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Job creation and employability in a pattern of industrial development

Adriana Campelo Santana
Advisor: Prof. Stephen Smith

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Introduction

The communication's revolution made possible to know what is happening in the world in a real time. It matters to economy. Services and information took an important place in the economy world. Improvements in transportation networks and technology are reducing the costs of shipping goods, and improvements in information technology have made it easier to manage the new interconnections.

Globalization is praised for the new opportunities it brings, access to markets and technology transfer, opportunities that hold out the promise of increased productivity and higher living standards. It brings, also, more competition, added new values for workers, new skills and changing the performance of workers. Moreover, economic globalization can expose a entire economy to capital flows.

In order of all these above, the agenda of developing countries must consider globalization. The role of government should keep special concern about how to bring the competitiveness of the industry, services and workers.

Trade is the primary vehicle for developing countries to realize the benefits of globalization. International trade brings additional competition and enlarges foreign markets. Furthermore, trade exposes domestic firms to the best practices of foreign firms, encouraging efficiency and productivity. Also, provides new opportunities for growth, encouraging the redistribution of labor and capital to more productive sectors.

Differences between domestic and international innovation relationships are fundamental for understanding the dynamics of globalization and national systems of innovation. Investigating the patterns of collaboration, in terms of "with whom do which firms collaborate", might highlight another central question namely to which extent innovation systems are national or international respectively.

Competition has come to focus more and more on the creation, transmission and incorporation of innovation within the production of products and services. This will be even more true in a context of globalization in countries where a certain technological capacity does exist, such as Brazil. Consequently, access to knowledge, research, innovation, education and training are becoming vital.

Now, despite advances over the last decade, the regional inequalities will also widen. The issue for governments is how to ensure that knowledge can be assessed and successfully incorporated across a whole national territory.

In particular, in less favored regions, small and micro enterprises, which constitute a predominant part of the economy, depend on the external environment for the production of innovation. Because of their size, they cannot internalize all the phases of production and services they need and they are thus heavily reliant on external sources of equipment, product design, and services. Thus, if the local business environment is not adequate, the small firms will be at a competitive disadvantage.

Despite of all innovation and technological changes, unemployment remains a big problem in some regions. Moreover, access to information and education is so timid in many parts of Brazil, which make people out of opportunities.

It is necessary to improve employability to maximize chances for people to stay in the labor market. Education is the better way to reduce the distance to new jobs. However, in a country as Brazil we can find many gaps of knowledge.

Reducing these knowledge gaps will require a shift in emphasis from promoting research and technological infrastructure on its own toward facilitating wider diffusion and adaptation of innovation in lagging regions.

In this respect, improvements in information technologies and data transmission will have an important influence on the accessibility of codified knowledge and will play a major

role in integrating isolated SMEs into national systems of innovation. Their potential impact should not be underestimated.

Furthermore, the incorporation of innovation depends heavily on the ability of the workforce to understand and apply new technologies or methods. They will generally be strongest where local enterprises, grouped in clusters, have specialized in particular regional vocation to production.

Bolstering the ability of economies to create new jobs is one facet of the strategy to reduce unemployment. But a high-productivity, high-wage job strategy can work only with qualified people to fill the new jobs. People must have a solid education. Workers should acquire skills through training.

Create new jobs in a pattern of industrial development requires to closing some gaps of knowledge. A policy to create jobs in less developed regions requires deep understanding about culture and capacity of the community. It is necessary to identify the vocational trend to make development feasible.

In order to bring economic growth for less developing regions, clusters and small business play an important role. Stimulate clusters formation and improvements in SME, joining to them knowledge, technology and apprenticeship training could be a big deal to create new jobs.

The Problem of Unemployment

1.1 Since Manufacturing Pattern to High-Tech Industries

Some things we already knew so deeply, how far as our memory could remind. Talking a glance at mankind's history, we can clearly see the efforts to make better the humans life. The humans still are the commencement and the end of all. Discovers and development are just ways to extend the human senses and they should work for this purposes.

One of the good things about communication development is that humans can see humans. We are able to see what happens worldwide and realize the differences between countries and realities. We can see human needs. The world economy is completely linked. Furthermore, the entire world matters about peace, rights, respect, poverty and life. That means while people still lives in under human conditions, the mankind cannot take a rest.

Everyone in every country has right to dignity life. This is the humanity goal. All things should run for this goal: The science, the medicine, the technology, the law, the policy and the economy.

The development holds itself several hopes. In less developed countries, people believe it can bring jobs, prosperity and quality of life. Moreover, the economic development can avoid poverty and hunger. Development is a challenge for whole world.

Deplorable as the quality of life still is in the poor countries, the challenge has not gone unmet. We should recognize that in no other period in history has the condition of the world's poor improved as much as during the past four decades when the international community has made deliberate efforts to accelerate the economic development of poor countries.

Everyone have a personal challenge that should be reached through the occupation. The job is the funnel to build our life and concretize our mission. Moreover, the job is the way to participate to the economy and the society. Regardless, in some countries the absence of jobs is a big concern and there is a reflect of economy and political trends.

Unemployment is a colossal waste of human potential and products. It is responsible for poverty and inequality; it erodes human capital; it creates social and political tensions wherever it strikes. The cost of this failure is truly immense. Research shows that unemployment is a major source of unhappiness¹. Moreover, mass unemployment has bred poverty, damaged the health of individuals and whole communities and reduced social cohesion by fostering an emergent underclass.

Jobs are always an important item on the political agenda. Full employment is a very important policy objective for almost all countries. Work and education should be available for all who seek it. Even if an optimistic scenario for information and communication technology could be realized, only a minority of the new jobs needed would actually be in ICT industries and services.

Information and communication technology affects all industries and services, creating new investment opportunities everywhere. The impetus that a new techno-economic paradigm can give to the economic system lays not so much in products or services as in the boost it can give to investment and to consumer confidence generally.

1.2 -How does manufacturing matter?

How far declining employment in manufacturing should be a cause for concern depends in part on the trend in manufacturing output. Falling employment accompanied by rising output indicates laborsaving technical progress, while static or declining output indicates job shedding without explanation. For Britain, for instance, the harsher interpretation of deindustrialization applies. Deindustrialization in the USA is a different phenomenon. By

¹ Clark, A. and Oswald, A. (1994) 'Unhappiness and Unemployment', *Economic Journal* 104, May.

contrast, the USA has doubled its manufacturing output, even with latterly declining employment.

In Brazil, a strong decrease in employment occurred during 1990/91. It remained stable from 1992 until 1995 when it started falling again. After the economic recovery beginning in 1993, manufacturing production started an upward trend similar to that of wages. From the beginning of the decade until the end of 1996, employment had decreased by 37%, while the real average wage increased by 22%.

The picture does not look very different when separate industries are observed. As for employment, it also did fairly well during the 1986/89 periods, but the tendency has been to fall ever since, sometimes despite significant increases in the output. That suggests that whatever caused this scenario of increasing wages and declining employment must be an economy-wide effect, not one limited to specific industries.

With higher productivity, fewer workers are able to produce a higher output of manufactured goods. If the demand for these goods does not increase enough to accommodate for this, employment in that sector will inevitably decline.

After a decade of stagnation, in 1990-labor productivity in the Brazilian manufacturing industry (measured as output divided by the number of hours paid) began to show very high growth rates. Labor productivity was growing at an average rate of 8.5% per year during the 1990/96 periods. It grew both under recessive and expansive scenarios. Up to 1992, output was falling, but employment was falling even faster.

This caused productivity to rise. From 1993 on, output grew while employment remained either stable or decreased, again causing productivity to rise. The contractive policies in response to the consumption boom following the stabilization caused manufacturing output to fall. However, employment did not adjust as quickly. Therefore, there was a sharp decrease in productivity during the first half of 1995. However, after mid-1995, employment started to fall.

From July 1995 to the end of 1996 employment fell by almost 20%. Meanwhile output was recovering and productivity was growing at a rate faster than the one before. These productivity gains were present throughout the whole of manufacturing.

After the economy began to recover, employment kept falling (although at a much slower rate), while productivity was still rising. It could be answered due to the opening of the economy-stimulated firms to undergo a managerial revolution, and to acquire modern equipment. Firms in which productivity was low were the most likely to close down as a result the average productivity of the remaining firms became higher.

According to Chamon² the gains in productivity and decline in employment is linked to three forms of reaction towards foreign competition: The first is the diffusion of new managerial techniques with the optimization of logistic process and introduction of labor saving technologies. The second is the increasing tendency towards subcontracting. The third is the increasing penetration of imported intermediate goods because of trade opening and exchange rate appreciation, which further increases the gap between production and value-added, upward biasing the productivity estimates.

Worldwide, productivity growth in manufacturing is accelerating rather than slackening. Manufacturing is important, especially for developed countries, where it is the shore of industrial development, for reasons such as productivity contribution, job contribution, technology contribution and trade.

In Britain, it is an established fact that rates of productivity growth in manufacturing are consistently higher than in services. During the period from 1895 to 1993, output per worker in manufacturing sector grew very rapidly. The implication of this general pattern is that manufacturing makes an exceptionally large contribution to economic growth.

² Chamon, M. (1998). *Rising wages and declining employment: The Brazilian manufacturing sector in the 90's*. Rio de Janeiro: IPEA.

Manufacturing matters for the rest of the economy also through its forward linkages, the products it makes available to other producers as well as to consumers. An industry may be creating and supplying more than just the outputs for which it charges a price. Consider the issues of new knowledge and product innovations, these can be thought of as intellectual feedstock that creates new opportunities for profit.

The manufacturing sector, particularly the engineering and chemical industries, is the dominant source of innovations, whether these are measured by patents registered or by survey records. Even, if some countries cannot support technical advances, new products continue to emerge worldwide and it will increase the international trade. In an increasingly integrated world technological performance and trade are ever more closely linked.

In employment terms, the challenge is that both the R&D process and the parallel high technology production increasingly employ skilled workers, who operate in a multi-disciplinary environment involving frequent task changes.

The economy requires an appropriate environment for manufacturing, which involves trade and exchange rates. Second, involves R&D. Both manufacturing production process and their integral R&D activities require the number of technically trained workers.

High-technology manufacturing matters for sustaining economic growth, for improving the international trade and for sustained employment, including in services.

1.3 - Looking forward to full employment

Old style Keynesian solutions to unemployment, which emphasize the importance of expansionary macroeconomic policy, are still voiced but the views of so-called modernizers, who stress supply side reforms and the need to make people more employable, have recently been in the ascendant. Between these two tendencies is the referred to as New Keynesian, who seek a sophisticated accommodation between demand

management and supply side measures designed to create a socially inclusive and cohesive economy able to sustain full employment without inflation even as at the same time improving living standards for citizens.

Nowadays in Brazil, few people feel fully secure in their employment and the common belief is that will not be sufficient jobs to go round. Common pessimism about the prospects for full employment would, of course, be justified if it were impossible to expand the volume of employment. If there were only a fixed amount of work to be done, policy-makers would be virtually impotent in the face of new technology and an increase in number of people looking for jobs. In a world of mass desire, poverty and need, the belief that there can never be jobs for all who seek them seems hard to sustain. The problem of mass unemployment instead lies in society's inability to maintain demand in the economy at a rate sufficient to absorb idle hands without stoking up inflation and creating balance of payments problems.

Some economists, however, while not disputing the importance of technology, also argue that increase competition from low-cost developing countries – arising from ever more globalize pattern investment, production and trade has also been a major factor underlying the fall in demand for unskilled workers in developed economies reviews the evidence for and against this trade effect on the labor market.

Economists' theories of international trade – which predict that in order to maximize the gains from trade a country will exploit its comparative advantage in available resources – suggest that the effect of globalize trade on the labor market prospects of low-skilled workers could be considerable.

By raising productivity, technological changes help lower costs and prices and enable people to buy more goods and services. Moreover, technology generates new investment, new forms of employment and new products – the demand for which, along with that for existing products, is boosted by higher real pay and living standards afforded by improved productivity.

Employment and Economic Development :

In most countries where unemployment is a problem, it is a product of several simultaneous causes, each of which interact with the rest: small wonder that unemployment policies are difficult to design. Moreover, many policies that could improve the economy efficiency are not politically implementable. The political realities dictate that it is not enough to find policies that give more jobs for those currently unemployed than they take away from those currently employed.

Gilles Saint-Paul³ observes that if labor market rigidities exist, it must be the case that they benefit some politically powerful groups. What is the margin of maneuver for a group in the labor market to increase its welfare at expense of others, and how this lead to rigidity? If the labor were the only factor of production, the marginal product of labor, which would be constant, would dictate the income of the any worker; labor would reap the entire surplus from production and there is nothing more it could appropriate. Workers would not be in favor of rigidities. Redistribution across workers would be feasible, but would not arise as long as labor was homogeneous.

The labor market rigidities may be the outcome of distributional conflicts among heterogeneous social groups. The Marxist view that this might be the outcome of class struggle between labor and capital is incorrect. If there are constant returns and capital is fully flexible factor in the long run, there is no scope for labor expropriating capital.

Rigidities may be decided by society as a whole as the outcome of some political mechanism of aggregating preferences. In all societies, decision-making is actually a mixture of coordinated, democratic mechanisms and uncoordinated mechanisms such as lobbying or local (sectoral) bargaining. By the other hand, the uncoordinated mechanism

³ Saint Paul, G., (1997). 'High unemployment: the political economy perspective', *Unemployment policy: government options for the labor market*, Cambridge, UK: Cambridge University Press.

is likely to lead to a sclerotic society with too much rigidity. St-Paul insists on two phenomena which would lead to excess rigidity and which are particularly relevant in other to understand where it comes from.

The first phenomenon is “prisoner’s dilemma”. When some agents take a decision, it ignores the impact of its decision on other agents. When all agents do this, the outcome is likely to be inefficient. Unions (or sometimes firms) in a particular sector or region may create rigidities to insulate themselves from competition. By doing so they reduce opportunities in the rest of society. In equilibrium, all sectors are rigid and the economy is blocked by an inefficient equilibrium. Societies with a higher degree of centralization in decision-making will tend to be better off, although centralization may create problems of its own.

In this point, we should consider that prisoner’s dilemma is what economists always called an “externality”, and it may be positive or negative.

The second phenomenon is the propensity of rigidities to spread like a disease across sectors and markets. The virus is called opportunity cost. When a sector is hit by a negative shock, it can elect to adjust the shock. The choice it will make will depend on the relative cost and benefits of these two alternatives. If the rest of the economy is more rigid, adjusting will be more costly because it will be more difficult to relocate in a new region or sector. The opportunity cost of establishing rigidity falls when the rest of economy is more rigid. Along the same lines, rigidity may also spread across markets.

People normally focus on the distributive conflict between capital and labor. Recent theories of so-called insider wage-setting have underlined the existence of conflicts among workers themselves, between the employed and the unemployed.

The social group who presumably benefits most from policies to cure unemployment is the unemployed themselves. By their nature, the unemployed cannot impose any policy. Even in situations where unemployed is considered large, they are a minority. They are

poorly organized and a few political parties are interested in getting support from them. In addition, they are a heterogeneous group and they are likely to support different policies. Moreover, this is a transient category. Therefore, policies that cure unemployment must get the support of the employed.

2.1 –Development:

The principal goal of development policy is to create sustainable improvements in the quality of life for all people. Sustainable development has many objectives. While raising per capita incomes and consumption is part of the development goal, other objectives such as reducing poverty, expanding access to health services, are definitely important. In this way, we should interpret economic development in terms of a number of sub goals.

Economic development involves something more than economic growth. Development is taken to mean growth plus change. There are essential qualitative dimensions in the development process that extend beyond the growth or expansion of an economy through a simple widening process. This qualitative difference is especially likely to appear in the improved performance of the factors of production and improved techniques of production. It is also likely to appear in the development of institutions and a change in attitudes and values.

Economic development is thus much more than the simple acquisition of industries. It attains a number of ideas about modernization, production, social and economic equalization, modern knowledge, improvement of institutions, and a rational system of policy measures.

Amartya Sen, a Harvard's philosopher-economist, stress that economic development should be interpreted as a process of expansion of the positive freedom that people enjoy. He interprets development as a process that expands the entitlements and capabilities of people to live in ways we have reason to value. He advocates that development

economists should concentrate on entitlements of people and capabilities these entitlements generate.

Employability

Although, savings, investments and foreign exchange constraints are very important to the development of a country, the development of human resources is also a very strong point. Indeed, human resources in rich countries have demonstrated that they can develop even if they are poor in natural resources. Moreover, if the faith in development through the accumulation of physical capital has waned, it has been replaced by a belief of investments in human capital. The improvement in the quality of people as productive agents must be a central objective of development policies. The knowledge embedded in human beings is the basis for achieving an increase in total factor productivity. Land, labor, and physical capital may be subject to diminishing returns, but knowledge is not.

Alfred Marshal characterized the economic problem as being man over nature. He declared: “ although nature is subject to diminish returns, man is subject to increasing returns...Knowledge is our most powerful engine of production; it enables us to subdue nature and satisfy our wants.”

The contemporary interest in the economics of education and more broadly in the economics of all processes connected with the argumentation and application of knowledge, represents a confluence of interests derived from concerns with widely divergent problems. These problems include such matters as the economic value of education to past economic development in advanced countries, and the role of education and expenditure on increased education in the planned development of underdeveloped countries.

A rehabilitation of investment in material capital as a potent source of economic growth may therefore be in prospect. What is more important, while the process of increasing economic knowledge proceeds in phases of exaggerated concentration on one or another aspect of a problem, both the effect and the intend are to arrive at a combined and more

powerful synthesis of explanations of economic phenomena. The current period, in which the concepts of human capital and of investment in it figure as corrections of emphasis in a system of economic ideas dominated by material capital, is bound to merge into one in which human and nonhuman capital are treated as alternative forms of capital in general. The desirability of achieving such a synthesis is not merely a matter of scientific economy and elegance; it is also a prerequisite for rational discussion and formulation of policy for economic growth in both advanced and underdeveloped countries.

Conception of economic growth as a generalized process of capital accumulation provides a unifying principle for the statistical explanation of past growth and the formulation of policy for future growth or plans for economic development. It does not; however dispose of any real problems, though it does clarify understanding of them. Instead, it transforms these problems into problems of the special characteristics of particular types of capital, which, probably could be followed for efficient investment programs.

From the point of view of economically relevant differentiations, items of capital can be classified in a variety of ways. One fundamental distinction to be draw relates to the nature of the yield or contribution to economic welfare – the distinction between consumption capitals, which yields a flow of services enjoyed directly and therefore contributing to utility, and production capital, which yields a flow of consumption goods of which yields utility. The returns from production capital are directly observable, and therefore more amenable to measurement than the returns on consumption capital.

Another fundamental distinction relates to the form in which capital is embodied – here it seems necessary not only to distinguish capital embodied in human beings from capital embodied in non-human material forms, but also to distinguish between capital embodied in both human and non-human physical forms and capital embodied in neither, the latter category comprising both the state of the arts (the intellectual production capital of society) and the state of culture (the intellectual consumption capital of society).

All forms of capital other than capital goods rendering specific services to production or consumption raise serious problems for economic analysis measurement and policy formation. The fusion of human capital with the personality of its owner raises among other things the problem of how far expenditure on the creation of human capital should be accounted as investment, and how far it should be classed as consumption; while the vesting of control over the use of capital in the individual invested in, given the imperfection of markets for personal credit, poses the problem of how far education should be provide at public expenses.

Conception of economic development as a generalized process of capital accumulation, in conjunction with recognition of economically significant differences between various types of capital, has important implications for the efficient programming of investment for economic development. These implications center on relationships of complementarities and substitutability in both production and consumption that may exist between types of goods provided by different investment processes, and consequent desirability of aiming at both balanced investment in the production of complementary types of capital and the selection of the most efficient combinations of types of capital in the light of the relative costs of different kinds of investment. The complementarities between modern equipment and technology, a skilled labor force, and social overhead capital in the transportation and distribution systems is by now sufficiently recognized for development planning to aim at producing integrated investment in education and vocational training (manpower programs) as well as investment in industrial and social overhead. For such comprehensive development investment programs to maximize the contribution of investment to economic growth, however, recognition of complementarities must be allied with recognition of substitutability and analysis of rates of return on the total investment of capital in alternative programs involving investments in capital goods, human capital, social capital, and the acquisition of new knowledge.

A prerequisite of the incorporation of technology is that firms manage to draw upon an adequate supply of skilled labor. The transmission of technology alone is not sufficient.

In order to successfully incorporate innovation, the workforce must have adequate "capacity to innovate". This can be described as an endowment of skills embedded in the regional fabric and nurtured by formal and on the job training that helps the adoption of technical advancements. Skilled workers, engineers and managers play a major role in deciding whether and how new techniques and machines are to be used. In addition, a high diffusion of skills in the local fabric encourages the establishment of innovative practices and design changes by easy communication among a large population sharing the same technical language and reasoning.

Policies to embed these qualities in the local labor market involve training in technology management for owners and employees of small firms, in-work qualification and lifelong learning programs, graduate placement schemes and linkages with local universities, and the development of open and distance learning options for people with poor access to educational institutions. In addition, there is scope for developing entrepreneurship among young people through the presentation of ideas of self-employment within the school curriculum.

Developing human resources to meet the changing needs of economic activities implies a balance between expenditure on maintaining fair access to education and expenditure geared more specifically to improving economic efficiency and competitiveness (skill enhancement). This balance can be best achieved at the regional level where it is easier i) to identify and address mismatch between skills and demands, ii) to organize feedbacks between the private sector and the training and educational system, and iii) to improve curricula and introduce appropriate skills recognition systems.

3.1 - Training

Many studies of economic growth in advanced countries confirm the importance of nonmaterial investment. These statistical investigations indicate that output has increased at higher rate than can be explained by an increase in only the inputs of labor and

physical capital. The residual difference between the rate of increase in output and the rate of increase in physical capital and labor encompasses many unidentified factors, but a prominent element is the improvement in the quality of inputs. Although some of this progress may be incorporated in physical capital, the improvements in intangible human qualities are more significant.

Population and the capacity and training of the population to use it effectively should interpret the capital stock more broadly to include the body knowledge possessed. Expenditures on education and training, improvement of health and research contribute to productivity by raising the quality of the population, and these outlays yield a continuing return in the future.

While investment in human beings has been a major source of growth in advanced countries, the negligible amount of human investment in underdeveloped countries has done little to extend the capacity of the people to meet the challenge of accelerated development. The characteristic of economic backwardness is manifest in several forms such as low labor efficiency, factor immobility, limited specialization in occupations and in trade, a deficient supply of entrepreneurship, and customary values and traditional social institutions that minimize the incentives for economic change. The slow growth in knowledge is an especially severe restraint to progress. The economic quality of the population remains low when there is little knowledge of the natural resources that are available, the alternative production techniques that are possible, the necessary skills, the existing market conditions and opportunities, and the institutions that might be created to favor economizing effort and economic rationality. An improvement in the quality of the human factor is, then, as essential as investment in physical capital. An advance in knowledge and the diffusion of new ideas and objectives are necessary to remove economic backwardness and instill the human abilities and motivations that are more favorable to economic achievement.

Training and education represent possibly the only greatest long-term advantage point available to all levels of government in upgrading economy. Improving the education system is an essential priority and it is a matter of economy and not just a social cause.

3.2 - Skills and Competitiveness

The adjustment needed to create a high skill economy will involve improvements in education and training and connected measures to assist the diffusion of information and computer technology. Christopher Freeman⁴ advocates in particular substantial investment in “information highways and byways” based upon digital technology. Such investment played an important part in the Clinton administration’s plan for economic prosperity in United States and it is a dominant theme in the European Union’s competitiveness program.

A highly skilled workforce will be decisive to exploiting the opportunities such technology offers for creating new markets and jobs. To reach a good level of skills, we should invest in conventional education and training, lifelong learning and apprenticeship programs.

There has already been a fast expansion in the numbers of young people staying on at school or moving into further and higher education before entering the labor market. It may represent a supply side response to the shift in demand away from unskilled labor. This supply side trend may so alter the incentives facing employers that many more will choose to adopt a high quality product strategy.

The wrapping up for this discussion is that one should be wary of arguments for full employment that blithely refers to the importance of education and training. A policy for skills must be wedded to a full-blown competitiveness package and industrial strategy.

⁴ Freeman, C., (1997), *Technical Change and Unemployment*, London: Routledge.

Moreover, if directed at sustained investment would foster growth, thereby raising productivity and lead to more jobs, which improve living standards. The measures should enhance innovation and encourage ever greater use of technology as well as skills would have to be a key component of policy.

Close ties between educational institutions and employers are enhanced if individual schools, colleges, and universities have the flexibility to adapt to the specialized needs of their local industries. There is a close connection between educational institutions and employers.

Employees must be equipped with the skills necessary to be participants in the economy. The majority of the population, at least the local population, must be given the foundations that will allow them to be trained on the job. A minimum standard necessary have been rising continuously as technology advances.

There must be a better balance between post-secondary education and training. In most countries, the growth in enrolments in academic studies has outpaced that in technical and advanced vocational studies. There is a danger of a shortfall of further education and training, and of a surplus of academic qualifications. Vocational and academic studies should both prepare and stimulate students for entrepreneurial activities.

Improvement of on-the-job training for adults is a major policy challenge. Individual firms are discouraged from investing in their workforces by short-term profit maximization objectives; by the possibility – for firms individually, though not collectively – of dismissing workers with obsolete skills and hiring others with the requisite skills; and by poaching of their skilled workers by other firms. To counteract these forces, some countries have adopted a training levy/grant whereby firms are required to spend a certain proportion of their wage bill on training or else pay an equivalent levy. Such measures, so far at least, have yielded mixed results, perhaps because of problems of design and implementation.

A more radical solution would be reforms to accounting standards, which could help improve information on the value of training investments, as would agreement on, and implementation of, training standards and credentials.

The New Paradigm

Economic growth has bestowed in industrialization. The citizen's who live in industrialized countries have been achieving better quality of life. The growth of real income per capita has been more rapid during the past half century for most developed and even for developing countries than it was in earlier periods. The developing nations look for industrialization as a whole sense.

The great deal for the economy is technical change. The technological innovations are a dynamic force leading to economic growth.

Researchers, engineers and scientists are engaged in hand-to hand trying to solve problems of medicine, communication, nutrition, housing, transportation, improvement of humans' mental capabilities and much else are convinced that important strides remain to be achieved.

If we can find concerns in high level of quality live in the developed nations, we have to face the real situation of the less developed countries. Food, housing, education and jobs remain priority necessities in so many regions of the world. Technology has a big matter to these economies. The less developed countries should find ways to bring technological advantages as server of their economy.

Unfortunately, the less developed countries meet some barriers to use of technical talent for economic development. There is rare find a good framework, through legal and institutional ways, to encourage risk-taking and dynamic competition among business enterprises. In addition, there is a scarcity of business entrepreneurs willing and able to take advantage of the opportunities for development offered by modern technology.

The industrialized countries should help emerging and developing nations moving toward the technological boundary in an assortment conducts. Truly, the most stressed point is

how to improve production to push economy and vice versa through implementation of modern technology in industry. To reach this target requires investment capital, active technology transfers mechanisms and entrepreneurship capable of helping technically trained graduates.

There are evidences that capital investment per work is lower in the less developed countries than in the highly industrialized nations. If capital accumulation was primarily responsible for economic growth and if the law of diminishing marginal returns held, the LDC had carried their investments less far into the stage of severely diminished marginal returns, and then the return on an incremental capital investment in a LDC should be higher than it would be in leading industrialized countries. This should draw relatively more to the less developed nations, raising labor productivity and causing a convergence of productivity levels toward those enjoyed in industrialized countries.

One important point to the economic development is knowledge. The human capital is considered an important input in a production pattern. This insight is not new and had been offered in diversity forms for so many economists. The University of Chicago has notable economists such as Theodore Schultz and Robert Lucas, who earlier understood that human capital, unlike physical capital, might be augmented with constant rather than diminishing marginal returns, permitting economic growth to continue indefinitely.

Schultz observed the recovery of production in Germany and Japan after the World War II. Despite massive destruction of physical capital, the economic reconstruction was rapid due to human capital. The capital embodied in managers and workers accumulated skills provided the basis for an industrial renaissance.

Paul Romer assumed that technical change was essentially exogenous, he postulated that technological progress in industry requires concerted, profit-oriented activity that yields two distinct components: specific designs embodied in products that could be patented and produced; and the knowledge of those designs that is a public good. It remains that knowledge could be considered as a pure public good. Romer thought that labor and

capital were not sufficient to create new designs and human capital should be devoted to this matter.

4.1-The Country's Scenario

The reality of industrial development has a narrow relation with home country's scenario. The ways that firms are created and sustained depends on foundation of the home nation. The economics, politics and cultural aspects affect directly industrial performance. The national competitive advantage is the determinant to keep industries in global advantage competition because the home base is where strategy is set, process development takes place and essential skills reside. The foundation home is the platform for a global strategy in the industry in which those from an integrated worldwide position supplement advantages drawn from the home nation.

There is only one-way to industries gain competitive advantage: it is through improvement, innovation and upgrading. About innovation, we can consider technology, management methods, and new strategies of marketing and new products.

Porter⁵ considers that determinants of national advantage lie in four broad attributes. Their shapes the environment in which local firms competes that promote or impede the creation of competitive advantage. They are: Factor conditions, Demand conditions, Related and supporting industries, and Firm strategy, structure and rivalry.

As factor conditions he means the nation's position in factors of production like skilled labor and infrastructure. Demand conditions are the nature of home demand for the industry's product or service.

The third determinant is the presence or absence of supplier industries and related industries that are internationally competitive. By related industries, the author means

⁵ Porter, Michael E. (1990) *The Competitive Advantage of Nations*, New York: Free Press.

those where firms can share activities in the value chain across industries or transfer proprietary skills from one industry to another (e.g. cars).

Finally, firm strategy, structure and rivalry means the conditions in the nation governing how companies are created, organized, and managed, and the nature of domestic rivalry.

These determinants, individually and as a system create the context in which firm are born and compete. In this way, firms gain competitive advantage when their home base affords better ongoing information and insight into product and process needs; when allows and supports the most rapid accumulation of specialized assets and skills; when the goals of owners, managers, and employees support intense commitment and sustained investment.

4.2- Technical Changes

Technological differences are indeed central to competitive advantage. The role of technological change does not represent an easy way. It is not an automatic or instantaneous process, and there are no doubts about the irreversibility of this. The technological innovation affects all steps of the production, which means from catch the raw material until consumption, including all variables as managing, selling and distribution. It represents innovation at organizational structures and how these structures will interact with others. In order of that, organizational innovations, technical innovations, and their interdependence are extremely important. This combination is the characteristic of a paradigm change, such as the information and communications technology.

The incidence of information and communication technology affects every industry and every service, their inter-relationships and indeed, the whole way of life of industrial societies. Whereas incremental changes in existing technologies involve many social and

institutional changes, some of which are painful and difficult, such as the pattern of employment and skills.

A slightly solid reason for believing that the future will be different from the past is because technological progress is not exogenous.

The number of components that could be placed on one chip continues to expand. This mean that firms those makes numerous products that used these chips are obliged to make frequent changes. Speed, storage capacity, flexibility and networking are strongly inter-related of the new techno-economic paradigm. Technical and organizational change became inextricably connected and there are strong pressures for greater flexibility in working hours from social changes. These interacted with the potential information and communications technologies to finally delivery in flexibility.

Technology could be very often identified with the hardware of production such as knowledge about process and machines. Nowadays, the definition of technology can be extending to skills, knowledge and procedures for making, using and doing useful things. Technology thus includes methods used in non-marketed activities and marketed ones, nature and specification of what is produced, design and know how to produce. It includes also, techniques directly involved in production, marketing and managerial techniques.

Technology consists of a series of techniques. The technology available to a particular one is all the techniques it knows about and could acquire. The actual technology in use is thus circumscribed first by the nature of world technology, then by the availability to the country of know techniques, and finally by the choice made among those available. Each technique is associated with a set of characteristics. These characteristics include the nature of the product, the resource use, such as skilled manpower, management, machinery, materials and energy inputs, the scale of production, the complementary products and services involved. All of these characteristics may be important in

determining whether it is feasible or desirable to adopt a particular technique in a particular place and the implications about this decision.

The uniqueness of technology is determined by the nature of the economies for which they are designed. The most significant determinants of the characteristics of new technology are the income levels, resource availability and costs in the society in and for which technology is designed, the system of organization of production, and the nature of the technology in use in the society. Technology depends on the level of development of the country. Consequently, technology tends to suit the condition of the country, which means that technology designed to suit advanced countries tends to be unwell adapted to poor countries. The transfer of technology in these cases tends to be inefficient.

The technology of the developed countries tend to produce high-income products, require high levels of education and skills, be of a large scale and require sophisticated management techniques, be associated with high levels of labor productivity. All of these should be linked through inputs and outputs with the whole system. When this technology is transferred without adaptation to less developed countries, we will have as a result a concentration of resources, savings and expenditure on human resources and infrastructure on a small part of the economy.

In fact, countries could make considerable gains at the macro level in terms of employment, output and savings, by policies leading to adoption of the most appropriate technology. It has been established that there is considerable potential for labor intensity in ancillary processes.

More appropriate technology may be roughly defined as technology whose resource use is more in keeping with less developed countries resource availability, and whose products are more suited to low-income consumers. Broadly, appropriate technology for the modern sector could consist in the adaptation of modern sector advanced country technologies in more labor-intensive directions, and appropriate technology for the traditional sector, which upgrades and improves traditional technologies.

The main issue of technological development in the LDC is not how to acquire the capability to innovation, but how can use the existing technology and process. In a way to acquire existing technology, a less developed country should try to reach efficiency in production and facilities.

Understanding technical change and innovation is crucial for understanding the dynamics of knowledge-based economies. Differences in innovation performance and the related institutional setting of a country, partly explain variations in economic performance. In modern innovation theory the strategic behavior and alliances of firms, as well as the interaction and knowledge exchange between firms, research institutes, universities and other institutions, are at the heart of the analysis of innovation processes. Innovation and the upgrading of productive capacity is seen as a dynamic social process that evolves most successfully in a network in which intensive interaction exists between those ‘producing’ and those ‘purchasing and using’ knowledge. As a result, both innovation researchers and innovation policy-makers increasingly focus on the efficiency and efficacy by which knowledge is generated, diffused and used and on the dynamics of the related networks of production and innovation.

4.3 - Clusters

What does cluster mean? If we look it up at the dictionary, we will find the follow definition: cluster- close group or bunch of similar people or things. At the economic literature, we can find n definitions, instead one generally. The term is used for a broad range of business arrangements, which depicts local concentrations of certain economic activities.

Clusters are defined as being networks of production of interdependent firms (including specialized suppliers) linked to each other in a value-adding production chain. In some cases, clusters also encompass strategic alliances with universities, research institutes, knowledge intensive business services, bridging institutions (brokers, consultants) and

customers. Successful and innovative firms have become more dependent upon knowledge and expertise in organizations other than their own. The cluster concept focuses on the linkages and interdependence between actors in the value chain when producing products, services, and creating innovations. The cluster concept goes beyond 'simple' horizontal networks in which firms, operating on the same end product market and belonging to the same industry group, co-operate on various aspects (like joint R&D, demonstration programs, collective marketing or joint purchasing policy). Clusters most often are cross-sectoral (vertical and/or lateral) networks and contain dissimilar and complementary firms specialized around a specific link or knowledge base in the value chain.

The main sense that makes clusters attractive is opportunity to join fast acts and low transaction costs with a notion of spatially concentrated firms and focus on external effects and interaction.

Altenburg and Meyer-Stamer⁶ propose an operational definition based on measurable variables: a cluster is a sizable agglomeration of firms in a spatially delimited area with has a distinctive specialization profile and in which interfirm specialization and trade is substantial. By this definition, we can assume that industrial districts, where there are local business networks in which a dense social fabric based on shared cultural norms, values and an elaborate network of institutions facilitate the dissemination of knowledge, and innovation should be consider a cluster.

Porter⁷ says that in clusters, industries are connected through vertical and horizontal relationships.

Many authors show us the advantages of this pattern of industry. Clusters can join local tendencies and regional characteristics with technological innovation and fast expanding

⁶ Altenburg, T. and Meyer-Stamer, J. (1999) *How to promote Clusters: Policy experiences from Latin America*. Great Britain: Elsevier Science Ltd. World Development Vol.27. No.9.

⁷ Porter, Michael E. (1990) *The Competitive Advantage of Nations*, New York: Free Press.

knowledge in a way to create a considerable number of jobs and raise standard life of local population.

Moreover, one competitive industry helps to create another in a mutually reinforcing process. Such an industry is often the most sophisticated buyer of the products and services it depends on. The level of quality demand becomes important to develop suppliers industries.

On the other hand, competitive supplier industries also help encourage excellent downstream industries. They provide technology, stimulate transferable factor creation, and become new entrants. For instance, one internationally competitive industry also creates new related industries, through providing ready access to transferable skills, through related entry by already established firms, or by stimulating entry indirectly through spin-offs.

The cluster becomes more than the sum of its parts to expand as one competitive industry begets another.

Once a cluster forms, the whole group of industries becomes mutually supporting. Benefits flow horizontally, forward and backward. Information flows freely and innovations diffuse rapidly through the conduits of suppliers or costumers who have contacts with multiple competitors. Entry from other industries within the cluster spurs upgrading by stimulating diversity in R&D approaches and providing a means for introducing new strategies and skills. Interconnections within the cluster lead to the perception of new ways of competing and entirely new opportunities.

The presence of an entire cluster expands and accelerates the competition. Firms from a group of interconnected industries have all tendencies to invest in specialized but related technologies, information, human resources and infrastructure. Clusters helps increase information flow, the likelihood of new approaches. It becomes a vehicle for a

maintaining diversity and overcoming the inward focus, inertia, inflexibility, and accommodation among rivals that slows or blocks competitive upgrading.

As clusters develop, resources in the economy flow toward them and away from isolated industries that cannot deploy the resources as productively. In this way, the productivity level of the whole cluster matters more than the level of each industry separately.

Clusters of competitive industries that achieve success are thus vertically deep, involving many stages of the vertical chain and industries providing machinery and other specialized inputs. The process of evolution often breeds new competitive industries and consequently builds or extends a cluster.

Some countries already have experiences in this matter. We can mention the case of Italy, where over of 40% of total exports are due to clusters of industries all connected to food, fashion or the home.

A wide range of studies has shown how intensive inter-firm links and learning between partners depend on high levels of trust. A number of reasons can be suggested to explain why high trust facilitates effective inter-firm co-operation. The first relates to the sort of knowledge being transferred that is often tacit, unmodified, firm specific and more or less commercially sensitive. It is therefore not immediately transferable and requires some dense and reliable communication paths. Partners are expected to share trust in each other's ability to provide valid and helpful responses to uncertainty. Furthermore, they are trusted not to use this information in ways that may prove disadvantageous to partners.

Hence, it seems as if a high level of trust (or mistrust) between the contracting partners is perceived *ex ante*. If the partners have confidence in each other from the outset, trust prevails in their mutual commitment. It is clear, that the attitude of *ex ante* trust is a matter of history, past experience and of the reputation of the partners. It is so important because firms rarely innovate alone. Collaboration in relation to product development is

not confined to large firms. In addition, in the small firms segment many firms choose to collaborate.

One of the reasons why networks are attractive may be a rapid rate of change in technologies and production and the need to establish flexible and learning organizations. In this context, inter-firm co-operation can be said to represent a response to contradictory demands on the competencies of the firm. On the one hand, it is necessary to concentrate on core competencies in order to be able to follow the innovation race. Furthermore, there is a need to have access to a wider set of technical competencies in order to remain competitive in a specific product area.. To resolve this, firms focus on their core activities while using closer relations with suppliers, customers, competitors and others as sources of complementary competencies when the need for them arises.

One feature deserves particular attention: The role of knowledge-intensive service firms in the innovation process. Manufacturing firms today are interacting intensively with knowledge-intensive service firms that in turn imply that service firms and sectors play an important role in the innovation process. Down-stream collaboration partners like customers are also important.

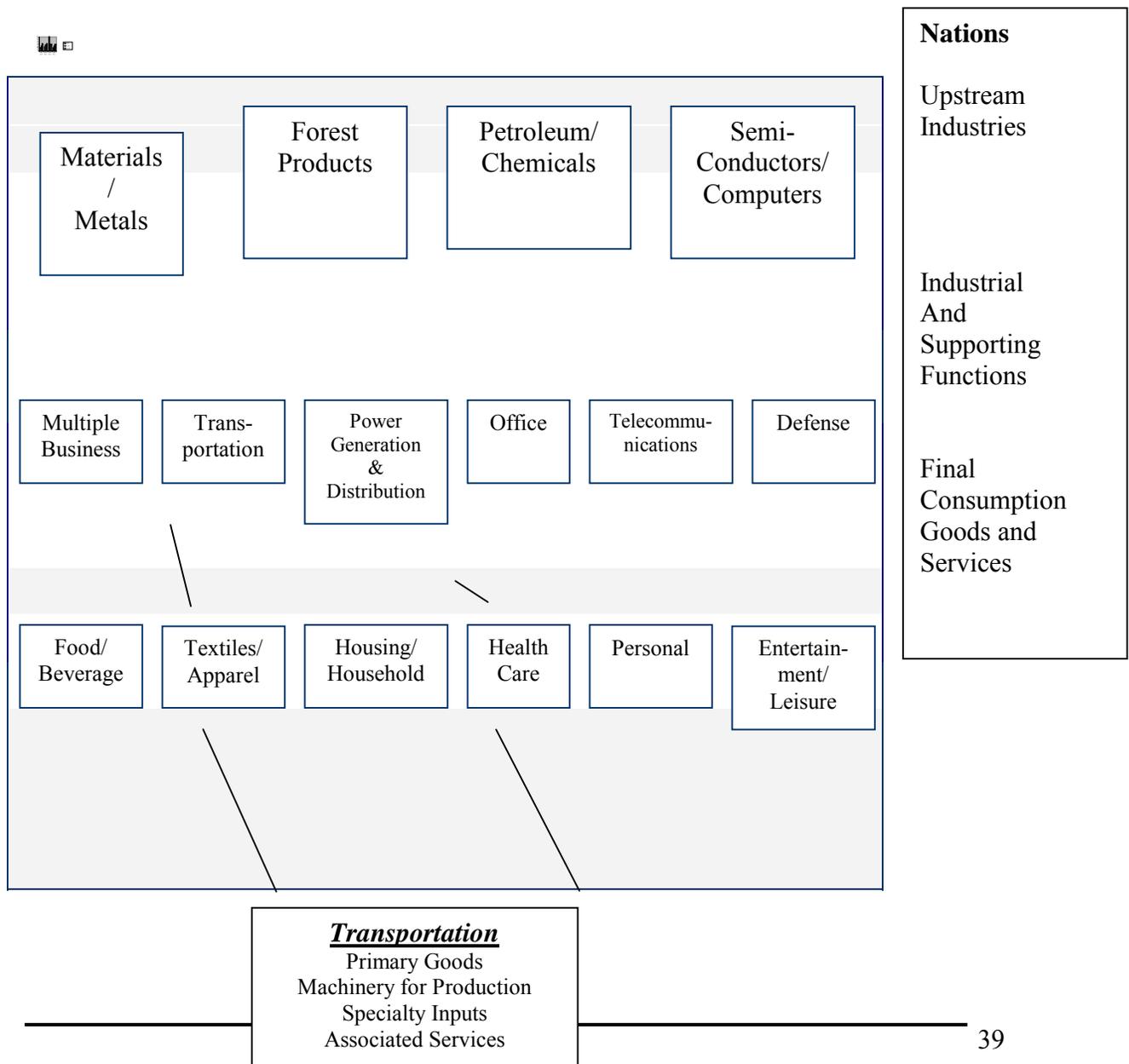
The survey has also shown that informal information exchange is very important, and that the knowledge is often embodied in people rather than organizations. In light of the fact that firms to a large degree collaborate with suppliers of technological services and knowledge “producers” like universities, and in light of the fact that innovation rests on an increasingly more unstable and complex knowledge base (increasingly, innovations have to integrate several disparate technologies and each technology becomes more and more dependent on a number of separate scientific disciplines), promotion of mobility of people is likely to enhance networking on innovation, in particular the informal knowledge exchange.

For some firms the absorption capacity may not be adequate in relation to exploiting codified, new research results. However, such firms may benefit if could be feasible a

collaborating directly with either the knowledge producing entity or an intermediary like technological institutes, thereby learning from the more tacit aspects of new knowledge.

In order to illustrate the patterns of Michael Porter theory, he used as a primary tool a chart we will show bellow. He assigns important roles to demand conditions and vertical relationships among industries in stimulating competitive advantage. The industries are grouped in the chart by end-use application. (Figure 1.0)

The Cluster Chart



According to the chart, across the top row are upstream sectors, which means broad sectors containing industries whose primary products are inputs to products in many other industries. Across the middle row are broad end-use sectors involving industrial or supporting functions. Most are related to particular end uses such as transportation or defense. The multiple business categories contain industries such as measuring instruments and power tools, whose products are auxiliary or sustaining products used in many end-use sectors. Along the bottom row are end-use sectors most associated with final consumption goods.

By specifying strict boundaries for industries or sectors (mostly based on some statistical convention), the traditional research approach fails to take into account the importance of interconnections and knowledge flows within a network of production. Compared to the traditional sectoral approach, which focuses on strategic groups of similar firms with similar network positions, the cluster concept offers a new way of looking at the economy and is more in line with the modern and interactionistic innovation theory, with changed market developments and with the changing character of market-based capitalism. The sectoral approach focuses on horizontal relations and competitive interdependence (relations between direct competitors with similar activities and operating in the same product markets) whereas the cluster approach in addition focuses at the importance of vertical relationships between dissimilar firms and symbiotic interdependence in the value chain. Although, innovations are stimulated by the horizontal struggle between competitors operating on the same product markets, vertical relations between suppliers, main producers and users are also important for creating innovations.

Table 1 adopted with changes from Porter's work (1997), summarizes the main differences between the traditional sectoral approach and the cluster-based approach.

Sectoral approach	Cluster-based approach
Groups with similar network positions.	Strategic groups with mostly complementary and dissimilar network positions.
Focus on direct and indirect competitors.	Focus on end product industries. Include customers, suppliers, service providers and specialized institutions Incorporate the array of interrelated industries sharing common technology, skills, information, inputs, customers and channels.
Hesitancy to co-operate with rivals	Most participants are not direct competitors but share common needs and constraints. Wide scope for improvements on areas of common concern that will improve productivity and raise the plane of competition.
Dialogue with government often gravitates towards subsidies, protection and limiting rivalry.	A forum for more constructive and efficient business-government dialogue
Looking for diversity in existing trajectories	Looking for synergy and new combinations

4.4 -The Significance of Clusters for Small Business

As the literature about industrial development shows us, cluster is a form of industrial organization where firms can be small, large or medium size; organized geographically or by nature. For small firms, clusters can add much more advantages. Researches on industrial clusters can transform thoughts about competitiveness and growth of small enterprises in developing countries.

For regions seeking industrialization, two things are very important to launch the process. The mobilization of unused local resources and the effective use of these resources. By resources, we mean financial and human resources. In the early stage, both mobilization and the use of resources can occur in small amounts of time. This is where clustering becomes significant because it facilitates specialization and investments in small steps. Producers do not have to acquire equipment for the entire production process: they can concentrate on particular stages leaving other stages to others entrepreneurs. Specialized workshops that can repair and upgrade existing machinery further help to reduce technological discontinuities. It follows that investment capital is needed in small lumps.

The mobilization and use of entrepreneurial talent needs to be considered. Investment in human capital can be made to count. One producer's investment in a specialized skill renders returns because others have invested in complementary expertise. Specialization does not mean isolation because without interaction no one can sell their products or services. The big deal is the steps are small and the risks are calculable. Moreover, clustering facilitates the mobilization of financial and human resources, breaks down investment into small risk able steps. The enterprise of one creates a foothold for the other, ladders are constructed with enable small enterprise to climb up and grow. Enterprises create for each other possibilities for accumulating capital and skill in a process.

Toward decide for clustering small enterprises, producers should take in mind two assessments: First, the challenging market environment requires strategic cooperation among clustered producers. Second, a change in the mental model of expected payoffs to acquiring different kinds of knowledge is required to enable exchange cooperation, learning and innovation.

The turn point of clustering process is the role of entrepreneurs in actively pursuing cooperation with others firms, purpose of learning, here we mean improve skills in technical, managerial and entrepreneurial, and innovation. The active behavior of entrepreneurs has its roots in competitive forces compelling them to upgrade their ties with suppliers, clients, banks and research centers with the aim to offset the resource disadvantages characterizing most small business. Benefits of cooperation take form of cost reductions, innovation and quality improvements.

Small firms, by forming local clusters and networks for co-operation, can challenge large firms as equals in the global market while remaining small. It is then more effective for governments to deal with these SMEs together than to do so individually.

Traditional public policy instruments designed for single large firm intervention are neither appropriate nor effective with SMEs, and simply cannot respond to the diversity of demand that local productive systems present.

Public support for small firm clusters needs to add a new dimension to traditional support services. Individual firms themselves may benefit from support program on standard management skills, for example, but clusters and net works require different forms of assistance directed to strengthening the internal efficiency of the network, extending inter-firm collaboration, agreeing new divisions of labor and specialization, joint development of new market opportunities and routes to the markets, and the collaborative development of new (often niche) products and services which are often inaccessible to large firms. Therefore, such area-based organization of production can build a strong

fabric for jobs and human resources while combining firm flexibility and interfirm mobility with employment development.

The best territorial policies identify core industries and encourage the clustering of other industries around them. Clusters often emerge and begin to grow naturally, but government at all levels can play a role in reinforcing that growth. Research in a number of cases has proven that programs to promote industrial clusters (usually in the form of business support services or specialized skills training) are more effective than sectoral subsidies.

Nevertheless, we should mention the importance of the network and external linkage to keep the cluster growing. It is necessary to take serious attention in the process. The process is a trajectory of this industrial pattern that lead to success or failure. Schmitz⁸ argues that clustering is particularly significant at the incipient stage because it facilitates evolutionary growth in risk able steps. Small amount of capital, skills and entrepreneurial talent can be made by count. However, clusters only experience industrial growth where effective trade networks connect them to sizable distant markets and where trust sustains interfirm relations.

4.5 - New Enterprises:

When a new business starts, its prospects are uncertainty. If the new firm is built around a new idea, potential innovation, it is unsure whether there is sufficient demand for the new idea or if some competitor had the same or superior idea. Tastes can change, and new ideas emerging from other firms will certainly influence these tastes. A new enterprise is

⁸ SCHMITZ, H., NADVI, K., (1999). *Clustering and Industrialization: Introduction*. World Development, Vol. 27, No.09.

burdened with uncertainty as to whether it can produce and market the intended product as well as sell it.

New firms are necessary to replace jobs freed up in established industries and segments as they improve production. It is not only important to upgrading process in an economy, but also to mitigates forces that challenge economic process. If new business formation falters, new job prospect can become bleak. On the contrary, with an abundance of labor and slowing wage increases, firms are less prone to invest in improving workforce skills and boosting productivity.

New business creation cannot flourish without a strong commitment to competition. In addition, the government has an important role in this matter, the policy can influence new business formation. In the role of the government, we should consider infrastructure, education, and regulation to treat patents and authorial rights, and capital.

Why would an entrepreneur start a new firm that would immediately be confronted by scale of disadvantages?

Probably, the greatest determinant of entrepreneurial activity is the willingness to take risks.

4.6 -Entrepreneurial

First, we should distinguish two types of entrepreneurial activity: at one pole, there is routine entrepreneurship, which is really a type of management. At the other side, we have the new entrepreneur.

The first one is involved in activities as coordinating and carrying on a well established, going concern in which the parts of the production function in use are well known and which operates in well-established and clearly defined markets.

By new entrepreneur, we understand one who is involved in activities necessary to create and carry an enterprise where not all the markets are well established or clearly defined and/or in which the relevant parts of the production function are not completely known. In both cases, the entrepreneur coordinates activities that involve different markets; he is an intermarket operator. One of the main obstacles to understand the entrepreneurial role lies in the conventional theory of production function.

The basic culprits are the following assumptions: that the complete set of inputs are specified and known at the actual or potential firms in the industry, and that there is a fixed relation between inputs and outputs.

In its usual conception the production function is considered to be clearly defined, fully specified, and completely known. Where and to whom in the firm this knowledge is supposed to be available is never stated. In fact, there are great gaps of knowledge about the production function. Points on the production function refer to well-defined inputs. To the extent that they are not completely defined in actuality, the entrepreneur must in some way make up the deficiency.

The usual characteristics attributed to entrepreneurs involve gap filling as one of their essential underlying qualities. It may be thought desirable that entrepreneurs possess at least some of the capacities to search and discover economic opportunities, evaluate economic opportunities, marshal the financial resources necessary for the enterprise, make time-binding arrangements, take ultimate responsibility for management, be the ultimate uncertainty and/or risk bearer, provide and be responsible for the motivational system within the firm, search and discover new economic information, translate new information into new markets, techniques, and goods, and provide leadership for the work group.

In a world of perfect markets, if such a world were possible, each of these characteristics would be marketed as a specific service. Thus, some firms might specialize in the

discovery of economic opportunities and sell this information to others. A similar remark could be made of each of the capacities mentioned above. The reason that is not the case is because some inputs are inherently unmarketable, and some are difficult to market and are frequently unmarketed.

It is important to stress that entrepreneurial activities do not arise only because of market structure imperfections. This view gives too shallow an interpretation of the entrepreneurial role. Some gaps in markets are inherent in all cases. The entrepreneur has to employ some inputs that are somewhat vague in their nature (but nevertheless necessary for production), and whose output is indeterminate. The provision of leadership, motivation and the availability of the entrepreneur to solve potential crises, the capacity to carry ultimate responsibility for the organizational structure and the major time-binding (implicit or explicit) contractual arrangements are of this sort.

The most important thing is that the entrepreneur has to possess what might be called an input-completing capacity. This capacity is the unique characteristic of the entrepreneur.

Entrepreneurship is frequently a scarce resource because entrepreneurs are gap-fillers and input-completers and these are scarce talents. Other things equal, the amount of gap filling and input-completing required determines the degree of scarcity. Gap filling is necessary because information about some inputs are unmarketable; and because private information about markets cannot always be proven and made public information. Of course, gap filling will also be necessary where universalistic markets have not been developed, or where the inputs are, in principle, marketable but for some reason such markets have not arisen.

For any given economic activity there is a minimum quantum of various inputs that must be marshaled. If less than this minimum variety is universalistically available, the entrepreneur has the job of stepping into the breach to fill the lack of marketable inputs.

Although there is no universally accepted theory of development, some authors show two important elements in the process: first, per capita income growth requires shifts from less productive to more productive techniques per worker, the creation or adoption of new commodities, new materials, new markets, new organizational forms, the creation of new skills, and the accumulation of knowledge. Second, part of the process is the interaction between the creation of economic capacity and the related creation of demand so that some rough balance between capacity growth and demand growth takes place. The entrepreneur as a gap-filler and input completer is probably the prime mover of the capacity creation part of these elements of the growth process.

The role of the government

Governments play a vital role in development. Government, at all levels, can improve or detract from the national advantage. The adopted policies can influence all the determinants we talked at the last paragraph, and affects it both positively and negatively. This role does not control the total industrial performance, but can influence it. The goal of industrial development policy should be increase level of revenue generated by employees per unit of time and the return generated by capital. These mean productivity, which is the main cause of a nation's standard of living.

To reach the goal, almost all nations nowadays are taking policies to improve competitiveness. Some of the most common policy are tax reform, deregulation, privatization, encouragement regional development, improvement of education system.

Nevertheless, the government has to be careful to keep its position out of market. Its role is to create better environment as possible, with positive influence the context and institutional structure. Government should encourage firms to play a prominent role in factor creation themselves and role in those areas where firms are unable to act. However, some industries are so indispensable to economy as a whole that nation should provide the ideal environment and guarantee their competitive advantages in the market.

While the national government has a role in upgrading industry, the role of state level could be much more potentially decisive. Acts such as investments in education, researches, infrastructure, and availability of information can cause significant impact at the local economy, which problem adds much more value and advantages for firms rather than national initiatives.

The role of local institutions is to identify and direct resources towards strategic regional needs. A successful institutional structure is one that can anticipate changing demands. A high level of innovation activity is as much the result of a conducive institutional context as it is the result of specific policy programs.

Concepts such as "systems of innovation," and "learning region" essentially involves creating the institutional supports by which the evolving supply and demand for knowledge within an area, notably the links between the education and training systems and the innovation needs of enterprises, can be effectively met. The additional function of institutions in this context is to effectively combine the two aspects of the knowledge system: enterprise and human resources, within a coherent framework.

Where the development of such a strategy at the local level goes beyond current institutional experience and capacities, institutional "thickness" must be developed. This involves broadening participation in decision-making processes within the region, establishing effective partnerships among economic actors and enhancing networking capabilities.

The outcome of this process of institutional negotiation and decision-making is the regional strategy which includes the analysis of socio-economic needs and potential, elaboration of the structures linking research and technology with users, delivery agents, links with bottom-up projects, and so on.

Central governments play a key role in setting appropriate framework conditions for technological development (taxation, incentives, regulatory systems etc.), as well as defining the overall strategy which, among other things, limits the possibility of destructive competition among regions. Similarly, supranational bodies provide strategic guidance and increase the scope for comparative evaluation and exchange of best practice.

5.1 -Cluster Formation and Government Policies:

Government policy has an important role in promotion and reinforcing clusters. In reality, clusters very often emerge naturally according to economic local vocation and local resources. Once a cluster begins to form, government at all levels can play a role to

reinforcing it. There are many ways to reinforce the environment to clusters thrive, we can say here some specific factors such as create technical institutes, alternative education to adults, training centers, data banks and infrastructure. New clusters are more effective if they are built around a concentration of specialized expertise.

Regional policy will be more effective if it follows the principle of building on clusters. A good policy act is to identify the core of industry strength and builds on them, to encourage geographically concentrated clusters. One industry creates demand or inputs for others. This is by far to encouraging a diverse group of firms to establish feeder plants or distribution centers in a location that they will never develop and upgrade further.

The key word here is stimulus. The main question is how to create environment able to keep firms in competitiveness at the same time as supporting innovation and constantly upgrading.

Among the most important and traditional, role of government is creating and upgrading factors, whether they are skilled resources, economic information, and basic scientific knowledge. The potential rate of upgrading in an economy is set by the rate at which the quality and especially the quality of factors improve. To achieve high productivity, firm must have access to an improving pool of advanced and specialized human resources, all these factors we already talked and others factors of production. Factor conditions must encourage firms to upgrade their production and services.

What is new then in cluster policy? In all countries, there is no direct link between cluster analysis and cluster policy, and some governments use information revealed by cluster analysis as a starting point for action. Cluster analysis is another way of looking at the economy that is more in line with the changed nature of rivalry in the market compared to the sectoral approach and the traditional linear model of innovation. Policy makers have to respond to changed market conditions that ask for policy innovations. Cluster policy should not be considered as a new instrument that can be added to the existing toolbox of

policy makers. It is rather creating a new mixture of policy instruments directed towards the needs and framework conditions of the various clusters in the economy.

The cluster approach provides quite a number of advantages over the traditional sectoral perspectives when analyzing innovation and innovation networks. These advantages are not limited to the analysis of innovation processes, but extend to the realm of innovation policy-making as well. Cluster-based policy aims at removing imperfections of innovation systems (systemic imperfections) by facilitating the efficient functioning of these systems.

The best territorial policies identify core industries and encourage the clustering of other industries around them. Clusters often emerge and begin to grow naturally, but government at all levels can play a role in reinforcing that growth. Research in a number of cases has proven that programs to promote industrial clusters (usually in the form of business support services or specialized skills training) are more effective than sectoral subsidies.

Governments looking to enhance the performance of local companies and economies should be seeking to understand the key characteristics of such a networking culture, and how to develop equivalent systems in their own local environments. Central to the effectiveness of such networks is not just the principle of local ownership and empowerment, but also the need for real devolution of authority.

Rising interest in the small business sector results from the changing structure of industrial firms in the wake of increasingly open economies. Traditional, vertically-integrated production units, which depend for their success on the desegregation of tasks, specialization of skills and labor, long production runs and economies of scale, have proved to be inflexible in adapting to changing circumstances. In contrast, small technology-based firms have demonstrated the capacity for viability, stability, flexibility, and adaptability to changing demands in the market place even to the extent of taking on the transnational character of markets.

Where the local economy is dominated by large branch plants of multinationals, local enterprises often have difficulty adopting innovations because they are too closely tied to the strategies and needs of one single client.

Finally, in more remote regions, some more specific weaknesses need to be addressed. The system of innovation in these areas is undermined by two specific factors: the isolation of small firms and the lack of critical mass in the local enterprise base. The main issue for policymakers is, therefore, to find ways of reducing these disadvantages. Consequently, intertwined with the issue of technology diffusion is that of the organization of the local and regional productive fabric. The technology diffusion policy for an area of independent, isolated SMEs is very different from that needed for areas where SMEs have strong interconnections and tacit knowledge is embedded and circulates freely.

The qualitative differences in terms of innovation in different regional contexts suggest two specific policy concerns: differentiation of policy according to the local economic system; and emphasis on local needs in terms of both innovation diffusion and human resource capacity building.

Until recently, this has rarely been the case. Policies have been conceived to focus mainly on large, traditional public infrastructure and on individual firms by means of incentive-based, state-driven, and standardized measures.

Technology policies should be based less on large, pre-fabricated national infrastructure programs and more on targeted initiatives for technology diffusion within the context of broader strategies to develop the business environment. Policies to facilitate innovation or improve the capacity of firms to innovate include: new financing mechanisms for SMEs; technology centers to act as knowledge brokers; promotion of mentoring, professional exchange; and targeting research financing for small firms or groups of firms

Given the success of clusters of small firms in using dense networks to overcome isolation and achieve critical mass, considerable policy attention is being paid to building

economies of association. These initiatives include efforts to improve culture of innovation within firms by encouraging social dialogue and information exchange. It also includes initiatives to encourage inter-firm reciprocity through buyer-supplier linkage programs, incentives for pooling resources, joint ventures and task specialization.

An immediate implication is that innovation policy should not focus on the single firm in isolation but rather on its capability to interact with other organizations and on the formation of innovative networks. This is, however, a rather general statement. More specifically, we see a role for government, national as well as regional, to establish for where potential partners meet.

Conclusions

Recognize the regional vocation is a strong tool to preserve culture, create jobs and improve development. In other to reach this goal, government has a important role to join training and stimulate patterns of industry, services and commerce. The weapons to build the environment to development should consider local reality, education, innovation system, technological changes and capacity to production. Clusters and small business have an special place in this trend.

Knowledge is consider an important tool to develop economy and standards of living. While it is important to provide training for the unemployed, broad training measures aimed at large groups of the unemployed have seldom proved a good investment, whether for society or for the program participants. Careful targeting will pay dividends. All the key actors at local level – employers, trade unions, educational institutions and local government – should be involved in a combined effort to develop training programs that respond to local needs.

Job creation measures are often an important component of active labor policies. Vigorous labor market policies improve access to the labor market and jobs; develop job-related skills; and promote more efficient labor markets. Active policies can fortify the links between the growth of aggregate demand, job creation and the supply of qualified labor.

Intensified job placement and counseling programs, intended at encouraging effective job search by the unemployed, have proved especially gainful. Countries that reject a widening of wage dispersions, as a means to increase employment will have to rely particularly heavily on active labor market, education and training policies.

Clusters offers a new way of thinking about the economy and organising economic development efforts and it is a useful alternative for the limitations of the traditional sectoral patterns. Its change nature of competition and market-based innovation systems and the main sources of competitive advantage. Cluster can capture important linkages in terms of technology, skills, information, marketing and customer needs that cut across firms and industries.

Understanding a new approach of production provide options for recasting the role of the private sector, government, trade associations and educational and research institutions and brings together business development opportunities of firms of all sizes and across traditional industry lines.

Government should play as a facilitator of networking, as a catalyst of dynamic comparative advantage and as an institution builder, creating an efficient incentive structure to remove systemic inefficiencies in systems of innovation. The strategy to act depends on a fan of measures such as establishing a stable and predictable economic and political climate; creating favorable framework conditions for a smooth and dynamic functioning of markets (infrastructure, competition policy, providing strategic information). Create a context that encourages innovation and upgrading by organizing a challenging economic vision for the nation or region. Raise awareness of the benefits of knowledge exchange and networking. Provide support and appropriate incentive schemes for collaboration and initiating network brokers and intermediaries that bring together actors. Acting as a demanding and launching customer when addressing needs, facilitating an arena for informal and formal exchange of knowledge and setting up competitive programs and projects for collaborative research and development Furthermore, providing strategic information (technology foresight studies, strategic cluster studies).

Moreover, government should ensure that public institutions (especially schools, universities, research institutes) cultivate industry ties, and stimulate innovation and upgrading processes.

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