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## The Relation among Regional and Industrial Development <sup>3</sup>/<sub>4</sub> The Role of Public Policies and Social Connections

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### 1. Introduction

Immediately after the II World War, several general planning and regional development groups emerged to study problems of regional inequalities and sustainability of economic growth. However, only in the seventies, as a consequence of the growing articulation of the universities and research centres with the industrial activities based upon advanced technology, that some analyses of regional planning started to consider technological variables and innovations among their specific concerns

As a background for that discussion, the world scenery in the last 20 or 30 years was marked by a crisis in the process of capital accumulation and by the emergence of new technological, economic and social paradigms.<sup>1</sup> These changes have produced heterogeneous implications over distinct human groups and geographical areas, in their forms and in their effects, bringing with it the fragmentation of the "world and environment of work" (Benjamin, 1998), with the exclusion of certain human groups; the abandonment of specific areas; the deepening of environment problems in some regions; and, in a global scale, the concentration of wealth in certain companies, countries and strata, with the resulting weakening and impoverishment of a great share of the people and nations of the world.<sup>2</sup>

This background is one of the main causes for the political and academic debate emergence emphasizing the role of specific places in economic and social constructions.<sup>3</sup> This revival of the studies of the localities happens also as a consequence of the flexibilisation of regulation instruments and local institutions,<sup>4</sup> with an important loss of the State-Nations power. We shall also stress the importance of social contexts, articulations, and institutions (the relevance of local culture; the behaviour of the civil society and of the productive organization; the new competition and cooperation forms that emerge from the articulation of two factors <sup>3</sup>/<sub>4</sub> the social capital and the territory, etc.) for the explanation of the differences between the development levels and other characteristics of distinct places.

Incorporating such concerns, the paper investigates regional and industrial development in some Brazilian cities and regions, comprehending mainly regions of the State of São Paulo, the most developed of Brazil, representing almost 50% of that country's GNP. This concentration is due to the historical formation process of the Brazilian industry and the role of the State of São Paulo in its constitution (Cano, 1998a; 1998b). We shall also observe that the São Paulo industry presents an extensive diversification which embraces many sectors and clusters, including the same sectors and clusters in different regions, and in a wide range of activities <sup>3</sup>/<sub>4</sub> from traditional industries and important agribusiness to high tech firms. In more recent periods, however, we can notice a significant regional deconcentration process in the industry of the State of São Paulo and of Brazil as a whole, from the City of São Paulo, capital of the State, to the interior of this same State, and also to other States of Brazil.

The paper is composed of the ensuing parts: in the next section, we make a short retrospection of the current concern with regional development, which has its foundations at least in the 50s. In the third section, we bestow a short analysis of the recent regional transformations in Brazil, especially after the 80s and with a special concern with the State of São Paulo case. Finally, in the fourth part, we adduce some implications for public policies.

### 2. The Concern with Regional Development

The regional planning and development models which appeared after WW II, although following diverse theoretical orientations and aiming disparate goals, were all sustained on conceptions of location factors

which were a consequence of the fusion of location theory with the multiplier of yield and employment, in the Keynesian tradition (in any of its streams), with a special emphasis in industrialisation (Isard, 1960; Chenery, 1964), but also in themes as inter-industry effects, linkages, unbalanced growth (even with a favourable view), and phases of economic development (Kuznets, 1966; Hirschman, 1958); the idea of relative regional and trade advantages sustained on the availability of specific factors (Ohlin, 1967), from which resulted the export base theory (North, 1964; Tibeout, 1977); the notion of major activity and polarised regional development (Paelinck, 1977); and the dropping and leakage effects (Hirschman, 1958; Diniz, 2000:6). Following developments achieved in these models, planning and policy experiences in regional development generalised in the developed countries, chiefly in the USA, United Kingdom, France, Germany and Italy. And after a short time span, in Latin America also emerged programs such as those for the hydrographical basins, in Mexico; the Guayana Region, in Venezuela; the Argentinean Cuyo; and the Brazilian Northeast (Diniz, 2000:6). After the 70s, particularly in the USA, a dynamic motion in the direction of the production of (more) advanced technologies in new places was noticed, in parallel to a deindustrialisation process in certain regions of the country. Such a trend is also verified in other countries, with localization changes occurring in an absolute as well as in a relative form, i.e., some activities not only had their importance diminished in some places in relative terms, but had lost significance in an absolute manner in terms of yields and employments generated. Furthermore, the dispersion of those old and even new productive activities was not limited to specific country(ies), but involved instead displacements to selected loci in the developing countries (the so-called periphery fordism <sup>3</sup>/<sub>4</sub> Harvey, 1989). In some of these cases, although the centre of production was maintained, it lost its regional primacy.

Nevertheless, since the industrial and innovative success of the Silicon Valley, in the USA, and the ever growing relation between Universities and Research Centres, on the one hand, with private industrial activities based in advanced technologies, on the other, some regional development studies begun also to take into consideration technological and innovation variables. Notwithstanding, as expected, the then existing theoretical conceptions and the various regional planning experiences did not have an established theoretical paradigm<sup>5</sup> to explain those phenomenas.

So, it was since the transformations in the "global chart" of capitalist production <sup>3</sup>/<sub>4</sub> from its former distribution in the 70s <sup>3</sup>/<sub>4</sub> that some of the most renowned regions in the advanced nations were fiercely defied. Five alternatives then emerged for the several regions: a) some remained quite behind and had extreme difficulties to recover and catch up with the progressive regions;<sup>6</sup> b) some recovered, changing the sectors in which they previously had their specialisation and/or achieving some upturn in the old ones;<sup>7</sup> c) some remained more or less having the same relative importance in general economic and sectoral terms; d) some new regions received old industries and become important industrial loci; and e) some new regions received or even bred new industries <sup>3</sup>/<sub>4</sub> Silicon Valley being the most conspicuous example of this last possibility in a developed country, and the East Asian NICS being the most noticeable among the developing ones.

Moreover, as we know, the last 20 or 25 years showed huge transformations in technologies <sup>3</sup>/<sub>4</sub> mainly in microelectronics, with its impact spreading to almost every economic sector <sup>3</sup>/<sub>4</sub> to what we should add the outcomes of the growing financial internationalisation. Nonetheless, in opposition to the idea of a borderless and rather even world in terms of opportunities, governed by an integrated international system which would not differentiate agents because of their national origins, and in which markets of goods and services would progressively take a global character, the process of mondialisation (Chesnais, 1994; 1999) presents a heterogeneous character in regional terms, whether in its form or in its effects. As explained by Benjamin (1998), the so-called globalisation of the great capital brings about sub-products as the fragmentation of what we can call the world of work; the exclusion of great human groups, the abandonment of some regions; the wealth concentration in certain strata, firms and countries; and the increasing fragility of the majority of the national States.

The most important aspects of these transformations is the fragmentation of national spaces. The process of mondialisation can increase the differences between regions in a specific country as well as augment the competition among distinct places (Swyngedouw, 1989:39). For Swyngedouw (1989), this return of the locality happens as a consequence of the flexibilisation of the regulation instruments and because of the

increasing importance and attraction of local institutions in this contradictory context in which some scholars even argue for the complete loss of the power of the State-Nation (Ohmae, 1993). However, Swyngedouw (1989) believes that in such an environment the relevance of specific social and institutional configurations will not disappear, quite to the contrary, they will tend to show an ever raising significance. Exactly in this sense, many authors add intangible variables to these social and institutional factors, such as local culture, institutions, organisation forms, modes of competition and cooperation, etc. (Benko, 1996; Harvey, 1989; Swyngedouw, 1989).

Albagli (1999), for instance, shows that the debate on the role of innovation in regional development considers that the innovation process results from a mix of research, development and economic and social conditions, which are present in a differentiate manner in each space. This innovation process occurs through the interaction of firms and other agents with their environment, displaying a dynamic character in which cumulativity, that is to say, the reproduction of knowledge both of individual and collective agents, has a fundamental function. Nevertheless, as a matter of fact, in many instances there is an important presence of transnational corporations (TCs) in national and local spaces, influencing national macroeconomic policies and showing that an ever enlarging share of the decisions and interactions among agents comes from abroad. This results in a less conspicuous role for the indigenous agents as well as for the national States (deciding, for example, the direction of investments in a national scale). However, conversely, the role of State and City governments is raising, i.e., the role presented by sub-national governments tries to compensate the less conspicuous share of their national counterparts in the formulation and implementation of public policies directed to economic development, also as a consequence of the higher possibility for these sub-national governments transgressing national borders and interests in the name of their own interests (Ohmae, 1993), whether or not we agree with this behaviour.

### 3. The Recent Regional Changes in Brazil

In Brazil, this sudden increase in the role of the sub-national governments appears in the progressive importance of the so-called "fiscal war" among sub-national States <sup>3</sup>/<sub>4</sub> which generate great dynamic budget problems for themselves through ad hoc reductions of value added taxes (ICMS),<sup>8</sup> in a State level, and service taxes (ISSQN),<sup>9</sup> in a Municipal level <sup>3</sup>/<sub>4</sub> and also other mechanisms (grants, estate donations, etc.) used to diminish operational costs of big corporations (mostly TCs) and attract them to specific places (Fernandes et al., 2000:83). Such a heightened role of sub-national governments has its origins in the opening of the Brazilian commerce, in the end of the 80s/beginning of the 90s. This was even radicalised with the Real Plan and had colossal deleterious effects over employment and also the sub-national budgets <sup>3</sup>/<sub>4</sub> particularly because of the maintenance of very high interest rates over the public debt (making its expansion explosive).

Thus, State and Municipal governments, in Brazil, suffered a great transformation since the end of the 80s, following an international trend in this direction (Harvey, 1989). The cities, in reality, united their policies to the new stance adopted by the States, adding municipal benefits (like reductions of taxes, estate donations, and publicity of the passivity and low cost of the indigenous workers) to the ones received in the states level. Hence, because of the economic crises and growth of the unemployment that comes with it, some regions and cities introduced manipulations of economic policies in order to attract investments. The policies adopted are quite concentrated in capital donations, contributing for a fiscal war which, as mentioned, spreads beyond the Brazilian territory, in very unequal relations between sub-national governments and TCs, adding more elements to the poor performance of the sub-national governments and to the high cost-benefit relation of such local "development policies".

But how should one cope with such a situation if regional development is progressively an important agenda<sup>10</sup> for a truer social development, i.e., one which is more systemic, endogenous and with local repercussions? One alternative is to reduce transaction costs through sectoral and clusters agglomeration, making easier the interactions among agents which are not brought about by market relations, and furthering the emergence of innovations (Cooke, 1998).

With those questions in mind, Souza and Garcia (1999:305) try to identify potentialities for the formation of specialised sectoral agglomerations in the State of São Paulo, through an analysis of the very complex and

diversified productive structure of this State. They emphasise that although we cannot find a clear specialisation pattern in the State of São Paulo taken as a whole, we observe a concentration of specialised producers in specific loci, which thus constitute geographical and sectoral agglomerations of firms. The State of São Paulo is very important in the Brazilian context, since its share in the manufacturing industry of the nation amounts to almost 50%, although it is declining, deconcentrating the Brazilian manufacturing industry both to other States and regions of the same State.<sup>11</sup>

Table 1

GEOGRAPHICAL DISTRIBUTION OF THE  
BRAZILIAN MANUFACTURING INDUSTRY

Selected Regions and States (in %)

Regions/States	1970	1975	1980	1985	1990	Northeast (without Bahia)					Bahia				
4.0 Minas Gerais	6.4	6.3	7.8	8.3	8.7	15.7	13.6	10.2	9.5	9.8	58.1	1.5	2.1	3.1	3.8
Grande SP	43.4	38.8	34.2	29.4	26.2	14.7	17.1	20.2	22.5	23.0	55.9	54.4	51.9	49.2	
Interior	14.7	17.1	20.2	22.5	23.0	3.1	4.0	4.1	4.9	5.7	2.1	2.8	4.2	5.0	6.2
Catarina	2.6	3.3	3.9	3.9	4.2	2.1	2.8	4.2	5.0	6.2	100	100	100	100	100
Rio Grande do Sul	6.3	7.5	7.9	7.9	7.7	Source: Souza and Garcia (1999:307).									

Table 1 displays this fall in the relative share of the manufacturing industry of São Paulo in relation to the national Value Added in the Manufacturing Industry (VAMI), from 58.1% in 1970 to 49.2% in 1990. We shall underscore that in the Grande (Great) São Paulo the fall was even steeper, from 43.4% of the national VAMI in 1970 to 26.2% in 1990. On the other hand, we can notice a prominent growth in the share of the State's inland, from 14.7% in 1970 to 23% in 1990. The regions of the São Paulo State interior with a more accentuated growth were the ones most industrialised: Campinas, São José dos Campos, Ribeirão Preto and, more recently, São Carlos.<sup>12</sup>

The cities of Campinas, Ribeirão Preto, São José dos Campos and São Carlos are displayed as agglomerations of specialised producers, and can even be classified as technological poles, because of their high tech firms and sectors, and also their strong institutional structure in S & T. The technological pole of Campinas is strongly specialised in telecommunications and information technologies. As well known, both sectors are based upon a strong tacit technological content, which lean to a spatial concentration of producers. The technological pole of São José dos Campos is directed to aeronautics and armaments, and also made up by telecommunications, autos and electronics. The technological pole of São Carlos is known by presenting high tech firms, in sectors like new materials, information technologies, technical instruments, electronics and precision mechanics.

Some regions of the state of São Paulo are specialised in traditional industries. The textile pole of Americana, also known as the textile pole of the State of São Paulo, is specialised in the production of plane synthetic textiles and also comprise firms of the nearby cities of Santa Bárbara D'Oeste and Nova Odessa. The city of Franca is the second most important men's leather shoes producer of Brazil, just behind the region of the Vale dos Sinos, in the southern State of Rio Grande do Sul. The Votuporanga city gather the second most important in Brazil, surpassed only by Bento Gonçalves, in Rio Grande do Sul. The Limeira region, despite presenting a diversified industrial structure, with a strong participation of both orange juice producers and metal-mechanic firms, has special advantages and strengths in the production of gems, jewels and ordinary adornments.

Many other regions of the State of São Paulo specialises in traditional industries, some virtuously, as Jaú and Birigüi, in the leather and shoes sectors; the cities which comprise the so-called Circuito das Águas in sweaters;<sup>13</sup> Ibitinga, in knitting products; Itu, Santa Gertrudes, Tambaú, Pedreira and Porto Ferreira, in ceramics; and São Bernardo do Campo and Itatiba, in furniture. These industries, although less important for the state and the national economies, also comprise sources of dynamism and externalities for the cities and regions in which they localise, counting on a set of specialised small and medium firms, and in a well trained workforce, with specific capabilities.

Other very important examples of the State of São Paulo are the chemical sector, chiefly in the cities of Paulínia, Cubatão and Santo André; and the metallurgical sector, in the ABC,<sup>14</sup> with strong relations with the

automotive sector. The metal-mechanic sector concentrates on the regions of Campinas and Piracicaba, and displays a very diversified structure, whereas the region of Campinas is rather specialised in inputs for the petrochemical pole of Paulínia, in this same region, the production of the region of Piracicaba is addressed to the local alcohol and sugar agribusiness. We shall notice that all these agglomerations are strongly vertical, coordinated by big firms with several subcontracting relationships of different kinds, and an almost complete absence of more cooperative relations.

Finally, it is important to mention the potentialities and the weight of the agribusiness of the State of São Paulo. The region of Ribeirão Preto, which comprehends also a technological pole for medical, hospital and precision instruments and equipments, is also well known for its huge production of alcohol, sugar, citric fruits, coffee, corn and Soya beans, with a very high mechanisation level and productivity. In the region of Limeira and Bebedouro there is a mighty orange agribusiness, heavily directed to exports, whereas in the regions of the Vale do Ribeira (Circuito das Pedras<sup>15</sup> and Cotia) we can observe the production of fruits, and in the sub-region of Holambra, near the city of Campinas, the production of flowers. In the west of the State, we shall underscore the cattle breeding and the meat and animal products industry, which addresses part of its production to foreign markets, and also the sector of vegetable oils refining, also with a share in the Brazilian exports (Souza & Garcia, 1999).

#### 4. Implications for Public Policies

There are several implications of what was showed above for innovation regional policies. A series of empirical studies try to devise manners and models to replicate successful productive agglomerations, but these last phenomenas are not so simple to emulate. Thus, the great challenge to those who study the intrinsic regional disparities generated by the excluding character of capital considered as a whole, which manifests also over space, is to contrive a production theory and a model, both in micro and macroeconomic levels, capable of reducing such disparities and of generating (mainly) the virtuous effects of the action of capitals over the regions and societies. One shall observe that in this statement we assume the relevance of any specific productive agglomeration does not depend on its representativity for all the economy of a State, Province or Nation, if it displays an important role in diminishing the socio-economic inequalities of specific localities.

In the Brazilian case, there is a growing intervention of sub-regional (State and Municipal) governments, trying (often in vain) to compensate for the abandonment, by the federal government, of the formulation and implementation of public policies, especially those directed to economic development (Fernandes et al., 2000:83). Therefore, the idea of introducing public policies into the attributions of localities is supported by the unremitting economic crises and the ensuing increase in unemployment, but also by the uncertainty about the returns of public expenditures and funds in terms of their consequences over public incomes and technological development. Nonetheless, there is often a great misuse of public funds in such policies, at least when compared to (the expected) returns.

However, there is no way for the public sector evading its role and responsibilities in sustaining innovation and modernisation processes, and consequently in augmenting the productive capacity of a region. The only concern is to try to make a better use of the public funds, achieving the best possible returns for them. In this sense, in the Brazilian case, currently emerges a debate over the political and institutional transformations, and their repercussions upon the regional development, since there are many scholars trying to devise a means to stop the fragmentation of the national space, at least as a hidden official policy.

Nevertheless, we have to recognise that a more directed focus in regional and local developments is a great opportunity to improve these repercussions of policies, at least in some cases, making very important the knowledge accumulation about specific productive agglomerations. It is necessary to investigate if the concentrated nature of certain activities in particular regions is a result of technological external economies, of the size of the market or of any other cause, and still there is the need to evaluate if and how should the public sector intervene.

The international literature (e.g., Cooke, 1998) completely discard public policies strongly based in subsidies and other fiscal benefits, recommending instead the establishment and improvement of cooperation networks which include local actors such as public organisms, firms, business associations, unions, universities, etc.

However, all these actors need to cope with the fact that many decisions and agreements originate, at least in part, from foreign sources, and that this foreign share is constantly raising, chiefly nowadays.

The public sector can assume a significant role even in such conditions, for instance, bestowing some critical inputs (as physical and knowledge infrastructures, public organisms for information about markets, technologies, marketing, etc.) quite of general use in the economies or in particular sectors or regions. A second alternative is to assist in the coordination of decisions among different agents (Chang, 1994), e.g., stimulating the horizontal cooperation of firms in complementary markets, or even among competitors for setting up some important inputs or channels for outputs, but also, in exactly this same last sense, stirring up vertical linkages among users and producers, and so on. The importance of some governance/institutions to reduce opportunistic behaviours is generally recognised in the institutionalist literature.

The State of São Paulo exhibits a diversified industrial sector, with the presence of many distinct productive agglomerations, whether high tech or traditional and mature. The recognisance of such diversities, their history, organisation and culture, constitutes an important asset for improving the policies adopted.

Furthermore, the understanding of these several sectors and their specificities can help this State and also the federal government in the design of effective sectoral and regional policies, in an alternative to simple, quite unproductive and short run policies based on fiscal benefits, with all their consequences for the fragmentation of the nation.

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## ABSTRACT

The changes of the last 20 or 30 years has generated heterogeneous consequences, with the exclusion of certain human groups, abandonment of contingents of people and areas, deepening of environment problems in some regions, and, in a global scale, concentration of wealth in certain companies, countries and strata. Concomitantly, there is also a flexibilisation of regulation instruments and local institutions, and an important loss of the State-Nations power. Incorporating such concerns, the paper investigates regional and industrial development in some Brazilian cities and regions, comprehending mainly regions of the State of São Paulo, the most developed of Brazil, representing almost 50% of that country's GNP. This concentration is due to the historical formation process of the Brazilian industry and the role of the State of São Paulo in its constitution. This State's industry presents an extensive diversification which embraces many sectors and clusters, in a wide range of activities  $\frac{3}{4}$  from traditional industries (garments, for instance) and important agribusiness to high tech firms. In more recent periods, one can notice a significant regional deconcentration process in the industry of the State of São Paulo and of Brazil as a whole, from the City of São Paulo, capital of the State, to the interior of this same State, and also to other States of Brazil.

## RESUMO

As transformações dos últimos 20 ou 30 anos têm gerado conseqüências heterogêneas sobre distintos grupos humanos e áreas geográficas, levando ao abandono e/ou ao aprofundamento de problemas ambientais de áreas específicas e também, em uma escala global, à concentração da riqueza em certas companhias, países e strata. Adicionalmente, têm ocorrido uma flexibilização dos instrumentos de regulação e das instituições locais, além de importantes perdas de poder por parte dos Estados nacionais. Tendo isto como pano de fundo, o artigo analisa o desenvolvimento regional e industrial em algumas cidades e regiões do Brasil, sobretudo no estado de São Paulo, o mais desenvolvido do país, representando quase 50% de seu PNB. Tal concentração foi causada pelo processo de formação histórica da indústria brasileira e pelo papel daquele estado na sua constituição. A indústria de São Paulo apresenta uma extensiva diversificação, a qual abrange muitos setores

e clusters, em um amplo espectro de atividades  $\frac{3}{4}$  de indústrias tradicionais e agronegócios a firmas e setores high tech. Em períodos mais recentes, nota-se um processo significativo de desconcentração espacial na indústria paulista e do Brasil como um todo, da capital para o interior do estado de São Paulo, mas também para outros estados brasileiros.

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