

Recording of globalisation phenomena in the Czech national accounts

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Abstract:

Behaviour of large multinational companies necessarily needs a reaction of national accounts compilers. The phenomena that were previously irrelevant from the macroeconomic point of view, in recent years directly affect the explanatory power of the national accounts and their analytical applications due to their increasing magnitude.

The Czech economy is very open economy. More than 25% of the total output is produced for exports. Imports cover 28% of intermediate consumption, 17% of expenditure on household final consumption and 21% of investments in fixed capital. More than 35% of the net worth of the Czech financial and non-financial companies is owned by foreigners, mostly by large multinational companies. Recording the globalisation phenomena in the business accounts is in many cases very far from the national accounts rules. The initial business accounts data need therefore adjustments in the process of national accounts compilation.

The paper is dedicated to how to record the four globalisation phenomena in the Czech national accounts, namely: (a) the production without own workers, or with the use of agency workers, (b) the production without own equipment, or recording of the case of processors and refineries, (c) production of non-resident units, or quasi-transitive trade and (d) the production of goods for permanently low prices, or solving the situation where the debt between the parental and subsidiary companies will never be paid.

Mass dimension of some previously existing and newly arising phenomena in behaviour of companies raises the question whether it is necessary to maintain the existing views on industries, on labour productivity, capital intensity, deflation, etc. From the other side, without the identification of these phenomena, their quantification and making the relevant adjustments they may cause much distorted view on the development of the entire economy or of individual industries.

1. Production without own employees (employeeless producers)

Czech labour agencies mediate jobs to 35 thousands of workers. We suppose that most of them are foreigners that are shortly living and working in the Czech Republic¹. There are also more than 100 thousands of non-residents working in the Czech Republic, so we can suppose that each third foreigner-non-resident is not employee of producer-company for which he works but employee of some of labour agency.

The workers are employees of labour agencies, so the producer has not labour agreement with these employees and so do not pay out neither wages nor social and health contributions nor income tax on wages, but pays for service to the labour agency. The labour agency has a labour contract with hired workers and pays out to them wages and pays out also social and health contributions and income tax per employee.

Simple conversion of data from business accounts of the producers or also of the labour agencies into national accounts distorts some of basic analytical indicators in comparison with situation without such outworkers, mainly technical coefficients and labour productivity, labour intensity of production or capital intensity of labour. It is the reason why we adjust business account data: we transfer the works together with their compensation of employees to the industries where they really work. Simultaneously we adjust intermediate consumption of producers and output of labour agencies by the same amount. In table 1 the original data, adjustments and final data are recorded.

Table 1 – Adjustments due to outworkers, 2010, CZK, thousands

Code	Indicator	Employment agencies (NACE 780)			Other industries, total			Of which: Manufacture of motor vehicles, trailers and semi-trailers (NACE 290)		
		original	adjusted	change	original	adjusted	change	original	Adjusted	change
P.1	Output	21 191	11 231	-9 960	9 211 842	9 211 842	0	701 080	701 080	0
P.2	Intermediate consumption	8 216	8 127	-89	5 809 129	5 799 258	-9 871	565 253	563 731	-1 522
B.1g	Value added, gross	12 975	3 104	-9 871	3 402 713	3 412 584	9 871	135 827	137 349	1 522
D.1	Compensation of employees	12 074	2 203	-9 871	1 580 117	1 589 988	9 871	61 658	63 180	1 522
D.2	Other taxes on production	10	10	0	16 303	16 303	0	98	98	0
D.3	Other subsidies on production	-254	-254	0	-52 437	-52 437	0	-334	-334	0
B.2g	Operating surplus, gross	1 145	1 145	0	1 858 730	1 858 730	0	74 405	74 405	0
	Employees	39 638	4 462	-35 176	4 060 608	4 095 784	35 176	135 654	140 667	5 013
PHP	Labour productivity, CZK ths	327	696	368	838	833	-5	1 001	976	-25
	Change in %			112,5			-0,6			-2,5
AN.11	Fixed capital	2 066	2 066		16 228 662	16 228 662		319 535	319 535	
	Capital intensity of labour, CZK thousand	52	463	411	3 997	3 962	-34	2 356	2 272	-84
	Change in %			788,3			-0,9			-3,6

This adjustment does not affect GDP and value added for the total of economy, but effects on the value added in individual industries – up in producer industries and

¹) More than 500 thousand foreigners are living in the Czech Republic. Each tenth employee is a non-resident or a foreigner-resident that is living in the Czech Republic longer than one year, thus he or she is a resident by national accounts definitions.

down in labour agencies industry. Operating surplus is neither effected on total economy or on any industry.

The impact of the adjustment on indicators in the labour agencies industry is crucial because these indicators do not give sense without adjustments. An extent of the impact of the adjustment on indicators in industries where the workers really work depends on share of these workers. Industry NACE 290 (production of motor vehicles, trailers and semi-trailers) is chosen as an example that is very important in the Czech economy and where about 5 thousand of outworkers work. The share of borrowed workers is not relatively high (3,6%) and by the same percentage is overvalued the capital intensity of labour and labour productivity is overvalued by 2,5%.

2. Production without own equipment (factoryless goods producer)

Absolute majority of distribution of fuel in the Czech Republic is carried out by three biggest multinational companies, respectively their Czech subsidiaries (processors, in the statistical register they are recorded as trade companies²). These companies own together one big refinery, also Czech resident company (in the statistical register is recorded as industrial company). This refiner produces for them fuel but as outsourcer from raw material delivered by these three principal entities.

The refinery keeps in its books revenues mainly from its mother's companies for provided services of refining oil, not for delivered fuel. The mother's companies (distributors of fuel) have in theirs book keeping costs for raw material delivered for outsources refining and costs for purchased service – refining. In their revenues is income from selling fuel on petrol stations. Real figures for 2010 simply transferred from the book keeping into national accounts items are recorded in the first part of Table 2.

This simple transfer very deforms final national accounts items, like we traditionally would like to see them. They deform mainly technical coefficients in both industries – in trade and refining industries. And it questions industrial classification of processors. Without adjustments of business accounts data they should be reclassified into industrial activity, if we consider that main part of generated value added is due to change of oil into fuel.

In the CZSO we decided to adjust business account data and to look on processor as on merchanters and on refiner as on traditional manufacturer. On the refiner side we adjust both costs and revenues by the same amount of value of used raw oil. On the merchanters side we exclude from their costs purchased raw oil and service for refining, and include the adjusted output of refining company. Output of these processors is calculated as trade margin (different between revenues from selling of fuel and value of “purchased” fuel).

²) One of these companies is a big chemical company that distributes fuel as its secondary activity.

Without adjustment of business accounts data we should solve industrial classification of merchanters (or processors???). We should reclassify them from trade into manufacturing, so a big part of trade would disappear. The total value added would not change and GDP also do not change, but the picture of the Czech economy would be significantly changed, in spite of nothing changed, for the first view. For the first view everything is running by the same way like 20 years ago – refiners refine raw oil and produce fuel, the produced fuel is sold by merchants on the petrol stations to consumers – everything is the same, only the ownership and recording in national accounts / in supply and use tables is different.

Table 2 – Refining of oil and distribution of fuel, Czech Rep., 2010, CZK mil

Code	Indicator	Original				change				adjusted			
		Refinery	Chemical /distribution	Whole-sale with petrol	Retail sale of fuel	Refinery	Chemical /distribution	Whole-sale with petrol	Retail sale of fuel	Refinery	Chemical /distribution	Whole-sale with petrol	Retail sale of fuel
		190	200	46B	473	190	200	46B	473	190	200	46B	473
P.1	Output	9 612	89 671	41 259	19 800	82 836	-65 073	-35 412	-15 148	92 448	24 598	5 847	4 652
P.111	Goods	0	87 321	40 571	17 444	89 592	-65 073	-37 562	-14 730	89 592	22 248	3 010	2 715
P.112	Services	9 597	2 261	115	733	-6 756				2 841	2 261	115	733
P.113	Trade margins	15	88	573	1 623			2 150	-418	15	88	2 723	1 205
P.113t	Revenues for sold goods	132	1 847	6 857	21 857			25 762	-5 632	132	1 847	32 619	16 226
P.113n	Cost on good sold	117	1 759	6 284	20 235			23 612	-5 214	117	1 759	29 896	15 021
P.2	Intermediate consumption	6 886	70 529	41 071	18 852	82 836	-65 073	-35 412	-15 148	89 722	5 456	5 659	3 705
P.21	Material	1 472	63 297	27 359	16 074	82 836	-61 558	-25 757	-14 052	84 308	1 739	1 602	2 022
P.22	Services	3 785	6 905	13 712	2 779		-3 515	-9 655	-1 096	3 785	3 391	4 057	1 683
P.23	Energy	1 629	327	0	0					1 629	327		
B.1g	Value added, gross	2 726	19 141	188	948	0	0	0	0	2 726	19 141	188	948
P.2/P.1	Share of IC on production	0,72	0,79	1,00	0,95	0,25	-0,56	-0,03	-0,16	0,97	0,22	0,97	0,80
P.113/P.1	Share of trade margin on production	0,00	0,00	0,01	0,08	0,00	0,00	0,45	0,18	0,00	0,00	0,47	0,26
%	Trade margins	13%	5%	9%	8%	0%	0%	0%	0%	13%	5%	9%	8%

Table 2 shows that after adjustment every indicator seems like we are usually accept it, because we adjust them to our traditional seeing of world – so, in this form we are able to accept and analyse them.

Without adjustments we have to accept technical coefficients that are non-acceptable now and balance commodity flows of raw oil and final fuel as one commodity or made changes the industrial classification of merchanters as processors. There are plenty of remaining questions mainly with consideration to the revised SNA 2008 that respects more legal than economic ownership.

3. Imports and exports of non-residents (quasi-transit trade)

There are 1200 entities - non-resident affiliates registered in the Czech Republic only for VAT reason. They engage in imports and exports of goods mainly, they store the goods and some parts of goods give to process. These entities are not the Czech residents, they do not register as income tax payers, so they do not submit income tax declarations and very often they have their bank account abroad – they do not exist physically in the Czech Republic. We also do not know what they have recorded in their books, because the storage, book keeping or transport is provided them of shore by the Czech residents or other, non-resident entities. They are not included in

business statistics because they are non-residents. Alone the foreign trade statistics (FTS) include their cross border data in imports and exports of goods.

This “import” and “export” of non-residents represents 14-15% of total imports and exports of the Czech Republic. External balance of goods by FTS is completely confusing figure because such an entity imports and exports by very different prices, so they generate very big “value added”. However, these differences in prices or “value added” generated by non-residents are not part of the Czech national economy. In National Accounts the transactions between residents and non-residents have to be recorded when changes of ownership occur, independently if these changes of ownership occur on the border or inside country. The totally different approach applied by FTS damages possibility to balance flows between residents and non-residents in any types of flows – flows in products, income flows or financial flows.

Almost unsolvable problems are occurring in supply and use tables during balancing of some commodity flows, mainly in group of commodities with big share of exports to their output and vice versa, the commodities with big share of imports to their consumption. The total share of total exports to total output for the Czech Republic is 29%, but there are commodities, where share is much higher, for example: tobacco, cigarettes (95%), chemical products (76%), machinery and equipment (77%), computers (87%), electrical machinery and apparatus (79%), or motor vehicles (74%). Some of these groups of commodities are practically impossible to balance without adjustments of FTS data. See example in table 3.

Table 3 – Discrepancies between resources and uses before made adjustments, 2009, CZK mil

	Computers	Toys
Output	186 787	13 905
Imports	154 244	14 593
RESOURCES	341 031	28 498
Intermediate consumption	158 544	9 675
Final consumption expenditure	8 229	6 634
Gross fixed capital formation	33 644	2 166
Changes in inventories	1 386	444
<i>Trade and transport margins</i>	-15 300	-4 143
<i>Net taxes on products</i>	-2 868	-1 204
Exports	180 505	24 606
USES	364 140	38 178
DIFFERENCES	-23 109	-9 680
<i>Share of differences on resources (%)</i>	-7%	-34%
<i>Share of exports on output (%)</i>	97%	177%

In some countries this issue is solved in Balances of Payments by imputation to import of service “branding”. But this imputation solves the general imbalance, not imbalances in individual groups of commodities. Moreover, from analytical point of view it does not good results – because it generates high external balance of goods and low external balance of services – and we know that reality is different.

That is why we make the adjustments in FTS data source before we use them for National Accounts (SUT) and for Balance of Payments. Imports by FTS are replaced by sales of these entities to the Czech residents and exports are replaced by purchases of these entities from the Czech residents. After this adjustment the commodity flows are balanceable.

4. Production and export for prices understate the economic value

There are companies in the Czech Republic wholly-owned by foreign multinational enterprises that permanently sell their production to their parental company for very low transfer prices. And vice versa their parental company permanently gives credits to their subsidiary.

The given credit is recorded in national accounts and balance of payments as negative reinvested earnings from direct foreign investment (in entrepreneurial income account) and in financial account these credits from parental company are reclassified to "Other equity". This solution satisfies the balance between non-financial and financial accounts but do not solve obviously distorted indicator of labour and capital productivity, see table 4.

Table 4 – Adjustment in the case of permanently low prices, 2010, CZK mil

Code	Indicator	Manufacture of computers and peripheral equipment	Manufacture of communication equipment	Manufacture of consumer electronics and optical instruments 26C		Manufacture of electrical equipment	Manufacture of machinery and equipment	Manufacture of motor vehicles, trailers and semi-trailers	Manufacture of other transport equipment
		26A	26B	Before adjustment	After adjustment	270	280	290	300
P.1	Production	177 293	34 075	58 562	65 062	199 513	257 768	701 080	48 255
P.2	Intermediate consumption	164 858	24 283	58 431	58 431	144 041	182 579	563 731	34 789
B.1g	Value added, gross	12 435	9 792	131	6 631	55 472	75 189	137 349	13 466
K.1	Consumption of fixed capital	2 829	1 941	1 525	1 525	6 227	9 485	26 386	1 480
B.1n	Value added, net	9 606	7 851	-1 394	5 106	49 245	65 704	110 963	11 986
D.1	Compensation of employees	5 954	5 499	3 506	3 506	29 537	45 260	63 180	8 040
D.29	Other taxes on production	16	12	5	5	74	137	98	14
D.39	Other subsidies on production	-71	-248	-29	-29	-263	-588	-334	-225
B.2g	Operating surplus, gross	6 536	4 529	-3 351	3 149	26 124	30 380	74 405	5 637
	Employees	16 411	12 313	9 314	9 314	79 571	116 683	140 667	18 255
PHP	Labour productivity CZK th.	758	795	14	712	697	644	976	738
AN.11	Fixed capital	22 730	17 891	17 353	17 353	79 584	163 050	319 535	24 972
B.2g/AN.11	Fixed capital productivity	29%	25%	-19%	18%	33%	19%	23%	23%

The permanently given credits by foreign parental company to its subsidiary generate higher and higher foreign direct investment, and higher debtor position of the Czech Republic. However, the figures in business accounts do not reflect a reality. The debt will be newer redeemed because of very big negative net wealth of the Czech subsidiary. Sooner or later the parental company will write off the dept. We suppose that this parental company's behaviour is a result of own internal policy aimed on shareholders.

Maybe we should use the same approach that we use for taxes that will be newer paid, it means not to record at all or to record and after to write off them as capital transfer. In our case it seems as better approach to adjust output to the level of usual prices or by annual credits and in the next stage to write off this adjustment as capital transfer. In table 4 the output is experimentally increased by the amount of credits given by parental company to subsidiary. After the adjustment the labour and capital productivities have reached a similar level as other neighbouring industries.

Conclusion

Globalisation phenomenon is interpreted usually as relation of the national economy and the rest of the world. The described cases show that the same problems more and more damage our traditional point of view on producer, production, enterprise, industry or evaluation and allocation of value added. The reaction of the different statistics is very different in both levels in one statistical office and on international level.

Therefore the description of all cases is aimed on explanation of our adjustments and their impact on some important economic indicators, not on assessment which approach is better or worse. Opinions are very different, it needs more discussion. Each of described cases has more solutions, they depends on point of view.

Maybe we will change our solutions and adjustments oriented on preservation of traditional analytical points of views, maybe we will learn to analyse changes in new dimension during the implementation of SNA 2008.