The Interdependence between the Level of Domestic Prices and the Price Level in the Developed Countries

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Abstract

The article deals with the controversial issue of price harmonization practiced in the European Union. Therefore, we take into account the differences between national economies of member countries and the time difference of these economies in EU, a thing that imposes the establishment of different harmonization periods. It is also raised the issue of price harmonization: by increasing the prices of commercial and non-commercial products in developed countries or by increasing the prices in less developed countries. There are also analysed different concepts and solutions, with their advantages and disadvantages, reaching the conclusion that prices, salaries and profits on the domestic market of a country have to be adapted to the reality in each country.

Keywords: single price, commercial products and services, non-commercial products and services, Balassa-Samuelson effect, Pierre-Noel Giraud theory, purchasing power parity

JEL classification: E31, E42, E52, H11, H20, O17

Introduction

The trial to extend the rule of single price in the domestic markets of underdeveloped countries or countries admitted into the European Union after 2002, against Bela Balassa demonstrations (American scientist of Hungarian origin) and the explanations given by Paul Samuelson, Nobel laureate for economy in 1971, should be seen and treated by underdeveloped countries as a measure of self-protection of developed countries and an act of crass naivety and ignorance of the countries' governments that accept it.

If the measure had been correct, why this principle was not applied since 01.01.2002 in all 15 countries that then constituted the European Union? Or, why it was not even applied within the 12 EU countries that have accepted the single currency? The answer is easily guessed. Different degrees of levels of living, different economic potential, productivity and wage scales, various public debts

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and for Greece, Portugal, Spain and Ireland also lower stages of economic development. You should not disregard the fact that three EU member countries have not joined the single currency (Britain, Denmark and Sweden). Do not forget that countries like Switzerland and Norway have refused to join the Union.

The so-called harmonization of prices in the European Union would not be a bad thing, but if the difference between the national economies of member countries and the difference of time covered in the community of states that made up the Union in 2000, requires the establishment and harmonization of different durations until then of the existing economic disparities between the more developed countries of the Union and Member States accepted lately. And after all, how will the prices harmonization be made? By reducing the prices in developed countries or increasing prices in less developed countries. Who should benefit of such harmonization and which countries are the losers? The problem of "price harmonization" is discussed for years. Some people would like that country with expensive products to lower the prices and make them accessible to everyone, while countries with high prices, would like to maintain a monopoly which helps increase the surplus.

1. The prices of commercial and non-commercial products and services

Depending on the distribution manner of goods and services resulting in a national economy, it is divided into two distinct categories, of which the first category is the commercial economy, where the distribution is done by selling goods on the market, and second, non-commercial economy in which the distribution is made out of the market by state governments or by private associations or charitable foundations. To compare these two categories of prices we must express them in the same currency, usually at the exchange rate of the comparison time or annual average exchange rate. Prices for goods and services sectors and areas that are part of the commercial economy and traded on commodity markets are dependent on global conditions of these markets.

Prices for goods and commercial services are dependent on their nature, especially on the population' standard of living when comparing the real economic power and thus the national economy represented by the commercial sector working for the economy. With the exception of health services and basic education part (between the ages of 6 and 18), the volume of demand for the other, is limited primarily by the size of cash income available to potential beneficiaries, i.e the inhabitants of that country. For this reason, the prices of goods and services are lower in poor countries and higher in richer countries. Therefore, if the prices in one country for commercial goods and services distributed through the market are lower than prices in richer countries, prices of noncommercial goods and services are diminished. Their productivity is always lower than those of the commercial economy, because it requires more labor. Cutting hair and hairdressing, shoe repair, digging the garden, house painting and repair facilities indoor are part of

non exportable occupations. In the same situation is the activity of local or central government, or that of police, defense and justice. All these non exportable activities require labor and not capital as in the case of goods production for the market. In addition, wages that are paid to the workforce that work in public and private administrations in this part of the national economy, are paid from budgetary funds or social security funds collected by the state necessarily by direct taxes, contributions to social insurance and taxes collected from staff working in the commercial economy (employees and entrepreneurs).

For countries organized as federal republics, which are among several states, such as 52 U.S. states, Germany and Austria with 16 member states in September, prices in their domestic markets were established and remained in the same currency: U.S. dollar, mark in unified Germany, replaced by euro since 01.01.2002, and in Austria, shilling replaced in 1994, also by euro.

The so-called "law or rule of a single price" in all the states that make up each of the three federal countries, goods and services are sold on their domestic markets at the same price. Imposing a single price in all countries that make up the federation is possible because all have the same access to technologies and people enjoy living standards equal or approximately equal. Any small differences from one state to another in the U.S., for example, are given a different rate of tax on goods movement. In Austria and Germany, these additions do not vary from one state to another, so that any difference in practice depends on a local supplement of tax or duty. Setting the same price on a national territory was made in order to prevent speculative trading, i.e buying of property in areas with lower prices and selling them in countries with higher prices.

2. Balassa-Samuelson effect

The assumption that, by expressing the prices in a common currency, the prices of goods sold on domestic markets of countries equalize, is not justifiable, but there is also an error, even if it is taken into account baskets of goods rather than individual products. The composition of the basket of products which regulates exchange rate parity for the determination of the exchange of national currencies in a currency exchange (U.S. dollars or euros, for example) is arbitrary and subject to manipulation.

Because it is likely that many readers may not have heard about the Balassa-Samuelson effect, in what follows we present the argument developed by Bela Balassa when today's developed European countries were far behind the U.S.², which shows that price levels in wealthier countries are systematically higher than those in poorer countries.

² "The purchasing power doctrine: a reapraisal", Journal of Political Economy, december 1964 quoted in the paper "La Mondialisation au-dela des mithes", coordinated by Serge Cordellier, Paris 1997 and TREI Publishing House, 2001-Bucharest, as well as M.Burda and Ch.Wyplosz, in "Macroeconomics", Oxford University Press, 1997.

In terms of performance, market economy is a mixed economy (market + state). Under these conditions, the consumer price index is a weighted geometric average of traded goods prices (P $_{c}$) and non commercialized ones (P $_{n}$) with weights "a" and "1-a" in the consumption basket.

The effect works as follows ("Macroeconomics, European Perspective", Michael Burda and Charles Wyplosz, Oxford University Press, 1997):

$$P = (P_c)^a \cdot (P_n)^{1-a}$$
 (the definition of relative price levels)

International competition in the commercial goods field links the prices of these goods with foreign trade goods price level (P_c^{ex}) expressed in domestic currency, the nominal rate being Rns.

$$Pc = Rns.Pcex.$$

The real wage in the traded goods sector (S $_{c)}$ is equal to the marginal product of labor (Qmm) so that:

$$S_c / P_c = Qmm_c$$
 (for domestic tradable goods)

and

$$S_c/P_c^{ex} = Qmm_c^{ex}$$
 (for foreign trade goods)

By combining these three equations it results the workforce equalization condition:

$$S_c / Rns. S_c^{ex} = Qmm_c / Qmm_c^{ex}$$

thus linking the salaries from domestic commercial property sectors, to the salaries of foreign trade goods sectors.

If the exchange rate "Rns" remains constant, with the increase in wages in the country, will also increase labor productivity (Qmm_c) measured in money, from traded goods sector in comparison to the rest of the world.

Although between the size of salaries in commercial economy and salaries in non-commercial economy there is no dependence, it is however obvious the employees' tendency in the non-commercial economy to approximate the amount of salaries they receive with the amount of salaries in the commercial economy.

$$S = S_c = S_n$$
 (wages in domestic production)

and

$$S_c^{ex} = S_n^{ex} = S^{ex}$$
 (wages in foreign production)

As the real wage in the non-tradable goods sector equals marginal product Qmm in the sector, this means that:

$$S n = P n . Qmm n$$

and

$$S_n^{ex} = P_n^{ex} . Qmm_n^{ex}$$

Assuming that the productivity of non-commercial do not differ too much from one country to another, it is possible that in a first approximation Qmm $Qmm_n = \int_0^{ex} e^{x}$.

Combining this equality with the definition of relative price levels [P = =(P c). (P $_{n}$) $^{1-a}$], provided labor equalization [S $_{c}$ / $_{c}$ Rns.S Qmm ex = $_{c}$ / $_{c}$ Qmm ex] and the marginal product conditions [S $_{n}$ = P $_{n}$. Qmm $_{n}$ and S $_{n}$ ex = P $_{n}$ ex . Qmm $_{n}$ ex] we reach the linking equation between the relative prices of internal and external levels, as follows:

$$\begin{array}{l} P \, / \, Rns \; . \; P^{ex} = \; (P_c)^a. \; (P_n)^{1-a} / \, Rns \; (P_c^{\; ex})^a \; . \; (P_n^{\; ex})^{1-a} = [P_c \, / \, Rns \; . \; P_c^{\; ex}]^a \; . \\ \qquad \qquad . \; [P_n \, / \, Rns \; . \; P_n^{\; ex}]^{1-a} = [S / \, Rns \; . \; S^{ex}]^{1-a} = [Qmm_c \, / \, Qmm_c^{\; ex}]^{1-a} \end{array}$$

equality which directly indicates that countries which have a higher productivity of commercial goods, have also higher levels of prices, measured in the same currency.

As it is shown in Balassa's argument (who worked in 1997 at Johns Hopkins University in Baltimore, USA), not low-wage countries and technological capabilities have violated the rules of the game, but their richer partners.

3. The theory of Pierre-Noel Giraud

Given that this whole issue is based 100% on the justified desire of the countries authorities in post-industrial stage of development to restrict and eliminate the growing inequalities based on income and wealth, the Frenchman Pierre-Noel Giraud said in 1996 that only the following two ways can be taken into account:

- 1. Acceptance of the free trade and the compensation increase of inequalites of greater income transfers from rich to poor in rich countries (and not to poor countries);
- **2.** Controlling free trade with countries that have lower wage levels and technological capabilities.

The first way, since 1996 was a difficult path to follow, because the error that was called Laffer's theory, the U.S. government led by Ronald Reagan reduced tax rate to 28%, with the justification that social transfers through taxation and redistribution are an obstacle to economic efficiency! As if people who are active in the national economy, would make part only of category owners and not of the workforce category! Throughout the developed world the proportion of value added over a year, is in the statistics, 65-75% performed by employees and 35-25% performed by employers.

As a result of large budget deficits made every year by U.S.A during president Reagan's time and the public debt growth, the following two administrations (Bush senior and Clinton) had to raise income tax rate to 40%. After Reagan's government, economic efficiency would have to mean increasing average wealth. Taxes mean direct collecting by the state of the amounts of revenue from the beneficiaries and the redistribution of the same amount to the

employees paid from the budget and people receiving social benefits. And their redistribution, which is related to growing wealth, means social justice.

It is very strange the view of certain Romanian intellectuals who argue that the Romanian people could live very well if the national economy would deal only with agriculture and tourism! And it is surprising to find that in mass media, there are journalists who support such a view. It is possible that they do not know that the highest productivity which can be achieved in a national economy is conducted by industry and not agriculture, not to mention the public services and private administrations.

4. Purchasing power parity in USA – the basis of comparing prosperity levels

To compare the levels of prosperity achieved by the world states, a standard was needed, i.e a national economy whose achievements can be compared to all other national economies. The United States economy was chosen to represent the basis upon which to make any comparisons.

As standard national economy, the domestic purchase power during a year is determined conventionally by the size in dollars of GNP / capita of U.S. produced that year; the resulting revenues are distributed to owners and employees who contributed to their achievement as well as the prices of goods and services during that year necessary to the U.S. citizens to live. Although USA have inflation, unemployment and crises, their economy was accepted as a standard.

For a possible ranking of the other states of the world according to this parameter, the size ratio of these two indicators should relate to what the U.S. succeeded in that year. All hopes, all development plans and all the shortcomings of the 193 states of the world, out of 194 recognized by the UN in 1994 minus the U.S., take into account the development of this report. Regarding the progress of purchasing power within the U.S., the comparison can be made both in relation to purchasing power from the previous year, but also in relation to the purchasing power of developed countries with zero inflation or close to that value.

By definition, purchasing power parity (PPP) has nothing to do with economic activity of production, and therefore with the domestic market's activity for which GDP or GNP was determined. The indicator presented in statistics is the amount in dollars determined in U.S., for a fixed basket of goods and services in Romania (in this case) based on purchasing it at market prices, using a sum of money equal to the value in dollars of GNP per capita achieved during a year. In other words, it is the amount of dollars that a U.S. citizen has to pay to buy there, the physical quantities of the basket of goods and services purchased in Romania, paying the prices from the domestic market in the U.S.

Therefore, when calculating the value of GNP / capita, are used the domestic prices of the country's domestic market for which those calculations are made.

Q quantity of products that are characteristic to the basket are determined on the basis of domestic prices during that year (p_{ir}) and the dollar value of GNP / capita (V_{GNP}).

In determining the amount in U.S. (V $_{USA}$) of a Q similar basket of goods and services, the domestic prices of US are used (p $_{USA}$).

So, for the same size Q, the values in the country and the U.S. will be equal to:

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case 1 – in the country: GNP/capita. \Longrightarrow V _{GDP} = Q x p _{ir} case 2 - in the USA: PPP \Longrightarrow V _{usa} = Q x p_{usa} Where: Q = V _{GNP} / p _{ir} = V_{usa}/p_{usa} and V _{GNP} /V _{usa} = p _{ir} /p _{usa} = GNP per capita / PPP
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which means that the ratio between GNP / capita determined by statisticians and PPP has the same value as the ratio of prices in the country reported to U.S. prices for the same basket of goods and services. Multiplied by 100, it represents the level in percentage of the prices in the country, in comparison to the prices of the same goods and services in the US.

5. The usage of purchasing power – the most suitable solution

In terms of utility, purchasing power parity can be viewed according to two types of interests. **First**, it is the foreigner interest who wishes to export something in that country or come there to start a business or to have a holiday **and second**, in terms of inhabitants of the country, keen to improve their standard of living, to send their children to school and university (private or individual welfare) and to change the appearance of towns and of the country in general (public welfare).

To help the population to obtain a decent living, it would have been necessary, as a first step, that the government should aim to maintain the ratio PPP / GNP per capita up to a GNP of about 10.000 dollars / capita. To this end, in addition to organizing and stimulating the growth of GNP per capita in the commercial sector to make possible the resemblance of the developing country's economic achievements to the average economic achievements of the developed countries, the government should have been interested in the composition of the basket of products which, in the first stage, should include those goods and services that are part of people's basic needs and only in the next steps to be extended to other goods.

A second important issue would have to be that of maintaining the purchasing power of wages, by applying continuous adjustment policies on income purchasing power of population, by preventing price increases through additions or through abuse of monopolistic mark-ups or state abuse on the national economy production (natural gas, energy etc..) or by granting the value added tax reductions or subsidize the costs of food, drugs, electricity, gas, fuel and transport, plus a policy of lower prices in clothing and footwear for children and students.

The situation in which domestic prices have got to be at the level of domestic prices of U.S., which occurred at a time in Switzerland and Japan, but quietly corrected in the next years, is a serious error, since the national economies of the developing countries have more labor force in agriculture, have more unskilled, jobless workers and do not have where to pay salaries that would be needed for people to live. And from such a perspective, it is incomprehensible and unacceptable the position of Romania's governments who have decided to introduce, on Romania's domestic market, the international market prices or kept them in force since, in 2000, for example, the difference in productivity between the U.S. (GNP of 34.100 dolllars / capita) and Romania (GNP of 1.670 dollars / capita) was 20.4 times.

For an overall picture, in table no.1, made after the original one of Summers and Heston (1988), it is shown the difference in prices in 1985 compared with prices of U.S. domestic market in 35 countries with different development stages.

Egypt's presence in column one as well as Taiwan and Venezuela in column two, are based on income polarization effect of the population in these countries, through a concentration of most of their population, towards the inferior pole of self-consumption and subsistence economy located outside the market. Twenty-three years later the situation has improved only in Taiwan.

In 1985, Egypt achieved a GNP of 680 dollars / capita, Venezuela managed a 3110 dollars/ capita, while Taiwan obtained 2.650 dollars / capita. In the same year, the U.S. managed a GNP of 16.400 dollars/ capita, Switzerland 16 380 dollars / capita, Saudi Arabia of 8860 dollars / capita and Portugal 1.970 dollars/ capita.

In poor countries, non-tradable goods are always cheaper than in rich countries. Among them are the special services and some activities which, if they become more expensive they would not be achievable such as hair cutting, hairdressing, clothes cleaning, maintenance, repair shoes or clothing, etc. Also in this category we have the activity of health care, education (school), etc.

Table 1 Average price level existing in 1985 on the domestic markets of 35 countries expressed as a percentage of prices in that year in the U.S.

Country	%	Country	%	Country	%
Switzerland	107,1	Netherlands	78,0	Spain	55,1
Saudi Arabia	104,4	Austria	77,5	Argentina	51,5
U.S.A	100,0	Ireland	74,5	Mexico	47,4
Sweden	98,8	France	74,0	Portugal	43,8
Japan	96,6	England	72,7	Brazil	43,6
Australia	93,2	New Zealand	71,7	Senegal	40,2
Canada	92,6	Belgium	69,3	Peru	34,0
Norway	89,8	Taiwan	68,5	Chile	32,8
Iceland	87,4	Italy	68,0	Chad	31,0

Country	%	Country	%	Country	%
Egypt	84,5	Israel	67,6	Ethiopia	30,1
Denmark	84,3	Venezuela	67,4	India	27,2
Germany	80,0	Greece	58,9	Pakistan	26,2

Source: Summers and Heston (1988).

This situation stems both from the lower volume of demand for services outside the commercial field, driven primarily by lower income of consumers, but also because of the supply affected by lower productivity within poor countries. For goods made in poor countries could be sold, their costs must be minimized. The largest share in costs, concerning services, is the use of labor, and the reduction in their price means low labor costs. Therefore, the interest of such service providers (doctors, professors and teachers, judges and employees of defense and order, public employees) should be, firstly, the growth and development of national economy in order to acquire a large added value in the sectors of the economy that distribute their products through the market, i.e in the trade economy. Until then, the concerns of the state should be that of achieving, on the domestic market, prices accessible to all inhabitants of the country.

As wages rise in a field of production from the sectors of domestic and foreign traded goods, it also raises labor productivity in those sectors. Comparing Romania's situation in 2008, with that of countries listed in table 1, this index should be lower in Romania than it was in 1985 in Portugal or Mexico. This means that domestic prices are on average less than 30-40% of U.S. prices. At least for basic foodstuffs, electricity, heat, gas, fuel and rent. When we understand this need, only then can we hope for a better life.

Using current techniques for obtaining wage increases by threats, blackmail, strikes, road blocks and anarchy, does nothing but try to confirm the French anarchist Proudhon, who, 150 years ago launched the idea, that "wealth can be made only by stealing from others!"

Prices, wages and profits, on the domestic market of a country, should be adapted to reality (which is not given by the private needs or desires of individuals, but by the possibilities, of the society they belong), and state institutions charged with stopping cartels and monopolies should take all measures to eliminate the monopoly prices and taxes ultimately paid by consumers. Otherwise, you get in a situation where payments can't be made, especially in Romania, where competition is seen by the monopolies, as being equal to harassment and liquidation of competitors and cartel arrangements as being some innocent business arrangements.

We have to end unlimited expenses that monopolies do to increase fees and charges for electricity, gas distribution and heat and, as well as the rises in prices of fuels and lubricants based on international market rises for products extracted from the raw materials in the country; we also have to stop the policies of tariffs and prices charged by TVR and private mass-media trusts and advertising agencies.

If the state (through government and parliament) is unable to establish maximum income limits in relation to the development of national economy and does not take the measures that all the salary increases or indexation may no longer be made in equal shares, but downward, as monthly income increases above the average, the polarization of society could not be stopped in the 21 century. Work and contribution to the results of production within a national economy do not depend on the nature of ownership, but on the purchasing power of GDP per capita achieved each year.

Conclusions

Liberalisation of trade union activity immediately after the revolution of December 1989 and its separation of state and political parties, was expected to create as in other countries, a state of social cooperation with their partner, which is not the government (because it is the sole executive power in the state) but the employers with economic management (including the state), in their role as job creators and employers of the employees.

Because of this, unions would have to be organized in branches and fields of activity and in terms of different interests regarding wages (salaries of public employees are paid from contributions to the state through direct taxes collected from the CAS for employees and employers in the commercial economy), public sector unions should never be part of a federation of employees' unions working in the commercial economy, i.e sectors producing for the market.

Because of the shortcomings of the law underlying the trade union movement in Romania, not promoting representative democracy in unions, trade union federations and confederations became in 19 years a monopoly of their leaders, some of whom have come to be owners and even millionaires. In the absence of democratic rules and procedures to allow the revival and expansion of permanent trade union activities in support of life, culture and health of union members, union leaders have come to behave like leaders who consider that their life in union should be conducted in the spirit of class struggle against employers and government that are considered to be part of a class enemy and whom they will have to fight with until retirement.

Anti-government actions initiated by trade unions and state governments during the months of November-December 2008 and repeated in the first quarter of 2009; make me remind you about some basic rules for preparing and managing a state budget.

In democratic and civilized world, the only manager of a country's budget is the government, as the state's executive power. The budget's project of a country is prepared by the government and approved or rejected by parliament. Parliament can not have legislative initiatives in the modification of budget revenue and expenditure. There is no provision in the Constitution, and in no organic law providing that parliament can change independently of the government budget

planning. Furthermore, when debating the draft budget and making a proposal to amend the spending plan, parliament must propose the funding source. In the case of a parliamentary initiative to increase the spending plan on a particular sector, as happened in Romania in November 2008, when parliament decided to increase by 50% the salaries of staff working in education, the parliament had the duty to indicate the funding source; in the case of budget it can consist of an additional tax paid by the population, or cancellation of other sectors' budget expenditure and transfer those amounts to the sector considered disadvantaged. Probably it would have been very instructive that that amount had been transferred to the education from the parliament budget. The Constitution provides two ways to correct such errors. The first institution that was supposed to do it was the Constitutional Court and the second was the President, who had to refuse promulgation.

At the 142 billion dollars foreign trade deficit of Romania from 1990 to 1998 (of which only 91.6 billion in the last four years), when through the current account adjustments we managed to pay up to 31.12.2004, only \$17, 4 billion, Romania is expected, over the next 10-15 years, to pay annual amounts over \$10 billion per year, i.e about as much as we would need to invest annually in the industry.

References

- 1. Băcescu-Cărbunaru, A. (2009). *Statistică macroeconomică*. București, Editura Universitară
- 2. Băcescu-Cărbunaru, A. (2001). *Analiză macroeconomică*. București, Editura Economică
- 3. Băcescu-Cărbunaru, A., Băcescu, M., Condruz-Băcescu, M. (2010). Dezvoltarea durabilă. Târgoviște, Editura Valahia University Press
- 4. Băcescu-Cărbunaru, A., Băcescu, M., Condruz-Băcescu, M. (2011). *Riscul de tară*. București, Editura Universitară
- 5. Băcescu, M., Băcescu-Cărbunaru, A., Dumitrescu, F., Condruz-Băcescu, M. (2008). *Politici economice de integrare a României în Uniunea Europeană*. București, Editura Economică
- 6. Anderson, K., Eberhartinger, E. (2007). *National tax policy in Europe*. Editura Springer Berlin
- 7. Bird, M. R., Gendron, P., (2007), *The VAT in developing and transitional countries*. Editura Cambridge University Press
- 8. Mrlianova, T., Wirtz, C., (2009). *Harmonized indices of consumer prices January* 2009. Editura Eurostat, no.6/2009
- 9. Giraud, P., (2009). Le commerce des promesses: Petit traite sur la finance moderne. Editura Poche

- 10. Bird, M. R., Vaillancourt, F., (2008) Fiscal Decentralization in Developing Countries. Editura Cambridge University Press
- 11. Bird, M. R., Martinez-Vazquez, J., Torgler, B., (2008). Tax Effort in Developing Countries and High Income Countries: The Impact of Corruption, Voice and Accountability, Economic Analysis & Policy. 38 (1, 2008): 55-71.
- 12. Alm, J., Torgler, B., (2004). *Culture Differences and Tax Morale in the United States and in Europe*, Center for Research in Economics, Management and the Arts
- 13. Văcărel, I., (2001). *Politici fiscale și bugetare în România 1990-2000*, Editura Expert
- 14. Stiglitz, J., (2003). Globalizarea. Speranțe și deziluzii. Editura Economica