

Globethics Repository



Challenges of economic development

This page was generated automatically upon download from the Globethics Repository. More information on Globethics see <https://www.globethics.net>. Data and content policy of Globethics Repository see <https://repository.globethics.net/pages/policy>.

Item Type	Preprint
Authors	Barros,Alexandre Rands
Publisher	UNRISD
Rights	With permission of the license/copyright holder
Download date	2026-07-13 21:54:25
Link to Item	http://hdl.handle.net/20.500.12424/179037



The **United Nations Research Institute for Social Development (UNRISD)** is an autonomous agency engaging in multidisciplinary research on the social dimensions of contemporary problems affecting development. Its work is guided by the conviction that, for effective development policies to be formulated, an understanding of the social and political context is crucial. The Institute attempts to provide governments, development agencies, grassroots organizations and scholars with a better understanding of how development policies and processes of economic, social and environmental change affect different social groups. Working through an extensive network of national research centres, UNRISD aims to promote original research and strengthen research capacity in developing countries.

Current research programmes include: Civil Society and Social Movements; Democracy, Governance and Human Rights; Identities, Conflict and Cohesion; Social Policy and Development; and Technology, Business and Society.

A list of the Institute's free and priced publications can be obtained by contacting the Reference Centre.

UNRISD, Palais des Nations
1211 Geneva 10, Switzerland

Tel: (41 22) 9173020
Fax: (41 22) 9170650
E-mail: info@unrisd.org
Web: <http://www.unrisd.org>

Copyright © United Nations Research Institute for Social Development.

This is not a formal UNRISD publication. The responsibility for opinions expressed in signed studies rests solely with their author(s), and availability on the UNRISD Web site (<http://www.unrisd.org>) does not constitute an endorsement by UNRISD of the opinions expressed in them.

Challenges of Economic Development

Alexandre Rands BARROS

Draft paper prepared for the discussion at the UNRISD meeting on
“The Need to Rethink Development Economics”,
7-8 September 2001,
Cape Town, South Africa.

Introduction

In recent times, the world has experienced important changes, both ideologically and in relation to the economic environment. These changes have posed serious challenges to the analysis of economic development and to its policies proposals. Some previously well settled conceptions have completely fallen apart. Historical evidences and empirical investigations made conceptions previously considered opposite to one another go to the same side of debates. Many ideas were placed upside down.

Four theoretical developments have been quite important in promoting such changes in conceptions and in the analysis of economic development. The first one is the New Growth Theory, which reached conclusions on economic development that were reasonably different from those obtained from traditional Neoclassical Growth Theory.¹ The ideas proposed strengthened some conceptions forwarded by Latin American Structuralists and weakened some liberal dogmas.

The second theoretical development is the idea of Rent Seeking. When the liberal conception that markets are able to promote efficiency falls down and it is shown that government interventions may produce positive results, the analysis of possible instruments brings the concern with Rent Seeking behaviour and the idea that agents tend to react rationally to policies searching to maximise their own utility. This last conception is the underlining hypothesis of the Lucas Critique and a direct consequence of the rational expectation hypothesis.²

The third theoretical development is the idea of the role of clustering on efficiency. Clusters emerge from the potential gains of efficiency from positive externalities and sectorial economies of scale.³ These ideas stressed the role of adequate local strategies and collaboration among agents in economic development. It posed serious doubts to the dominant conceptions predominant in institutions such that the World Bank in the early eighties that macroeconomic equilibrium was the only essential strategy for

¹ See Barros (1993).

² See Lucas (1987) and Turnovsky (1995).

³ See Barros (2000) and (2001) for examples of papers which unveil some of these potential gains of efficiency. See Porter (1998a and 1998b) for a general exposition on the role of clustering for economic development.

economic development. Even conceptions based on the idea of international relations strategies or sectorial macro policies, such as those forwarded by Latin American Structuralists, were challenged by the emphasis on the role of clustering.

The fourth theoretical idea that is also playing a relevant role in changing views on economic development is the new conceptions on social capital. It is still at an early stage, since not even the basic concepts are well settled.⁴ The role of social capital on economic development was first highlighted by Putnam (1993) in a study on Italy. Other researches followed his analysis stressing its role on development.⁵ This line of analysis is certain to promote many changes in the notion of efficient economic policies.

This paper summarises the major consequences of these theoretical developments to the ideas about economic development and the proper strategies to its promotion. The major hypothesis is that the best path to economic development, which all these notions point to, is in fact a combination of some recipes stressed by Structuralists and by Liberals in the early stages of economic development.

The paper is organised as follows: the next four sections present overviews of all these theoretical developments. Section 6 proposes a general framework that helps to understand the relationship among these individual contributions. It also indicates the individual contributions of each of these developments in this framework. Section 7 briefly summarises some consequences of these theoretical contributions to development policies and presents the major conclusions.

Clustering Analysis

The ideas of cluster and clustering are becoming increasingly popular, especially among those who focus attention on economic development. The recognition that institutions play a major role to explaining economic development⁶ and that market inefficiencies, such as the existence of externalities, play a major role on productivity and growth, have strengthened this view.⁷ Many developing countries have promoted the Liberal reforms praised by international institutions such as the World Bank and International Monetary Fund. Nonetheless, they still did not succeed in reaching high incomes. Some of them have shown that even under such Neo Liberal environment they are still slow on growth.⁸ As a consequence, researchers started to search for other sources of differences in economic development, which could explain the huge differences found in per capita incomes among countries.

The World Bank and UNIDO's recent concern with the promotion of cluster experiences in the third world, as was the cases of Northeast of Brazil and

⁴ For unifying frameworks, see for example Glaeser, Laibson and Sacerdote (2000) and Glaeser and Scheinkman (2000).

⁵ See for example Helliwel (1996).

⁶ See for example Parente and Prescott (2000).

⁷ The literature on New Growth Theory stresses the role of externalities on growth. See for surveys Barro and Sala-i-Martin (1995).

⁸ See for example Jindia (2001) for examples on Sub-Sahara Africa and Dornbusch (1991) for a general statement like this to the world.

Guatemala, called the world's attention to the methods and concepts involved. Moreover, the existence of concrete successful experiences in the third world, for example Chihuahua, in Mexico, and the one in Malaysia, also shaped the idea that this kind of policy can succeed in the less developed parts of the world.

In spite of this broader dissemination, the idea of clustering has been used in several different ways, and sometimes for purposes different from its original ones. For this reason, it has created expectations that either exceed its original purpose or do not correspond to its potential. Such problem most certainly leads to disappointments with the outcome of such development policies and may eventually reduce its credibility, in spite of its ability to promote economic growth. In addition to the problem of inadequate expectations, there are also difficulties in implementing such strategy, caused by specific inner features of each society. Therefore, misuse or inadequacy of clustering policies implementations may eventually undermine their credibility, unnecessarily dampening its ability to contribute to economic growth.

A. Some Basic Concepts

Before proceeding, this subsection will present a few basic concepts which are essential to Clustering Analysis. Cluster is a set of firms, which includes some key companies that generate wealth through the trading of products and/or competitive services. Besides these companies, there are others that provide them with inputs and services and all the organisations that offer qualified human capital, technology, financial resources, physical infrastructure and adequate business environment to the final output by the companies firstly mentioned.

An alternative concept can be found in Michael Porter's words:

“Clusters are geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition. They include, for example, suppliers of specialised inputs such as components, machinery, and services, and providers of specialised infrastructure. Clusters often extend downstream to channels and customers and laterally to manufactures of complementary products and to companies in industries related by skills, technologies, or common inputs. Finally, many clusters include governmental and other institutions - such as universities, standards-setting agencies, think tanks, vocational training providers, and trade associations - that provide specialised training, education, information, research, and technical support.” (Porter, 1998a, pp. 78).

The concept presented by Michael Porter shows that a cluster includes a broad spectrum of companies and institutions that develop a relationship throughout the process of determining the efficiency of a certain good or service which is negotiated with agents from outside their production chain. It is important to say that consumers are also included in clusters, when they form vast markets, which correspond to a significant share of the total demand for its final products. For example, in the case of the clusters of grains, large trading companies, which take in a great percentage of its final products, are often included as part of the clusters.

Clustering is the policy which promotes the development of clusters. Although it is common sense that clusters have the tendency to be built naturally as a consequence of market forces, there are benefits in their strengthening and integration, which are not captured by agents through market signalling only. When a new agent enters a cluster, other agents benefit from productivity gains that are not possible to be charged through market mechanisms by the new entrant. Thus, the incentive for the agent to join the cluster is smaller than the returns for the whole cluster. That is true not only for the incorporation of a new agent, but also for the inclusion of new activities and relationships that did not exist in the cluster before. This fact makes market signals alone inefficient for the building and strengthening of clusters, and therefore, justifies the emergence of active policies designed to foster clustering. Such policies are defined as clustering policies.

For example, a trader supplying a given input, and as such, already a member of a particular cluster, may suddenly start to produce this input within the cluster. As an earlier member of the cluster, that trader will only be introducing a new activity. For the other members purchasing this input, this change in its source may be an opportunity to a better adjustment to their real needs, improving their efficiency. If this happens, the major part of this additional gain of productivity, however, will be captured by users of this input, rather than by the new supplier. Therefore, the incentive of the new producer will be smaller than the benefits that the whole cluster will have. In this case, the introduction of this new activity should be encouraged by a clustering policy.

B. Theoretical justification of the reliance on clustering policies

Clustering policies may be justified by the existence of market failure, which may be overcome through collaboration among agents who are in the same cluster. The possibility of enhancing economic welfare through policies when there are market failures is a well-settled result in economics. More strictly liberal economists only criticise government interventions under such circumstances relying on the argument that they may not produce the desired effect and may lead the economy to an even worse state of welfare.⁹ Nevertheless, the theoretical possibility of efficiency enhancement through rational intervention in markets when there are market failures is a well-settled result.

There are many market failures which can justify clustering policies. The existence of externalities,¹⁰ agglomeration effects and increasing returns to scale¹¹ are certainly the most important ones. The existence of public goods is also relevant, although less important than the others. A crucial source of market failure, which can justify the existence of clustering policies, is the existence of goods whose consumption are not subject to rivalry, although they are subject to excludability. Technology is a good with this feature, as argued by Romer (1990). Under all these alternatives, clustering policies may increase efficiency and welfare.

⁹ See Krueger (1991) and Balassa (1982).

¹⁰ See Barros (2000).

¹¹ See Krugman (1991) and Barros (2001).

Another important justification to the reliance on clustering policies as a development enhancing device is the existence of social capital as an important productive factor. The economic literature has progressively recognised the role of social capital as a factor of production.¹² However, its accumulation is not subject to the same rules as physical and even human capital. Market forces do not work properly in this case. As clustering policies have as one of its major by-products the construction of social capital, the simple relevance of this on production justifies clustering policies. Under such approach, clustering policies may be seen as one of the major way to build social capital in the short and medium term.

There are already some examples of models in the literature which show rigorously how externalities may justify the use of clustering policies. Barros (2000) have used the case of externalities on image, on an environment of imperfect information for consumers, to show that it is possible to emerge coordination failure among agents to shift from a previous equilibrium to a new optimal one, after an external shock. This model unveils the most important failure whose effect is more appropriately offset through clustering policies. When there is coordination failure, fiscal and monetary policies are normally not efficient as an instrument to move the economy to its optimal equilibrium. Clustering policies are more efficiency enhancing in this case.

Barros (2001) shows that in some circumstances when there are important economies of agglomeration, a clustering policy may also play a crucial role in gathering agents to take collective actions to benefit from the potential gains. The logic in this model is quite simple. Sometimes when there are few producers in a specific sector, the cost of production is high and that particular output may have costs which are enough high for not justifying its production. Nevertheless, if there are several producers, who start producing all at the same time, it is possible that such production become highly efficient. The economies of agglomeration may shift the efficiency order of two technologies or even assure the efficiency compared to other regions. Clustering policies are the most appropriate to promote producers collaboration to act collectively and to gain from positive agglomeration effects.

The role of externalities as a source to make clustering an efficient policy is similar to the one of agglomeration effect. Collective actions may bring the relevance of external positive effects as an important determinant for action. This again may be obtained through clustering policy, without needing to introduce complicate tariff systems. Clustering policies may lead beneficiaries of externalities to undertake some of the costs of collective actions, offsetting their extra gains from group actions.

Public goods always have the difficulty for their financing, as their costs are superior to the marginal benefit for individuals. Clustering policies, as instruments to gather agents to act collectively, may collect the necessary contributions to justify investments on such goods. Of course in this case fiscal policies are more efficient, as they are faster and rely on compulsory contributions to obtain the necessary resources to finance the chosen investments. Nevertheless, clustering policies may still be more effective for some particular investments, as they may be paid by collaboration of a

¹² See for example Glaeser, Laibson and Sacerdote (2000).

limited number of producers who strongly benefit from them. If they rely on fiscal policies, they will have to convince all other agents of the relevance of such investment to set the necessary resources to finance them. Therefore, although a clustering policy is not more efficient in terms of effort to mobilise the resources, when the decision to make that investment is made, it may be more efficient to assure some public goods productions, when only a small set of agents benefit from them.

New Growth Theory

New Growth Theory introduces important ruptures to the Neo-classical general equilibrium model as developed by Arrow and Debreu. The proponents of such models recognise that any economy in the real world faces several distortions from the basic assumptions of the general equilibrium model. The most relevant ones to understand long term growth, which have been emphasised in the literature are: (i) non-convexities in the production function and (ii) the existence of imperfect information. Positive externalities arising from the accumulation of some factors of production, such as (i) human capital;¹³ (ii) economic infrastructure;¹⁴ and (iii) technology development¹⁵ deserve special attention in the first group. Still among the non-convexities in the production functions, there are also the economies of scale,¹⁶ which can lead to market imperfections, and the existence of public goods. Both phenomena also jeopardise the optimality of a competitive equilibrium. Their simple existence introduces the possibility of policies to foster welfare without making anyone worse off.

The existence of imperfect information normally is taken as generating mainly short term distortions, such as price and wages rigidities, short term unemployment and so on. Nevertheless, it may also generate some coordination failure, which can again jeopardise long-term growth.¹⁷ If the idea that information is a non-rival good¹⁸ is accepted, it is possible to show that some cooperation for its production would lead to gains of efficiency in production. Therefore, coordination failure would arise from the very nature of information as a productive input.

The possibility of public policy interventions arises from all these sources of distortion of reality with respect to assumptions on the Arrow-Debreu model. Governments can move resources from sectors and regions with lower social return to others with higher social return, although market forces direct resources to different applications. In other words, individual returns of distinct applications of resources differ from social returns. If the government moves resources across regions and sectors, it can make some consumers better off without making anyone worse off.

¹³ See for example Lucas (1988).

¹⁴ See Barro (1990) and Barro and Sala-i-Martin (1992).

¹⁵ See for example Romer (1990) and Young (1991) and Aghion and Howitt (1997).

¹⁶ This is the special emphasis of the original texts on regional disparities in Brazil by Furtado (1959 and 1976), among others.

¹⁷ See Barros (2000).

¹⁸ See Romer (1990) for arguments in favor of this idea.

Social Capital

Social Capital theory incorporates two well-settled ideas among development and macroeconomic policies practitioners, namely:

- i. There is no full information in any economy and, consequently, a huge amount of resources is invested to improve the trust on available information. Therefore, societies with stronger social relations and more trust among individuals tend to reach a higher welfare level, as its growth rate is higher.¹⁹ At a micro-level, individuals with higher social capital, which means with higher social networks and credibility, tend to have higher income.²⁰ The social aggregated result arises from the micro level conclusion.²¹
- ii. Information flow has a cost. Consequently, individuals with a higher level of social interactions and networks tend to have higher income as they are able to gather more information about other agents and to give information about his/her own endowments to others through cheap social interactions and networks.²² Furthermore, a society with higher level of social interactions and networks tends to develop more, as the cost of information flow is lower and there is more efficient allocation of resources.²³

Such conclusions are crucial for the understanding of differences in economic development, either within the same country or across countries. Furthermore, such differences in social capital tend to demand specificities in social institutions. Consequently, lessons from a particular country have to undergo several adjustments when used to shape policies in another country. Another important consequence of such theoretical developments is that culture plays a relevant role on development according to this framework.

Another relevant comment is that the hypothesis that social capital plays a relevant role in determining development does not imply that this is the only relevant determinant. Such factor is only one more among many other possible determinants.

Rent Seeking

The hypothesis of Rent Seeking extends a logic strongly emphasised by Brazilian theorists of the Internal Dependency Theory.²⁴ It argues that the institutional framework is not rationally organised. Private agents with particular interests always manage to some extent to establish their own interests in the format of such frameworks. Therefore, even when interventions may increase social welfare and economic efficiency, they still most probably will not be welfare improving, as their legitimate goals will

¹⁹ See Putnam (1995).

²⁰ See Glaeser, Laibson and Sacerdote (2000).

²¹ See for example Helliwell and Putnam (1995).

²² See Glaeser, Laibson and Sacerdote (2000) and Putnam (1995).

²³ Putnam (1993).

²⁴ See Cardoso and Falletto (1981), Farias (1979), and Goldenstein (1994).

be distorted by political interventions of these groups who can benefit from changes in the optimal format of institutions.

The idea of Rent Seeking plays a major role in development because it stresses that even if policy interventions may be a source of welfare improvement, they will not necessarily be performed in the most efficient way.²⁵ Particular groups will try to bias interventions to promote their own interest, even if that implies in losses to the rest of society. Therefore, all these new developments, such as the ones of Clustering Analysis or New Growth Theory, which stress the potential of public policies to improve welfare, have to support policies taking into account that they are always subject to distortions to benefit particular social groups.

When first proposed by Anne Krueger (1974), such developments were overshadowed, because at the time economics was heading to an overwhelmingly liberal ideology. Interventions begun to be condemned not because they could be distorted by interest groups, but rather because they were seen as unnecessary and welfare reducing. Therefore, an idea that justifies non-intervention as a second best alternative, only because interventions may not be made in the necessarily efficient way, was not appealing at this new dominant ideology.

The concept of Rent Seeking points to two problems in economic development. First, interventions have to be clearly justified; otherwise, interest groups may push them in circumstances in which markets work properly and efficiently. Any policy intervention has to be justified through some market failure, which may be clearly identified. Secondly, whenever there is a policy intervention, incentives generated through distortions should still replicate as much as possible a market incentive mechanism, so that the new framework does not miss the role of discipline device and the ability to make individual search for benefit to generate the maximum gain for the whole society. If there is not this concern, the final output may easily unnecessarily benefit a limited group of rent seekers.

Unifying Framework

Each one of the theoretical contributions mentioned before uses its own framework for analysis. As a consequence, such theories often seem too distant and unrelated with each other. To understand their consequences to the research which takes place in the field of economic development and to policy designs, it is necessary to consider them altogether. To help in this approach, a general framework will be presented that can indicate the role of each of them in the same economic model. A simple set theory approach with the Arrow-Debreu general equilibrium representation is the chosen instrument.

An individual is defined as having an endowment, which includes all his/her productive attributes. This set is represented by Ω . This same individual also has a set of preference orderings, which is called here as Φ , and a set of social capital attributes, which is defined as $\mathcal{S}$. This definition of an individual is exactly the same as in Debreu (1959), with the addition of the set of social capital. In Debreu (1959) there is full information so that this

²⁵ See Krueger (1974).

last set is the same for all individuals, and it becomes irrelevant in his analysis, although it is relevant to understand the equilibrium in an economy in the case of imperfect information. The concept and measurement of social capital is as defined in Glaeser, Laibson and Sacerdote (2000).

As in Debreu (1959) and Arrow,²⁶ the set Ω contains all the attributes that may by any chance affect the productive performance of an individual, wherever he/she is located, in addition to all his productive resources as well as his/her amount of wealth, in whatever format. It means that such a set contains all his/her attributes that normally are associated with human, physical and financial capital. More generally, it contains everything that could be considered wealth, even if it does not have a positive value and may generate utility. It is important to emphasise that this set does not contain social capital. This is included in the set $\mathfrak{S}$, which is composed of social relations an individual set up along his/her life, which contribute to his/her productive performance in a society. This exists because in no economy is there full information and, consequently, producers use information extracted from such social relations to reduce their risk when engaging in production. Since there is perfect information in the Arrow-Debreu, this last set of social capital is not relevant in their definition of individuals.

The set of preferences brings an ordering of all possible bundles of goods and services. It is based on some simple assumptions, such as more being preferred to less and there being no satiation. This perfect ordering implies that the set is convex and it will be assumed that it is closed, as in Debreu (1959). This implies that any linear combination of two bundles is also a bundle in the set. The set of preferences may be divided in two subsets, such that $\Phi = \Phi' + \Phi''$. The first one contains all ordering among efforts and leisure or goods and services. The subset Φ' may affect individual income as it may affect the kind of labour individuals engage or the amount of labour they are willing to spend.

The endowment may be divided in two subsets. One of them has the personal disembodied wealth and the other has personal attributes, which determine individual productive abilities, such as human capital and experience. These two subsets may be called Ω_w and Ω_h , respectively. In the Arrow-Debreu world, when there is a competitive equilibrium, the elements in the first subset do not affect the income an individual may obtain in the market as part of his/her income from selling labour.²⁷ Only rents and profits acquired in the market are affected by such elements. The elements in the second subset affect the wage rate, which is possible to obtain from labour sales.

Most economists recognise that, given the price vector in an economy, production of any economy is not determined only by attributes and wealth of individuals who apply their efforts and resources in that economy. There are also attributes, external to individuals, which are essential for the determination of the total output vector. The most important of these external attributes are natural resources, whose set is represented by N here, public

²⁶ See for example Arrow and Hurwicz (1958), Arrow, Block and Hurwicz (1959) and Arrow and Debreu (1954).

²⁷ In a world in which there is not full information, as the one in which social capital plays some role, this is not true. Its effect, however, is secondary and will be disregarded here.

infrastructure, whose set is represented by θ , and institutional environment, whose set is represented by Θ . It is also possible to have externalities emerging from individual use of resources, which together in a whole economic space may generate non-trivial synergies for the whole set of individuals. The total externalities in any economic space is represented here as E . All these factors, as long as they affect total output, may also affect individual income, from either labour or other sources from sales of elements in the endowments.

The set of externalities E may be divided in two subsets. The first one, E' , includes all the externalities that emerge from other individual variables, whatever set they are. The second subset, E'' , includes all the externalities emerging from relationships among agents and other variables, not their level particularly. If all the variables in all the sets (Ω_{hi} , Ω_{wi} , Φ_i' , θ_i / Θ_r , θ_r , N_r) are exactly the same, but there is a different spatial distribution of them and relationship among agents, a different element in the set of E will emerge. Nevertheless, it will be contained in the set E'' . By definition $E'' \cap E' = \emptyset$ and $E = E' + E''$.

Given these concepts, it is possible to assume that each individual has an income Y_i , which may be determined as:

$$Y_i = Y(\Omega_{hi}, \Omega_{wi}, \Phi_i', \theta_i / \Theta_r, \theta_r, E_r', E_r'', N_r, Y_j) + e_i \quad (1)$$

Where $Y(\cdot)$ is a function which transforms individual attributes and endowment in income, given an equilibrium and environment, which is defined by Θ_r , θ_r , E_r' , E_r'' , N_r . The index r indicates that these attributes are specifically for the region the agent is located. The term e_i is a stochastic deviation from the trend determined by economic conditions and attributes. It has a purely random component and another that depends on individual history and is not part of the social capital stock. It is assumed that $E(e_i) = 0$, where $E(\cdot)$ is the mathematical expectation of the argument within brackets.

Given a general equilibrium,²⁸ the aggregated income Y is a sum of all individual incomes, Y_i 's. The solution presented in equation (1) is the result of a general equilibrium, given the price system, which emerges from the interaction of agents in the market. Therefore, an individual income, Y_i , depends on the sets Ω_{hj} , Ω_{wj} , Φ_j' , θ_j , for all j , where j represents any other individual, and the sets Θ_r , θ_r , E_r' , E_r'' , N_r .

A. A Brief Overview of Some Alternative Views

The oldest and most conservative theories emphasised the role of N_r , considering all the others as secondary to determine disparity of income among countries. Nevertheless, the field of economic development questioned these ideas from the beginning. Latin American Structuralists placed a major emphasis on θ_r (public infrastructure) when defining their policy proposals and on Θ_r (institutional environment), specifically in what

²⁸ Conditions for its existence and optimality were the concern of Arrow and Debreu (1954), Debreu (1959) and all the literature on general equilibrium from that time on. See, for example, Arrow and Hahn (1971), Hahn (1984) and MasColél, Whinston and Green (1995).

concerns international trade framework, and E_r' (externalities), when analysing the causes of low development level and proposed industrialisation as a crucial step to develop a country.

B. New Growth Theory

New Growth Theory emphasised the role of E_r' to economic development.²⁹ Models by Lucas (1988) and Romer (1990) relied on externalities to explain the difference in per capita income among nations. The first one emphasised the role of externalities arising from human capital accumulation, while the second stressed the role of externalities arising from production of information as the engine of growth, despite Rebelo (1991) demonstration that such type of models did not need to rely on externalities to explain endogenous growth.

Other New Growth models emphasised other sources of growth and externalities as potential engines of growth and development. Some of them stressed the role of θ (public infrastructure) as an important determinant and a potential source of externalities.³⁰ Nevertheless, also in this case, externalities are not necessarily the source of endogenous growth. They actually speeds up growth.

The externalities emphasised by New Growth Theory are those that emerge from the accumulation of individual attributes or assets. If government is also included in the general equilibrium framework and it is considered to be an agent whose property belongs to all individuals, each one with a low share of its total asset, all the externalities taken into account by the many models of New Growth Theory are generated from accumulation of individual assets. Therefore, they are part of the set E' in the concepts previously introduced.

All these models not only made growth determination endogenous, but also indicated the role that some externalities arising from human capital accumulation, from information and technology generation, and from infrastructure building may have in explaining the differences in per capita income and the speed of long term growth. While emphasising the role of accumulation of these factors, they only explain how an economy can grow. Nevertheless, when they include externalities as a potential source of growth, they stress that development policies may increase the speed of development and improve social welfare.

Such policies in this case should be directed to foster accumulation of some specific factors of production or to increase the relative production of some input, such as infrastructure and information. Therefore, the final output from theoretical developments is that government can move resources among agents or engage itself in production of some inputs that could decisively promote growth and welfare. Nothing is said about institutional environment.

²⁹ Ver Shleifer (1991).

³⁰ See particularly Barro and Sala-i-Martin (1992).

C. Social Capital

In terms of the previous framework, it may be said that social capital analysis places a major emphasis on $\mathcal{S} = \sum_i \mathcal{S}_i$ as a source of economic development. More clearly, such view argues that if there are measures to the different attributes included in the sets $\mathcal{S}_i$, it is possible to build a set $\mathcal{S}$, such that $\mathcal{S} = \sum_i \mathcal{S}_i$, for all i , and $\mathcal{S}^i > \mathcal{S}^j$, then $Y^i > Y^j$, where:

$$Y^i = Y(\Omega_h, \Omega_w, \Phi', \mathcal{S}^i / \Theta_r, \theta_r, E_r', E_r'', N_r) + e \quad (2)$$

and

$$Y^j = Y(\Omega_h, \Omega_w, \Phi', \mathcal{S}^j / \Theta_r, \theta_r, E_r', E_r'', N_r) + e \quad (2')$$

and the sets Ω_h , Ω_w and Φ' all have the same logic of construction as $\mathcal{S}$.

New ideas on the role that social capital may have for economic development also stress that different institutional environments may have different consequences for the speed of development. They emphasise that the higher the trust and associative culture, and the stronger the impositions for contract fulfilment, the greater will be the speed of economic development. Therefore, Θ (set of institutional framework) also plays a crucial role in development, according to this view. Therefore, everything else being the same, but $\Theta^i > \Theta^j$, then $Y^i > Y^j$.

It should also be pointed that non-market interactions may define different potential relationships among individuals in production. A firm that needs to purchase a given input, can do it from different suppliers, who could have exactly the same product. Nevertheless, there may exist a difference in trust among these agents. Therefore, it is possible that one of them would be able to offer this input at the lowest cost of transaction. If there is no market mechanism that assures that this supplier becomes the actual supplier, it is possible to improve welfare by exchanging supplier. This means that externalities of the type E'' emerging from production relationship may change the welfare and the speed of development.

Of course no economist argues that this factor is the only determinant of relative development. Other factors pointed by traditional and modern contributions to growth theory also have a crucial role in determining the level of development. All that these ideas on social capital stress are that social trust and association culture play a role that may not be disregarded. Such hypothesis has serious policy implications.

Under this analysis, institutional policies, such as enforcement laws and settlement mechanisms may play a major role in development. Countries with more coercive mechanisms tend to have lower transaction costs and higher level of social capital than others. Countries with simpler and more efficient legal systems tend to develop faster. Therefore, improving coercion mechanisms could be an appropriate development policy.

Furthermore, policies that promote social interactions could also be seen as development policies. Therefore, even policies to foster practice of associative sports and social interactions, as event organisations with participation of many agents, could be seen as development policies. This changes the view policy makers usually have of such activities.

D. Clustering

The implications that the analysis of the role of clustering strategies on development has on the general model presented are similar to those which social capital has. Actually, as emphasised before, the existence of social capital is one of the possible sources to justify the reliance on clustering policies as a development strategy. The impact of an institutional framework on clustering promotion also places a major role on the set Θ (set defining institutional framework) on economic development or determination of total per capita output in a society. Moreover, the impact of $\Delta\theta$ on the development level and speed is also similar to the one found under the arguments on the role of social capital to economic development. The higher the trust and associative culture, the higher will be the clustering efficiency and the greater will be the speed of development.

Nevertheless, the nature of institutions is different under these two theoretical developments. While the theory of social capital emphasises the role of coercion and promotion of associative culture, Clustering Analysis stresses the role of exchange of information and cooperation strengthening among productive agents. These may be promoted through associative culture, but it is also possible simply to do it by unveiling the common benefit of such strategy. Of course, when there is more associative culture, there is also more cooperation among agents, but it is possible to have different degrees of cooperation with the same associative culture. Therefore, although Clustering Analysis and social capital hypothesis converge to similar conclusions, it is possible to have different stage on any one of the engines of growth they stress with similar results for development.

The major emphasis of clustering strategies is on increasing the relationship among agents to promote the efficiency of clusters, seeking to make them more competitive, and therefore, making their development possible. To achieve this objective they try to:

1. Make public or private investments in economic infrastructure, which can be useful to the development of the cluster's competitiveness and efficiency in the allocation of resources. (Change $\Delta\theta$ and promote its efficiency).
2. Make investments in human resources and technology to match the needs of the clusters and to raise their productivity. (Change the subset of Θ which determines technology and human resources investments).
3. Attract new entrepreneurs to foster integration of the production chains, and therefore, improve internal information flow, besides reducing costs. (Change E'').
4. Increase supply of financial services in order to help expansion of the clusters. (Change E'').

5. Create mechanisms to help information flow inside the cluster, not only among its own agents but also with the rest of the world. (Change E”).
6. Overcome possible coordination failures among the agents that might reduce the cluster’s efficiency. (Change E”).

All these actions basically seek for ways to overcome markets’ deficiencies in allocation of resources or to accelerate its action in order to achieve faster desired levels of efficiency. The methods through which these objectives may be achieved vary and depend not only on the structure of clustering policies themselves, but also on specific conditions of clusters and connections among their agents.

Investments in economic infrastructure produce externalities and, thus, its allocation of resources will not be efficient if submitted to the rules of market forces only. In this particular case, clustering policies might act in two different ways. The first one is unveiling existing infrastructure needs, which can raise competitiveness of clusters. Obviously these needs must be organised, as there are resource constraints. The second way is also in the sense of coordinating demands of the agents involved in the cluster to define priorities of investments of the public sector. In each economic environment there is always a large group of agents, some of them connected to the most important clusters, but many others without any direct linkage with them. During the joint decisions about priorities of investments in infrastructure, all these agents tend to participate revealing their preferences. If the clusters are not properly organised and under a unified leadership, the individual demands of their members tend to scatter among several proposed projects, including those that are not priorities for the clusters. Consequently, the existence of these other agents in the same economic environment may lead the definition of investment priorities to those which are not the more adequate ones to the development of the clusters.

Investments in human resources and technology behave in the same way as those in infrastructure. They produce positive externalities, and therefore the private agents do not allocate an optimal amount of resources for their production. In these cases, clustering policies also seek to identify existing barriers for competitiveness of clusters and coordination of agents in order to generate the demand for these investments. In both cases, namely investments in infrastructure and in human resources and technology, clustering policies also seek to promote a partnership between public and private sectors in order to make possible the necessary investments to enhance the competitiveness of clusters, as in both cases this cooperation can result in benefits.

Very often private agents that could play an important role in promoting efficiency of a given cluster do not make the necessary investments because of the risk of not becoming the supplier of a sufficient number of agents within the cluster that could justify such investment. In this case, a clustering policy may help assure the minimum necessary demand through the coordination of agents who demand that particular good or service. In this case, a market flaw associated to insufficient information is eliminated simply by coordination.

A clustering policy can also help increase the availability of long or short-term credit for agents involved in a given cluster. Difficulties to obtain credit occur for three reasons. First, banks or other financial institutions do not trust the ability of the company to honour its financial commitments, because they are uncertain about the company's positive profits projections. The second situation occurs when the bank does not have total confidence that the beneficiary of the credit will give priority to the due payment. Finally, the bank may judge that the cash flow of the company will not assure the necessary cash availability to honour its financial commitments within the bank's suitable schedule.

All these factors which generate financial restrictions, share an element associated with suspicion, which is originated from the existence of incomplete information about the activities developed by the cluster and its agents. This determinant of credit restrictions could be one of the problems solved by a clustering policy. It can promote the degree of collaboration necessary to generate an appropriate amount of information in a way that the financial resources made available face less risk from the lenders' standpoint.

Clustering policies may also integrate the involved agents to increase the amount of information exchanged between them. This tends to foster their search for technological improvements and market influence. It also helps to reduce the costs caused by their precaution in the transactions inside the cluster, as a better interaction among agents helps the acquaintance about each other's genuine situation.

Besides assuring a greater flow of information among agents of the cluster, clustering policies can also promote cooperation among these agents so the amount of information about the reality of the cluster which is announced to outside agents is increased, not only through the promotion of its products but also through real business opportunities. In addition, it can also create cooperation mechanisms that will help in the acquisition of information on economic and technical developments related to the cluster's activities, which is crucial for the decision making process of the agents in the cluster.

E. Rent Seeking

The hypothesis of Rent Seeking does not have any particular contribution as regards the instruments to promote growth through public policies that restrict the role of markets on resources allocation. The hypothesis focus mainly on the negative side of interventions, as it argues that there is any policy interference, most probably social welfare could be greater if it is suppressed. This is to say that, supposing two societies whose total income are:

$$Y^i = Y(\Omega_h, \Omega_w, \Phi', \vartheta / \Theta^i, \theta_r, E_r', E_r'', N_r) + e \quad (3)$$

and

$$Y^j = Y(\Omega_h, \Omega_w, \Phi', \vartheta / \Theta^j, \theta_r, E_r', E_r'', N_r) + e \quad (3')$$

Where $\Theta^i > \Theta^j$ implies that there are more interventionist policies in the economy i than in the j one, than $\Theta^i > \Theta^j \Rightarrow Y^i > Y^j$ in equilibrium.

It means that, according to this theory, the best way to promote welfare is through reduction of policy interventions. In this way, in the general framework, its emphasis is on the institutional framework, which can have a significant impact on economic performance of countries. Although this major hypothesis stands opposite to the conclusions of all other recent contributions to development previously discussed, it has a very important contribution, which has been increasingly incorporated in policy making throughout the third world. A modified version of this view may be expressed as:

Modified conclusion on policy intervention from the Rent Seeking hypothesis: Any policy to promote growth and welfare has to try to include instruments which will mimic the market mechanisms and as such will press for competition and cost efficiency among suppliers, avoiding the transference of risks from private to public agents. Such mechanisms prevent policies to be captured by interest groups to promote their benefits at the expense of the whole society.

Under this view the major policy suggestion which arises is that governments should be very thrifty in interventions and whenever they rely on them, they should try to replicate, as much as possible, market mechanisms, so as to avoid private agents capturing such instruments to extract extra rent from society. A view that combines this more extreme one with the other contributions would stress that policies have to take into account the propensity for Rent Seeking, although they still have to be introduced to increase welfare. This approach approves policy intervention but stresses that they should, whenever possible, stimulate market mechanisms.

Conclusions and summary of Policy implications

This paper discusses four contributions to Development Economics, which together present the most important arguments to guide policies which were developed lately. Three of them, New Growth Theory, Clustering Analysis and social capital theory, emphasize the existence of inefficiency of market mechanisms to allocate resources and to assure maximal development attainable. They also unveil the existence of opportunities to exploit the potentiality of welfare enhancing by public policies. Rent Seeking Analysis discloses the dangers associated to policy implementations, as they are easily captured and distorted by rent seekers. Therefore, it uncovers the need of particular care in policy design. Policy makers should make an effort to shape policies so that the rational behaviour of individuals pushes their incentives to promote social welfare. In other words, policies should mimic the underlining mechanisms of the invisible hand.

These theories have much to say with respect to most of the policy instruments traditionally used as development promotion devices. Many models of New Growth Theory have emphasised the potential role of trade distorting measures.³¹ Nevertheless, the idea of Rent Seeking has prevented most of their authors from enthusiastically supporting trade restrictions as a development instrument. They actually point that markets are not efficient in allocating resources when one of the countries involved in trade is less developed, although Rent Seeking could make policy interventions produce even worse results.

New policy designs through credit subsidies and reduction of taxes on exports are already substituting old instruments such as discretionary tariffs. They tend to be more universal and as such more difficult to be captured by specific Rent Seeking groups to promote their own benefit at the expense of the rest of society. Market mechanisms such as auctioning still need to be more widely used as a device to determine who is to have access to resources and in which amount.

Rent Seeking Analysis has tremendously restricted policies such as subsidies and tax privileges for particular sectors, because of their high costs and their bias to excessively benefit interest groups. Their logic creates incentives corruption and Rent Seeking. Clustering strategies are increasingly seen as more effective to promote efficiency of particular sectors. A community can support a business sector, but not by transferring part of tax it can collect to producers. It should rather draw on instruments such as education and training, definition of priority for the demanded infrastructure investments, and so on. Such strategies tend also to encourage local social capital strengthening and consequently generates spill over for development, as it encourages further reduction in transaction costs. Therefore, the new developments point to a different strategy to sponsor private activities within a country. They focus less on price distortion and more on cost reduction.

Technological policies are still seen as quite important for development. New Growth Theory emphasises that governments should provide resources

³¹ Models by Segertron (1991), Stokey (1991) and Grossman and Helpman (1991) are examples.

to R&D, financing universities and particular researches. Clustering Analysis focuses on the need for collaboration of agents to make R&D individual efforts to focus more precisely on the real needs of private agents and to avoid unnecessary replications of particular efforts.

New Growth Theory emphasises the role of education and professional training, as they could generate externalities. Clustering Analysis stresses the role of collaboration among local agents to define investments in human capital as a strategy to foster competitiveness. Therefore, such development policies gained support to their execution and a suggestion about the way they should be carried on.

Public investments in infrastructure are still seen as a crucial development policy. New Growth Theory emphasises its role. Clustering Analysis forwards a way the definition of their priorities should be made and what would be the appropriate arrangements for their building. Rent Seeking stresses the need to have clear rules to determine priorities; otherwise misallocation of resources can emerge. Therefore, these two theories together give legitimacy to an old development policy, only stressing different arrangements to their definitions.

It should be emphasised that none of these contributions challenges the absolute importance of macroeconomic stability to development, as stressed by some works.³² Nevertheless, they only highlight that this is not sufficient to pursue growth efficiently. Policy interventions at a micro level may also contribute to the effectiveness of the growth path chosen by a country.

Most of these contributions bring back old ideas in development. Their major contribution is in the policy format brought up by them. Their proponents are more aware of the complexity of economic processes and that policies are normally not implemented according to theoretical recipes. They have costs and may easily be distorted by interest groups who can seek rents from them. This clear notion restricts the role given to the public sector and stresses the need for policies to mimic market mechanisms. Together, these analyses form the foundation of what I call a Post Neoliberalism approach to development.

³² See Fischer (1991).

References

- Aghion, P. and P. Howitt (1997), *Endogenous Growth Theory*. Cambridge, MA: MIT Press.
- Arrow, K. and F. Hahn (1971), *General Competitive Analysis*. San Francisco: Holden Day Inc.
- Arrow, K. and G. Debreu (1954). "Existence of an Equilibrium for a Competitive Economy". *Econometrica*, 22: pp. 265-290.
- Arrow, K., J. Block and L. Hurwicz (1959), "On the Stability of Competitive Equilibrium II". *Econometrica*, 27: pp. 82-109.
- Arrow, K. and L. Hurwicz (1958), "On the Stability of Competitive Equilibrium I". *Econometrica*, 26: pp. 522-52.
- Balassa, B (1982), "Development Strategies in Semi-Industrial Economies". Baltimore: John Hopkins University Press.
- Barro, R (1990), "Government Spending in a Simple Model of Endogenous Growth". *Journal of Political Economy*, 98(5): pp. 103-25.
- Barro, R. and X. Sala-i-Martin (1992), "Public Finance in Models of Economic Growth". *Review of Economic Studies*, 59(4): pp. 645-61.
- _____, (1995), "Economic Growth". New York: Mc Graw Hill.
- Barros, A (1993), "Some Implications of New Growth Theory for Economic Development". *Journal of International Development*, 5(5): pp. 531-58.
- _____, (2000) "The Demand for Clustering Policy as a Consequence of Coordination Failure" – In Anais do XXVIII Encontro Nacional de Economia. Campinas, São Paulo: ANPEC.
- _____, (forthcoming), "Fundamentos Econômicos da Dinâmica da Pesca em Pernambuco" in *Revista de Economia do Nordeste*.
- Cardoso, F. H. and E. Falletto (1981), *Dependência e Desenvolvimento na América Latina: Ensaio de Interpretação Sociológica*. 6.ed. Rio de Janeiro: Zahar.
- Debreu, G (1959), *The Theory of Value: An Axiomatic Analysis of Economic Equilibrium*. New York: Wiley.
- Dornbusch, R (1991), "Da Estabilização ao Crescimento". In F. Barbosa (ed.), *Estabilização e Crescimento Econômico na América Latina*. Rio de Janeiro: Livros Técnicos e Científicos: pp. 93-114,
- Farias, V (1979), *Desenvolvimento Dependente no Brasil*. São Paulo: Brasiliense.

- Fischer, S (1991). "Growth, Macroeconomics and Development". In O. Blanchard and S. Fischer, *NBER Macroeconomics Annual 1991*, Cambridge, Mass.: MIT Press.
- Furtado, C (1959), "Uma Proposta de Política para o Desenvolvimento do Nordeste". (Mimeo.), GTDN. Recife.
- Furtado, C (1976), *Economic Development of Latin America*. 2nd ed., Cambridge: Cambridge University Press.
- Glaeser, E. and J. A. Scheinkman (2000), "Non-Market Interactions". Manus, University of Princeton.
- Glaeser, E., D. Laibson and B. Sacerdote (2000). "The Economic Approach to Social Capital". *NBER Working Paper Series*, no. 7728.
- Goldenstein, L (1994). *Repensando a Dependência*. Rio de Janeiro: Paz e Terra.
- Grossman, G. and E. Helpman (1991). *Innovation and Growth in the Global Economy*. Cambridge, MA: MIT Press.
- Hahn, F (1984). *Equilibrium and Macroeconomics*. Cambridge: MIT Press.
- Helliwel, J (1996), "Economic Growth and Social Capital in Asia". *NBER Working Paper Series*, No. 5470.
- Helliwell, J. and R. Putnam (1995). "Social Capital and Economic Growth in Italy". *Eastern Economic Journal*, 21(3): pp. 295-307.
- Jindia, J (2001). "Role of the State in Economic Development". Papers and Proceedings of the 28th Annual Meeting of the Academy of Economics and Finance. Biloxi, MI, USA, (February).
- Krueger, A (1974), "The Political Economy of the Rent-Seeking Society". *American Economic Review*, (64): pp. 291-303.
- _____. (1991). "The Political Economy of Controls: American Sugar". *NBER Working Paper Series*, No. 2504.
- Krugman, P (1991). "Increasing Returns and Economic Geography". *Journal of Political Economy*, 99(2): pp. 483-99.
- Lucas, R (1987), *Models of Business Cycles*. Oxford: Basil Blackwell.
- _____. (1988). "On the Mechanics of Economic Development". *Journal of Monetary Economics*, 22(1): pp. 3-42.
- Mas-coléll, A., M. Whinston and J. Green (1995), *Microeconomic Theory*. Oxford: Oxford University Press.
- Parente, S. and E. Prescott (2000). *Barriers to Riches*. Cambridge: MIT Press.

- Porter, M (1998a). "Clusters and the New Economics of Competition". *Harvard Business Review*, (November-December): pp. 77-90.
- _____ (1998b), *On Competition*. Princeton University Press, Princeton.
- Putnam, R (1993), *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton: Princeton University Press.
- _____ (1995). "Tuning in, Tuning out: the Strange Disappearance of Social Capital in America" in 1995 Ithiel de Sola Pool Lecture to the American Political Science Association.
- Rebelo, S (1991), "Long-Run Policy Analysis and Long-Run Growth". *Journal of Political Economy*, 99(2): pp. 500-21.
- Romer, P (1990). "Endogenous Technological Change". *Journal of Political Economy*, 98(5): pp. 71-102.
- Segerstrom, P (1991). "Innovation, Imitation and Economic Growth". *Journal of Political Economy*, 99(4):pp. 807-27.
- Shleifer, A (1991), "Externalidades como Motor do Crescimento" in F. Barbosa (ed.), *Estabilização e Crescimento Econômico na América Latina*, Rio de Janeiro: Livros Técnicos e Científicos: pp. 27-39.
- Stokey, N (1991), "Human Capital, Product Quality and Growth". *Quarterly Journal of Economics*, 56(2): pp. 587-616.
- Turnovsky, S (1995), *Methods of Macroeconomic Dynamics*. Cambridge, MA: MIT Press.
- Young, A (1991), "Learning by Doing and the Dynamic Effects of International Trade". *Quarterly Journal of Economics*, 56(2): pp. 369-406.