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**The service sector in planned economies.
Past experiences and future perspectives**

by

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1. Foreword.

Experience has shown that when capitalistic countries faced the problem of unemployment which the industrial sector seemed unable to match, then the discussion on the role of the service sector in absorbing the unemployed labour force went to the fore. During the thirties Fisher (¹), impressed by the persistence of high level of unemployment, argued that industry had lost the capacity of absorbing labour force and analysed the possibility of the tertiary sector (a term which he introduced in that occasion) of creating new jobs. The analysis, with regard to the industrial sector, proved to be unduly pessimistic; nevertheless his analysis of the characteristic of the service sector was fruitful.

During the sustained prosperity of the postwar period the attention to the service sector did not disappear, though industry was absorbing labour force at a sustained pace. The attention, indeed, was focused on the shift of the share of employment between the two sectors in mature industrialized economies, a phenomenon first pointed out by Hobson (²) for the pre-first world war Great Britain. The economic thinking on the role of the service sector came out again strongly in the eighties, on the impact of both the recession of the first eighties, and of the impressive job machine, represented by the service sector of the U.S. economy during the following recovery.

(1) See A.G.B. Fisher (1939).

(2) See A.J.Hobson (1906). In this book he gives an impressive description of the early phases of employment tertiarization, in the second half of the XIXth century, in U.K. and in U.S.A.. One of the most interesting point raised is the distinction between material activities, which he calls 'make', and all the ones which help the goods to circulate, named 'deal'.

We used this classification to analyze the cyclical behaviour of employment service growth in the post war period, in a comparison between U.S.A. and the main european economies (see G.P.Caselli and G.Pastrello (1987)), and for the italian economy (see G.P.Caselli and G.Pastrello (1989)).

For what concerns socialist countries, it's worthwhile to stress that the ongoing economic situation links together, for the first time, the two interwoven problems of sector employment shares and of unemployed labour force absorption in the service sector. It's quite interesting to recall that, during the second world war, Rosenstein-Rodan ⁽³⁾ writing about the problems of economic development of the eastern countries, stressed the strong agricultural overpopulation which plagued all the eastern european countries, reaching the level of 25% of the population.

Rosenstein-Rodan was arguing against an autarkic way of solving the problem, like the U.S.S.R one, and suggested a model of international integration based on light industry. As everybody knows the story went the other way round, as thoroughly analysed by Winiecki ⁽⁴⁾. In spite of the fact that forced industrialization partially emptied the agricultural basin, eastern countries still maintain a relevant agricultural overpopulation, compared to western standards. Moreover the need of increasing efficiency, which is the aim of the present economic transformation strategies towards the market, is threatening to create massive unemployment, coming from the industrial sector too. Once again the service sector is called to solve the unemployment problem.

But in order to analyse the possibilities that can be offered by this sector, an overview of the past development is due. It's amazing how little study, research and effort have been devoted to the study of the service sector in the socialist economies by western and eastern scholars. Ofer's book ⁽⁵⁾ on the soviet service sector is quite an outstanding exception; there are some

(3) See P.N.Rosenstein-Rodan (1943). In this brief and foreseeing article it's quite clear the choice and the consequences of an autarkic model of development, compared with an open one. Moreover he stresses the necessity of a wide international cooperation in order to achieve the open way of development.

(4) See J.Winiecki (1988). It's this author who mainly stresses the role of the lack of international, and domestic, division of labour in shaping the CPE's economies.

(5) See G.Ofer (1973). This is the first complete work on the U.S.S.R service sector written from a macroeconomic point of view by a western scholar.

works written by french economists ⁽⁶⁾, and not much else, apart from the current discussion on the measurement of the socialist service sector productivity, going on in the Journal of Comparative Economics ⁽⁷⁾.

There is lip service attention to the socialist service sector in more general works on socialist economies and the conclusion usually drawn is that the growth of the service sector has been hampered by the tremendous effort of industrialization overtaken by these countries. This mainstream thesis, with different qualifications can be found in the works of Winiecki, Ellmann, Stollar and Thompson ⁽⁸⁾ and others, and has become economic common sense in the official eastern publications. The aim of our paper is to discuss this thesis, on the background of western debate on services, and to check its interpretative capability.

2. An outline of western theories on services.

The real point, which underlies the great development of the literature on the tertiary sector, is represented by the question whether an economy, mainly based on the tertiary sector, might grow substituting the industrial sector in creating new jobs.

A first theoretical model has explained the growth of the service sector by means of a 'growth stage' theory: the increase of tertiary employment is a function of the increase of the per capita income which generates a shift towards "superior goods", i.e. services ⁽⁹⁾; it is just this 'stage' theory which is mainly discussed by eastern economists ⁽¹⁰⁾. Objections to this

(6) See M.A.Crosnier (1988).

(7) See A.M.Prell (1989a), (1989b), L.Kurtzweg (1989). The point under discussion was whether or not to include housing services in order to correctly evaluate service sector contribution to GNP.

(8) See M.Ellmann (1979), A.J.Stollar and G.R.Thompson (1987), J.Winiecki (1988).

(9) See C.Clark (1940), W.Rostow (1960).

(10) See E.Kwiatkowski (1980), A.Maksimiuk-Pazura (1987). These authors do not take into account the latest development of western debate on services, centered on the notion of 'producer services'. This lack of interest is probably due to the material absence of such services in CPE's.

interpretation have been raised, on an empirical grounds by Kaldor and Fuchs⁽¹¹⁾, who stressed that the income elasticity of consumption is not greater than one; at the same time it has been observed by Katouzian⁽¹²⁾ that in less developed countries higher level of tertiarization are associated with lower level of income per capita.

The second approach is based on the role of productivity differentials between tertiary sector and industry in explaining the relatively higher growth of service employment, and is mainly linked to the names of Kaldor and Baumol⁽¹³⁾.

Both these approaches share the conception of the service sector as a whole. But just its impressive growth has raised doubts on the usefulness of this aggregate explanation, because it has been recognized that in the growth of the service sector household decisions have been playing a decreasing role, while the role of business sector and the state has considerably increased. Leaving apart the role of the state (obviously linked to keynesian and welfare policies up to the mid seventies), a central role in the explanation of the growth of the service sector has been played by a group of services, which has shown the higher employment growth rate, i.e. the 'producer services'⁽¹⁴⁾. The relevance of this new category of services is determined by a new phenomenon in the capitalistic economies, which may be stressed by the sentence: services enter the material production, i.e. services enter, like intermediate factors of production, in the production of industrial goods.

(11) See N.Kaldor (1966), Fuchs (1968).

(12) See Katouzian (1960).

(13) See N.Kaldor (1966), Baumol (1967). These authors stress the importance of productivity differentials in the process of employment tertiarization, giving a supply side explanation of the phenomenon, which was previously explained only by changing demand patterns.

(14) See H.T.Greenfield (1966), S.Bhalla (1971), K.Myazawa (1974), T.M.Stanback (1979), A.Ginsberg and S.Wojta (1981). Though these studies are made with different economic techniques and perspectives, they all point to the importance of this new service category in the process of economic growth.

This phenomenon highlights an epochal change in the real process of production; this is a change in which the organization factors which link and connect different parts of the productive sectors come to have more importance with respect to the so called "material metabolism", to put it in marxian terms. Trying to enucleate from the galaxy of services the 'producer services', some economists put under a searchlight the part of the service sector which is supposed to be functional to the process of economic growth ⁽¹⁵⁾.

This phenomenon has been driven by different factors: firstly by the expansion and diversification of the functions of control and management of capitalistic firms ⁽¹⁶⁾; secondly by the introduction of new technology in the field of information treatment by the use of computers ⁽¹⁷⁾; third by the increase in uncertainty existing in capitalistic economies, caused by the ever expanding globalization of markets: some 'producer services' may help to reduce this degree of uncertainty (e.g. marketing, insurance).

Indeed with the enucleation of such an aggregate, some economists have tried to give a different answer to the question which, during the sixties and the seventies, run through all the analysis of the process of tertiarization: is the expansion of the service sector in terms of employment and value added physiological or on the contrary merely reflects a pathological feature of the capitalistic economies, witnessing the loss of productive potential?

Summing up we may distinguish three periods in the tertiaritation process of european capitalistic economies: a first period which goes till to the end of the sixties which is characterized by a productivity differential between industrial and the service sector and by a sustained demand, which together cause the continious growth of service sector employment. The second

(15) For an input-output approach applied to italian economy see F.Momigliano and D.Siniscalco (1982), G.P.Caselli and G.Pastrello (1984).

(16) See A.Barcet and J.Bonamy (1982).

(17) See R.Kaplinsky (1984), V.Leontiev (1983). Contrary to the conventional expectations of employment expansion linked to the diffusion of informatic equipment, the authors point out the possibility of a 'ricardian effect' on employment, due to the 'labour saving' characteristic of this wave of innovations.

period, the seventies, has been characterized by a slowing down of the rate of growth of the western economies and by a change in the use of services mainly by the industrial sector. The slimming in terms of employment of the industrial sector caused some economists to speak of deindustrialization, or, judging in a positive way this new phenomenon, others spoke of the coming of a new postindustrial society. The present period, in which we now live, has a new feature, represented by the introduction of computers mainly in the offices, applying computer techniques to non manual activities. It seems to us that a so called extensive period in the growth of the service sector employment is finished, or is in the verge of finishing. The introduction of computers in firms' offices which has till now the goal of making much more flexible the organization of production, in order to give firms more flexibility during the cycle, may have in the future the target of saving labour in the sector of non manual profession.

3. The socialist countries debate.

"To understand the role assigned to the service sector in the socialist countries of eastern europe we have to place it in the context of a continuous debate in the marxist economic theory on productive/material and non productive/non material activities."⁽¹⁸⁾ In our opinion the muddling of the service problem with the "marxist" ideological subtleties has confused rather than unlightened the analysis on the reasons of the growth of the service sector in the planned economies. For practical reasons we build the following very rough sketch of the debate only on polish sources, in which almost all the main contributions of eastern economists on the subject are referred to, and in our exposition we will refer only to few paradigmatic positions.

The debate on services begun in the late fifties (apart from an isolated attempt in the thirties by Strumilin ⁽¹⁹⁾), somewhat hidden in different economic journals ⁽²⁰⁾, and strongly developed

(18) See J.Maciejewicz and J.Monkiewicz (1989).

(19) See S.G.Strumilin (1926) and (1936).

(20) See C.Niewadzi (1989).

in the second part of the sixties ⁽²¹⁾). It is quite clear, also if we do not find direct references, the link with the ongoing debate on economic reforms that focused the attention of eastern and western scholars. Indeed at the core of these two parallel debates lies the crisis of the model of growth based on accelerated industrialization.

The economic points around which the debate develops are: the meaning of productive and unproductive activities, and the related accounting definition of national product; the question whether services do contribute or not to economic growth; the problem of wage structure and the wage differentials between productive and unproductive sectors; the issue of the shares of the sectors, either in terms of employment either in terms of investments, i.e. whether the industrial sector and in particular the sector producing means of production (sector A) should be given the preminence in all the relevant economic choices.

It is possible to distinguish between two different approaches: an 'ortodox' view which stresses the unproductive character of services, whose workers are christened by some radical exponents as 'nachlebniki', i.e. living on social gifts ⁽²²⁾. Against this view stands the 'reformist' one (whose more prominent exponents are Strumilin, Gromov and Minc ⁽²³⁾), which though accepting the common background of the productive/unproductive categories, is arguing in favour of a productive role of service activities.

They are mainly basing the argument on two points: on one hand they refer to the marxian conception of the "collective worker", i.e. that different kinds of activity are cooperating in the effort of production (this fact, which is quite visible within a productive unit, is analogically extended to the whole economy); on the other hand they stress mainly the role of science in

(21) See C.Niewadzi (1989), and A.Maksimiuk-Pazura (1987).

(22) See D.I.Pravdin (1976), and also V.E.Kozak (1979).

(23) See S.G.Strumilin (1962), E.A.Gromov (1971), B.Minc (1981).

fostering economic growth, hence considering scientific activities as direct productive forces. Together with science is often emphasized the role of education and health services in increasing the productive capabilities of the population.

There are obviously some positions in between -e.g. Kronrod ⁽²⁴⁾-, which, though maintaining the unproductiveness of the service activities, are recognizing their usefulness, and accept to discuss in some way the preminence of sector A.

The reformistic view points out an apparent paradox ⁽²⁵⁾: while the increase in living standard -as represented for instance by education , health and social insurance- were shown as the greatest achievement of a socialist society, at the same time they were considered as mere residual sectors in the decisions concerning the production and distribution of wealth. From a general point of view they were not considered "wealth" at all.

The main failure of the debate is that it is almost exclusively aimed to justify the choices done, not done, or to be done, and is not aimed to explain the functional relationships between the different parts of the economic system.

Of course the real issue underlying the debate is the shift to a model aimed towards the growth of consumption, and hence of services; and this raises the related problem of wage differentials between sectors.

An outstanding exception to this way of reasoning is represented by Winiecki ⁽²⁶⁾ who tries to explain the relative shares of the sectors as regard to employment and GNP, showing the existence of a self-generating mechanism. According to him the share of industrial sector is systematically greater, compared both to developed and LDC's countries, for three reasons. First, the autarkic choice of the model of growth; second, the drive of socialist firms towards vertical integration, in order to face the uncertainty of supplies; these two features diminish the

(24) See J.A.Kronrod (1958).

(25) See M.Strak (1981).

(26) See J.Winiecki (1988).

benefits of international and domestic division of labour, contributing to increasing inefficiency, as represented by the growing labour and material absorption in the production process. These two factors interact with the third one, i.e. the bias in central decisions in favour of the extensive development of the industrial basis, depressing the shares of non industrial sector in employment, investment and GNP.

Summing up, the main difference between the two debates on services, the western and the eastern one, is that in the second is missing an explicit reflection on the evolution of the division of labour and on its functioning within the process of economic growth, which is on the contrary the core of the first one.

In the present period, when planned economies are going towards a general reform, aimed at the introduction of market mechanism in a substantive way, the western reflection on the role of the service sector, and mainly on the role of producer services, may give important hints on the future development of these economies. The crucial aspect which must be taken into account, even if not thoroughly analyzed, is the different way, in which economic activities are interconnected, giving rise to a different network of relationships, in capitalistic and socialist economies. Only taking into account this differences is possible to sketch the future developemnts which are more likely to occur during the process of economic reform.

4. Was the service sector in planned economies really crowded out ?

The usual works on service sector in socialist countries ⁽²⁷⁾ are based on comparisons of the service employment or service value added shares with the ones reached in capitalistic countries.

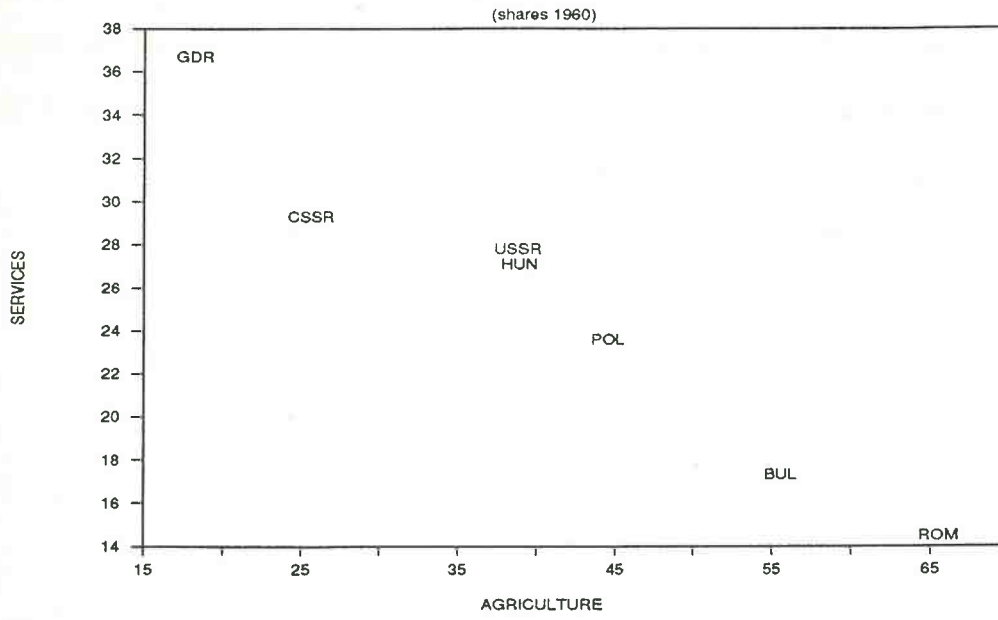
(27) See J.Winiecki (1988), G.Ofer (1973), V.Michalova and V.Fronkova (1989), J.Maciejwicz and J.Monkiewicz (1989), A.Nesporova (1989), E.Ehrlich (1989).

Whether this comparison is made with simple or sophisticated instruments, taking or not into account GNP differentials among countries, the general conclusion is that the service sector in socialist countries is not only smaller if compared to western ones, but it's smaller being crowded out by the industrial sector.

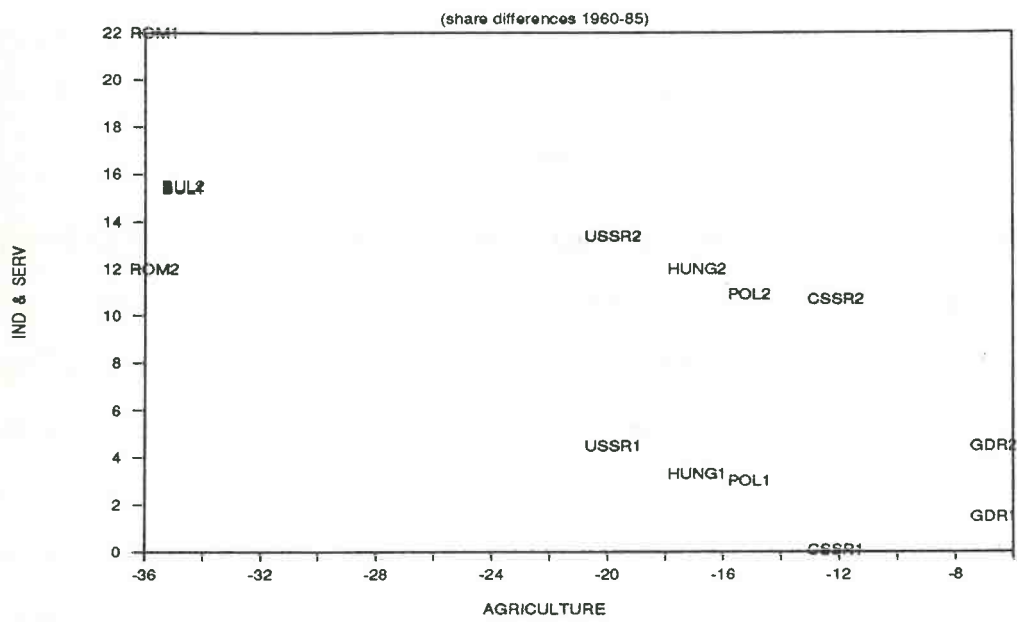
The reasoning more or less goes this way: on one hand we have the well known planners preferences for the growth of the industrial basis, on the other hand the service sector is underdimensioned. The drawn conclusion is that the first is the cause of the second, via distorted allocation of resources; in our opinion this conclusion is drawn taking preferences for real decisions: real decisions are represented by the rate of growth of investment and employment in the different sectors. These rates of growth show that during the decision making process, initial preferences are faced with all kinds of constraints, resulting in effective behaviour, which is different from the first supposed set of preferences.

If we examine the employment shares we can see that all the socialist countries show in 1960 a very high level of the share of agricultural employment (see GRAPH 1); since then a clear process takes place: depletion, in terms of employment, of the agricultural sector, and growth of both the industrial and service (productive and unproductive, in eastern terminology). But, apart from two exceptions -Bulgaria and Romania-, the employment share went up more in service sectors, productive and unproductive, than in the industrial one (see GRAPH 2)

GRAPH 1. EMPLOYMENT SHARES RELATIONSHIP

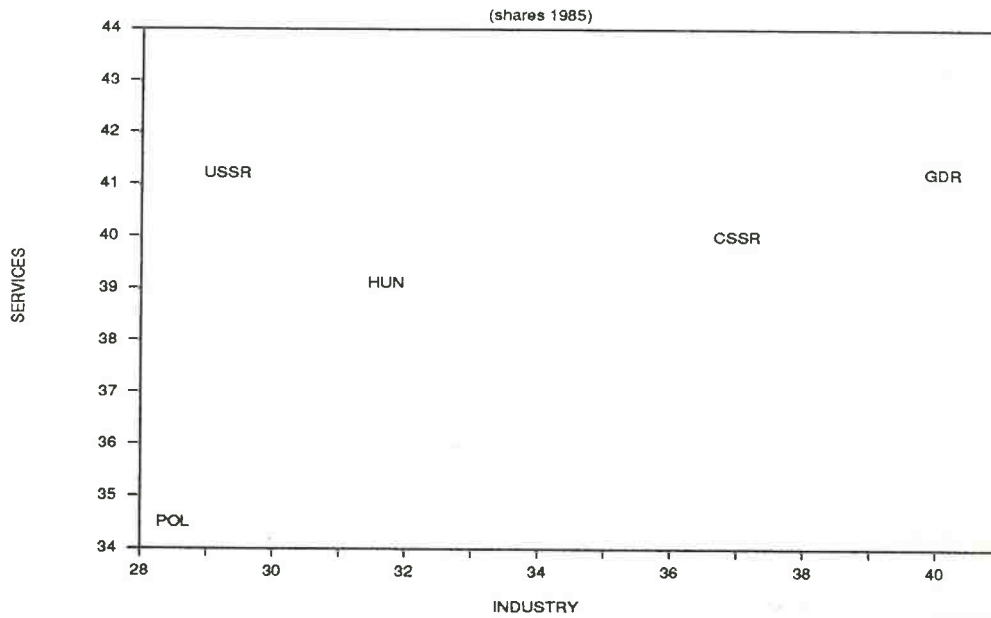


GRAPH 2. EMPLOYMENT SHARES RELATIONSHIP



Moreover, the crowding out thesis would imply a negative relationship among countries between the share of industrial employment and the share of services, while the evidence is quite the contrary. Indeed a positive relationship between the employment share in industry and services does appear, apart from Bulgaria and Romania (see GRAPH 3).

GRAPH 3. EMPLOYMENT SHARES RELATIONSHIP



While in capitalist economies the disguised unemployment has by long time disappeared from agriculture, and has rooted itself in the service sector, the planned economies has not yet undergone this transformation. For as the rate of investment is concerned, we have found that investment in the service sector, during periods of high investment in the industrial sector, was high as well, and was not hampered by the effort of accumulation in the material production sectors; when the overall rate of investment was slowing down, or became negative then service sectors investment rate of growth was curtailed more drastically than the industrial one.

There is no room for speaking of a crowding out of service investment by material investment in the periods of more intense accumulation; on the contrary the effort of investment in the service sector was quite strong. Moreover, given the tendency of increasing input

absorption, if the mentioned planners preference had been embodied in real investment decisions, a great differential between industry and services rate of growth of investments should have emerged.

A true crowding out effect of service investment by the industrial sector may be observed only in the period 75-80. In this period faced by the increasing accumulation difficulties the planners tried to save the growth of the material production cutting service investment, with the exception of USSR. But the outcome of the subsequent period proved that this cut was insufficient. Our conclusion is that we cannot talk about a growth model, which encompasses all the post-war period, with an built in bias in favour of industrial investment but rather of the uncapability of planners to decide either to maintain the forced industrialization model, either to radically change it when needed.

The result was that they were unable either to maintain the desired high rate of growth of the material product, either to develop the needed new sector of activities. It was not the accumulation drive which caused crowding, but rather its failure.

5. Summing up: perspectives of net employment creation in the service sector.

A question may be raised whether the service sector can absorb the unemployed labour force which will be expelled by the agricultural and industrial sector. The opinions on the magnitude of this employment shaking are quite different ⁽²⁸⁾ because there are different views on the deepness of the recession, caused by the measures of economic stabilization, apart from the case of GDR. But there is a general agreement on the productivity differential with the western economies which goes from 30% to 50%. Then the potential unemployment rate may

(28) For an extreme optimistic view see J.Sachs (1990) and J. Sachs and D.Lipton (1990), for a more skeptical one see K.Laski (1990), and G.P.Caselli and G.Pastrello (1990).

be guessed to be about 20%-30%; whether this potential unemployment will become effective and persistent, will depend upon the speed of the process of economic reforms towards the market and from the economic policies enacted by the governments.

From these very sketchy observations it follows that the task of the service sector in creating net employment will be very hard. We can divide the service sector in three broad categories: producer, consumer and state services. In the first category we include transport, communication, trade -wholesale and retail-, business, finance, insurance and real estate. In our opinion, among the sectors of this group, the most promising one with regard to the creation of net employment seems to be the trade sector, which is presently underdimensioned in terms of units and employment.

The sector expansion will be driven by two different forces: the drive to adequate the trade structure to the needs of population from the demand side, and from the supply side the fact that missing barriers to entry, in terms of capital and know how, will allow the development of small trade. This will lead the sector to perform the sponge role which is typical of western economies at a lower income levels. In the process of privatization the transport sector too might give birth to small transport firms, even if not in a very relevant measure from the point of view of employment creation.

The business services, which have focused the attention of western economists in the last decade, and which recently have raised the attention of eastern scholars too, represents a very awkward problem to deal with, in the transition from a planned to a more market oriented economy. In the planned economies the functions of coordination among different enterprises and different sectors of the economic system are performed by the state through the ministers, and the problem of facing demand has totally a different nature ⁽²⁹⁾. We could say that these kind of business services are 'internalized' into planning institutions.

(29) See J.S.Berliner (1957).

What can we expect from a transformation towards market in terms of employment? Part of the services of coordination will be 'externalized'; but this process will mean only substitution of state employment that will be released with market employment. It must not be forgotten that the development of business services in capitalistic economies happened when these economies were at a much higher level of GNP, compared to the present one in socialist economies, and with a great openness to international trade. Hence a great part of the services performed by ministers will simply disappear or will be 'internalized' in the firms without new employment creation. The sector in itself will grow, even impressively, but its contribution to solving unemployment problems will not be very great.

Financial services too are 'internalized', but moreover they are very poorly developed. The obvious reason is that the extent of financial relationships among firms, and among firms and households is very limited. What we can expect is a development of the banking sector, even if in this case too is difficult to guess which part of this job creation will result only in employment substitution between public and private sector. Moreover it's very unlikely that the development of a monetary and financial network would lead to a system of financial institutions and firms similar to the one existing in western countries. The development of a capital market will have a negligible effect on employment.

The second great contribution to employment may come from the development of consumer services: hotels, restaurants, cars repairs, leisure activities and other personal services. Part of these activities are presently 'internalized' in the firms ⁽³⁰⁾, due to their 'autarkic' bias as analyzed by Winiecki. It's likely that, under the process of marketization, some of these services will be 'externalized'. But this sector will grow, apart from the sponge effect, only if government economic policies will ensure a steady and sensible growth of per capita income.

(30) See V.Frankova and V.Michalova (1989).

Obviously the employment in the state sector is supposed to slim, unless central authorities should decide to use it as a sponge, which would be in contradiction with the declared target of a strong reduction in state expenditure.

Summing up the transformation of the planned economies towards the market will release forces which will reshape the structure of employment. It is to be expected that the service sectors shares will increase, both in 'traditional' sectors: trade and transport, consumer services and in the more 'advanced' business services'; but the contribution to net employment will come only from the traditional sectors. The service sector in itself is not able to match a general problem of unemployment, insofar its absorption capacity is linked with the overall level of economic activity whose management relies on expansionary policies, as the main instrument to achieve full employment.

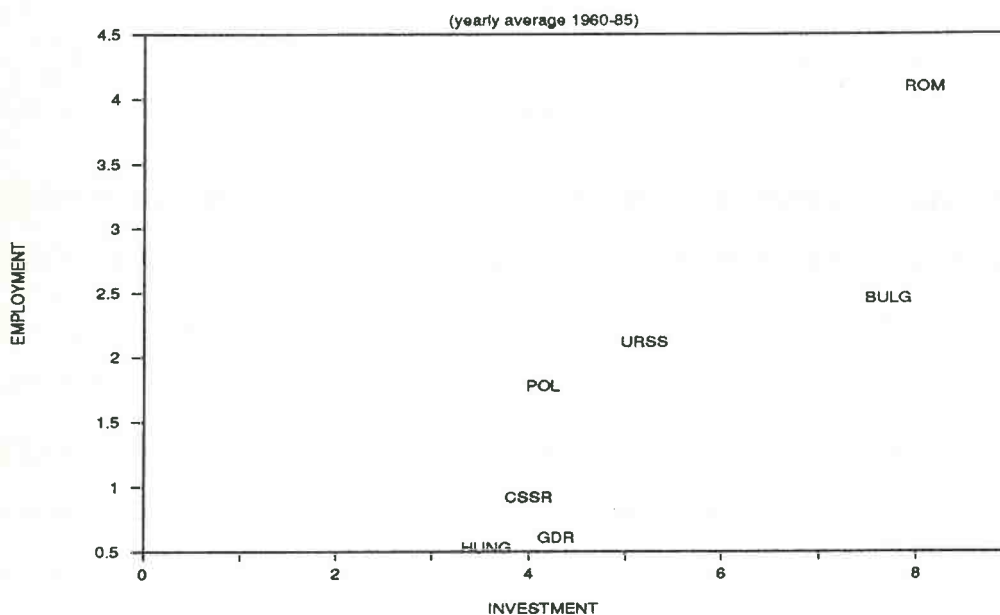
APPENDIX

1. Empirical findings.

1.1 Sectors analysis.

We have taken into account the rate of growth of employment and investment for seven socialist countries (Bulgaria, CSSR, Hungary, Poland, GDR, Romania and USSR) for the following sectors: industry (IND), unproductive sector (UNPR), and the aggregate material services (trade, transport and communication), which we call DEAL ⁽³¹⁾. The time period goes from 1960 to 1985, with few exceptions. In the graphs 1, 2 and 3, we have plotted the yearly average rate of growth of investment, on the X-axis, and employment, on the Y-axis, for IND, DEAL and UNPROD respectively.

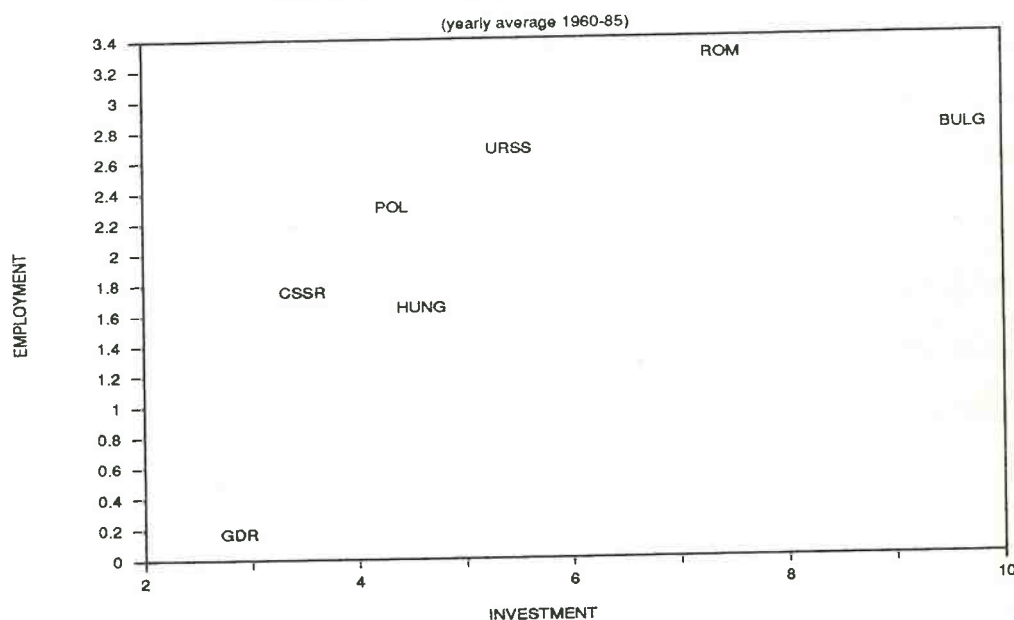
GRAPH 4. INDUSTRY GROWTH RATES



(31) For an explanation of the term, based on Hobson's works, see G.P.Caselli and G.Pastrello (1987).

The main point which emerges from the graphs is that for IND and DEAL the rates of investment and employment growth present a certain degree of correlation, with the exception of Bulgaria in the DEAL graph

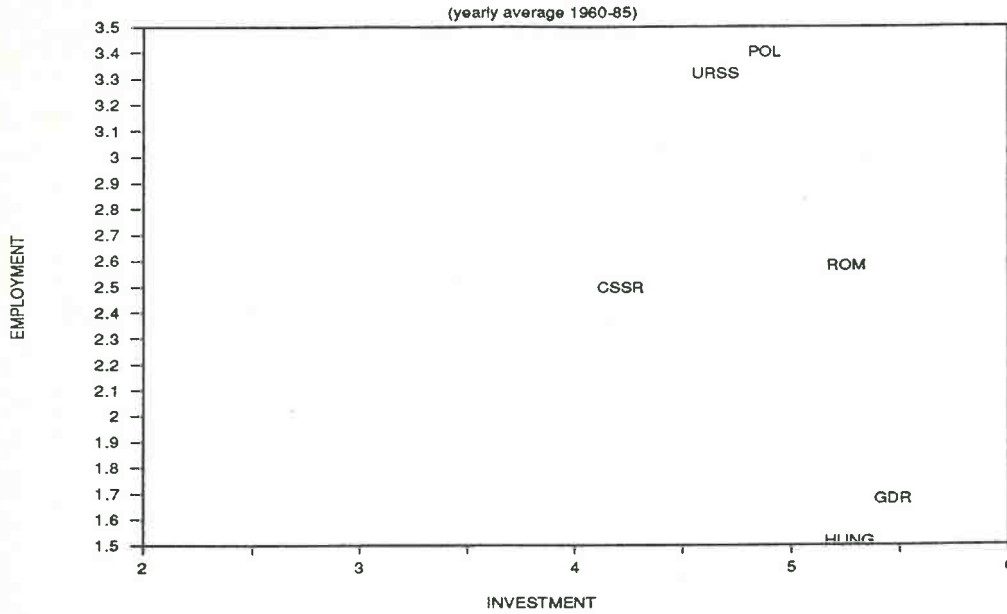
GRAPH 5. DEAL GROWTH RATES



which shows a greater rate of investment in regard to employment rate, as compared to the other countries. In the UNPROD graph, instead, the yearly rate of investment is quite similar in all countries while employment rate is dispersed through countries, according to different state policies. This kind of relationship recalls the one we have analyzed for U.S.A and C.E.E. countries ⁽³²⁾, in which the industrial employment and the DEAL employment moved together during the cycle, while the employment in the other service sectors was independent from GNP cyclical fluctuations. Substituting the demand pull, typical of market economies, with the investment push of the planned economies, what emerges is the clear connection between the IND and the DEAL sectors.

(32) See G.P.Caselli and G.Pastrello (1987).

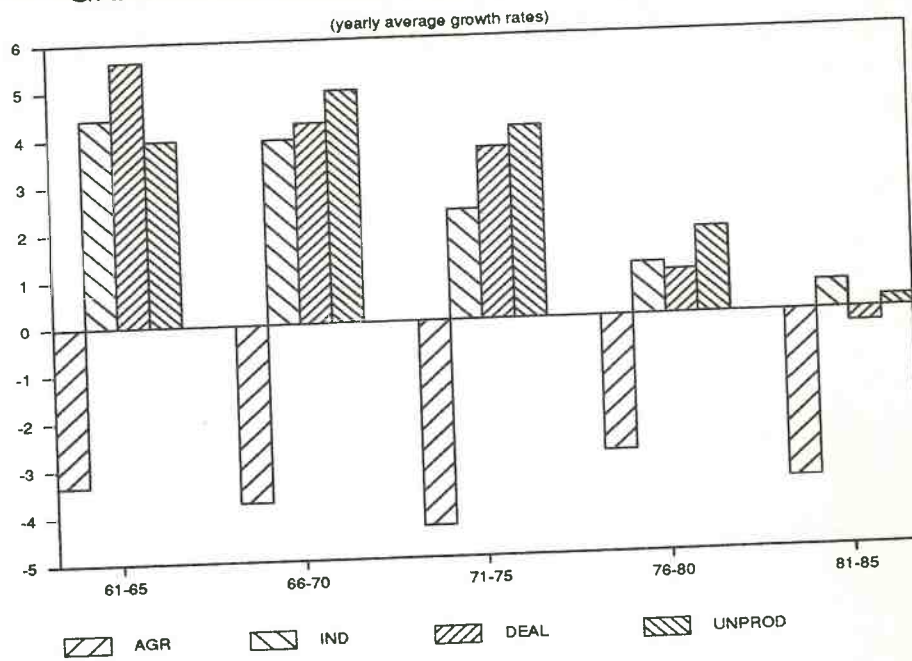
GRAPH 6. UNPROD. SERV. GROWTH RATES



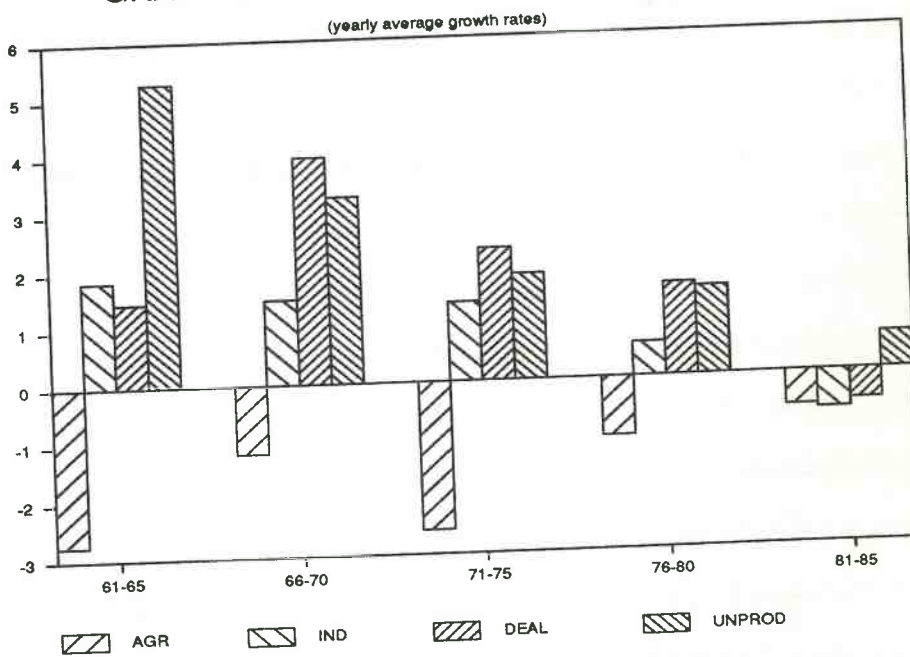
1.2 Employment analysis.

For what employment behaviour is concerned we may distinguish two countries which behave in an opposite way, Hungary and Romania, four countries which show a similar pattern: Bulgaria, CSSR, Poland and USSR, and a country, GDR, which has a peculiar behaviour. Romania may be considered the paradigm country of the 'crowding out' thesis; in fact during the all period the rates of growth of service sector employment are systematically lower, with one exception, than the industrial employment rate of growth. Hungary, which is crowding up to the mid sixties, inverts such a tendency, behaving like western economies, creating service employment at a higher rate even when industrial employment is shrinking. GDR is showing a somewhat schizophrenic attitude towards service employment: for while DEAL employment is systematically depressed, with the exception of the period 81-85, compared to industrial employment, the UNPR. employment is growing at a very faster rate than the industrial one. The other four countries show a general tendency to a growth of service employment of the two sectors higher, even if not to a great degree, than the industrial one. Obviously all these countries show a declining trend according to the general decline of the overall rate of economic growth.

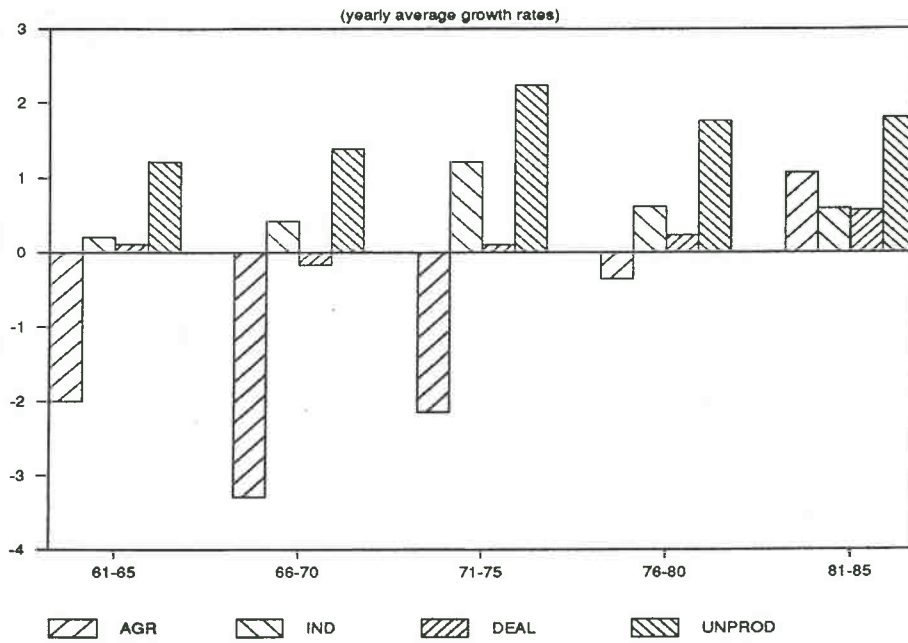
GRAPH 7. BULGARIA: SECTOR EMPLOYMENT



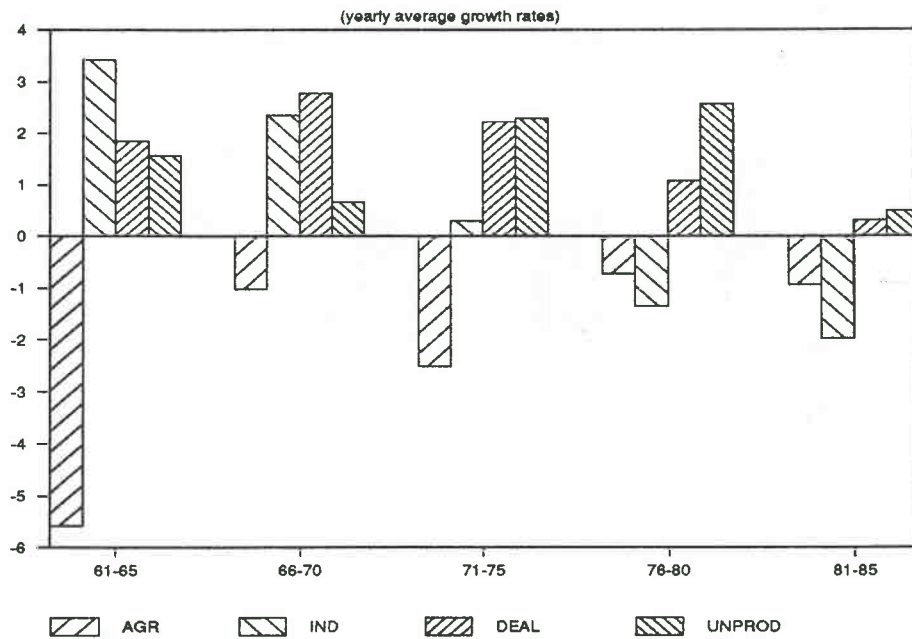
GRAPH 8. CSSR: SECTOR EMPLOYMENT



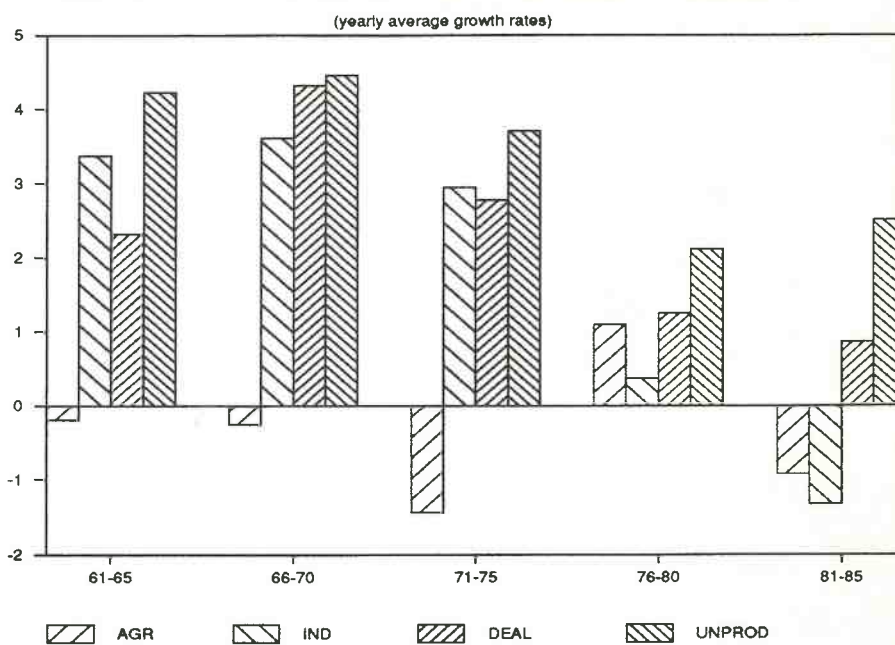
GRAPH 9. GDR: SECTOR EMPLOYMENT



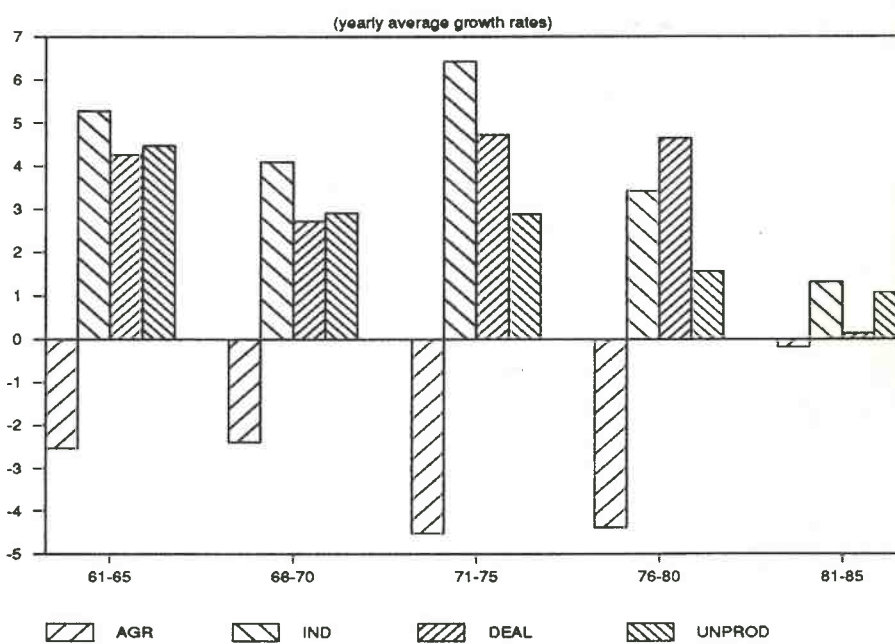
GRAPH 10. HUNGARY: SECTOR EMPLOYMENT



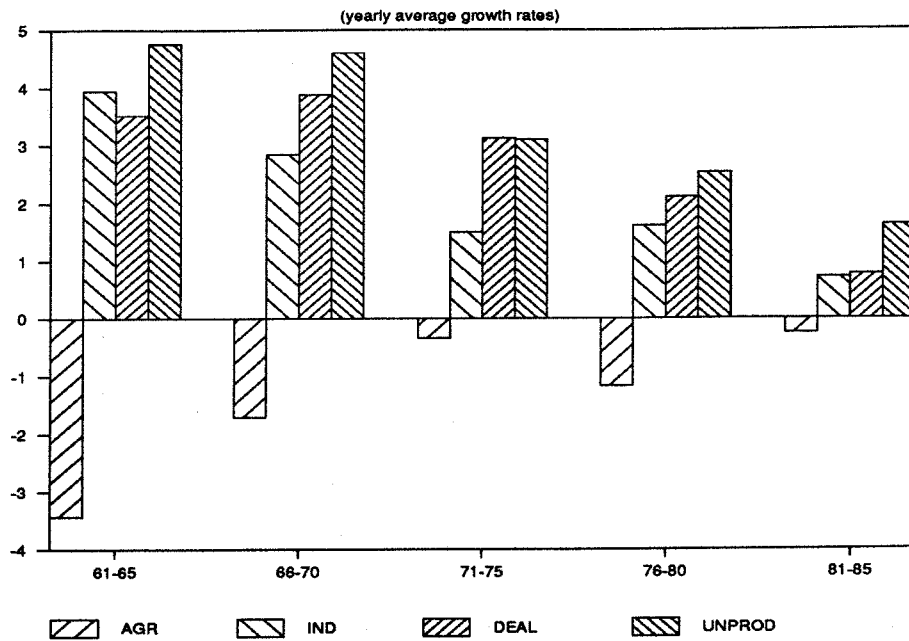
GRAPH 11. POLAND: SECTOR EMPLOYMENT



GRAPH 12. ROMANIA: SECTOR EMPLOYMENT



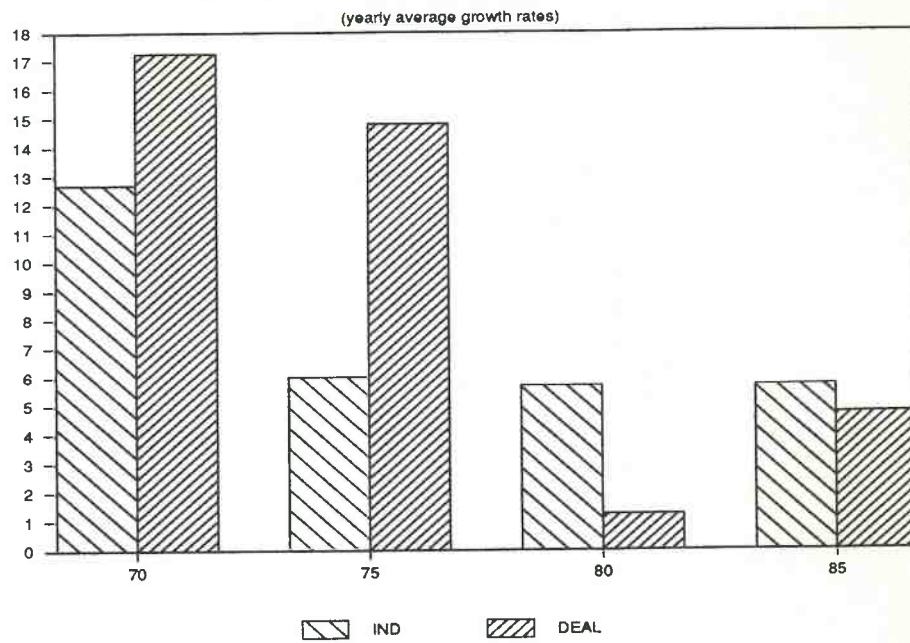
GRAPH 13. USSR: SECTOR EMPLOYMENT



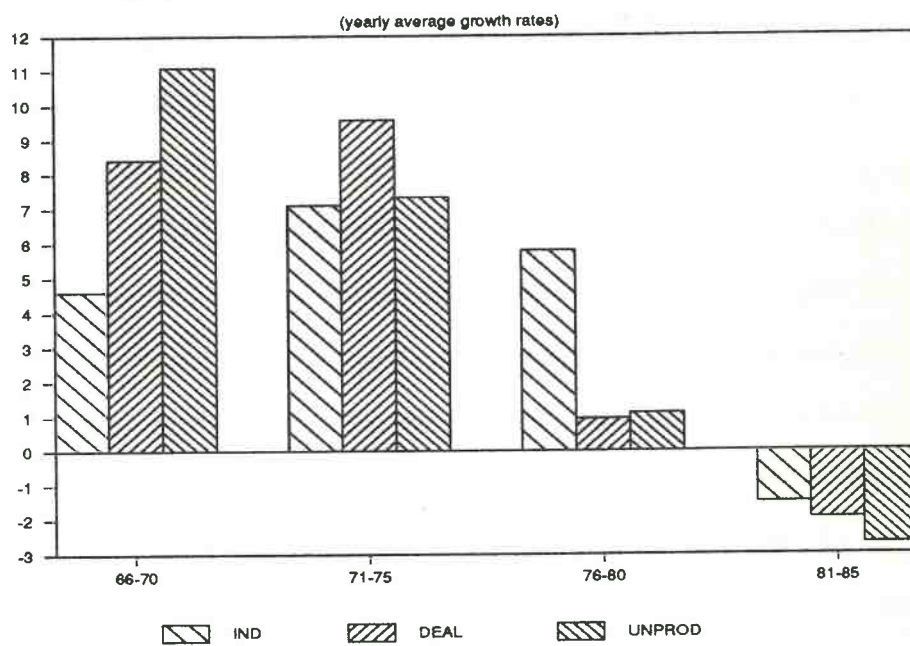
1.3 Investment analysis.

We can distinguish three groups of countries. To the first one belong USSR and Bulgaria, which show no sensible degree of crowding out of service investment, whose rate of growth is almost always higher or equal to the industrial one. The second group is represented by Poland which shows a very particular behaviour, impossible to classify. In the years 61-65, service and industrial investment run at the same pace. The period 71-75 was marked by the well known tremendous effort of modernization which caused the explosion of the the rate of growth of the industrial investment. The service investment too grew at a very sustained pace, though lower than the industrial one. With such high investment levels it doesn't seem adequate to talk about crowding. In the subsequent periods of deep economic crisis the service investment fell at a lower pace than the industrial one. The four remaining countries: CSSR, GDR, Hungary and Romania show a similar pattern of behaviour: no crowding out -rather the contrary- until the mid-seventies; a slowing down of service investment more marked than the industrial one in the period 76-80; and a lower negative rate of growth of industrial investment compared to the service one in the last period, 81-85.

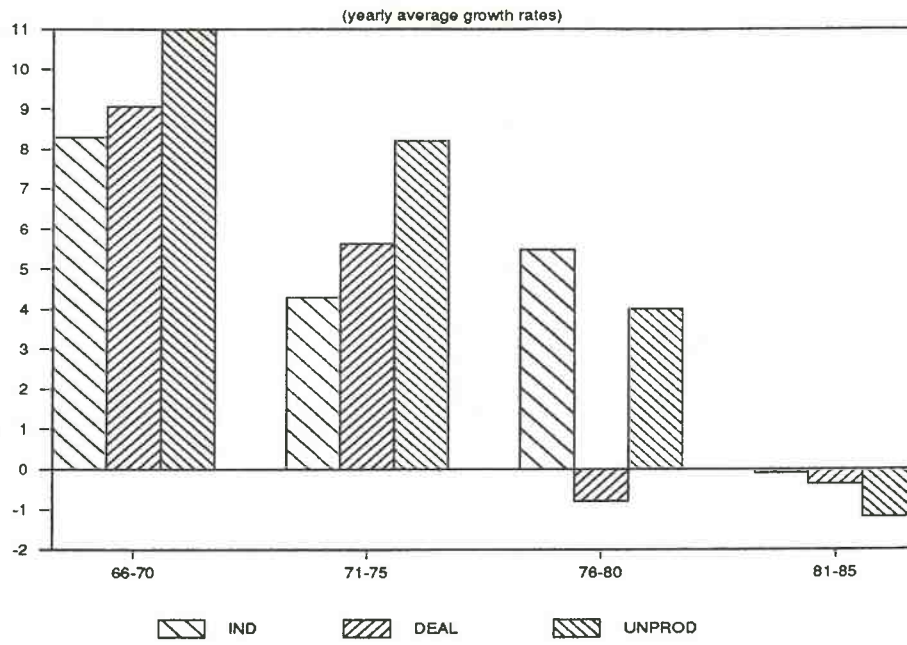
GRAPH 14. BULGARIA: SECTOR INVESTMENT



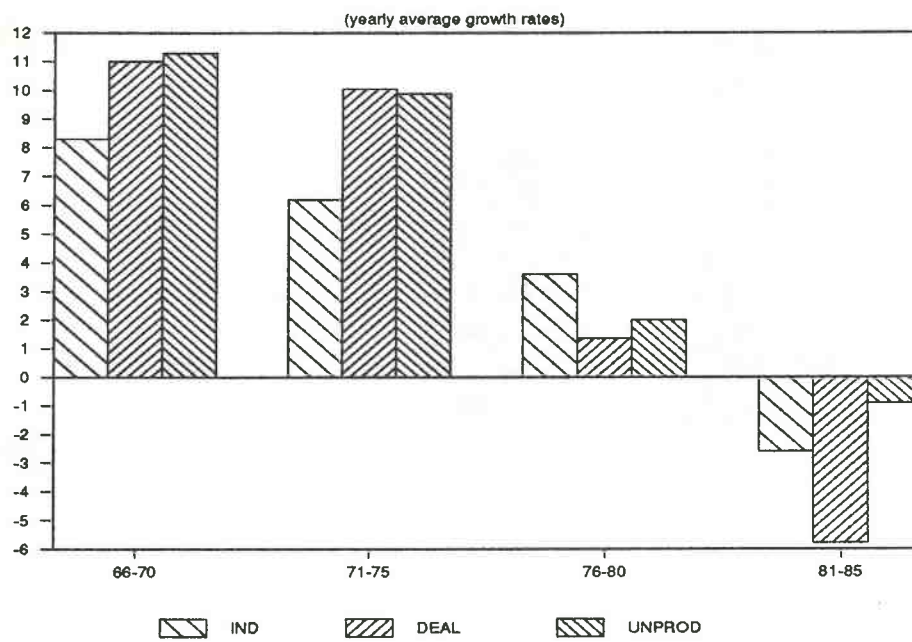
GRAPH 15. CSSR: SECTOR INVESTMENT



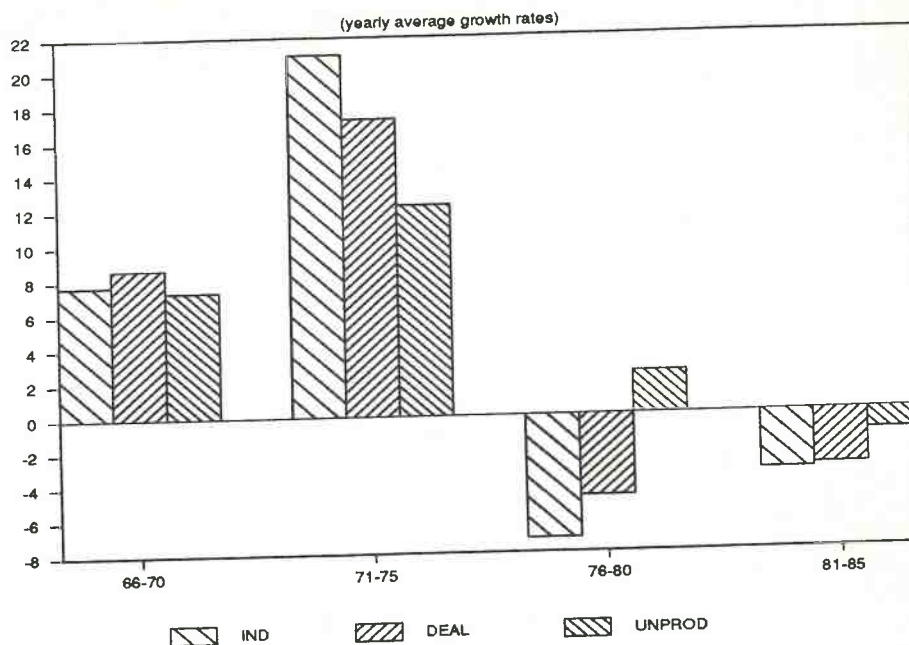
GRAPH 16. GDR: SECTOR INVESTMENT



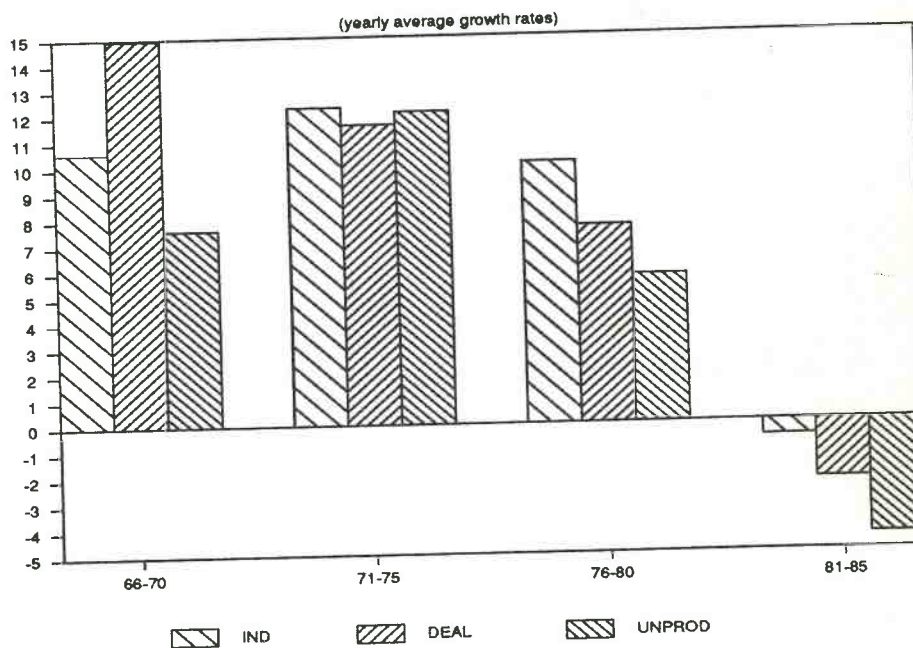
GRAPH 17. HUNGARY: SECTOR INVESTMENT



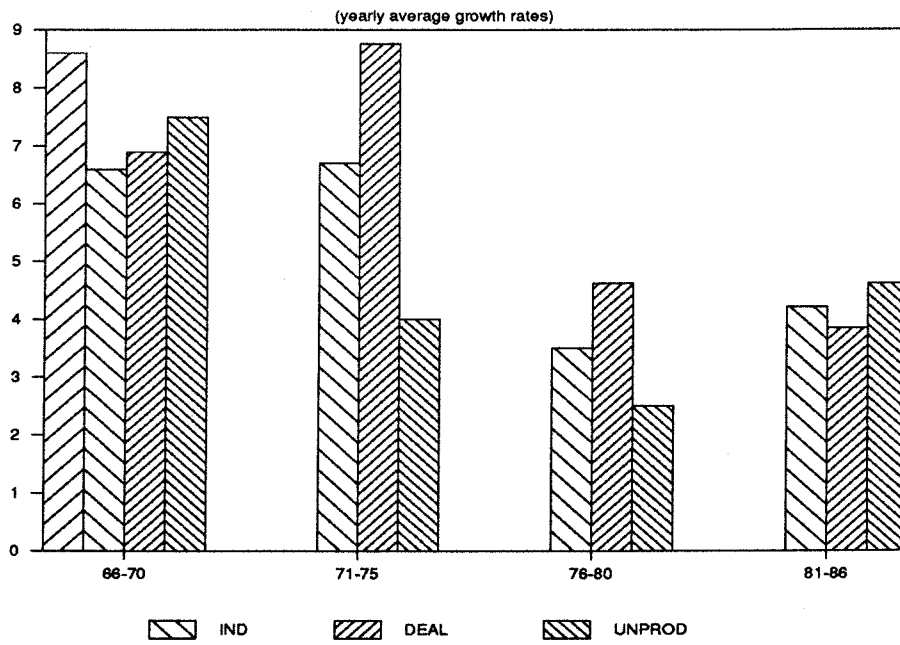
GRAPH 18. POLAND: SECTOR INVESTMENT



GRAPH 19. ROMANIA: SECTOR INVESTMENT



GRAPH 20. USSR: SECTOR INVESTMENT



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