

THE EMPLOYMENT – PRODUCTIVITY – SALARY RELATION, A CONDITION FOR ACHIEVING LONG - TERM ECONOMIC GROWTH

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The employment-productivity-salary correlation is essential towards setting up conditions for economic growth and lasting social stability. An influence exists from technological changes, current stage of economic development, peculiarities of labour offer, employers – trade-unions interaction, etc. The analysis covers long-term and short-term cycles. In keeping with specificity of development stages, national economy witnesses an interval of productivity growth facilitating maximized employment and a rise in salary too. A lower growth rate indicates difficulties in assimilating new technologies; a higher growth rate generates instability in employing labour. Thus, the exercise of strong pressure is shown to exist on economic and technological structures. Likewise, this is what happens when productivity goes ahead of the separate analyses of the correlations between employment and productivity, on the one hand, and productivity and salary, on the other.

Introduction

The connection between the modification of labour with its level of employment, productivity and subsequent pay, with their settled rates, represents an essential element providing the necessary conditions for economic growth and for the achievement of durable social stability. Employment, productivity and salaries are under the influence of several factors with a direct or indirect action, of a higher or lesser significance. Thus, there are: types of technological changes, the stage in the development of national economy, the characteristic features of workforce offer, the trends perceptible in the foreign economic environment, and so on. By understanding the correlation of those factors as an ensemble, one simultaneously understands that there is dynamism in the salary payment. Yet, if certain limits are exceeded, loss of balance can occur in economic life, which will unfortunately impact the action of a key factor, namely “sharing material interests”.

1. Manifestation of the relation between the dynamics of employment and productivity

The relation set up between employment and productivity can be looked upon as a choice between present and future, as far as the turning into good account of the human capital is concerned.

Within a short period of time, as economic realities have proved, while maintaining a certain level of the final demand for goods and services and of the available resources as well, the growth of labour productivity brings about the diminution in the number of working places and a constantly

high rate of unemployment. Over a longer period, however, a higher productivity scores totally different effects and causes the maintenance of a high level of labour employment.

Referring to the influential factors derived from the specific features of stages in the national economy development, an interval can be pointed out as having higher rate work productivity which, in turn, provides conditions for maximizing labour employment rates. A lower rate within this interval can be shown to be a reflex of the difficulties relating to the assimilation of new technologies. The home and foreign data point to failures in modernizing the production apparatus as conducive to limited opportunities for available labour, on a long-term basis. Nevertheless, a higher rate of productivity over this interval can trigger an intensification of the instability in using human resources. Additionally, there is an emergence of new consequences for economy and society. Thus, there is a powerful pressure put upon economic and technological structures existing at a certain moment. As the growth possibilities are not hastened equally over the national economy branches, the stimulation beyond a certain limit of the efficiency in labour employment can lead to the occurrence of parallel structures within economy, with important gaps formed between the traditional sector and the sector dominated by new technologies.

An accelerated evolution of the labour productivity implies a re-modelling of the correlation between consumption and accumulation, and it also implies a change in the composition and mode of consumption. One fact is taken into consideration, namely that the bulk

of results obtained from the productivity increase ought to be distributed among the participants in the economic activity, so that the improvement in the efficiency of the production equipment should not jeopardize the working of social justice. Thus, the premises are laid for a lasting economic growth, as well as the persistence of social harmony and unity of purpose.

Therefore, the accomplishment of long-term planning in economy is feasible while taking into consideration the relation between employment and productivity. It is a very complex relation, working under the requirement of analysis both in the context of century-old cycles of economic development and in the context of decade-old ones.

Theoretically, it is admitted that, within a long-term cycle, labour productivity increases slowly all along its rising stage, when the production apparatus gets re-built. It increases faster along its decreasing stage, when the use of new technologies spreads onto a large scale. The evolution of the relation between employment and productivity is not considered to be simple in the case of a short, decade-long cycle. In this discussion, there are two patterns to surface. The first one is characterized by a procyclic evolution of the labour productivity, that is to say, a fast evolution within the boom interval and a slowing down of the evolution rate, or even a reduction of the absolute level during the recession, in an attempt to avoid the boom of the unemployment rate. The first pattern illustrates the Keynesian doctrine, which states that the existence of a great, prolonged demand for goods and services is the essential factor for efficiently using the human capital. The second pattern, which conforms itself to the neoclassical concept, states that the highest level in the rise of productivity happens during recession, when there is a massive release of the excess human capital, together with the significant renewing of the production apparatus and a rationalization of some activities that do not efficiently use the human capital. Afterwards, as a re-launching of the economic activity occurs, the growth rate of the home labour demand gets very

close to the GROSS NATIONAL PRODUCT (henceforth, GNP) evolution rate.

At first sight, from the point of view of labour employment, there is a procyclic evolution of productivity which seems to be more advantageous for generating fewer tensions, apparently. But the application of one of the two, already-mentioned, patterns can be ultimately determined by the possibilities of generating a rise in the GNP and by the constraints coming from the external environment and aimed at increasing competitiveness.

2. The characteristics of the employment-productivity relation between 1990 and 2000

For a better understanding of the evolution relating employment to productivity, these two indicators - as applied in developed and less developed countries - have been taken into consideration for the interval 1990-2000. The 90's of the last century are characterized by an ever-wider presence of globalization and market-economy mechanisms. Under these circumstances, there has been introduced a remodelling of the relation employment - productivity, both in countries with a consolidated market economy and in countries of Central and Eastern Europe finding themselves drawn in a very complex process of transformation and economic integration into a world circuit. Taking into account the evolution in the ranks of the employed population, in the GNP and in labour productivity, one finds that both categories of countries covered two subintervals: 1989-1993 and 1993-2000.

During the first interval, there was a recessionary climate for both categories of countries. But the recession-generating causes and the recession types were different. Thinking first of the countries with a consolidated economy, recession was mainly defined through the perspective opened by the ratio between the existing offer and demand on the labour market. The basic problem was to diminish the possibilities of employing labour on a larger scale. The GNP level, with few exceptions, manifested a rising tendency; thus, labour productivity knew a continuous increase.

Table 1. Indicators of the employment-productivity relation between 1989 and 1993

Country	I	II	III	IV
U.S.A.	0.4	0.9	71.94	1.8873
Japan	1.3	1.2	98.29	1.4556
Western Europe	- 0.2	1.9	- 68.62	- 0.4814
Germany	0.6	2.4	18.03	0.3845

France	- 0.4	1.5	- 47.95	- 0.4308
Italy	- 0.5	1.3	3.92	0.1634
Great Britain	- 1.5	1.9	68.38	0.1463
Finland	- 4.9	2.5	92.45	0.4884
Ireland	2.0	2.0	99.26	1.4829
Portugal	0.2	1.8	5.76	0.0760
Spain	- 0.9	2.3	- 18.24	- 0.0783
Sweden	- 2.6	1.8	99.46	3.3965

I = average growth rate per year of the employed

II = average growth rate per year of productivity (%)

III = correlation coefficient between the logarithm of GNP indices and the logarithm of employed population indices

IV = GNP elasticity proper relating to the employed

Note: table obtained from the data in *Economic Survey of Europe* no. 3 / 1999.

In the circumstances of an intensified spirit of competition in the world, the adjustment of national economies has displayed a significant differentiation. In the United States of America, for instance, the rising rate of labour productivity was of 0.9% and the average rising rate of labour employment was of only 0.4%. This evolution means a manifestation of North-American economy which was very close to the neo-classical theory. Japan recorded rising rates of over 1%, being very close to the rates of the employed population. In an overview, one can see that Western Europe has witnessed a diminution of employed labour, so that the GNP enlargement has been the exclusive result of the rise in productivity at a higher rate than in the United States and Japan. Similar tendencies have been recorded in France, Italy, England and Spain.

Finland and Sweden have accomplished a strong restructuring of the production apparatus and this fact is brought out by the high rate of productivity growth and by the substantial decrease in the demand for labour. As a consequence, in these two countries, a compression of the GNP has been recorded. In Portugal, the employed population scored a slight rise under the conditions of improved work efficiency so as to reach a pace approaching a European average. In Ireland, owing to important incoming foreign investments, both the employed population and the work

productivity annually increased by approximately 2%. After calculating and applying a correlation coefficient between the logarithm of the indices of occupied labour and the logarithm of GNP and the elasticity proper of GNP in relation to the working population, one can obtain a more eloquent picture of the development of the two already mentioned variables.

The absolute value of the correlation coefficient is high in the case of those countries where significant rises had been recorded for both employment and productivity (Japan, Ireland) and also in countries in which a process of restructuring was carried through in an orderly manner (Sweden, Finland). Moderate absolute values (ranging from 45% to 75%) were signalled in the USA, France, England, whereas very low absolute values were reported from Italy, Portugal and Spain. Thus, the assessed values for elasticities proper of GNP as relating to those employed deviate from what is anticipated if one looks at average rates.

Between the years 1993 and 1998, there was a re-launching of economy, causing significant mutations within the employment – productivity relation. In the United States of America, the rising average rate of productivity was almost equal to the rate recorded during the previous interval.

Table 2. Indicators of the employment-productivity relation between 1993 and 1998

Country	I	II	III	IV
U.S.A.	2.4	1.0	99.43	1.4650
Japan	0.3	0.9	89.80	4.4344
Western Europe	0.7	1.4	97.52	0.9232
Germany	- 0.3	2.1	- 83.21	- 2.5725
France	0.2	1.8	88.90	5.1348

Italy	0.0	1.8	77.07	16.8810
Great Britain	1.4	1.7	99.31	1.6597
Finland	1.2	3.3	99.77	2.5778
Ireland	4.8	3.6	98.70	1.7969
Portugal	0.9	2.2	88.76	0.6162
Spain	1.9	1.1	99.66	1.2635
Sweden	0.1	2.6	40.65	1.9023

I = average growth rate per year of the employed

II = average growth rate per year of productivity (%)

III = correlation coefficient between the logarithm of GNP indices and the logarithm of employed population indices

IV = GNP elasticity proper relating to employed

Note: see Note under Table No 1.

Hence, one can claim that there is a new model of manifestation for labour productivity with an inertial evolution which is indifferent to the pulse of circumstance. As a consequence, the average growth rate of employment indirectly shows the economic condition.

In Japan, during the same period, a reduction was recorded in the possibilities of expanding employment, due to the fact that the economy of the country in question faced several difficulties. As for Western Europe taken as an ensemble of countries, there was a rise in the GNP, which was accompanied by an enlargement of the employment phenomenon, at the same time with a moderation concerning productivity rates. This tendency was manifested in France, England Italy and Spain. Comparing this to the previous period, one finds out that the absolute value for correlation coefficients of the logarithms in the two analyses is significantly higher, over 90% in most of the countries, Japan and Sweden excepted.

Generally, one can refer to interdependencies between changes in the level of employment on the one hand and productivity on the other hand, which are stronger during economic re-launching than during recession. The consequence is that the

estimated value of the real GNP elasticity proper, when compared to employment rates, synchronizes better with the values of average rising rates.

The analysis of the employment-productivity correlation for the countries with a market economy consolidated during the 90's shows that eventually, in terms of an amplification of international competitiveness, the rise in productivity has become a goal to be attained no matter the variations in the pulse of concurring events. The increase in the labour demand preferentially takes place within the intervals with a fast GNP enlargement.

For the Central and Eastern Europe countries, the analysis reveals that the transition to a market economy, in the context of a rather unfavourable environment, has brought about a deepening of the complexity of relations between the two indicators analysed here. Against a background of powerful recession, from 1989 to 1993, the adjustment of the labour force has occurred in a different manner from one country to another. The most powerful reductions of demand for labour were recorded in Bulgaria and Hungary, while in Romania and the Czech Republic they had the slowest manifestation.

Table 3. Indicators of the employment-productivity relation in Central and East-European countries between 1989 and 1993

Country	I	II	III	IV
Bulgaria	- 7.3	0.8	99.55	0.7382
The Czech Rep.	- 2.7	1.5	96.62	1.6120
Poland	- 4.2	1.0	63.59	0.3815
Romania	- 2.1	-4.6	74.96	2.2979
Slovakia	- 5.3	-1.7	79.84	-1.2124
Slovenia	- 5.0	0.0	99.68	0.8829
Hungary	7.8	3.2	91.11	0.5365

I, II, III, and IV share the reading of Table no. 1.

Note: see Note under Table No 1.

In Romania, the carrying out of the goals in a medium-term development strategy called for a special attention going to a fast rise in productivity and in the competitiveness of products, together with the encouragement of the creation of new jobs. The measures meant to accelerate the re-organization of the old industrial enterprises are or should be necessarily devised in a close interdependence with those regarding the growth of a healthy economy.

Comparing the GNP, in Romania, Slovakia and the Czech Republic, the phenomenon of lesser employment was slowed down and resulted in over-employment of labour. This evolution signals the existence of hardships and hesitations in developing the process of re-organization. Labour productivity did not record rising rates either in the countries already mentioned or in others. There are somewhat apparent rises in figures, as a rule accompanied by slight

adjustments in the employed ranks. The average annual rates of employment and productivity made it that the GNP elasticity have some resemblance when related to the employed numbers of the workforce.

Since 1994 onwards, there has been an intensification of the economic increase (though differing from country to country) and the employment – productivity relation has acquired another weight and direction. Almost all over Central and East Europe (Bulgaria excepted), labour productivity has gone up. The transition to a re-organization of the production apparatus has set limits to the rising of opportunities for employed labour; the number of jobs has gone down for almost all the countries mentioned here. The re-launching of economic activity has determined that the interaction of a modified GNP and employed labour be stronger.

Table 4. Indicators of the employment-productivity relation in Central and East-European countries between 1993 and 1998

Country	I	II	III	IV
Bulgaria	- 0.7	0.8	99.55	2.2206
The Czech Rep.	0.1	1.5	96.62	1.5286
Poland	1.6	1.0	63.59	3.2269
Romania	- 2.6	2.6	24.13	0.2809
Slovakia	0.2	5.6	84.18	6.0728
Slovenia	- 0.6	5.0	- 87.55	- 14.1734
Hungary	-0.5	3.6	9.23	0.3717

I, II, III, and IV share the reading of Table no. 1.

Note: see Note under Table No 1.

3. Manifestation of the relation between the dynamics of salary payment and labour productivity

Between productivity in work and salaries paid a mutual relationship is set up: while labour productivity constitutes one main factor in deciding upon a rise in salary, the salary in its turn exerts a stimulating influence upon the rise in productivity. Under normal conditions, to prevent the occurrence of negative processes, it is necessary for the increase in productivity to outdistance the increase in pay.

The productivity-salary relation has to be scanned in the light of the relations between utility and disutility, which in their turn are studied dynamically in terms of the effect of substitution and the effect of income. A substitution effect lies in increasing the number of hours to the detriment of spare-time hours: working time is substituted for by leisure. This process is accompanied by the rise in hands wanted, for the purpose of ensuring a satisfactory monthly income (in real terms) under the given socio-economic conditions.

The effect of income lies in reducing the excitement of working in excess of a number of

hours, enlarging spare time, the level of the monthly income and a feeling of satisfaction. Under those circumstances, the hourly pay goes up, stays at the same level or may even go down. However, its combination with a reduced number of working hours gives the employee enough satisfaction for the given period and for the social status of his family. Consequently, the help wanted scores a decrease.

The effect of substitution and the effect of income, as well as the dynamic relations between them, will leave traces on the rates of workforce employment. When the effect of income is larger than the effect of substitution, the offer of jobs tends to diminish; and when the effect of substitution gets larger than the effect of income, the offer of jobs tends to increase.

The statistics obtained in the countries analysed above show that the effect of income is stronger within time intervals characterized by high, prolonged productivity and vice versa.

The productivity-salary correlation fosters the necessity of insuring a dynamic equilibrium between demand and supply. The focus is on the necessarily existing connection between the amount of products and services extended by a hired person and the salary he collects. In this perspective, the great differences in the dynamics of the two indicators lead to the appearance of a mismatch between demand and supply. Thus, productivity getting ahead of the salary over a longer period of time scores negative effects on the equilibrium in economy, monetary mass and inflation. The opposite case, when productivity outruns the dynamics of salaries beyond certain limits, a loss of balance can be generated in economy, unfavourably impacting the action of joint interests.

Conclusions

A few notes of final appreciation become self-obvious:

- In working out and carrying out economic programs, national economies must get as close as possible to a required level of growth in productivity to result in a maximum

utilization of their workforce without endangering the continuous growth of GNP.

- Secondly, it is worth remarking on the connection between the three variables becoming more intense in the stages of economic expansion and less intense in the stages of economic recession.
- Thirdly, the more impetuous growth of GNP is insured in the periods when both productivity and the rates of workforce employment are higher.
- Last but not least, one can notice, at present, a rise in the complexity of the relations established between the alterations in the employment figures and productivity figures, a fact which triggers the deeper study of the determining factors and the optimal means of the workforce utilization towards a bettering of its efficiency.
- Adopting a new direction of thinking, one should see the importance of the idea that the appearance of high rates of non-occupation of the workforce in circumstantial periods in economic life will not be followed by a marked reduction of these rates within periods of economic boom; this fact turns the debate onto national economic capabilities of creating new jobs, as closely as possible to those figures indicating hands wanted.
- The productivity-salary correlation has a general character, but it can also be reshaped through steps specific to economic policies. Occasional deviations, of short standing, do not result in significant economic risks; yet, the permanent or absolute manifestations of these deviations can generate a series of unbalancing moves and drawbacks.

Bibliography

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