INSTITUTE OF GEOGRAPHY AND SPATIAL ORGANIZATION
POLISH ACADEMY OF SCIENCES

RESTRUCTURING OF ECONOMIES AND REGIONAL DEVELOPMENT

Edited by
ANDRZEJ WRÓBEL

WARSAW 1988

INSTITUTE OF GEOGRAPHY AND SPATIAL ORGANIZATION
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RESTRUCTURING OF ECONOMIES AND REGIONAL DEVELOPMENT

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RESTRUCTURING OF ECONOMIES, REGIONAL DEVELOPMENT AND GEOGRAPHY

Changes in the structure of economy encompass many types of relations; in most cases, however, the term refers to two groups of changes:

a) changes in the composition of output (product-mix) and total employment of national or regional economy,

b) changes in the organization of production units, involving size-structure of plants and specialization of activities of multi-plant enterprises which results frequently in the spatial separation of the stages of production.

It may be observed that changes of both types have always been concomitant of the process of economic growth, especially since the industrial revolution. If they come to special attention nowadays, it is because of the recent intensification of these changes and, in consequence, their impact on national economies and their spatial structures as well as on international economic relations. This is due to a number of factors, among which the scientific-technological revolution, bringing about a set of interconnected changes in technology and organization of production, as well as in transport and communication, plays the primary role.

An additional factor, and in the same time an additional reason for the growing interest by both the scientific community and the policy makers, is the increasing relative importance of the second type of structural changes mentioned above, i.e. changes in the organization of production units which lead to the spatial separation of various stages of the productive process. Such a separation creates a new type of hierarchical spatial structures, with all the implications for dependence-dominance relations.

The most spectacular effects of the process of restructuring of the economy, involving far reaching changes in the international division of labour, are taking place in the manufacturing sector. On the level of national economies, there occur equally important changes of relations between economic sectors, in the form of the "shift to services"; these are accompanied by structural changes within the service sector itself.

The phenomena referred to above have been analysed in a number of studies, particularly numerous in the recent decade. Understandably enough, empirical investigations have been accompanied by various new theoretical interpretations, some of which are pointed out in one of the following sections of this paper. It seems necessary, however, to comment here briefly on one aspect of these interpretations which seems particularly relevant from the point of view of international discussions crossing the boundaries of socio-economic systems. I am referring to those numerous studies appearing in the Western literature in which the process of restructuring of economies and its spatial manifestations have been analysed in the categories of the Marxian political economy; according to these studies, the industrial restructuring is inherent in the logic of the capitalist mode of production (for an extensive review of this type of studies see J. H. Bradbury, 1985).

This "radical" approach contributed certainly to the analysis of the process in question, highlighting some neglected aspects like those related to geography of employment (as an outstanding example may serve here the work of D. Massey, 1984). It seems, however, that

this approach, which makes use of terminology and conceptual apparatus designed so as to apply exclusively to the capitalist economy, tends to bypass some other important issues and to impose limits to the analysis as well as to the evaluation of the processes.

The above statement may be, of course, a subject of discussion. The unquestionable fact is, however, that the process of restructuring of economy is not limited to the capitalist system. It is also going on in socialist countries. In the early stages of the construction of socialist economies, the process of economic development was quite explicitly treated as a process of structural changes both on the national and on the regional level. Similarly, at present, restructuring is treated as favourable and indispensable process, although, as a matter of fact, its pace in the socialist countries has been recently much slower. Yet, the necessity to speed up the process is at present quite strongly stressed, both in the economic literature and in the official statements. Therefore, the research on restructuring in the conditions of market economy is followed with great interest in the socialist countries, where the process is seen as most closely related to the task of the modernization of economy and increasing its efficiency.

Restructuring of regional and national economies in the context of the changing international division of labour became an object of growing attention of the geographic community due to the serious consequences this process has had not only for regional development or, generally, for changes of various spatial patterns, but also - indirectly - for geography as a scientic discipline.

Some of the related problems are briefly discussed below. They comprise: a) theoretical and methodological impact of the studies on the processes of economic restructuring, b) actual and potential contributions of geography to the study of these processes and to the solution of the resulting practical problems, and c) the scope and perspectives for international geographical cooperation in this field.

Theoretical and methodological implications

The dimension of the impact of changes in the structure of economy on changes in the spatial structures is enough to justify the interest of geography. This impact constitutes, however, also a theoretical and methodological challenge. Studying the changes in spatial structures resulting from structural economic change, we witness an evident shift of relative importance of various regional development factors towards exogenous (extra-regional and extra-national) factors. This results in diminishing importance of those attempts at theoretical explanation of changing regional patterns of economy which stress the significance of local "location factors" and particularly local demand. At least for large scale, dynamic industrial activities, it becomes more and more true that their development in a region cannot any longer be explained by variables referring to that region; this, in turn, poses quite a problem both to the regional development theory and to regional policy.

Several authors feel that the existing theories of regional economic growth are inadequate to cope with the new situations in which regional growth inequalities result not only from intersectoral but also intrasectoral spatial differentiation.

This leads to the attempts to formulate a new approach to regional growth theory characterized by the postulate that regional inequalities are to be seen not as (temporary) departures from "general equilibrium" but rather as a permanent feature of economic growth process.

The following passage from one of the outstanding recent theoretical contribution to the problem, consistent with the broader current of structural approach to the economic growth theory, describes the logic of this new approach in the following terms: "a fundamentally new kind of local economic problem is arising. In an economic landscape where geographical specialization is not intersectoral but rather intrasectoral, a qualitative change in the organization and responsiveness of the local economy occurs. Most importantly, and perhaps most ominously, geographical inequalities in this spatial division of labour appear not only

at its demise, but are integral to the structure of the spatial system itself. That is, regional problems and their concomitant geography of inequality were previously the result of prior collapse or failure of an economic system (or part of it). The problem for recovery was to restore the economy to working order, causing regional problems to disappear, or so was thought. This is not the case under the new spatial division of labour. Now, localized inequalities in skill and income, for example, form the very basis of the geographical organizations of the corporate economy ... In this way, spatial inequalities become a part of the normal working order of the economy, and no longer a sign of its failure or demise". (G. L. Clark, M. S. Gertler, J. Whiteman, 1986, p. 25).

If the relevance of various new theoretical approaches remains a subject for discussion, it may be certainly stated that there appears a quite evident tendency towards closer integration of the regional development theory with the economic growth theory, a trend towards considering the regional development processes as an aspect of an overall process of economic growth, seen mainly as a process of changes in the structure of economy (comprising various types of relevant structural relations). This also fosters this type of thinking about regional development which focusses on the adaptation of regional economy to macroeconomic changes - which seems to be the type of thinking of growing importance in view of increasing degree of economic integration on national and international scales.

This type of approach meets some more general trends in the methodology of geography. I am referring here to a tendency towards the integration of geographic knowledge on the basis of systems analysis. Let me refer in this context to a statement presented more than a decade ago: "The new situation generated by a scientific-technological revolution points to the current need for a holistic model, one that would not only grasp the spatial structures of the complex systems existing within industrialized societies but also help to plan socio-economic and civilizational developments within the limits of tolerance imposed by nature.

The adoption and implementation of holistic assumptions and of system methodology open new, far reaching possibilities to geography, as they are on a higher level of generality and furnish a rational foundation for information and for controlling the highly complex systems on regional and global scale" (Chojnicki Z., Wróbel A., 1976).

It should be further pointed out that an especially important aspect of the systems approach for geographic research is the possibilities it opens for the study of the evolution of spatial systems. The systems approach creates also the possibility to grasp the adaptive properties of spatial systems which might be analysed as controlled systems. Notwithstanding many postulates in this respect, the progress in this field is still inadequate, especially concerning the spatial economic systems, in which the hierarchy of elements and structures as well as purposes is changing (Chojnicki Z., Wróbel A., 1977).

It seems that this more general methodological aspects should be kept in mind in our research, since the studies on regional development in conditions of far reaching structural changes of economy might contribute to overcoming of these difficulties and might lead to a deeper understanding of the evolution of the "wholes" denoted by the concept of economy, the spatial structure of which is of main interest to geography; the feedback effects are also to be expected.

Possible contributions of geography

The process of structural economic changes with its spatial manifestations is obviously an interdisciplinary object of studies. Since the spatial dimensions of restructuring are a vital and, indeed, inseparable aspect of the whole process, imposing disciplinary barriers on respective studies would be even less sensible than in case of other complex phenomena.

On the other hand, it is sensible to ask what are the specific contributions that geographers have made and can make in this field. The

review of the reports of the present volume will certainly give a partial answer to this question. Let me here point out the following types of studies which seem to me relevant.

The typical "geographic" approach would be to assume that the structural change of national economy is given and to study the behaviour of regional economy as a response to the change in this exogenous variable - response determined by a set of local conditions, including the actually existing structure of regional economy. Checking of this assumption might be an object of study as such; strong regions characterized by innovative capacity leading to structural change might to a large extent determine the national rate of such change which in that case can hardly be treated as exogenous variable (although certain national factors like monetary and foreign trade policies will still remain external to the regional economy).

In both cases, however, a study of the regional economy, taking into account multiple interconnections, is an object of an analysis well established in economic-geographic tradition. What is new, however, is a somewhat new perspective of looking at the region and the bases of its development - strongly emphasizing its conditioning by national and international economy.

Studies of regionally differentiated impact of national structural changes might lead to prediction of the trends of regional development in the future. Such predictions, based on the knowledge of national structural changes of economy on one hand and the existing regional conditions on the other hand, would provide a very useful basis for devising all types of regional development policies, not necessarily limited to regionally directed measures. In many cases, such policies, to be effective, would have to be devised so as to bring about national structural changes.

Such projections, together with studies of actual situations, may also serve as a basis for the proposals of actions aiming to facilitate the restructuring of regional economy, solving the arising problems

(like e.g. changing gender proportions in demand for labour), and to diminish its negative economic effects and social costs.

Perspectives of international geographic cooperation

The international geographic cooperation in the field of interest as defined above has certainly similar general aims as in the case of other geographic problems:

a) to gather a number of facts and generalizations which would allow to formulate generalizations of higher order and help to check research hypotheses and theoretical constructions,

b) to improve methods of research.

As to the topics of such collaboration, the theoretical and methodological questions, like those mentioned in the earlier section of this paper, seem to be of particular importance.

Apart, however, from the studies on various aspects of the problem, it seems that there is an obvious need for systematic investigations of real dimensions and character of structural economic changes in individual countries. This, in fact, may be considered a task for economists; nevertheless, geographers should also take part in this type of studies which are quite indispensable for proper interpretation and evaluation of resulting spatial changes as well as for elaboration of realistic proposals as to regional development policy measures. It must be said that such systematic studies are not very frequent (as an example one may indicate the study by H. F. Eckey (1985) referring to the Federal Republic of Germany).

In this context there arises a question which merits some discussion: whether the categories of the classification of economic activities (including those used in the UN publications) are really well adapted to this kind of analysis. It seems that they hardly allow to distinguish the "new" industries operating with most advanced technologies from the traditional types of industrial activities if their output falls into

the same class of related products; the intrasectoral specialization of plants is quite invisible in most of the statistics.

The comparative analysis of national studies would be certainly much more easy and fruitful if such a purpose was already included in the plan of research, which presupposes a coordination at the stages of elaboration and execution of a research plan. This might take form of bilateral cooperation or "joint ventures" relating to groups of countries characterized by a certain similarity, like e.g. the countries of the EEC.

As to the socialist countries, the Institute I am representing has agreements on scientific collaboration in the field of structural changes of economy and their spatial consequences with the institutes of geography in Czechoslovakia, GDR and the Soviet Union. I think that the respective studies might result in a joint report to be presented for discussion on the forum of our Commission.

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RESTRUCTURING OF REGIONAL ECONOMIES IN EAST EUROPEAN COUNTRIES

Economic restructuring through new industrial locations

After the second World War most East European countries had two main problems to resolve. One was the modernization of their underdeveloped economies, especially in Poland, Bulgaria and Romania. The other was the development of backward regions, such as Slovakia, the northern regions of the GDR, and the eastern regions of the USSR. The economic policy of accelerated industrialization adopted at the period as well as a highly centralized system of planning and management did favour the solution of these two main problems. A considerable proportion of the capital resources available was earmarked for investments in selected backward regions. Central decisions gave rise to the establishment of many new industrial enterprises.

The Russian concept of so called territorial-production complexes (TPC) provides an excellent example of the approach to developments mentioned above (Bandman 1976; Aganbegian 1984). According to this concept, the territorial-production complex is a set of mutually-related industrial enterprises, transport, construction and non-productive units, occupying a certain territory and served by a common infrastructure. Such a complex is formed according to a plan, approved by central authorities. Most TPC-s use local mineral resources as a base for

leading industries as well as for complementary industries. During the period 1982-1985 eleven such complexes were being built in the USSR (Gladyshev 1982). Three of these were in the eastern half of the Russian Federal Republic, three in Kazakhstan, and one in Tadzhikistan, that is, in relatively weakly industrialized regions. A good example is the West-Siberian Complex, which is based on oil and gas. Chemical industries - oil refining, synthetic rubber, and plastics - have been developed here, while the manufacture of mining machinery and further expansion of chemical production are planned.

In Poland there are also a few regions corresponding to the Russian territorial-production complexes. These are however of much smaller scale. Good examples are the Konin coal-mining region and Legnica copper district, both of which are in underdeveloped regions. We can also find examples of centrally-planned and managed regional restructuring in Czechoslovakia (in Slovakia), in the GDR (northern and eastern regions), and in Hungary (industrial centres outside Budapest), as well as in Bulgaria and Romania. Most of these regions were developed through extensive investment activity which was not of the territorial-production complex type. However, they all have one thing in common: investment programmes in these regions were devised and implemented according to planning and locational decisions of central authorities. Most of the industrial plants established in the socialist countries of Eastern Europe before the 1980s were sizable units, producing on a large scale, corresponding to technologically-optimum scale characteristics for a given sector. They also employed relatively new technology, for the period concerned. In this way, external innovations were adopted in older regions, a process which often radically changed the regional economic structure. New technologies were mostly created in central R + D institutions, located outside the regions in which the new plants were established.

Thus, the process of regional restructuring was often initiated and accelerated by importing new technology from outside the regions involved on the basis of decisions taken by central authorities. The in-

adequacy of this form of restructuring activity relates to the fact that innovation adoption generally occurred only once, when new plants were constructed. In order to secure continuous application of innovations in new plants it is necessary regularly to import newer technologies from outside the regions or to establish R + D units in the enterprises concerned. The latter solution initially met many obstacles, particularly of an organizational kind. For example, in Poland in the 1960s, a number of enterprise-based R and D units were closed down, and their activities transferred to industrial boards and to ministries supervising particular industrial sectors. Again, in the GDR during the 1970s, official policy began to favour the creation of large industrial complexes containing many enterprises (Kombinate), and these took over the R + D units previously located at individual enterprises (Harmann and Kaergel 1985).

This chapter has focussed so far on the modernization of underdeveloped regions in Eastern Europe. However, that model of centrally guided restructuring of the economy applies also to developed regions and to existing industrial centres. Official policy originally intended that these regions should develope less intensively than backward ones. However, it proves impossible to stop or to markedly slow down their growth. In practice, many industrial centres have increased their economic potential and substantially changed their structure. Good examples of such industrial growth centres can be found in the GDR at Leipzig, in Czechoslovakia at Bratislava, and in Poland at Cracow (Harańczyk 1986). During the 1960-1980 period, industrial employment in Bratislava and Cracow grew by 41% and 43% respectively, while the industrial production in these two cities grew much faster. Rapid output growth also occurred in Leipzig, although industrial employment here decreased by 26% over twenty-year period.

The "unplanned" development of old large industrial centres has in some cases been influenced by a centrally-determined deglomeration policy. In these cases, some plants have been transferred to non-urban locations, while the construction of new plants has been forbidden within

the city. This was the case in the 1960s in Warsaw, Łódź, Cracow and Poznań in Poland, and in Budapest in Hungary where some limitations are still in force.

Although the development of large industrial cities was centrally controlled and guided, the construction of new plants or modernization of existing ones was often based on new technologies which had been developed locally. This was possible because of the existence of local scientific research centres and R + D institutions. Hence, development in such cities could be ascribed to local technological innovation.

The restructuring of regions based on their own innovations is usually not a very rapid or spectacular process. It requires special conditions and circumstances if it is to bear fruit. Since such conditions exist only in a few regions, this type of regional restructuring has not so far dominated regional development in most East European countries. However, this situation is now changing radically. Traditional initial industrialization policies for backward regions are no longer effective. New policies or regional restructuring based on internal innovation, or development from below, have to be adopted. That is why we now turn to the analysis of conditions favouring horizontal cooperation and local development in East European countries.

Horizontal coordination for regional restructuring

In all East European countries, national economic growth and particularly industrial development have been strongly dependent on central, sectoral management. However, the level of sectoral dependence has differed as between different countries. The sectoral system of planning and management has developed specially in the Soviet Union, where industries in a given region have been dependent on federal ministries, ministries of a mixed federal and republic status, as well as on a particular republic's own ministries. The GDR system is also relatively centralized. Here, most industrial enterprises belong

to large complexes (Kombinate), which are supervised by central, sectoral ministries. Even local industry is organized in the form of such complexes. The level of centralization is also relatively high in Czechoslovakia, Bulgaria and Romania. On the other hand, industry in Hungary and, since 1982, also Poland is relatively less dependent on sectoral ministries.

For a given enterprise, a high level of sectoral dependence involving mainly vertical and hierarchical relationships represents a considerable obstacle to horizontal links within a given region or centre. In order to overcome this problem, different organizational and planning instruments are used at the regional level. Coordination of horizontal links within the regional economy is mostly implemented through a system of five-year plans. On the one hand, in all East European countries the central plan is accompanied by specific regional profiles. These are based on official administrative divisions, such as the republics in the Soviet Union, Bezirke in the GDR, and voivodships in Poland. The regional profiles of the central plan constitute a base for the coordination of sectoral plans in a given region. On the other hand, regional authorities have the legal power to coordinate sectoral activities through planning of manpower, transportation and construction. They are also authorized to prepare regional balances of certain minerals, raw materials and products as well as balances of population money incomes and expenditures. They are required to prepare five-year plans of overall regional development covering all aspects of the economy, regardless of whether they are centrally or regionally guided. Of course, regional authorities are also obliged to control the execution of these comprehensive plans.

As can be seen from the above short description, formal possibilities exist for the horizontal coordination of the entire regional economy in spite of its sectoral dependence. However, in practice the elaboration of complex plans and determination of regional balances, as well as their execution, encounters many difficulties. A typical list of these difficulties is given by Vorontsoff (1984, see also Tampiza 1985) for

the USSR. They include the development of inconsistencies between sectoral and regional plans, the very low quality of many regional plans, and frequently - considerable delays in their elaboration. Very similar weaknesses have been observed and criticized in other socialist countries. For example, there are many difficulties in the coordination and execution of territorial plans in the GDR despite the fact that the local authorities there are in a position to use a relatively large number of coordination instruments (Lange 1986).

Horizontal coordination of the regional economy is still more difficult within short-term (one year) planning. Operational, sectoral management dominates over horizontal aspects and relations. With respect to plan execution, local and regional authorities can effectively control only those spheres of the regional economy which are administratively supervised by local and regional authorities. Traditionally, the regionally or locally-dependent sphere of the economy covers only small-scale industries and services, agriculture, local transport, retail trade, housing, communal utilities, and other services of local importance such as health care and primary and secondary education (Opałło 1986). It must be stressed, however, that all these spheres are doubly-subordinated, in that they are both regionally or locally-dependent, and centrally-dependent, at the same time. Regional and local authorities are therefore heavily restricted in their actions.

What influence can local and regional authorities exert on structural change and innovation creation and technological change in their regions? A major constraint here is that regional authorities cannot directly influence the activity of research centres and R + D institutions. In most East European countries, research centres are directly subordinated to the Ministry of Research, whereas R + D institutions are responsible to different industrial branch ministries.

All this does not help very much in developing local synergies with respect to technological innovation. However, in spite of this there are some positive examples which show that regional authorities can be very active in promoting cooperation between industrial plants and local

R + D institutions. This is the case for example in the GDR, where regional authorities are responsible for "intensification" of development factors within their territory. They are legally obliged to coordinate the activity of enterprises and R + D institutions (Bonisch, Moks and Ostwald 1982). In the Soviet Union there are examples of such cooperation in large cities, particularly in Moscow, Leningrad, Novosibirsk and certain other Siberian cities where there are seats of the Siberian Branch of the Soviet Academy of Sciences (Razvitiye ..., 1978).

It can be argued that the regional restructuring process through innovation in industry, particularly in small and medium-size enterprises, could be much more intensive if such enterprises and regional authorities had greater autonomy. Such a situation with regard to the economic and planning system does exist nowadays in Hungary and to a lesser extent also in Poland. In Hungary, no formal coordination of regional and central plans is required. The relations between regional authorities and enterprises are mainly regulated through different economic instruments. The creation of stable sources of financial income for regional authorities is regarded as the most important task for the near future.[1] Similar changes regulating the actions and responsibilities of regional authorities were undertaken in Poland in 1984. More recently, new regulations creating favourable financial conditions and tax-reductions for small-scale regionally-subordinated industries have also been introduced.[2] All these actions should help regional and

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[1] According to a document entitled: "Directives for the improvement of the economic management system of the People's Republic of Hungary", Budapest 1985, Central Planning Office (from a Russian translation).

[2] This is the case with the Regulation of the Ministerial Council of Poland of 19 May 1986 regarding the expansion of small-scale enterprises. In: Monitor Polski, 31 May 1986 (No. 14).

local authorities to stimulate innovations and through them a faster development and reconstruction of their regions.[3]

Last but not least as a factor in stimulating the local and regional innovation process is the issue of greater financial autonomy for individual enterprises, particularly with regard to finance for future development. In some East European countries the financial system under which enterprises operate has been already changed so as to ensure the autonomy of individual enterprises over financial decisions: in the other countries, such changes are planned for the near future (Rozwój ... 1985). If such trends continue, decisions concerning regional industrial development will be further decentralized. In this way the creation of favourable conditions for regional restructuring through technological innovation will rest to a much greater extent in the hands of autonomous enterprises and local and regional authorities.

Aims and instruments of local restructuring policies through innovations. The case of Poland

In Poland there exist a need for a separate innovation policy at the local level which would respond to the specific situation and conditions existing there. It has been predicted sometime ago that the further development of the Polish economy in the 1980s would bring a further diversification of the local situation and would require locally specific development policies. This would also increase the need for local restructuring policies in order to properly tackle various development

[3] The paper does not especially focuss on problems of local development, which in itself is an important aspect of the decentralization in socialist countries. This aspect is discussed in: B. Gruchman, Local and regional development in East Europe: Experiences, main issues and perspectives, in: Regional Development Dialogue, Vol. 3, No. 1, Spring 1982, United Nations Centre for Regional Development, Nagoya, Japan, p. 28-44.

at this level. The awareness of this need starts to be felt by a growing number of local authorities in Poland. Several districts already adopted separate restructuring programmes of undertook specific actions in this field.

A closer scrutiny of likely motives and aims of local authorities to formulate restructuring policies reveals the following points:

a) They are concerned with safeguarding stable and high-income jobs for the inhabitants of their territory. Enterprises which do not innovate cannot, in the long run, guarantee such jobs.

b) Many local authorities in Poland, above all those operating in industrial agglomerations, are currently preoccupied with the shortage of manpower to cover the demand voiced by existing industrial enterprises and other sectors of the local economy. Labour saving innovations in existing enterprises are most welcomed in order to ameliorate the situation on the local labour market.

c) Local resources, primarily of land (space), water and other minerals, become critically scarce in many localities. On the other hand and better and wider utilization of other available local resources, instead of imported ones, offers an opportunity to remove existing barriers. Innovations in this field can speed up future growth.

d) Protection of the environment is considered a crucial task of local authorities in a growing number of areas of Poland. In many cases implementation of protective devices and measures becomes very coslty and even exceeding the financial possibilities of all concerned. Innovations which would lower the costs of such measures and even better, which would eliminate environment polluting production processes are of high interest to local authorities who really care.

e) Last but not least, high profits of enterprises connected with the local budget bring the local authorities additional means badly needed in many social sectors financed from that budget. Innovations are a good way to attain additional financial resources. Besides profiting the local budget they bring benefits to enterprises concerned and to the innovators themselves.

Turning to instruments of restructuring through innovations at the disposal of local authorities one should point out that in consequence of recent reforms, the local authorities in Poland obtained some instruments and possibilities with which they should be able to influence developments in our field of interest. It remains to be seen how effective these instruments will really be. Some instruments have still a formal character without real substance and economic weight, but the reform process has not yet been terminated and one hopes that further changes will follow in the desired direction. Nevertheless, what is already at the disposal of local authorities is worth a closer scrutiny.

The list of major instruments of innovation policy currently in the hands of local authorities in Poland is following:

a) Granting priority in certain fields to high-tech industry. Local authorities can exercise this in their location policy, tax and tariff exemptions within their competence, in their housing and social infrastructure policy.

b) Organization of new small-scale enterprises which would introduce innovations into production and development of services, which would help enterprises to innovate. Lack of entrepreneurs and financial resources limits the application of this instrument in practice.

c) Initiation and organization of contacts between local research and development institutions (R + D) and local industrial enterprises. Modalities and organizational forms of such contacts initiated by local authorities can vary from regular, stable and institutional ones to sporadic and informal ones. What counts here is to establish a steady flow of information between the two sides concerned.

d) Granting financial assistance to innovative enterprises and financial support to R + D institutions. This may be done either through granting investment credits on favourable conditions or alloting grants from the local budget. This may also be done through the establishment of a special fund for supporting innovations and technical progress functioning at the district level.

In the final instance, innovations are created by people not by enterprises. It is therefore important to focus on measures directly influencing innovators themselves. Here, the financial rewards for innovations are regulated by central regulations, but such remunerations are not the only incentives to innovate. Innovators organize themselves in groups, clubs and special organizations. Assistance to and cooperation with such groups and organizations is a vital task of the local authorities. Some of them organize competitions, exhibitions, grant prizes and popularize outstanding achievements in this field. All this helps to create a climate favourable for innovators and their work. Such climate is vital for the development of innovations "from below". It is only when the latter reach a critical mass and match the actions of the government "from above", that the future satisfactory growth of the national economy is safeguarded.

Conclusions

All the socialist countries of East Europe are now looking for new ways to accelerate economic development These efforts are being pursued with greater or lesser intensity, and also vary in approach, as between different countries. The most crucial objective in all cases is to increase the innovation capacity of the national economy to its highest possible level. Most governments are committed to continuing and expanding traditional central innovation policy, in the form of "pumping" innovations into the economy from above. But at the same time, most of them are searching for new ways of stimulating autonomous enterprises to create and adopt innovations for themselves.

In this latter context, two different approaches are already evident: the Hungarian one which stresses the role of individual enterprises in restructuring through innovation, and the GDR approach which emphasizes the key role of industrial complexes (Kombinate) in technological change. Thus far, experiences vary considerably so that it is too early to draw

any conclusions as to which model will be more effective. It may well be that a combination of both will best fit the conditions of a given country. It should however be noted that each policy approach has specific spatial effects, and creates different conditions for diffusion and technological change as a basis for restructuring the regional economy.

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THE IMPACTS OF RECENT CHANGES IN GLOBAL CAPITALISM ON THE RESTRUCTURING OF REGIONAL ECONOMIES IN ADVANCED CAPITALIST NATIONS*

It is the central argument of this paper that whilst useful insights into the restructuring of regional economies in advanced capitalist nations may be derived from perspectives which focus upon what has happened and is happening within the borders of individual nation states, they provide inappropriate bases for thinking about regional development issues in the late 1980s. The conceptualisation of the distinctive and highly conspicuous forms that have been manifest in the organisation and structure of regional economy in advanced capitalist nations with the restructuring and transformations of capitalism over the last two decades and more requires a different starting point. Rethinking regional development at the present time, it is contended, must result in analysis commencing not with the macro analyses of economic relations within nation states but rather with the consideration of the impacts and consequences of the growth of disorder and private economic power at the global level, especially in finance markets.

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*This paper incorporates some of the themes and ideas previously presented in a paper (Browett and Leaver, 1987) given to a Centre for Development Studies Workshop on Rethinking Development Issues, Flinders University, May 1987.

In outline, the paper will first seek to demonstrate that the greater part of regional development theory and thinking focuses most attention either upon spatial structure within nation states or inherent tendencies (free market forces) within capitalist social formations (domestic economies). It will then argue that the greater significance that is attached to the nation state is entirely understandable in terms of the historical specificity of the re-emergence of regional development studies. It is, however, no longer a sufficiently adequate basis for analysis. Following Thrift (1986, 62), it is recognised that in order to understand changes within nation states human geographers need "... to come out of their national shells and take the wider (global) view" - see also Thrift, 1985. Hence, it will be suggested that it is necessary to commence analyses with a consideration of shifts in the global capitalist economy. Whilst some geographers have recognised the significance of the spatial impacts of the growth in the internationalisation of production, in this paper it is suggested that as much, if not more, attention needs to be devoted to shifts from public to private economic power and from order to disorder in international finance markets. These shifts are not only of central importance in and of themselves, but also they have brought about a reduction in the extent of control over domestic economic policy on the part of the nation state. As noted by Radice (1984, 113), "the capitalist world economy is now so thoroughly integrated across national boundaries that an autonomous national capitalist strategy is no longer possible". Even the Bank of International Settlements concurs: international financial integration, it recently declared, "... has led to a drastic curtailment of domestic policy independence, even for the largest countries and for debtors and creditors alike" (quoted in The Australian Financial Review, 8/7/87, p. 8).

At the outset, however, it needs to be clearly understood that it is accepted that although analyses should initially be concerned with trends in the global political economy, they should not remain at that level. To focus exclusively on trends in global capitalism ultimately

results in people being regarded largely as passive victims of external structures and denies the working class any possibility of success through class struggle (Jensen-Butler, 1982, 1314). Rather it is necessary to examine the ways in which the actions of local groups and classes have either enhanced or counteracted the global shifts. The global perspective, then, provides a backdrop context against which the impacts of, and responses to, changes in world capitalism upon local and regional communities can be examined. For the outcomes of, and adjustments to, global economic change must remain conjunctural, dependent in part upon past and present local class structure and struggle. Unique outcomes cannot simply be regarded as deviations from general trends and processes which need to be explained away by taking into consideration, often in an ad hoc and descriptive way, a number of additional factors and special circumstances (Massey, 1984a, 9).

As Massey (1984b, 7) has noted elsewhere, "the world is not simply the product of capital's requirements". There is nothing which is systematic or determinate here: the varying responses of capital and labour cannot be known in advance on the basis of theory, and neither need such responses always be functional to the reproductive requirements of capitalism. The outcomes can only be uncertain (see Hadjimichalis, 1987). The implication of this, of course, is that the search for the holy grail of grand theory, a search which runs through so much of both the conventional and radical perspectives on uneven regional development, needs to be abandoned. Instead, there is the need to embrace Slater's (1983, 101) call for perspective that combine an awareness of shifts in global capitalism with "... varying regional contexts where other elements specific to the socio-economic and political structures of those regions exert a powerful influence on the development of social struggles and political change".

With this caveat on the need for the analysis of concrete situations in mind, the remainder of this paper is devoted to supporting the proposition that the most appropriate starting point for this analysis is not the examination of internal economic relationships within nation states,

but the investigation of global trends (see also Thrift, 1985; Dicken, 1986). Thus it is suggested that the methodological priority advanced by Lipietz (1986, 22) should be reversed: that concern should not so much be placed upon "... each particular social formation together with its external linkages" (emphasis added). Contra the arguments of Aglietta (1982), and before him of Bukharin, as to the primacy of the national dimension, it is to be proposed that the trends associated with internationalisation in global capitalism be accorded pride of place at the commencement of analysis. Undoubtedly this is overstating the case not only in and of itself, but also because varying degrees of openness, diversity and dependence on international capital and commodity flows means that the analysis has more applicability to some advanced capitalist nations (Australia) than to others (Japan). Nevertheless, the case still needs to be made, as Murray (1971) recognised long ago.

Regional Development Thinking

The revival of academic interest in the formulation of a theoretical understanding of processes leading to uneven regional development is a contemporary phenomenon. In the advanced capitalist nations interest was re-awakened in the post second World War period so as to inform policies designed not only to address regional problems of excess or insufficient economic growth but also to improve the quality of that economic growth (a concern that is no longer dominant). In this endeavour regional development theorists, in large part, tended to take their term of reference from broader macro-level conceptualisations of economic growth and development that had previously been espoused at the national or international level. So it was that, over time, the approaches adopted in the interpretation of those forces thought to be responsible for the creation and perpetuation of uneven regional development embraced various schools of thought (for reviews see Gore, 1984; Richardson, 1984).

Debates between the different approaches have at times been lively, not to mention acrimonious, and the transformations between and within them often convoluted. Nevertheless, it is possible to recognise shifts from static equilibrium models of self balance, to modernisation perspectives on the trickle down and diffusion of economic growth impulses from growth poles/centres, to current efforts to reconstitute neo-classical economics' concern with the working of the price mechanism in inter-regional resource allocation. Radical interpretations have embraced dependency paradigm perspectives on development and underdevelopment (internal colonialism models, spatial dialectics) and productionist viewpoints (the articulation of modes of production). More recently, attempts have been made to link immanent tendencies in the reproduction of social relations of production in advanced capitalist nations with unevenness in spatial structure at the regional (amongst other) level (for a review see Bradbury, 1985).

Much of this academic literature on trends in regional development at best gives very limited attention to global economic shifts and at worst either ignores them or takes them as given. This is particularly so for those models and studies which concentrate attention on the internal economic dynamics of single regions considered as isolated and separate entities. But it is also clearly evident in models which focus upon inter-regional economic relations within nation states. This is by far the most dominant and long standing approach within regional development studies. It encompasses neo-classical models of regional economic growth, diffusionist core-periphery models, and more recent radical perspectives on the systematic production of uneven regional development as a necessary pre-condition for continued and enhanced capital accumulation, for crisis avoidance, and for the reproduction of the capitalist mode of production.

In the systems of regions approaches the main concern is with relations (beneficial or exploitative) between regions within a nation state. This is usually conceptualised as some variant of an evolving capital structure of dominant and dependent regions. Core regions of over-ac-

cumulation tend to be regarded as being necessarily and causally interrelated (via flows of labour, capital and commodities) with peripheral regions of truncated or blocked development. Gains for the core regions not only represent losses for the peripheral regions, but also constitute an indispensable condition for continued capital accumulation (economic growth) in economically privileged regions. Often there is a presumption of a zero-sum spatial redistribution within the national territory so that economic transfers from underdeveloping peripheral regions (for example, through polarisation forces or through the geographic transfer of value via unequal exchange) are assumed to go to, and remain within, the developing core regions. Yet, for example, between 1982/3 and 1985/6 the repatriation of profits and dividends out of Australia increased from $ 2405 million to $ 5601 million. At the global level, net transfers from the developing countries in 1986 amounted to $ 29 billion.

Even today it is still possible to find examples of analyses of the restructuring of regions and inter-regional economic relations which are confined to the national level. References to changes taking place in the world capitalist economy are notably absent, for example, in a study of the regional transformation of the American economy (Chinitz, 1986) and, more surprisingly, in a textbook on the structure of regional economic systems and the dynamic processes of adjustment and restructuring (Clark, Gertler and Whiteman, 1986). Even where the need to examine contemporary uneven regional development in the context of global shifts is recognised, such a focus is not always adopted. Thus Lipietz (1980, 17) notes that his analysis of regional underdevelopment in France should be placed in the context of the international division of labour and the world crisis, but then goes on to write that this raises much broader questions and so uses this as a justification to end his discussion at that point. Similarly, Peet (1983, 127) restricts his analysis to locational aspects of inter-regional and international shifts of United States manufacturing since "... the exact synthesis of international competition and national economic development in a theoretical framework of the growth of the world capitalist system has yet to be made".

It is not so much that inter-regional approaches are in some ways flawed. Rather, what is merely being suggested here is that much of this literature has failed to incorporate, as a central element, changes in the global economy - changes which are not only exerting a differential influence upon the economic fortunes of regions within advanced capitalist nations, but also, and more importantly, upon the ability of the nation state to effectively pursue and co-ordinate domestic economic (and regional) policy. And so it is, although sometimes to a lesser degree, with more recent approaches which have sought to go back to the analysis of underlying dynamic forces, invoked by classical political economists in the 19th century, which are inherent within processes of capital accumulation (profit) within nation states under capitalist social relations of production (the free market economy).

For the New (old?) Right laissez-faire economists attention is directed towards competitive free-market tendencies which are expected to get factor prices to reflect their relative scarcity and so bring about more efficient, and sustainable, regional economic growth on the basis of the principles of comparative advantage. Untroubled by the fact that reality fails to conform to their defunct models and underlying assumptions, the promotion of stability, balance and economic adjustment is to be effected by nation states resolutely pursuing domestic reforms which reduce damaging rigidities in labour markets and which halt the erosion of incentives for wealth creation by reducing progressive tax structures, financial regulation, protectionism and burgeoning public expenditure. Even if one is prepared to believe that market failures, distortions and imperfections can be eliminated and that increases in economic output can be sustained by prudent domestic policy, the point to be remembered is that all of this assumes a degree of national control over economic policy which has long since been undermined by changes in global capitalism. Nation states are not autonomous actors which are able, if not always willing, to stabilise their own economies, and neither can domestic policy be seen as paramount in the determination of national economic performance. Even

under the unusually favourable conditions of the long boom, the promotion of regional development as a means of achieving a more tolerable and morally acceptable capitalist order was only ever a distant possibility. In an age of interdependent global economic recession it is something which is even more remote. The task is infinitely more complex than the assemblage of a set of conditions which, if properly established, will lead to the onset of sustained economic growth.

Similarly, in some radical analyses of late the understanding of regional structural change and crisis is to be found, this time from Marx, through a consideration of the inner laws of motion, rhythms of accumulation, immanent tendencies and contradictions which are manifest, and unfold, within the reproduction of capitalist social relations of production (see, for example, Shakow and Graham, 1983; Peet, 1984; Sheppard and Barnes, 1986). Thus some writers have espoused the tendency within capitalism towards spatial agglomeration. This assumes a contemporary relationship between tendencies leading to the structural concentration and centralisation of capital and its spatial concentration in core regions of advanced capitalist nations. Smith (1984, 122), for example, writes that although there is no one-to-one mapping, "the social centralization of capital both produces and requires a certain spatial centralization of capital".

Alternatively, others have taken recourse to immanent contradictions within capitalism to account for changes at production sites in advanced capitalist nations in the conditions for capital accumulation and the production of surplus value - changes which are said to be responsible for capital flight from old industrial regions (or its devalorisation) and its relocation either offshore or in peripheral regions within the same nation (geographical see-saws or the 'spatial fix' of the snowbelt to sunbelt transfers in the United States, for example). Thus Peet (1983) commences his analysis of the relocation of manufacturing in the United States since 1960 with contradictions emerging in the relations of production, whilst Stilwell's (1982) examination of regional economic performance in Australia focuses upon capital ac-

cumulation and the failure of the economy to generate the conditions for its renewal in the private sector. Similarly, the long run perspective on regional policy and crisis in the United Kingdom by Dunford, Geddes and Perrons (1981) targets problems associated with the exhaustion of possibilities for continued capital accumulation under a regime of intensive accumulation (see Lipietz, 1984) and the lack of adjustment to the post second World War norm of international competition (p. 377).

Again it must be emphasised that it is not the inherent weaknesses and inadequacies of either the laissez-faire or radical approaches which are of concern here. Rather it is their undue emphasis upon the operation of economic tendencies within nation states - the contemporary low (or negative) rates of growth in employment and output, for example, being attributed in large part to internal factors (either unsound domestic economic policy or declines in the rate of profit). Where changes in global capitalism are considered it is often as no more than an outcome of these tendencies. As one result, in these approaches, and indeed even more so in the inter-regional models, enhanced regional economic growth (and sometimes development) is seen as being attainable through the exercise of public economic power. In conservative circles the state has a role to play in attempting to mould a more congenial environment and infrastructure for regional economic development. As one moves to the left, the state's role expands to incorporate the promotion of institutional reform (regional devolution, for example) and the direct amelioration of regional inequalities in socio-economic welfare. The focal point for a major reconstruction of Marxist theory, according to Soja (1984, 48), is the role of the state in the production of space. Thus, for conservatives and radicals alike, the nation state is assumed to have a central role in regional planning, co-ordination and some regulation. It is expected to directly intervene to overcome regional crises and to maintain favourable conditions for continued and enhanced capital accumulation (economic growth).

All of this is an expression of the understandable, if unfortunate, presumption that significant and sustained change can be achieved at

and in the level of state policy; that successful regional development strategies can be instituted by, in and for regional and national economies themselves. There is, then, a failure to recognise the increasingly severe limitations on the capacity of the nation state to manage the regional (and other) consequences of changes in the global capitalist economy (see, for example, Gore, 1984). The prescriptions proposed for achieving regional economic growth, let alone development, were overly naive even in the best of times. Now that the historically unprecedented conditions of the post-war era have dissolved, it is hardly surprising that the prospects for restructuring regional economies through domestic policy appear less bright. It is a point to which we will return after a brief consideration of the historical specificity of regional development thinking.

The Inheritance of Historical Specificity

That the analysis of trends in global political economy has been off centre-stage for so long in post-war regional development thinking is, it is suggested, a reflection of the fact that it is a product of its time and place. The revival of regional development thinking as an academic endeavour can be seen to be coincident with the fashioning of a new inter-national economic structure in which nation states were the leading actors. More specifically, such thinking was nurtured within an historically specific institutional environment where order, stability, formal state structures and the exercise of public economic power were dominant features. As such, there was encouraged a belief in the efficacy of incremental change through a process of evolutionary reform, guided and informed by the thinking of development experts. After all, this was an era in which it was possible to point to successful public economic intervention not only in reconstructing the war-damaged European economies through the Marshall Aid plan but also in the management of domestic economies through the application

of Keynesian economic principles in monetary and fiscal policy. In these circumstances the critical importance of the nation state as the central focus in regional development studies is understandable.

Much of extant regional development thinking, then, can be regarded as an intellectual expression of the high point of controlled nationalism. It emerged and matured at a time when the public authority of the nation state over its economic domain stood at its apogee. Today it is the waning of this authority, and the order around which it was structured, that makes much regional development thinking anachronistic. With the decline of United States hegemony and the irreversible breakdown of the old economic arrangements, the absolute and relative ascendancy of large corporations and banks, and the consequent volatility, heterogeneity and unpredictability of trends in the global capitalist economy, regional development thinking has a new set of conditions to confront and to take on board.

If it is accepted that the concerns of regional development thinking are historically specific, then it is necessary to first understand something of the conditions which contributed to their existence. The high point of public economic authority was determined by particular developments at a number of levels. The post-war era succeeded an age where the contraction of the international economy had been most pronounced. This resulted from the compound effects of the depression and the war: the former led to a disproportionately large shrinkage in the international flows of capital and commodities, while the latter superimposed upon this contracted international sphere a set of domestic controls and regulations. In addition, the experience of war directly fuelled the growth of left forms of political nationalism, which in turn legitimised an interventionist style of post-war policy making in pursuit of a better life for all under the auspices of the welfare state. But most important of all was the sense of economic and monetary stability brought about by the conclusion of the Bretton Woods agreements. It was these conditions, buttressed by faith in Keynesian interventionism, which formed important parts of the favourable economic climate within

which regional development theory evolved. In consequence, after the period of reconstruction in the advanced capitalist nations, regional development and the maintenance of full employment were often seen as a matter of tinkering with policy in a stable, and hence predictable, monetary environment.

This economic order has long since been overthrown. Monetary stability has been swept aside and replaced by disorder in international economic relations. Yet in this shift the state has not gained a greater degree of control or significance over national and regional development - the multilateral order established under United States hegemony has not simply decayed into its nationally-based component parts. Rather, alongside the loss of order, and in part contributing both to it and to the limitation of the possibilities for its reconstitution, has been the growth of private, global, economic power in production and finance. It is not that the nation state no longer has a significant influence upon patterns and trends in regional development and restructuring. Very clearly it still has a major role to play in the determination and implementation of policy. What is being suggested instead is that the nation state no longer commands or exercises the degree of control and power over its economic domain that it had twenty or thirty years ago - and this needs to be taken into account. At the present time, in some quite crucial respects, the internal affairs of advanced capitalist nations are at the mercy of private, unregulated, forces over which the state can exercise little influence (of course this has been the case for much longer in most of the 'Third World' nations). And it is this erosion of control, and the increasing volatility which is inherent in current international economic arrangements, which need to be incorporated as central elements in understanding both contemporary processes underlying patterns of uneven regional development and constraints on the formulation of regional policy.

The Global Capitalist Economy and the National Economic Domain

The need to redirect thinking towards changes in the world capitalist economy over the last quarter of a century has been recognised by some geographers. Both Thrift (1986) and Dicken (1986) have provided accounts of shifts in industrial production sites in the global economy, whilst Fagan (1981), Susman (1981), Lapple (1983), Shakow and Graham (1983), Susman and Shutz (1983) and Morris (1987), amongst others, have sought to examine the impacts of transnational corporations, the internationalisation of capital and the New International Division of Labour on inter-regional relations, the restructuring of capital and uneven regional development in advanced capitalist nations. In addition, several edited collections (see for example, Taylor and Thrift, 1982, 1986; Hamilton, 1987) have examined the impacts of multinationals and the branch plant economy upon domestic economies. As one result, Armstrong and Taylor's (1978) query on Holland's (1976) assertion that "... the existence of multinational corporations actually makes it more difficult to operate a regional policy in both developed and underdeveloped nations" (Armstrong and Taylor, 1978, 43) has now been demonstrated (see also Thrift, 1985).

In general, the location and relocation of firms across the global economic landscape (and their incentive to do so in order to remain competitive in cost terms) tends to be attributed to a number of factors. On the one hand, productive capital is said to be pushed out of some advanced capitalist nations from the late 1960s onwards in response to tightening labour markets and falls in the rate of profit. On the other hand, enhanced possibilities were concurrently opened up for relocation in parts of the global periphery. These included improvements in the efficiency of global transport and communications technology which rendered the organisation of different stages of production decreasingly dependent on geographic distance. Moreover, both increasingly high standards of scientific management and the decomposition of complex production processes into a variety of more elementary functions per-

mitted greater possibilities for capital accumulation under more flexible conditions. Hence deskilled and fragmented mass production and assembly jobs could be undertaken where the possibilities for the production of surplus value were seen to be the greatest.

These trends have imposed severe constraints on the ability of the nation state to control its own economic destiny. There are three interrelated aspects to this, one of which arises from the shifts in manufacturing production. Thus the enhanced potential of firms to shift production (or to threaten to) around the world (see Dicken, 1986, Chapters 3 and 4) should be seen as one component of the transfer of economic control back into private hands. In Australia, for instance, private sector investment has been stagnant for the last few years, yet Australian private investment abroad increased from £1556 million in 1982/3 to £6908 million in 1985/6. But in addition, and the second aspect, the erosion and emasculation of public economic power can be seen simply as the result of increasing proportions national output and employment falling under the auspices of very large private corporations (not necessarily transnational). This has sometimes even happened by design (for example, privatisation).

One of the dominant and defining features of the restructuring of capital has been the growth in the size of already large firms. This has come about through two processes. On the one hand, there has been the concentration of capital - the elimination of smaller and weaker firms through competition and the diminution in the possibility of new entrants emerging because of the increasing organic composition of capital and the increasing potentialities for accumulation in large complex units of production. On the other hand, there has been the centralisation of capital - a much more rapid process whereby the ownership of capital is reorganised into much larger units through mergers, take-overs and non-arms length collaboration. As one result, in Great Britain, for example, the hundred largest firms increased their share of net output from 20% in 1950 to 66% in 1980 (Burkitt 1984, 70). As one other result, in some instances the shift towards

private economic power has been such that private corporations are presently taking on massive public works infrastructure projects that are considered too vast for the public purse.

Control over the national economic domain by the nation state is not only compromised and diminished by such an increase in private, often oligopolistic, economic power (see Susman, 1981; Crough and Wheelwright, 1982), but also by greater global interdependence, the third aspect. In the post war era the capitalist world economy has become increasingly interdependent, trade in most years having grown at a much faster rate than production in the advanced capitalist nations. One implication of the increasing proportion of GDP that is represented by imports to, and exports from, advanced capitalist nations is that "the level of output and employment in individual countries is now considerably more dependent than it used to be on decisions made by consumers, businesses or governments in other countries" (Stewart, 1984, 22). These decisions cannot be greatly influenced by nation states, especially when a rising proportion of that increased trade is conducted within, and by, very large (often transnational) private corporations (Thrift, 1985).

Despite the widespread focus upon the New International Division of Labour (and of capital), its significance may well have been exaggerated. Deindustrialisation in advanced capitalist nations, as measured by absolute and relative falls in manufacturing employment, may just as well be attributable to a re-organisation of the labour process (increasing capital intensity) rather than offshore flight. Moreover, more direct foreign investment still takes place between advanced capitalist nations than in the 'Third World'. Similarly, the link between deindustrialisation in the advanced capitalist nations and the emergence of the Newly Industrialising Countries (NICs) is at best tenuous. Grave reservations are held against viewpoints which, for example, argue that "... the industrialization of the NICs was a response to crisis at the international scale" (Smith, 1986, 100). For me, the onset of industrialisation in the most successful of the NICs

(those of East and Southeast Asia) not only predates 'the crisis' but also is a much more complex process which needs to be explained, against the backdrop of the internationalisation of capital, more in terms of the historical specifications of the processes of local accumulation, the intervention of the state in the processes of social reproduction, and the rise of an indigenous and successful capitalist class (see Browett, 1985; 1986).

Rather, it is suggested, what is of much more significance, and what tends to be missed in the geographic literature (Thrift, 1986 is a recent exception) is the trend towards increases in both private economic power and instability as a result of the spectacular growth in private, global, finance capital markets dealing in domestic currencies. This is by far the most outstanding, and possibly the least understood, of all the changes in global political economy. It not only has grave implications in terms of the reduced effectiveness and control over key aspects of domestic economic policy on the part of the nation state, but it also is largely responsible for the shift towards disorder in international economic arrangements - which in turn weakens the co-ordination and decision-making powers of the nation state. Each will be treated separately below.

One of the practical implications of greater financial interdependence is that falls in the rate of growth in output and employment, both of which are likely to be uneven between regions, cannot be tackeld by unilateral expansionary policies on the part of individual nation states (witness the United Kingdom, 1974-76; France, 1981-82). This is so, Stewart (1984, 47-53) argues, because there is a bias in the world economy so that, asymmetrically, unilateral deflationary policies are likely to be validated and reinforced by the world financial community, whereas expansionary ones will be discouraged and invalidated (by large movements of finance capital out of the country, leading to falls in the exchange rate and/or national reserves). The ability of the nation state to influence its own key domestic economic variables, especially in an expansionary manner (which is what intervention to

promote regional development entails) has correspondingly been severely eroded (Stewart, 1984, 27).

For our purposes, the crucial point is that the monetarist policy of competitive deflation which nation states are currently obliged to pursue so as to counter inflation is very likely to result in public expenditure not being available in sufficient volume to contribute to the restructuring of regional economies. The deflationary bias directly erodes the capacity of individual nation states to implement policies to promote economic expansion in depressed regions. Only if regional policy initiatives can be funded by cuts in other sectors (defence is an appealing, although unlikely, candidate) can this trap be avoided. If not, then increasing budget deficits, public borrowing and/or the money supply to fund the programmes will most likely result in capital flight in the face of expected rises in inflation rates, falling exchange rates and the need, sooner rather than later, to abandon expansionary policies. In this manner transnational finance capital is able "... to determine the expansion and construction of credit in a manner that is less and less susceptible to the political control of domestic monetary authorities" (Wolfe, 1983, 15).

The rise to such prominence, in both absolute and relative terms, of the private international finance and banking sector was not accidental. It can be traced to internal weaknesses and inconsistencies in the Bretton Woods arrangements which eroded their ultimate foundation, that of monetary stability. The weaknesses essentially revolve around the desire on the part of the United States to mould a multilateral financial system that would complement and not hinder the international expansion of private capital. This found foremost expression in its reluctance to allow a substantial capital base or multilateral credit creation facility to the IMF - and hence opened the door for international banks to play an increased role in sovereign lending.

The inconsistencies were twofold. On the one hand, United States hegemony, upon which the multilateral economic order was centred, was undermined by United States' desire to encourage economic growth in

other advanced capitalist nations - an encouragement that was so successful that it contributed to the emergence of rival economic powers (Japan and, to a lesser extent, West Germany) and the decline of United States hegemony. On the other hand, with fixed exchange rates and the United States dollar as the reserve currency, the United States ran up huge external deficits. Whilst these served to promote world liquidity, they eventually led to the over-valuation of, and loss of confidence in, the dollar as the foreign 'overhang' of dollars dwarfed American gold holdings in which the dollar was supposed to be redeemable. In combination, these weaknesses and inconsistencies led to collapse of the Bretton Woods order, a collapse that was not only directly responsible for enhancing the independence of private international finance capital from the control and authority of home nation states, but also for the anarchy of the market in international economic arrangements.

The power of the international banks, as measured by their size, is truly awesome. Chase Manhattan Bank claimed in 1982 that it transferred US $ 112 billion around the world on an average day (Stewart, 1984, 174). In one year (1980), when the IMF lent US $ 8 billion, net lending by private banks internationally amounted to US $ 165 billion (Cameron, 1983, 121). But undoubtedly the centre piece of the growth of private international finance capital is the Eurocurrency Market. Fuelled by the outflow of United States dollars during the 1960s, the subsequent emergence of offshore markets in other currencies, and the recycling of OPEC petro-dollars, it has expanded at an exponential rate. By the early 1980s the gross size of the Eurocurrency Market was estimated to be in excess of US $ 2000 billion, a figure that is likely to have grown significantly by 1987.

It is not, however, the absolute size of the market which is of prime concern, but rather the instability which its operations brings into international economic arrangement. Long ago, at the beginning of 1980, Kenneth Dadzie, United Nations Director-General for Development and International Economic Co-operation, was able to recognize that

the international economy was "... drifting aimlessly in uncharted waters, without either solid anchorage or an adequate motor" to deal with "the gales of uncertainty that were daily gathering velocity" (quoted in Laidlaw and Laishley, 1980, 1). Endemic disorder and extreme volatility have continued to be the abiding hallmarks of the movement from the Bretton Woods order to the current disarray. Unregulated international private finance markets remain out of control, especially in the wake of deregulation of foreign exchange controls by those advanced capitalist nations (such as Australia) which had previously sought to retain influence over foreign capital flows. This is not because these markets in any way resemble "the free market" (in which no one institution can determine final outcomes) but rather because the horizontally and vertically integrated institutional structure (through consortium banking and syndicated loans) has a vasted interest in it being so.

In part, this instability arises from technological revolutions in communications so that very large sums of money can be transferred between banks around the globe almost instantaneously. CHIPS (Clearing House Interbank Payments System) is a world-wide network which clears around US $ 300 billion foreign transactions per day (Cameron, 1983, 112). Under these circumstances the movement of 'hot' money between countries or currencies can be effected very rapidly indeed. In response to actual ro expected changes in economic indicators (exchange or interest rates) or to esoteric events which affect confidence in a currency or economic policy (the announcement of the resignation of Paul Volker as Chairman of the Federal Reserve Board, for example) money can and does move immediately, often in a self-fulfilling way. Such is the instability that very often rumours can lead to a loss of confidence and to speculative attacks against currencies. One consequence of this very mobility, therefore, has been that the enhanced possibility of making substantial speculative gains in currency market transactions encourages ever more furious efforts to do so.

In part also, and of greater significance, is that the growth of instability in this age of casino capitalism (Strange, 1986) has, as both cause and effect, reduced the possibilities for capital accumulation from directly productive investment - possibilities which have already been reduced either because of recession and inflation in the past or deflationary domestic policies and high real interest rates in the present. The argument here is complex, but in essence it is maintained that the growth of monetary anarchy directly and indirectly has eroded the conditions conducive to productive investment in goods and services, without which development of any kind or quantity is inconceivable. It tends to directly undermine productive capital by attracting capital into lucrative speculative gambits where profits are made by changes in currency values which, in extreme cases, can be made to order by financial managers. It tends to indirectly undermine productive investment by creating conditions of uncertainty (even panic) which result when unrestricted movements of short term, footloose, money place extreme pressures upon the external account and domestic monetary policy - pressures which national monetary authorities are forced to react to in defence of their own currencies.

In this paper speculative attacks and instability, in and of themselves, are not the central concern. Rather it is the impact which such disorder has on constraining decision-making by and within nation states. To the extent that the exchange rate and foreign exchange reserves of a nation are extremely vulnerable and subject to potentially damaging short run variations, so must also be its domestic economic policies. More than this, however, there is a fundamental disjuncture between the ways private economic power serves its own interests and the ability of nation states to achieve their own policy objectives. As explained at length by Stewart (1984, 49),

> The aim of those charged with the management of these private funds is the maximisation of the rate of return earned on them - or, perhaps, the minimisation of risks or losses. They have no interest, as such, in the economic variables which are of concern to governments - the level of

> unemployment, the rate of growth of the GDP, the inflation rate, or the distribution of income. Their concern is with short-term movements in bond prices, interest rates, exchange rates.

Yet in speculating on these prices and rates in the short run, the international finance markets adversely affect the ability of nation states to achieve their longer term policy objectives. In this way the economic fate of nation states has, in part, been forfeited to private economic interests: national economic policy is held hostage by financial speculators (Roddick, 1984, 131).

Sadly these global economic shifts are not a temporary aberration and neither are short run 'solutions' at hand. The proposals put forward to date - the transfer to resources from North to South, a new Bretton Woods system, or increased co-ordination/co-operation between the major capitalist nations - are just not on. The evidence is rather for moves away from multilateralism as failures to gain agreement at various economic summits continued to be recorded. Contra Andre (1984) the age of disorder cannot yet be seen as transitional to the re-establishment of capitalist order in the world economy. It is not possible to indicate, from ex post facto descriptions of current trends in the global economy, the likelihood of medium to long term scenarios with any certainty (in contrast to earlier times when such claims had credence within the halls of extant theory). Indeed, Burns (1987, 17) reports that the average forecasts of 49 dealers participating in an Australian Financial Review survey failed to correctly predict any of the 15 major changes in direction of the Australian exchange rate between March and December 1985. In this sense it is necessary to move from the global to the local level, not just to avoid the perils of structuralist imperatives of capital accumulation, but also to escape from the lacunae of moribund theory and prescriptive impotence.

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RECENT ECONOMIC RESTRUCTURING IN NORWAY. ITS IMPACT ON REGIONAL DEVELOPMENT AND REGIONAL STRATEGIES

1. The Legacy from the Past

Economically Norway was mainly dependent on localized natural resources well into the post-world war II period. Apart from agriculture, which during historic times has never been able to feed the people, but which until 1950 employed a quarter of the economically active population, the country by and large came to rely on energy and raw material based industries. But it was a rather diversified dependency. Thus both fish and wood processing, metal smelting and electro-chemical industries bulked large. The only deviation from the main pattern in the economic structure was a very important merchant marine, which relatively early gave some weight to services in the economy. Of interest in our context is the fact that this structure, especially in its initial stages, meant some preservation of a regional balance. This was particularly the case as long as the energy base (electricity) was relatively localized, owing to transfer costs and transfer losses, raw materials mainly remained semiprocessed and seamen were recruited from all over the coastal districts.

The heyday of industrial development (the 1950s and 1960s) meant a change in the industrial structure and regional development. Although the relatively low degree of refining of natural resources lingered on,

there was a growing tendency towards a more refined and sophisticated production. Norway saw a specialization of niches of manufactured goods, some of which became important on a global scale. The new industries were less based on energy and more on innovation and technological skill, benefits from urban and agglomeration economies, market organization and to some extent economy of scale. And what is more, a broader range of services proliferated (Table 1). Easier transfer of energy and less importance of primary activities added to this structural change, which in a small economy like ours with a problem of scale, made for an increased concentration of activity and a growing centralization in settlement and population distribution.

By the mid-1960s the issue of a growing regional imbalance grew into political problems which needed fresh initiatives and even institutions to be coped with. Most of the institutions were integrated into the Regional Development Fund which dates back to 1961. This organization has many elements in common with the Cassa per il Mezzogiorno in Italy, the greatest differences being geographical, as the RDF in principle covers the whole country, except the most central municipalities in Southern Norway. When Norway in the next decade seemingly managed her regional problems better than many comparable western countries, explicit regional policies and measures only played a minor part, however, as we shall presently see.

2. Restructuring of the 1970s and 1980s

Norway's long term growth of the 1950s and 1960s with an economic performance above the average of the OECD countries and which simultaneously meant a further specialization and diversification of the economy, was halted by the early 1970s. By analysts at the time this was attributed to the oil crisis. This is naturally a too simplistic view. Norway was also beginning to feel the repercussions of global reorganization of industry (Ahnström 1986). Cost problems were becoming severe. However, in this situation, which might have meant stagnation,

Table 1. Contribution by different industries to the net national product in Norway (percentage shares)

	1962	1972	1985	
			Total	Conti-nental Norway
PRODUCTION (extractive and transformative industry)	41.1	40.1	45.6	33.4
DISTRIBUTIVE TRADES	32.5	26.2	18.9	23.1
SERVICES	25.5	30.5	33.1	40.6
OTHERS and not reported	0.9	3.2	2.4	2.9
	100.0	100.0	100.0	100.0
Agriculture and forestry	6.1	4.2	2.4	2.9
Fishing	1.2	1.0	0.6	0.8
Mining and oil production	0.7	0.6	18.5	0.4
Manufacturing	21.9	22.9	13.8	16.9
of which mainly finished products	11.4	11.8	6.9	8.4
semi-processed products	6.7	6.7	4.0	4.8
heavy industrial products for investment purposes	3.5	4.0	2.7	3.4
other manufacturing	0.3	0.4	0.2	0.2
Construction, energy supply	11.2	11.4	10.3	12.4
Wholesale and retail trade	20.9	14.5	12.8	15.6
Shipping	6.7	5.9	1.1	1.4
Other transport and communication	4.9	5.8	5.0	6.1
Hotels and restaurants	1.2	1.5	1.9	2.3
Finance and insurance	2.1	2.9	3.9	4.7
Business services	1.4	2.5	4.1	5.0
Education, research, health and welfare services	6.7	9.8	10.9	13.3

Table 1 (continued)

	1962	1972	1985	
			Total	Conti-nental Norway
Other, mainly public services	4.8	5.4	4.7	5.8
Other private services	9.3	8.4	7.6	9.4
Others	0.9	3.2	2.4	3.0
	100.0	100.0	100.0	100.0
Net national product in mio Nok	33 664	84 918	429 433	351 084

Source: Central Bureau of Statistics of Norway. National accounts.

Norway had already received the mixed blessing, a non-anticipated "god-send"-oil. As an already developed country, Norway unlike most of the oil-exporting countries, was also able to integrate the petroleum activities relatively easily into her economy. It gave the authorities great freedom of action in formulating and implementing economic policies and strategies at a time when most western countries suffered a stagnation.

When looking back on the 1970s, we are struck by two main driving forces in the Norwegian economy:

1) the genesis and development of the petroleum activities, converting (once more) our economy into a more extractive structure,

2) growth of services, particularly in the public sector.

To be true, fruits from the petroleum activity were mostly to be reaped in the 1980s. However, the 1970s saw considerable investments in the new industry, increasingly by Norwegian firms. Some of these companies very early developed sophisticated drilling rigs and platforms, particularly of the concrete type. Together with a vigorous redistributional policy by government, particularly in the field of social services, partly built on borrowing in anticipation of petroleum revenues, this

new activity "heated" the economy, bringing about cost and inflationary pressure. Many of the former manufacturing enterprises in the non-petroleum trades were forced out of business, some being relocated to other world regions, in line with the new international division of labour. To be true, internationalization of industry has never been pursued so vigorously by Norwegian firms as has been the case with Swedish and Danish industry. However, in the traditional service sector, shipping, we were beginning to see a veritable decline by the mid-1970s due to an unprecedented flagging out of ships to overseas tax havens.

The 1980s, the heyday of petroleum production, saw the development of a fully-fledged polarized economy, on the one hand by a strong dependence on oil and gas (only 2% of total employment, but nearly 20% of GNP, about 40% export share), on the other hand by a gradual conversion to a service economy. The latter transition is pretty general in advanced economies with a large petrol export sector (the danger of a Kuwait economy). The service development of the 1980s in Norway mostly took place in the non-distributional field of the private sector, increasingly in business related services (Table 1). It is justified to talk about a deindustrialization; traditional manufacturing remaining stagnant even in volume until the middle of the decade. Later it has been growing incrementally, but is still losing market shares both at home and abroad, mostly due to cost problems. This development has to some extent been offset by some recent growth in high tec. trades, notably the data industry. Norsk Data is, for example, a world renowned firm with a spectacular growth. The main impression remains, however, of a rather onesided industrial structure, particularly vulnerable to global business fluctuations, as testified by the effects of the oil glut, starting in late 1985. The unbalanced economy has come to cause much concern. There is much talk about diversifying, but as yet with few tangible results.

3. Regional Impact of Industrial Restructuring

3.1. Forces having worked towards levelling

The economic transformation has had profound effects on regional development. It has worked both ways, towards levelling as well as concentration. Generally levelling came before concentration. The early conversion to a petroleum activity benefited many semi-peripheral regions. Thus new life was put into the stagnating south-western part of the country (near the oil fields), gradually transforming it into a core area. Multiplier effects of the new investment needs made themselves felt also in other districts, however, particularly where industry could be activated to readjust to the new demand. It is partly this restructuring, that, apart from the generally industrial decline is reflected on the map (Fig. 1). Parallel with this development politicians and authorities were enabled by income from petroleum revenues or from borrowing in anticipation of income to pursue a vigorous sectoral redistribution as a conscious political option. In the industrial field this came to benefit agriculture, Norway being the only OECD country which by parliamentary decision has guaranteed farmers an income level on a par with workers in manufacturing industry. Also some ailing manufacturing enterprises were directly supported by the state, postponing much painful readjustment and restructuring till the 1980s. Mostly, though, redistribution made itself felt in the social field which implied strong decentralization of social and community services. In comparison with these forces and policies of a sectoral nature the impression remains that the effects of explicit regional policies have been relatively slight.

Accompanied by a growing equity in redistribution of regional income* the above development has had several impacts:

*Index value of mean taxable income per inhabitant in the most and the least well off subnational region (East Norway and North Norway), thus changed from 123 and 58 respectively in 1950 to 107 and 88 in 1983, both regions approaching the national average (100).

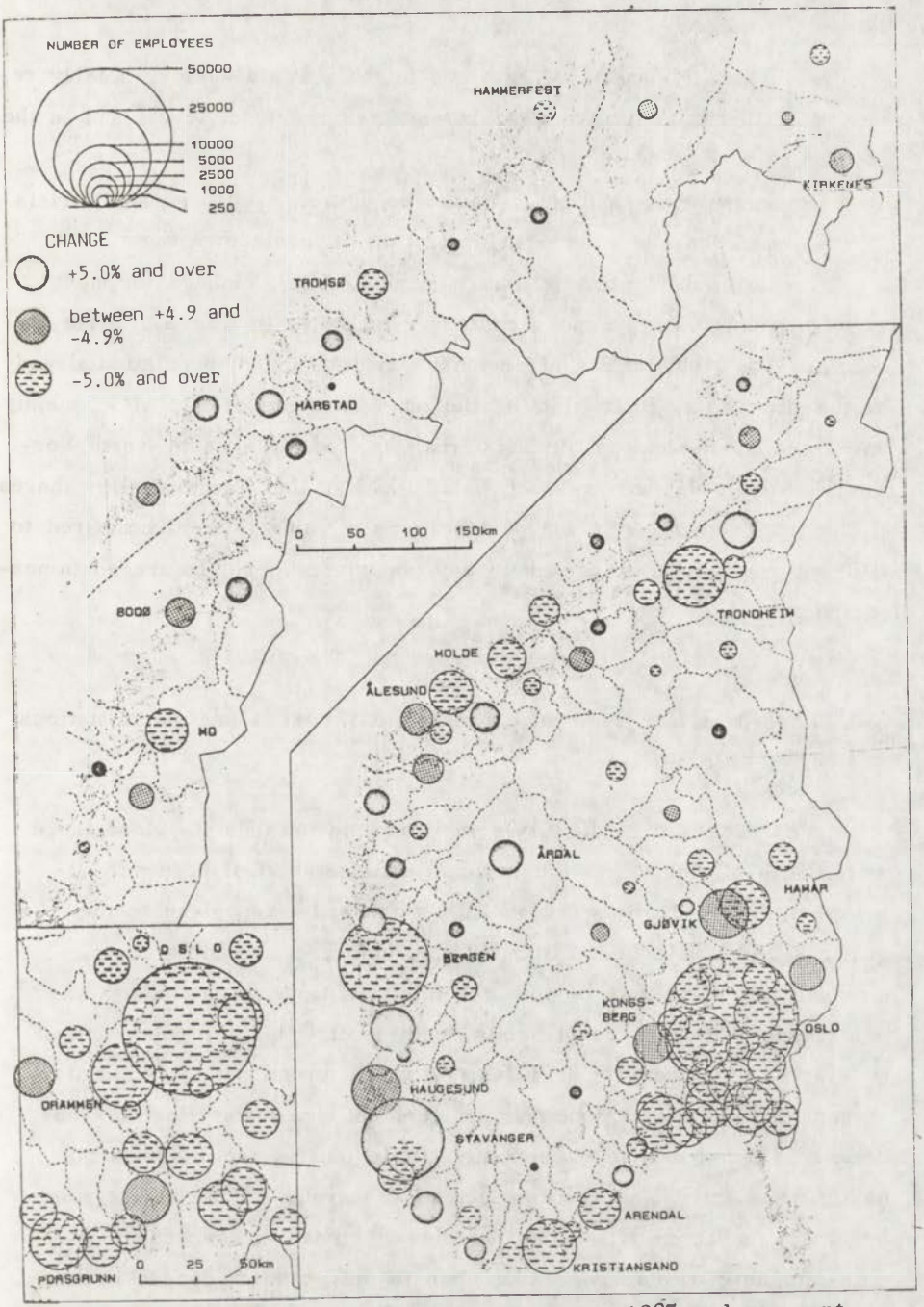

Fig. 1. Employment in mining and manufacturing 1985 and per cent change 1975-85. Trading district.
Source: Helvig and Sjøholt 1987.

- substantial growth of services in the private sector, notably retail trade in non-convenience goods, at lower regional levels and in the periphery
- a growing concentration of the population within rural districts
- expansion and more standardization of local government.

Counter urbanization (the turn-around trend) claimed for most western countries, is a more controversial issue in Norway. Some scholars found indications of regional consolidation of population already by the mid-1970s. Brox (1980), the chief advocate of this view, mainly based his conclusions on findings from the Tromsø area in North Norway, however. In retrospect Sjoholt (1984) rather found smaller shares of the total population in the periphery as a whole in 1980 compared to 1970. Rural population growth of any importance could be traced in non-peripheral areas only.

3.2. Towards a new regional concentration? Forces and manifestations of the 1980

As the decade of the 1970s was drawing towards its close there were signs of changes in the regional manifestation of economic development. The vigorous investments which had taken place in the public sphere during the 1970s entailed unforeseen running costs. Gradually, irrespective of political colour of government, there was a slackening of the pace of public social redistribution, relaxation of countercyclical measures in industry, which turned out to be counter-structural, and less enforcement of regional measures. How this has come to effect location of economic activity during the 1980s is not easily documented, partly from lack of research. As far as the most important "force motrice", the petroleum activity is concerned, its spin-offs have to a larger extent than in the previous decade become located centrally. There are many reasons for this development. To some extent it is due to restructuring. Although subject to fluctuations, construction of hardware has generally decreased in importance.

Modul building contracts have also been lost by Norwegian firms due to the cost factor.

A general "maturing" of the activities towards more sophisticated inputs has taken place. Engineering has increased as part of total inputs and so have services both for investment and operational purposes. Although relatively diverse in structure and requirements, from catering to sophisticated consultancy, the growing share of these activities are dependent on personal contacts and contacts with other service enterprises. These functions, therefore have increasingly been located to larger and diversified environments, with Oslo as the leading locality, the western main thorough-fare of the city being nicknamed "the consultant road".

Also in petroleum unrelated fields services have come to play an important part for growth in employment. Comprehensive documentation of regional impacts of this activity is precluded from lack of data. Suffice it to say that R + D and other knowledge producing activities in Norway mostly have been a public affair. Only a few enterprises, the most prominent among which is Norsk Hydro, have had their own departments for applied research. This has means a relative centralization in location of activities. Business services in a narrow sense for which we have available data throughout the 1980s, may serve as an indicator of the development trend.

Figure 2 shows the regional concentration of the services at the beginning of the 1980s. Growth of this industry, by far the relatively most vigorous during the 1980s, has also mainly occurred centrally (Fig. 3) . Three fourths of the growth has taken place in the Oslo, Stavanger and Bergen city regions. Particularly dismal has the growth been in peripheral regions both in South and North Norway (Selstad 1986) . In addition to this trend private distribution has ceased to be a growth industry in the rural areas in general and in the periphery in particular.

There is no room in the present context to discuss in detail the deeper causes of this regional economic restructuring. Suffice it to

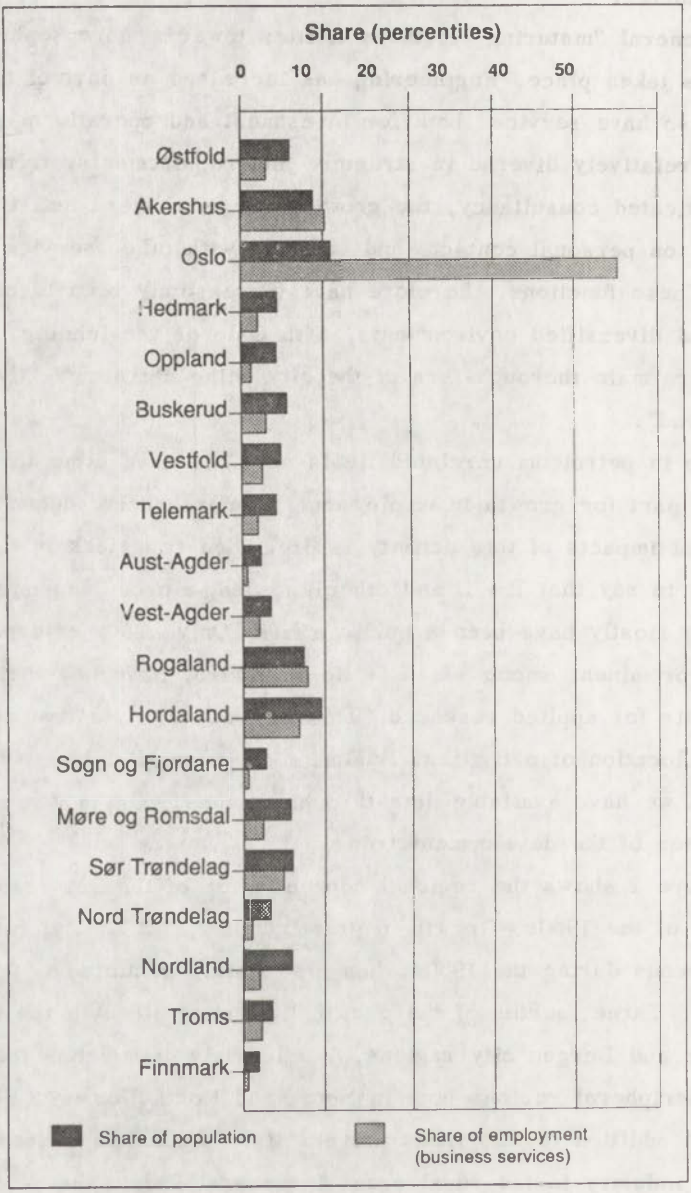

Fig. 2. Share of total employment in business services and population by counties in Norway 1980.
Source: Selstad 1986.

say that it may be a reflection of the requirements of the new industries in their early stage of growth and diffusion (product cycle). However, the development may also be a reflection of scale, a small economy like ours being more in need of centralizing these specialized activities than a larger and more diversified one. Thus in the US relatively sophisticated services for the petroleum industry can exist in several cities.

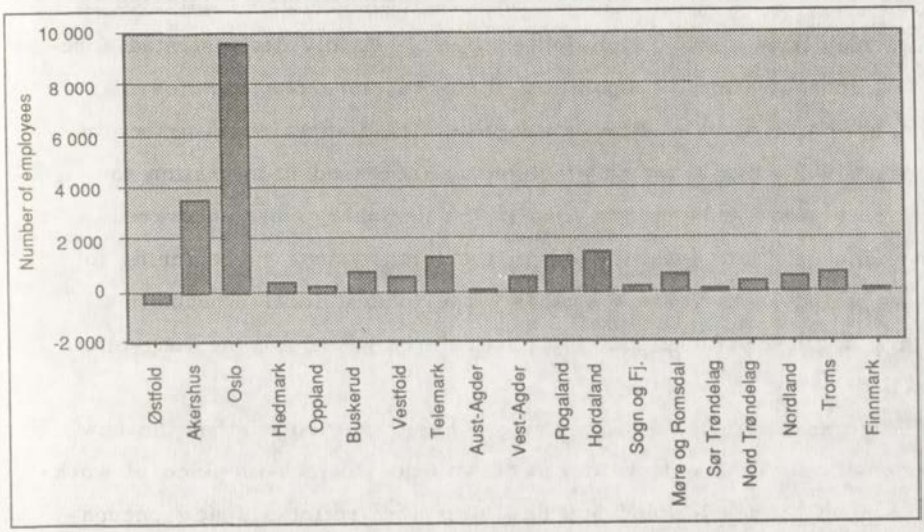

Fig. 3. Growth in employment in business services by county in Norway 1979-1984
Source: Selstad 1986.

Internationalization of capital and firms into Norway in the petroleum business has also had a centralizing effect. Foreigners naturally only perceive the most central areas as opportune for localization and are not easily persuaded to move elsewhere. Finally spending of income from the petroleum business, whether as corporate income or state revenues has been channelled centrally rather than peripherally. The new transfer system from state to municipalities by block grants,

based on crude population criteria may thus, as proven by cases, mean less drain of money from central areas (Oslo) and less financing of smaller municipalities in North Norway than before (Reppen and Johansen 1987).

No wonder that the transformation has had impacts on settlement. Illeris (1980) who found clear indications of settlement decentralization by the late 1970s throughout Scandinavia, taking stagnation of the capital regions as evidence, found in the case of Norway a clear reversal of this trend during the 1980s, a tendency also replicated in Sweden (Illeris 1987). Holt-Jensen (1986) vividly demonstrated a renewed concentration of population in Norway to a few counties, particularly in the Oslofjord area (Fig. 4). Hansen in a number of works (1982, 1985) not only pointed to increased in-migration to central regions and growing loss in the periphery, but uncovered simultaneously how levelling out of the fertility rate is beginning to leave behind an increasing number of peripheral local communities with a negative natural growth, particularly grave for the long-term viability of these areas.

Increasingly it has also come to be acknowledged that the new depopulation of the periphery not only is due to lack of place of work to keep up households and add new ones, but reflects a new occupational structure within the household. Women are more and more demanding jobs of their own with higher competence in an ever more diversified job market.

4. Policies and Strategies for Regional Development. Nature of Measures and Need for Readjustment

The above analysis of recent restructuring puts the policies and strategies for regional development by government and statal and parastatal institutions into a new perspective. The regional disparity gap in Norway has tended to diminish as far as single welfare indicators

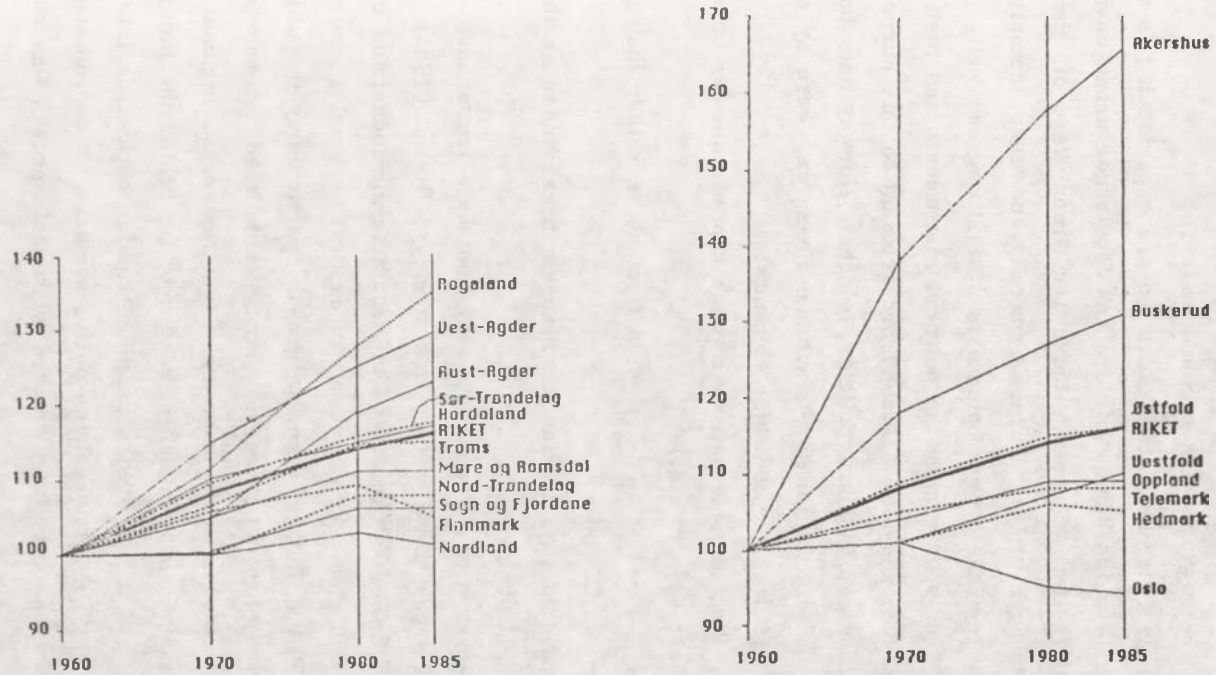

Fig. 4. Growth of population in Norway by counties 1960-1985
The Oslofjord area: Østfold, Vestfold, Akershus, Oslo, Buskerud; The Stavanger area: Rogaland; The Bergen area: Hordaland; The Trondheim area: Sør-Trøndelag.
Source: Holt-Jensen 1986.

are concerned, as also showed above. What has remained are the growth differentials of population and settlement. The goal of preserving the main settlement pattern of the country intact has loomed particularly large in Norwegian regional policy.

Some of the renewed centralization we are experiencing is undoubtedly an expression of new preferences for larger urban environments, a reinforcement of urban values. The Green Wave of the 1970s seems to have run its course. Generally, however, commitment to promoting a regional growth balance is still strong and well organized in Norway. Are then the political instruments and institutions inherited from the past sufficient and relevant to this purpose in the present situation? Regional policies, which in Norway date back to the 1960s as explicit coordinated territorial measures, were by and large characterized by the following elements:

- growth stimulation incentives through capital subsides (cheap loans, investment support etc.)
- measures aimed at redistribution from above rather than promotion of endogenous initiatives
- concentration on activities for the male breadwinner as the main sector of the household.

It would be a distortion of reality to deny that some fruits have accrued to non-central areas in Norway by this strategy. Bivand (1984) claimed an increase of 2500-3000 employees in manufacturing industries in four peripheral counties as a direct result of explicit regional strategies in the period 1970-81. But compared to growth, particularly in public services, this employment increase must be considered incremental, indeed. This fact adds to the impression that Norwegian regional policy has, in perspectives and measures, tended to lie behind the industrial development front. It has been accused of walking backwards into the future (Nilsson 1979). Interest in public services as coordinated regional measures was thus first aroused when their growth was on the wane.

Some changes were becoming manifest on the threshold of the 1980s, however. Still there remained a strong belief in manufacturing industries as measures for spearheading development into rural areas. But new activities like fishfarming were beginning to make their influence felt, becoming one of the growth industries in rural coastal areas in the 1980s. The industry has also become increasingly technology and knowhow oriented in its export profile. In more and more fields initiatives increasingly originated at the local level, local politicians and semi-public regional institutions becoming strongly comitted to development promotion, manifested by initiatives like "idea-banks" and "boot-strap pulling" projects.

Local leaders who had earlier offered cheap and stable unskilled labour and abundant and cheap space as their main comparative advantages, became headhunters for enterpreneurial talent and interested in developing competence and skill of would-be entrepreneurs.

Governmental regional agencies like the Regional Development Fund relatively soon took up the new ideas. Already for the budget year 1984 about 20% of the Fund´s support was given to less tangible promotion work like R and D functions, management and marketing consultancy and general readjustment.

Very recently a new governmental response to the changed situation has become apparent. A strategy team in the Ministry of Labour and Local Government has come forward not only with new ideal of an expanded industrial base in regional promotion work. The authorities are in fact about to launch an experimental program in three peripheral counties, where private services will be used as an instrument of regional development. Areas of priority are location of information technology based activities and development of competence centres and networks at lower regional levels for promotion of production and distribution of business services, advanced know-how and industrial research.

The importance of developing formal and informal networks for promoting this process and the role of the centres in rural areas as

important nodes for these networks and activities have received renewed attention. So has also the need for supplementing the above infrastructure with cultural institutions and for creating and disseminating cultural activity at a relatively low regional level.

This reorientation in policies and strategies will certainly not by itself be a panacea for attaining a regional balance or consolidation. We still know too little about requirements for an adjustment to the new economic structure and development in small and limited environments. Problems abound. Handicaps of enterprises due to narrow environments with few functional linkages and other networks are coupled with low competence or competence not matching requirements. A stagnating population will only add to the problem. A solution to the problem of inadequate competence as well as to the opposite problem of enabling married couples and cohabitants to realize their joint competence are among the greatest challenges in a regional policy of the future. Given the constraints as we now see them, these policies and strategies probably will have to be more geographically selective than we have been apt to admit hitherto in our quest for a regional balance.

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THE NATION VERSUS THE NORTH: REGIONAL DISPARITIES IN ECONOMIC GROWTH AND INDUSTRIAL DYNAMICS IN MEXICO 1940-1986

Introduction

Mexico owes its economic growth since the 1940s to a large extent to its industrial growth, especially the growth of the manufacturing sector. Ironically, the way in which the manufacturing industry developed also became one of the main forces behind the country's financial and economic crisis of 1982 and beyond. Surprisingly, nowadays it is the manufacturing industry aiding the country most in its process of economic recovery.

Being one of the main forces behind the economic performance in Mexico since the 1940s, manufacturing has shaped not only the present economic structure of the country, but also created to a large extent the spatial dimensions of economic development. Contrary to what could be expected, however, one of the sectors within manufacturing contributing most to Mexico's recent economic recovery, does not seem to have any effect in terms of changes in the spatial economy of Mexico, despite its quite different and highly concentrated location pattern.

It will be explained how the region experiencing enormous industrial activity and growth in employment, i.e. 'The North' of Mexico,

does not perform very well in statistics on Industrial Product. In contrast, the regions which experience sharp losses in employment and plant closures as a consequence of the economic crisis, i.e. the 'old' industrial metropolitan areas, maintain a high share in Regional Industrial Product.*

A fairly large part of the role of manufacturing in Mexico's economic growth and decline can be attributed to the influence of direct foreign investment. The influence of foreign subsidiaries in manufacturing industry on local, regional as well as national economic performance seems to depend at least in part on the location of the final product market which is to be served.

The increasing attention recently paid to export-production, and the growing flexibility in the attitude of the Mexican government towards (foreign) export-producers may involve some dangerous risks.

1. On the sources of economic growth: 1940-1982

At the beginning of this century, Mexico could still be regarded as an (outward oriented) agricultural economy. The start of the Revolution (1910), aiming primarily at a return to the community based 'ejidosystem' and, therewith, to an end of the era of the large hacienda, meant a huge distortion of production in agriculture, resulting in zero or negative growth rates lasting well into the 1920s.

In the thirties, agricultural production had recovered, and average annual growth was even higher than growth of total Gross Domestic Product (GDP). Agriculture continued its growth in output also in the next decade, though its level now was below the growth of total GDP and, from then on, would never catch up again with its former leading

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position. In fact, after the 1950s, average annual growth of Agricultural Product declined until it could not even cope with the annual rate of population growth (see Table 1).

In contrast, industry (i.e. Mining, oil, manufacturing and construction) started to grow significantly when import-substitution became an explicit policy in 1945. Ever since, until 1981, average annual growth rates in industry, especially manufacturing, have been higher than the total growth of GDP.

Import-substitution has been stimulated intensively by the Mexican government, using trade-, investment-, industrial- and fiscal policies, be it with different accents during the different phases of import-substitution (see for a short overview: Verkored and Hoenderdos, 1985). The combined effects of these measures provided an optimum investment climate in Mexico for both local and foreign firms.

In practice, import-substitution had several side-effects upon the main sources of the 1982 financial crisis. The effects mentioned below all relate in some way or another to the origin, amount and destination of investments in Manufacturing:

- (Direct) Public investment during the first ten years of the 'take-off' period (1939-1958) rose with 25% per annum. These investments were largely based on an increasing reliance on external capital (borrowing as well as investments). One of the results was an immediate growth of the deficit on the balance of current accounts, increasing with 14% annually during the take-off (Villareal, 1981:69, 80).

- At the same time, public investment concentrated more and more on industry. Whereas in 1939 12% of all public investment was directed towards this sector, it was 34% in 1958 (ibid, p. 80). Together with the overall increase in public investment, this reflects not only the high priority of the Mexican government towards industrialisation, but also the high costs involved.

- Both trends continued during the period of 'Desarrollo Estabilizador' ('Stabilised Development', lasting from the mid-fifties until 1970):

the deficit on the balance of current account increased with almost 20% annually, while public investment in industry was 37% of all public investment at the end of this period (ibid.: 70,80).

- Industrial investments by the State concentrated on oil (later also including petrochemicals), electricity and, to a much lesser extent, on the steel-industry. It is the steel- and petrochemical industry that can be most associated with import-substitution as such.

National private investments were mainly concentrated in the sectors of non-durable consumer goods, such as food, textiles, clothing, leather and printing. In this area impressive results have been realized through import-substitution until 1950 (see Boltvinik and Hernandez Laos, 1976).

Foreign investments have mostly been realised in the production of durable consumer- and intermediate goods, including chemicals, machineries (electric and non-electric) and transport-equipment. The high concentration of foreign subsidiaries in these sectors of (manufacturing) industry resulted in oligopolistic and even monopolistic industrial firms. Moreover, foreign industrial capital concentrated in those sectors where rates of return were much higher than elsewhere (Jenkins 1978).

Foreign investments rose considerably during the period of Desarrollo Estabilizador, especially since 1954 when, after a new pesodevaluation, wage levels were kept low relative to productivity, and industrial concentration as well as the alliance with foreign capital was promoted (Fitzgerals, 1978:53; Jenkins, 1978;169). Foreign industry contributed greatly to the import-substitution of (durable) consumer goods but had at the same time a fairly large import-component. In fact, their import-component was much larger than had been the case for Mexican industry, whereas the average level of protection for the sectors in which foreign industry concentrated was more than twice the level of Mexican industry (Jenkins, 1978; Sahagun, 1977).

- While protection by tariffs, quotas and import-licenses fostered industrial production in Mexico, production costs were artifically high, prohibiting manufactured exports. As a consequence of the high import-

component in the production of durable consumer- and intermediate goods, the trade balance deficit almost more than quadruppled in the first half of the seventies. In 1974 and 1975, export revenues were less than half of total import-costs, and the trade deficit was larger than total export- (mercancy) revenues (Balassa, 1983, Table 2).

Thus, import-substitution fostered direct foreign investment, which in turn fostered a negative trade balance. Also, industrial growth, being the main source of economic growth until the end of the seventies, had been paid for to a large extent by a growing public and external debt.

In itself, economic growth figures during the first decades of industrialisation have been impressive (see Table 1). It is also clear that industry has been the main force behind this economic miracle.

Table 1. Mexico: Average annual growth rates in population, gross domestic product and employment: 1910-1980

	1910-1921	1921-1930	1930-1940	1940-1950	1950-1960	1960-1970	1970-1980
Population	-0.6	1.7	1.7	2.8	3.1	3.8	3.6
GDP	0.7	0.8	2.9	6.9	5.6	7.0	5.5
agriculture	0.0	-1.8	3.3	5.1	4.6	3.7	2.4
industry	2.3	1.6	2.9	8.1	6.5	8.8	6.7
services	0.4	1.6	2.8	7.0	5.6	6.8	5.9
GDP per capita	1.2	-0.9	1.2	4.0	2.5	3.2	1.8
agriculture	0.5	-3.4	1.6	2.2	1.4	0.0	-1.1
industry	2.9	-0.1	1.1	5.2	3.2	4.9	3.1
services	0.9	-0.1	1.1	4.1	2.4	3.0	1.5
Employment	-0.7	0.6	1.3	3.5	3.1	1.7	4.1
agriculture	-0.3	0.4	0.5	2.3	2.4	-1.9	2.5
industry	-2.8	1.8	1.6	3.8	5.0	3.7	5.3
services	-0.3	0.3	4.0	6.6	3.6	5.6	4.8

Source: R. E. Looney, 1982, Table 3.

In the seventies, industry was still considered the motor of the Mexican economy. Especially public investment in industry (steel and oil) became more and more important in total industrial investment. As production costs rose considerably during the Echeverria regime (1970-1976), private investment diminished, and so did direct foreign investment. The State then became the main investor in industry. In 1975, the public investments in industry accounted for more than 50% of total investments in industry: in 1977-1978 this figure had risen up to 63%. At the same time, a shift of private investment capital took place from the 'productive' sectors towards the non-productive sectors (commerce, services) (Fitzgerald, 1978:54, 58). The costs of economic development thus became very high, especially when also considering that since the mid-sixties the agricultural sector could not cope any more with population growth and basic food imports were necessary. Public investment increased from 5% of total GDP in 1971 to almost 9% in 1975, and surpassed 10% in 1979. Likewise, public sector deficit grew from 5.1% in 1971 to 8.8% in 1975 and, in 1981, public sector deficit reached 12.6% of total GDP (Balassa 1983; Table 2). The deficit was financed more and more with external lending: in 1971 32% of the public finances were provided this way, in 1975 50% (ibid, p. 215).

To many it became clear that industrialisation should be oriented much more towards the external sector. The model of import-substitution finally had led to an explicit desubstitution of imports, growing unemployment, an increasing income concentration (at the national scale as well as between and within rural and urban areas), and an increased dependency on foreign capital (Balassa, 1983; Villareal, 1981; Boltvinik and Hernandez Laos, 1976; Looney, 1982).

The opening of the Mexican economy started effectively with the devaluation of the (for a long time overvaluated) peso in 1976, therewith reducing one of the existing export-barriers. Imports were liberalized in the first year of Lopez Portillo's administration, partly in order to improve efficiency of the national industry. Also, plans were made to enter the General Agreement on Tariffs and Trade (Gatt).

The plans were finally cancelled in May 1980, at the end of an intensive public discussion (in which industrialists strongly opposed the plans as they were afraid of foreign competition with which they could not cope after all those years of protectionalism) .

However, the first explicit policies towards a more outward oriented economy were formulated, in part pointing towards a new industrial strategy. In the very first National Industrial Development Plan (dating from 1979) , the importance of export-industry was stressed, the petrochemical sector being the focus of attention as it should act as a catalyst to other manufacturing activities. Unfortunately, the high investments in this sector (realized by extensive external borrowing) gave a somewhat disappointing result, as the world market for oil-products acted against the Mexican needs. At the end of Lopez Portillo´s administration, foreign debts had increased to 82 billion dollars, and Mexico was almost unable to fulfill its financial obligations.

2. The 1982 crisis and beyond

Miquel de la Madrid, the first Mexican president having a university degree in economics, started his presidency in 1982 with a severe financial crisis, but with ideas that at first sight seemed very healthy for the Mexican economy. His National Development Plan (1983) points towards a two-tailed industrial strategy:

- import-substitution will not be abandoned, but instead will continue, especially in the production of capital-goods. Within the Mexican industry, it is explicitly stated, the aim is to establish a high level of vertical integration, in part in order to increase the level of national integration ('grado de integracion nacional' - GIN) in manufactured products. For this aim a well developed industrial structure is required;
- on the other hand, industrial export-production is stressed, as it can contribute positively to Mexico´s balance of payments problems; also, export industry (as it is mainly foreign) can increase the level

of technology used, and can establish a transfer of technology. Although export-industrialisation existed long before 1982, it has since become increasingly clear that it was the final hope for Mexico´s economy.

Unfortunately, the 1982 financial crisis worsened in the following years. Inflation had been 100 per cent in 1982 and continued to be high in the years following. The devaluations in 1982, and the since than daily devaluating peso, severely affected the performance of Mexican industry, as imports soon were too expensive. Thus, imports diminished in absolute terms. Industrial Product (in constant prices) fell below the 1981 level and continued to do so until 1986, when it recovered finally to the 1981 level (Banco de Mexico 1987; see also Table 2). Even more affected was construction, its Gross Product falling with 22% between 1981 and 1983, and by far not recuperated yet in 1985. Likewise affected were commerce and transport (see Table 2).

The financial crisis thus eventually became a severe economic crisis, resulting in an absolute decrease of real GDP in 1982 and 1983, and recovering only very slowly since 1984. Large industrial enterprises were faced with extremely high losses: Grupo Alfa and Grupo Monterrey, both due to dept-payment obligations; DINA (Diesel Nacional, parastatal in automobiles) as well as the six largest auto producers - all foreign - in the country, to mention just a rew. The parastatal Fundiora Monterrey (employing 19 000 persons and having 36 branch plants) finally saw its bankruptcy in February 1986 as the market for steel had reduced significantly. At least five parastatals were confronted with huge losses (BANCOMEXT, 1985-1987).

New plans were made to finance Mexico´s future development, but external borrowing remained important and still is the main force of Mexico´s actual development. The role of the State in industrial activities concentrates increasingly on strategic sectors like oil and petrochemicals, as an intensive privitasation and liquidation of state-owned companies in other sectors of industry is taking place from February 1986 onwards (SPP, 1986).

Table 2. Gross Domestic Product by activity 1960-1985 (millions of 1970 pesos)

	1960	1970	1980	1981	1982	1983	1984	1985
1. Gross Domestic Product	237 216	444 271	841 855	908 765	903 839	856 174	887 647	912 334
2. Agriculture	40 451	54 123	75 704	80 299	79 822	82 131	84 153	87 380
3. Mining (incl. oil)	7 364	11 190	27 391	31 593	34 498	33 558	34 169	33 940
4. Manufacturing	48 266	105 203	209 682	224 326	217 852	202 026	211 684	223 886
5. Construction	10 581	23 503	46 379	51 852	49 259	40 393	41 675	43 019
6. Electricity	1 450	5 147	12 594	13 647	14 554	14 655	15 745	17 052
7. Commerce	57 552	115 163	216 174	234 491	230 032	207 034	213 217	216 855
8. Transport and Communication	11 497	21 357	62 970	69 710	67 086	63 860	67 940	69 533
9. Financial Services	30 182	50 210	82 168	86 113	88 625	90 481	93 097	95 435
10. Public and Private Services	30 173	63 744	119 778	128 949	134 644	135 095	139 483	138 415
11. Banking services (imputed)	-2 299	-5 396	-10 985	-12 215	-12 533	-13 059	-13 608	-13 182

Source: SPP/INEGI-PNUD (1987), Sistema de Cuentas Nacionales de Mexico, 1960-1985.

Important measures taken recently in order to improve Mexican industrial performance are:

- A set of policies and programmes aiming the promotion of the production of manufactured exports. This general policy started with the broad outlines formulated in the National Development Plan, and were strengthened in the National Programme for Industrial Development and External Commerce 1984-1988 (PRONAFICE) and the Integral Export Development Programme (PROFIEX). The production of manufactured exports should generate the necessary amounts of foreign currency to solve Mexico's balance of payment problems and, increasingly important, it was seen as the only sector that could generate substantial amounts of productive employment.

- In May 1985, a programme was launched for the temporary import of inputs used in the production of export-articles (PITEX). Industries having annual sales of above 1 mln. US dollars or which export at least 10% of their production, are allowed to import temporarily inputs that are to be used in the production of export-products. Industries exporting a higher share of their total production (13% or more), may import on a temporary basis also machineries, instruments, research and control-equipment etc. (Acevedo Garat 1987:443). In 1986, inputs under this programme amounted almost 2 billion US dollars.

Complementary to the PITEX is the so-called 'drawback': the repayment of custom duties paid on imported goods which have been re-exported or used in the manufacturing of export-goods. This 'drawback' system has been introduced in April 1985.

Both measures are to support the export of non-oil products, providing means to produce at more internationally competetive price.

- In June 1985 new measures were taken to open the Mexican economy. The non-tariff barriers to imports (such as import permits and quotas) were substituted with tariff barriers, being the first major preparation towards entering the GATT (BANAMEX 1986). In November of the same year, the formal request for entering this organisation was under way and Mexico entered the GATT in 1986

under large protests of industrialists and employers organisations, as well as leading economists. Mexican industry, it was argued, could not compete with foreign imports, nor could it perform well with national products on export markets.

- The measures taken to stimulate and increase efficiency in national industry can be grouped together in what soon came to be known as the 'Industrial Reconversion'. For some time, it was not very clear what this 'reconversion' was actually about. The three main goals of the reconversion, as formulated in the 'Programa de Aliento y Crecimiento' (PAC), are:

1) introduction of new technologies by means of additional investments;

2) closing down of obsolete production activities; and

3) increased production, employment and productivity (BANCOMEXT, 1986:581).

Summarizing: the 1982 crisis had severe effects on the industrial outlook of Mexico, and this outlook is still changing rapidly as a consequence of ongoing restructuring activities. While the national and parastatal industries try to find a new balance, given the new economic situation, export production must guarantee the necessary employment and foreign currency needed in the immediate future. As will be shown later, export industries are not at all a recent phenomenon in Mexico. Before doing so, the regional economic effects of industrialisation will be highlighted in the next section.

3. Industrial growth versus regional development

The process of industrialisation in Mexico via import-substitution has resulted in important changes in the internal composition of the manufacturing sector. In 1945, two thirds of total employment in manufacturing was within food, drinks, textiles and leather (shoe) -industries. In 1975, this figure was reduced to 40%. In terms of employment, impressive growth took place in metal-industries, production of

machineries, electric- and electronic equipment and transport equipment: together they accounted for a quarter of all manufacturing employment in 1975, compared with less than 5% in 1945 (see Table 3). Unfortunately, data on intra-industry divisions after 1975 are not available yet, but it will be explained shortly that the recent developments will result in high growth rates of Divisions VIIIb and VIIIc.

Table 3. Composition of employment in manufacturing: 1945-75

Main division	1945	1960	1975
I. Food, drink and tobacco	31.3	24.8	23.6
II. Textiles, confection, leather	35.0	25.1	17.1
IIII. Wood, wood products (incl. furniture)	5.7	5.3	4.5
IV. Paper and -products, printing	4.2	6.9	4.9
V. Chemicals, oil derivates, rubber and plastics	5.8	11.5	11.1
VI. Non-metal minerals (excl. oil)	5.1	8.1	6.0
VII. Basic metal industries	6.6	4.6	4.8
VIII. a - Metal products	3.7	7.3	7.6
b - Machinery, incl. electric and electronic equipment	0.8	5.3	11.0
c - Transport equipment and components	0.3	2.5	6.7
IX. Other industries	2.1	2.0	2.1

Source: based on I. Hernandez Gutierrez: Estadisticas Historicas Industriales (1979).

3.1. The spatial distribution of Industrial Product versus Industrial Activity

During the first phase of import-substitution (the substitution of consumer goods), urbanization took place at a rapid pace. Massive migration from especially the rural areas, where the number of

landless people outgrew regional agricultural potentials, induced a fast growth of the three main cities in the country, Mexico-City, Monterrey and Guadalajara. Population growth in these urban areas fostered local consumption markets, and this is only one of the reasons why the new industries producing consumer durables located in these metropolitan cities. Thus, by 1965, 30% of all manufacturing firms were located in the Mexico-City metropolitan area, accounting for 40% of total investment in this sector, 45% of total GDP in manufacturing and 46% of manufacturing employment (Sahagun, 1977).

Table 4. Gross Domestic Product in manufacturing in selected regions: 1970-1980 (mlns. of current pesos)

Region/State	1970	1980	% distribution 1970	% distribution 1980	% growth 1970-80
1	2	3	4	5	6
Nation	105203.0	985013.1	100.0	100.0	836.3 (=100)
Metropolitan Area	52305.8	468182.0	49.7	47.5	95.1
Federal Distr.	33880.4	290140.0	32.2	29.5	90.4
Mexico	18425.4	178042.0	16.5	18.1	103.6
'The North'	23707.2	219116.5	22.5	22.2	98.6
Border States	20269.8	186154.1	19.3	18.9	97.9
Baja Calif.	2154.7	17236.9	2.0	1.7	83.7
Coahuila	3074.5	30631.0	2.9	3.1	107.2
Chihuahua	1846.0	18192.0	1.8	1.8	105.9
Nvo. Leon	10022.6	89709.5	9.5	9.1	95.1
Sonora	1362.0	12614.5	1.3	1.3	98.8
Tamaulipas	1810.0	17770.2	1.7	1.8	105.4
Other North	3437.4	32962.4	3.3	3.3	102.7
Durango	1097.4	9262.5	1.0	0.9	89.0
San Luis P.	1032.9	13519.7	1.0	1.4	144.6
Sinaloa	1307.1	10180.2	1.2	1.0	81.2
Other States	15891.6	154757.4	15.1	15.7	104.5
Jalisco	7248.7	65603.0	6.9	6.7	96.3

Table 4 (continued)

1	2	3	4	5	6
Veracruz	5334,7	51919.0	5.1	5.3	104.4
Puebla	3308.2	37235.4	3.1	3.8	122.6
Rest Country	13298.4	142957.2	12.6	14.5	116.6

Source: SPP/PNUD: Sistema de Cuentas Nacionales de Mexico. Estructure Economica Regional: PIB por Entidad Federativa, 1970, 1975, 1980; Mexico 1985.

As can be seen in Table 4, concentration of Gross Manufacturing Product (GMP or: GDP in manufacturing) in the Metropolitan Area increased to almost 50% in 1970. Together with the two states in which the large industrial centres of Monterrey and Guadalajara are located (Nuevo Leon and Jalisco respectively), the three main industrial regions/states accounted for two thirds of total GDP in manufacturing. This high concentration of GMP only slightly diminished during the seventies.

'The North', comprising all six border states (including Nuevo Leon) and three other northern states, produces around 22% of total GMP. The few states in this region which increased their share in GMP between 1970-1980 achieved this only on the basis of a very lov 1970 figure.

The 'rest of the country' is the only one 'region' showing a substantial increase in its GMP between 1970 and 1980. Although not visible in Table 4, this is mainly the result of the oil-related activities in some states in the country. Thus, 'poor' states in the South like Tabasco and Chiapas, still producing mainly food and food products in 1970, experienced the consequences of the oil-boom in the seventies, one of them being a growing share in Gross Manufacturing Product.

In short, 40 years of industrial 'development' in Mexico have resulted in a spatially highly uneven distribution of Industrial Produc

(the same can be said on the distribution of Regional Product, although not shown here). The main source of change in this spatial pattern seems to have been - surprisingly enough - the oil-industry and its related petrochemical activities.

However, Gross Domestic Product, Gross Industrial- and Manufacturing Product as well as Regional Product are strict economic measures of production. They do, for instance, not reflect increases in general (regional) welfare or income, nor in household income.

The internal structure of productive activities and, more important, the organizational structure of these activities in terms of 'Who acquires, What, Where' is not reflected in Regional Production figures. All these production figures show us the amount of Value Added in certain sectors and/or regions of production. In the case figures on Gross National Product, or National (Regional) Income be available to us, we would have an indication of the total amount of income paid to households in return for their labour-supply, plus the profits retained by firms in the region. Now, as we only know the regional/sectoral Value Added, we do not know amount of total income earned in the region. Also, we loose contact with the regional dynamics of industries in terms of the generation of industrial employment. For instance, Industrial (and Regional-) Product may be generated with high capital/labour ratios. This means that, although total product is high, this will not be reflected in a general increase of regional welfare, as relatively few household-incomes may be involved. Likewise, high production figures resulting in substantial (regionally generated) profits do not serve the region when not reinvested (or consumed) in the region itself.

In other words: the amount of Regional Income is not necessarily related to the size of Regional Product. As will be shown below, the case of manufacturing in Mexico reflects this clearly.

Table 5. Distribution and growth of employment and firms in manufacturing in selected regions, 1975-1985

Region/State	No. of employed 1975	1985	% distribution 1975	1985	% growth 1975-85	No. of firms 1975	1985	% distribution 1975	1985	% growth 1975-85
1	2	3	4	5	6	7	8	9	10	11
Nation	1654381	2573466	100.0	100.0	55.6	118643	149246	100.0	100.0	25.8
Metropolitan Area	765007	1013168	46.2	39.4	32.4	40140	43781	33.8	29.3	9.1
Federal Distr.	493365	613648	29.8	23.8	24.4	29668	30032	25.0	20.1	1.2
Mexico	271642	399520	16.4	15.5	47.1	10472	13749	8.8	9.2	31.3
'The North'	388088	702949	23.5	27.3	81.1	19825	31378	16.7	21.0	58.3
Border States	321908	597432	19.5	23.2	85.6	14288	23973	12.0	16.1	67.8
Baja Calif.	31075	55021	1.9	2.1	77.1	1608	2518	1.4	1.7	56.6
Coahuila	58790	95168	3.6	3.7	61.9	1940	3406	1.6	2.3	75.6
Chihuahua	43220	123949	2.6	4.8	186.8	2359	4113	2.0	2.8	74.4
Nvo. Leon	134258	206639	8.1	8.0	53.9	4640	7373	3.9	4.9	58.9
Sonora	24411	52234	1.5	2.0	114.0	1301	3041	1.1	2.0	133.7
Tamaulipas	30154	64421	1.8	2.5	113.6	2440	3522	2.1	2.4	44.3
Other North	66180	105517	4.0	4.1	59.4	5537	7405	4.7	5.0	33.7
Durango	18377	30225	1.1	1.2	64.5	1772	1925	1.5	1.3	8.6
San Luis P.	28160	50980	1.7	2.0	81.0	2105	2947	1.8	2.0	40.0
Sinaloa	19643	24312	1.2	0.9	23.8	1660	2533	1.4	1.7	52.6

Table 5 (continued)

1	2	3	4	5	6	7	8	9	10	11
Other States	241635	402314	14.6	15.6	66.5	24226	30315	20.4	20.3	25.1
Jalisco	114321	179535	6.9	7.0	57.0	9373	12042	7.9	8.1	28.5
Veracruz	62374	117869	3.8	4.6	89.0	9085	7782	7.7	5.2	14.3
Puebla	64940	104910	3.9	4.1	61.5	5768	10491	4.9	7.0	81.9
Rest Country	259651	455035	15.7	17.7	75.2	34452	43772	29.0	29.3	27.1

Source: X Censo Industrial 1976- datos de 1975; SPP/DGE, Mexico 1979
Censos Economicos 1986: Resultados Preliminares del Empadronamiento Urbano; Mexico 1986. Mexico 1986.

3.2. The spatial distribution of industrial employment

When looking at industrial concentration and dynamics in terms of employment and number of firms, the above presented picture of (spatial) concentration changes in an important way. In Table 5, the regional distribution of manufacturing employment and firms is given for 1975 and 1985, which means that the consequences of the post-1982 crisis (in this respect) are included.

Two general observations are relevant here:

Firstly, in 1975 the Metropolitan Area provided employment to 46% of total manufacturing employment in the country. In 1985, the area's share in employment had fallen to less than 40%. Both figures are below the area's share in Gross Manufacturing Product (cf. Table 4). Also, the region's share in the number of manufacturing firms has reduced significantly due to the almost stagnant figure of the Federal District. The reduction in the area's share of employment and firms is much larger than the fall in the area's share of GMP. When combining the three states/areas in which the old industrial centers are located (Metropolitan Area, Nuevo Leon and Jalisco), their growth in employment is only slightly above or below the national average.

Secondly, in the North employment and the number of firms rose considerably. In some Border States employment growth is twice or even triple that of the national average (the same being true for the number of firms). This tendency is not even reflected in a growth of the region's GMP. On the contrary, the region's share in manufacturing actually diminished and is lagging far behind the region's share in employment (cf. Table 4).

Summarizing: it is evident that the spatial concentration of Industry in terms of GMP is not reflected in a likewise concentration of industrial employment, nor do the tendencies of change of both figures coincide. Employment in manufacturing, having at least a household-income and a direct regional income effect, is growing fastest in a region where GMP is almost stagnant or diminishing.

There is no question about the fact that the economic crisis during 1982-1984 has severely affected employment figures in the large industrial centres. The type of industries located in these areas rely to a large degree on the local- and national consumer markets, on intermediate deliveries to other industries and/or on imports National economic performance leading towards price increases (inflation and devaluations) combined with a rapidly reducing purchasing power, are amongst the main causes of stagnating industrial activity in these centres.

But then, how did 'The North' escape this situation? How have the high growth figures in employment and number of firms been realised, when at the same time this region has been showing a reduced share in GMP? In the following section attention will be given to the special characteristics of industrialisation in 'The North'.

4. Export production: from northern reality to national policy

During the sixties, industrial policy in Mexico was still directed towards import substitution. High tariff barriers, licences and quotas still aided the protection of a 'national' industry and thereby industrial growth. There was no need yet nor any incentive to change this direction of industrial policy.

In the Northern Border zone, urbanisation took place at growth rates never experienced before, even by Mexican standards. This was mainly due to massive migration induced by legal and illegal possibilities to earn a living in the USA. In 1964, the so-called 'Bracero' labour agreement was cancelled by the US-government, meaning the return of hundreds of thousands Mexican labour migrants in the USA back to Mexico, most of them gathering in the Mexican border cities. These cities were already confronted with severe problems with respect to housing and labour. As a consequence, in the early sixties some regional development projects were launched, PRONAF

(PROGRAMMA NACIONAL FRONTERIZO, dating from 1961) being the most important among them. However, the new situation in 1964, being aggrevated by a severe agricultural crisis in cotton, required more than a global face-lifting of border cities, as was the main result of PRONAF.

In 1965, Mexico and the USA agreed upon a BORDER INDUSTRIALISATION PROGRAMME (BIP). One of the main objectives of this programme was the creation of employment in the border cities. This was to be accomplished by means of construction of the necessary infrastructure for industrial parks in the Border Zone (defined as a 20 mile zone into Mexico along the entire international border), in which industrial enterprises of a specific kind and complying with several prerequisites could operate.

The (mostly foreign) plants settling in Mexico under this programme, called 'maquiladoras', were exempted from Mexican taxes. Also, they were allowed to establish with a 100% foreign ownership, therewith escaping the Mexican rule that foreign companies should be owned at least for 51% by Mexican capital. Necessary imports were duty-free, and final products were to leave the country. In this sense, an enormous Export Processing Zone was created in the north of Mexico. For US-companies, another major advantage was that, being very near to the home-market, they could profit from the US import-tariff items 806.30 and 807.00, which state that re-import of (parts of) products are free of almost any duty: only the value added in the foreign country is subject to import-duties (Bearessen, 1974; Pronk, 1985).

In 1972, the first ammendments to the BIP were made: it was no longer a border industrialisation programme, as 'maquiladoras' could - from then on - settle anywhere in the country except in Mexico City, Guadalajara and Monterrey. Later, some sectors within the maquiladora industry were allowed to sell up to 20% of their production on the Mexican market. Both changes reflect the attitude of the Mexican government towards flexibilization of foreign investment.

The BIP, or 'maquiladora programme' - as it was no longer restricted to the border zone now - developed in a satisfactory way. Within ten years of operation, the number of industrial plants under this programme counted over 400, with a total employment of over 75 000 in 1974 (SPP, 1983). However, the rise in minimum wages as well as the growing labour costs (partly as a consequence of Echeverrias 'Shared Development' policy) meant a sharp and sudden reduction in employment figures of 9% in 1974/1975. Partly for this reason, but also due to other factors (like short terms of operation, closure during holidays etc.) the maquiladoras soon came to be known as 'run-away industries' (Bustamante, 1983; Canga, 1977). The 1976 peso-devaluation induced the establishment of new enterprises, and in 1978 the number of employees and firms was almost equal to that of 1974.

Ever since, maquiladoras have shaped the industrial outlook of Northern Mexico. In 1980, 620 maquiladoras employed 120 000 persons; only five years later 760 firms employed 212 000 persons. In 1986, the number of employed surpassed 275 000 (SPP, 1983; 1986; DESEC, 1987). Employment in maquiladora industries has not only become increasingly important for 'The North', but for the entire country. In 1975 maquiladora employment accounted for 4% of total employment in Mexican manufacturing; by 1985 this figure had risen to 11% (Banamex, 1986).

Although the firms under the maquiladora programme are free to choose their location (nowadays including the metropolitan areas), the border states are still the most favorite. However, regional shifts within the border states did occur, and will continue to take place in the near future. Formerly, Baja California loomed high in numbers of employment, partly due to its early status as a Free Trade Area. Recently, the state of Chihuahua has shown the fastest growth in number of maquiladoras and employment. Sonora and Nuevo Leon are now starting intensively with the acquisition of maquiladoras, the

governor of the last state aims at 200 000 employees in his state before the end of this era (Uno mas Uno, September 1986).

The employment effect in the Border States has proved to be of utmost importance. As can be observed from Table 6, it is however not the mere growth of employment as such, but the employment numbers in relation to total manufacturing employment that make maquiladoras so important for this region. In three out of the five states listed, employment in maquiladoras accounts for more than half of total manufacturing employment. The last column shows the percentage of total employment growth in manufacturing that can be explained solely by the creation of maquiladora employment: the states of Baja California, Chihuahua and Tamaulipas owe 70 up to 98% of their employment growth in manufacturing to these maquiladora industries!

Table 6. Employment in maquiladoras in relation to total manufacturing employment in 5 selected Border States (1975 and 1985)

	Number of employed in maquiladoras		Maquiladora employment as % of total employment in manufacturing		% of growth in manufacturing employment explained by maquiladoras
	1975	1985	1975	1985	1975-85
Baja Cal	15 285	38 975	49	71	98
Coahuila	4 461	10 700	8	11	17
Chihuahua	19 775	77 592	46	62	72
Sonora	9 430	20 197	39	39	39
Tamaulipas	12 961	37 050	43	58	70

Source: SPP, 1986 and calculations based on Table 5.

The number of persons employed in plants operating under the US tariff items 806.30 and 807.00 is, however, even much larger than the number of those employed in maquiladoras suggests. Another peculiar type of export industries exists in 'The North', although they are not maquiladoras in the sense of the Mexican law. This is due to a 1972 government decree, stating that companies producing (parts of) automobilites or computers for the Mexican market should compensate the value of their total imports with an equal value of exports (preferably with a positive export balance) before 1979. Partly due to the economic crisis in 1976, this decree was renewed in 1977, at which time the deadline was postponed to 1982 (Alderete, 1986; see also Looney, 1982).

Both these two sectors of export industry grow even faster now in 'The North' than the maquiladora industry. Industrial parks in 'The North' are filling up with plants producing autoparts and computer components, if not complete microcomputers. As these industries are no true 'maquiladoras' (according to the Mexican law) but do operate under the US import-tariff items, the employment figures of these industries are not given in the maquiladora statistics. In terms of destination of production (export), type of operation (assembly) and dependency on relatively cheap labour and production costs, these industries are, however, very much like maquiladoras (Alderete, 1986). Both types together are called 'in-bond' industries, referring to the assembly character of their production and the use of imported components.

In short: what started originally in the North of Mexico as a mere regional development programme, finally became the core of Mexico's new wing of industrial policy: export production through direct foreign investment as a means to provide foreign currency, to create employment, to establish a technology transfer and to increase intra-industry linkages.

Much has already been said about the ins and outs, pros and cons of maquiladoras (see for good overviews on this topic: De Buen and

Fernandez 1983; Dilman 1983; Martinez del Campo, 1983) . However, some remarks have to be made with regard to export-production in general and maquiladoras in particular.

1. Maquiladoras gave form to the industrial panorama in northern Mexico (with the exception of Monterrey) , as other industries have been of little importance. Although initially employment was insecure and wages were not always paid according to labour legislation and minimum wage regulations, this cannot be said anymore. In fact, maquiladoras are eager to keep their personnel in their enterprise, as turn-over rates increased alarmingly, reaching 15% monthly in 1984 (Banamex 1984) . Thus, increasing fringe benefits, higher salaries and solid labour contracts are no longer the exception but the rule.

2. Maquiladoras have little or no relation to regional or local industry. Intra-industry deliveries hardly take place, and - if they do - (still) occur in the United States instead of in Mexico. Out of total inputs used by maquiladoras, only 1% is of Mexican origin and, thus, 99% being imported! In 1986, imported inputs added up to 4.3 billions of US dollars (SPP, 1986; Acevedo Garat, 1987:442) . Consequently, local industry is not yet stimulated by the existence of, and proximity to, the most important industrial uplift in the region. Neither is this likely in the near future, despite the postulated aim in the National Development Plan to increase the level of national integration in the production of manufactured goods (see also final discussion) .

3. Most important is (as stated by leading government officials) the income generating effect of maquiladoras. As maquiladoras are tax-exempted in Mexico, the only income generating effect for Mexico is related to wages and inputs of Mexican origin. Local expenditures necessary for running the operation (rent, electricity, water etc.) are ten times higher than the total amount of Mexican inputs! Salaries and wages account for more than half of total Value Added, and these are the main sources of income out of maquiladoras for Mexico (figures for 1985; SPP 1986) . Despite these considerations, the in-bond industry

is actually the second generator of foreign currency at this moment, oil being the first (see also below).

Few were the people who took this type of industrialisation very seriously. In fact, one had to feel ashamed, talking about maquiladoras as having any positive effect for Mexico. Likewise, and for many years, industrialisation in 'The North' has hardly been observed in the centre of the country. Only after 1982, 17 years after the initial introduction of this type of industries, newspapers pay attention regularly to new developments in the in-bond industry. Nevertheless, the Mexican government soon became aware of these industries, in particular given its growing concern for employment creation and its worsening foreign debt situation. Ultimately, this is the main reason why the maquiladora programme has been transformed, in order to serve as a nation-wide industrialisation-strategy.

5. Economic performance and foreign manufacturing industries

> "In August 1985, aggregate value (of the in-bond industries - WH) reached 893 million dollars and estimates were that, by the end of the year, the total would be 1.3 billion dollars, 13% above 1984. (...) In 1985, the industry occupied the second place, behind the petroleum sector, as a net generator of foreign currency for the nation." (quoted from BANAMEX, 1985:457-460).

The in-bond industry provides a large share of the badly needed foreign currency. However, at least in the case of the maquiladora industry, this is largely paid in wages and salaries. Therefore, the situation becomes rather complicated, as the second income generator of foreign currency does hardly or not contribute to GDP in manufacturing or to Regional Product, as is shown in section 3 of this paper. Thus the in-bond industries do have a positive effect on regional income by means of the payment of salaries, wages and plant-operation costs,

but this is not reflected in an increase in Regional Product. The difference with export product number one (crude oil) is striking, as this is an activity that not only generates wages and salaries, but the more so contributes to national capital formation. In the case of in-bond industries, only the mere production costs flow into the country; profits, savings, taxes and state-revenues are zero.

One may argue that it is not difficult to distinguish between foreign industries and national industries in terms of the regional-economic effects of the plants involved. Therefore, in the following, in-bond industries will be distinguished from other foreign companies in Mexican manufacturing industry. In a literal sense, both are Trans National Corporations (TNC's). For the sake of convenience, I will distinguish the 'classical' or 'normal' TNC, producing in Mexico for the Mexican market, from the 'in-bond TNC', producing in Mexico for the home-market. The differences between those two types of direct foreign investment in manufacturing are of great significance when discussing their contribution to Regional or Industrial Product and to Regional Income:

Firstly, the TNC's located in Mexico and producing for the Mexican market do (generally) not produce for branch plants in the home country, whereas in-bond industries located in Mexico produce almost solely for parent companies located abroad. When restricting to US companies only: in-bond industries may calculate a relatively low value added in Mexico, as it is taxed at the moment of import in the USA (import tarriff items 806.30-807.00). Other TNC's are not at all aided by calculating a relatively low Value Added, as this will be reflected in the prices of the final (consumer) products which are to be sold on the Mexican market. One of the consequences of this difference is that 'normal' TNC's contribute more to industrial GDP (or to Regional Product) than do in-bond industries (even when assuming that both industries produce exactly the same product while using exactly the same inputs). The following comparisons may illustrate this difference:

- In 1975, 61% of the total Value Added in maquiladoras consisted of salaries and wages, the comparable figure for all manufacturing industry in Mexico was only 43%.

- Likewise, the Value Added as a percentage of the Gross Value of Production is lower for maquiladoras than it is for all manufacturing industry.

- Also, in 1975 the Value Added per employed person in the entire manufacturing sector was 107 000 pesos per year. The comparable figure for maquiladoras in the same year is only 59 000 pesos per year, while this covers the highly efficient, modern and US-run industries! (calculations based on SPP, 1986 and SPP/DGE, 1979).

In sum: one of the reasons that GDP in manufacturing in 'The North' is not rising as spectacular as is suggested by industrial activity in this region (expressed in the numbers of firms and employment), is that the Value Added (being the local/regional added value in GDP figures) in the in-bond industries may be kept relatively low. Consequently, as the Value Added is one of the main components of (Regional or Industrial) GDP, the Regional Product in the North and its GDP in manufacturing will be kept relatively low.

Secondly, one may question the differences between the two types of foreign industries in the net-income effect for Mexico. TNC's operating on the Mexican market have essentially different goals of production compared to in-bond industries: apart from gaining and enlarging market-shares, they would not settle at all if it were not profitable. Profits will finally be returned to the parent-company. Profits are made thanks to Mexican consumers who buy the final products. As is made clear by Jenkins, TNC's in Mexico concentrate in high-profit sectors within manufacturing and have rates of return twice as high as do have local firms. The same author claims that the contribution on the balance of payments of foreign direct investment during the 1940-1972 period is a net outflow of US $ 1.586 million (Jenkins 1978).

In contrast, in-bond industries (in so far as they do not sell part of their production of the Mexican market) are not profitable per se at the level of the production unit: they produce very cheaply for parent companies in the USA. Thus: profits are likely to be realised elsewhere. The main point however is, that in contrast to the 'other' TNC's, they bring money into the country, in this case: (northern) Mexico. Although in-bond industries hardly stimulate local industry by means of intra-industrial linkages, all they do is exchanging foreign currency into local labour, rent, services, electricity, transport and other utilities. They are spending money in one country, whilst they are saving money in another country.

Thus: while in-bond industries hardly contribute to Regional Product or Industrial Product figures, the net-effect of these activities is a positive balance of exchange for Mexico, especially within the producing regions. Though other TNC's do contribute heavily to Regional- and Industrial Product figures, in the end they transfer Mexican consumer pesos into company profits abroad, therewith influencing Regional Income (and National Income) figures in a negative way.

We are faced with an essential dichotomy in types of foreign industries. The two types can be distinguished in terms of the following:

- different markets for the final product;
- (therefore) different reasons to operate in Mexico;
- (therefore) entirely different locations at the regional scale (consumer-market locations in the metropolitan cities or highly urbanised regions (i.e. the centre or the country) vs. location close to the final export-market);
- different effects on the local/regional economy (Regional Product vs. Regional Income);
- different effects on the national economy (balance of payments);
- different reactions on economic performance (growth and crisis).

One may speak, therefore, of a dissimilarity in the causes and effects of (foreign) investment in manufacturing industry. In the case of Mexico, this dissimilarity leads towards a regional diversion of economic performance and of economic activities. The activities involved can only partly be differentiated by the type of their final product, neither can they be differentiated entirely in terms of the origin of investment capital. In fact, it is the location of the final product market that seems to be decisive in the (regional) performance of (foreign investment in) industry. I will illustrate this for the case of the 'Mexican' automobile industry (apart from DINA, all automobile industry is foreign-owned).

The national market for automobiles has since long been served (and is still being served) from the country: Mexico City, Puebla and Toluca. The location of the production units is based on the market principles of location theory (as has been the case for most of the durable consumer goods industry during the period of import-substitution). In 1982, the national market for automobiles dropped. This was due to the high losses in real income (as a consequence of uncompensated high inflation), to increasing costs of imported inputs (peso-devaluation) and to the introduction of an exorbitant sales-tax on new cars. From then on, the automobile industry is being confronted with severe losses, exceeding 1.5 billion US dollars since 1982 (BANCOMEXT, 1986).

Automobile industry plants (including the production of autoparts), however, flourished in the North, especially from 1982 onwards. Since the early seventies, relatively uncomplicated components like wiring harnasses were produced in maquiladora industries. In 1984, a US-plant established in Chihuahua producing 400 000 motorblocs annualy. In 1985, a French plant producing motorblocks opened in Torreon. Japanese plants producing for the home- and US-market established in Aguascalientes and Sonora. In 1986 a combined US-Japanese owned plant started producing complete cars in Sonora. A US-branch automatic transmission plant is planned to establish in 'The North'.

Of course, these plants all produce for export markets. Attracted by low (and still decreasing) production costs (wage-costs did not keep up with inflation and the dollar-peso ratio 'improves' daily), the location of these plants in the North is entirely based on low production costs and proximity to final markets as well as management.

Whereas in one part of the country the automobile industry fights for its mere existence, in another part the same industry (in some cases even the same branches or companies) open new plants at a rapid pace. The dissimilarities of the causes and effects of both 'types' of foreign investment in automobile industry are based in the different markets which are being served, resulting in different reactions on economic growth and decline in the country. Both 'types' of foreign investments have their own effects on regional income and regional product, as well as on employment figures.

6. Discussion

Both the former and the present outlook of the Mexican economy and Mexican industry have strongly been influenced by foreign capital. Initially, direct foreign investments fostered the process of import-substitution; later, they contributed to de-substitution and increasing trade- and balance of payments deficits. Then, foreign loans became more and more important in the financing of Mexico's economic 'development' (Brannon, 1985:16).

Presently, president Miguel de la Madrid is making strong efforts to open the country to new investors. Foreign investment is indeed necessary and effective as far as employment is concerned. Whereas in central regions manufacturing employment stagnated and even diminished in absolute numbers, foreign investment resulted in high growth rates of industrial employment in 'The North'.

Mexico's centre flourished during the period of industrialisation serving national markets (i.e. import-substitution). Then, due to the economic crisis of 1982 and beyond, national consumer and producer

markets were too small in relation to the existing productive capacity of industry. As a result, financial losses up to bankruptcy and plant-closures took (and are still taking) place, especially in the central industrial area, but also in Monterrey. The crisis not only affected Mexican industry: foreign TNC-subsidiaries also felt the consequences of the sudden and sharp drop in their product markets.

'The North', on the other hand, hardly participated in industrialisation via import-substitution, neither did this region experience the crisis as bad as the centre of the country. When export-industries arrived in the region as part of a regional development programme, it turned out to be a great success in terms of employment and in the generation of (foreign) currency. 'The North' today is flourishing, as foreign investments of this type are warmly welcomed by the Mexicans. Besides, as production costs diminish almost daily and investment costs can be obtained at reduced rates, investment-money flows into the country in a period of high economic crisis.

The measures taken since the crisis in order to promote industrialisation for exports, especially the 'drawback' and PITEX programme, contribute to a closing of the gap between 'maquiladoras' and other exporting industries. As these new measures have no regional limitations, export production may increase also in the old industrial areas, as some TNC's might choose to combine both production for local markets and production for exports.

Providing duty-free imports for export-production does, however, conflict with one of the main goals of recent industrialisation strategy: to increase the level of national integration in export production. Such a higher level will only be realised by stimulating the use of nationally produced inputs. It is the opinion of maquiladora managers, that local inputs are hardly used because of their bad quality, incompetitive prices and bad sales conditions of providers. Therefore, it is suggested to give the same preferential import-treatment to 'indirect exporters': those who produce goods that are used in the production of export

products. The example for such an 'intermediate drawback' is already given by Brasil (Acevedo Garat 1987:442, 445).

Such a measure definitely would mean the increase in Value Added of the products to be exported. As we have seen, not every plant producing for export will be looking for such an opportunity, as the (possible) reduction in transport costs must finally outweigh the additional taxes on import in the USA. Many in-bond industries will not use local inputs as long as they are not cost-effective in the end, as cost reduction is their raison d'etre.

Besides, an 'intermediate drawback' could result in a production-chain of intermediate- and indirect products which will finally be used in export goods. This might bring along the risk of neglecting the existing national productive capacity which, in the end, should actually be more competetive internationally!

Maquiladoras may not be called 'development', as they lack any stimulus to local activity and as they hardly contribute to a national industrial base. 'The North' might be delighted with their existence, as they bring the necessary employment and household incomes. However, turning the country into one large maquiladora will definitely mean the end of any trial to realise an autonomous process of industrialisation.

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THE CASE OF VENEZUELA: REGIONAL DEVELOPMENT PROCESSES AND POLICIES

1. Twenty-five years of regional processes and policies: 1958-1983

The regional pattern resulting from urbanization processes occurring during Pérez Jiménez' dictatorship (1948-1958, particularly 1952-1958) was described by Erich Otremba in two papers published in 1954.

E. Otremba tried to sketch the development and change of Venezuelan cultural landscape under the dominant influence of petroleum. Changes in the landscape implied previous development of two peripheral oil exporting territories. The aforesaid territories had grown at the periphery of a densely settled centre of organization, consumption and commerce, developed in Caracas and the neighbouring areas of the Federal District and the states of Miranda, Aragua and Carabobo. The peripheral economies were polarized toward two cores: Maracaibo (west) and Puerto La Cruz (east). The former was regarded as more important than the latter and the area depending from it was specifically defined by Otremba as the economic core area at the periphery. According to Otremba "the drama of modern Venezuela's economic life is being played in the aforesaid territories. Nothing has been won still in the play by the Andes, the Llanos and Guayana. With a very few exceptions, they are losing importance and even may lose

their present productive forces". In other paragraphs, however, strong growth has been recognized in the agricultural and forest areas of the Western Llanos and in the prospective mining growth areas in Guayana. According to Otremba, the scale of urban growth by areas was, in increasing order, as follows: 1) impoverished, stagnant and decadent cities of the Llanos; 2) stagnant cities of the Orinoco; 3) Andean cities, whose growth rates were about the national average; 4) fast growing cities in the eastern Andean piedmont; 5) oilfield settlements; 6) the national capital.

No description was made of the midwestern and northeastern cities. According to the map, they grew at rates under the national average. Cities of the remaining areas of the Federal District as well as of the states of Miranda, Aragua and Carabobo were not separately classified but in other paragraphs they were included in the core area or centre.

The period of Pérez Jiménez' dictatorship was also characterized by the strong tempo of urbanization process: the urbanization level (percentage of urban population) increased from 47.9 in 1950 to 62.5 in 1961, meaning an increase of 14.6 points, lower than the increase between 1941 and 1950 (16.6 points) but higher than between 1961 and 1971 (13.0 points).

In 1961, 37.9% of the population lived in metropolitan areas having 100 000 or more inhabitants. Then the 1950s may be defined as the years beginning the process of population metropolization (Chaves 1974).

Generally speaking, the 1950s may be described as a period of fast and strong growth of petroleum exports. Expanding prosperity of the oilfield settlements and high product per capita in the oil producing states (Zulia, Anzoátegui and Monagas) were the result of petroleum investment. The petroleum rent received by the state was spent on the growth of bureaucracy and sumptuary public works in Caracas and the North-Central Coastal region.

The location of investment in iron ore mining in northeastern Guayana allowed some economic growth in this region while sanitation of the lowlands allowed the colonization of the fertile lands of Western Llanos, a process that was eased by the construction of roads and by the inclusion of colonization as one of the priorities of the policy of agrarian reform.

The concentration of investment in a few mining and oil extracting settlements as well as in the core area or "heartland" meant increased population mobility. The colonization of the western Llanos also meant increased population mobility, especially from the Andes to the Llanos.

Toward the end of the 1950s the reversion of oil concessions to the state meant the slowing down of investment in the oil - fields. This meant the stagnation of the petroleum cities. Otremba's scheme collapsed as the former prosperity of the economic poles of periphery was fed by now stagnant oilfield settlements. Zulia, Anzoátegui and Monagas decreased their ranks in the hierarchy of products per capita.

Table 1. Share of the States of Zulia, Anzoátegui and Monagas in the total population

	1936	1941	1950	1961	1971	1981
Zulia	8.2	9.0	11.1	12.2	12.1	11.5
Anzoátegui	3.9	4.0	4.8	5.1	4.7	4.7
Monagas	2.8	3.2	3.5	3.3	2.8	2.7
Total	14.9	16.2	19.4	20.6	19.6	18.9

When the peripheral cores collapsed, the centre or "heartland" became relatively strengthened and the center-periphery spatial structure became consolidated.

The governments which followed after the fall of dictatorship adopted the policy of industrialization by export substitution. The na-

tional market which was strongly concentrated in the North-Central region became a magnet attracting manufacturing.

The strong political centralization, inherited from the dictatorial governments of Gómez and Pérez Jiménez, implied a strong concentration of political and administrative decisions in the capital. The economy strongly supported by public expenditures, was favourable to the concentration of manufacturing inside and around the capital.

On the 30th of December, 1958 was created the Central Office of Coordination and Planning (CORDIPLAN) by the Decree No. 492. It depended upon the Presidency of the Republic and the tasks of regional planning were allocated to it. The regional objectives were regarded as integrating parts of the National (generally Five Year) Plans.

As indicated by E. Cordero (1985), the first three plans approved in the 1960s referred in a general way to regional development. E. Cordero writes: "The First National Plan (1960-1964) referred to the problems of overcrowding detected in the Metropolitan Area of Caracas; it proposed to counteract them through agrarian reform and industrialization policies, resulting in decongestion of the centre and in polarization of activities around several axes located in the interior of the country" (1985:134).

The Second National Plan (1963-1966) postulated that the common resources posessed by the Nation should be more fairly shared among the regions. The theory of the propelling industry (industrie motrice) and the multiplying effect gave the general trends for the adoption of the policy beginning with the 1969 Regionalization Decree.

The policy defined in the Second Plan re-appeared in the Third National Plan (1965-1968) (idem).

Results of the deconcentration policy were felt however in the North-Central Coastal region rather than in other areas of the country. The state of Miranda - comprising the satellite cities of Fajardo (east), Losada (south), the upland satellite area of Los Altos (including Los Teques) and the valley of Paracotos (southwest) - and the states of Aragua and Carabobo - comprising the manufacturing axis of Puerto

Cabello-Tejerías - increased their share in the national population from 14.1% in 1950 to 15.8% in 1961; they reached 19.1% in 1971. The Federal District grew from 14.1% in 1950 to 16.7% in 1961 and to 17.4% in 1971 (Table 2).

Notice that the total percentages were the same for the Federal District and the states in 1950; the Federal District grew more than the three states between 1950 and 1961, and the states more than the Federal District between 1961 and 1971. Due to suburbanization and deconcentration, the Federal District decreased its share from 17.4% in 1971 to 14.3% in 1981. Aragua and Carabobo increased their share, but Miranda, which includes the satellite cities and area, attained the highest increase, from 8.0 to 9.8%.

Table 2. Share of the Federal District and the states of Aragua, Carabobo and Miranda in the total population

	1936	1941	1950	1961	1971	1981
Federal District	8.4	9.9	14.1	16.7	17.4	14.3
Aragua	3.9	3.6	3.8	4.2	5.1	6.1
Carabobo	5.1	5.0	4.8	5.1	6.1	7.3
Miranda	6.4	5.9	5.5	6.5	8.0	9.8
North-Central Coastal Region	23.8	24.4	28.2	32.5	36.6	37.5

Source: Páez Celis, loc. cit.

Summarizing, the period 1941-1961 is characterized by the growth of Caracas and the stagnation of other areas (including the Centre outside Caracas and the remaining states of the periphery). Between 1961 and 1971 the oil producing states stagnated and the growth of the Centre reached the states of Aragua, Carabobo and Miranda.

The general trend to peripheral stagnation was modified by the industrialization in Guayana and the colonization of Western Llanos, beginning in 1950 (Table 3).

The industrialization of Guyana and the colonization of the lowlands fringing the Cordillera of Mérida meant differentiation of the periphery as areas of population increase and colonization appeared among areas of stagnation (Table 3).

Table 3. Share of the states of Bolivar, Barinas and Portuguesa in the total population

	1936	1941	1950	1961	1971	1981
Bolivar	2.5	2.5	2.5	2.8	3.6	4.6
Barinas	1.7	1.6	1.6	1.9	2.2	2.3
Portuguesa	2.2	2.3	2.4	2.7	2.8	2.9
Total	6.4	6.4	6.5	7.4	8.6	9.8

Source: Páez Celia, loc. cit.

Notice that colonization of the Llanos advanced from northeast to southwest: in Portuguesa the increase occurs continuously from 1936 onwards but the strongest increase occurred between 1950 and 1961; in Barinas the increase began in 1950 and it was strong not only between 1950 and 1961 but also between 1961 and 1971.

Studies made by L. F. Chaves (1973) and K. Diaz (1975) about the functional structure of cities in 1961 and 1971, respectively, showed the differentiation of the Centre and the Periphery and the regional differentiation within the periphery.

L. F. Chaves characterized the cities of North-Central Coastal region or core region by the presence of port, manufacturing and administrative functions. The oil cities and service centres in oil areas appeared as clusters in the West, the Northwest and the North-

east. A belt of central places in areas of highly commercialized and industrialized agriculture was recognized, extending from the basin of Lake of Maracaibo, through the northeastern Andes and the north-western depressions, accross the Llanos, as far as Maturin. To the south, a belt of central places in areas of less commercialized and industrialized agriculture was recognized, including Mérida, Táchira, Barinas and Apure. A cluster of mining and manufacturing cities was recognized in the iron ore belt of Imataca (northeastern Guayana) (Chaves 1973:212).

In K. Diaz' study, the cities of the Centre were defined as manufacturing and port cities. The belt of central places in areas of highly commercialized and industrialized agriculture was divided into two areas: 1) Mid-Western (Lara and neighbouring areas of south-western Yaracuy, northern Portuguesa, northeastern and central Trujillo), 2) Northeastern (Sucre, Monagas, Anzoátegui and Bolivar). The belt of central places in areas of less commercialized and industrialized agriculture was recognized in the Southwest (Mérida, Táchira, Barinas and the neighbouring areas of southern Zulia) (Diaz 1975:104-105).

The lack of data for employment in oil extraction and mining has not allowed the definition of mining and oil producing cities.

The Mid-Western area was characterized by agro-industrial and agro-commercial cities.

The Northeastern area included diversified central places as well as central places with strong politico-administrative functions and oil cities with politico-administrative functions.

The Southwestern area included central places with agro-industries and central places with diversified manufacturing (Idem: 102-103).

The petroleum boom of the 1970s allowed the accumulation of capital and the urbanization of the periphery.

The Fourth National Plan (1969-1974) initiated the policy of regionalization of planning and development. The tasks of regional

coordination and planning were allocated to the ORCOPLANS (Offices for Regional Coordination and Planning) while the tasks of regional development were allocated to the Regional Corporations. In practice only the Corporation of Guayana had economic resources and functional autonomy enough for an autonomous promotion of regional development.

The following regions were initially defined: Capital (Federal District and Miranda), Central (Aragua, Carabobo, Guárico and Cojedes). Northeastern (Anzoátegui, Sucre, Monagas and Nueva Esparta), Midwestern (Lara, Falcón, Portuguesa and Yaracuy), Zulian (Zulia), Andean (Táchira, Trujilo, Mérida, Barinas and the District of Páez in Western Apure), Southern (Central and Eastern Apure, District of Cedeno in Western Bolivar and Amazonas) and Guayana (Eastern and Central Bolivar and Delta-Amacuro).

Simultaneously, regional cores were developing in the Northeast, Guayana, Zulia, the Andes and the Midwest.

The Fifth National Plan (1974-1979) had to recognize the emergence of the regional cores. In its proposition for industrial deconcentration, four areas were recognized: A) an area in which manufacturing displacement to other regions should be incentivated, comprising the Metropolitan Area of Caracas; B) an area of non incentivation of new factories, including the remaining area of the North-Central Coastal region; C) an area of manufacturing incentivation, including most metropolitan areas in the Periphery; D) in other urban settlements in the Periphery the priority for new factories should be less important.

Among the metropolitan areas, the attention was concentrated on three: Barquisimeto, as imminent extension of the Centre, Maracaibo and Ciudad Guayana.

A new regional scheme was approved. The Capital region was united with the core of the Central region (Carabobo and Aragua), forming the North-Central Coastal region. The peripheral areas of the former Central region as well as central and eastern Apure became integrated in a new region (Llanos) which included also parts of south-

ern Aragua (District of Urdaneta) and eastern Barinas (District of Arismendi). Zulian and Midwestern regions remained unmodified, Andean region almost unmodified. The Southern region was reduced to Amazonas, Guayana to Bolivar and Delta-Amacuro. The Northeastern included Anzóategui, Monagas and Sucre. A new region was formed with the islands (Nueva Esparta and the Federal Dependencies).

II. New trends of space organization in the 1980s

1. The axial organization of space in the policies of the Sixth National Plan

The Sixth National Plan (1979-1984) formally recognized the emergence of five regional poles in the periphery: 1) Maracaibo - Eastern Coast of Lake of Maracaibo (cities developed on the oilfields of Bolivar and Mene Grande and the petrochemical complex of Tablazo Bay); 2) Barquisimeto-Acarigua-Araure, including the valleys of Turbio and Sarare rivers between the states of Lara, Yaracuy and Portuguesa (Cabudare-Los Rastrojos, Yaritagua, Sarare, La Miel); 3) San Cristóbal-La Fria - San Antonio; 4) Barcelona-Puerto La Cruz and Cumaná; 5) Ciudad Guayana-Ciudad Bolivar. The areas were defined as Prior Areas for Urban Development (PAUD or APDU) and the tasks of "deconcentrated concentration" were allocated to them.

A new regional division was approved: the South was aggregated to the region of Guayana; the Capital region was recreated; Cojedes was aggregated to Carabobo and Aragua in the Central region; southern Aragua turned back to the Central region and eastern Barinas to the Andean region. The Zulian, Midwestern, Northeastern and Insular regions remained unchanged.

The growth of Guayana, shown by the increase of the specific weight of the state of Bolivar from 2.8% in 1961 to 4.6% of total

population in 1971, has been seen as the basis for the development of a new economic axis in the Orinoco-Apure.

Strategy for the development of this axis was based on iron ore, hydroelectricity and steel and aluminium metallurgy in lower Caroni and other eastern Guayana areas; bauxite mining in western Guayana (Los Pijiguaos) and coal-coke, phosphatic rocks and Portland cement in the state of Táchira. Other resources in the western end of the axis include petroleum (in the Barinas or western sub-basin of Apure basin), hydroelectricity (in the Uribante-Caparo) and non ferrous ores (in the southwestern part of the Cordillera of Mérida).

The capital needed for the development of such enterprises as iron mining (Ferrominera), steel (SIDOR), ferroalloys (Fesilven), bauxite mining (Bauxiven), alumina refining (Interalumina), aluminium (Venalum and Alcasa) and hydroelectricity (Edelca), comes from a holding controlled by CVG (Corporación Venezolana de Guayana).

The general strategy for the development of the Orinoco-Apure axis proposed during the government of Herrera Campins (1979-1984) has been developed during the government of Lusinchi (1984-1989). The Investment Fund of Venezuela, the CVG and the UPE Suroeste (Special Programming Unit for the Southwest) have promoted the re-vitalization of coal and phosphate mining in the state of Táchira. In 1986, President Lusinchi has opened the Orinoco-Apure waterway and the first embarkation of bauxite from Los Pijiguaos in Puerto Gumilla took plan. Development of the petroleum belt of the Orinoco (on the left banks of Orinoco), involving costly investment in new technology, has been postponed due to the crack of petroleum economy beginning in 1983.

The strong specific weight of Guayana in Orinoco-Apure causes a disbalance in relations within the axis. The relation between Guayana, the Central, Southwestern and Southern Llanos, and the southwestern part of the Cordillera of Mérida is asymmetric and the danger of a new center-periphery relation has been suggested by some people in the state of Táchira. The investments of CVG in mining ventures in the Southwest have been feared as a form of internal colonialism.

2. Population dynamics in the differentiation of periphery

The analysis of the periphery according to five variables allows the recognition of four regions in 1981 (Fig. 1). The variables are: percentage of immigrants in total migration movement; natural growth; birth rates 1971-1980; population percentage in the age group 15 to 64 years; number of dwellers per house.

Fig. 1. Population dynamics in the differentiation of periphery: C: Centre, P: Periphery, P1: Intermediate periphery, P1a: Peripheral cores, P1b: Average states, P1c: Other intermediate; P1d: Emigration periphery, P2: Stagnant periphery, P3: Colonization periphery.

The strongest differences are those opposing the Centre (Federal District and states of Miranda, Aragua and Carabobo) and the Periphery (the remaining states and territories).

The Centre (C) is characterized by high percentages of immigrants in total migration movement (more than 70% with the exception of the Federal District, which is affected by "population overflow" to the satellite cities in the state of Miranda). Immigration explains high percentages of population in the age 15 to 64 (more than 56%). The birth rates are under 36.8‰; they are low in Miranda, but higher in the Federal District and the states of Aragua and Carabobo. This is explained by the counteraction of high percentages of population in the age of fertility and malthusian behaviour (according to the national standards these birth rates may be defined as "low" to"moderately low"). Moderately high rates of natural growth in Aragua and Carabobo (but high in the Federal District and low in Miranda) may be explained by the same counteraction. The nuclear family is predominant (less than 5.3 dwellers per house).

The Periphery may be divided into three domains: P1) intermediate periphery, P2) stagnant periphery and P3) colonization periphery.

Stagnant periphery (P2) (states of Monagas, Sucre and Apure, and federal territory of Delta-Amacuro) shows the opposite traits of the Centre: high emigration (immigrants accounting for less than 39.5% of total migration movement); population percentages in the age 15 to 64 accounting for less than 51% of population; the emigration explains high but not the highest natural growth rates: 29.6 to 30.8‰ (an exception is Apure with the highest rate of the country: 47.5); the birth rates are over 40.4‰ and the number of dwellers per house is 5.8 to 5.9 meaning larger families than in the Centre.

Colonization periphery (P3) (states of Portuguesa, Barinas and Bolivar and Federal Territory of Amazonas) show immigrant percentages (61.9 to 73.9 in the migration totals) similar to those of the Centre; natural growth is high (over 35‰); birth rates are similar to those of

stagnant periphery; with the exception of Bolivar, percentages of population in the age 15 to 64 are similar to those in stagnant periphery; the number of dwellers per house is similar to that in intermediate periphery.

Intermediate periphery (P1) includes the largest part of the states, showing intermediate indices. Zulia and Anzoategui (P1a) are more similar to the Centre than other states, except in the indices of family size. Cojedes and Yaracuy (P1b) are the average states. Other two groups showing their own peculiarities in the inside of the large domain are: P1c (Lara and Nueva Esparta) and P1d (Falcón, Táchira, Trujillo, Mérida and Guárico). The last group (P1d) shows opposite traits regarding colonization periphery in the values of most variables; then it may be defined as emigration periphery.

3. Crack of the rent based petroleum economy and emergence of the intermediate agro-commercial, agro-industrial and transportation belt. Spatial strategy of the Seventh National Plan

On the 18th February 1983, the Venezuelan Government recognized that the period of economic prosperity of the 1970s has ended. The petroleum market had cracked ... The national money (bolivar) should be devaluated and the money exchange should be controlled. The economy based on petroleum should shift to an economy based on productive sectors, agriculture and manufacturing. The utilization of domestic resources should increase.

The aforesaid implementation of measures for the growth of Orinoco-Apure should be included among the policies for the development of a new economy.

Definition, in the 1950s, of the "heartland" and the core areas of the periphery along the latitude 10°N, and definition, between the 1970s and the 1980s, of the Orinoco-Apure growth axis, along the latitude 8°N, have left a belt along the latitude 9°N playing the role of cushion

belt. This belt includes mainly small metropolitan areas (50 000 to 25 000 inhabitants) such as El Vigia, Mérida, Barinas, Guanare, Calabozo, Valle de La Pascua, Anaco, El Tigre and Maturin.

The Sixth National Plan defined some High Priority Areas for Agricultural Development and they were essentially located in this belt.

Our previous analysis has allowed the definition of this belt on basis of both population behaviour and role of the cities in the settlement system. The Western Llanos have been defined as a part of the colonization periphery. The Eastern Llanos belong to the stagnant periphery, the Andes and Guárico to the emigration periphery. The remaining areas belong to the intermediate periphery.

Except for the group of petroleum cities of central Anzoátegui, most cities are central places.

The central belt in the state of Guárico, between El Sombrero and Valle de La Pascua, is also very important as the most dynamic transport axis relating different regions of the country.

The Seventh National Plan defines the following spatial strategies intending to change the system of cities (Cordero, 1985):

- Measures dis-stimulating the location of population and economic activities in the Metropolitan area of Caracas.

- Strict population growth control in the remaining areas of the Capital region.

- Consolidation and non stimulated growth in the high priority urban development areas defined in the Sixth National Plan.

- Stimulus for the development of cities of 50 000 to 250 000 inhabitants as well as for their immediate orbits of influence, especially the cities of the intermediate belt. The fundamental functions of cities in this belt shall be oriented to support the agricultural and agro-industrial development.

- Consolidation of frontier settlements.

The spatial strategies in the National Plan include also policies regarding the organization of the countryside and the management of forest, fishing, scenic and energetic resources.

4. Metropolization process

The metropolization process continued during the 1960s (one half of the population in metropolitan areas having 100 000 or more inhabitants in 1971), the 1970s and the 1980s (67.4% by the end of 1985). 70.7% of population lived in metropolitan areas having 70 000 or more inhabitants in the last year. The metropolization process in uneven, however; none of the metropolitan areas in the intermediate belt had more than 250 000 inhabitants by the end of 1985; eight of these large cities were located in the northern belt and two in the Orinoco-Apure belt.

5. Socio-political contradiction in the space: economic deconcentration versus political centralization

The policies of regionalization and economic deconcentration (concentrated deconcentration), the metropolization of periphery and the emergence of regionalized economic concerns, as well as the elevation of educational and cultural standards and the development of mass media in the periphery have created new possibilities for the deconcentration of political decision. The Venezuelan state has remained, however, as an extremely centralized structure. Most political decisions are taken by the central government in Caracas.

The Seventh National Plan changes the subject of regional planning from the region to the states, territories and the Federal District. The decision power for the execution of regional plans is vested in the Governors.

A Commission for the Reformation of State, nominated by President Lusinchi, has made some proposals referring to the structure of regional power. Extension of the prerogatives of regional legislature and direct election of governors are included among the proposals for reforms.

III. Conclusion

Spatial restructuring of the Venezuelan economy is far from being complete. The Northeastern region and the Southern Llanos are still stagnant, while strong migration is addressed toward the Western Llanos and Guayana.

The process of concentrated deconcentration is already felt in the demographic structures of Zulia and Anzoátegui.

Concentrated deconcentration and emergence of the axis Orinoco-Apure explain the fast growth of Bolivar.

Other parts of the country are more or less stabilized: Andes, Central Llanos and Mid-West. They depend upon the development of agriculture, agro-commerce and agro-industry. The Mid-West and the northern parts of the Northeast are the less dynamic parts of the northern belt.

The central belt, along the latitude 9°N, is less urbanized than the other two belts. It depends essentially on the growth of agriculture (petroleum however is significant in the east). This belt shall be the food supplier for both the Northern and Orinoco-Apure belts. However both the Mid-West (in the Northern belt) and the Southern Llanos (cattle raising region of the Southern belt) shall be also food suppliers.

The demographic dynamics depends both upon the diffusion of neo-mathusian behaviour in families and upon the proportion of fertile population due to differences in the composition by age as a consequence of internal migration.

Changes in the international market and growth of the industrial holding in Guayana will lead to new trends in regional development:

1. Overflow of population from the Metropolitan Area of Caracas to the satellite cities will continue but, due to defficiencies of transportation between the latter and the central city, increased traffic congestion will emerge with the increase of suburbanization.

2. Integration of the Central Megalopolis will increase by means of urbanization in the valleys of Guayas and Paracotos.

3. Growth of assembling market-oriented industrialization in the Centre shall be slowed down as difficulties of the petroleum market will mean a reduced capacity for the import of capital goods, semi-manufactured products and know-how.

4. A new export economy will grow in the Periphery, based on steel, aluminium and electrochemistry in Guayana, coal, phosphates and non ferrous ores in southwestern Andes, as well as petrochemistry in the Northwest and the Northeast.

5. Demand for national production of foods and raw materials will stimulate the growth of agriculture, agro-commerce and agro-industry in the intermediate belt and the Midwestern and Southern Llanos regions.

6. The links between regions will be increased, meaning the growth of such economic branches as transport, commerce and tourism. Central section of the intermediate belt will grow as the main transport axis of the country and the mountain areas of the Andes and the beach areas in the island of Margarita, the Northeast and the Northwest will experience strong growth on the basis of tourism.

7. The new role of the Periphery shall strengthen the struggle for political decentralization and regional autonomy.

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REGIONAL DEVELOPMENT AND NATURAL RESOURCES IN THE CONDITIONS OF RESTRUCTURING

Soviet society has entered now the period of accelerated socio-economic development on the basis of intensification of the national economy. A decisive factor of such development is radical restructuring of the whole national economic complex.

In the recent 15-20 years, the Soviet national economy was characterized by above average annual growth rates of output in the most progressive industries and, on the other hand, below average growth rates in agriculture (Table 1). The general negative feature was a relatively high growth rate of the value of fixed assets denoting the predominantly extensive character of development of the national economy. Thus, the data of Table 1 indicate that in 1960-1970 1% annual increase of gross national product corresponded to 1.40% annual increase of the fixed assets, in 1970-1980 - to 1.77%, and in 1980-1985 - 1.92% (along with its significant reduction from 11.7% to 7.3%). For the national income produced these parameters are, correspondingly, 1.36, 1.86 and 1.87%.

Predominantly extensive way of economic development, as is known, has resulted in decceleration of its growth rates. While in relation o primary sector this decceleration may denote the progressive trend towards higher level of utilization of the primary resources and raw materials (Table 2), for other industries it can

not be justified in any way. On the contrary, it is linked with deterioration of the essential parameters characterizing the national economy in the 1980s: from reduction of the mean annual growth rates of gross national product and national income produced to decline in growth rates of labour productivity.

The strategy of accelerated socio-economic development of the USSR on the basis of intensification, developed and formulated by the Party documents, is based on optimization of use of the economic potential.

The notion of economic potential, in its essence and contents, implies understanding of the two general categories of "potentialities" - unexploited resources, and "potential" - resources under exploitation (or that can be exploited). The major structural elements are the production potential (industrial and agricultural), natural-resource potential, scientific-technological, infrastructural, informational, organisational, socio-cultural potential, etc. Thus, one can easily appreciate the wide scope of still unexplored or not fully exploited possibilities for restructuring the economic potential in the USSR. Taking into account the great territorial diversity of the country, the restructuring can not change in equal degree all structural elements of the economic potential; therefore, its optimal exploitation is possible only within the frames of integrated regional units.

Restructuring of the economic potential taking place within the regional units represents a powerful stimulus of regional advancement at the present stage. In the new conditions, it is assessed not only from the perspective of potential for economic growth, but also potential for modernisation and social transformation of the regions of different types and ranks. At the same time, it provides a powerful tool for recruiting the territorial resources and potential to solve the all-national task of advancing the national economy on the basis of intensification.

The problems of resource-supply would maintain their importance as one of the major problems for development of the basic industries

Table 1. Annual rates of production growth in 1960-1985 (in %)

Characteristics	1960-1970	1970-1980	1980-1985
I. Total industrial production	12.7	7.8	4.0
1. Mining of fuel (thousand tons of conventional fuel)	7.63	5.51	2.55
2. Mining of iron ore (calculated at 100% concentration of metal)	9.68	2.48	0.47
3. Production of electric power	15.37	7.46	3.86
4. Production of metals:			
pig iron	8.37	2.48	0.50
steel	7.74	2.76	0.95
rolled metal	8.46	2.76	0.98
tubes	11.41	4.61	1.34
5. Chemical industry	28.5	12.5	6.10
including production of mineral fertilizers (calculated at 100% concentration of useful elements)	29.9	8.9	6.8
6. Petrochemical industry	18.3	10.1	3.40
7. Engineering	22.4	16.8	6.86
including production of devices	38.1	35.0	10.7
II. Agriculture	3.8	1.1	2.2
III. The major economic indices			
1. Gros national product	9.5	6.6	3.8
2. Produced national income	9.9	6.3	3.9
3. Fixed assets	13.3	11.7	7.3
4. Traffic turnover	10.9	7.1	3.0
5. Capital investments	9.4	6.3	3.8
6. Number of workers and personnel	4.5	2.5	1.0
7. Productivity of labour	8.6	4.7	3.2

Sources: Narodnoe khoziaistvo SSSR v 1985 g. (National economy of the USSR in 1985) M.: Statistika i finansy, 1986, pp. 34-36, 128, 140, 142, 143, 145, 157; Narodnoe khozaistvo SSSR v 1980 g. M.: Statistika i finansy, 1981, p. 164; Narodnoe khoziaistvo SSSR v 1970 g. M.: Statistika i finansy, 1971, p. 205; Narodnoe khoziaistvo SSSR v 1975 g. M.: Statistika, 1976, p. 252.

Table 2. Dynamics of the primary resources and raw materials consumption (1% of mean annual increment of mining and other primary resource production corresponds to "n" %% of output of secondary sector)

Industries	1960-1970	1970-1980	1980-1985
Fuel mining - power production	2	1.35	1.51
Mining of iron ore - total iron and steel-production	0.85	1.11	1.49
Mining of raw materials for chemistry - basic chemistry	1.36	1.01	1.61
Mining of oil and gas - petrochemical industry	1.01	1.16	1.00
Withdrawal of timber for industry - timber output	0.71	x)	0.4
Withdrawal of timber for industry - paper, pulp and cardboard	8.08	xx)	13.3
Production of metals - engineering	2.71	6.08	9.80
Chemical and petrochemical industry - production of mineral fertilizers	1.20	0.75	1.30
Decrease of metal consumption in national economy (without depreciation) in % to the beginning of the period under study	no data	3.9	2.5
Decrease of power consumption per unit of produced national income, in % to the beginning of the period under study	no data	14.1	5.5
Decrease of metal consumption per u unit of produced national income, in % to the beginning of the period under study	no data	18	10.8

Source: data of the Table 1; Narodnoe khoziaistvo SSSR v 1985 g. (National economy of the USSR in 1985). M.: Statistika i finansy, 1986, pp. 57, 143, 148-149, 150-151.

x) 1% mean annual reduction of withdrawal of timber corresponds to 1% mean annual reduction of output of saw-timber.

xx) 1% mean annual reduction of withdrawal of timber corresponds to 4.88% of mean annual increase of output of pulp, paper, and cardboard.

in the USSR for the period up to 2000. Taking into account the increasing inputs of power, material and financial resources, labour, required for development of the natural-resource potential of the country, this problem can be effectively solved only with introduction of the intensive character of resource-use in all sectors of the economy.

The growing demand in natural resources should be met not through increased volume of mining, but through comprehensive intensification of their utilization. Higher national product per unit of natural resources included into the economic turnover as an indicator of higher level of intensity of their utilization uplifts the productive potential of the natural-resource factor. At the same time, implementation of integrated action aimed at the maximum possible utilization of the useful components and properties of the natural resources, including their re-utilization, would minimize wastes and result in reducing the pollution of the natural environment.

Adoption of the intensive way of resource-use is linked with the need to restructure the very system of exploitation of the natural-resource potential. As the initial standpoint one should adopt the requirement of minimisation of the society's demand for primary products and raw materials. The main idea is, essentially, as follows. The growing requirements of the national economy in natural resources can be met only through their comprehensive and integrated utilization, by use of the adequate technical means and technologies; increasing the productive

potential of the natural-resource factor by adoption of the intensive way of resource-exploitation decreases the necessity of developing new sources of raw materials. The minimum amount of natural resources to be developed would, correspondingly, minimize the magnitude of extensive resource-exploitation. However, the territorial relationships of extensive and intensive type of exploitation of natural resources would be different in various regions depending on the specific features of their nature and economy.

Another requirement ot exploitation of natural resources and, simultaneously, a methodological approach to its restructuring refers to interlinking the problem with the specific pattern of economic activities in individual territories, or more accurately - with territorial organization of these activities.

The scientific category "territorial organization of economic activity" refers to interregulation and intercoordination of different economic activities with, first, established territorial structure of the economy, and second, with each other in specific territorial-functional and organizational-structural formations. In relation to the system of nature resource-use (Fig. 1) this means interregulation and intercoordination of the components E, SS, OS, R and O in performing both individual and common functions of supplying natural resources for the economy.

This category represents the process and result of interregulation and coordination of different economic activities within the framework of the spatial structure of national economy. The notion "process" here bears a double meaning. On the one hand, this is a combination of successive regular changes in the order of a certain economic system - it is, essentially, self-organization of the system of resource-use in correspondence with its specific features. On the other hand, one would bear in mind an integrity of deliberate actions directed towards acceleration, deceleration, suspension, or modification of the natural course of their self-regulation (organization; proper). The general outcome of this process is the spatial system of interrelations between different economic activities in the process of resource supply to the national economy.

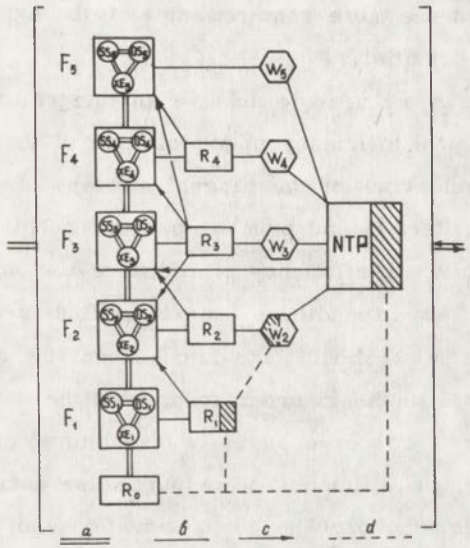

Fig. 1. The system of use of natural resources: F - functions of different kinds of economic activities: 1 - exploration, recovery of natural resources, preparation to their exploitation, including reproduction, 2 - exploitation and reclamation of natural resources, 3 - exploitation for production of power and primary products, 4 - use of power and primary materials for producing finished products, 5 - consumption of finished products meeting the requirements; E - economic activities performing the corresponding functions; SS and OS - spatial and organizational-structural forms of economic activities; R - developed, exploited and transformed natural resources: O - natural-resource potential, 1 - explored, recovered, and prepared for development natural resources (under-recovered portion is hatched), 2 - resources involved into the economic turnover (hatching covers their unwithdrawn part), 3 - resources processed into primary products, thermal and electrical power, 4 - resources processed into final products for consumption; W - wastes of production at different stages of development, exploitation and transformation of natural resources, NTP - natural-technogenic potential (unexploited portion is hatched); a - streams of interaction, b - streams of production interactions related to natural resources, c - streams of their consumption, d - feedback.

The irregular character of the above discussed interrelations reflects the independent and induced failures in the course of spatial organization of economic activities and denotes, at the same time, the uncoordinated operation of individual users of resources; this, in turn, puts forward one more requirement as to the exploitation of the natural-resource potential.

Here, we mean the need to achieve an integration of the economic, social, and ecological efficiency in exploitation of the natural-resource potential in the framework of the general strategy of minimization of consumption of raw materials and primary products. This means, that the assessments of economic efficiency of resource-use according to the criterium of "minimum expenditure - maximum final production per unit of withdrawn materials" should take into account the necessity of allocating additional means in order to prevent the destructive and polluting influence of resource users on the natural environment. The principle of ecological efficiency of resource use establishes a close relationship between the problem of conservation and reclamation of the natural environment and health of population, the later being the main productive power of the society, holder, and, simultaneously, consumer of all its material, social, and spiritual values.

At present, the ideas of economic, social, and ecological balance of development, of harmonised evolution of society and nature, and in more narrow sense - of the material production and its natural basis, are not new any more. However, there is still no adequate conception nor adequate tools to implement these ideas into practical life. An important step in this direction would be development of the economic-geographical concepts and principles of spatial coordination of various economic activities taking into account the resources, conditions and possible effects in different geographical and socio-economic situation. The ideal goal is such a coordination of economic activities within the frames of the adopted strategies of resource use that would eliminate contradictions of the economic, social, and ecological effects either to the corresponding imperatives of the society, or to the totality of

natural, economic, and social characteristics of a given territory.

In view of that, of considerable importance is to make an inventory of the already established and newly emerging contradictions of this type in the sphere of resource exploitation.

These contradictions can be described by several spatial characteristics: natural-resource and ecological constraint; under-utilization of the natural-resource potential and not optimal (not complete) utilization of the material and labour resources; lagging of the social conditions behind the required level, etc.

Resource and ecological constraints are interpreted as limitations imposed on development of an economic activity in this or that territory by resource availability or by ecological situation; elimination or relaxation of these limitations through more intensive resource use would ensure, respectively, the maximum contribution of the given territory to solving the national task of resource supply to meet the demands of economy, and to ameliorate human environment. Under-utilization of the natural resource potential and not optimal (not complete) utilization of material and labour resources imply existence of certain reserves for increasing the productive potential as compared to the current level. Taking into account the possibility to substitute some resources by other kinds, the above mentioned reserves are determined by the ke resources in specific conditions. Lagging of social conditions behind the required level of development is understood as a limitation imposed over the economic activities by social conditions: elimination of this factor through amelioration of facilities in this or that territory increases the economic and social efficiency of resource exploitation.

Finally, the fourth problem in exploitation of the natural-resource potential is the need to coordinate more closely the decision-making at the regional level. An important issue here is the resource circulation between the western regions including the Urals, and the eastern ones (let's give them the conventional denominations "West" and "East").

The recent period of national economic development with heavy predominance of resource exploitation of the extensive type, was characterised by increasing flows of raw materials and, correspondingly, increased percentage of raw materials in total cargo traffic (Table 3). The flows of raw materials from East to West became especially heavy. For example, since 1960 to 1980 the volume of coal, timber and ferrous metals transported by railways in this direction increased 2-4 times, and in other kinds of primary products and raw materials - still more.

Of course, the relations "West"-"East" are much more complicated than simply supply of fuel, power, and raw materials. First of all, they are complicated by "North"-"South" relationships. Second, it was proved by theory and confirmed by practice, that the functions of the East in meeting an important portion of resource demands of the West, as well as shifting of power and recource-intensive industries closer to fuel-power and raw materials reserves of the East are not in the least contradicting the idea of integrated development of the latter. Third, in the process of functioning of the national economic complex and diversification of its production structure, the West and the East have become the organically interrelated and mutually complementary patterns in spatial organization of this complex. However, owing to the historically developed discrepancy between location of the productive and labour potential (mostly in the West), and territorial distribution of natural resources (mostly in the East), it is the East that is charged with the task of accelerated development of its natural resource wealth.

One can develop an impression that accelerating its production potential and building new resource areas, among them in areas of limited accessibility, the East thus becomes "guilty" of additional expenditure for resource-use that maintains here the predominantly extensive character, while the West, pursuing the development trends of technological re-equipment and reconstruction of the operating enterprises represents the main source of compensation for this additional

Table 3. Growth of cargo traffic of raw materials in 1960-1980

Commodities	Traffic in 1980 in % to 1960				
	By all kinds of traffic	By railways	By pipelines	By river traffic	By ocean traffic
1. All commodities	223.9	197.8	438.8	270.1	300.4
i.a. raw materials	238.1	198.8	438.8	273.5	283.8
Including:					
natural gas	1216.4	-	1216.4	-	-
oil and oil products	361.9	279.9	482.6	224.3	338.1[a]
coal and coke	156.5	155.5	-	216.3	138.1
all ores					
Ferrous metals	165.2	248.2	-	-	238.7
timber and timber products	88.7	88.7	-	450	450
mineral construction materials	264.9	222.0	-	79,7	268.2
mineral fertilizers	563.2	576.1	-	540.0	187.9
2. Proportion of raw materials in total traffic[b]	84.8/90.2	77.8/78.2	100/100	90.2/91.3	87.9/82.9

Sources: Narodnoe khoziaistvo SSSR v 1984 g. (National economy of the USSR in 1984). M.: Statistika i finansy, 1985, pp. 337, 338, 343, 344, 347.

[a] All liquid cargo.

[b] Numerator - 1960, denominator - 1980.

expenditure, thanks to its more intensive production and use of resources. Actually, this is not so. The magnitudes of exploitation of the natural-resource potential in the East should be determined not by its availability, but by accelerated introduction of intensive resource-exploitation, predominantly in the West, but in the East, as well (in

its more advanced regions). In its turn, transition to predominantly intensive resource-use in the West, that also requires additional expenditure, should agree with the actual role of the extensive resource-use in its total volume, and not only in the East, but in some regions of the West, too. In other words, in the all-union system of resource-use the West is the "entrance" to the subsystem of the East, and the East - the "entrance" to the subsystem of the West. Therefore, it would not be correct to formulate the regional alternatives of development of the natural resource potential within the general strategy, ignoring the resource relationships West-East.

The above leads to the conclusion, that restructuring of the system of exploitation of the natural resource potential on the basis of advancement of spatial organisation of economic activities can proceed in different ways. First, in the direction of establishing optimal spatial proportions among the intensive and extensive types of resouce exploitation and of their intermediate variants, in correspondence with the specific regional conditions of nature, economy, and social situation. Second, it is possible to alternate the sectoral, functional, organizational, and spatial-structural forms of economic activities aimed at development and exploitation of natural resources, when these forms do not answer the specific conditions. Third, it may be possible to direct efforts onto transformation of the integrity of conditions for resource exploitation, taking as the key object of influence either natural, or economic and social conditions, or the former and the latter together. depending on the specific situation, and the material and technological resources available. Fourth, deliberate action is needed for accelerating, expanding, reducing, redirecting the economic activities in coordination with the regular trends of self-organization and self-management of the system of resource-use. Fifth, it is necessary to optimize not only all the complicated system of resource relationships, but also its relationships with other structural elements of the national economic potential.

Restructuring of the system of exploitation of the natural-resource potential is of special importance in the western developed regions of the country. This is due to several reasons. They include increasing shortage of fuel and power resources, raw materials, water and land resources, and also the leading role performed by many of these regions in restructuring of all the national economy, due to the high level of expertise in development, both positive and negative, accumulated by them.

Intersectoral problems of resource supply reflect disagreement of the established structure of resource use with the reserves and availability of the natural resources under exploitation. At present, the structural shifts in the sphere of resource use by industry are not great. Thus, if one compares the regional units (not below the rank of oblast) in terms of calculated coefficients of structural changes[1] for 1960-1970 and 1970-1985, it may be seen that in 42% of the territorial units under study the rates of structural changes in the recent 15 years have decreased, as compared to the previous decade.

This is exclusively characteristic of those regional systems of resource use where the coefficient of structural changes was previously measured by values of the three upper gradations of their arranged sequence. More than 1/3 of the total number of regional systems of resource use did not actually experience any structural changes, and only less than 1/4 them showed some acceleration of the structural shifts. On a whole, the rates of structural changes have been reduced throughout most of the European part of the country.

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[1] Coefficients of the rates of structural changes were calculated for the group of mining and resource-processing industries including processing of agricultural raw materials within the agro-industrial complexes, using the formula:

$K = \sqrt{\sum \frac{f_1}{f_o} - 1}$, where f_1 and f_o - percentage of individual primary industries in total industrial output of a region in the current and in the reference years.

Thus, in 1960-1970 56% of the regional systems under study had coefficients of structural changes within the two lower ranks of their gradations, in 1970-1985 these accounted for already 71% of their total number.

Discrepancy between the long-established structure of resource use and the changing resource availability and socio-economic situation was gradually aggravated there during the recent 15-20 years. This trend may become even more pronounced in the future, if restructuring of the economy would be limited to sectors and enterprises ignoring their relationship with territory. Co-existence of contradicting sectoral and territorial interests accounts for the need to optimize the system of relationships "sector - enterprise - territory - social environment", because it is in this sphere that new problems are evolving, in particular related to exploitation of resources. Their emergence is predetermined by the fact that the structural shifts that were traditionally appreciated as progressive - related to industrialisation and priority of productive functions in general (i.a. those linked with utilisation of the natural resource potential) have lead in the situation of growth of territorial concentration of production to the outcomes that oppose the social imperatives. These include: deterioration of the environment; constrained water budget; inadequacy of the fuel-raw materials base and higher costs of its exploitation; withdrawal of lands from agricultural use and their fallowing; depopulation of rural areas; lower efficiency of capital investments; disproportions in development of structural elements of economic potential in individual regions; instability of labour. Solution to these problems can only be found on the intersectoral level, or more accurately - on the suprasectoral level with implications for the economic, social, and socio-cultural spheres.

Comprehensive intensification of exploitation of the natural resource potential of the European USSR that continues to maintain its role of the largest national consumer of natural resources would help to solve some of the problems discussed above. Thus, limitation on

construction of new capacities in heavy industries reducing demands in fuel and power, raw materials, water and land resources, agrees well with the task of rigid resource-economising. To maintain the environment-protective, basically social functions of the renewable resources, in some regions it may be expedient to carry out deconcentration of production and especially diversification of the economic functions. On the basis of utilization of the accumulated wastes of production and of diversification of the structure of resource requirements, it is possible to develop the territorial-production complexes of a new type employing low-waste technologies.

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CAPITAL URBAN-REGIONAL DEVELOPMENT AND ECONOMIC TRANSFORMATION OF MOSCOW CAPITAL REGION

Of special importance in the processes of modern regional development are regions headed by capital cities. They are places where decisions on key problems of socio-economic development are made, innovation centers, often model testing grounds for solving problems both general and specific: in the field of territorial planning, leisure organization, conservation of nature and cultural monuments etc. A lot of global phenomena of the present day such as urbanization and its transformation into a large scale regional phenomenon, the scientific and technological revolution, information and management explosions, are closely connected with the "capitality phenomenon" (Ekonomikogeograficheskiie problemi ..., 1985). The role of this socio-economic and geographical phenomenon has been enhanced as a result of the post-war growth of the number of independent states, various autonomies within them, the administrative-political interference in economy. At the same time, in capital-city regions themselves, a disorganizing effects often take place due to the complexity of their structure, the great number of managers: political and government offices, departments, firms, local authorities. The management faces here new tendencies and forms of activities, the quick change of social priorities and economic functions.

Different "capitality" aspects can be reduced to three main sets of notions and properties (Fig. 1), formal attributes both official (the status of capitals and their administrative territories of federal district type) and unofficial (leadership, centrality, innovation potential)

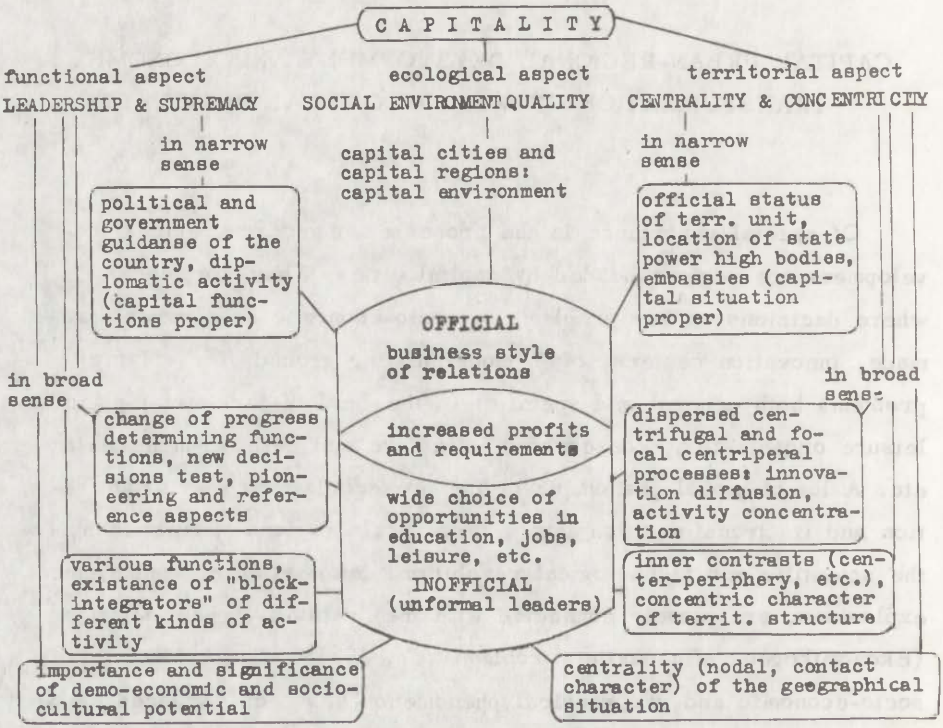


Fig. 1. Main conceptual aspects and occurrences of "capitality".

being important. Alogside official, there exist unofficial capitals of different ranks, metropolises, as well as the so-called multicapitalities in countries having federative organization. The formation of capital regions in connected with the processes of center and region formation in the country at a particular historical stage. The experience of identifying such regions for research and planning is not rich yet. One of the exceptions is the National Capital Region in Japan (about 37 thousand km^2, 34 million people) which has become an officially recognized formation (Saxeha and Tyasi, 1974; Witherick, 1972).

It is possible to distinguish three main types of capital regions headed by national capitals according to the status: (1) absolute leaders combining development "from city" and "from region" (Moscow, Paris, London, Tokyo etc.); (2) intermediate type of relative leaders, whose development was provoked by large capital cities but which is inferior, to some other economic area (regions of Warsaw, Berlin in the GDR, Rome, Delhi, Kiev); (3) specialized political leaders with capitals being situated according to geographical orientation or compromise (Bern, Canberra, Ottawa, Washington, Brasilia). Type 3 is absent in socialist countries, types 1 and 2 are widely represented, the author is believing, type 2 on the whole being more preferable for larger countries than type 1.

Both of them vividly demonstrate peculiarities and problems of capital regional development, its dynamism, the high differentiation and integration of functions with the emphasis being made on high quality services for all the country. Such regions often serve as a model for regional development of the whole national economy. At the same time, the largest capital regions demonstrate a number of territorial-structural anomalies. Absent here rather often are centers of the second level of the Christaller's hierarchy with a higher density of centers of lower ranks near the capital (Shuper, 1984). This makes it difficult to implement decentralization programmes which are carried out in a lot of capital regions, the more so that they are often surrounded by territories characterized by lower level of socio-economic

development. As a rule, they lack large fuel and raw materials resources, with agro-resources beeing mediocre in quality. The main potential of the region (accessibility, peculiar socio-cultural medium, specialized manpower) is monopolized by the capital city. A good example of the problems in question provides the study by the Soviet geographers on Moscow Capital Regions (MCR).

This paper deals with the results of one of the sections of that work devoted to the historical interrelations of the functional-industrial and territorial structures of MCR. The structures are reduced to the blocks of the leading functions of the region including proper capital ones and nets of leading economic centers together with Moscow. Four generalized stages of the development of MCR have been distinguished.

At the first stage (14th-16th centuries) the leading functions of MCR forming together with the centralized Russian state were military and cultural with supplementary role of agriculture and trade. The Mongolian invasion caused an inflow of population from the south, the ploughing up of a forested parts, the formation of a dense net of settlements (Lappo, 1961; Mintz, 1961 etc.). Local markets formed around towns and monasteries, but natural economy inhibited trade development. In these conditions, the capital functions of Moscow, requirements of the court and church played an important part. A radial plan of the city reflected its central position. However, forming its surroundings, Moscow needed mostly satellites of defense character protecting dangerous directions, particularly southern and western. Later, the system of town-fortresses was used to colonize new territories and became weaker in MCR, some centers disappeared, others became industrial-trade towns being situated along roads leading from Moscow. The "rear" centers of the north-east were the first to acquire a cultural-economic character, some of them were important ideological and political branches of the capital (Syergiyev Posad, Alexandrovskaya sloboda). On the whole, the centers-satellites surrounded Moscow by a ring at a distance of 75-100 km with a break in the east, in Meschera, where it was inconvenient to

plough up and which did not need military cover. It is not typical for the first stage to have concentration of subcenters near Moscow. Though more than a half of large towns of Russia were within MCR, 2/5 of them having been preserved until now, the general appearance of their network was different from the present one.

At the second stage (17th-19th centuries) classical economic regions arose due to the development of the market and labour division between industrial and agricultural areas. The leading part of the Industrial Centre among them connected with the concentration of population and capital, the primacy in interior trade retained even after the capital was transferred to Petersburg. Deprived of part of capital functions, MCR retained conditions for the development of branches based on peasants' industries. A discrepancy between the few administrative towns and real economic centers having the typical form of nests and bushes arose. At this stage, development depended to a greater extent on the region than on the capital center. The net of centers "turned" to the east; a paradox appeared, defined by A. A. Mintz (1961, p. 41) as "a strange disparity of the role of Moscow in the development of the region often called Moscow industrial oblast and the situation of Moscow on its periphery". The causes of this asymmetry are as follows: unfavourable conditions for agriculture in the east; the presence of peat, a fuel important against the background of regulations (ukases) providing the closure of factories destroying forests within a radius of 200 versts from Moscow; orientation to the Volga trade route (a powerful field of trade-industrial activity was created between this route and Moscow); the devastation by wars of localities to the west from Moscow, attraction of these localities to Petersburg as its agrarian zone. The profile, size and form of the region at the second stage show a partial loss of capacity by it. The preservation of its unofficial attributes (centrality, economic leadership) was provided by all the complicated industrial surrounding of Moscow.

At the third stage (the 1920s-mid-1950s) Moscow again became the capital and once more united Russian lands during the years of the civil war (Baransky, 1927). Then it assumed the function of the basis of socialist industrialization. The large-scale industry of Moscow increased the volume of its production two times as fast as Moscow oblast, 10 times as fast as Ivanovskaia oblast. Moscow broke from the surrounding in industrial structure: before the revolution it had two times as many workers in the textile industry as in metal industry, but by 1948 the picture reversed. MCR gave more production than all the eastern regions of the Russian Federation (Saushkin, Glushkova, 1983; Tsentralnii raion, 1962). It created a new energy basis using local second rate fuel. Carrying out national tasks Moscow was in a hurry, it could not wait for other regions to support it, for the system of labour division to be formed. Large territorial shifts appeared as early as the pre-war period. Subcenters began to concentrate around Moscow. However, the eastern and southern asymmetry inherited from the second stage retained, it even aggravated because of the accelerated exploitation of the brown coal (Mosbas) and peat deposits near Moscow. Gradually, negative consequences of the forced industrialization and management centralization manifested themselves. The centripetence of territorial development increased inspite of the essential limitations introduced in 1931.

The fourth (present day) stage is connected with a new functional shift which has made MCR the scientific-technological basis of the country. The growth of employment in science became of town-forming importance. Other non-industrial functions began to play a similar role. These shifts refelcted the functional typologies of region towns (Mintz and Khorev, 1959; Kopilov, 1976; Bukhanova, 1982): (a) the growth of non-industrial centers - from 16 to 20 and 33 in the chronological order of typologies, i.e. from 24% up to 46% of all towns, (b) decrease of the net of purely industrial towns (from 76% to 54%) and increase of scientific-productive (6%-32%); (c) a tendency of the majority of towns which changed their profile, to be situated in the nearest

vicinities to Moscow. A typology of all the town-like settlements of the capital oblast (Osnovi teorii ..., 1986) shows that industrial centers have retained their eastern excentricity, recreational ones - western, while the situation of scientific centers is characterized by the greatest symmetry. As the youngest, they are, on the average, closest to Moscow, while industrial subcenters are the remotest. A tendency towards overall levelling of asymmetry in the territorial structure is observed: subcenters in the western sector have the highest growth rates. Agglomerational and superagglomerational processes have increased, a central superagglomeration (megalopolis) is being created on the basis of 6 adjoining large-town agglomerations (Regionalni geograficheski ..., 1977, p. 76; Polian, 1985).

From this brief review the following conclusions can be made:

- The main structure determining role is played not so much by capital administrative-political functions themselves as by the main kinds of mass activities connected with them at a particular stage. "Satellite functions" also determine the character of a net of centers-satellites.

New functions develop originally in close association with capital functions. As these functions diffuse widely in space, this link disappears; finally, with the saturation of the region with industries typical previously only for Moscow, the MCR acquires the same "capital" type of economic structure.

- Great shifts are observed in the evolution of the subcenter net when functions change. The feedback effect of a reconstructed territorial structure on functional structure increases as a particular stage comes to its completion, is greatly felt in the pioneering phase of the following one but then, again, the mobility of the territorial structure increases. At the present stage it is particularly closely connected with settlement shifts, the course of urbanization. According to A. E. Gutnov, the adaptation to the functional programme gives way to the "teaching effect" of settlement. The same author (1979) believes that the policy of decentralization is most effective at the end

of successive phase of the active growth of settlement carcass, i.e. when functional programmes change.

This should be taken into consideration when forecasting capital regional development; its basis must be the forecast of function change, though it is not clear how this can be done. As to the functional-territorial changes, it is evident that there is a process of centrifugal diffusion of old functions with new industries and kinds of activities being born constantly in the MCR core. However, old industries can also behave differently, revealing different kinds of "pulsation". Here one can distinguish three main phase kinds of territorial concentration: primary concentration of new functions in foci with necessary starting conditions where the contrast between the center and periphery arises; residual concentration of developed functions as a result of the collision of diffusion with inertia when the differences "center-periphery" are smoothed out but are still considerable; secondary concentration of traditional functions (in modernized forms) with the center acquiring an increased role.

Figure 2 illustrates a diagramme showing employment changes in three large industries with a step of 20-25 years in 3-4 spatial concenters of MCR and adjoining oblast. Science and scientific service show here a vivid primary concentration in Moscow and then in Moscow oblast. In agriculture, following the phase of active diffusion, a sharp decrease of the scales of activities in the periphery started while they remained at the same level in Moscow oblast. Its fraction in the number of agricultural workers of central oblasts of Russia has been increasing lately, which proves a secondary concentration. Employment in industry for a longer period showed three changes of the tendency: in 1867-1913 residual concentration of industry (predominantly light industry) took place in MCR, by 1940 the results of the "metallization" of industry during the first five-year periods were felt, i.e. secondary concentration was observed, and then a new phase of diffusion with a considerable residual concentration of industrial workers in MCR.

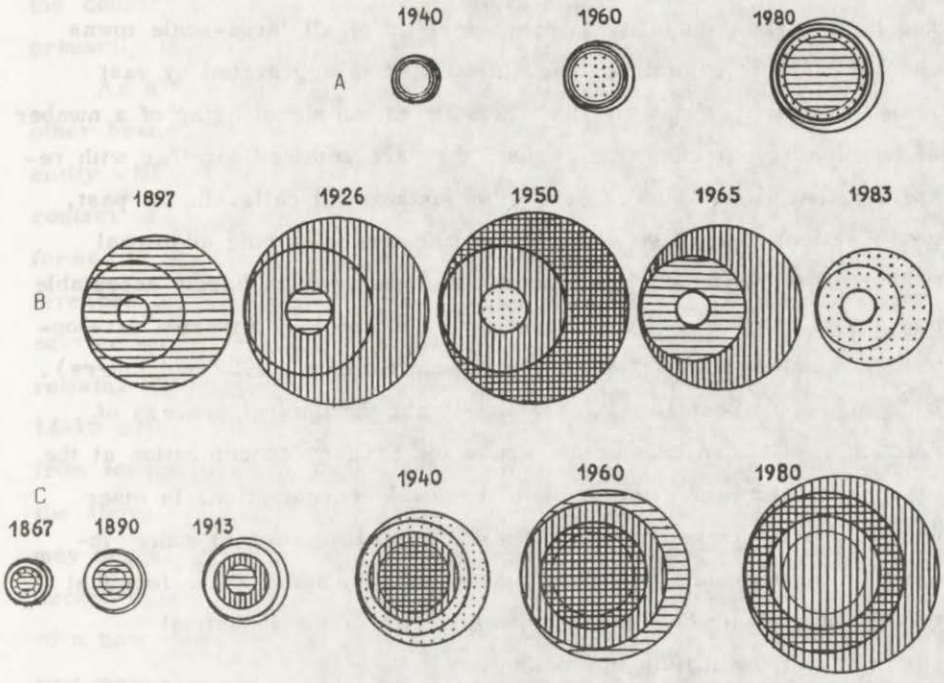


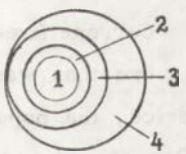
Fig. 2. Spatial diffusion of employment in some branches of the national economy of MCR and surrounding territories

A - science and scientific services

B - agriculture (1897 and 1926 - economically active rural population; 1950-1983 - engaged in socialized economy)

C - industry (1867-1913 - workers, since 1940 total employment in production)

The size of circles and rings corresponds to the number of employed in zones:



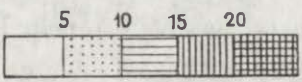
1 - Moscow (not shown when characterizing agriculture)

2 - Moscow oblast (gubernia)

3 - a group of oblasts (gubernias), the direct neighbours of Moscow (including Ivanovskaia oblast)

4 - a group of oblast (gubernias), neighbours of Moscow oblast of the secondary order (within the Russian Federation, without Mogilev and Vitebsk oblasts)

Share of employment in a given branch in the total number of the population of zones, in per cent.



A contradiction between striving for rapid change of functions and their inertial stability is characteristic of all large-scale towns and particularly capital regions. In MCR it is aggravated by vast scales of activity concentration. In spite of the moral aging of a number of functions overloading the region, they are retained together with respective settlements, fixed assets, organizational cells. In the past, new functions were just added to the old ones requiring additional resources to be drawn from outside. But this way is hardly acceptable now for the region supposed to serve as a model of intensive development and not extensive growth (Lexin and Sitnikov, 1982 and others). It is in the interests of MCR to accelerate the natural process of function replacement, to create space for primary concentration at the expense of decreasing the scale of residual concentration. In other words, a strict selective policy is needed, elimination of many industries incompatibile with a capital region, in spite of the fact that this is impeded by both the objective inertia of the industrial potential and the inertia of thinking.

The case is different in the fields of scientific-informational block, which are much closer to the phase of primary concentration, are more labour-consuming and sensitive to the skill of workers than industrial branches. Secondary concentration increase characterizes agriculture, some productive and non-productive fields producing consumer goods and services of mass requirement. A new inflow of workers to catering services is expected (Samborski, 1982). The volume of paid services in Moscow, planned for the current five-year period, exceeds 5 billion roubles, by a third more than was realized in Uzbekistan in the previous five-year period, the population of Uzbekistan being larger than that of all MCR. One should bear in mind that something like an inversion of macroindustrial development takes place in the USSR, when the quaternary sphere (particularly science and management) has outstripped in its growth the tertiary sphere (ordinary service). The improvement of the latter sphere, bringing it up to the present day level is an important task of all

the country, conditions for its solution, as usual, being created primarily in the capital region.

As a service blocks of the economy of MCR grow, their impact on other branches is felt, the modern type of regional socio-economic entity will manifest itself more vividly, being characterized by a close contact of taxons of production and settlement in their agglomerational forms. It appears, that in the nearest 15-25 years, the territorial differences in the level of living standard, infrastructural saturation, service quality as well as centripetal processes in settlement will remain. The population of Moscow agglomeration is likely to reach 14-16 million people by the year 2000 and not 2020 as can be deduced from forecasts of some design and development organizations. Then, as the above contradictions level out, a deconcentration of the population may begin. One cannot exclude a possibility that this would be connected with the establishment, in the first quarter of the 21st century, of a new type of regional entity, socio-cultural, based on principally new means of communication and environment qualities (Goltz, 1986).

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