# POLICY IMPLICATIONS OF THE DEVELOPMENT IN PRODUCTIVITY OF LABOUR IN TANZANIA

# Prof. Jerzy Jedruszek\*

Since 1st July, 1980 the new national policy on productivity, incomes and prices has been introduced in Tanzania. The idea of payment by results combined with production incentive scheme is being now implemented with the aim of relating salaries and wages to the increment in output. It is assumed that each individual's renumeration should be influenced, wherever possible, by his contribution to the production.

The fact that the policy has been introduced just now does not depend, of course, on chance; it was and it is necessitated by the past negative economic phenomena which contributed substantially to the crisis situation in the country.

The old income and wage policy tended to concentrate almost exclusively on the reduction of income differentials without recognizing the importance of proper incentive schemes. The role of incentives was negligent; their influence on the productive capacities was practically none. The system of remuneration was based on fixed wage combined with the overtime payment in cases when the quantitative production targets were not met plus, additionally, the bonus paid at the end of the year distributed equally among all the employees. This system favoured neither individual nor group efforts to raise productivity. Even more, it was not sensitive at all to the problem of costs, to the problem of waste and negligence. Managers were not compelled to look carefully at the production costs and at the development in overall efficiency and in productivity of labour. Equilibrium between the consumptive and productive attitudes was lost. All this affected adversely the productive capacities and trends in the field of productivity. It affected also adversely the motivational block of the workers and their productive attitudes.

The internal factors in the realm of wage policy added up to the external shocks affecting the process of production and must have had exerted additional negative influence on the production phenomena.

Tanzania's economy, in fact, faced and still faces, since 1973, a series of crisis which make it "extremely difficult to respond swiftly and effectively to the challenges of immediate economic problems without jeopardizing the long term social and economic targets." The origins of the past and present difficulties are multiple. They stem from the very strong exogenous political and economic shocks about which the country could do nothing at all; they originate, however, also from the endogenous internal development policies related mainly to the process of structural changes in the economy.

For policy purposes it is necessary to assess critically the separate contribution of those set of factors to economic vagaries observed in the country. This is not an easy task but luckily there is a number of documents which allow one to draw some conclusions. Among these are:

The big World Bank basic economic report consisting of the main report and 7 separate annexes; (1978)

ILO sponsored "Towards Self-Relience" publication dealing with development, employment and equity issues in Tanzania.

Prof. Malima paper on "Tanzania and the IMF;"

<sup>\*</sup> Prof. J. Jedruszek — Research Professor, Economic Research Bureau, University of Dar es Salsam.

ERB paper on "Development in Employment and Productivity in Tanzania in 1967-1977; by J. Jedruszek;

Work unpublished as yet on Tanzania's Economic Strategy (1974-1977) by Van de Laar, R. Green and D. Rwegasira;

And a number of industrial case studies prepared by the National Institute of Productivity.

From among economic phenomena observed in the past not surprisingly the development in productivity and employment were given a very great attention. After all, the employment creation, representing the swiftest and most rational improvement in the income distribution of the country, and developments in the overall social productivity determine the increment in the social production; they determine the supply stream so badly needed in a country like Tanzania.

From among economic phenomena observed in the past not surprisingly the developments in productivity and employment were given a very great attention. After all, the employment creation, representing the swiftest and most rational improvement in the income distribution of the country, and development in the overall social productivity determine the increment in the social production; they determine the supply stream so badly needed in a country like Tanzania.

The assessments of the trends in those fields differ sometimes quite substantially but in general there was a consensus that some improvements affecting the productivity and the structure of employment should be made.

The background to this feeling may be illustrated by tendencies described in the ERB paper on employment and productivity phenomena which occured in Tanzania in the last decade. I will not recall extensively the detailed analysis presented in this paper but a brief summary may be here useful.

The picture which arises from the past decade shows clearly that there was a declining tendency in the rate of growth of GDP measured in constant prices. Table 1 below illustrates this tendency well.

Table 1.

Yearly Rates of Growth fo GDP by industrial origin (constant prices)

0/0

9	Total Production	Per Capita	Monetary Economy Only	GDP Finance deleted
1967—1972	4.7	1.1	5.7	6.1
1972—1977	4.4	1.4	4.0	4.1
1967—1977	4.6	1.3	4.9	5.0
1977—1979	5.3		3.77	3.96

Source:

The declining tendency was especially outstanding in the monetary sector. Of course, one may say that the statistical data are shaky and they don't allow one to determine precisely what was going on, but they are accurate enough to describe at least

the trends.

There is, however, a figure for the last two years which calls for some comment. Increase in the total production in the years 1977 - 1979 represented a level of 5.3% per year and compared with much smaller rate of growth (3.8) in the monetary sector implies a growing contribution of the subsistence sector to the GDP. This is a bit strange. If it is not due to errors in data, or if it is not related to the problem of definition then it may raise a feeling of concern. Not because the situation in the subsistence sector has improved but because it may mean that instead of being relatively "squeezed out" of the economy by the more efficient monetary sector the role of this sector grows. This is confirmed by the information in Table 4 of the Economic Survey 1979/80 from which follows that the total subsistence production in 1979 represented 31.4% of the total GDP expressed in 1966 prices as compared with 26.9% from 1974 and 31.5% from 1967. Therefore, there was some error in the data or the efforts of the whole decade to change the basic structure of the national economy were not successful.

The negative tendencies in GDP described above coincide with the direction of changes in total factor productivity and in proxies for "pure" capital and "pure" labour productivities.

As the discussion about the "pure" labour and "pure" capital productivities would take us beyond the terms of reference of this paper and, as I have got reservations about those categories I will concentrate more attention on the average total factor productivity which may be treated as the overall social productivity.

Let us start with the analysis of the relationship between the rate of growth of GDP and the rates of growth of productivity and of employment. The rates will be shown for the same periods as appearing in Table 1. The basic data used for comparison are given in Table 2 below.

Table 2 Productivity per employee 1967 - 1979

	1. Cancer, my per comproject 150, 1575					
Year	Proxy for "Pure" capital productivity (shs. per employee)	Proxy for "pure" labour productivity (Shs. per employee)	Total factor productivity (monetary sector finance deleted			
	,		GDP Shs. per employee.)			
1967	<i>7779</i>	10323	11384			
1972	9615	11797	13081			
1974	7701 ·	10499	11875			
1977	10501	12173	13455 (13859)			
1978	<del></del>		13604			
1979	_	<del></del>	13488			

Source:

Table 3 indicates clearly that the averages rates of growth of GDP and the productivity display a decreasing tendency. There is a deceleration in growth in the case of total factor productivity where the rate dropped from 2.8% in the years 1967-1972 to 1.0% in 1972-1976 and again to 1.002% in 1977-1979. Such a clear tendency does not appear in the case of employment which indicates that the additions to the GDP were

Table 3

Average Rates of Growth in Monetary Sector [% per annum]

	GDP	Overall			
Years	finance deleted r	Employment b	Social productivity a	b:r	a:r
1967-1972	6.1	3.2	2.8	0.52	0.46
1972-1977	4.1	2.9	1.2	0.71	0.29
1967-1977	5.0	3.0	2.0	0.60	0.40
1977-1979	4.0	3.83	1.002	0.96	0.25

due mainly to expansion of labour force. The ratio b:r is growing. This is typical for an extensive type of growth and might be expected; development, however, in the field of productivity should be the source of serious concern as it implies that the *effectiveness* of one of the most important national resources, i.e. the labour force, deteriorated strongly. This is further indicated by the fact that *the sensitivity* of the increase of the GDP to increase in employment deteriorated also. The ratio of r:b representing roughly output elasticity with respect to labour inputs dropped from 1.91 in 1967-1972 to 1.88 in 1972-1976, to 1.41 in 1972-1977 and lastly to 1.33 in 1977-1979.

In general from Table 3 it can be seen clearly that up to 1979 the influence of changes in productivity on changes in GDP was steadly declining to such an extent that the expansion of labour force could not hold the slowing down of the rate of growth of GDP. Ratio a:r which shows the share of an average growth in productivity in the average rate of growth in GDP dropped from 46% in 1967-1972 to 29% in 1972-1977. The years 1977-1979 represent further deterioration as this ratio dropped to the level of 25% only.

It may be revealing, however, to determine what was happening in the particular fields of the national economy. Moving all the time at the high level of aggregation we will have a closer look at the development in industrial production divisions, for in the long run their output determines not only an income created but also an income distributed. The divisions concerned are mining, manufacturing, electricity and water supply and construction. Sources for GDP in 1966 prices and for employment are the same as used for previous analysis. The methodology used is also the same; thus the results obtained are comparable.

Table 4
GDP and Productivity in Industry

Year	GDP in industrial divisions in 1966 prices (mil. Shs.)	Employment persons (thousands)	Overall social productivity per man/year (Shs.)
1967	1,120	87	12,874
1972	1,431	125	11,448
1974	1,528	159	9,610
1977	1,567 (1,620)	148 (164)	10,946 (9,555)
1978	1,532	148	10,351
1979	1,574	156	10,089

Results of the analysis of changes are shown in Table 5.

Table 5.

Average rates of growth (%) per year for an aggregate of four industrial divisions expressed in 1966 prices

Year	Output	Employment	Total factor productivity	b:r	a:r
	r	b	a		
 1967-1972	5.0	7.5	-2.3	1.50	-0.46
1972-1977	2.5	3.4	-0.9	36	-0.36
1 <b>967-197</b> 7	3.8	5.5	-1.6	1.45	-0.42
1977-1979	0.2	-2.5	2.7		
1978-1979	2.7	5.4	-2.6		

The picture presented in Table 5 is much more dramatic than for the production of total monetary sector. First of all, there was nearly a steady decline in *the absolute level* of total factor productivity expressed in constant prices. In the period 1967 - 1977 there was an average decrease of 1.6% per year and the overall decrease in absolute level of productivity amounted to 14.4%. The additions to output, which were growing in those ten years by 3.8% per year, were due mainly to the extensive factor; expansion of labour force. This may be seen from the growing ratio of b:r which indicates the accelerated increase in labour force and its growing share in GDP created. There is definitely a deteriorating situation in the ratio a:r indicating the falling role of productivity.

The data for particular industrial divisions support strongly this observation. In the whole manufacturing division e.g. in the period 1967 - 1977 employment rose 2.6 times but contribution to the GDP expressed in absolute terms only 1.8 times. Employment rose there on average 11.1% a year while the production in constant prices only 6.5% a year.

The deterioration in effectiveness of use of labour factor — disregarding the reasons for it — is striking and implies very serious material losses in industrial production. If only the total factor productivity had remained at the 1967 level the total figure of gross value added in 1966 prices in the four industrial divisions considered would have been in 1977 Shs. 1,985 instead of Shs. 1,620 million. "Loss" due to decrease in productivity in four industry divisions amounts to Shs. 285 million and transformed into 1977 prices — Shs. 678 mill. which means 19.2% of the actually observed value of industrial output in 1977. This is a phenomenon too expensive in social and economic terms to be left without any attempt to change it.

The more detailed analysis of the above developments is not possible without a description of what was happening with the utilization of capital assets and with the capital intensity of production. More disaggregation of the data down to the level of particular sectors of industrial divisions and even of particular enterprises is needed. It would be out of place to repeat all what I wrote on this topic in the paper mentioned above but some indices of what was happening are here needed.

The tendencies appearing in the utilization of capital assets and in the effectiveness of

expansion of capital stock may be discovered by the analysis of incremental capital-output ratios. The experience of a number of countries indicates that the capital-output ratio ranges on an average between 3:1 and 4:1. High rates of growth are associated with a low ICOR. If this ratio increases it implies that the effectiveness of capital inputs deteriorates i.e. one has to invest more to get the same output.

For Tanzania we can calculate ICOR using data on the total capital formation in the monetary sector and on the total GDP in this sector (finance included), to get the value of ICORs I summed up corresponding figures in the periods under consideration, calculated the average share of capital formation in total monetary GDP and then divided it by the yearly average rate of growth of that GDP. The results for all data expressed in 1966 prices are shown in Table 6.

Table 6.

Years	Capital formation as % of GDP	Yearly average rate of growth of GDP	ICOR
1967-1972	26.3	5.7	4.61
1972-1977	27.0	4.0	6.75
1967-1977	26.7	4.9	5.45

The tendency appearing in this ratio in Tanzania is quite clear; it forcefully implies a grave deterioration in the effeciency of use of capital inputs in the national economy.

Tanzania is not the only country which was affected by the negative phenomena in the field of productivity, of income creation and of employment security. To cite the data published in the Economist on the 25-31.08.1979:

"in the decade to 1973 each worker employed in the 7 major western market economies managed to raise his output by an average of 4.5% per year. Since 1973 this rate of increase has shrunk to 1.5% a year." After 1973 and up to 1979 there was severe decline in growth of productivity. The highest occured in Japan where the yearly average rate of growth of productivity slipped from 8.7% observed in the period 1963 - 1973 to 3.3% a year between 1973 - 1979.

The growth of productivity in 1973 — 1979 has been slowest in the US with a bare 0.1% a year on average. By 1978 W. Germany had a significantly higher level of output per man than the US and registered the smallest decline in the rate of change of productivity with a drop of only 1.5% points. However, this was achieved in a typical way for a capitalist market economy through the policies of shedding labour and through disregard of the socially important principle of employment's security. Over the six-year period, 1973 — 1979 in West Germany employment actually declined by an average of 1.1% a year. This tendency still continues and appears also in other leading capitalist-market economies like U.K. and U.S.

Those tendencies brought a new — in modern times — phenomenon. There are cases where some trade unionists after years of under-employment are resisting attempts to increase productivity as a threat to jobs. Thus improved productivity suddenly became a social menace instead of a social blessing.

This is not surprising in the countries where the idea of an overall social rationality is abhorred and therefore impossible to implement. In such a situation the call to raise output per man in order to finance the higher standard of living that all societies demand is not valid and cannot bring the results hoped for.

The point relates to the social effectiveness; the overall social rationality cannot be treated as a simple summation of the effectiveness of the single particular units. It is not true to state that once we secure the efficiency at the micro level we secure in an automatic way effeciency at the macro social level. It is wrong to assume further that once the problems of accumulation and growth are successfully solved the distributional problems will be solved too. In the social system where there is no unity of aims — where the market and its rules are the central object of action and of analysis — the social rationality becomes meaningless. Development concept confined to the jacket of solely market analysis cannot secure consistency of the system from the point of view of both macro and micro rationality.

However, the planned socialist economies too are not without their problems although for different reasons.

In Poland for example the industrial social effectiveness showed also a declining tendency. If we assume that this effectiveness may be measured by the difference between the rates of growth of total factor productivity and of total outlays this kind of a measure started clearly to decline after 1974. The negative tendencies appeared especially in the efficiency of the use of capital assets and their increments. Increments in national income became in the seventies less sensitive to the increments in capital assets than in the sixties.

Negative phenomena appeared also in the field of productivity. Thus for example technical endowment per employee in the socialized industry rose in the period 1975 — 1977 by 22% while the value added per 1000 zl. of capital assets in industry decreased in that period by 5.4%. In 1978 technical endowment of labour in industry rose by 9.7% while the productivity of labour increased only by 2%. Such a negative discrepancy between those two indices could be observed in fact since 1972.

One may assume then that the negative phenomena in the field of productivity were quite widely spread and affected both market and planned economies although the set of causes bringing about this phenomenon was and is not identical.

In the modern planning systems under the socialist conditions it became useful to distinguish between the elements' rationality and the whole system's rationality. In some cases, closely associated with the level of productive forces development the wastes at micro or elements' level may be tolerated and accepted — if they appear unavoidable in strengthening the overall system's rationality. The acceptance of this kind of losses has been greatly influenced by the existence of macro social irrationality of the capitalist economy.

If we distinguish concepts of elements and of a system, the situations may appear where the components behave rationally and the system appears irrational and this is what happens exactly in the market economy. If we move over to another social system it is quite understandable that first of all the main focus is being laid upon the removal of the phenomena contributing to the system's irrationality. And then in turn we may be confronted with the situation where the system is planned and acting rationally but the components behave irrationally. This is exactly what happens quite often and, of course, this kind of a situation cannot be tolerated too long. The rationalities, both at

micro and macro levels, must be coordinated; they cannot contradict each other.

I introduced those remarks reflecting on the system analysis as they are valid for our problem on hand namely, the problem of productivity and employment. In fact attitudes which imply concepts of elements versus system rationality do play quite important role in the analysis of factors of production.

When one reads two major reports on productivity and employment in Tanzania — the part of the World Bank report on this matter and the ILO report — one can see clearly the differences in approach.

Chapter V of Annex V of the World Bank Report (1978) dealing with productivity issues clearly puts a stress on the micro-economic rationality in a context of market economy. It seems that no wider consideration can justify there the falling productivity. Aggregate productivity trends are treated there as misleading and a stress is put on the performance of particular firms. It is indicated thus, that the textile sector productivity fell by over 25% between 1970 — 1976; that productivity in the cement plant fell by about 15% between 1971 and 1975 etc. (pp. 99, 100) And then further on that the Tanzania Cigarette Co. was overmanned and that e.g. when NDC took over a formerly worker managed rubber products factory in late 1976 it found it necessary to lay off 2/3 of the work force. And that "even some of the most efficient parastatals such as TCC have below average productivity by international standards." Everywhere the stress is put rightly on the pressure for cost control and productivity increases but somehow the relation of those problems to macro-economic issues of overall social rationality seem to be treated marginally if at all.

On the other hand when one reads through the ILO report the main stress there is put on macro-economic issues.

Thus for example on page 92 it is argued "that the high rate of growth of employment in industry has been efficient despite the fact that there has been relatively little increase in industrial productivity. This is because the phenomenon represents shifts of labour from the low productivity rural sector to the higher productivity sector." And further, "with major organizational and personnel changes there should be some loss of micro-economic effeciency in the short term. However, from the long term point of view of the economy this temporary 'loss' may be unavoidable and in fact efficient."

The difference of approaches is obvious. Both, however, imply certain dangers. The first one from obvious social reasons; the second one by justifying too long the deterioration in a micro-economic efficiency and by ignoring the fact that "whatever any social aim — be it the most noble and just — one can redistribute without any troubles only what has been materially produced."

When one states that 2/3 of the workers of a factory have been thrown out, it may sound rational from the efficiency point of view of that enterprise. But ILO approach would be right to state that it is a social disaster from the employment security point of view and that it should be avoided.

Market approach which throws out supernumerary workers and does not care a bit as to what happens to them later is socially irrational and cannot be accepted. On the other hand, the policy of formal employment creation not backed up by resulting additional product and tolerating sham productive activities is not rational either. One may venture to state that the policy of forcing up a formal employment only without the accompanying measures influencing other factors of production may prove, at a certain point, counterproductive.

This fact may be illustrated by some theoretical considerations. If we define the overall social productivity as the ratio of GDP per employee:  $W = Q : X_1$  (GDP: no. of employees) this category may be presented as one depending on:

 $W_{t-1}$  = a lagged productivity;

 $X_{2t}$ :  $X_{1t}$  = technical endowment per employee (capital stock per employee)

 $X_{1t} = \text{labour force.}$ 

The relationship among those variables may be presented by the following equation:

$$W_t = a_1 W_{t-1} + a_2 (X_{2t} : X_{1t}) + a_3 X_{1t} + a_4 + E_t$$

Parameter  $a_1$  in the above function represents auto-regressive property of changes in the endogenous variable.

This function may be transformed in such a way that one may obtain a production function describing the changes in output. This may be achieved by multiplying both sides of this equation by the variable  $X_1$  representing the labour force. We get:

There is one very interesting property of this model; the parameter  $a_3$  is negative as it implies that an increase in labour force may create additional output only to a certain point. If that point will be reached and all other factors remain constant a further increase in labour force  $(X_1)$  may lead to a decrease in production.

The above equation for 4 industrial divisions in Tanzania for the period 1967 — 1977 takes the following form:

As we can see the parameter related to the variable  $X_{1t}^2$  is negative and exerts quite substantial influence on the output.

In the situation of merciless ecological pressures and natural disasters combined with the continuous diverse economic threats from outside, the country must have ability to resist such pressures and to counter the dangers. This ability my be achieved only when the country's system is efficient at both micro and macro levels, when its resources including, chiefly the labour force, will be put to efficient use. Ideally, micro economic rationality at the enterprise level which assumes effective employment of its labour force and puts a stress on the costs problems should go hand in hand with society's policies aimed at creation of new opportunities for effective employment through the whole set of development policies affecting the appropriation and investment processes. It should always be remembered that clearly microeconomic efficiency is a necessary but not a sufficient condition for macro economic rationality.

Obviously such factors like: 1) disproportions in the national economy and, connected with it, shortages in raw materials, in supply of energy, spare parts, weakness of transport, over-investments etc., 2) weaknesses in the management system of the national economy., 3) weakness in the motivation blocks of the workers, and 4) lack of participation and lack of involvement of workers in the production processes, all contribute to the overall social and economic efficiency.

One of the very important factors influencing this efficiency is the wage system and the system of different types of incentives. Wage policy and, in general, the renumeration policy should clearly stimulate the growth of the social and individual productivities.

The translation of this principle into the practical wage and salaries policy is quite difficult and it determines, in fact, not only the level and quality of life but also the rate of growth of the national economy. How difficult it is it may be seen from the brief experience of one of the parastatals which has introduced the new wage system.

The new production incentive scheme on top of the basic wage introduces in this enterprise bonuses related to the capacity utilization of the machines. Rates of bonuses paid out there fluctuate between 25% and 50% of the basic wage. The parastatal in question had an excess of surplus capacity and as the general conditions of production (energy supply, availability of spare parts etc.) were constant the periods considered are comparable.

The new scheme was introduced in January 1980 and the results of the first 4 months of that year were observed. They are striking but they may cause some social concern.

Under the new system the work on Sundays — which was routine previously — stopped. This represented at once quite serious savings in costs of transport, of energy and of expenditures for workers' benefits. For the workers it meant one day rest.

Remembering that the basic wage is constant and that it was not touched by the new system we may compare the overtime paid to the workers under the old system with the bonuses paid under the new one. Cost reduction from this point of view was dramatic.

What has happened?

- 1. as the physical production and the number of workers remained practically constant the stoppage of work on Sundays meant actual rise in productivity by about 15%;
- 2. cost per unit dropped significantly as the total amount of bonuses paid out under the new system over the period of 5 months was cut down by 50% compared with an amount paid as overtime in the preceding 5 months;
- 3. because of this development the total wage fund dropped and on average the individual wage suffered;
- 4. we have got here classical case of a clash between the micro and the macro rationality and an illustration of how difficult it is to assess exactly the implications of a planned measure:
- a) at the workers level this is at the moment negative development; higher productivity resulted in lower wages;
- b) at the enterprise level the activity is efficient and rational: cost per unit decreased, productivity didn't suffer and even increased; surplus part of which will be retained in the enterprise increased;
- c) at the overall social level the ultimate outcome is doubtful. Although the appropriated surplus going to the budget has increased and deflationary tendencies were started, a part of the society pays the price of the pressed down level of living and this means that a start may have been made towards the tendency to deepen the conflicting social interests. The stress is now being shifted, in the long run, on what happens with the increased surplus. If the phenomenon (of raising surplus) continues and if the increase in productivity is not accompanied by an increase in wages, the increase in productivity, so eagerly aimed at, may become a social menace and not a social benefit This may lead in the long run to a social syndrome where in a socialized system an active action is taken by the basic part of the society against what may be considered —rightly or wrongly an excessive surplus and against badly controlled, in social terms, and

badly executed, spending of this surplus.

productivity, so eagerly aimed at, may become a social menace and not and not a social benefit. This may lead in the long run to a social syndrome where in a socialized system an active action is taken by the basic part of the society against what may be considered \_\_rightly or wrongly - an excessive surplus and against badly controlled, in social terms, and badly executed, spending of this surplus.

Thus temporary micro-economic efficiency may result later on in very high social costs.

Of course, the case I was discussing here is still treated as an experiment and those who are doing it realize already its weak spots and think about the remedies. It is, however, a very good illustration of the need to consider the micro-economic problems against the wider social issues. As I have said elsewhere in my paper: "both rationalities—at micro and macro level—must be coordinated; they cannot contradict each other".

One of the crucial issues which has to be stressed again and again is the fact that — although we are stressing nowadays on productivity in the country — the productivity of labour alone is not a sufficient criterion for evaluating the effects of the labour factor treated as a basis for the level of wages.

The overall productivity depends on:

- a) the labour productive capacities, and
- b) the productivity of a worker.

The first component is conditioned by certain objective factors like resources, climate and, most significantly, by the technical endowment and the rationality of organizational solutions. In fact in the developed industrial countries intensivity of workers' effort which has to determine the workers productivity plays a smaller and smaller role. In the automation era and in the highly mechanized production the growing importance has to be attributed to the technical and organizational endowment. We are confronted thus with a dilemma: What brings about the rise in productivity? And, in what proportions? The work of the machine or the labour of man? After all, this latter component should mainly decide the level of wages. One may imagine a situation in which an introduction of a new machinery might raise drastically the overall productivity considered as the ratio of value added per employee, and might contribute to the rise in wages without a corresponding increase in workers efficiency and in their efforts. I am stressing this possibility as it implies a need for a certain specific approach to the analysis of productivity in which an increase in productivity must be considered in relative terms.

Any comparison of productivities especially among different countries and even among the enterprises of the same division will say nothing if the technical endowment is not taken into account.

If we want to discuss for example the wage differentiation the productivity of labour should be related to comparable conditions. What is more any increase in productivity must be considered in relative terms as it must be judged against the production targets i.e. against the given standard representing an average productivity of workers in given technical conditions, for which the worker gets the basic wage. The problem of wages cannot be separated from the problems of standards; from the problem of norms treated not only in quantitative terms for an individual worker but referring also to the production targets for the group of workers.

Differentiation of wages, however, cannot be based always on this simple mechanism which was and is being used widely in the market economies. The trouble is that we are not always able to determine that productivity of labour which is of the accepted standard. Quite often it is not the level of the norm which determines the level of wages but, quite the opposite, it is the planned-in-advance-wage level — at which the worker is still ready to continue his work in some specific deficit branches — which determines the level of productive standards. In such a case, the productivity of labour cannot, of course, be a basis for the reliable differentiation of wages as it describes only the quantitative part of the labour's effects and not its quality.

This implies that besides the productivity of labour we have to consider another conceptual category that of the effectiveness of labour. In those terms not every increase in productivity is really needed. An increase matters if it leads to the better satisfaction of basic needs, and also leads to the social savings in terms of efficient use of means of production and of resources. Consequently such an increase matters which pays a great attention to the problem of production costs.

The poorer the country the wider should be the implementation of this last principle connected with the efficiency of labour.