of enterprises (appraisal is subject to profit optimisation within the whole corporation).

### **3. How to face the impact of globalisation on statistical measurements**

The improvement of international methodologies concerning statistical measurements should be regarded as priority. This applies especially to the International Financial Reporting Standards (IFRS), methodologies prepared by international institutions (ESA 95, PEEI business cycle statistics, methodology of OECD concerning transfer prices, FATS statistics, building the Euro-register of business groups, etc.). It will also be necessary to enlarge the methods of expert guesses and modelling, especially for economic phenomena and processes the statistical monitoring of which is administratively demanding and does not bring good quality results. Last, but not least, the on-going process of globalisation is also a challenge to search for brand-new techniques and methods of statistical measurements.

## Scope and contents of globalisation

For the purpose of measurement the foreign direct investment (FDI) statistics are currently used. The FDI statistics are produced in accordance with international standards for balance of payments calculations adopted by the IMF, OECD and the European Commission. For surveying of selected indicators of joint ventures the Foreign Affiliates Statistics (FATS) are piloted including the preparation of a relating regulation.

## Selected data for the Czech Republic

### 1. Foreign direct investment in the CR in 1993 - 2006

<u>Indicator</u>	<u>in CZK millions</u>
FDI total	1 617 053
registered capital	994 345
reinvested earnings	489 378
other capital	183 330

### 2. Selected indicators of joint ventures in the CR in 2005

<u>Indicator</u>	<u>Value</u>
number of employees (physical persons)	636 641
sales of goods and services (CZK thous.)	2 695 207 669
value added - “ -	535 208 342
export of goods and services - “ -	950 377 552
import of goods and services - “ -	820 981 106

### 3. Foreign direct investment of Czech enterprises abroad in 1993 - 2006

<u>Indicator</u>	<u>in CZK millions</u>
FDI total	105 600
registered capital	73 720
reinvested earnings	22 790
other capital	9 090

### 4. Selected indicators of Czech joint ventures abroad in 2005

<u>Indicator</u>	<u>Value</u>
number of employees (physical persons)	27 382
sales of goods and services (CZK thous.)	185 446 803
value added - “ -	20 198 581
exports of goods and services - “ -	20 162 162
imports of goods and services - “ -	84 929 452.

Source: CNB