AN APPROACH TO LOCAL AND REGIONAL COMPETITIVENESS*

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ABSTRACT

This paper is aimed at: (i) showing that some competitiveness principles are key issues for local development, and (ii) bringing forth some indicators that permit to establish the relative competitive position of a region concerning the trade of goods and services at different aggregation levels. On such a basis, the paper suggests a methodology that combines elements from export demand and inter-regional demand analysis, when demand is segmented, there is product differentiation and intrafirm trade characterized by agglomeration, scale and scope economies in firms.

Key words: Trade, local and regional competitiveness, economic growth.

RESUMEN

Una aproximación a la competitividad local y regional

El presente artículo se propone: (i) mostrar algunos principios de la competitividad como elemento del desarrollo local y (ii) mostrar algunos indicadores complementarios que permiten determinar la posición relativa de las regiones en el comercio de bienes y servicios en los diferentes ámbitos de agregación. Basándose en lo anterior, en el texto se presenta una metodología que combina elementos de demanda de exportación y el análisis de la demanda interregional, en ambientes caracterizados por la segmentación de la demanda, por la diferenciación de productos y por el comercio intraempresarial, con economías de aglomeración, escala y alcance en las empresas.

Palabras clave: comercio, competitividad local y regional, crecimiento económico.

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1. Local and Regional Competitiveness Analysis

Competitiveness over historical time is the basis of dynamic change that creates fundamental uncertainty. In the evolution processes, regions develop behavioural patterns and habits called routines, in order to make decisions on future actions. These routines are based on a repertoire of skills that evolve over the life-cycle of the region as learning and selection occur. This central dynamic to competitiveness needs to be grounded in an economic framework that allows for evolutionary change, something that neo-classical models can not provide. The seminal economics work on evolutionary theory is by Nelson and Winter (1982), while the first local (or geographic) evolutionary perspective came from Allen and Sanglier (1978). Arthur (1990) linked the geographic perspective to the time path-dependence set up by economic-based routines.

A local and regional competitiveness system is a physical, mental or cyberspace environment in which concepts operate as an overall supportive (or unsupportive) system. The local competitiveness systems approach to competitiveness enables a conceptual framework to be developed that has an institutional setting covering all aspects of the competitiveness process in a historically determined dynamic. The concept of a nationally based competitiveness system was simultaneously proposed by Freeman, Lundvall and Nelson (see Dosi, Pavitt & Soete, 1990). A subnational level of competitiveness systems began to be identified through case studies in the early 1990s (Davis, 1991; Cooke & Morgan, 1994;

Saxenian, 1994). The theoretical underpinnings of local and regional competitiveness began to be developed in the late 1990's (*e.g.* Porter, 1998; Hamel, 1999), and in recent years by authors like Acs (2002), among others. These concepts concentrate competitiveness in specific spaces to create increasing returns to location. This occurs because specific sub-national spaces, internal and external to each region, create cumulative learning that establishes a set of evolving routines.

The local and regional perspective began to alter significantly in all industrialized regions from the beginning of the 1990s, from seeing regions as some homogenous distant and less advantaged areas, to viewing thens as independent and significant contributors towards their own identities. Evidence of this altered perspective exists in the private and public sectors. In the private sector, firms have recognized the need to relate and adapt to the local community, to the extent that even globally based firms have begun to develop a local identity (often called *glocalization*) (Sengenberger, 1993, 1993b; Chell, 2001).

Similarly, local government policies have reduced their emphasis on improving inequalities and developed support systems to encourage local diversity and enterprize (Hassink, 2002). The role of competitiveness in providing diversity and enterprize for this altered local perspective has been strongly developed by researchers from many disciplines and regions. Competitiveness, in terms of creative technological knowledge, has always been recognized as a key driver of economic growth and community development.

The literature on local competitiveness has not been grounded in an economic model of the economy that is compatible with the local problematic and the five regional concepts. A non–neoclassical economic framework using the work of Kalecki has been developed with the objective of competitiveness playing a critical dynamic role. Kaleckian economics is based on the central role of capital accumulation as it drives the business cycle over the short term, while creating long-term trends that determine the growth and development of a specified region. Capital accumulation is embedded in the endogenous (or induced) competitiveness generated from within the regions (*via* research and development [R&D] expenditure, and knowledge spillovers). Kalecki (1991: 327) identifies this competitiveness effect as a development factor.

Kalecki sees exogenous competitiveness as representing the intensity of competitiveness with given capital investment levels. This means that any change in the intensity of the competitiveness effect originates with the invention or basic business opportunity identified as the source of the competitiveness (Kalecki, 1991). This would lower the long-term trend, whereas an increase in competitiveness intensity would raise the long-term trend in economic growth. The first Kaleckian principle of competitiveness derived from the above analysis is that induced and exogenous competitiveness together create the transition of an economic region from static-state to long-term upward development. The process that generates this transition is capital accumulation embedded in competitiveness. This then brings us to the second Kaleckian principle that

historically determined profit levels generate the ability to invest in capital goods and in competitiveness knowledge enhancement (Kalecki, 1991). Profits (or surpluses in non–profit regions) not only provide the wherewithal to invest, but also through their extension of the capital funds owned by the region (entrepreneurial capital), they also allow for access to loans and share issues (rentier capital), which can further extend capital and knowledge-based investment.

The third Kaleckian principle refers to the two applications of competitiveness. One is coordinated through mass production systems in large regions, and is related to Schumpeter's Mark II competitiveness mode through large corporations (especially large R&D budgets). The other application is in new small-scale developments across diverse areas of activity, and is related to Schumpeter's Mark I competitiveness mode through new small entrepreneurs (Kalecki & Szeworski, 1991; Malerba & Orsenigo, 1993). Both applications increase capital accumulation, but have different structural implications.

The fourth Kaleckian principle is about the tendency for non-metropolitan regions to suffer the disadvantages of competitiveness. Generally weak local and regional competitiveness exists in such local centres as large firms controlled by powerful monopoly capital, which tend to keep their R&D in central urban locations; often with multinational companies, this tends to be in homebased centres overseas. Such weak local and regional competitiveness then experiences negative cumulative causation resulting from income distribution shift from wages to

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monopoly capital profits, reducing the role of profits in stimulating investment in capital goods and competitiveness in local centres, and lowering wages, which provides less effective demand as an incentive to supply local markets (see Kalecki & Szeworski, 1991). This leads to continued dependence on traditional commodities that are mature products and are much less liable to innovate.

2. What Concerns to Local and Regional Competitiveness

To Dosi, Pavitt, and Soete (1990) competitiveness is the capability of a subsidiary, of a firm, of a region, of an industry, of a sector or of a nation to keep or increase its market share in those products or services which importance (share) in national and international trade, consumption and value added is growing and is expected to continue growing in the foreseeable future. Thus competitiveness is always a relational concept; the competitiveness of any one person, firm, region or country is always relative to the achievements of others. It is important to be in growing markets because in them there is company growth through product differentiation, output diversification, static and dynamic scale economies,[1] andscope economies, and here opportunities of hardware, marketing or managerial technological innovations are

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[1] Unit cost reduction obtained through output increases due to more intensive use of available production facilities (static scale economies) or through learning-by-doing and improvements in machinery, equipment, routines and general organization (dynamic scale economies).

greater. To Nadini (1987), this is a condition under which the joint production of two different items allows the companyto reduce average manufacturing costs as compared to their independent production. Also, firm profitability tends to be higher in growth markets than in stable or shrinking markets.

Competitiveness is based upon: (i) the productivity of available production factors; and (ii), the capability of assigning those production factors to their most productive use. The higher the individual and aggregate factor productivity, and the higher the capability of firms and society to assign them to their most productive uses, the greater will be the achieved competitiveness. The productivity of production factors relative to that achieved in other regions is the main determinant of interregional competitiveness, and thus of national market share, as well as of the direction and composition of foreign trade of regions and countries. Human capital, technology and domestic schemes determine the national or international position. The economic trade theory on which the suggested methodology is based uses the following assumptions on the behaviour of markets and economic agents:

• Local and regional markets are characterised by diverse degrees of imperfect competition and multiple forms of government intervention.
• The development and absorption of knowledge is a costly, cumulative process, and frequently the result of local and regional actions which are not necessarily coordinated.

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- For the same product or service, production functions vary among regions. These production function differences are a central reason for the existence of regional trade.
- Scale economies are non-decreasing.
- Consumer preferences differ between regions, due to differences in income level and distribution, cultural heritage and weather; however, the smaller the differences in income levels and their distribution, the more similar will the consumption patterns be, in agreement with the Linder hypothesis.
- Production factors differ in their degree of regional mobility.
- The economy is in a perpetual state of disequilibrium due to the existence of inflexibilities, delays and uncertainty among economic agents.

Conceiving the economy as essentially unstable implies the need for long-term analysis based upon indicators that are: (i) not subject to sudden random changes; and (ii), lend themselves to the use of statistical methods that reduce or eliminate erratic movements. Given that the local or regional competitive position of a firm providing a given product or service is given by relative factor productivity, local competitive position is a means to achieve long-term phenomena. Thus, it should be analyzed during at least independent three year periods, and preferably through periods of more than ten years. This insistence on medium to long-term analysis has the objective of reducing the effects of variables other than relative productivity changes. Bell and Pavitt (1997) list the following economic sectors by source and use of technology, and dominant form of entrepreneurial rivalry:

- *Natural Resource Intensive Industries.* The location and competitiveness of this type of industry is determined by the existence of an ore or weather conditions. These industries are buyers of technology, and the capacity to identify the adequate technology and to learn to use it efficiently are important elements influencing productivity and thus competitiveness. In these industries, price is the most relevant market rivalry variable. Agriculture, mining and basic metal industries belong to this sector.
- *Supplier Dominated Industries.* These industries are buyers of technology. Their location and competitiveness is greatly influenced by the relative abundance of production factors, by market intelligence capabilities and by the presence of agglomeration economies. And, even though price is the relevant rivalry instrument in many of these industries, elements such as design, technical quality, fashion, client service and marketing are also important, and in some cases, may become the relevant rivalry instrument. Textile and cloth industries, wood products and metal products manufacturing industries belong to this sector; also retail and department stores, restaurants and repair shops belong to this sector.
- *Information Intensive Industries.* This is the newest technological sector, and is the result of advances in the capacity to store, process and transmit data and information made during the last quarter of the twentieth century. Technological accumulation in this sector comprises the design, operation and continuous improvement of information management systems. These industries are bu-

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yers of technology and client service is the dominant market rivalry instrument. This sector includes financial services, foreign trade companies, publicity and tourism related businesses.

- *Scale Intensive Industries.* These industries develop technology for their own and exclusive use. Technological development is oriented towards cost reduction through ever increasing output rates. These industries are clearly oligopolistic, with a high incidence of image, product differentiation, process and marketing innovation and region-wide foreign direct investment. Their location is influenced by potential market size and by the availability of transport infrastructure. Industries such as car assembly, household electrical appliances, consumer electronics, and basic chemistry belong to this sector.

- *Specialised Supplier Industries.* These are industries that develop new technologies for sale to other industries. Firm competitiveness in these industries is dependent upon their design capabilities, close relationship with their clients and incremental product innovation. Usually these industries are formed by small and medium sized companies that are highly dependent on the presence of agglomeration economies. Machine-tool, medical-instruments, specialized industrial machinery, civil engineering equipment and material handling equipment manufacturing industries belong to this technological sector. Many producer services such as management consulting and accounting firms also belong to this sector.

- *Knowledge Intensive Industries.* Market rivalry in these industries is centred in the firms´ ability to create radical technological innovations and is strongly related to investment in research and development. The location of these types of industries is influenced by the presence of research centres and universities. Aircraft and spaceships manufacturing, pharmaceutical, industrial and medical electronics industries belong to this sector.

Local and regional competitiveness is identified as the essential element in any local competitiveness strategy that attempts to generate long-term competitiveness and ensure local rejuvenation and sustainability. I has been commented that research requires a perspective as the basis for investigation. Local competitiveness research needs to address the basic local problems of adjustment on the periphery to rapid structural change that originates from the core of economic activity in major urban centres and overseas. The latest in revolutionary structural change is the development of the knowledge-based information technology paradigm (Freeman & Pérez, 1990).

The local situation emerging from the structural change problematic has been a heightened state of vulnerability for regions that have suffered significant decline and for regions that have had to cope with unmanageably rapid growth. Regions in decay have experienced large unemployment, low income levels, lack of public services, diminishing private sector facilities, and growing isolationism. Regions with large population growth spurts experience severe constraints with respect to provision of adequate public facilities (especially public transport), demand pressure on lo-

cal resources (*e.g.* land, labour) and social cohesion between the established culture and the new residents' values (Wahlquist, 1998).

Based on From local vulnerability, analysts need to work out the precise requirements that can rejuvenate regions in decay and sustain regions under severe growth pressures. This is where competitiveness is needed to develop appropriate creative solutions to manage and ameliorate the specific vulnerability problems identified in each region. Landabaso (2000) outlines the regional competitiveness paradox that afflicts peripheral and vulnerable regions, by observing that the more innovation is needed in less favoured regions to maintain and increase the competitive position of their firms in a progressively global economy, the more difficult it is to invest effectively and therefore absorb public funds for the promotion of innovation in these regions.

The underdevelopment and fragmentation existing in vulnerable regions makes competitiveness systems relatively weak and ineffective. Such regions require specific cultural and institutional changes that will allow interactive learning to bring forward competitive solutions to meet local needs for overcoming vulnerability. A local strategy must be put into place once the requirements are identified and appropriately adapted to the local needs. A plan must be forged that aims to develop embryonic competitive strengths that provide transition from vulnerability to sustainability. Competitive strengths is a dynamic term that refers to competitive activity that develops into some form of competitive advantage. An embryonic local and

regional competitiveness is the creative potential that emerges out of local competitiveness, providing the project(s) that are planned and then implemented in the context of specific local cultures and institutions.

Local and regional competitiveness perspectives can be identified for different types of strategies, that can be split into:

- The paradigm-shift (or transformational) perspective involves a major shift in the technological and institutional structures in the local competitiveness system, to take advantage of identified competitive strengths. In this perspective, there is a need for major strategies using large public infrastructure spending; attracting leading-edge organizations into the region; and strong strategic niche management techniques for the market, particularly for new demand outside the region.
- The radical perspective involves a significant shift towards identified competitive strengths, but building upon the current local systems in place. In this perspective there is a need to foster clustering and networking that already exists with strategy plans that incorporate technology parks with synergies between large and small firms; joint ventures by established firms; and state anchor clients that provide a strong demand for footsure competitive strengths activities.
- The incremental perspective involves important but subtle shifts towards local and regional competitiveness that potentially or actually exist. This perspective should use the significant local and re-

gional competitiveness that already exists but requires public policy support, rather than an enabling function. The need to foster incremental competitiveness comes from identifying breakdowns or possible improvements in the value-producing sectors along the value added chain. This value chain management technique should implement strategies to move along the appropriate competitiveness path by adjusting routines, improving financial support, developing incubators and forming alliances.

In all three perspectives, it is crucial that infrastructure and opportunities be created for locally-based organizations to exploit the competitiveness policy established. A research framework that embeds the competitiveness process into the region from one of the three perspectives must be formed. The elements of this framework are:

•   Identify competitive strengths and the competitiveness perspective in the region.
•   Form an interactive bottom-up local competitiveness plan via instrumental analysis.
•   Develop public infrastructure in the local and regional competitiveness that is consistent with the plan.
•   Create effective private investment in competitive strength type activities through competitiveness strategies and techniques.
•   Entice collaboration between public and private sector for the region to "take off" (*e.g.* public anchor client).

This research activity needs to be undertaken by a variety of researchers at different levels of analysis from different but interlinked organizations. Academic researchers need to analyze the past and present local problems and develop frameworks and strategies for future problem resolutions. Governments need to research and implement the enabling process for local competitiveness, and consultants need to provide support for competitive private (profit and non-profit) organizations to create or restructure new systems and processes.

## 3. Competitive Position as a Local or Regional Exporter

It is a three phased analysis. The first stage consists of determining the relative positions of exporting regions at the beginning of the analyzed period. In the second stage, the relative positions at the end of the analyzed period are examined. In the third phase, changes of relative positions are determined and analyzed. The objective is to understand the medium to long-term trend in relative positions and its causes. If possible, an identification of trend-breaking points and their causes should also be attempted. It is assumed that, given the existence of lags in investment and trading decisions, there is an inertia element in international trade. However, it must also be considered that as the level of desegregation of statistical data grows greater, the inertia element is compensated for by the greater influence of new investment in planned export supply, or production assignment decisions by national or multinational corporations. In any case, three-year moving averages are used to re-

duce the influence of smaller and erratic changes that may be due to industrial action, natural phenomena or economic crisis.

To describe initial and end-of-period relative positions, the graphic in Figure 1 is used. Along the horizontal axis of the graph, regional market share is measured as the percent that the exports of each region represent of total national trade of the product being analyzed. The vertical axis measures the foreign trade balance of each region, measured by the ratio of exports to imports (X/M).

Figure 1
Relative Position as Exporter
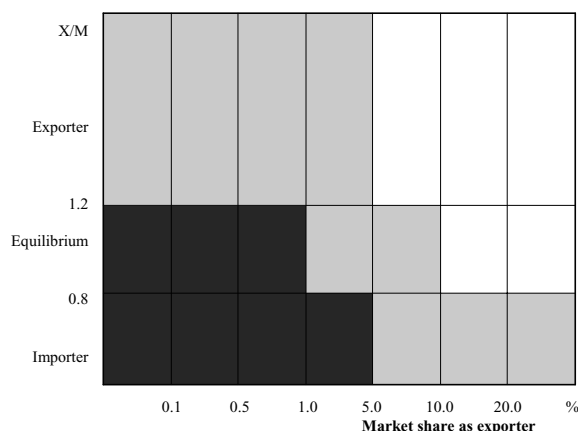
Source: Own elaboration.

The graph is divided into three different zones. The first zone, coloured in dark and located in the lower left part of the graph, indicates conditions of low competitiveness in the sector, industry or generic product under analysis. The condition of low competitiveness is expressed as the simultaneous occurrence of a small market share as exporter (the region's or firm's exports constitute a very small or marginal part of national trade as measured in percent), and a deficit in trade balance (indicating that the domestic market prefers foreign to regional or that regional supply is unable to cater to domestic demand or is nonexistent). The si-

multaneous occurrence of a trade deficit and small export market share can be due to deficient product design, low technical quality, insufficient output, low productivity, high costs, inadequate marketing, or poor innovativeness, among many other possible causes. In some cases, it can be due to small firm or region size, as can happen in scale intensive industries, or it can be due to the lack of a needed natural resource.

The grey coloured area that runs from the upper left to the lower right part of the graph constitutes an area of intermediate competitiveness. Local firms located in the upper

left part have a positive trade balance with a small market share. This can be due to being closed economies or to a local demand that is highly differentiated as related to *average* regional demand, and thus a local product or service can only be sold to very few people outside the region. This last behaviour can happen in supplier dominated and in specialized supplier industries.

Firms located in the lower right part of the graph hold a large share of local or regional market, but never theless have a trade deficit in the industry or product under analysis. This case may be due to specialization in a product variety highly demanded in regional markets, and the need to import another product variety. It may also be due to the occurrence of a big region relative to national trade, whose production is mainly oriented towards overseas markets. Such behaviours can happen in scale intensive and knowledge intensive industries. The white area located at the upper right corner of the graph indicates a high national or international competitiveness that is manifested in simultaneously holding a big regional market share and a positive trade balance. In relation to the determinants of regional market share at the industry or product level, Dosi, Pavitt, and Soete (1990) used the following equation:

$$\ln(X_{ij} / S_j X_{ij}) = b01 + b_{1i}\ln(PSHA_{ij}) + b_{2i}\ln(KL_j) + b_{3i}\ln(POP_j) + b_{4i}\ln(Dist_j)$$

Where:

$X_{ij} / S_j X_{ij}$ represents national market share of region *j* in the sector, industry or product I,

$PSHA_{ij}$ is the share of region *j* in the patents registered in the nation re-lated to the sector, industry or generic product i, used as a proxy of technological capability or innovativeness,

KL_j is the cumulated fixed investment per inhabitant in region *j* as a proxy of relative factor endowments,

POP_j is the population of region *j*, as a proxy of region size,

$DIST_j$ is the index of the distance between region *j* and the main national markets; and,

$\ln$ means natural logarithm.

The equation attempts to validate neo-technology theories of international trade and mixes elements of a production function, a gravity model for international trade and national technological capabilities. Gravity models state that distance and region size are the determinant influences for region size, while production functions state that the availability of production factors like, capital to labour ratio and technology use determine the size of maximal available output (see Figure 2).

From top to bottom, first we have *growth induced innovations;* this relationship makes technological change partially endogenous to the economic system and is related to the dynamic Verdoorn Effect. With income growth, for a given or flattening income distribution, more people can have access to the same products, enhancing the need to develop scale economies. On the other hand, as income grows, higher income people will demand more differentiated (personalized) products and services, creating the need to develop or enhance

Figure 2
Technology, Trade and Economic Growth
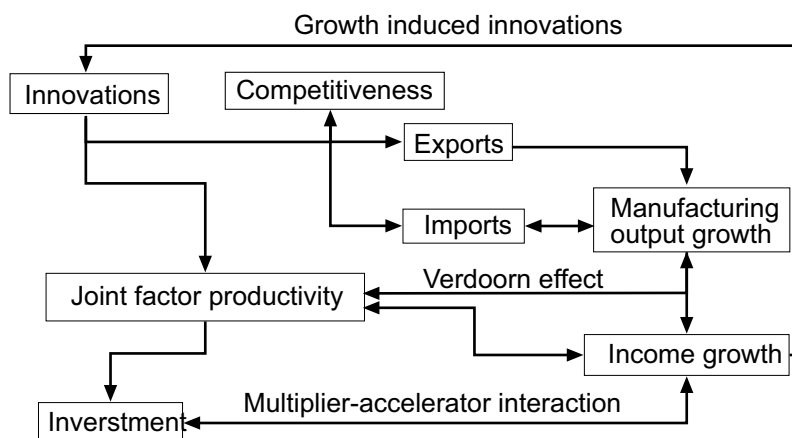
Source: Own elaboration based on Dosi, Pavitt and Soete (1990, p. 229).

scope economies. Also, higher income (implying a bigger demand) creates new possibilities of increasing the division of labour, which increases the need and development of agglomeration economies.

The second of these relationships is the Verdoorn Effect; in it, the growth of joint or total factor productivity growth is a function of the cumulated manufacturing output growth $(Dq = f(DQ))$, in accordance with Kaldor's laws.[2] The Verdoorn Effect in its static form is related to *learning by doing* and to *learning by using*; this is to say that,

with a given technology, the more people use the same tools. intermediate inputs and machinery, the more skilful they become in handling them; also, the longer time people deliver the same output, the more skilful they become in delivering it.

At the bottom of the diagram, we have the multiplier-accelerator interaction, which can help to explain growth and contraction cycles of economic activity as income and investment co-determine each other in a Keynesian fashion. However, investment is also influenced by innovations, in a Schumpeterian relationship, and thus, if innovations are related to each other creating a *technological system*, then they will appear in waves, inducing economic cycles, particularly if they are radical and even more so, if they are exogenous (science pushed) innovations.

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[2]   Which state that the growth of national income will be highly influenced by the growth of manufacturing output, since the manufacturing industry has the greater chance to experience scale and scope economies.

4. Relative Position as a Local or Regional Importer

If what is needed is to determine the relative attractiveness of possible export markets, then the previous analysis can be reversed, since what is needed is to identify wealthy, populous and uncompetitive regions with which to establish a long-term supplier-client relationship. What is needed is to identify those value-added chains or segments of value-added chains in which the export client region is not non-price competitive and is not expected to be so in the near future (o, alternatively, when analyzing a particular industry or generic product, which regions are not and cannot be non-price competitive in it, and can thus become long-term clients). The search is to be focused upon elements such as low technological capability and low joint factor productivity within the industry, with the simultaneous existence of highly related industries in one or several value-added chains.

It should be emphasized at this stage that between one-third and one-half of international trade is of the intra-industry type at the six digit level of the Harmonized Customs Merchandise Classification System; it is very common for the major exporting regions also to be the major importing regions. Also, it must be noticed that around one-third or more of international trade is of the intra-firm type, being realized mainly among the affiliates of multinational corporations. And that intra-firm trade can be vertical (between different steps of the value added chain), or horizontal (same step of the value added chain) (see Figure 3).

Figure 3
Position of Local or Regional Importers

Source: Own elaboration.

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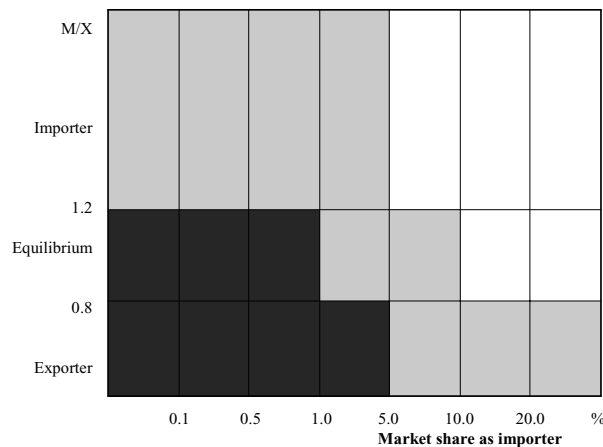
Intra-firm trade of the horizontal type can be explained by the existence of scope economies at the firm level and scale economies at the floor (factory or subsidiary) level. The attempt to use both results in intra-firm, intra-industry trade and is characteristic of the present stage of globalization. Vertical intra-firm trade (between different stages of the value-added chain but within the same firm) is due to differences in knowledge and resource bases as well as in relative factor endowments among nations. It is thus better to establish different stages of value added in different regions, implying international transportation of merchandise. This type of intra-firm trade was inherited from the late-nineteenth century phase of globalization.

Intra-industry trade is possible due to the existence of scale and scope economies as well as of product diversification on the supply side. On the demand side, intra-industry trade is possible due to the fact that similar income levels and income distributions give rise to similar consumption patterns for sophisticated products, and that similar needs and conditions require similar solutions, on the demand side. To Borkakoti (1998), the notion that similar income level (for individuals) results in similar consumption patterns is known as the Linder Hypothesis. Applied at the aggregate level, it assumes that similar income level and distribution results in similar social consumption patterns.
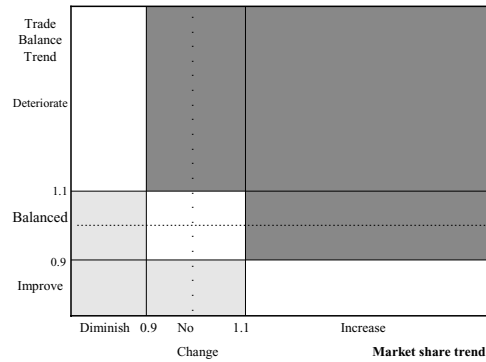
In the case of importer analysis for establishing target markets, the ratio of imports to exports can be interpreted as an indicator of the competitiveness of local suppliers. If local suppliers deliver high quality and are strongly diversified, few demand segments will be left to foreign suppliers, reducing the value of imports. On the other hand, the merchandise of high-quality, well diversified manufacturers will be demanded outside their borders, implying a high value of exports. This would imply a low import to export ratio. Never the less, big, wealthy regions will tend to have large regional market shares as importers, due to the highly diversified nature and possibilities of their domestic demands, as well as the sheer size of their domestic demand. It can thus be easier for a foreign supplier to find a demand segment it can make its niche in regions that have large and diversified demand.

As usual, the twilight zones occur where trade balance is positive (indicating competitive local suppliers), and their imports have a high market share. In this case it is possible that local suppliers are not highly diversified, thus leaving entire demand segments to be catered to from overseas. The other possible case is that of a small region, whose demand does not justify local manufacturing and cannot represent a high percentage of national production.

For analysing the trends of import markets, it is known that those regions that present deteriorating trade balances along with imports growing faster than regional trade are likely to become increasingly important demanders of foreign products these regions will be easier to cover with exports than markets whose trade balance is improving while its imports grow at below average rate. A market that presents a deteriorating trade balance and whose importance as a regional source of demand is diminishing is probably experiencing a crisis of some sort, be it economic, political, national or international (see Figure 4).

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Figure 4
Trend as Importer

Source: Own elaboration.

Regions which exhibit an improving trade balance and whose importance as interregional demand sources is increasing imply the need to analyze whether local suppliers can diversify into the demand segment held by the exporter interested in that market. Statistics for exports common to all regions are limited down to the six digit level of the Harmonized System. So if conducting a more detailed import demand analysis is required, the eight, or ten digit import ranges of the Harmonized System can be used. These levels of disaggregation offer two disadvantages that need to be considered:

· They are region specific and thus no comparisons among regions can be made.
· There is no equivalent detailed information for exports, to which comparisons can be made.

A suggested solution is to use a modification of the Boston Consulting Group's decision matrix. Though originally designed for stock market and business mix deci-

sions, it can also be useful when analyzing demand. The idea is to avoid offering a product variety that has a low and diminishing market share; ideally firms should offer products that have high and growing market share or novelty products (that have small but swiftly growing market share). If what is being analyzed is the position of a region or a firm as a provider of a specific product, it must avoid being a small supplier with diminishing market share. Suppliers should aim at having a high and growing market share (Figure 5).

Figure 5
Import Market Positions

Source: Own elaboration.

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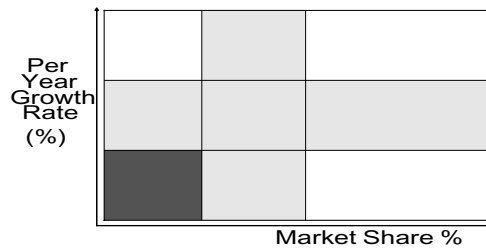
The area to be avoided is shadowed in dark. And a cross of average growth rate (the import demand growth rate), and average non-local supplier market share is shaded in medium grey. Other areas are non-shadowed. This average behaviour cross divides the graph in to the four classic areas of "dog", "cow", "child" and "star" positions.[3]

Conclusions

A research framework (defined as a local research focus) needs to be developed to assist in this strategic competitiveness approach from problem identification to creative solution and then planned implementation. This article provides an attempt at such a research framework that can be used as the basis for research grants, research inquiries and consultancy requests from local communities. There has been a body of research that has formulated a series of theoretical concepts used effectively in the understanding of local differences in competitiveness. These concepts can now be used to develop processes required for a local competitiveness plan.

Competitiveness is based on the productivity of the available production factors, and on the capacity to assign those factors to-

wards those activities in which they obtain the greater levels of productivity. The greater the productivity of the factors, the greater is the capacity to orient them towards their greater productivity, and thus the greater will be the competitiveness that can be obtained from them. The productivity of the production factors in relation to those obtained in other regions is the main determinant of international competitiveness, and therefore their participation in the international market, as well as the direction and composition of their foreign trade. Therefore, the human capital, the technology and the schemes of organization definitely contribute to determining the international position of the regions.

Local or regional trade will essentially take place between regions or localities with similar income distributions, and it is often described as the intra-industrial type when it is based on product exchanges in consumption and/or production. The validity of this hypothesis is sustained by the fact that more than one half of the regional commerce occurs among developed regions —that is, with similar income levels and distributions— and that more than half of it involves goods substitutes; more than fifty percent of international trade can be considered as intra-industrial.

Therefore, we can conclude that local and regional competitiveness can be translated into the capacity of a company, industry or industrial district to preserve or increase its market share in those goods or services whose importance in the regional commerce, consumption and added value is growing, and it hopes that it continues doing so in the

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[3] A "dog" position is that of low share and low growth and should be avoided. It implies the need to leave, redefine or revalorize business. A "cow" position is that of high but declining market share and implies the need to revalorize or modernize business. A "star" position is that of high and growing market share and is normally occupied by market leaders. A "child" position is that of low and increasing market share and is normally related to newcomers or new product varieties.

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future. For that reason, competitiveness applied to the local and regional scenario is based on the productivity of the available production factors, and on their capacity related to those activities in which greater levels of productivity are obtained.

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