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Systemic competitiveness: *a new challenge for* firms and for government

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This article analyses the concept of systemic competitiveness by examining its determining factors and the way in which they interrelate. The author puts forward the view that industrial competitiveness is the product of the complex and dynamic interaction between four social and economic levels in a national system, namely: the micro level, consisting of enterprises, many of them interlinked in mutual assistance networks, which aim to achieve simultaneously efficiency, quality, flexibility and speed of response; the meso level, corresponding to the State and social actors, which develop specific support policies, promote the establishment of structures and coordinate learning processes at the level of society; the macro level, where pressure is exerted on the enterprises through performance requirements; and finally, the level referred to in this article as the "meta" level, which is made up of solid basic patterns of legal, political and economic organization, an adequate social capacity for organization and integration, and the capacity of the actors to achieve strategic integration. The article concludes that an enterprise's competitiveness is based on the organizational pattern of the society as a whole. It is the parameters of competitive relevance at all levels of the system and their interaction that generate competitive advantages. Competitiveness is systemic.

I

Introduction

In recent years, attempts have been made at the Organization for Economic Cooperation and Development (OECD) to categorize the different approaches to the notion of competitiveness and to combine them in a single, integrated approach under the heading of "structural competitiveness" (OECD, 1992). The main aspects of this concept are its emphasis on innovation as a key factor in economic development, company structure that goes beyond Taylorist principles and is capable of activating the potential for learning and innovation in all the enterprise's fields of activity and, finally, cooperation networks aiming at innovation and supported by various institutions and an institutional framework conducive to innovation.

The concept of "systemic competitiveness" (Esser, Hillebrand, Messner and Meyer-Stamer, 1994) is a frame of reference for industrialized as well as developing countries. Two features distinguish this concept from others designed to identify the factors involved in industrial competitiveness. The first is the distinction between four analytical levels (meta, macro, meso and micro). At the meta level, aspects such as a society's capacity for integration and strategic action are considered and at the meso level, the creation of a support structure able to promote, supplement and further the enterprises' efforts is examined. The second distinguishing feature is the linking of factors relevant to the industrial economy, to the theory of innovation and to industrial sociology with the arguments put forward in the recent debate among political scientists on economic management with reference to policy networks.

The concept of systemic competitiveness is based on the recent discussions at the OECD. Observations on this subject begin with a phenomenon observed in many developing countries, namely the absence or inadequacy of an effective entrepreneurial environment that places emphasis on the OECD's concept of "structural competitiveness". This phenomenon may prevent structure adjustment from furthering industrial development even where stabilization at the macro level has been successful, as has been observed in member countries of the

OECD, as well as in developing countries of various stages of development.

It should be noted however that an inadequate support structure need not, in itself, preclude competitiveness. When general conditions change fundamentally with the transition from a protected domestic market to an open economy and when enterprises are faced with the choice of either increasing efficiency or leaving the market, some at least will make the necessary efforts to rapidly increase their competitiveness. This happens primarily where it is feasible to take advantage of static advantages of location. However, the absence of an efficient support structure does impair enterprises' ability to achieve lasting competitiveness. Instead of being able to focus on the main productive activity in which they have a competitive edge, they have to develop for themselves products and internal services that other enterprises are able to acquire or use as externalities. As a result, they do not undergo the continuous improvement experienced by enterprises that have achieved lasting efficiency.

The German Development Institute (GDI) employs a concept of competitiveness that goes further than the one developed by the OECD. The latter and other similar ones cover economic factors only and neglect almost entirely the political dimension involved in achieving competitiveness. Even though there is increasing acceptance of the view that the creation of an effective support structure through the collective effort of the enterprises and the joint initiative of business associations, the State and other social actors may lead to the comparatively rapid development of competitive advantages, the literature on the subject does not take sufficient account of the management models on which successful processes of late industrialization have been based (Amsden, 1989; Wade, 1990). However, with regard to industrialized countries, it is found that analyses of competitiveness and research into new management models in different areas of policy-making such as industrial structures and technology policy are hardly interlinked at all. While a detailed description is given of the enterprise support structure that

should be created, the specific policy proposals concerning the modalities and methods for identifying and dealing with problems, decision-making, im-

plementation and follow-up of results continue to be vague and imprecise (OECD, 1992, p. 84 *et seq.* and p. 254 *et seq.*).

II

Competitiveness in the systemic approach: levels of systemic competitiveness

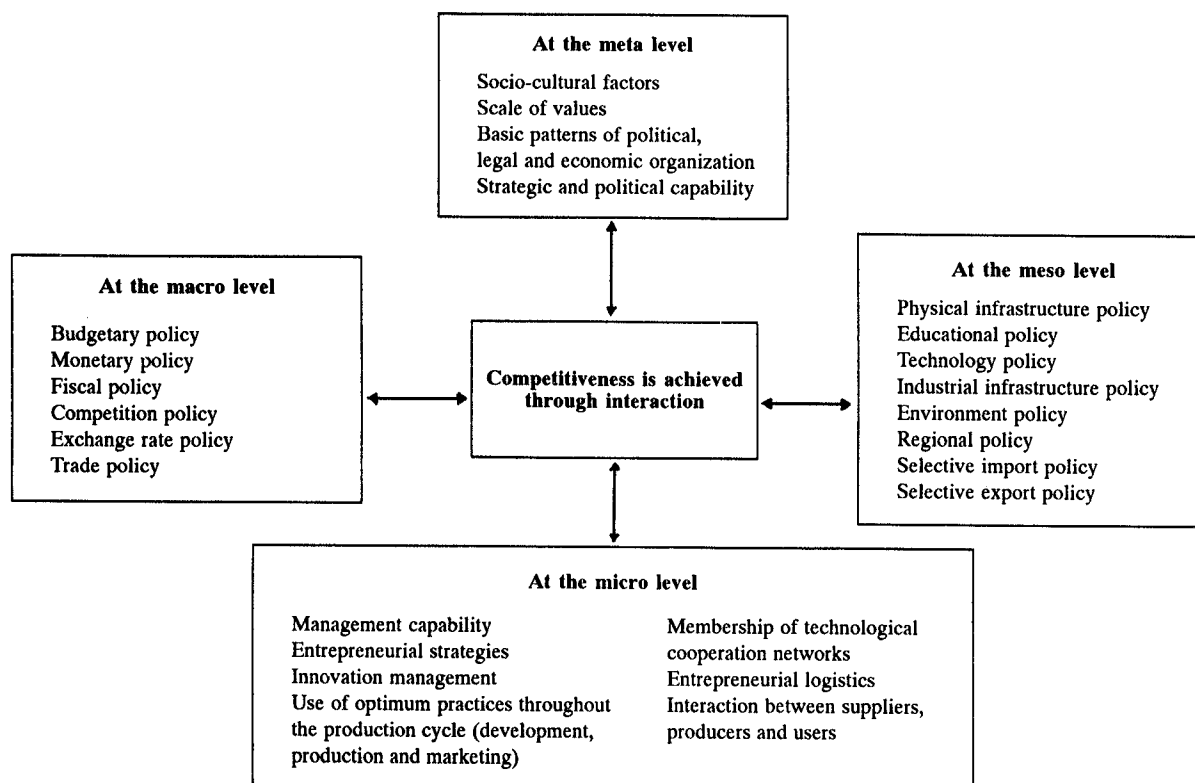
Countries cannot develop an infinite number of policies or elements of competitiveness from a finite set of factors determining systemic competitiveness (figure 1).

The most competitive countries have: i) at the *meta level*, basic structures of legal, political and economic organization, the social capacity for organization and integration, and the capability of the actors to achieve strategic interaction; ii) a *macro framework* that requires the enterprises to be more

efficient; iii) a structured *meso level* where the State and the social actors develop specific support policies, promote the establishment of structures and coordinate the learning processes at the level of society; iv) at the *micro level*, a large number of enterprises, many of them interlinked in mutual assistance networks, which aim to achieve simultaneously efficiency, quality, flexibility and speed of response.

FIGURE 1

Factors determining systemic competitiveness



1. Meta level

The State's ability to steer the economy and the existence of organizational models that help to stimulate society's creative capabilities are essential for the achievement of maximum efficiency at the micro, macro and meso levels. Economic modernization and the development of systemic competitiveness cannot yield results unless suitable structures are established in society as a whole. If macroeconomic reforms are undertaken without the concurrent development of the ability to regulate and steer the economy (State reform, coordination of the strategic actors) and without suitable social structures being established, the tendencies making for social disintegration will become even more pronounced. Systemic competitiveness without social integration is a project without a future. The development of systemic competitiveness, therefore, is a social transformation project involving more than mere adjustment of the macroeconomic framework.

In order to achieve the management capability necessary at the meta level, the following are required: consensus on the "market governance and world market" model, agreement on the actual course to be followed in the reforms, and consensus on the need to impose the interests of the future over the well-organized interests of the present.

A strategy aiming at an overall solution to the problems presupposes a clear institutional separation between the State, private enterprise and intermediary organizations. Only a separation of this kind will make possible autonomous organization, independent learning processes and the development of a well-developed capacity to anticipate and respond. Once this institutional separation has been achieved, the possibility opens up for an autonomous and efficient State to emerge and, at the same time, for groups of private and public social actors to show a readiness to cooperate and establish links with each other. These are the general functional requirements for the establishment of creative reforms in the area of policy management; their specific features, however, will vary from one country to another according to factors such as the political and institutional structure that has developed in each of them.

The most important factor for coordination at and between the four systemic levels is the willingness of the most significant groups of social actors to engage in dialogue, this being a factor that helps consolidate efforts and channel society's creative

potential along agreed lines. Dialogue is essential for strengthening national innovative and competitive advantages and setting in motion the social processes of learning and communication. Similarly, it helps create the necessary readiness and skills for implementing a medium- to long-term strategy aimed at competition-oriented technological and industrial development.

Achieving competitiveness demands a well-developed capacity for organization, interaction and management on the part of the national groups of actors, whose ultimate aim should be to achieve systemic management embracing the whole of society.

2. Macro level: stabilization of the macroeconomic framework

The existence of efficient factor, goods and capital markets is essential for the effective allocation of resources. This is a requirement wherever the concept of management is multidimensional and supported by competition, cooperation and social dialogue directed towards channelling national potential and developing the necessary capability for successful operation in the world market. The experiences of the 1970s and 1980s have shown that an unstable macroeconomic framework is highly detrimental to the efficiency of these markets and has a negative effect on economic growth.

Macroeconomic stabilization should be based primarily on the reform of fiscal, budgetary, monetary and exchange-rate policy. However, the transition from an unstable to a stable macroeconomic framework is difficult for the following reasons:

i) Attempts to combat inflation through restrictive budgetary, tax and monetary policy not only contribute to limiting consumption in many cases but also act as a brake on investment, thereby reducing still further the national economy's capacity for growth and improved distribution. Hence, the latent tension between the objectives of stability, growth and distribution;

ii) Stabilization measures at the macroeconomic level are usually effective if accompanied by structural reforms carried out in parallel over a long period, such as the reform of the State-run economic sector, the development of an efficient financial sector and the reform of foreign trade policy;

iii) While the costs of the adjustment are felt immediately the benefits are not, with the result that production, investment and employment usually decrease in the initial phase;

iv) Social groups are not all affected in the same way by measures to stabilize the macroeconomic framework and the accompanying structural reforms. In fact, the process has winners and losers and therefore gives rise to bitter disputes at the level of domestic policy (Haggard and Kaufmann, 1992).

Consequently, stabilization of the macroeconomic framework not only requires a conceptual basis that is coherent in technocratic terms but also calls for considerable political effort. Success will be guaranteed only if the Government is determined to implement difficult and controversial reforms, if it manages to rally national reforming forces in support of the cause of restoring the domestic and foreign economic balances, and if it also manages to win international support.

3. Meso level: the active formation of structures

In a recent analysis, the World Bank attributed the successful economic growth and high level of international competitiveness of the countries of East and South-East Asia to sound macroeconomic management and an active export-promotion policy, combined with a moderate tariff policy (World Bank, 1993). According to this analysis, macroeconomic policies aiming at stability particularly encouraged savings, making for significant public and private investment. In addition, the extensive opening up of the economies to foreign technology, accompanied by a system of export incentives, contributed significantly to the development of a dynamic private sector.

However, it would be overstating the case and hence misleading to attribute the successful growth and high level of international competitiveness of these countries entirely to their adherence to fundamental macroeconomic principles and a relatively liberal foreign trade policy. This is because, unlike economies with small populations (Singapore and Hong Kong), medium-sized economies such as Taiwan and the Republic of Korea heavily protected their domestic market from foreign competition until the end of the 1980s or even later, combining tariff barriers with other, mainly quasi-tariff, barriers and only admitting imports that were complementary and not particularly competitive.

Not only was this policy essential to prevent major foreign trade imbalances in these economies, but the fierce protectionism coupled with a selective trade policy allowed industry to benefit from an

undisturbed learning process for 30 years. Furthermore, the first generation of newly industrialized economies, with the exception of Hong Kong, have consistently promoted the development of internationally competitive industries by creating dynamic comparative advantages, the protection of infant industries being only one of several strands of a complex macro and meso approach. This explains the heavy criticism of the World Bank for asserting that selective interventions in the Republic of Korea and other economies have had no significant influence worth mentioning on either industrial structure or the productivity of industrial enterprises. When the battle for competitiveness in world markets begins to intensify, that is precisely the time when Governments would be well advised to combine stabilizing macro policies with the active formation of structures.

4. Micro level

Today, enterprises are facing an increasing number of requirements as a result of various distinct trends (Best, 1990; OECD, 1992), which include.

- i) The globalization of competition in an increasing number of product markets;
- ii) The increasing number of competitors, as a result of successful late industrialization (especially in East Asia), the success of structural adjustment and an orientation towards exports (for example, in the United States);
- iii) The differentiation of demand;
- iv) The shortening of production cycles;
- v) The introduction of radical innovations such as new techniques (microelectronics, biotechnology and genetic engineering), new materials and new organizational concepts;
- vi) Big advances in technology systems which make it necessary to redraw the boundaries separating different disciplines, for example those between information technology and telecommunications (telematics) or between mechanical engineering and optoelectronics (optomechatronics).

In order to meet the new challenges successfully, significant readjustments have to be made to the enterprises themselves and to their support structures. For this purpose, incremental changes such as those planned in the 1980s with intensive automation and the creation of data-processing systems (under the motto "automating Taylorism") are not sufficient. The simultaneous acquisition of efficiency, flexi-

bility, quality and speed of response calls rather for profound changes at three different levels:

i) Organization of production: the objective is to shorten production time by, for example, replacing the traditional assembly lines and transfer systems with manufacture and assembly cells and islands in order to respond rapidly to the client's wishes and decrease warehouse stocks, thereby reducing working capital costs;

ii) Organization of product development: in many cases, the strict separation of development, production and marketing increased the costs involved in product design; in other cases, the products were not to the client's taste. The parallel organization of the different stages of development, and the reintegration of product development, production and marketing (concurrent engineering) helps to reduce significantly the time involved in development, to manufacture products more efficiently and to market them with greater ease;

iii) Organization of supply arrangements: enterprises reduce the scope of their production activities in order to concentrate on the speciality that guarantees their competitiveness. They reorganize supply by introducing, in particular, just-in-time production systems and reorganizing their subcontracting pyramid, reducing the number of direct suppliers and raising some of

them to the status of suppliers of subsystems integrated in the product development process.

The creative combination of organizational as well as social and technical innovations is the task to be undertaken at the three levels. Reorganization tends to be the starting point that creates the conditions necessary for efficient use of the new computerized equipment. Social innovations (reduction of hierarchical levels, delegation of decision-taking to the operational level) are a prerequisite for the success of the new concepts of organization.

The increasing requirements imposed on enterprises are accompanied by ever-increasing demands on their support structure. Enterprises which are operating in the world market do not compete in a decentralized and even isolated manner, but as industrial clusters, i.e., as groups of enterprises organized in cooperation networks. The dynamics of their development depends, to a large extent, on the effectiveness of each industrial location in terms of close and ongoing links with universities, educational establishments, scientific and technical research centres, outreach institutes, technological information and financial bodies, export information agencies, and private sectoral organizations, to name but a few.

III

Development of structures at the meso level: the importance of selective policies

The enterprise support context –i.e., institutions and political structures at the meso level– has been acquiring greater significance in the 1990s as a result of technological and organizational change and the move away from the traditional Fordist production model. The cumulative effects of learning and innovation go together with the formation of enterprise-to-enterprise cooperation networks at the macro level and with both informal and formal cooperative links between enterprises and the groups of institutions connected with clusters of firms. The establishment of these institutional groupings is the key to any active location policy. Technological capacity as a basis for competitiveness is, in turn, based on stores of knowledge and accumulated learning processes

which are difficult to transfer and often not codified, processes which become apparent in the interaction between enterprises and institutions. Thus, specific patterns and competitive advantages that are not easy to imitate are emerging for each country and region.

Political actors who, when framing national policy at the meso level, fail to develop a strategic perspective to direct the activity of the State and enterprises and rely first and foremost on spontaneous reactions and processes of trial and error underestimate three factors:

i) The importance of timely and selective development of the physical and, more particularly, the non-physical structure for the international competitiveness of enterprises;

ii) The length of time necessary for the development of human capital and technological infrastructure, i.e., the key factors in international competitiveness;

iii) The negative effect on aggressive business strategies of technological insecurity (Dosi, 1988) and risk situations which a single enterprise alone is unable to assess in their entirety or to turn to its advantage.

IV

The State, enterprises and intermediary institutions at the meso level: the traditional dichotomies break down

As enterprises develop ever more sophisticated products, the demands on the local, regional and national environment increase accordingly. The idea that the State, viewed as society's main guiding force, is alone capable of steering technological and economic processes, and the dogma that the State must be subordinated to market forces are both wide off the mark. The successful cases in the world economy indicate that there is a broad margin of action for the implementation of policies that strengthen the competitiveness of industrial locations, and this margin of action lies between two extremes: *dirigiste* State intervention and the *laissez-faire* approach limited to establishing the general conditions necessary for economic operation. New forms of organization and management are being defined at the social and political levels, in the same way as in industrial production.

Demand conditions conducive to competitiveness are often the result of initial measures such as deregulation, privatization of State enterprises and external financial support. It is also essential to build a physical infrastructure for exports (for example, transport and telecommunications systems). What is more difficult is to reform and develop, educational, research and technology establishments in order to further competitiveness, as well as to implement policies supporting industrial location that are aimed at structuring the meso level. It is not only a matter of deciding which tools should be used (figure 2) but also of ascertaining how to select and combine them and determining which decision-making processes could serve as a basis for the development and implementation of location

policies geared to the complex nature of industrial production. It follows that the structuring of the meso level is primarily a problem of organization and management.¹ What is required is the creation of an efficient institutional structure (hardware) and the promotion, in particular, of a capacity for close interaction between private and public operators within a cluster (software) (figure 3).

The new industrial location strategies differ fundamentally from the traditional State approach to industry, industrial planning and investment management. They also differ from the neo-corporative approaches of the 1970s involving only the leaders of business associations and trade unions. Today, the two approaches have no further use because at the level of location policy and the development of meso policies, the potential for action, the knowledge necessary to develop long-term policies and the capacity for implementation are shared among several State, private and intermediary operators: enterprises, associations, the scientific sector, State institutions, private intermediary institutions and trade unions (Mayntz, 1993). During the period of Fordism and highly standardized industrial patterns, it was still possible to successfully establish large, vertically integrated enterprises based on the

¹ This aspect of meso policy, which is linked to the theory of economic management, is not mentioned at all in publications on the meso economy such as Peters (1981). In that study the author clearly moves away from the orthodox macroeconomists; he points out the importance of structural policies for the structural reform of the economy and puts forward a wide range of means which could be used, but he does not say whether these means could achieve this, or how.

FIGURE 2

Industrial location policy in Germany: technology policy tools

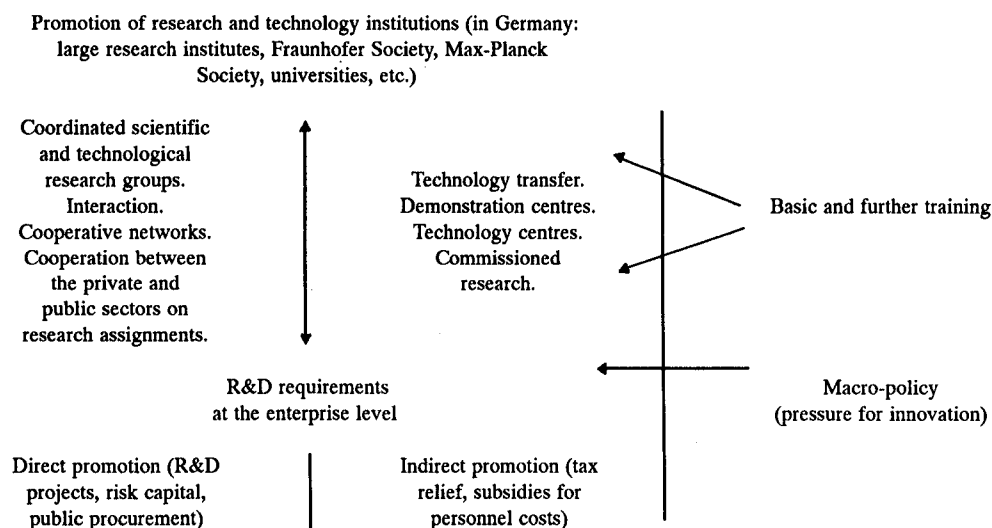
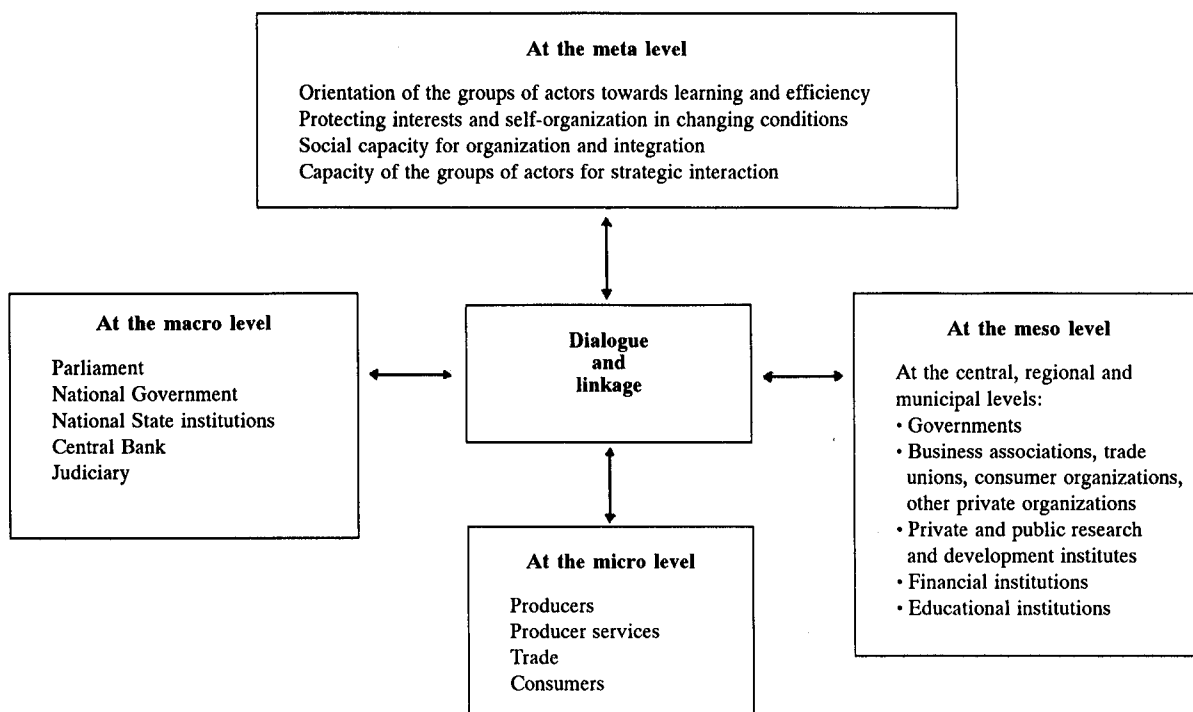


FIGURE 3

Determinants of systemic competitiveness: strategic capacity of the groups of actors



centralized State planning of industry (as in the former Soviet Union, India and even Brazil). Today, however, centralist and unidimensional regulation patterns are doomed to failure when the objective is to develop and support the creation of complex enterprise networks and groupings of specialized institutions.

Patterns of social organization, the rapid flow of information, open channels of information, and inter-linked structures and communications are becoming competitive factors in themselves. "Soft" management media (Krumbein, 1991, p. 49), such as information flows, the integration of interests and the establishment of procedures are acquiring increasing significance as a result of changed structural conditions.

These means have two functions: on the one hand, State meso policy is dependent on the resources offered by the technical know-how of enterprises, the scientific sector and other strategic actors; on the other hand, the new management means are consistent with the interactive nature of innovation and the systemic nature of competitiveness. Thus, meso policies gradually take on the nature of a process. The formation of structures at the meso level (in contrast to macroeconomic policies) is not only promoted by public policy, since the enterprises, intermediary institutions and associations (individually or together) can and should contribute to shaping industrial location policy (for example, by offering training opportunities, developing information systems or speeding up information flow).

These new management methods have gained ground in countries such as Japan since the 1970s, when classical industrial policies prevailed, with tariffs and quasi-tariff barriers, the promotion of imports through tax incentives, subsidies for scientific and technological research and the creation of compulsory cartels (Hilpert, 1993; Vestal, 1993). The plans and forward-looking strategies set forth by the Japanese Ministry of International Trade and Industry (MITI) are the result of a lengthy and thorough process of dialogue with representatives of the private sector and members of scientific research circles. These plans, which are regularly drawn up for a period of three to ten years, have nothing in common with the directives of a centralized economy since

their implementation is not obligatory for either enterprises or public bodies. The views of the future outlined by the main social actors give a general idea of the direction that macroeconomic development should take: a direction which is desired and felt by many to be correct. These plans also set short- and medium-term objectives for different sectors, by means of an overall analysis of bottlenecks, strengths and possible radical changes. They also provide guidance to help banks to decide on the granting of credit, to aid enterprises in decisions on long-term investment, to help the private sector to decide on the allocation of resources to research, and to enable intermediary institutions (educational and research establishments) to readjust and correct their management aims. Such a policy reduces insecurity and stimulates innovation and investment in scientific and technological research, enabling enterprises to pursue long-term strategies aimed at growth and the acquisition of market shares.

Another example of the increasing importance of "soft" management media and effective communication channels between relevant social groups, institutions and organizations is to be found in the "regional conferences" which have become institutionalized in some federal states of Germany, particularly in critical areas where extensive reconversion work has been or is being carried out, such as Nordrhein-Westfalen (Jürgens and Krumbein, 1991; Voelzkow, 1994). Here, many of the social actors involved try to reach agreement on future development opportunities in the region, seeking to identify obstacles to the modernization process and to predict the environmental and social costs of this process in order to develop guidelines for decision-making at the political and enterprise levels. In the regions involved, complex cooperation networks including business organizations, trade unions, associations, local government, technological institutes and universities are emerging. These networks are situated between the State and the market. They develop visions or, in more pragmatic terms, scenarios for regional development. They prepare major strategic decisions and open the way for non-governmental policy management of the programmes for economic restructuring as well as the participatory development of industrial location structures, both regional and national.

V

Courses of action in situations of radical change and of consolidation

The search for promising economic areas with a high potential capacity for generating value added and the development of an anticipatory structural policy are ambitious undertakings. In general, this type of precisely focused approach is likely to be successful only in consolidated economies with experience of coordinating the action of enterprises with that of government and the scientific sector.

Focused approaches and selective meso policies go hand in hand with the development of a complex monitoring system. It is precisely during the different stages of economic restructuring that strategic focusing by the public institutions (ministries of the economy, teams of advisors) is a key factor. Business associations and groups will primarily defend their own interests and press for their respective industries to be defined as strategic focal points. During stages of radical change, actors who are following a strategic course of action must cooperate in public bodies with independent experts and advisers in order to be able to identify industrial focal points with development potential. In the stage of economic consolidation, the main task is to establish a more extensive monitoring system based on a broad range of agencies and institutions. For their part, economic research institutes, university research centres, sectoral technology and advisory institutions, business associations, research centres in the private sector, trade unions and consultancy firms help to continually improve the information on the dynamics of the productive sector. They all interact through the publication of papers, scientific debate, conferences and joint research.

The technical know-how built up in the institutions and the formal and informal interaction which they permit (cooperative network) enable all the

social actors to undergo an ongoing learning process regarding the economy and industrial location, while showing up more clearly the strengths and weaknesses of the national economy and the challenges facing it, and enhancing the ability of enterprises and private and public institutions to adjust their courses. The first thing that many developing countries have to do is to set up institutions providing a context for the acquisition of technical know-how linked to the productive sector. In the industrially advanced countries, however, the accumulation of such knowledge is, to a large extent, an autonomous process since the aforementioned operators communicate with each other through the exchange of reports, seminars, joint research projects, advisory councils, and a wide range of other means. Apart from the existence of this autonomous horizontal dimension, it is the research-promotion institutions that usually set the corresponding priorities.

It is clear that what is lacking in order to translate this technical know-how into economic policy is an action-oriented strategy. Here also, State institutions dealing with economic policy and industrial location must undertake the important tasks of gathering and processing the existing technical know-how, exploiting channels of development, and cooperating with strategic actors with a view to developing visions for the medium-term so as to obtain, on this basis, the best possible blueprint for industrial location. The formation of new patterns of social organization and of "procedures for intervention and regulation that are more compatible with autonomy" (Scharpf, 1992) at the meso level facilitates at the same time the management and shaping of market processes, reducing the shortcomings of purely commercial regulation and of State planning.

VI

The national, regional and local dimensions of the meso level

In addition to a general framework conducive to innovation (basic education, tax incentives for scientific and technological research), the implementation of specific and selective meso policies is required for the creation of competitive advantages. Unlike "horizontal promotion", which is so widespread, selectivity at the meso policy level is aimed at "strengthening the strong" with a view to the rapid construction of dynamic industrial focal points and efficient localized industrial structures that will radiate an effect outwards onto the less developed areas around them.

The selective approach has three main aims:

- i) The focusing of meso policies on industrial clusters with development potential;
- ii) The development of an efficient support structure for these clusters, i.e., a framework conducive to innovation, a set of instruments designed to advance the best performers (i.e., the "winners") and encourage them to employ the best international practices as quickly as possible, and the formation of structures which help the enterprises with development potential to catch up with the best;
- iii) The strengthening of the developing regions where dynamic enterprise groups or clusters are emerging.

The policies which make up the meso level have a national and a regional or local dimension.² At the national level, meso policies are aimed at developing the physical infrastructure (transport, ports, rail and road networks, telecommunications, energy, water, supply systems, waste disposal systems, etc.) and non-physical infrastructure (education systems, etc.) appropriate to the clusters. Also of significance are the selective policies and activities in the area of foreign trade (trade policy and strategies for market penetration) as well as the active protection of inter-

ests at the international level (for example, those of the developing countries in the face of the protectionism of the industrialized countries).

As this systematic improvement of the national meso level takes place, policies specifically designed to support the clusters assume importance at both the regional and the local levels. Given the increasing importance of spatial structural factors for the competitiveness of enterprises, it is necessary to implement decentralized policies and to re-examine the powers of national, regional and local political bodies. It is essential, in this context, to extend the powers and funding of the regional and local administrations and support the formation of other structures at the local and regional levels (development of structures from the bottom up).

Decentralization should not be seen as a schematic delegation of responsibilities to subsidiary decision-making levels and, still less, as a dissociation between the regions and the State. As is the case in modern enterprises –where the increased autonomy enjoyed by the most profitable units does not imply the elimination of managerial levels but rather increased ability to control and the acquisition of new tasks for central management (the organization of cooperative networks and the development of strategic visions for the enterprise as a whole instead of centralized management of all its divisions)– efficient decentralization of the public sector will bring about complementary changes at the central level. The State will continue to be important in bringing together dynamic groupings within a national development strategy, in ensuring productive feedback between local and regional groupings and in implementing an active foreign trade policy (development of structures from the top down).

Structuring the meso level in order to create capacities is an ongoing task for the public and private sectors. Meso policy should be viewed as a cross-sectoral undertaking directed towards the continual improvement of economic location. Furthermore, a well-structured meso level not only serves as a means

² Within the context of the European Union and, to a certain extent, within that of the Common Market of the South (MERCOSUR), there is a multilateral dimension to technology policy which is not discussed in detail in this paper.

of increasing and maintaining the international competitiveness of the economy but also forms the basis

for the effective implementation of accompanying social and environmental policies.³

VII

Cooperation network structures and their operation

The structures based on cooperation networks and autonomous horizontal coordination are situated at the meso level. This is where hierarchical management interacts with management based on these networks –“self-coordination in the shadow of hierarchy” (Scharpf, 1993, p. 145). The mechanisms based on cooperation networks predominate at the meso level because management resources are spread widely throughout this entire policy area (the ability to identify problems, knowledge of the causal links which affect management, and the capacity for implementation). The meso level is distinguished by the phenomenon of “shared sovereignties” (Meyer, 1994), which affects public institutions, enterprises and intermediary organizations alike shaping an economic location through a set of technological, innovative, educational, industrial and regional policy measures therefore depends on the social actors of the micro and meso levels being closely interlinked. The meso level is where government actors operate (from the local up to the national level), together with public and private intermediary institutions (educational, advisory and technological bodies, and also chambers of commerce and other associations). Their interaction gives rise to cumulative processes which boost the capacity of all the parties involved, including that of the meso level as a whole.⁴

Against this background, three points are relevant: first, the specific relationship between the meso and meta levels; second, the scope of meso policies, and third, their importance for the development of international competitiveness.

1. The relationship between the meso and meta levels

As mentioned earlier, different patterns of organization and management are superimposed on top of each other at the meso level, so that the task of developing this dimension depends on the organizational and strategic capability of many different social actors. Thus, the capacity of the organizational patterns situated at the meso level and based on cooperation networks is closely linked to the deep-rooted structures of each society involved and, hence, to the meta level. It is at the latter level where attempts should be made to identify the factors determining whether or not the collective actors will be able to address themselves to finding solutions to the problems.

Any attempt to implement a management strategy based on cooperation networks will be doomed to failure if the actors involved have a tendency to operate as lobbies, if they have no previous experience of dealing with conflicts or working out consensual solutions (in which case structures based on cooperation networks can easily result in “endless disagreement”), or if the absence of the securities inherent in a State governed by the rule of law hinders the creation of “general trust” among the actors: an important prerequisite for management based on cooperation networks (Messner, 1995).

When conditions are favourable at the meta level, the tasks to be undertaken at the meso level are as follows: to strengthen the capacity of the actors involved as far as possible (enterprises, business clusters,

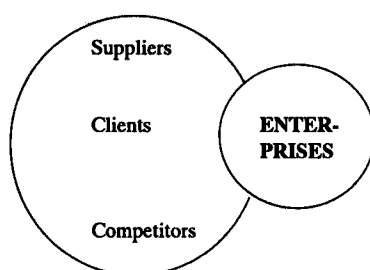
³ See Esser, Hillebrand, Messner and Meyer-Stamer (1994), p. 82 *et seq.* In future development research it would be essential to link theories on competitiveness with the new approaches focused on equity. One of the questions raised refers to the dynamics of the modern sectors, oriented towards the world market, and to the contributions to development made by the informal sectors in relatively weak economies.

⁴ This formation of the meso space at the national level may have its counterpart in location policies at the multilateral level (those of the European Union, for example). At this level however, it is customary to take strategic decisions (discussions about the sectors with potential) or to implement joint research projects, whereas the institutional formation of the meso space is carried out in an increasingly decentralized manner in each of the economic regions.

FIGURES 4

Selective policies and specialized factors: What are the institutions and approaches that make up the meso space?

Technology: Commissioned applied research, technology transfer, advisory services, measurement, standardization, quality control and assurance, business associations and chambers of commerce, universities and technology institutes
Specialization, selectivity and interactive linkages.



Basic and further training: private and public institutions
Rapid adaptation to new demands

Finance: investment credits, working capital, participation in joint ventures, insurance, export financing
Patience and willingness to take risks

Infrastructure: transport, loading and unloading, communications, energy, water
Speed and efficiency

Exports: market information, design, trade insurance, marketing firms
Specialization and close contact with the private sector

Environmental protection: supervision, technological advice
Pressure and support

employers' and employees' associations and other interested groups, and intermediary institutions); to encourage coordinated action among them with a view to generating synergistic effects and uniting widely dispersed management resources without undermining the relative autonomy of the actors; and to achieve a balance between individual and collective interests.

What is also needed is a system for balancing powers which prevents the environmental, social and economic costs of the meso-level cooperation networks from being unloaded onto society. The formulation of this level places great demands on societies, and is a difficult task for developing countries or countries in transition. This is why the structuring of the meso level is such a test of the organizational and managerial capacity existing in a given society.

2. The scope of policies and private activities at the meso level

In contrast to the situation at the macroeconomic level, where scope is limited in some areas by the globalization of the economy (for example, through loss of sovereignty concerning interest rates), the meso level offers greater room for manoeuvre and is increasingly important. If we allow that the effectiveness of this level depends on the coordinated action

of the social actors, and that the local, regional and national dimensions do not lose their relevance,⁵ since there tend to be national competitive advantages (Porter), and if the creation of competitive advantages is linked to industrial locations, then it would seem to be the case that while the demands on the meso policies are great, there is sufficient leeway for their development. Although it is possible to take advantage of external potential (such as foreign know-how and participation in international technological networks), the meso level remains limited to a single geographical area, since it is an interlinked organizational and institutional system that cannot be exported or imported. The patterns of organization and management based on cooperation networks which predominate at the meso level particularly encourage the clustering of enterprises.

3. The importance of the meso level in the creation of systemic competitiveness

The situation described above gives a clear indication of the importance of the meso level in the creation of national competitive advantages. Whereas macro

⁵ As indicated in studies by Porter, OECD, advocates of the theory of *industrial districts* and other works.

level policies are becoming increasingly similar world-wide, the localized industrial clusters differ significantly from one country to another. The design of these localized structures is determined mainly by the set of institutions existing at the meso level (figure 4). This is where institutional and organizational competitive advantages are generated, as are the specific patterns of organization and management and the national profiles which sustain the competitive advantages and are difficult for competitors to imitate.

This approach contrasts sharply with the arguments of authors such as Knieper (1993) who maintains that an increasing number of uniform localized groupings "without their own distinctive features" are emerging in the world economy and that, when taking decisions, investors pay greater heed to the wage levels and tax rates prevailing in the host country. Most probably, it is precisely global competition that leads to the development of highly diverse and specific national patterns of competition within the world economy.

VIII

Demands on countries and regions

Not only does the ability of countries to respond to the needs of the different social groups and to the demands of technological change, the world economy and the sustainability of the development process vary greatly, but it also changes according to the different stages that each country goes through. The world economic situation therefore undergoes relatively frequent readjustments. The recessionary processes that take place in countries whose ability to adapt is declining are mirrored by technological progress and successful late industrialization in other countries. Moreover, the capacity to anticipate and react to new demands at the technological and organizational level and in the world economy varies significantly.

Highly competitive and innovative countries, in particular, are developing regional groupings for trade and integration, resulting in the formation of interlinked systems in which industries cooperate closely on the basis of division of labour. Open regionalism enables new technologies to be tested in a large regional market before efforts are made to win shares of the world market. Furthermore, it also allows for a flexible response to the changes taking place in the world economy –such as the dispropor-

tionate progress of other countries in the competitive battle– while softening the impact of the adjustment on the national economy. Regionalism may lead to the establishment of regional blocs or the stimulation of world trade.

It remains to be seen how far the traditional industrialized and the newly industrialized countries will involve the other countries in a dynamic world economy and how far the latter will be capable of setting in train dynamic learning processes to permit rapid adjustment to the demands of the corresponding technological and organizational paradigm and to strengthen national enterprises and the national competitive advantage. Undoubtedly, national potential should be strengthened through cooperation and regional integration. It is only within the framework of integration projects that disadvantages of scale at the market level can be offset in the enterprise and in scientific and technological research activities. Only integration around countries with a firm economic and political basis will create a market dimension that arouses strong and sustained interest in economic growth among national and foreign enterprises.

(Original: Spanish)

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