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**ENDOGENOUS DEVELOPMENT, THEORY AND PRACTICE:
INTERVENTIONS IN THE RURAL AREAS OF RIO DE JANEIRO, BRAZIL**

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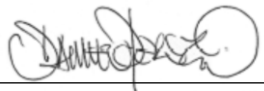
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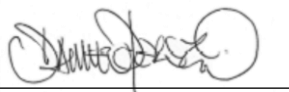
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*To Marta, responsible for every optimistic thought,
my inspiration and my best excuse to be a better man.*

To Abraham, my eternal brother.

*To Frinné, sample of feminine virtues.
My companion and the kindest soul I've ever known.*

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ABSTRACT

Development is a multidimensional conception where most of human efforts converge: advances in economic systems, evolution of societal models and technological innovations are closely linked to the achievement of goals towards welfare and progress. The evolution of development theory has crossed through the proposals of modernization, dependence, world systems and globalization theories. Nonetheless, the repercussion of economic activities, population growth and an improper management of resources have led to the rise of environmental issues and their implications in societies, bringing to discussion conceptions within the sustainability framework and making necessary a revision of the human perspective of this process, considering that the physical welfare and spiritual growth of the human being should always be the final purpose of development. In this sense, Endogenous Development (ED) is a proposal applied in local contexts based on the strengthening of social capital, the use of local resources in the attention of difficulties, the rescue of the local culture and the approximation of communities towards capital accumulation trends, in front of globalization homogenizing effects. This work addresses the reality of Italva, a municipality within the state of Rio de Janeiro, Brazil; and its main aim is to analyze theoretical proposals about ED and its situation with respect to the empirical scenario. With this, the objective is to know about the feasibility of ED strategies in Italva and to define punctually the action of external projects like INTECRAL as a driver of changes through the employment of Political, Economic, Social and Technological (PEST) factors. The collection of data took place through direct observation and also through the conduction of interviews to producers and local actors with an active participation in development processes. Additionally, an analysis PEST was conducted in order to identify opportunities and threats for the local context. As a result, elements related to Economic Geography principles and the interaction of centripetal and centrifugal forces within the territorial dynamics were found as the main barriers for the success of ED plans: a high level of dependence of the system with respect to the external context and the existence of leaks that impede any attempt of capital accumulation, making the application of ED strategies an impossible task, as long as conditions as the ones found in Italva are not addressed or remain throughout the time.

Key words: *Endogenous Development, local development, social capital, capital accumulation, dependence, leaks.*

RESUMEN

El desarrollo es un concepto multidimensional donde la mayoría de los esfuerzos humanos converge: el avance de los sistemas económicos de producción, la evolución de modelos sociales y las innovaciones tecnológicas están íntimamente relacionadas con las metas hacia la consecución del bienestar y el progreso. La evolución de la teoría del desarrollo ha tenido lugar gracias a las contribuciones recibidas por las propuestas de la modernización, de la dependencia, de los sistemas mundiales y la teoría de la globalización. No obstante, las implicaciones de las actividades económicas, el crecimiento de la población y un manejo inadecuado de los recursos ha llevado al surgimiento de problemas ambientales y sus impactos en las sociedades, trayendo a discusión concepciones dentro del marco de la sustentabilidad y haciendo necesaria una revisión de la perspectiva humana de este proceso, considerando que el bienestar físico y el crecimiento espiritual del ser humano debería ser siempre el fin último del desarrollo. En este sentido, el Desarrollo Endógeno (ED) es una propuesta aplicada en contextos locales, basada en el fortalecimiento del capital social y los mecanismos de participación, el uso de recursos locales en la atención de los problemas, el rescate de la cultura local y en la aproximación de las comunidades hacia tendencias de acumulación de capital, frente a los efectos homogeneizantes de la globalización. El presente trabajo aborda la realidad de Italva, un municipio del estado de Río de Janeiro, en Brasil y su principal propósito es analizar las propuestas teóricas del Desarrollo Endógeno y su situación con respecto al escenario empírico. Con esto, el objetivo es conocer la factibilidad de implementar estrategias cónsonas con este modelo de desarrollo en Italva y definir puntualmente las acciones que un proyecto como INTECRAL puede desarrollar en la región, como fuerza conductora de cambios a través del uso de factores Políticos, Económicos Sociales y Tecnológicos (PEST). La recolección de los datos tuvo lugar a través de métodos de observación directa y la conducción de entrevistas hacia productores y actores vinculados a los procesos locales de desarrollo. Además, un análisis PEST fue conducido como forma de identificar oportunidades y amenazas para el contexto local. Como resultado, elementos relacionados a los principios de la Geografía Económica y la interacción de fuerzas centrípetas y centrífugas dentro de la dinámica territorial fueron halladas como las principales barreras para el éxito de planes de Desarrollo Endógeno: un alto nivel de dependencia del sistema con respecto al contexto externo y la existencia de fugas que impiden cualquier intento de acumulación de capital, haciendo que la aplicación de estrategias de Desarrollo Endógeno sea una tarea imposible, en tanto condiciones como las encontradas en Italva no sean atendidas o se mantengan a través del tiempo.

Palabras clave: *Desarrollo Endógeno, desarrollo local, capital social, acumulación de capital, dependencia, fugas.*

ZUSAMMENFASSUNG

Entwicklung ist ein mehrdimensionales Konzept, bei dem die meisten menschlichen Bemühungen konvergieren: Fortschritte von Wirtschaftssystemen, die Entwicklung von Gesellschaftsmodellen und technologische Innovationen sind eng mit der Erreichung von Wohlstand und Fortschritt verbunden. Die Evolution der Entwicklungstheorie hat die Vorschläge der Modernisierung, die Abhängigkeit, die Weltsysteme und die Globalisierungstheorien gekreuzt. In Folge von wirtschaftlichen Aktivitäten, dem Bevölkerungswachstum und einer unsachgemäßen Bewirtschaftung der Ressourcen kommt es zu einem Anstieg von Umweltproblemen und deren Auswirkung auf die Gesellschaft. Dadurch wurden Diskussionen über Nachhaltigkeit entfacht und eine Veränderung der menschlichen Sichtweise auf diese Prozesse, da das physische Wohlbefinden und das geistige Wachstum der Gesellschaft immer das eigentliche Ziel von Entwicklung sein sollte. Die Endogene Entwicklung (ED) ist ein Vorschlag der in lokalen Kontexten angewandt wird und, hinsichtlich Vereinheitlichungseffekten der Globalisierung, unter anderem auf Stärkung des Sozialkapitals, Nutzung lokaler Ressourcen und Angleichung von Gemeinden in Richtung Kapitalakkumulation, basiert. Die vorliegende Arbeit befasst sich mit Italva, einer Gemeinde im Staat Rio de Janeiro, Brasilien. Das Ziel ist die Ausarbeitung eines Vergleichs von theoretischen Vorschlägen über ED mit Bezug auf empirische Szenarien. Die Zielsetzungen ist somit eine Analyse der Durchführbarkeit von ED-Strategien in Italva, sowie das punktuelle Handeln von externen Projekten wie INTECRAL als Treiber von Veränderungen durch den Einsatz von politischen, wirtschaftlichen, sozialen und technologischen (PEST) Faktoren, zu definieren. Die Erhebung der Daten erfolgte durch Beobachtung und die Durchführung von Interviews von Erzeugern und lokalen Akteuren die aktiv an Entwicklungsprozessen teilnehmen. Außerdem wurde eine Analyse von PEST durchgeführt, um Chancen und Risiken für den lokalen Kontext zu identifizieren. Das Ergebnis ist die Identifikation von Haupthindernissen für den Erfolg von ED, welche mit den Prinzipien der Wirtschaftsgeographie und dem Zusammenspiel von zentripetalen und zentrifugalen Kräften innerhalb der territorialen Dynamik zusammenhängen. Die Untersuchungen der vorliegenden Arbeit zeigten, dass ohne eine Veränderung der Ausgangsbedingungen in Italva die Anwendung von ED-Strategien unmöglich ist, da die hohe Abhängigkeit des Systems vom externen Kontext und die Existenz von Schwachstellen jeden Versuch der Kapitalakkumulation verhindert.

Schlüsselwörter: *Endogene Entwicklung, lokal Entwicklung, Sozialkapital, Kapitalakkumulation, Abhängigkeit, Schwachstellen.*

RESUMO

O desenvolvimento é um conceito multidimensional, onde a maioria dos empreendimentos humanos convergem: o avanço dos sistemas de produção econômica, o desenvolvimento de modelos sociais e inovações tecnológicas estão intimamente relacionadas com a realização dos objetivos de bem-estar e progresso. A evolução da teoria do desenvolvimento tem ocorrido com as contribuições recebidas pelas propostas de modernização, dependência, a teoria dos sistemas mundiais e globalização. No entanto, as implicações das atividades econômicas, crescimento populacional e uma má gestão dos recursos tem levado ao surgimento de problemas ambientais e seu impacto na sociedade, trazendo a discussão concepções no âmbito da sustentabilidade e necessitando revisão da perspectiva humana desse processo, considerando que o bem-estar físico e o crescimento espiritual do ser humano deve ser sempre o objetivo final do desenvolvimento. Neste sentido, o desenvolvimento endógeno (ED) é uma proposta aplicada em contextos locais, com base no fortalecimento do capital social e mecanismos de participação social, a utilização de recursos locais na resolução dos problemas, o resgate da cultura local e a aproximação das comunidades na adoção de tendências de acumulação de capital, contra os efeitos homogeneizadores da globalização. Este trabalho aborda a realidade da Italva, município do Rio de Janeiro, Brasil; e seu principal objetivo é analisar as propostas teóricas sobre ED e sua situação respeito ao cenário empírico. Com isso, o objetivo é saber sobre a viabilidade das estratégias de ED em Italva e definir pontualmente a ação de projetos externos como INTECRAL como motorista de mudanças através da utilização de fatores políticos, econômicos, sociais e tecnológicos (PEST). A coleta de dados ocorreu por meio de métodos de observação direta e entrevistas aos produtores e atores ligados a processos de desenvolvimento local. Além disso, uma análise PEST foi conduzido como uma maneira de identificar oportunidades e ameaças para o contexto local. Como resultado, elementos relacionados com os princípios da Geografia Econômica e a interação de forças centrípetas e centrífugas dentro das dinâmicas territoriais foram encontradas como as principais barreiras para o sucesso de planos de desenvolvimento endógeno: um elevado nível de dependência do sistema com relação ao ambiente externo e a presença de fugas que impedem qualquer tentativa de acumulação de capital; tornando a implementação de estratégias para o desenvolvimento endógeno numa tarefa impossível, enquanto as condições como aquelas encontradas em Italva não sejam atendidas ou mantenham-se no tempo.

Palavras-chave: *desenvolvimento endógeno, desenvolvimento local, capital social, acumulação de capital, dependência, fugas.*

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Acronyms and abbreviations

- \$R:** Brazilian reais (Brazilian currency)
- CENTERJ:** *Centro de Treinamento de EMATER-RIO*
EMATER-RIO Training Center
- CMEPSP:** Commission on the Measurement of Economic Performance and Social Progress
- COGEM:** *Comitês Gestores das Microbacias Hidrográficas*
Hydrographic Microbasins Management Committees
- ECLAC:** Economic Commission for Latin America and the Caribbean
- ED:** Endogenous Development
- EEUU:** United States of America
- EMATER:** *Empresa de Assistência Técnica e Extensão Rural*
Technical Assistance and Extension Enterprise
- EMBRAPA:** *Empresa Brasileira de Pesquisa Agropecuária*
Brazilian Agricultural Research Corporation
- EU:** European Union
- FAO:** Food and Agriculture Organization of the United Nations
- GDP:** Gross Domestic Product
- HDI:** Human Development Index
- IBGE:** *Instituto Brasileiro de Geografia e Estatística*
Brazilian Institute of Geography and Statistics
- INTECRAL:** Integrated Ecotechnologies and Services for a Sustainable Rural Rio
- IPCC:** Intergovernmental Panel on Climate Change
- LA:** Latin America
- m.a.s.l.:** Meters above sea level
- MIT:** Massachusetts Institute of Technology
- PAIS:** *Produção Agroecológica Integrada e Sustentável*
Integrated and Sustainable Agroecological Production
- PES:** Payment for Ecosystem Services
- PMI:** *Prefeitura do Município Italva*
Mayoralty of Italva
- RJ:** Rio de Janeiro
- SD:** Sustainable Development
- SPR:** *Sociedades de Producción Rural*
Rural Production Societies
- UN:** United Nations
- UNDP:** United Nations Development Programme
- US:** United States of America
- US \$:** Dollars of the United States of America
- USSR:** Union of Soviet Socialist Republics
- WB:** Weather Base.

I. Problem statement and Objectives

1.1 Problem statement

As is already well known, today we live in an urban world: population at the global scale nowadays lives more in cities than in rural areas (UN, 2014; p. 1). However, rural areas play a key role within the development schemes through the disposition of raw materials and the production of basic goods and services demanded by markets. For centuries, development models have been structured over conditions where most cities are supplied with food and minerals brought from agricultural and mining areas. In the same way, this dynamics has generated pressures over the environment in terms of resources, since as mentioned, urban population has been steadily rising.

The size of the variation is such, that the rural space in continents is decreasing and urbanization rates are certainly transforming landscapes in many countries, due the dramatic increase of urban population. According to the Population Division of the United Nations (2014, p. 7) the world's urban population passed from 746 million in 1950 (30% out of the total) to 3.9 billion in 2014 (54%). Additionally, it is expected that by 2050, 66% of the people live in urban areas globally.

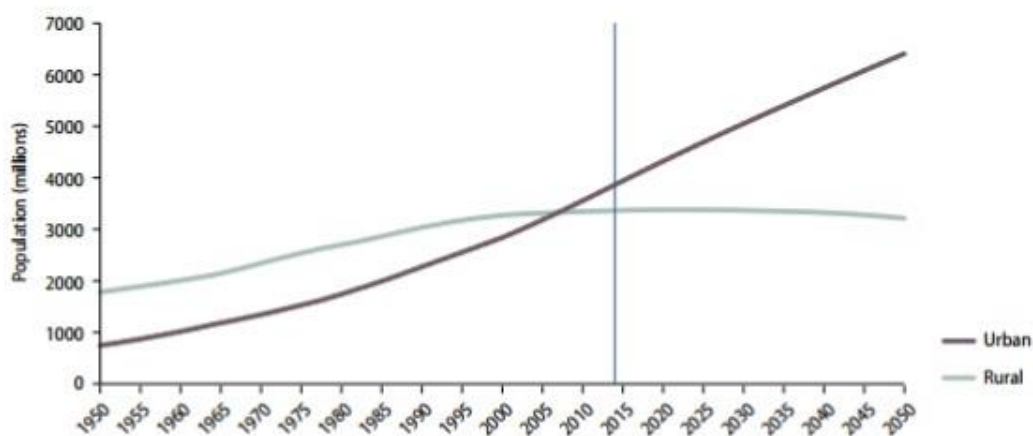


Figure 1. Urban and rural population of the world 1950-2050. UN, 2014.

In this sense, the quantity of resources required to generate enough goods and services to satisfy urban life's standards, put at risk the environmental security in different zones of the planet, at the time that creates problems such as the ones related to the necessity of mass production of food (transgenic products, loss of native species, land use change and soil degradation) and energy (biofuels such as ethanol) which also impacts the behavior of markets by affecting the demand and subsequently the price standards of agricultural products being also considered as a potential factor in the generation of poverty (Arndt, Benfica, Maximiano, Nucifora & Thurlow, 2008, p. 498; Rutz & Jansen, 2014, p. 81; Sexton, Rajagopal, Hochman, Zilberman & Roland-Host, 2009, p. 194).

Furthermore, when it comes to evaluate welfare situation in the inland within productive areas especially in developing countries; the findings point out that the life level of the population is generally low. The needs can be found in any dimension of human development: education rates are not good enough, health services are precarious and exposition to illnesses is normally high, living conditions in some cases can get to be miserable, infrastructure in most cases is poor and services in general are underprovided (Josodipoero, 2003; p. 67). In front of such a scenario, youth tends to emigrate, leaving their lands in search of employment options and as a way to find better life conditions. Considering this situation, it becomes necessary to structure rural development plans that make use of instruments such as economic planning, spatial planning and sustainable environmental management, to carry out relevant projects towards the improvement of rural areas.

Nonetheless, development processes as they are known today, do not include any of this within the formulation of their strategies; on the contrary, development is a matter that for years has implied the destruction of ecosystems worldwide and for this reason has been considered as an antagonist element before nature conservation efforts.

1.1.1 The paradigms of development

The complexity of development as a concept, implicates the analysis of all the processes and dimensions involved in it. From a first perspective, one might say development suppose an economic advance and an improvement of life conditions. At the same time, it includes cultural affairs, socio political circumstances and the environmental state of a determined context (Bellù, 2011; p. 2). In consequence, it's a multidimensional conception with the participation of different actors.

The paradigms that development faces are different in the sense that they can be interpreted in specific ways: from the human, economic, territorial or social perspective. Despite of this, they're eminently oriented on the matter of how would be possible to carry out the improvement of the quality life of human beings without exceeding the capacity of the context where it takes place, that is to say, how would be likely to convert development in a *sustainable* process through the time (Bellù, 2011; p. 3).

In this respect, it becomes necessary to go deep on the origins of development and its theories: beginning from the ideas of Schumpeter¹ on the evolution of economic systems which derived into the modernization theory, continuing later on with the raise of dependence theory, to end up with the constitution of world systems and the born of globalization in a scheme tending to uniform the organization of production, giving origin to alternative ideas such as SD or ED models (Reyes, 2002; p. 2-17)².

In this sense, is valid to point out that the conception of development emerged to take part in Economics studies once the II World War came to an end, as an ideal moment to reformulate global future in the years to come. From that point, the discussion about the intervention of the State in the economy was totally rejected by classical economists³.

Despite this fact, time brought to the surface more inconsistencies of capitalism as a production model, showing that the impact of the economic processes within social systems were more than detrimental, by excluding a big sector of the society through unemployment and poverty, by creating inequalities by itself and by leaving an environmental debt of consequences that gets out of sight.

Within the analysis of these effects, there has been broad discussion about the study of deadlines of production, with the rise of questions about the capacity of the system to stand the production and consumption trends in the future. That being so, in 1972 there was a big upheaval in the global awareness in reference to the existence of these limits after the publication of the Club of Rome's Report,

¹ In 1911, Schumpeter proposed the existence of agents who produced the evolution of economic systems through the introduction of innovations, in his work titled: *The Theory of Economic Development: an Inquiry into Profits, Capital, Credit, Interest and the Business Cycle*.

² An analysis of this point is provided in Chapter II, where the most important development theories are explained as antecedents of its current conceptualization.

³ Nevertheless, J.M. Keynes saved capitalism after the big depression of 1929, by suggesting the introduction of public expense in the Aggregate Demand formulation in *The General Theory of Employment, Interest and Money*, published in 1936.

where the possible consequences of growth were shown for the first time⁴. Years later, the projections were reviewed and brought more insight to the sustainability debate (Rodríguez, 2011; p. 99).

Therefore, all this knowledge brings the necessity to elaborate plans based on a *normative* perspective in order to allocate resources and their most important founts and protect them under policies made up by the humankind itself, such as legal instruments. On the other hand, *positive* perspective shows that these natural sources, eventually located in rural areas are being misused and depleted, in very counterproductive development schemes, under no concept of territorial planning or sustainable way of living; following extractive methods under exogenous patterns.

As an example of this, rural areas of Latin America are characterized by low population density, by serving as a productive barn for large urban centers and by the lack of social services (Virgil, 2010; p. 10). This situation seems to have a similar pattern, as it becomes recurring in different countries of the hemisphere.

For Schejtman & Ramírez (2004, in Cárcamo, 2009; p. 46) inequality and poverty are characteristics of Latin American countries and poverty has been around a 45% of the population for more than ten years and indigence around 20% in cities, being of 64% and 39% respectively for rural areas, at the time that Cárcamo (2009; p. 47) concludes that the most important message of these facts are the rise of poverty rates, the inefficiency of rural development programs to overcome this reality and the aggravation of environmental problems generated by these issues at the global scale.

Revising the current situation of the rural area of Rio de Janeiro, in Brazil, one may be able to distinguish certain circumstances affecting the lives of its inhabitants, which coincides with the profile of most Latin American inland areas. The North and Northwest zones of the state of Rio de Janeiro are characterized by holding the highest levels of agricultural production, family farming and rural poverty. Additionally, young people have been migrating to the cities in search of better employment opportunities, causing a gradual reduction of the rural workforce (Schlüter & Torrico, 2012).

⁴ *The Limits to Growth* (1972) received criticisms from economists around the world, despite revisions made in *Beyond the Limits* (1993) and *Limits to Growth: The 30-Year Update* (2004) confirmed many of the predictions stated. Also, this publication was compared for independent scientists 5, 15, 35 and 40 years after its publication and all of them confirmed at least one of the scenarios formulated.

In front of such a scenario, options for a new rural order could only reside in the establishment of flexible development models, able to adapt to the situation of a particular context and considering its own potentials within the local frame as resources to find ways to fight internal problematics.

1.1.2 Evidences of the human action within the global environmental change debate

Moreover the poverty and scarcity scenarios where the possibilities of improvement are reduced, climate effects in the rural zones of RJ also affect the organization of sustainable production systems and restrict the implementation of rural improvement projects. The area under study, for instance, is especially known by its high temperatures and the low levels of precipitation registered the last year in the rainy season, for which reason measures to face drought effects are being applied today (Rural Rio Project, 2015).

Beyond the discussion of the level of responsibility that human acts have for the alteration of biogeochemical cycles in ecosystems or if current changes correspond to the occurrence of natural stages within the planet's dynamics, it is essential to recognize the presence of historical deviations in geophysical variables at the global scale, either as a natural or more as a human-conducted process. In any case, is evident that Anthropocene coincides with the rise of a long list of environmental problematics and the evolution of human activities has let plenty of footprints and side effects (Steffen, Crutzel & McNeill, 2007; p. 620). Therefore, the Earth system can be defined as “an integrated, self-regulating system under increasing pressure from anthropogenic transformation” (Ignaciuk *et al.*, 2012; p. 1).

In addition to the failure of the economic system to cover in a proper way all human needs with justice; the adoption of massive production prototypes and market economy models for most countries of the world as a successful example to follow, has implied the allocation of raw materials everywhere in the world, the assignation of an artificial value to food and traditional products, the depletion of resources, the pollution of natural spaces, and in general a high cost to ecosystems (Fuks, 2001; p. 52).

As a consequence, the advance of environmental damage has led to the establishment of protected areas, legally constituted by countries with special attention to the protection of particular ecosystems (FAO, 2010; p. 6). In the same way, there were determined the existence of areas in danger in the world, due to

their peculiar richness in endemic vegetation and fauna species, which have been threatened for the action of wrong policies regarding to management and resources use: these areas are known as the 25 world hotspots of biodiversity. Even though their value and vulnerability have been demonstrated and are recognized globally, extinction processes still take place in these zones (Brooks *et al.*, 2002; p. 911).

Conclusions of IPCC stand out climate change as one of the most important threats the planet Earth will face during the 21st century (IPCC, 2014; p. 10). This organization also remarks the tendency of global changes, such as the mean sea level rise, average surface temperature and precipitation, erosion, solar radiation and the consequent acceleration of aggregate economic losses. Additionally, it is mentioned that resources unavailability and shortages will lead to the appearance of hotspots of hunger in the planet (p. 16).

In addition to the IPCC statements regarding to the changes to come, there is fundamental emphasis in pointing out the participation of human action in the noticeable alteration of values in the atmosphere composition:

“Anthropogenic greenhouse gas emissions have increased since the pre-industrial era, driven largely by economic and population growth, and are now higher than ever. This has led to atmospheric concentrations of carbon dioxide, methane and nitrous oxide that are unprecedented in at least the last 800,000 years. Their effects, together with those of other anthropogenic drivers, have been detected throughout the climate system and are *extremely likely* to have been the dominant cause of the observed warming since the mid-20th century” (IPCC, 2014; p. 4).

In the same way, there is scientific evidence which demonstrate the dramatic increase of CO₂ levels with the coming of the industrial era and the subsequent advances in transportation, energy generation and technological advances which have supported massive production.

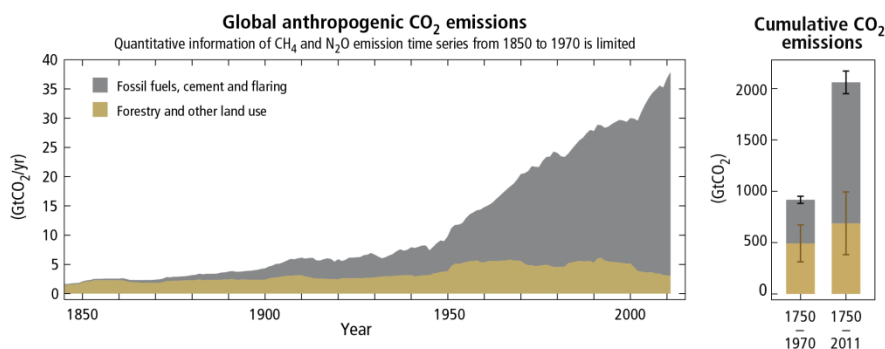


Figure 2. CO₂ emissions from 1750 until 2011. The remarkable increase from 1950 onwards is evident. IPCC, 2014.

In this regard, the impacts on rural spaces generate an effect on production structures located in the inland. According to the appreciations of this institution, “rural areas are expected to experience major impacts on water availability and supply, food security, infrastructure and agricultural income, including shifts in the production areas of food and non-food crops around the world” (p. 16). Respecting to this position, when analyzing the situation of the rural lands addressed in the present study located in RJ, it becomes clear that they have been object of transformation, with changes in the landscape and environmental conditions given to the deforestation, drought and erosion influences.

Taking into consideration evaluations of the degradation progress throughout the time in the zone, is possible to notice the reproduction of activities linked to a strong urbanization and its corresponding consequences: “The most important degradation factors in RJ include the expansion of the road network, suburbanization processes, and agricultural intensification, which have been leading to landscape and forest fragmentation, habitat losses, and enhanced erosion processes” (Nehren, Kirchner, Sattler, Turetta & Heinrich, 2013; p. 509).

Hence, it is demonstrated that current production methods find themselves null and void, without any possibility of success within a considerable short time scale and will have to be replaced in the following years, whatever the actors and governments consider today. In any case, the most important work would be not to replace them on time. In words of Bellù, (2011), new ways of development must come out by affirming that:

“In an ever changing context, where emerging issues raise questions for the development community on the way development processes have been and are being designed and supported, it is important to critically assess prevailing visions about development and adapt them, or even adopt alternative, more suitable approaches” (p. 1).

In this vein, the theoretical basis of ED comes from the discussion about the necessity of innovative proposals on the reformulation of development as a dynamic, multivariable and multidimensional process, intimately linked to human activities and the relations of these with nature, implying the economic principles of rationality and productivity in the management of resources as the core points, above the promotion of massive production perspectives, based on the hoarding of unstable money flows.

1.1.3 A change for the better: challenges at the local scale

With the revelation of the implications of current developing models for the environment and the future problems that they represent for production in the long term, communities of the world have realized about the importance of their participation in the formulation of alternative mechanisms and new practices towards socioeconomic improvements in front of globalizing processes.

Partridge and Olfert (2011, p. 25) propose a set of guidelines in order to design a successful regional development strategy, including a fair provision of efficient government services and regulations; high levels of expertise and quality of human capital; support for entrepreneurship, investment and innovation; recognition of externalities due to participation or not of the private sector and the implementation of sustainable regional policies regarding the use and management of resources and waste.

In summary, economic strategies to promote the sustainability of a region can't become made without knowing the reality of the context to address. Therefore, there is not a manual or a guide that rigidly dictates the guidelines required to achieve sustainability. On the contrary, there are much broader mechanisms and fully customizable criteria to serve as a pattern for the approach of actions towards a viable management, according to the potentialities and limitations of the population and the space under study.

With this in mind, then is clear that the aim of territorial arrangement must be then the adaptation of the population and wealth production in a determined space, within a progress and development perspective. For Montes Lira (2001), economic and social components have a central relevance in the organization of the territory:

“(...) an approximation to the concept of environmental arrangement of the territory for Latin America and the Caribbean, is set as a process of organization of the land in its social and economic aspects, allowing the incorporation of more endogenous elements in agreed terms and that makes compatible the so-called environmental values of the territory, social aspirations and the maintenance of growing productivity levels in economic activities” (p. 13)⁵.

⁵ Textual citation, under translation from Spanish made by the researcher.

In the particular reality of the case under study, planning policies haven't had big impacts in the organization of the territory, considering that even at the national scale population in Brazil is settled mostly in the south of the country (IBGE, 2014). However, there have been already initiatives to promote rural development in the region of RJ, which show a high potential to carry out proposals to strengthen opportunities for the population and contribute to the empowerment of rural services and the coverage of basic needs.

As an example of this, the INTECRAL Project (*Integrated Ecotechnologies and Services for a Sustainable Rural Rio*) has been developed with the participation of German and Brazilian institutions, within the framework of the Rural Rio Project, managed by the World Bank⁶.

In this project, there are proposals such as community investments in prevention of soils erosion, water treatment, building infrastructure for environmental restoration and the creation of conditions for sustainable development of rural areas with the support of ecosystem services. Some of the capabilities that are to be established in the region are competitiveness of the families in the administration of the economic benefits of farming from a sustainable approach, resource protection against commitments involving environmental change and the adaptation and use of German technologies in monitoring the status of water and vegetation (Schlüter & Torrico, 2012; p. 23).

As a matter of fact, the application of convenient development plans within these areas is looming as one of the opportunities for a positive change, taking into account the implementation of projects and investments from recent years. Thus, the aim of this research is to analyze the possibility to implement sustainable measures towards rural development within an ED framework. To do this, it will be necessary to know the theoretical roots of development starting from the first conceptions established in the academic field and their evolution among the different stages of the last century, until getting to know the foundations of ED.

The Fluminense Northwest region where the municipality of Italva is located, is particularly affected by the absence of a pertinent territorial planning that considers risk management, the lack of tools for environmental monitoring, the need of the creation of social participation mechanisms for environmental management, new agricultural technologies, water recovery oriented to agricultural

⁶ The Rio Rural Project is being executed since 2005 through the *Sustainable Rural Development Program in Micro-Watersheds* and is planned to be applied until 2018. Further details can be found in Chapter III, in the description of the case study and experiences with the execution of rural development projects.

and domestic use, restoration of degraded areas, the establishment of alternative markets and the supplying of the required environmental services for a sustainable and effective agricultural development (Schlüter & Torrico, 2012; p. 18). In this sense, the new economic relations must be embedded in an innovative production model and related to alternative forms of management of agriculture and the generation of goods and services.

In a general way, a first image reveals that the most important issues of Italva nowadays are:

- The rise of unemployment and therefore poverty rates.
- The degradation of soils as a result of extensive methods of livestock production.
- The presence of environmental effects due to climate variability effects at the local scale and their impacts on production: scarcity of water, decline of productivity and death of animals.
- The dependence of the local economy on a single activity (milk production).
- The reduced possibilities of producers to upgrade the local market.

So, in order to cover part of the needs of new and improved market structures, alternative economic relations and a new production scheme in general, the implementation of a set of strategies from the ED perspective that link the needs of the region with its potentialities becomes necessary within a sustainable environmental framework. To do this, the new productive order should be based on a specific economic model, which must necessarily emerge from the knowledge of current issues, so that no measures stumble again with inconvenient situations already known.

In this sense, the context of the municipality of Italva, located in the state of Rio de Janeiro will be described, from a characterization process based on research and data collection. In a third stage, the work will consist in the identification of deficits and opportunities to provide to INTECRAL new schemes of action using the potentialities of the area in order to address their own problems.

Finally, the suitability of ED strategies suggested to be applied within the context studied will be evaluated and situations that determine the course of actions will be identified and remarked, so as the ones that represent the most important hitches.

1.2 Research questions

In order to find out the level of suitability of ED in the context of RJ and analyze the possibility to implement new methodologies towards innovative ways of development, the following questions were set:

- Which is the theoretical basis of ED and how is it possible to recognize its determinant factors in the rural context?
- Which are the significant strengths and lacks of these factors at the internal and external scale?
- How could INTECRAL work on disadvantages and improve the effectiveness of its actions in the rural areas of RJ?
- After the analysis, would be possible to bring ED into practice in the context addressed?

1.3 Objectives

1.3.1 General objective

Analyze Endogenous Development as a theoretical basis employed in the practice of interventions in the rural context, taking as case study the municipality of Italva RJ, Brazil.

1.3.2 Specific objectives

- From the theoretical basis, define endogenous development and the key factors that determine its dynamics.
- Make a characterization of the area under study, through the provision of punctual information.
- Identify deficits and potentialities of key factors considered at the internal and external scale through theoretical, analytical and empirical research.
- Analyze the capacity of INTECRAL to take advantage of the opportunities of the region and attack the lacks present in the area.
- Determine the suitability of the ED practices within the context of Italva, RJ with reference to the characteristics of the case under study.

II. State of the art

The different conceptions about progress are the starting point of a big academic discussion about development. In this sense, economists from different schools have often shown concerned about the clearness of development as a concept and have thus opted to explore growth (Van der Ploeg & Long, 1994; p. 184). Moreover, development is understood from several perspectives as a set of actions to carry out changes with the intention of improving (Mata, 2002 in Cárcamo, 2009; p. 51). From this perspective, it would be possible to notice the development of a country when it has reached certain levels of economic capacity, political freedom and social welfare.

In the same way, development applied in rural areas has been described as a process going uphill. In words of Abourezk, (1973 in Virgil, 2010; p. 3) rural context is the site that has been displaced, left behind; a place that has been victim of strangulation by the political, social and economic neglect of current societies. This author takes into consideration low population density and the extractive nature of the economy or even the scarcity of resources and opportunities as some of the distinctive elements of the countryside. In any case, when it comes to know the state of development in the rural context normally the literature refers to the lack of investment, care, social services and infrastructure as highlighting needs.

Meanwhile, rural development is understood as a process of socio-economic transformation that tends to improve the welfare of the rural population through the use of technological tools and the provision of social services (FUNDEP, 2002 in Cárcamo, 2009; p. 51). So, it is crucial to know where is it possible to establish the point at which certain region has reached economically acceptable and environmentally bearable development levels.

For Terry and Terry (2001, p. 3) in the field of development there is no longer discussion about a linear economic conception; because the social, economic, political and cultural factors are inextricably linked. Additionally, the authors show the debate between the introduction of development and the obstacles that represent the cultural components, as in turn, modernization threatens the cultural and environmental heritage of the undeveloped regions.

In this vein, what would be necessary to define within the rural context is the productivity and welfare criteria which reaches to promote an integral life, allowing

full human development and the improvement of the capacities of its inhabitants, within a framework that grant to the natural spaces the chance to recover from cycles of resources exploitation at the time that the cultural field remain essentially without being totally displaced or replaced by new forms of social configuration and economic practices.

Precisely, economic practices are a form of social organization; an agreement between those who hold and require goods and services. Therefore, economic practices will determine the use of resources, the social structure and consequently, environmental implications. For this reason, it is important to define strategies, plans or economic projects in order to make an appropriate use of available inputs, from a time-space perspective.

Having mentioned this, it is valid to point out that Endogenous Development appears at the end of the discussion thread in the recent years, as an idea based on local peoples' own criteria for change and their vision for well-being based on the material, social and spiritual aspects of their livelihoods but in a constant and dynamic interface with external actors and the world around them. The key distinction of the concept is based on the character of endogenous of the benefits obtained; instead of proceeding with a model based on exploitation and extraction of resources, leaving rural areas every time more impoverished.

The content of this chapter is oriented to expound on the origin of development as a historical proposal within societies, in order to improve essentially economic and social conditions by the analysis of the different theories around its conception; the revision of the humanist perspective of the concept; giving a chronological ride until to get to explain the factors and actors mentioned by literature normally involved in ED processes, ending up with the description of some experiences in the matter.

2.1 Development theories

From the end of the World War II, the need to rebuild the infrastructure lost in the course of the armed conflicts and to recover life conditions of the population and economies of the countries affected brought to the global scene the conception of development; a theoretical building of improvement explained in terms of different dimensions. These facts represented an enormous advantage for the rise of economies benefited from the reconstruction of Europe, like the United States through the implementation of the Marshall Plan and the opportunities that impacted the dynamism of Taiwan, South Korea and Japan. Also, these years were

witness of the dissemination of a united communist movement around the globe (Reyes, 2002; p. 2)⁷.

By this time, other processes were also taking place in the world, such as the emergence of independence movements in colonies of Asia and Africa; and the pronouncement of several countries in Latin America demanding to follow self-guided political management which afterwards gave space for the construction of a global political figure known years later as the Third World (Gutiérrez, 2007; p. 45)⁸.

From the beginning, development theories were oriented to analyze changes in economic structures and the factors that resulted as obstacles in the conclusion of positive and desirable changes in disadvantaged societies, bringing up questions regarding the existence of differences in the life level, growth and capital conditions between countries and regions at the global scale, and how would be possible to face them.

These questions were explained in different ways and in different moments of history through the establishment of theories about the conceptualization of development, given that as Vázquez Barquero (2007, p. 85) points out, the vision about development “evolves and transforms itself in the extent that society does, in the extent that countries, regions and cities have to give solutions to new problems, in the extent that innovation and knowledge are disseminated through economic and social organizations”.

To this respect, Schumpeter pointed out in 1911 his belief in the existence of a circular flow of economic life, conditioned by certain circumstances in a given context; making a distinction between exogenous and endogenous factors of the economic system. Besides, as a way to study development, his proposal was based on the identification of changes to subsequently identify the reason of these changes, employing high levels of abstraction (Schumpeter, 2005; p. 112). In his analysis, one of the factors considered as endogenous to the economic system was innovation and its capacity to create disturbances in an assumed state of equilibrium⁹.

⁷ Considering the summarized revision that this author makes on Development Theories, his work published in 2002 is subject of frequent mentions in this section.

⁸ Idem, 2007.

⁹ Most of Schumpeter's assumptions in relation to this point are exposed in his article *Development*, written in 1932 and discovered by a German scholar in 1993, unpublished until then.

Taking Schumpeter's ideas as the first attempt to explain progress and evolution processes, described later on in a detailed conceptual tissue which product was a notion defined as development; emerged the first theories that created a complex scheme with the designation of elements, actions and effects within the economic system, taking also into consideration social and political phenomena in order to explain changes. All of this took place in response to war consequences and before the need to implement strong investments and the launching of plans for infrastructure recovery in many European cities.

2.1.1 Modernization Theory

Initially, and while the historical events of the last century above mentioned were occurring, the first answers to disequilibrium were based on the modelling of a first approximation to the justification of development as a necessary task for societies, which resulted in the rise of the *Modernization Theory*.

According to Smelser, (1964; in Reyes, 2002; p. 2) in a modern society there are more proofs of productivity, education is a value well distributed among children and the benefits are received by all social levels. Additionally, there exists a clear definition of institutional functions and political roles; nonetheless the complexity of the institutional system can get to create integration issues. In addition to this, some other authors like Abramovitz (1952), Arrow (1962), Kuznets (1966), Lewis (1955) and Solow (1956) created a conceptualization of development by describing it as a series of actions referred to contribute in growth processes and structural changes aiming to satisfy population needs, employment, improvement of life conditions and the diminution of poverty. In order to get these goals, policies were intended to increase productivity by introducing technological changes (Vázquez Barquero, 2007; p. 185).

Arthur Lewis (1955 in Gutiérrez, 2007; p. 46) set the coexistence of a dual society, which two main sectors were known as the modern *capitalist* sector, linked to the industry, and the traditional *precapitalist* sector linked to agriculture. In this context, the purpose is to analyze the structural transformation processes in which economy as a whole will evolve to the modern sector, where the dual economy is eliminated in order to give place to the expansion of capitalist economy.

In the same way, conceptions and theoretical proposals in the middle of the 20th century evolved through the redefinition of ideas about the facts that were determinant in order to find the way to development. In consonance with the proposal of Rostow (1960 in Parr, 2001; p. 3) there are five specific steps for every

society in order to be able reach development: traditional society, precondition to take off, taking off process, the way to matureness and a society of massive consumption.

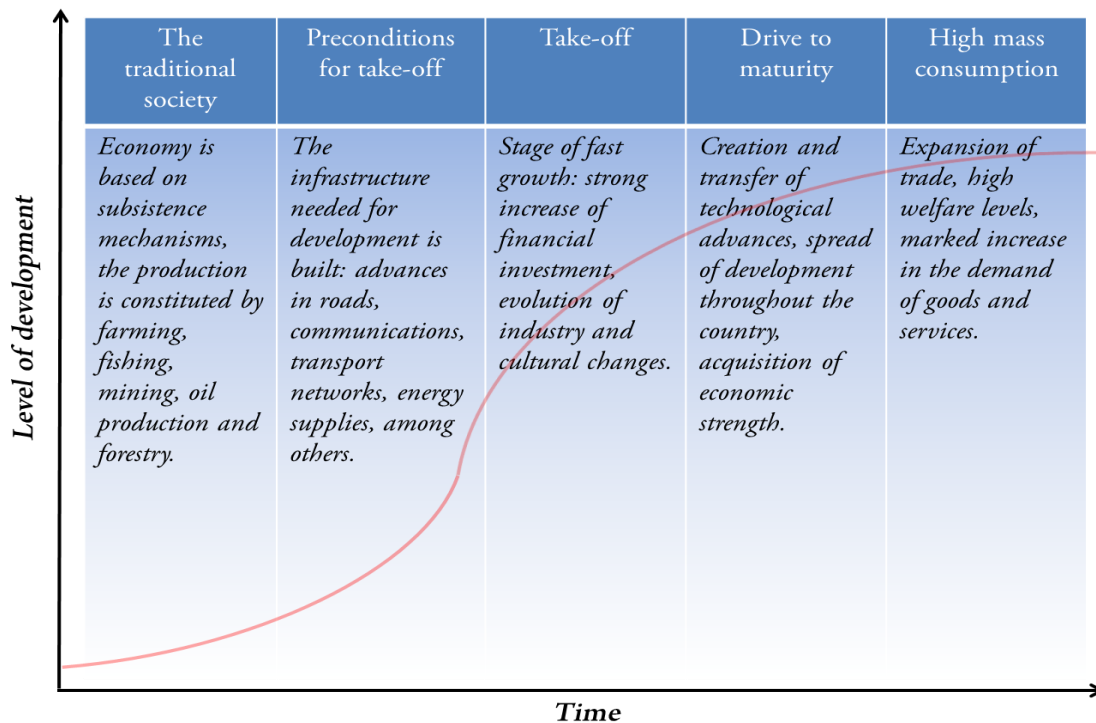


Figure 3. Stages of growth, according to Rostow's model. Own elaboration, 2015 based on Parr, 2001.

According to Rostow ideas, a solution in order to promote the modernization of traditional (Third World) societies would be to cover the lack of productive investments, technology and experience through the direct transference of these factors. Core points of his proposal gave to modernization a character integrating and homogenizing which was oriented to generate the convergence of societies, by enhancing the imitation of European and American political and economic systems. The process was for most authors considered as irreversible and unavoidable in the long term; and even desirable for developing countries, despite of certain limitations found at the regional level (Parr, 2001; p. 6).

For Nederveen, (2010, p. 45) changes under the modernization schemes were not exclusively dependent on exogenous factors, but also on effects oriented to the inside of the systems, when arguing that “modernization theory is usually

referred to as a paradigm, but upon closer consideration turns out to host a wide variety of projects, some along the lines of *endogenous change*, viz. social differentiation, rationalization, the spread of universalism, achievement and specificity”.

Part of the criticism made to the Modernization Theory, was based on the facts that development is not necessarily a unidirectional process; that there is no need to eliminate traditional values, since traditional and modern values are not mutually exclusive and that externalities and conflicts are not taken into consideration. Over the basis of these statements, new studies in the modernization school have made a difference by considering all of these aspects in the reformulation of theory under a renewed approach (Reyes, 2002; p. 6).

2.1.2 Dependence Theory and Structuralism

The appreciations of ECLAC about the modernization postulates, gave origin to the publication of diverse works about the needs associated to development processes, especially in the context of Latin American countries. One of the most outstanding positions was shown by Prébisch¹⁰ (1948, in Gutiérrez, 2007; p. 48) in the inauguration of the activities of ECLAC, giving place for the birth of the *Structuralist Economic Theory*. Paul Barán and Sair Amin are also considered as outstanding representatives of this theory (Blacutt, 2013; p. 70).

Prébisch – totally disassociated from neoclassical perspective – set that underdevelopment is not a normal stage of development but a systemic consequence of the economic dynamics linked to social issues; reason for which his proposal gained followers beyond the Latin American context. On the contrary, this author describes underdevelopment as a historical phenomenon characteristic of specific societies, determined by the *peripheral* condition of economies as a result of a backwardness of the productive system where benefits and salaries shrink under growth capacity in front of *central* economies with higher productivity levels and advanced capacities. The main thesis of this idea is the deterioration of exchange terms and relationships (Gutiérrez, 2007; p. 48).

Among some other contributions, he found out that the classical position on international trade that points out that higher productivity levels in developed countries will later on benefit underdeveloped economies by the decrease of prices; was totally wrong. Instead, he demonstrated that occurs exactly the other way

¹⁰ Raúl Prébisch, 1948: “*El desarrollo económico de América Latina y algunos de sus principales problemas*”.

around, since prices relation changed against the interests of the periphery once productivity increased in developed economies¹¹.

This dissertation was elaborated on the base of the existence of a center (where developed economies were) and a periphery (where the so-called Third World was located), linked within a macroeconomic relationship denominated as mentioned, as the deterioration of exchange terms and relationships (Gutiérrez, 2007; p. 49).

At the macroeconomic level, the most important facts that determined the conditions for development in a country according to the structuralist school were summarized by Reyes (2002; p. 7) in the control of the exchange rate, the promotion of a governmental role more efficient in terms of national development, the need to give priority to investment and saving processes with the participation of external capital, the promotion of a wider internal demand and the adoption of the model of substitution of imports.

Nevertheless, since by the end of the decade of 1960, this model showed a remarked tendency to standstill by the difficulties to carry out the substitution of imports model, which later on brought problems for the creation of employment and made slower the income distribution process. This is how structuralist school serves as the nest for the emergence of the *Dependence Theory*.

Among the authors considered as founders of this theory are André Günder Frank (1970), Theotonio Dos Santos (1973, 2002), Ruy Mauro Marini (1973), Aníbal Quijano (1978, 2000) and Vania Bambirra (1978). For them, the peripheral circumstances defined by ECLAC implied a *dependence condition*, that is to say, the configuration of a specific law that impeded any possibility to carry out changes that derived in a transformation of the conditions within capitalism, leaving developed countries always in a permanent advantaged situation (Gutiérrez, 2007; p. 50).

The revolutionary processes in Latin America (LA) after the first half of the 20th century were in the search of legitimacy through the definition of a theoretical basis that brought together the main concerns and demands of the new times in the context of the Third World. In this theory, the role of LA is considered as a provider of raw materials and consumable goods in order to contribute to the development and industrialization of central countries, where the prevailing classes

¹¹ Idem.

kept the maneuver of the domination scheme according to their interests (Gutiérrez, 2007; p. 50).

Within this approach, the distinction between developed and undeveloped countries as central and peripheral is still in use, as a way to identify the two main contexts of development; despite the structuralist approach went losing acceptance in the discussions about development. Nonetheless, in addition to these facts the strong growth of the USSR represented a good signal for the future of planned economies, which led to the implementation of interventionist strategies and a strong participation of State in development processes (Oriol Prats, 2006; p. 9).

According to Dos Santos, (1971 in Reyes, 2002; p. 8) the Dependence Theory combines Neo-Marxist elements and some others from the Keynesian Economic Theory. Considering the Keynesian perspective, the Dependence Theory is formed by four basic aspects, specifically:

- The development of a considerable and effective internal demand;
- The provision of the real relevance that holds the industrial sector for development, giving its capability to add aggregated value to national products;
- The increase of the workers' income level, as a way to adequate demand level within the national market;
- And the promotion of a more active and efficient governmental role in the economy in order to reinforce national development.

In this order of ideas, Neo-Marxism serves then as a basis for the emergence of *dependence* ideas, since it exposes a new perspective on development conceptualization that certainly differs from the classical Marxism. For Foster-Carter, (1973, p. 12) there are several differences between the orthodox classical Marxism and Neo-Marxism; among them, that the matter analyzed for Marxism is centered in monopolies at the global scale, while the more recent studies are projected from the sight of peripheral conditions; that the classical movement foresaw the need of a bourgeois revolution in the introduction of transformation processes, but from the Neo-Marxist posture, based in the conditions of the Third World, is eventually necessary to *jump* into a social revolution, because of the evident and strong identification of bourgeoisie with elitist positions and its disregard respecting to nationalist positions; and finally that the classical approach considered that the industrial proletariat was fitted with enough strength to produce a social revolution and it was actually its duty to become the cutting-edge

force, while the new approach insisted in the participation of peasants in the process within the generation of a revolution.

In summary, Dos Santos (1973; p 44 in Gutiérrez, 2007; p. 50) states a very clear relationship between these two spheres of development, by pointing out that “the interdependency relation between two or more economies, and between them and global trade, assumes the form of dependence when some countries (the dominant ones) can expand and propel themselves, whereas others (the dependent ones) can only do it as a reflex of that expansion, that can act in a positive and/or negative way on immediate development”¹². In the same way, some similarities between modernization and dependence positions can be found when observing that both take the development of the Third World and the *States-Nations* figure as object of analysis, and that both have a polarized vision to describe their theoretical structures (tradition-modernity and center-periphery).

Also there has been, as is natural in the course of any scientific debate, certain level of criticism against the Dependence Theory, based on the clear impossibility to develop a *dependent capitalism*. Instead, it was revealed the necessity to transit towards a transformation of the social and economic structures within the context of periphery and the inclusion of the different sectors of society in the construction of unifying perspectives towards development (Gutiérrez, 2007; p. 51). Additionally, points such as the lack of exhaustive empirical evidence in order to justify its conclusions; the negative image given to the relation with transnational corporations (which can actually be an opportunity for the transfer of technology); and its very high level of abstraction, have been pointed out as deficiencies of the dependence approach (Dos Santos, 1971 in Reyes, 2002; p. 9).

Furthermore, Cardoso (1972 in Chilcote, 1974) contributed to dependency studies, answering to the criticism and giving lights about the reasons of the existence and possible permanence of gaps between developed and undeveloped worlds; along his work refuses the reasoning of modernization hypothesis by arguing that “analysis based in the naïve assumption that imperialism unifies the interests and reactions of dominated nations is a clear oversimplification of what is really occurring” (p. 17). Additionally, the critics of the center-periphery relation stated that the advance of Asian countries was shown as a ‘proof’ of the inexistence of any sort of dependency link within development dynamics (Blacutt, 2013; p. 70).

¹² Translation from Spanish made by the author.

Even though its imperfections, it is valid to recognize the big contribution of this theory, given that it acted as the main reason for the activation of new and better schemes for the countries in disadvantage, serving as a platform for the creation of alternative proposals coming from the perspective of countries located in the so-called peripheral area.

2.1.3 World Systems Theory

The paralysis of the Latin American economic thought by the impossibility to apply self-guided policies within a *dependent* theoretical scheme and the crisis of capitalism which exposed many of its inconsistencies, gave place to the proposal of a new and integrating interpretation of development by the end of the decade of 1960 based on a global scale, known as the *World Systems Theory*. One of the most representative authors of this school of thinking is Immanuel Wallerstein, a North American sociologist currently working as Professor of the Binghamton University in New York, while the academic birth of this school took place in the Center of Studies on Economics, Historical Systems and Civilization, in the New York State University of Binghamton (Gutiérrez, 2007; p. 51; Reyes, 2002; p. 11).

Among its principles, this theory establishes the existence of a strong link between social sciences, especially between Sociology and the political and economic disciplines. In this same sense, this school recognizes that generally a particular attention is given to the individual development of every one of these disciplines separately, instead of analyzing the interactions between them; likewise, this perspective suggests that instead of developing a specific study by variables, the analysis must take into consideration the reality of social systems as a whole. Additionally, from this outlook is necessary to recognize the nature of the capitalist system and its inconsistencies, just like the generation of inequalities by itself, the inefficiency of the market in the *fair* assignment of resources without an institutional intervention and its incapacity to deal with the rise of complex problems related to war conflicts (Wallerstein, 1987; p. 318).

Within this integrating viewpoint, a *State-Nation* scheme is not suitable anymore when it comes to treat development studies, since most of the relationships at the global scale are given under an environment of regional contexts. According to Wallerstein (1987 in Reyes, 2002; p. 12), some of the processes pointed out as the starting point for the consideration of regional scenarios were the rise of a new world communication system, the new mechanisms of global trade, the international financial system, the transfer of knowledge and the establishment of military linkages; acting as crucial factors

within the internal context of every country, creating at the same time their own dynamic internationally.

Some other contributions came from the authors of the so-called *Regulation Theory* in France: Aglietta (1979), Boyer (1978), Coriat (1984) y Lipietz (1983); who interpreted the crisis of capitalism and its effects over the North American economy during the decade of 1970, from a Keynesian, Marxist and Institutional approximation. The main proposal of this school, is *economic planning* through the integration of the production and the internal consume, the administration of external trade mechanisms, the control of the salary relation, the supervision of the action of industrial and financial corporations within the local economy, the strengthening of institutions and the promotion of social welfare, rebuilding the Welfare State as a developer agent of the internal market and repositioning the economic function of the State; all of this, supported on a social tissue where different actors have the opportunity to develop their own interests in a fair legal framework under clear rules (Gutiérrez, 2007; p. 51).

Thus, the concept was extended from Sociology to Anthropology, Political Sciences, History and urban planning and its relationship with economic affairs, going through the changes of the global context and considering as the new unit of analysis, adjusted to new times. Also, the difference between productive and speculative investment is remarked, suggesting that the last one generates faster cycles of earnings in stock-markets leaving no benefits for societies. The conception of this theory actually let “only damages” (Blacutt, 2013; p. 71).

2.1.4 Globalization Theory

The *Globalization Theory* came to be the consequence of increasing levels of integration triggered by the effects of the technological evolution in the context of the global dynamics: communication processes (as a prolongation of the *World Systems* proposal), with the inclusion of sociological, educative and cultural aspects, and especially the development of new financing systems in the management of economic affairs.

In addition to the elements mentioned, the fall of the Berlin Wall, the declaration of the failure of the socialist model and the repositioning of capitalism in the world order, were facts that contributed to the reinforcement of capitalist values, embracing the whole world and determining the course of global actions towards the unification of social, political, technological, cultural and economic criteria.

Interpreting the appreciations of Moore (1993 in Reyes, 2002; p. 14) the most important aspects of globalization are that a) it recognizes the relevance of global communication systems and its role in the facilitation of the interaction between countries at the governmental and population level; b) the extension of the communication mechanisms from the developed world to poorer countries through the use of innovative technology; c) the introduction of modern communication systems bringing along considerable structural modifications in economic, social and cultural patterns, which are every day more accessible at the local level, creating a new environment in the realization of economic transaction; d) this new communication scheme is currently affecting the conception of minorities within countries, reducing the control over decisions at the mercy of corporations and political elites; and e) the cultural elements will arrange the configuration of social structures in every country, since social conditions are the result of the influence of dominant factors in a given context.

Within the fundamental premises of this theory promoted by “close relatives” of modernization and world systems preachers, are the determinant role of cultural factors within societies, the lack of relevance of the *State-Nation* conception as unit of analysis in today’s interconnected world context and the standardization of technological advances as a way to create connections between different social groups around the world (Blacutt, 2013; p. 71).

Adopting the same orientation of modernization values, globalization posture considers the models implemented in EEUU and Europe as the example to follow, since they enjoy better communication, organizational and industrial mechanisms and it’s precisely the influence of these structures on the developing world which is going to create the necessary interaction towards the generation of global equity.

Among the changes inspired in the wish to reach higher development levels, developing countries were basically forced to follow macroeconomic policies based on the renewed version of the neoclassical economy personified by neoliberalism. Since previous models had a strong link with Keynesianism, their unsuccessful experiences were associated with a crisis within this school of thinking. By this time, the proposals of the Chicago School represented mainly by Milton Friedman ideas (1980) were showed as the response in order to solve the imbalances generated by what was considered as an *excessive* intervention of the State in economy.

Under the shadow of this position, a set of public policies in the economic scope were elaborated and presented for the most powerful financing world institutions as a way to conduct deliberately macroeconomic plans of developing countries, especially in Latin America. These policies, known as *structural adjustment policies* were compiled in a document denominated the *Washington Consensus*.

As a consequence of the crisis suffered by the economies of the developing world, the North American economist John Williamson proposed in 1989 a list of policies directed to establish stronger levels of stabilization in macroeconomic systems as a way to recover the dynamism of market, through its liberalization and a restriction of the participation of State in market affairs.

In summary, the policies were directed to give priority to sensible areas in terms of the public expenditure, the increase of the internal savings, a tax reform, financial liberalization, the promotion of a competitive and unified exchange rate, the privatization of public enterprises, smaller budget deficits, abolition of regulations against the entrance of new investments and the provision of secure property rights, especially to the informal sector (Williamson, 2004; p. 196).

In a critic position about the extension of globalization ideas which has embraced the world with the experimental risks that this supposes, Sege Latouche, (1993 in Nederveen, 2010; p. 112) announces the domination of Western ideas by stating the following: “The debate over the word ‘development’ is not merely a question of words. Whether one likes it or not, one can’t make development different from what it has been. Development has been and still is the *Westernisation of the world*”¹³.

Regarding to this point Blacutt (2013, p. 72) affirms that globalization surpasses modernization, but it does not impose societal rules in order to become a *modern* society. Instead, this process lets everyone know about its existence and range. In this sense, even agreeing or not, everyone will have to think about the way how is going to get integrated into this dynamics.

Despite there is a lot to say about globalization and its impacts in recent history, the purpose of this work is restricted to mention it as the last and most influential development theory respecting to current global dynamics. Having mentioned the reason of its appearance, a sample of its most significant effects are

¹³ In italics in original.

being demonstrated day after day with the improvement of communication technologies, the acceleration of information production, transmission and dissemination, the open access to plenty of data sources, the increasing levels of economic integration and the multicultural exchange which have also led to the loss of traditional heritage.

In order to make a brief appraisal among the theories mentioned, the distinctive elements of every position are exposed in a list as way to establish a comparative review between them, summarizing the analysis carried out by mentioning structural aspects of the different theories, as it follows:

Element/Theory	Modernization	Dependence	World Systems	Globalization
Vision	Functional-structuralism: traditional nations should follow the example of modern ones, since they're more productive.	Neo- Marxist and Keynesianism elements. Existence of a center (developed countries) and a periphery (developing countries)	Historical-structural model as a sociological recognition of the new character of integration of the capitalist system.	Ethnocentrism: the main direction of development should be that one followed by the US and Europe.
Unit of analysis	State-nations	State-nations	Social systems in the internal or external context of a country. Generally focused in world regions.	The world in a global perspective based on the analysis of systems and sub-systems.
Methodology	Evolution. Transfer of capital, technology and experience from modern to traditional nations.	Revolutionary actions. The Third World needs its own economic rules and to build its own order.	Historical dynamics of world systems are kept within its rhythmical cycles and trends. Bottom-up or top-down movements within global economy.	A gradual transition through a social structural-functionalist movement.
Focus	Traditional (Third World) nations.	Periphery (Third World nations).	Periphery, semi-periphery and center.	The world and its global dynamics
Criticism	Development is not a unidirectional process. The need to eliminate traditional values.	High levels of abstraction and lack of empirical exhaustive evidence to justify its conclusions.	Omission of externalities that affect economic systems.	Massive consumption, pollution, homogenization of processes and loss of cultural heritage.

Table 1. Summary of the analysis of the main theories of development. Own elaboration based in various authors, 2015.

Unifying ideas, a general conception of development supposes a condition within a nation (or any other territorial unit) which implies the welfare of the population, social benefits, education, health and nutrition, a rational use of resources and natural systems, a proper and disseminated use of technology and cutting-edge tools, opportunities for employment, good levels of investment and the satisfaction of the basic needs, legitimacy of governmental systems, an efficient

and transparent institutional complex, respect and conservation of the cultural heritage and the existence of social and physical spaces for recreation, amusement and the practice of sports. In this sense, development must be extrapolated and must express results in every one of its dimensions; giving origin to different ways to understand and interpret development: the well-known economic development, political development, social development, cultural development and the formulation of a relative situation of *environmental development*.

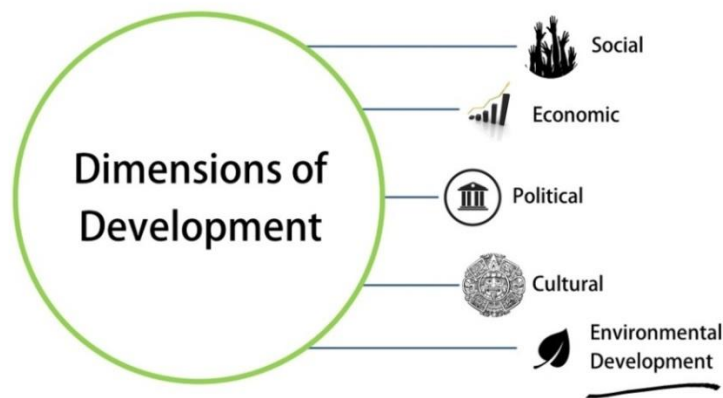


Figure 4. In the same way as different dimensions of development are sensitive of progress, a state of *environmental development* is also desirable in societies. Own elaboration, 2015.

In such virtual scenario, the context would count on enough elements to ensure the conservation of natural resources and its cyclical recovery through the implementation of renovation strategies, the necessary infrastructure to carry out technical processes of reuse, disposition and reallocation of materials and the existence of a strong legal framework with reference to the shield of the environmental sphere. This would be possible in a level where a situation of equilibrium could be reached by the *integration* of human activities with natural cycles, creating a harmonic relationship between processes instead of the contradictory position of the current times, where development supposes a sacrifice of resources and its consequent depletion.

In any case, the conception of development holds a true integrity character, for which there's a lot to evaluate in the different dimensions existing in order to establish real welfare conditions, providing that there is a clear need to incorporate a set of elements for the composition of recognizable development states.

In words of Sen (1998, p. 10) “while it is true that social development by itself is not capable to generate economic growth, we can affirm that instead, it would actually stimulate a rapid an integrating economic growth if it would be complemented by policies in favor of markets, that fomented the economic expansion. The function of economic equity has also been a case study, in reference to the negative effects of the non-equitable distribution of rent and/or land”¹⁴.

In the same way, the line of the author goes on the analysis of political rights and their role in development processes, pointing out the relevance of political incentives in societies; given that when the situation is relatively stable, the role of the democratic system is unperceived, whereas when things get complicated the corrective function of democracy can represent a key factor. In certain manner, the perspective of the *hard way* towards development implies a visualization of rights as obstacles in the fulfillment of economic objectives. This position is refuted from the humanist perspective, as a way to reject totalitarianism and the restriction of social rights.

2.2 Humanist interpretation of development

Since the times when development studies started to take place, they have been closely associated with perceptions of economic growth. A rise of the national income implies higher economic opportunities for a country, while if it is accompanied by a stabilization of the population growth rate, results in an increase of the per capita income. In this regard, improvements in infrastructure, accompanied by an increase of the purchasing power, are clear signs of a safe course towards the path of development, according to conservative precepts enrolled in an economicist vision of development.

However, besides the economic area, there are other spheres participating in the dynamics of development as a process: the social and political fields, for instance. The contempt given to the possession of political rights and the subordination of values in front of market determinations, generate a perceptual conflict about what real development would mean in the collective ideology. The humanist vision of development is a philosophical and ethical posture which contributes to the understanding of the human condition through the provision of principles and shows a complex approximation to development, in a holistic and axiological way (Madoery, 2001; p. 6).

¹⁴ Translation from Spanish made by the author.

Beyond the short-sighted economic approaches tied to a theory of possessing, which limits the realization of human beings in their respective context; there is a critical, renewed and more humanist position about development, proposed by Louis Joseph Lebret¹⁵. Among his pioneering ideas within the humanist vision of the economy, are the need to coordinate economic, social and cultural measures together and the proposal of approaching a holistic concept of development as an idea and as a process. According to his point of view, “the problem of the distribution of goods is secondary compared to the problems of preparing men to receive them” (Lebret, 1959 in Goulet, 1996; p. 9), in an effort to demonstrate the necessity to reestablish real human needs in order to find a situation of equilibrium, since satisfying the high demands of few people at the time that multitudes are kept in poverty can never be the aim of true development.

For Furtado (1982, in Boisier, 2010; p. 10) development “is about a social and cultural and only secondarily economic process”¹⁶; leaving then clear that before being linked to the economic sphere, development should be related to its deep social and cultural roots that identify it as a complex set of elements associated systematically. In this sense, according to a vision more tending towards the defense of values rather than to the defense of capital, Goulet (1971 in Boisier, 2004; p. 4) indicates that “development needs to be redefined and thrown into the arena of moral debate”¹⁷ as a way to express the lacks within the conception of development from the humanist viewpoint.

Similarly, it is appropriate to recognize that development is not given as a product generated by any institution or politic body, it is not created by the State or by God. Development is a state of affairs, the establishment of a context in which the elements interacting in it (in this case, populations)¹⁸ count on ideal conditions to get on and function properly. However, it is then emphasized that development is not generated as a product but carried out by individuals, in order to turn into *human persons*.

From a conceptual viewpoint, the human person according to what Boisier (2004, p. 5) affirms, far from representing a redundancy is an idea understood as the human being in its individuality, laden with its own personality, knowledge and senses, with social rights and duties, subscribed into a system where keeps constant

¹⁵ Details of his appreciations are shown in his classical work *Dynamique concrète du développement*, published in 1969 where a humanist version of economy is set for the first time.

¹⁶ Translation from Spanish made by the author.

¹⁷ Idem

¹⁸ Regarding to human population, animals and all the components of nature.

communication with other individuals and presents the necessity to be provided of food, social services, information, communication, knowledge and recreation. Therefore, this definition suggests that the human person is indeed, the subject and purpose of development.

But then, arises the question of what are the elements or characteristics that identify the human person. In this regard, Boisier (2010, p. 18), emphasizes four of them, of necessary mention. First of all, *dignity* as a part of respect towards the human being, in addition to the coverage of basic needs regarding food, housing, health, work, among others. For the author, a dignified human being should also count on a dress, by arguing that a nude human being is lacking of dignity, given that loses its modesty. In the same way, he states that the dignity of a person also lies in its economic possibilities, conditions of access to employment corresponding to their skills and its appreciation as a person, beyond the economic assumptions in the theoretical models of production, where human beings are qualified as a productive factor and in the worst of the cases as an input in a production function.

Secondly, the author states that the concept of human person is linked to *subjectivity*. In this sense, it is understood that a human person evolves due to a set of perceptions, knowledge, memories, values, ideas and feelings responsible of the actions of the human being and is built according the structure of the systems.

Third, *sociability* is mentioned by the author as an inseparable characteristic of the human person, since human sociability provides this condition given the fact that being a person is only possible among other people; and explains that using the example of Viernes in the tale of Daniel Defoe (1719): “Viernes was only a product of the imagination of Robinson Crusoe, an artifice in order to create a person, that could allow to the English mariner to continue being a person in the solitary island” (Boisier, 2010; p. 19). In addition, points out that collective feelings like racism or different ways of social rejection or segregation result in an obstacle to the rise of the human person and that real solidarity instead of charity makes a human being to become a person.

Finally, the concept of human person is directly linked to its *transcendence*, according to the author. In words of Mora (2000, in Boisier, 2010; p. 20) “If the person wouldn’t transcend itself constantly, would always stay within the limits of the individuality of psychophysics and in last term would end up immerse in the impersonal reality of a thing”. The transcendence is important then, as a way to continue the human vital experience and to be able to project it in time and space,

giving the chance to remain in the memory of the rest and to create historical foundations at the individual and collective level.

Understanding these analytical efforts, it is concluded that the vision of development tied to growth is a kind of conceptual vice that constantly links to link the notion of progress with purely economic elements and omit elements of such important as the cultural and political components, inherent to any process of growth. In any case, the most important point would be to learn to recognize economic progress as a means to reach development and never as the final end of it. Considering these statements, it was revealed in the global debate the need to carry out a measurement of development taking into consideration more than only economic elements, because of its multidimensional character. So, in an attempt to humanize the way to see the results of socio-economic development processes in societies and to make comparisons among countries and regions, studies like the ones assembled by Prof. Amartya Sen and Prof. Mahbub Ul Haq searched for a particular development orientation, under the linkage of the economy and social dynamics.

As a result of their studies, an indicator was developed by UNDP as a means of measuring human development (HDI), which methodology is based on the integration of data on income, health and education, in a tabular arrangement of indicators of these three areas. As mentioned above, when looking for a definition of human development, UNDP partners highlighted the need to differentiate primarily between the means and ends of human development:

“As the 1990 Human Development Report argued, a basic distinction needs to be made between the means and the ends of development. Human beings are the real end of all activities, and development must be centered on enhancing their achievements, freedoms, and capabilities. It is the lives they lead that is of intrinsic importance, not the commodities or income that they happen to possess (...) A person’s income level, for example, does not reveal what expectation of life the person has, whether he or she is presently healthy (or suffering from a disease), is disabled and capable of moving about freely, etc.” (Anand & Sen, 1994; p. 1)¹⁹.

To date, the HDI remains a referral mechanism to have a first idea about the conditions of human development, having become since its appearance into an indicator widely employed and with a vast use at the different educational scales, and in different fields of knowledge and research.

¹⁹ Underlined in original.

Nonetheless, critical positions about the limitations of the model presented in order to carry out the measurement of the human condition arose quickly. For Dubois (2014, p. 36) it is also necessary to strengthen other areas of life, such as participation, security, the guarantee of human rights, among others; arguing that above these, and taking as a reference the capability approach of Sen, is possible to build *collective* capabilities as the basis for local development.

Ranis, Stewart and Samman (2006, p. 328) recognized that the HDI “broadly covers bodily well-being, the material well-being and mental development” despite of which they don’t considered it conclusive. Given the lack of an integrated vision, the authors proposed another eleven categories as part of the analysis that must be conducted in order to have a complete picture of human development arguments: mental well-being, empowerment, political freedom, social relations, community well-being, inequalities, work conditions, leisure conditions, political security, economic security and environmental conditions.

Even Sen, (1999) makes a thoughtful review of complementary aspects without which true development would not take place, since besides making emphasis in the importance of freedom to achieve human development, states that social arrangements are required in the provision of facilities in the areas of education and health and as a way to enhance the promotion of gender equality, recognizing that without these incentives would be impossible to deal with problems such as poverty and inequality. In further notes points out that these goals should be raised as the main objective of societal development, rather than being considered side effects of economic policies.

2.3 New perspectives on the measurement of development

As a way to continue with the critical line that explores fundamental aspects of life that are not covered by the humanist analysis of the promoters of HDI, there have been explored a number of variables involved in development processes at the individual and collective level, where the studies delve into both quantitative and qualitative data beyond the restricted level of income, health and education.

In this sense, and in a political effort to determine what kind of additional information was necessary to seek in order to build a more complete scheme as a diagnostic of social progress, took place the creation of a commission in 2008, led by US economist Joseph Stiglitz, Amartya Sen and Jean Paul Fitoussi. The name of this working group was released as *The Commission on the Measurement of Economic Performance and Social Progress* (CMEPSP).

In summary, the justification for the formation of this team was based on different specific points, namely:

- The search of better ways to know, understand and interpret the development of societies:

“[...] the Commission’s aim has been to identify the limits of GDP as an indicator of economic performance and social progress, including the problems with its measurement; to consider what additional information might be required for the production of more relevant indicators of social progress; to assess the feasibility of alternative measurement tools, and to discuss how to present the statistical information in an appropriate way” (Stiglitz, Sen & Fitoussi, 2009; p. 7).

- The use of statistics tools and indicators, since they hold a high importance in the process of design and assessment of policies, working as a reference of the behavior of different dynamics and relevant variables in societal and economic approximations.
- The need to make emphasis in the fact that actions at the political level are directly influenced by what is measured and how, so as how information is used.
- The reduction of the gaps between the results of measurements and the real perceptions of them.
- The proper use of concepts, and a look into the procedure considered for its corresponding measurement, in an attempt to reset the sense of the results obtained.

In this sense, a new debate in the field of development studies becomes present, justified on the basis of practical inconsistencies presented by traditional measurement models and how the ignorance of the true meaning of the measured variables, statistical errors or technical distortions and misinterpretation of the results can lead to make wrong decisions at the political level and can consequently affect the successful conduction of development processes. In addition to this, the rest of the dimensions of development remain unexplored and probably unknown, to the point that social, political and environmental criteria are not considered at all. Ray, (2014; p. 305) emphasizes this statement on the environmental variables, by pointing out that: “earlier measures of growth like Gross Domestic Product per capita, or even more recent measures like the Human Development Index (HDI), failed to consider the ‘environmental’ aspect of development”.

Based on these facts, the field of development has entered in a stage of reinvention, where it has been in the search of new and more rigorous perspectives towards the way the complexity of the theme is analyzed, constructed and projected over future global implications.

The most outstanding results of the work completed not only by Stiglitz, Sen and Fitoussi, but also for a long list of academic and scientific collaborators, were summarized in the three main sections of the final report which analyzed affairs with reference to the classical GDP issues in the development debate, a look into quality of life and observations about sustainable development and environment. Among their final considerations by chapter, they concluded with a set of messages and recommendations which they insisted not to be taken as policy guidelines, but as an inquiry on measurement.

Chapter 1: GDP related issues

- Production talks about the behavior of the market, while income and consumption actually talk about people's well-being. In this sense is important to know what is necessary to evaluate.
- In the same way, income and consumption must be studied jointly with wealth, in order to understand the level of capital available for people and the analysis of stocks for the future.
- In current societies it has become necessary to emphasize the household perspective, considering the importance of living standards.
- There is the need to give more weight to the distribution of income, consumption and wealth, as combined indicators of socioeconomic performance; considering nonetheless the homogenizing character of high levels of aggregation.
- Changes in societies imply broaden income measures to non-market activities such as self-provided services and the investment of time and household activities.

Chapter 2: Quality of Life

- Quality of life involves a wide variety of factors that influence life and make it worth living, not necessarily treated by markets analysis or money-based measures.
- Subjective well-being can also be a valid source in order to find reliable data, since it incorporates cognitive individual evaluations, positive aspects and negative aspects from the particular perspective and all of these aspects must be measured separately.
- To know the quality of life it is also fundamental to study the conditions and opportunities present in the context from an objective perspective.
- Further formulations of indicators must include information about individual perceptions of inequality, in order to provide not only a look of the average, but also on individual differences, in order to make them noticeable.
- Implications of development at the regional level: how does progress in one area affects the advance of others.
- More attention should be put in the configuration of suitable scalar measures as a way to address properly the

research respecting to quality of life, through the use of instruments statistically effective and truly representative.

Chapter 3: Sustainable Development and Environment

- It is necessary to develop statistical projections instead of only observations in the practical measurement of sustainability, since it sense it's about the analysis of future implications of the human activity.
- It is also necessary to establish a common framework of significance respecting to the consequences revealed by sustainability predictions, eliminating differences between particular appreciations and subsequently in the conception of policies.
- The construction of sustainability requires the participation and compromise of every one of the regions and countries of the world, since multiple dynamics around all dimensions (especially in environment) occurs globally.

Table 2. Summary of conclusions of the Report by the Commission on the Measurement of Economic Performance and Social Progress. Own elaboration based on Stiglitz, Sen & Fitoussi, 2009.

It is clear then, that development is being constantly reformulated. From the beginning of its emergence as a concept, it has been analyzed from different points of view, charging it with a sense towards a set of directions in cases opposite or non-compatibles; which is explained especially by its highly complex and multidimensional character. In this respect, recent studies have gone deep into the revision of the use and misuse of information and data in the studies about development, as well as the interpretation and sense given to every one of the products obtained. So, new studies are aiming to rebuild a conception of development which is wider, which takes into consideration a broad diversity of aspects of human life increased by the diversity of activities implied in an active life in the current times and its purpose is closely linked to a true and clearer process of interpretation in order to guarantee a proper use of the information collected.

2.4 Endogenous Development conceptualization, key factors and actors

The considerations that were taking more and more relevance in the global debate about development by the ending decades of the last century were all grounded in the evidences of unfulfillment of the pretended objectives of development. In contrast, samples of disequilibrium and disorders like poverty, inequity, global environmental change, hunger, depletion and scarcity of resources and economic, political and social instability were rising all over the world;

demonstrating that failures in recent models were the explanation of the facts. A first approximation to the conceptualization of ED as a theoretical proposal, must necessarily be preceded by the most important facts related to the emergence of Sustainable Development as a current of thought that could reach a high level of integration since it seemed to concern to everyone (academics, producers, businessmen and students, housewives and politicians); and grew from the hand and support of the political global discourse, getting to be the communication bridge between the economic domain and the signs of a world under a critical situation.

2.4.1 Sustainable development

The first signs of the of the human action in different scenarios of the world, came with the rise of socioeconomic phenomena and the evidences of the environmental effects of the economic activity by the second half of the last century, revealing that production actually implies serious consequences and the management of resources is determinant, given their limitations. Besides, the global depletion of resources, waste and pollution started to call the attention of governments and international organizations, promoting the born of an initiative intended to bring consciousness about the necessity to rethink the production model and to consider environmental consequences of the transformation processes within economy. Barkin (1998, p. 25), remarks that the rise of this new mode to interpret the orientation of development came from the recognition of the fact that is not possible generalize current consumption levels, that it to say, that developing countries should never (even if they could) adopt the consumption model of the First World.

Moreover, the first scientific proof of the possible consequences of the continuity of this dangerous tendency transited by production patterns, was shown in the work developed by a group of researchers of the MIT led by Dennis Meadows following a request made by the Club of Rome. As final product of this research, a report entitled *The Limits to Growth* was published in 1972. In this report, causes and consequences in the long term of variables like population; industrial capital; food production; resources consumption and pollution were analyzed, exposing worrisome results (Rodríguez, 2011; p. 76). It was the first time that the limits of human consumption, use and management of resources was put into perspective and could attract the attention of the global community.

Origins of the study of sustainability are associated, according to Abrol (2007, p. 903) with the fact that environmental problems emerged due to the

historical application of narrow, traditional and specialized knowledge and techniques, in the resolution of problems involved in complex systems. The well-known definition of SD given by the Brundtland Commission in 1987 and cited infinite times, let clear the intention to continue with a rhythm of production, and the need to adapt it to new schemes, considering its environmental implications and the coverage of the needs of future generations. Furthermore, Calvo & Corrales (1993 in Gutiérrez, Benayas & Calvo, 2006; p. 28) point out that the concept outlines a philosophy and embraces as basic and distinctive aspects the following postulates: it leaves clear the need to preserve natural resources; it assumes the existence of physical limits of production; emphasizes the need to reach societal objectives; and is inspired in values like intergenerational solidarity.

The idea found its theoretical substance in the necessity to put together the willingness of relevant groups in the economic, social, political, environmental and cultural arenas in order to work jointly in the search of solutions in front of the production dilemma by the reunion of knowledge, compromise and political disposition of these groups of interest. The subjects shown by the Club of Rome and the Brundtland Commission were the target in subsequent global meetings organized by the UN in Rio (1992), Johannesburg (2002) and once again in Rio de Janeiro, in the so-called *Rio +20* meeting of 2012.

As a product from the first reunion in 1992, the *Agenda 21* was generated: an ensemble of objectives to be reached at the global scale, set in agreement and signed by all the participant countries. Among its sections, were established the intended general policies regarding to the social and economic dimensions, the conservation and management of resources for development, the strengthening of the role of major groups and the means of implementation of the proposed plans. In later reunions, including one in 1997 (Rio +5) the content of this Program was revised and the goals compared to reality. Most of the goals were not fulfilled and the trends to future stages didn't show an optimistic perspective (UN, 2012; p. 14).

In this sense, the existence of a method for the measurement of the goals of sustainability must incorporate the behavior of social tissues and the evolution of the political bridges towards sustainable development. For Pintér, Hardi, Martinuzzi & Hall (2012; p. 22) the evaluation of progress towards these goals will consider:

- “the underlying social, economic and environmental system as a whole and the interactions among its components, including issues related to governance;

- dynamics and interconnections between current trends and drivers of change;
- risks, uncertainties and activities that can have an impact across boundaries
- implications for decision making, including trade-offs and synergies” (p. 22).

The orientation of sustainability goals was the reason for the rise of UNDP positions towards a new and humanized definition of development, by stating that: “Human development is a process of enlarging people’s choices. The most critical are to lead a long and healthy life, to be educated and to enjoy a decent standard of living. Additional choices include political freedom, guaranteed human rights and self-respect [...]” (UNDP, 1990; p. 10). In later definitions, sustainable and human development conceptions were merged into one, giving origin to the idea of a *Human Sustainable Development*, based on both emerging benchmarks (Blacutt, 2013; p. 74).

In a critical position, Adams (2006 in Medellín, Ávalos & Nieto Caraveo, 2011; p. 230) points out that the definition of Brundtland was clear but not exact, and its scope highly inclusive, which was considered useful in order to gather people’s intentions but resulted counter-productive at the time to establish agreements and convene common goals. So at the end, such a wide term ends up meaning nothing; by losing sense while including categories of analysis. Additionally, one of the points of the *Manifiesto for Life*²⁰ established very punctually, that:

“The discourse of ‘sustainable development’ starts from a wrong idea. Sustainable development policies try to harmonize the economic process with the conservation of nature, favoring a balance between the satisfaction of current needs and the ones of future generations. Nevertheless, it pretends to carry out its objectives promoting the fallacy of a sustainable economic growth above the limited nature of the planet” (Galano *et al.*, 2002; p. 9).

Undoubtedly, the original conception formulated under an atmosphere of concern about the future of humankind, went taking distance of its roots, reasons and philosophy. Instead, the misuse of the term has served as a platform to justify the expansion of the economic activity under the disguise of with the use

²⁰ *Manifiesto por la Vida*, original work published in Spanish in 2002, with the participation of more than 20 academics and researchers of Latin America. Translation of the quoted lines by the author.

of stickers with terms like *green*, *environmentally friendly* or just *sustainable production*.

Nevertheless, leaving aside the criticism made to the current state of this concept and how does it have evolved through the last years, it's necessary to retake the original purpose of this proposal and recognize its contribution to the appearance of recent initiatives towards the reorientation of productive processes and the undeniable influence it exerted over the orientation of development.

Precisely, the considerations of sustainability provide a big relevance to questions that seemed to be absent in the past and were the base for further reasoning with respect to new development challenges. Besides, it incorporated very insightful content to the justification of better forms of development, especially at the regional and local scale.

2.4.2 Endogenous development

The interest for the study of growth processes recovered attention during the last decades of the last century, as it was pointed out as the main responsible factor involved in development dynamics. In this sense, the theory of growth from within has been launched retaking Solow's words in the definition of new proposals from hands of Romer (1986) and Lucas (1988). Their proposals attend to the understanding of productivity laws, given their relation with the capital accumulation process. By the same period, emerges *Endogenous Development Theory* from the beginning of the 80's as the theoretical product of the fusion of two visions: one with the intention of generating the development of localities and territories in backwardness; and another that studied the processes of industrial endogenous development in southern Europe. In addition, the conception of a new scheme of development brought to light new and more flexible ways to organize territorial production; the incorporation of entrepreneurship; the role of actors, tied to the introduction of innovation as part of an evolving process, and the recognition of the sociocultural and institutional areas of society as strategic forces in development processes (Vázquez Barquero, 2007; p. 186).

Albuquerque (2004; p. 1) points out that the current vision of development is very linear, as if it depended exclusively on the decisions made by big corporations and their investments. For him is not the case, since the orientation of financing resources to real productive investment depends on factors like social and institutional involvement and how technological innovation is adopted to the inside of the local context.

The analysis made by Barredo, (2010, p. 72) on development evolution, shown its first linkages with economic growth and the argument that precisely, growth would solve the future problems of income, given the increase of wealth levels. This assumption only demonstrated that the gap between poor and rich people became wider. Secondly, makes emphasis in the affirmations of Stiglitz, Sen & Fitoussi (2009) which denied that exportations were the axis of growth, neglecting internal market and food security, considering the inequalities present in international trade agreements. Finally, affirms that the direction marked by globalization plays a very important role in development processes, since the debate between the local and global approaches implies the recognition of synergies needed to connect the new ways of organization of society.

Brunet & Baltar, (2010, p. 7) see ED as a theory that places regions as new units of reference, based in the literature about districts and *clusters* which growth and structural change is organized through interdependences of the economic context with the external world in a local-global relationship aiming to build internal scientific progress, investment and innovation. For the authors, is a kind of development that makes easier the collective learning and appropriation of knowledge and technology, which lead to the replication of processes and the multiplication of the internal product, awarding continuity to the system and allowing it to be permanently updated.

In this vein, compiling these viewpoints and reasoning, Endogenous Development is defined as a process with deep territorial roots, in which the quality of life of population is improved by the use of particular human and natural resources, studying internal potentialities and the utilization of external opportunities in the use of financing resources, technology and knowledge in order to enhance growth from within the system; with emphasis in the reinvestment of the local income, capital accumulation, entrepreneurship, analysis of local human capacities, social active participation, the institutional and cultural involving, a flexible organization of production and the recognition of geographical advantages.

Respecting to territorialities and cultural attachment, according to Albagli (2004 in Flores, 2007; p. 38) is possible to strengthen them by “encouraging identity and cooperation bonds based in the common interest to protect, value and capitalize the capacities of a given territory including its cultural features, environmental richness and economic potentialities”²¹. From his side, Cuesta (2004, p. 3) rescue the relevance of culture within development processes by

²¹ Translation from Spanish made by the author

asserting that culture is a key element for the organization of production and since “globalisation process neutralises former economic advantages associated with geographical location and endowments and traditional barriers, values promoting competitiveness become increasingly decisive”. The author also underlines the contributions of Weber at the beginning of the 20th century when he brought consciousness about the significance of values to elucidate the success of industrial capitalism in Europe (p. 1).

In a very detailed way, Vázquez Barquero²² (2007) reveal along his work the set of factors involved in development processes with an endogenous perspective. Among them, autonomous development of the territory, solidarity and participatory democracy, the support to local initiatives, development of citizens’ capacities and the strengthening of social capital, creativity and entrepreneurship, cultural inclusion, capital accumulation and economic progress, flexible organization of production, technological change and dissemination of innovation and knowledge, the urban development of the territory, flexibility and transformation of institutions, the creation of infrastructure for development, patterns of a proper scheme for local governance, and the necessary synergy in the conduction of political mechanisms.

So, is perfectly noticeable that these elements are related to the different dimensions of development: social, political, cultural, economic, institutional, technological and environmental (taking as a reference sustainability principles) and conserve the integrative and multidisciplinary philosophy of SD, with a necessary reduction of the scope to the local scale and the incorporation of specific criteria about the appreciation and use of the local potentials. The relevance of the connectivity among dimensions is such, that it can determine the success or failure of a determined strategy or development intervention; lesson learned from the past when projects with an economist vision focused exclusively in the fulfillment of productive goals and couldn’t solve the contextual problems. Explained in other words, “early work within the exogenous growth paradigm [...] completely failed to connect economic and non-economic aspects” (Cuesta, 2004; p. 2).

²² It was found that this author’s work owns the highest relevance in the theoretical study of ED, for which is frequently quoted in this section. The most important elements, considered as determinant for ED processes were the flexible organization of production, innovation and knowledge dissemination, institutional density and urban development of the territory.

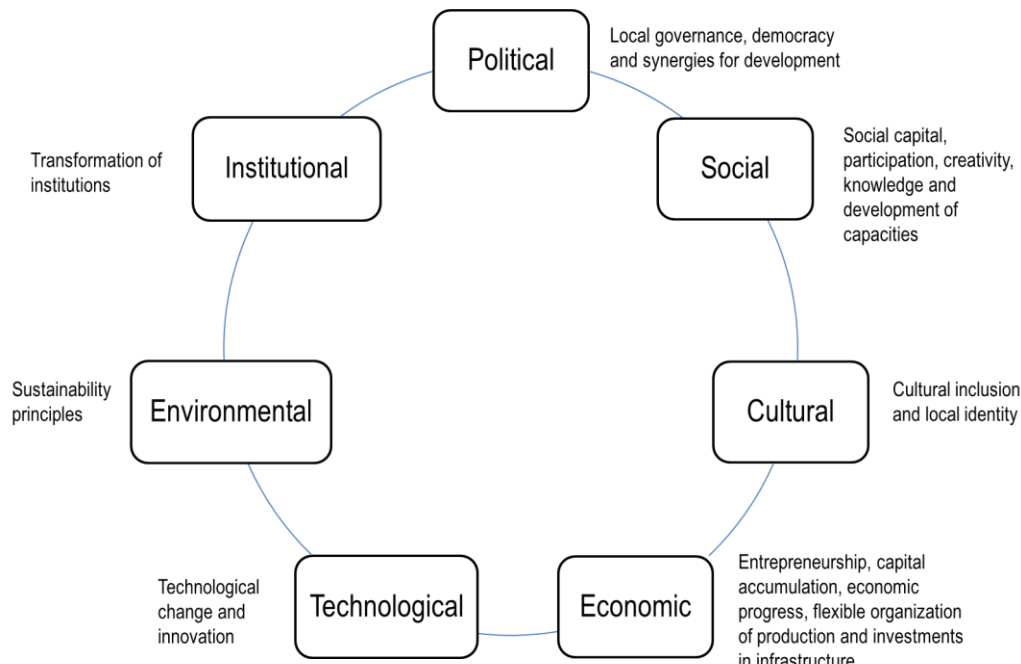


Figure 5. Distinctive elements of Endogenous Development by dimension.
Own elaboration based on Vázquez Barquero, 2007.

As a contribution to the justification of the interaction between dimensions in the construction of development, Becattini (1997, p. 3) states that enterprises are not isolated entities that exchange products and services in abstract markets. Instead of that, is clear that they are located in concrete territories and integrate productive systems firmly installed in the local society.

With reference to the actors within ED approach, they are located at both sides of the context: internal and external. Externally, the participants in globalization processes (corporations, governments, agencies, global institutions) and internally the responsible for the definition of local development processes such as local leaders, political figures and even producers; all connected through interactions with the purpose of achieving local development plans, considering territory as an agent of societal transformation (Madoery, 2001; p. 6). Rendón & Herrera (2011, p. 121), also suggests that the actors participating in transformation processes with and endogenous orientation are enterprises, organizations and the civil society, this one recognized as *social capital*.

In the same sense, conclusive views respecting to this discussion aim that development seen from an endogenous perspective makes easier the interpretation

of strategies, taking advantage of the opportunities that globalization offers, where policies are built from the arrangement of economic, social, environmental, institutional, politic and cultural factors, combined in a particular way in every local context, for which they vary from one territory to another (Vázquez Barquero, 2007; p. 206).

Then, is understood that ED came from the union of different contributions along the occurrence of historical facts, the accumulation of theorems during the last century, the rise of hypothesis, the dissertation of ideas about factors and determinants of development, and along the evolution of development theory itself.

Authors	Contributions
Marshall (1980, 1919) Rosenstein-Rodan (1943)	Organization of production and diminishing returns
Perroux (1955) Hoover(1948)	Growth poles, urban development and agglomeration economies
Schumpeter (1934) Kutznets (1966)	Capital formation, technological change and increase of productivity
Coase (1937) North (1990)	Institutional development and reduction of transaction costs

Table 3. Contributions to the theoretical basis of ED and their authors.
Own elaboration based on Vázquez Barquero, 2007.

The notion of *endogeneity*²³ is the promoter of changes towards the attention of local problems with the employment of resources available. ED not only helps to encourage creativity by trying to apply solutions with certain tools, particular in quality and quantity according to the context, but also reduces the level of dependence from external sources of financing help, traditionally expected and considered as necessary before the lack of enough local budget (or before the lack of creativity, entrepreneurship and organization). The offers of this proposal are highly inclusive, at the time that delimited. The application of such a complex idea is simple to be managed when the context is reduced, and there is actually no way to consider ED in wide areas, since it responds to the attention of the local reality in front of the global dynamics. Additionally, its orientation to the rescue of values and human principles, marks the route of the local life on the way to higher and better levels of integration, were societal values, gender equality and cultural respect (instead of just *tolerance*) are part of the positive side effects.

²³ Referred to the endogenous character of development, having nothing to do with any econometric statistical model.

Notwithstanding the above mentioned, some limits of ED were identified by Brunet & Baltar (2010, p. 12) when they make reference to three specific points:

- The coherence of the economic scenario gets lost in the transit of a locality towards its goals, since the accumulation of interests around the enterprise as the face of the private sector and main responsible for the conduction of investments has been established in societies for years. The coordination of these actions in collective and non-particular hands would represent a redefinition of roles and therefore, of the system's functioning.
- The creation of small businesses and productive initiatives at the local level often obeys to surviving reasons, in an effort to cover temporary necessities; which represents the lack of permanence intentions and even worse, the impossibility to generate growth.
- It's very important to recognize the political limitations of local initiatives, since they depend on the national planning of investments and budget assignments, determining the route of regional development.

Additionally, there has also raised criticism against the conception of a development oriented to the inside of the system. Margarian (2013, p. 2) argues that the conceptualization managed by ED is unclear, weak and even "fuzzy". For the author, the theoretical advance of the idea haven't found a common meaning or interpretation among authors and the proposal of a social management of decisions and own governance seems to be more a reaction to the dominant globalization trends than a model with a strong theoretical basis.

In addition, the application of the ED approach into practice has brought inconsistencies from a place to another, not considering the contextual adaptation of methodologies and the failure of the proposal lacking of any constructive capacity, to create new solutions to current paradigms. This is explained by Malunga & Holcombe (2014), when they mention that "what has gone fundamentally wrong with present-day development approaches is that they have replaced rather than built on the endogenous ways of dealing with development issues" (p. 616). In this sense, the character of ED must also be highly dividing and able to mark new stages for development.

2.5 Conditions in situ: a theoretical analysis of the context

When it comes to explore possibilities for the realization of development plans, there are millions of elements included in the interactions eventually possible within the evolution of processes. In a situation where conditions are

limited to a given number of key items, a higher importance is given to certain elements, of greater relevance according to its weight in development plans. That's the reason to support the assumption that some factors must be present in a given context in order to consider the level of feasibility of this kind of projects. Desirable conditions from a theoretical perspective of endogenous development according to Sunkel (2006), Vázquez Barquero (2000) and Madoery (2001) could be the existence of high levels of communication and social participation, an organized structure of economic processes and at least a well-known institutional framework.

Despite these factors could be present in certain contexts, it's not the common denominator of developing areas of the world. When is not the case, the situation should be created, brought from the foundations of organization systems, with the use of basic elements in order to start generating conditions for the success of development projects.

For Millar (2014, p. 639) the definition of these factors are always present in traditional communities, and is possible to notice it in the way that different cosmovisions are considered and the relation between domains of life (natural world, social world and spiritual world) are studied. So, the natural world covers the physical elements of our surroundings, including the living world and materials in general. The social domain contains collective resources management, leadership, knowledge about local organization, social relations, among others; while the spiritual world makes reference to a set of elements tied to cultural sources such as religion, beliefs, spiritual forces and values respecting to the invisible world. According to his viewpoint,

“[...] endogenous development aims at the local determination of development options: local control over the development process and the retention of the benefits of development within the local area. Endogenous development can be looked upon as in situ conservation and development. It takes the local values, local concepts and practices (with their biophysical, socio-economic, and spiritual dimensions), local resources, and opportunities as the starting point of development” (Millar, 2014; p. 641).

As it was mentioned previously, according to Fua (1994, in Vázquez Barquero, 2007; p. 204) there are factors that determine the spatial competence, such as the entrepreneurship and organization capacity, the qualification of the workforce, the level of instruction of the population, the quality, quantity and use of natural resources and the institutional functioning.

In regional planning studies, examples of regions with evident differences in their development and growth rates, have led to the research on the reason behind these dissimilarities, especially when regions compared share the same physical, topographic, climatic and geographic conditions. For Montes Lira (2001, p. 9) territorial planning plays a key role as an instrument capable to enhance public investment, to promote private initiatives and to support social organization towards the improvement of cities and rural spaces, meeting their current needs and future aspirations.

Krugman (1999) explained the influence of geographic factors in the development of regions, making possible to include them formally in the general discussion as an element of economic relevance. For him, forces such as trade and commercialization, diminishing returns, economies of scale and imperfect competition are long way more significant in the production of changes in regional scenarios than comparative advantages, constant returns or perfect competition (Moncayo, 2001; p. 103). In this sense, the author gives more attention to the local accumulation, in which participate centripetal and centrifugal forces in favor and against the geographic concentration of economic activities.

Centripetal forces	Centrifugal forces
Market size effects (linkages)	Immobile factors
Thick labor markets	Land rents
Pure external economies	Pure external diseconomies

Table 4. Forces affecting geographic concentration. Krugman, 1999.

The centripetal forces have to do with the Marshallian sources of external economies, which are responsible for the generation of economies of scale and forward linkages, creating preference in a determined place for the production of goods and services, opening the possibilities for the industrial concentration and subsequently creating relationships between local and external economies in order to generate the local concentration of the economic activity. On the other hand, the centrifugal forces are represented by immobile factors like land, demonstrating its aptitude to stop accumulation processes, by explaining that: “concentrations of economic activity increase the demand for local land, driving up land rents and so discouraging further concentration” (Krugman, 1999; p. 144).

Respecting to the decisions made by regions to become successful in comparison to others, there is the need to adopt governance models compromised with a proactive regional management and to build own capacities, instead of trying to bring external agencies and enterprises. The key is in the promotion of the local economic activity through the retention, expansion and support of the local entrepreneurship (Partridge & Olfert, 2011; p. 3).

These assumptions make possible to incorporate new elements in the scheme that has been considered for the construction of a general view of development, with the corresponding details provided by history, theoretical positions, data accumulation, measurement techniques, empirical research and experiences from the past. In any case, what is clear is that the existence of certain elements in a given context prior to the implementation of development projects, puts influence in how the processes take place, in the results of the experiences and as a consequence, in the success or not of regional plans. However, it is important to point out that the presence of these favorable conditions is desirable, but not necessarily mandatory for the realization of regional development interventions.

2.6 Experiences on ED projects

The application of endogenous development approaches has brought to discussion the relevance of elements that would make easier the implementation of policies with an endogenous orientation, as well as the possible emergence of some others that can even get to interfere into the evolution of processes, acting as barriers for the success of development plans. An example of this would be the lack of investments in basic infrastructure, the absence of communication means or the scarcity of technological tools and innovation.

Within the assessment of two projects conducted in Galicia (Spain), the experiences were summarized by Paül, (2013) in different points, regarding at the case study as “dominated by a deep socio-economic depression that [...] development funds over the last few decades has not been able to overcome” (p. 169). In the same way, among the main characteristics that described the situation also were mentioned the high rates of migration and loss of population, being only the oldest individuals the ones who remain; and the decline of economy and socio-cultural life. Economic activities were only based on small and decayed farms and the reception of external income in the shape of retirement pensions; meanwhile youth had almost abandoned the place, provoking a demographic imbalance.

In this sense, EU funds were directed to finance development plans in the area and have been implemented throughout the last decades. Despite regional development projects in the rest of the country have been relatively successful the results shown in the Galician case didn't follow the same trend. The resources provided were managed under particular ways that obeyed to political interests, not directed to attend critical problems but invested in infrastructure and facilities with no impact in real economy. As a way to face the situation, tourism was found by the local government as a suitable answer since it was a way to explode local potential in a sustainable way. However, the results didn't reach the expected benefits, which makes to direct the sight to corruption and fraudulent management of resources as the possible reason of the problems (Paül, 2013; p. 170).

In front of such scenario, the proposals towards a solution consisted in the activation of rural areas from the hands of the civil society, participating actively in the improvement of the situation through the creation, promotion and implementation of potentials for development, given that:

“The solution to the crisis depends on the use of the potential for development and the actions that come from civil society, inasmuch as development processes that occur as a result of using own resources through projects designed and managed by citizens and local organisations” (Vázquez Barquero, 2009 in Paül, 2013; p. 187).

In a second example, recreated (not applied) in a very wide context of analysis, the opportunities for development in Africa are examined in an attempt to understand and evaluate the reasons that explain the backwardness of this region of the world, when it actually counts on a natural wealth and a big amount of resources. Considering the richness that can be found in every corner of the continent, the first reference goes right into historical reasons. According to Malunga & Holcombe (2014, p. 616) after the colonization processes the cultural heritage was spread to many other regions of the planet, where the native elements were distributed, leaving African lands running out of opportunities.

Besides, economic activity is poorly developed; poverty is spread in different levels throughout the continent, education faces problems regarding quality and infrastructure, the malnutrition levels are present in most of its countries and is the region with the highest level of population with problems associated to health, due to the dispersion of illnesses. In the same way, political instability and armed conflicts among countries act as barriers for integration strategies. There are lots of problems associated to the African context, and it's not the case to enlist every one

of them in this section. Despite of this well-known situation, the authors consider that:

“[...] the contemporary development challenges of inequality, livelihoods, responsible governance, and resource stewardship are not new. Throughout the centuries Africans, as individuals and communities, have found ways to address these problems, sometimes with great success. The challenges today may be more acute because of their magnitude, the speed of impacts, the spanning of distances, the deepening of power inequalities, and the growing global awareness of and connection to these challenges [...] foreign cultural norms and values cannot be imposed on another society in the name of development” (Malunga & Holcombe, 2014; p. 617).

Then, according to what their assumptions point out, it's not about the issue, but the way how it is addressed. The problem regarding the failure of different plans for the establishment of development mechanisms in Africa has been clarified for the authors by stating that when talking about endogenous development for Africa research shouldn't focus on specific political, social or economic rules, but on the underlying values behind and what does it represent in terms of stability and management of the expected results. The situation is definitely different in this context, since social relations are dissimilar and the relevance of variables and perceptions vary widely from theoretical models to reality, for which Western rules can't be applied.

So, taking into consideration the main aspects of the examples mentioned, the lessons learned about empirical aspects of development (from practice in one case and from evaluation in the other) can be summarized in two important necessities for the improvement of ED studies:

- There's the need to take advantage of available resources at the local scale. Despite the situation faced seems to show a scenario where Galicia has run out of opportunities; external help, finance aid and institutional intervention didn't provide a valid solution for the problematic. External factors cannot deal with issues when the cause is endogenous at the system and dissolve any external support. In this case, corruption and inadequate management of resources made that any external financial support were ineffective. So, the appropriation of problems and the assumption of control from the side of the local community was in conclusion the alternative proposed.
- The adoption of development plans are contextual, for which they must be adapted to conditions in the case study. The African continent cannot adopt

policies and models applied in other contexts under different considerations. As Malunga & Holcombe stated:

“Perhaps the greatest unwelcome and unintended outcome is that by trying to create, or perhaps better said, ‘clone’ development in developing countries in the image of Western ‘development’, development efforts defeat their own purpose through undermining their own relevance legitimacy, and sustainability” (p. 615).

Part of these conclusions have previous antecedents, and have deep roots in the recognition of the necessity to adopt an ethical approach within the study of development dynamics. This corresponds with the stated by Goulet (1996) when expressing that: “[...] high-income nations have as much need to find a wisdom to match their sciences as poor countries have to test their ancient wisdoms in encounters with modern technology and dynamic social change” (p. 4). In this sense, the willing to promote new formulas is reflected in the proposals coming from the developing world, leaving in perspective that development must also own the capacity to be flexible and contextually adaptable instead of rigorous and strict.

Taking a look at two additional examples which took place in Mexico, where the problematic is associated with the effects of the application of neoliberal policies and the loss of relevance of the local context that this fact represents, results are more concrete and positive.

In the first example, farmer strategies were analyzed in the context of San Miguel Papaxtla, a pre-Hispanic settlement located in Tecuanipan, Puebla²⁴. In this place, there is little land available to carry out cultivation activities. Additionally, most of the producers possess a small land extension and production is normally subject to climate conditions, since crops depend on the rainy season. The growth of the urban area of Puebla represents a risk for farmers, at the time that can be also taken as an opportunity given the consequent increase of the demand of agricultural products. Previous crops of the zone were maize, beans, zucchini, chili and cotton; nonetheless in the present times horticulture is the main activity, with the permanence of maize and beans.

Along the work, the reconstruction of the facts from 1950 took place with the information provided by settlers with an age above 65 years who gave an explanation for all the current facts observed. The zone, with an increase of

²⁴ All comments regarding to this example are based on Capullín Grande, Escobedo-Castillo, Ocampo-Fletes, Juárez-Sánchez & Rappo-Míguez (2007) and their work: *Endogenous Development and farmer strategies in a Cholulteca Community. The case of San Miguel Papaxtla, Tecuanipan, Puebla.*

migration rates from the last 15 years, counted on relevant elements that led to several conclusions:

- Within the community, it is possible to live from the exploitation of small properties, where the reduction of the scope can increase productivity levels. Nonetheless, standard of life is not the core point of this assumption.
- Employment and food security are valid reasons to support the local agricultural activity instead of the opening of the locality to big markets, which would lead to the loss of traditional features and an increase in migration rates.
- The change of crops throughout the time according to weather and market conditions and the adoption of new methods in farming activities have allowed this population to transcend and even see their income rise. This is an example of adaptation and technology acquisition.
- Chemicals and fertilizers are being applied in horticulture activities, for which is important to consider the environmental effects that this fact can bring as a consequence.
- Local knowledge has been the base of the permanence of this settlement, being transmitted throughout generations. In the absence of this element, local options would be reduced. Nonetheless, the opportunity to reach its transcendence has been found as an endogenous element.
- And last but not least, external opportunities are also welcome in ED experiences, as long as they don't affect negatively the constitution and logic of the system by introducing, changes in the local structure, negative environmental impacts or loss of cultural heritage, for instance.

The second experience revised took place in two municipalities of Mexico state²⁵, characterized by an active exploitation of nopal²⁶, an edible cactus plant with fleshy stems highly consumed by the population. Both municipalities register high levels of poverty and they're several indigenous communities' home. In 2005, 15 nopal greenhouses were installed within the two areas, and by 2010 they were 85. The success of these crop was the possibility to invest at a small scale obtaining benefits in terms of food security, water saving and a considerably good economic return. Besides, the intention of the proposal was the transformation of the local culture by creating organization methods and promoting active participation.

²⁵ All comments regarding to this example are based on Rendón & Herrera (2011) and their work: *Towards endogenous development of the mazahuas of the State of Mexico communities. Contributions from the production of nopal.*

²⁶ Several species of the gender *Opuntia*, belonging to the family *Cactaceae* receive this name in Mexico.

In this sense, the whole local production process was based on the organization of the population. That is to say, organization of production was directly linked to social strong associations, so-called Rural Production Societies, (SPR in Spanish), while some others contributed working in the management and performance respecting to other greenhouses. Once the greenhouses acquired more relevance in the local reality, capacitation regarding to the transformation and added value of nopal was the following step. Further products were created: sweets, marmalade, tortillas and so on, all based in nopal. So, lessons respecting to this case can be summarized in several points:

- Social organization and the association of local actors own high relevance in local development experiences and can be determinant for the success of a given project, for which the fact that social capital is one of the core forces of ED is justified in the practice.
- Transaction costs can diminish when actors possess more information than any organism or institution in the local context. This reduces the complexity of the processes, the external dependence level and represents savings in terms of time and money.
- The creation of a solid platform based in social values, generate ideal conditions for the rise of new stages based in necessities, in this case knowledge was needed to include new links to the production chain; giving a growth orientation to the local economic scenario.

III. Case study

3.1 Italva

The municipality of Italva is located in the Northwest region of the state of Rio de Janeiro, being considered as a very young political-administrative area emancipated from the municipality of Campos dos Goytacazes on June the 12th, 1986²⁷.

²⁷ Through the Law 999, sanctioned by the Governor of the State, Eng. Leonel de Moura Brizola in the mentioned date.

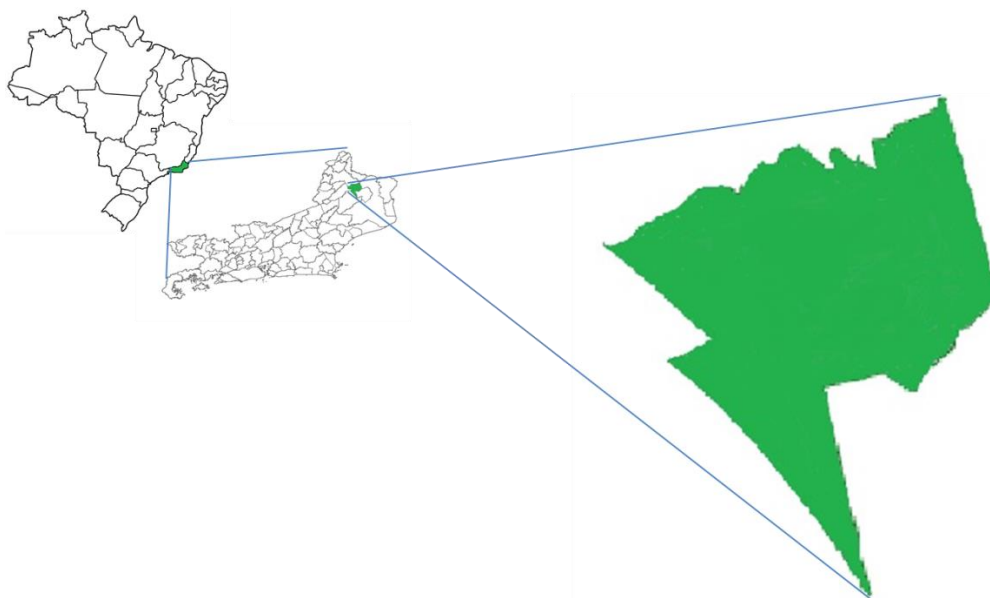


Figure 6. Location of the municipality of Italva in the Northwest region of RJ. Own elaboration, 2015.

3.1.1 Relevant Data

- Area and location

Italva borders the municipalities of Campos, Cambucí, Sao Fidélis, Itaperuna and Bom Jesus de Itabapoana. Its total area reaches 293.81 km², the capital of the municipality is a small city with of homonymous name, located at 42 m.a.s.l. specifically located in the latitude 21°25'15" South and in the longitude 41°41'27" West (IBGE, 2014). Some of the distances with respect to other cities are:

City	Distance (km)
Rio de Janeiro	320
Cambuci	53
Cardoso Moreira	13
São Fidélis	55
Itaperuna	42
Bom Jesus do Itabapoana	48
Campos dos Goytacazes	63
Macaé	168

Table 5. Distance of Italva with respect to other cities in the state of RJ. EMATER-RIO, 2014.

- Brief historical review

The first references of population in this region date from 1870, when adventurers and explorers crossed through the zone finding fertile lands, also rich in minerals. Its first name was Santo Antônio das Cachoeiras, made official by Providential Law (06/11/1873). Under decree of the date 10/08/1891, it was classified as Campos District. Later on it adopted the name of Cachoeiras, and by 06/01/1917, took the denomination of Cachoeiras do Muriaé, due to the river which crosses through the municipality. According to ancient narrators of the city, in 1930 as a way to honor a traditional family of the place called the Monção, this name was instituted through the State Law of the date of 29/12/1930. Other narrators said y the time that Monção made reference to soft breeze, a characteristic of that small town (PMI, 2002)²⁸.

Its current name, came from a suggestion of a humble inhabitant, Mr. Joacir Pereira de Oliveira who put together the tupi-guarani words *Ita* (stone) and *Alva* (white); *Italva*, remaining in a manner that it recalls the relevance of marble within the local idiosyncrasy, which was already appearing in the surface due to the rising exploitation. Despite of the richness of the region, the city didn't even count on a bridge, for which the transportation of goods and people out of the town was made through the rent of canoes. Even the heaviest minerals were transported by a big ship tied to a steel wire rope bogged down in both banks of the river. Only by the end of the decade of 1940, the long dreamed bridge was built, adopting the name of its idealizer, the Governor Edmundo de Macedo Soares e Silva (PMI, 2002).

- Climate

The weather of the municipality is the corresponding to Tropical Savanna Climate (Aw), registering 1.077 mm of annual precipitation and an average temperature of 23,3 °C. (INMET, 2015; WB, 2015).

	JAN	FEB	MAR	ABR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Average
HAT	32	32.9	32.2	30	28.4	27.3	26.9	28	28.5	28.9	29.9	30.6	29.6
AT	26	26.4	25.8	23.9	21.8	20.6	20	21.3	22.2	23.2	24.1	24.9	23.3
LAT	21.7	21.9	21.4	19.8	17.5	15.7	15	15.8	17.4	19.1	20.2	18.9	18.9

Table 6. Average temperatures of Itaperuna, (42 km from Italva), including averages of high (HAT) and low (LAT) levels. Weather Base, 2015.

²⁸ The Municipal Plan for Rural Development should be published by the Mayoralty of Italva every governmental period. Nevertheless, last version published corresponds to the period 2002-2005.

- Hydrography and soils

The municipality of Italva is cut by the Muriaé River, which hydrographic basin is constituted by 28 municipalities. This river is born in the municipality of Mirai, in the state of Minas Gerais, crosses and provide water to the municipalities of Mirai, Muriaé, Patrocínio do Muriaé in the state of Minas Gerais (receiving in this area the Gavião River) and runs through the municipalities of Laje do Muriaé, Itaperuna (receiving the Carangola River), Italva and Cardoso Moreira in the state of RJ, discharging in the Paraíba do Sul River, in the municipality of Campos dos Goytacazes. In the same way, within the municipality of Italva, it has as tributaries: the Carqueja Stream, Do Vinhático Stream, Da Prata Stream, Marimbondo Creek, Taipabas Stream and Da Lapa Creek (PMI, 2002).

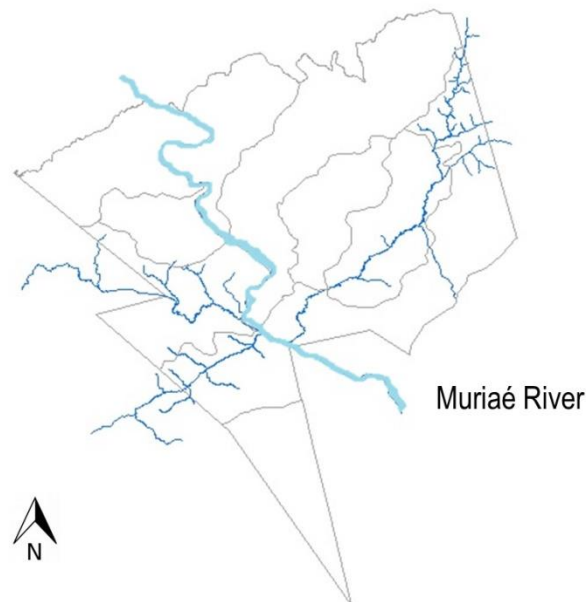


Figure 7. Hydrography of Italva. Own elaboration, 2015.

The topography of the region is rough in general terms, formed in a 60% by mounds and small mountains, 30% slopes y 10% meadows. The land use is represented mainly by cultivable areas (6.420 ha.) and native and cultivated pasture (22.470 ha.) (EMATER-RIO, 2014). The area is largely occupied by the Oxisol and Ultisol type of sandy-clay-sandy texture, with typical vegetation of tropical forest (Sub-evergreen & Atlantic semi-deciduous), low in organic matter, weakly acid, covering vast areas in the pre-coastal strip of the Northwest region. (PMI, 2002).

- Demography

The total population of the municipality is estimated in 14,489 for the year 2014, with a demographic density of 47.86 inhab/km² (IBGE, 2014). Urban population is around 10,228 and rural population around 3,799 (EMATER-RIO, 2014).

- Economy

The area of Italva is rich in mineral resources (marble, calcite, dolomite y quartz). Therefore, its economy is based in the production of cement, lime, marble and limestone, products that caused the establishment of big industries in the municipality. Additionally, the area counts on fertile lands and it's a big producer of milk and average producer of tomatoes, bell pepper and fruits. Relevant variables in the economic field show a local GPD which for 2014 reached \$R 170,695,000 (≈US\$ 53,517,500) and the GDP per capita \$R 11,952.56 (≈US\$ 3,747.45). Local HDI was 0,688 for the year 2010, for 2003 poverty index at the local scale was 27.65% and Gini coefficient, which expresses inequality level was in 0.40 for the same year (IBGE, 2014).

Main Products	% of the brute value of the production	Value of production in \$R
Milk and its products	29	1.371.816
Olericulture	22	989.400
Cattle meat/milk	36,7	1.728.000
Pig farming	2,0	105.000
Grains (rice, beans, corn)	9,7	458.000
Fish farming	0,9	45.000
Apiculture	0,01	-
TOTAL	100	4.697.216

Table 7. Production spectrum of Italva. PMI, 2002.

Unifying meat and milk from bovine livestock with the generation of milk and its byproducts, the percentage of the brute value of the production reaches around 65% for 2002, which presents a clear upward trend during the last years. There is also the presence of some other activities like fishing and pig farming, at a smaller production rate.

Activity	N° of producers	Unit of measure	Herd size	Annual Production	Unit
Beekeeping	12	Hives	83	492	Liters of honey
Sheep breeding	8	Heads	840	8	Tons
Fish farming	6	One thousand fish	7	19	Tons
Pig farming	22	Heads	292	10.5	Tons
Traditional fishing	32	-	-	61	Tons
Livestock farming (Meat)	122	Heads	6150	172	Tons
Livestock farming (Milk)	359	Heads	6540	7,735,594	Liters

Table 8. Production in livestock and fishing activities. EMATER-RIO, 2014.

In the zone, the generation of products from forestry takes place in the factory *Holcim Brasil, Ltd.* Likewise, approximately one million (1,000,000) feet of Eucalyptus were planted by the end of the decade of 1980. Today, after the retirement of most of this exotic woodland, around 38% of it remains planted for its exploitation (PMI, 2002). Agricultural production takes place with tomato, bell pepper, cane, beans, maize and manioc as the most representative crops.

Crop	N° of producers	Area (ha.)	Productivity (Tons/ha.)	Profits (\$R)
Beans	60	50	1.23	171,528.00
Rice	22	35	3.50	259,000.00
Manioc	40	49	11.96	820,600.00
Maize	94	94	2.50	169,000.00
Cane	350	350	50.00	1,300,000.00
Pineapple	2	0.30	1.67	550.00
Bell pepper	35	30	24.17	1,064,250.00
Tomato	50	67	79.55	6,603,400.00
Yam	5	2.2	3.00	6,384.00
Coconut	6	11	23.27	213,720.00
Total				10,608,432.00

Table 9. Agricultural production by crops. EMATER-RIO, 2014.

The ownership of land is basically represented by small producers, which property is under 5 ha. (556 owners – 79%). Some others own areas between 5 and 10 ha., being considered medium properties (134 – 19%) and areas above 10 ha. (14 – 2%) considered big properties. (PMI, 2002). Within the municipality, most of the people developing the rural work are native settlers, even though, a considerable quantity of young people leave the place with the intention to work in the industrial area, specially oil production in Campos dos Goytacazes.

Activity	Employees
Livestock, agriculture and fishing	4940
Industrial activity	2035
Services	1730
Trade	1714
Transport and communications	385
Social activities	1045
Others	3020

Table 10. Employment in absolute terms, by activity. PMI, 2002.

The municipality counts on 28,890 ha. of cultivable areas and pastures, which exploitation generates income by the order of \$R 3,142,016. This income could be increased by the solution of some of the problematic present in the region nowadays, such as difficulties for the transport and commercialization of goods, the distance of the main markets and the lack of an adequate infrastructure to add value to products generated.

Similarly, an irregular distribution of rainy regimes, the rural exodus, an unqualified workforce, the low zootechnical profile of the cattle, the lack of rural organization, the scarcity of financial opportunities for the rural producers and the need to improve the access to energy and its distribution systems are problems of remarkable relevance in the current context of the municipality.

- Transport and communications

The road BR 356 crosses through the municipality in connection with the roads BR 101 and BR 116, bringing the possibility to be connected to the national system of terrestrial transportation. There are 256 km of neighboring streets, 6 private bus lines and a bridge over the Muriaé River, built in the decade of 1940 (PMI, 2002). As it was mentioned, access to energy is one of the most noticeable needs in distant areas.

- Education

There are education programs for preschool, elementary and secondary schools, from both public and private sectors, at the time that there are some depending from the federal government and some others which work with resources from the municipal budget.

Level	No. of schools	Teachers	Enrollment
Preschool	11	44	480
Elementary school	13	156	1717
Secondary school	3	65	435
Total	27	265	2632

Table 11. Education statistics in Italva. IBGE, 2012.

- Health

There are 5 health attendance points, 1 unit of first aids and a big health center, (Dr. Adilton Jorge Crespo). The higher incidence rates correspond to respiratory illnesses, cardiovascular illnesses, hypertension, diabetes and alcoholism. Water is efficiently provided to 75% of the population in rural areas and 95% in urban areas. There are 4 doctors, 3 nurses, 33 health agents and 15 dentists residing in Italva, and 22 living out of the municipality. (PMI, 2002).

- Politics

Government is represented by a Mayor elected every 4 years, with 7 Secretaries: among them Culture, Tourism, Sport and Leisure; Agriculture and Rural Streets; Social Assistance; Education; Environment and Public Cleanliness; Health; and Internal Revenue.

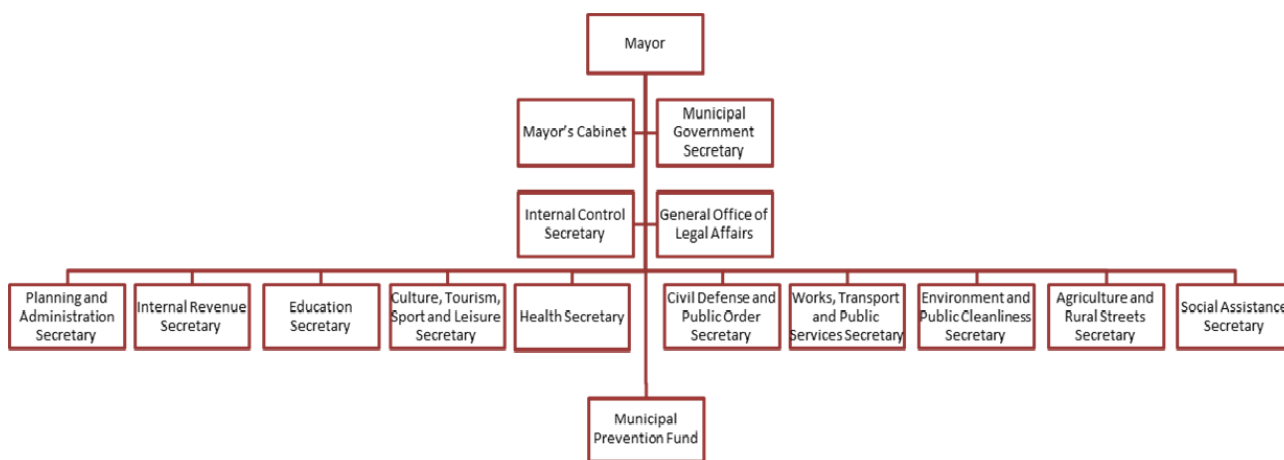


Figure 8. Organization chart of the current governmental structure of Italva. PMI, 2015.

In addition, there is one representative in the Legislative Assembly of the state of Rio de Janeiro and there is a Municipal Camera constituted by 12

representatives, elected every four years. The Municipal Law was created in 1990. (ALERJ, 2015).

- Tourism and Culture

Due to the multicultural character of its origin, the miscegenation of races took place in the early years of the colonization process and after the arrival of immigrants from Syria, Lebanon, France, Spain and Portugal whom decided to stay in the zone. So, culture in the municipality is not limited to a certain group of costumes, but to a lot of different traditions as a result of this mixture. Population features are diverse, and there's nothing particular or distinctive in it, despite of the evident predominance of whites and mulattos. It's possible to read 7 local and national journals; there are 2 radio stations and 5 Internet providers. The municipality counts on several churches among Catholic and Evangelical, expanded throughout the zone.

- Catholic Churches and 13 chapels
- 9 Baptist Churches
- 15 Assemblies of God Churches
- 1 International Evangelistic Center
- 1 Center of Universal Church of God's Kingdom
- 1 *Espírita* Center
- 1 Seventh-Day Adventist Church
- 1 Presbyterian Church (PMI, 2002).

For the leisure time and the practice of sports, there are 8 soccer fields, 7 in the rural zone and 1 in the Buena Vista neighborhood. In addition, there's a stadium in the center of the municipality and 5 sport courts: In the Matrix Square, in the Saldanha da Gama Square, in the Glycério Salles School, in the São Caetano neighborhood (roofed) and one in the CIEP Ver. Dr. Said Tanus José (PMI, 2002).

Painfully, tourism has not taken on a particular importance and infrastructure with touristic purposes is very poor, so as local consciousness of the potential of the area as an attractive touristic pole in order to make of this a relevant economic activity.

3.2 Notes on the case study

In the local dynamics, there has been a constant lack of investment in rural development projects, and this situation made that certain problematics became

bigger. There was a marked deforestation during the last decades, which caused environmental damages that still show their effects, and are certainly responsible for the changes shown in climate at the regional scale, the rise of temperatures and the prolongation of the dry season. The consequences of these changes have affected, as is natural, all scenarios of life. Starting from the environmental impact and changes in landscape, going through economic reality given the close relationship of local economy with livestock production; until the institutional network, which nowadays is oriented to promote, generate and provide solutions in front of such threats.

In this sense, initiatives from the local, national and even global perspective have had influence in the area, especially from the last years, with the participation of institutions of diverse nature, most of them linked to governmental or external programs, with the intention to cause changes in the context, intending to improve environmental conditions and recover the natural heritage. Most of these programs take place with the implementation of concrete projects, which implementation goes direct into new policies and proposals, affecting positively the local domain. Some of them (among institutions and projects) were linked to the development of this research process in the field, they were:

PESAGRO Empresa de Pesquisa Agropecuária do estado do Rio de Janeiro –
Agricultural Research Company of the State of Rio de Janeiro.

This organization created in 1976, works in the management and conservation of agricultural landscape with income generation, reorientation of production systems with incentives to agro-ecological transition and marketing, value addition, food markets quality and safety. All of this, through a network compound by research, innovation, technology, service and sustainable development in micro-watersheds.

This is a public company, linked to the Secretary of Agriculture, Livestock, Fisheries and Supply and member of the National System of Agricultural Research. Its work is oriented to intensify research activities, looking for alternative technologies, allowing the catchment of inputs to promote the increase of productivity; creating conditions for an active and effective participation of producers in the economic context (PESAGRO, 2015).

EMBRAPA: Empresa Brasileira de Pesquisa Agropecuária –
Brazilian Agricultural Research Corporation

This institution was created in April 1973, under the coordination of the Ministry of Agriculture, Livestock and Supplying, as part of the National System of Agriculture and Livestock Research. Its work is oriented to develop an agricultural model adapted to the conditions of the country and its diverse natural scenarios, in an effort to overcome obstacles referred to the generation of food and energy, employing for that the best-qualified technicians and the management and production of technology (EMBRAPA, 2015).

Some of the achievements of this corporation are the adoption of sustainable production methods, recovery of degraded areas and the increase of productivity levels, inverting the importation relations with respect to grains, meat and chicken production.

EMATER: Empresa de Assistência Técnica e Extensão Rural –
Technical Assistance and Extension Enterprise

This organization is in charge of the provision of technical assistance and the development of rural extension plans in the state of Rio de Janeiro. They work in synchrony with national, regional and local institutions in the planning, coordination and execution of projects and programs especially oriented to the transformation of local reality through the dissemination of knowledge in the technical, economic and social areas.

In addition, environmental challenges are set in the institutional agenda as an objective to fulfill, since they also work on plans intending to spread knowledge on environmental protection, sustainability of production methods, and the provision of services and technical advice to producers in the development of agricultural activities.

In the municipality of Italva, this institution counts on a Training Center (CENTERJ) where hundreds of people have received training for decades, regarding to technical agricultural management and other areas, through the organization of courses. As a result, most of the personnel trained end up involved in regional initiatives, and even absorbed for national and regional institutions specialized in research and rural development.

PAIS: Produção Agroecológica Integrada e Sustentável –
Integrated and Sustainable Agroecological Production

This is an initiative from the Ministry of Social Development and Hunger Combat in order to strengthen and wide actions towards food security in areas with a low Human Development Index.

The methodology developed in this program is particularly linked to agroecological systems, avoiding the use of pesticides and agrochemicals, at the time that contributes to the restrain of deforestation processes. This plan integrates animal and vegetal production, with the use of inputs generated inside the local properties, also helps to preserve water sources and enhance local association between producers and is a mean for the creation of new markets. Besides, this model allow the production of healthy agricultural products as for own consumption as for their commercialization (MDS – PAIS, 2015).

RURAL RIO Desenvolvimento Rural Sustentável em Microbacias Hidrográficas – *Rural Sustainable Development in Hydrographic Watersheds*

The Rural Sustainable Development Program in Hydrographic Watersheds is developed by the Agricultural and Livestock Secretary of the state of Rio de Janeiro, through the Sustainable Development Supervision and financing resources from the World Bank. For this program, the role of rural people is fundamental in development processes, and the success of the policies proposed depends on their active participation. The aim of this big project is to spread the adoption of sustainable practices and more effective production methods, with the inclusion of communities in the formulation of public policies and the management of natural resources, with the purpose of establishing sustainable practices as a new methodological approach and to make it part of the regional culture.

Also, the project approves the implementation of PES, as a way to give familiar farmers a retribution for efforts related to the limitations in the use of natural resources and their contribution towards conservation policies. At the moment more than 300,000 producers are being benefitted with the program, which started in 2005 under the name RIO RURAL GEF (Global Environmental Facility – Integrated Management of Ecosystems) with a budget of R\$ 34,000,000.00²⁹.

In 2009, the project was extended until 2015 and the objectives had a wider scope: under the name of RURAL RIO BIRD (International Bank for

²⁹ Currency according to the official website (http://www.microbacias.rj.gov.br/projeto_gef.jsp).

Reconstruction and Development – Rural Sustainable Development) received a total of US\$ 79,000,000.00; working 270 micro watersheds throughout the state, located in 5 strategic regions: North, Northwest, Highlands, Center and South. Considering the unique global importance of the Mata Atlantica, this second stage was supported with the aim of expanding RURAL RIO GEF strategies, helping to reduce the threats to biodiversity, enhance carbon stocks and reverse the land degradation process in critical ecosystems, in a reorientation of productive processes. The project was extended once again until 2018, in order to give fulfillment to some of the most important goals (RURAL RIO, 2015).

Within the project, an innovative organization unit with a strong territorial basis has been implemented, which is the classification of areas in micro watersheds. With this, the objective of the initiatives is to involve local actors in the management of water, land and other resources, which results pertinent for the people depending on common water sources.

Italva is not the exception, for which it has been divided into nine micro basins, were sub-projects related to the goals of RURAL RIO are developed and monitored:

- Córrego Coléguinho
- Córrego da Lapa
- Valão da Prata
- Córrego Olho da Agua
- Córrego Santa Joaquina
- Córrego Marimbondo
- Valão Carqueja
- Valão Carcanjo

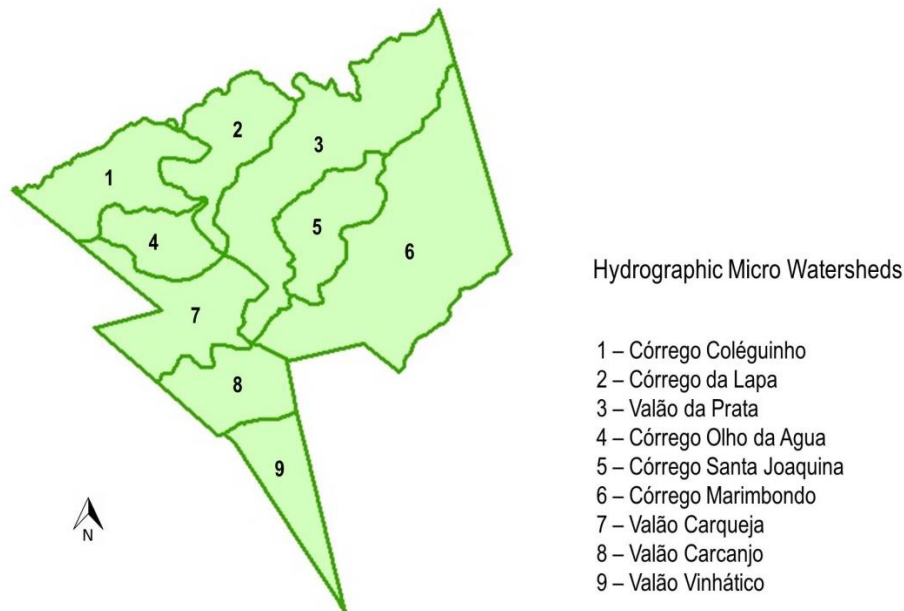


Figure 9. Itava divided into its corresponding micro-watersheds. Own elaboration, 2015.

The RURAL RIO Project, promotes mechanisms for the local association, in order to fulfill its objectives in coordination with the needs of the inhabitants of these regions, at the time that provide tools for the solution of the current environmental problems and encourages an active participation in the appropriation of the local reality. In this sense, the so-called COGEMs (Hydrographic Micro-Watersheds Management Committees) are constituted by local farmers, residents and interest groups; deciding the policies to develop within the area of the micro-watershed and solving common problematics from a community-based perspective.

INTECRAL Integrated Ecotechnologies and Services for a Sustainable Rural Rio

INTECRAL is a project that works in connection with RURAL RIO and its objectives are oriented in the same direction. Nevertheless, the specific concern of this initiative is to provide solutions to the rural context of RJ, through the adaptation of German technologies to specific contexts, facilitating solutions with an integrated approach in the management of land, water and forestry resources. The project also aims to enhance the integration of micro-watershed development strategies within the regional and local governance scheme. The project is coordinated from the Institute for Technology and Resources Management in the Tropics and Subtropics, belonging to the Cologne University of Applied Sciences, having among its partner institutions in Germany the University of Leipzig and the

Friedrich-Schiller-University Jena; with the support of nine Small and Medium Enterprises. Besides, this initiative is also accompanied by five more research institutions and three governmental institutions in Brazil. The budget approved for this project was around US\$ 3.2 million, and it will take place in the rural areas of RJ until 2016 (Schlüter & Torrico, 2012).

One of the areas where this project wants to act is the development of RURAL RIO goals at the micro-watershed level through a stronger integration of

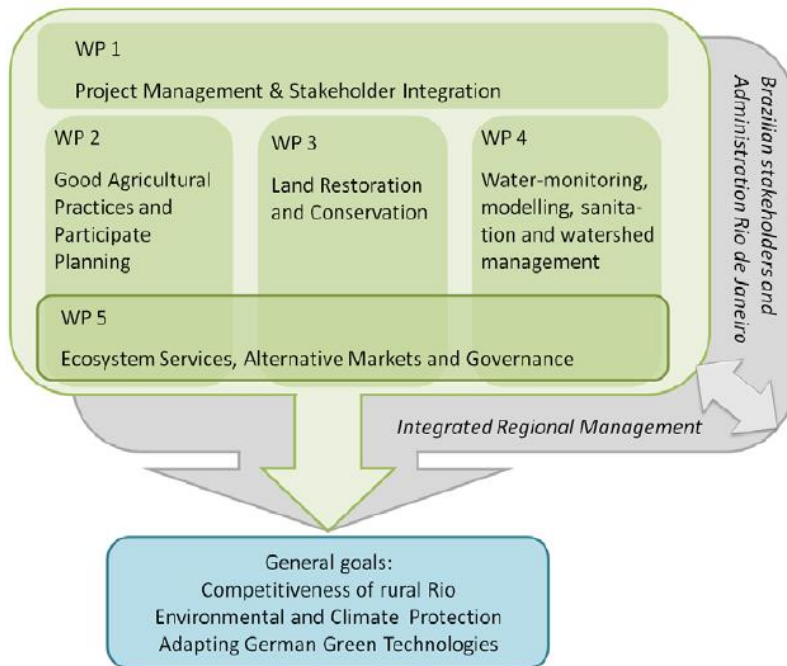


Figure 10. INTECRAL structure and organization of Work Packages. Schlüter & Torrico, 2012.

social and environmental spheres and their linkage with possible complex scenarios like the presence of environmental risks and climate change threats. This has been considered as a difficult situation to face, especially when it comes to work in the recovery of ecosystem conditions and the improvement of the economic activity results within the

regions involved; in an effort to complement local research and investments towards the solution of environmental problems, sometimes limited in resources, expertise level, adequate processes and pertinent technologies (Schlüter & Torrico, 2012).

The development of this thesis work is subscribed in the INTECRAL Project, specifically in the Work Package 5, Ecosystem Services, Alternative Markets and Governance. This work is oriented to contribute to the objectives of the project, in the sense that it will give lights about the alternatives for development found in the area under study, which is part of the municipalities covered by INTECRAL and its actions. Aspects of the local life like lacks, deficits and weaknesses are expected to be exposed in order to be addressed; at the time that strengths and potentials are going to be identified in order to provide ideas and ways to address problematics,

through an endogenous focus. In this sense, elements of ED identified through theoretical analysis would serve as the platform to promote solutions for the current challenges of Italva in its way towards a local self-sufficiency and integrated management of sustainable production methods, with an impact on the different dimensions of development. Despite the analysis of this case study could get to be replied in other areas of the state in order to explore development options, it must change from locality to locality, since contextual variables can also be very distinctive and the omission of particularities can hardly provide representative results.

IV. Methodology

4.1 Analytical Framework

In this section of the work, a brief description of the methodological approach will be provided in order to explain the direction of the research, the instruments employed in practical work and the channels and forms to obtain the required information. Firstly, a revision of certain basis of the complex systems will serve as an introduction to explain the object of this investigation. In a second stage, the methodological approach will elucidate the vision under which the practical research has been conceived and finally an explanation of the PEST analysis will be provided in terms of the determination of external opportunities with potential of impact in sociological systems.

4.1.1 Considerations about complex systems

An analysis of development implies the recognition of factors and interactions between elements involved in different dimensions of the system, in this case the spheres of societal dynamics involved in human processes, for which reason such approximation is necessarily knotted to the paradigm of complexity. Since development is defined as a multidimensional process, taking place at different scales, its revision includes considerations respecting to the nature of the system, its functioning, the actors involved and the relations established between them, normally from a positive perspective. For Mitchel & Newman (in Pagel, M. [ed.] 2002, p. 1), a complex system is:

“a group or organization which is made up of many interacting parts [...] In such systems the individual parts – called ‘components’ or ‘agents’ – and the interactions between them often lead to large-scale behaviors which are not easily predicted from a knowledge only of the behavior of the individual agents”.

A definition of complex system provided by (Gruia, 2010; p. 1624) in an attempt to find common terms, is established as “a set of elements containing multiple and interacting entities whose behavior cannot be explained individually, but starting from the behavior of an individual entity; thus, it can be assessed the behavior of the system as a whole”. This assumption is visibly oriented to the determination of a methodology to carry out the analysis of complex objects, which consists essentially in decomposing its structure and study simpler elements in order to have the whole picture as final result.

Peter Bishop (in Groff & Shaffer, 2008; p. 7), name several principles of complex systems thinking, in an approximation made from a futurist perspective of analysis:

- “Every entity (thing is a system which consists of parts (sub-systems) and which is also a part of larger systems [...]”
- Every system and every part of a system is connected to every other system, at least indirectly.
- Systems and parts of a system interact in ways that can produce surprising and counterintuitive results.
- The tendency to produce unexpected results makes predicting the outcome of systems’ interaction difficult, if not impossible”.

In this sense, a complex system owns characteristics that make necessary the use of simplification methods in order to understand, dominate and manage its contents. In every social system, there is also a big charge of complexity implied, for which is compulsory to count on methods to unravel the factors embedded into a given problematic when addressing research in societal scenarios. Nonetheless, the study of reality is not conducted in the same way in every context, given the fact that this reality changes from place to place, and it doesn’t obey to a linear behavior, but to a set of elements and forces involved particularly in a chosen case study.

Thus, despite of the necessity to streamline the system under revision, the aim of the complex system analysis – and therefore, the aim of this approximation – is actually to work on the examination of a given context without trying

necessarily to use simplification as a way to find answers, but as a way to question findings in the field, look for contradictions and give an interpretation to it. In consequence, the use of a specific methodological approach regarding complex systems is not going to be employed in this work, but is going to be considered in the development of the analysis of results.

So, far from giving answers this process would lead to formulate more questions, that will eventually partake in the comprehension of the reality addressed (Di Carlo, 2010; p. 60)³⁰.

In addition, the study of reality through qualitative research is seen as a good mean to obtain information, given that “qualitative methods are often regarded as providing rich data about real life” (De Vaus, 2002; p. 5) but at the same time this method is charged of subjectivity from the researcher’s side, since:

“another problem with a judgement-based approach to making ethical decisions in research is that the assessment of costs to the participants and the benefits to society are subjective decisions based on the researcher’s own moral position of what is good or bad and what is important and unimportant”³¹.

Furthermore, “qualitative research is often criticized for lacking generalizability, being too reliant on the subjective interpretation of researchers and being incapable of replication”³². For this reason, some measures should be considered in order not to fall into malpractices in this respect, to which De Vaus finds an answer:

“We should look at all the data we collect rather than that which suits our purposes. We should rigorously test our scales and evaluate the validity and reliability of our variables. We should look for the ‘negative’ results and do all we can to report inconvenient results. It is only by doing this that we can extend our knowledge beyond that which our beliefs and prejudices dictate [...] those who believe that they have final truth and that they know what is good and right for the rest of us are almost certain to be mistaken. It is therefore important that the social scientist be involved in *testing* the beliefs of ourselves and of others as to what the ‘real’ world is like”³³.

³⁰ In this case the local system at the municipal scale, with a particular focus in development processes. These new elements rising as a product of the systematic analysis are presented as the two main findings of this work, described in the following Chapter.

³¹ Op. cit. (De Vaus, D. A., *Surveys in Social Research*, 2002), p. 59.

³² Op. cit., p. 5.

³³ Op. cit., p. 210.

In general terms, is very difficult not to assume a particular position in front of a given reality, nonetheless while developing qualitative research the person entering in a given context in search of data, information and impressions, must avoid subjective attitudes that can affect the original purpose of the process and therefore reduce the quality of the products obtained.

4.1.2 Methodological approach

The scope of this work is exploratory, in the sense that is aiming to determine the nature of the problem set out in previous pages; and descriptive because is intending to provide details about the situation found in its normal conditions, without the stimulation of any change. Likewise, the research follows a deductive approach, considering theoretical aspects in order to know their behavior in the real world, without getting to embrace any hypothesis. The data collection took place through several interviews and a constant observation of the context for around three months, so it is considered a longitudinal study, within a short-term scheme. The steps given in order to obtain a representative image of the reality examined, and provide an analytical product of the conduction of this research are: 1) the previous knowledge of complex systems characteristics (heterogeneity, connectivity, limits, organization, functioning, dynamics, flexibility and some others), 2) the analysis of ED elements and their pertinence within the context addressed, 3) the empirical revision of the condition of the elements, employing for that methods of observation and interview analysis with actors involved in development processes, 4) establishment of key findings, classifying them respecting to their condition of positive (strengths) or negative (deficits) within development dynamics and 5) consider their connectivity to the external context, exploring opportunities (and why not, possible hitches) through the identification of political, economic, social and technological (PEST) elements or facts from outside the system that could change reality in a positive way, being employed for the enhancement of strong points and the provision of ideas to face the deficits found. The external context in this case, is constituted by the elements, fluxes and processes influencing the internal dynamics, that is, the reality explained at regional scale. Therefore, actions like aiming to change the local life like investments, technologies adaptation and environmental recovery plans are considered as interventions in the local space, for which reason INTECRAL and RURAL RIO would be considered as external drivers of changes. The idea is based on the creation of the match between the actions that can be developed by these projects through PEST channels in order to address focused problems, at the time that potentials are identified and reinforced.

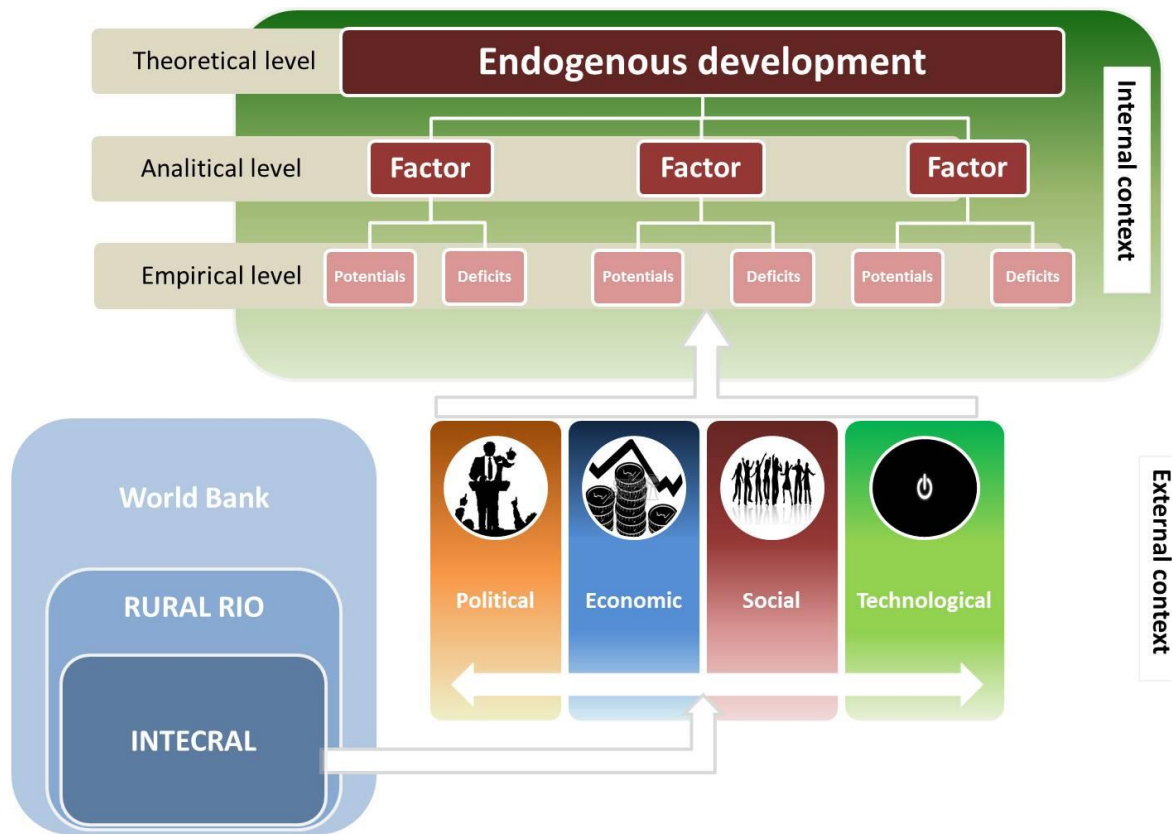


Figure 11. General scheme of analysis in the determination of potentials and deficits of the internal context studied, considering external elements and its influence in the system. Own elaboration in cooperation with Prof. Dr. Johannes Hamhaber (ITT-Köln), 2015.

The internal context is divided in three stages of analysis, where the firstly the theoretical basis of ED is going to be revised, allowing to have an image of the proposal towards development; to next make a selection of factors suggested by theory according to its pertinence and its level of adaptability to the case study. Finally, positive and negative perspectives of these elements are going to be set at the empirical level, through observation and the conduction of interviews. Likewise, the influence of external factors is going to be evaluated.

The methodology followed pursues the identification of factors at the internal and external level separately, without getting to be a SWOT analysis. This has been thought in this way, respecting endogenous postulates about systems, given that if a SWOT analysis were conducted, both external and internal variables would have to be considered in the same matrix of analysis, depriving the internal context, their elements and the assessment developed of its *endogeneity*. Instead, the use of a methodological tool in order to explore exclusively external conditions was necessary. In this vein, a methodology known as PEST analysis has been

proposed as an instrument for the identification of external forces with pertinence in the studied context.

4.1.3 An approximation to PEST analysis

PEST is an acronym for Political, Economic, Social and Technological factors, acting in a given context and influencing it from the outside. Actually is a marketing strategy in order to evaluate barriers and challenges of companies (microeconomic level) regarding to the macro environment around. This methodology was created by Francis Joseph Aguilar,³⁴ in an effort to recognize elements that affect business and the particular performance of an organization.

For Ruiz (2012, p. 1) “many macro factors are specific of a country, region, city or sector, therefore a PEST analysis will have to be carried out specifically for every organization with the proper aggregation level. The number of factors is basically unlimited”³⁵. Nonetheless, in the same way every context varies respecting to others, so the variables considered in every case can be totally different. The author exposes some examples of these elements and its positioning according to the dimension to which they belong.

Political	Economic	Social	Technological
Regulations and environmental protection	Economic growth	Demography	New investments in development
Fiscal Policy	Unemployment policies	Changes in lifestyle	Transfer of technology rate
Political stability	Taxes	Education	Life cycle and velocity of technological obsolescence
Legislation on the fulfillment of contracts and consumers protection	Public Expense	Rent distribution	Use and costs of energy
	Exchange rate	Labor and social mobility	

Table 12. Example of elements to be considered in a PEST analysis, by dimension. Based on Ruiz, 2012.

³⁴ Exposed in his work *Scanning the Business Environment*, published in 1967.

³⁵ Translation from Spanish made by the author.

New conceptions about this methodology have also considered the addition of Legal and Environmental aspects, especially when they represent high influences in the system, for which reason is also known as PESTLE analysis. For the purposes of this work, legal aspects are included in the political dimension and environmental dynamics within technological aspects, due to the relation of the projects taking place in Italva, directly related to the introduction of technologies and changes in production methods.

Despite it's still necessary to study external conditions given that autarchy is not a logic condition of the system and every system shares connections and exchanges flows with external entities, the main idea is centered in the exploration of internal potentials. However, the endogenous focus is inclusive, meaning with this that external opportunities can – and must – also be considered to take advantage of them.

4.2 An introduction to the qualitative research

Qualitative research possesses particular characteristics, and is not as simple and tied to objective factors coming from concrete sources, like numerical data. Structure of qualitative studies can also vary in terms of the formulation of a hypothesis. During the development of this work, no hypothesis has been proposed; this obeys to different reasons, directly linked to the nature of the research. Normally, is not common to find hypothesis in qualitative studies, since this kind of research is eventually about the exploration of a new scenario, of which few is known by the researcher and the establishment of possible reasons remains invalid or lacking of basis. Despite of this, is also possible to find cases were the explanation of a given fact or phenomenon is carried out from the statement of prior assumptions.

The formulation of a hypothesis is basically the explanation of a given fact or identified situation, tied to a research case and its confirmation or rejection is normally proposed as one of the aims of the research process, which is usually found in quantitative studies. For Hernández Sampieri, Fernández Collado & Baptista (2006; p. 122) hypothesis are “the guide for a research or study [...] are tentative explanations of the phenomenon under study, formulated as proposals [...] in fact, they're provisional answers to the research questions”. Corbetta (2007, p. 72) define hypothesis as “a proposition that implies a relationship between two or more concepts, placed in an inferior level of abstraction [...] is a provisory affirmation that must be compared, derived from theory but that requires an

empirical verification to be confirmed”, pointing out its functionality as a connection between theory and practice in research processes.

On the other hand, qualitative methodology is oriented to the discovery, understanding or comprehension of certain reality, through different methodological approaches. According to Stake (1995 in Yazan, 2015; p. 139) qualitative research is holistic, pretends understand instead of comparing, is empirical because is based in observable facts under normal conditions, interpretative, given that they are based in subjective perception and intuition, and empathic, since attends to specific individuals intentionally and is sensible to changes. To this respect, the present study is then structured as exploratory and descriptive, considering the relation among actors without getting to be a correlational approximation or ever farer from a casual study.

Any level of intervention in a context with research purposes exposes the researcher to interactions with the local people, institutions and representatives, in a combination of the need to catch *emic* facts (and relations) from an *etic* perspective³⁶. In this sense, the critic perspective is one of the values that any researcher should handle. Also, an ethical behavior and a proper management of information are precise. Noreña, Alcaraz, Rojas & Rebolledo (2012, p. 270) make emphasis in three ethic aspects to consider when it comes to develop a field work doing qualitative research: informed consent, confidentiality and risk management.

Firstly, the informed consent is based in the fact that human beings should receive a good treatment, as the end in itself and not as a measure to obtain something from them, this means that informers should agree with their participation in the research. The character confidential of the information makes the researcher must to ask to the participants whether they want to keep anonymity or consent the appearance of their names among the results of the research. The management of risks is related to the hazards to which informers are exposed if the information they provided and their identities are exposed (Noreña *et al.*, 2012; p. 270). All of these points depend on the moral responsibility on the researcher and vary from case to case and depends also on the necessity to identify the role of participants in the explanation of results or the “sample” consists in a random selection criteria.

³⁶ For further details about the emic/etic dichotomy see González, (2009). *La dicotomía emic/etic. Historia de una confusión*. There is also a revision made by Schaffhauser (2010), which was employed in the preparation of this work.

Then, we can find a situation where we must decide between protecting the identity of participants and leaving them clear in order to enrich the research and the way it would be understood. For Kimmel, (2007, p. 6) “when moral problems reflect an uncertainty we say that the situation poses an ethical (or moral) dilemma [...] apparent in research situations in which two or more desirable values present themselves in a seemingly mutually exclusive way” for which reason the researcher is precisely in the moral obligation to make a decision.

In effect, in the present case study, participants are particular personalities with responsibility and active partaking in development processes at the local level, which makes necessary to know what their respective roles in the context analyzed are. Despite is not necessary to know their names, a random location of actors within the system would lead to a loss of representativeness of the whole findings due to the disorganization of ideas and information, and would cut the vision of their position, responsibility and viewpoint. Having this in mind, it was found pertinent to provide charges and answers³⁷ of participants in the presentation of this work, considering the following points:

- Participants were informed about the reason of the research.
- All of them agreed with offering their cooperation and gave their approval to share both contents and their information before doing the interviews.
- The content of the interview didn't imply the exposition of the participants to any apparent danger or risk.
- The use of the information was exclusively for academic purposes.
- Personal or private information was not included at all.

Additionally, information from producers interviewed was kept anonymous, given the fact that they don't play a unipersonal role within the system since they are not in charge of any public office in particular and any of them could have cooperated in the provision of the information required, having similar margins of representativeness.

4.3 Observation processes within a given context

Observation has always played a key role in qualitative research, since it's one of the most employed methods, simple to develop and easy to summarize in the production of results. Despite it seems to be a process quite effortless, certain procedures must be followed in order to obtain representative results, with a high

³⁷ The answers were limited to the object of the research. Personal data or additional details were omitted.

potential to be used as an evidence of the essence of the context analyzed. Like in the use of any methodology, there is a protocol to follow and steps to take into consideration. Additionally, findings with a very high relevance like evolution studies had their basis on observation processes. According to Charles Darwin, (quoted in Benguría, Martín, Valdés, Pastellides & Colmenarejo, 2010; p. 1) “it results strange that nobody wants to see in observation its value as a force – positive or negative – on opinions, if maybe they have any value”³⁸ as a way to declare how much he believed in the power of this research method.

For Fernández-Ballesteros (1980 in Benguría *et al.*, 2010), “observing supposes a delivered attitude from the observer, which objectives go directly to the collection of data in base of which is possible to formulate or verify a hypothesis”³⁹. Advancing in concepts, Corbetta (2007, p. 304) establishes differences between simple observation and *participant* observation, stating that: “the first indicates a technique in order to collect data about non-verbal behavior, while the second makes reference to something else than just an observation, including the direct intervention of the researcher”⁴⁰. For the author, the level of observation becomes participant when this intervention is carried out by the researcher directly in a social group for a determined period of time, interacting with informers and describing their experiences within final results.

Observation may be carried out in a systematic way or not, depending on the purposes of the research. In any case it must be planned, so that points of interest are previously known and the researcher has the chance to distinguish between useful information and unimportant facts. Nonetheless the focus shouldn't be closed to further factors appearing in the context that could be helpful for the purposes of the research.

Noreña *et al.* (2012, p. 270) emphasize some aspects in order to carry out observation processes considering two key points: the interaction between the researcher and informers and their role as instruments in the process of data collection. The researcher must adopt a balanced position, but at the same time to gain enough confidence from people involved in the scenario observed in order not to disturb their reality and have a better interpretation of what is seen. In addition, within the field work is possible to witness difficult or compromising situations, before which must prevail the values of justice and beneficence, reserving any opinion and having respect for the people involved. These authors also consider

³⁸ Translation from Spanish made by the author.

³⁹ *Idem.*

⁴⁰ *Idem.*

important to make a revision of points within a research field work, such as how to access to the field, the establishment of data sources, the presentation of the research and its goals, the identification of key informers, the behavior in the field, among some others.

In any case, is very important to handle results in a proper way, considering that many of the things appreciated by the researcher may represent a compromising situation or have a significant meaning for people involved in the context observed.

Some advantages of observation are that it allows perceiving things just the way they are in reality when the context remains under normal conditions and that in some cases the participation of people involved is not compulsory. For (De Vaus, 2002, p. 15) “the emphasis on basing theories on observations and evaluating them against further observations may seem to be common sense” which indicates that according to his perspective, the best way to provide validity to observation results is to repeat the process and confirm prior conclusions. Nonetheless, that is not possible in all cases, so it is restricted by elements such as time, resources and possibilities.

With reference to the register of results, according to Corbetta (2007, p. 326) analysis of observation results is a continuous process, taking place during the field phase. Nonetheless points out the character retroactive and cyclic of the revision and recommends describing the facts and providing reliable sources.

In this sense, and in an effort to provide tools for the development of observation as a scientific method, specifically regarding to explain how the local people make use of natural resources, Aguirre (1979, p. 1) proposed a methodology – which was used in part of the conduction of this work – based on five steps:

- 1) *Preparation of a list of phenomena of interest.* This list must be elaborated under a logical arrangement, starting from general concepts to particular aspects.
- 2) *Selection of informers.* According to their knowledge about the topic, participation in key processes and expression skills.
- 3) *Description of the facts directly observed.* As detailed as possible, in order to allow further comparisons.
- 4) *Explanation of the facts.* They must come from reliable sources, respect the proper terminology and appear faithfully among the field notes.

- 5) *Organization of the information collected.* Consisting in an organized and systematic register of the information in a field notebook and its subsequent incorporation in the corresponding report.

The interaction with some informers at this level was not recorded. Instead, some notes were made in order to register information and key data. Among the instruments employed in the development of the observation process, narrative registers like field notes were used, while as mechanical registers elements such photos were utilized. Other mechanical registers like voice notes were employed during the interviews.

4.4 Principles on the formulation of interviews

In a deeper stage of the research, once observation has shown the principal features from the context, informers appear as particular sources of key information. This idea is supported by Denzin (1978 in Conger, 1998) who suggests that “in a typical case, observation might be combined with unobtrusive methods, life histories, and survey interviewing with field experiments. In this way, the shortcomings of one method are balanced by the strengths of the other”.

There are different ways to conduct an interview, through a structured set of questions or developed as a spontaneous conversation. In this last case, at least points of interest should be established before starting, otherwise the direction of the interaction may get lost and produce irrelevant results.

This work was based on a semi-structured interview, consisting in a set of questions with open answers. Regarding to the structure of the interview, Iarossi (2006, p. 10) remarks the necessity to prepare an overall program design, where stages like design of the questionnaire and previous training should be considered. Also, the way the information is going to be collected must be considered. In this case, given the expected length of the interactions, a voice recorder was employed for the register of the information; later on they were transcribed and processed through the use of specialized software⁴¹.

In addition, the author makes emphasis in the structure of the questionnaire, remarking six important points:

⁴¹ For the purposes of this work, MAXQDA 11 was chosen. (A software employed in the analysis of qualitative data).

- *Wording*: The question must be well formulated, it must be relevant, accurate and the informer must show willingness to answer. Also, how the question is structured is a key element, since a single word can modify the whole sense of the question.
- *Style*: The level of complexity must be appropriate to the informers' characteristics. The researcher must use *Legible Questions*, that is to say, that interviewed must clearly understand questions.
- *Type*: Avoid questions that imply the use of memory or sensitive questions, which answer supposes a judgment from traditional patterns of society.
- *Sequence*: The flow and order of the questions must follow a logical way, and must wake informer's attention and doubts.
- *Length*: Despite length depends on the kind of questionnaire, for qualitative interviews the recommendation is to manage relatively short questions, in a precise number. A long interview can get to receive more errors or omissions and might see its accuracy reduced as the interview draws on.
- *Translation*: Special attention must be put on the translation of key terms, the grammar and accuracy in the elaboration of questions and the management of results (Iarossi, 2006).

Particularly, it was considered that the fulfillment of a work plan, the identification of potential personalities to be interviewed and the coordination of visits and other activities were good options, nonetheless this kind of planning must count on a certain level of flexibility and adaptability, according to the dynamics of the field work and the rise of eventual situations that imply changes in the expected work schedule.

When it comes to carry out interviews with a particular qualitative focus, Noreña *et al.*, (2012, p. 271) recommend to create a comfortable environment so that the informer feel free to expose opinions and ideas with confidence. The interview must be conducted in a conversational mode, without emitting any value judgement in front of what is declared by the informer, it is important also not to limit its participation through "hostile interventions". The interviewer must avoid becoming intrusive or interruptive, respect the silences made between answers and avoiding discussions about what the other wants to express. Finally, for the authors an interview is a kind of free interaction where answers shouldn't be conditioned or influenced in a given direction.

For the purposes of this work, narrative questions were elaborated, since they allow informers to express themselves in an unrestricted way. The interviews

were conducted in Portuguese, and transcribed in the same language. Original transcriptions were not translated, since subjective translations could interfere with the transparency of results and would certainly cut the particular vision that the reader can have from answers by changing the meaning of certain words due to differences in conceptions according to cultural patterns. Instead, they will be explained with the highest level of objectivity possible in the corresponding section.

4.5 Interpretation of qualitative data

Data unification, processing and interpretation are the final steps of the methodology proposed. As main recommendations in this particular stage, the ideas of Iarossi (2006, p. 188) were taken as a reference. Firstly, the transcribed interviews must be codified, that is, classified according to its pertinence or relation respecting to a given topic within the range of answers obtained. So, for example if the question is related to the reasons why children don't go to school in a supposed community, the answers could go from economic reasons, distance to schools, transportation costs, demotivation and so on. Every one of them constitutes a label or *code* in the data registration, and will be employed as many times as the same label is found among answers. Secondly, in the edition process possible mistakes in transcriptions are detected and corrected; this will allow improving the quality of the information, given that mistakes in questions or omissions in answers (due to environmental conditions or lack of experience) can represent disturbances and editing may have an important role in solving these possible inaccuracies.

Finally, the entry of electronic data and cleaning processes aim to organize the information to be presented, following a logic scheme where results are clearly shown and explained in a practical way. However, in the cleaning process it is important to be very careful, in order not to alter the content of answers, since they represent a product obtained in the field and must be managed properly (Iarossi, 2006; p. 195).

During the process of data interpretation, this work was developed with the use of digital resources. In this sense, the method employed consisted in the utilization of *MAXQDAplus 11*. MAXQDA is a professional software that helps to analyze and classify information, work on the establishment of a coding system and use the information already processed for the construction of graphic

arrangements, the application of visual tools and the production of diagrams, making information easier to transmit and read⁴².

As mentioned above, in the coding process every new topic mentioned in an answer, will lead to the assignation of a new code. All of them are established in a first stage as macro codes, and more specific answers within this macro codes are organized as sub-codes.

At the end of this process, the expected outcomes are directly linked to the objectives of the research, which are basically oriented to know:

- Deficits and potentialities within the case study with respect to ED coming from locals' perspective.
- As a consequence of this, an inference about the applicability of development projects.
- Dynamics between the internal and external context
- Possible actions to be conducted through external agents.

V. Results

5.1 ED factors and PEST analysis.

5.1.1 ED factors

Coming from theory, there are factors defined as basics when it comes to develop an approximation to a given development performance at the local scale. In this sense, the elements of the ED theoretical model proposed by Vázquez Barquero⁴³ (2007) in the conceptualization of territorial and societal dynamics are:

- Autonomous development of the territory
 - Solidarity and participatory democracy
 - Self-development with local initiatives
- Human and cultural development

⁴² Detailed explanations about the functioning of the program are beyond the limits of this section. Further information can be found going directly to the official site of the provider.

⁴³ The list of elements mentioned as well as its subsequent description, obey rigorously to the proposal of the author exposed in his work *Endogenous development: Theories and policies of territorial development*, published in 2007. The analysis starts from the theoretical dimension and is taken to the analytical level, in order to identify and compare theoretical factors in the real context.

- Capacity building of citizens
- Creativity and entrepreneurship capacity
- Cultural sustainability
- Capital accumulation and economic progress
 - Flexible organization of production
 - Technological change and innovation dissemination
 - Urban development
 - Flexibility and institutional transformation
 - Self-sustained development
- Local policy development
 - Creation and growth of enterprises and *clusters*
 - Dissemination of knowledge and innovation
 - Building of urban equipment and infrastructure for development
 - Development governance
 - Interaction and synergy of ED policy.

In this vein, the assessment of all these factors will be summarized by group of categories based on the proposal for development studies developed by Vázquez Barquero and considering what was found in the field respecting to them.

In this sense, the situation of Italva is compared to an ideal scenario, considering the main elements within the ED theoretical proposal, through a qualitative assessment based on the results described below. These figures are not aiming to assume specific and rigorous values by category. Instead of this, they are provided as a visual instrument for the recognition of the results obtained.

- Autonomous development of the territory

Local values like solidarity and the weight of participation as a driver of communication and organizational independence in the local scenario are present, but they're still not very strong. Despite people demonstrate a big disposition to participate and to cooperate, mechanisms and facilities in order to do so are not actually well defined. Nonetheless, entities like COGEMs (Conselho Gestor da Microbacia – *Micro-watershed Management Board*) are taking a relevant role in the discussion of local affairs and are receiving more importance as a valid institutional reference among locals.

Despite these facts, local initiatives are not enough to sustain development, or at least they are being underestimated. Certain level of waste of resources like time or workforce is evident in different facets of the locality, which could actually

be used as centripetal forces in order to build new points of support, enhancing new stages of growth. At this stage, was possible to establish with a high level of probability, the existence of centrifugal forces, acting as takers of the local primary resources and talents, for which local development remains depending on external factors and the creation of local rent becomes an uphill task.

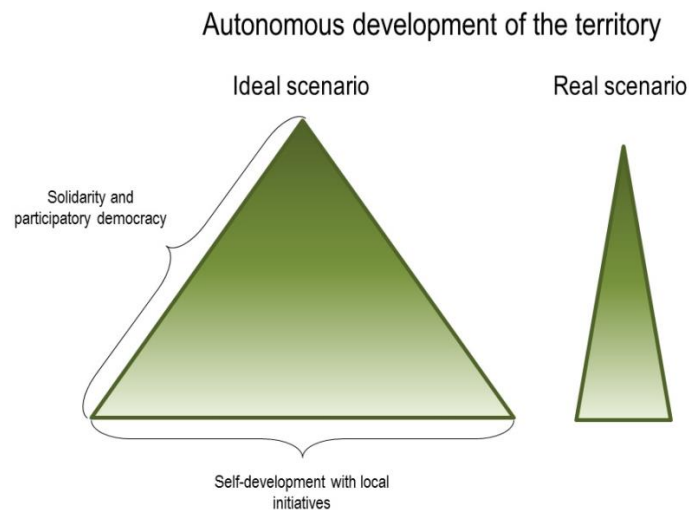


Figure 12. Empirical conditions of Autonomous development of the territory in Italva with respect to an ideal scenario. Own elaboration, 2015.

- Human and cultural development

The very first image of Italva shows a community that seemed to be suffering important losses in the cultural area. The presence of cultural values demonstrate the capacity of the community to survive before external threats that can displace the local heritage and affect part of the sociological dynamics, deriving into the loss of identity. Nevertheless the impacts of these values were not observed in the municipality: there was an image of poor cultural life and an economic atmosphere depressed by the effect of external pressures.

Local initiatives and entrepreneurship don't receive any support and good ideas end up forgotten for the lack of finance, but also die due to the weakness of virtues like encouragement, organization and a low capacity building level. Citizens are still keeping a paternalist way of thinking within society, so they consider themselves highly dependent on governmental support, and don't act to change this situation. Cultural sustainability in this case will be very vulnerable not to say impossible to reach, since the leaks of the system are the reason for the non-permanence and growth of culture and sense of belonging.

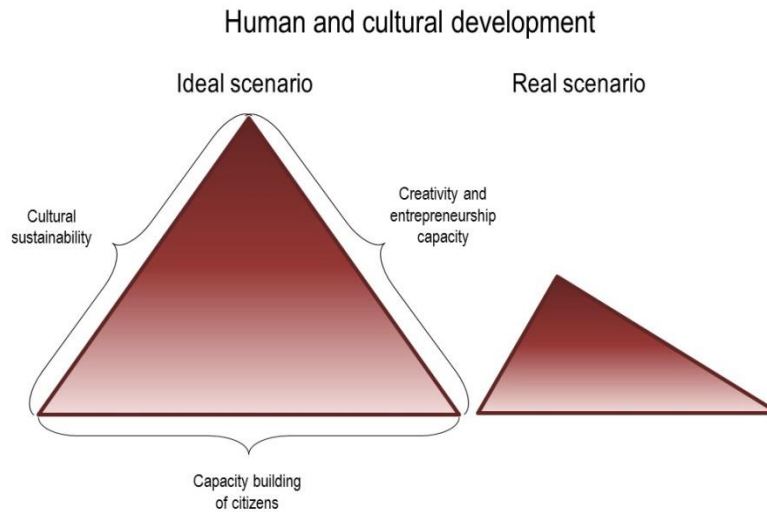


Figure 13. Empirical conditions of Human and cultural development in Italva with respect to an ideal scenario. Own elaboration, 2015.

- Capital accumulation and economic progress

One of the reasons that determined the selection of the case study was the situation of the market. Producers in this area are mainly focused in the production of milk, which represents a disadvantage for them in different senses: First of all, milk is a product with a very short period of validity since its quality changes rapidly, even under refrigeration. Milk cannot be stored and conserved for when the price rises, like in the case of the coffee market, so producers must accept price conditions and are exposed to the market dynamics until certain point, which makes them highly vulnerable. Their rent depends on price more than in the quantity produced and they fail to manage the planning of a budget due to the uncertainties of this activity. In addition, the low level of production makes them even weaker in front of the impositions of big buyers, which has been changing with the years due to the activation of local organizations in a first level, and has been consequently demonstrating the power of association and the fulfillment of common goals through the organization level they have acquired.

So, in this case production is not flexible, on the contrary, it has become a very rigid relationship between producers and buyers; and respond to processes within a very short productive cycle: the production of milk takes place daily and a delay in production is not easily admitted by the market. For this reasons, association has been working as a way to develop a collective management of production.

There are local institutions actively working in the field of agriculture and livestock production in order to wake awareness about proper ways to produce and sustainable practices, so the introduction of technologies and the dissemination of innovative elements within the local life are taking place, eventually through institutional cooperation. Nevertheless, there's still a lot to reinforce and change, given that deforestation effects and consequences of land use change remain visible, and the change of mind is just starting to show its first results.

In terms of urban development, the city itself has not grown enough, the bridge that communicates Italva with the rest of the country was built in the 40s and it has received poor maintenance. In general, services and infrastructure work considering the population level, although the construction of parks, sport fields and leisure spaces is actually necessary. Levels of security are very good, and pollution is not representative, despite there are not effective waste plans. These factors are not representative from a particular assumption, given to the fact that with the rise of scale economies, with a big and modern infrastructure, with accumulation of capital, population and resources, also diseconomies starts appearing: noise, pollution, traffic, insecurity and common characteristics of the big cities. The relevance of development studies in this particular affair, is regarding to find the point where these negative effects starts appearing and how to get to conduct urban and social growth avoiding to have to admit them in the development models. Besides, the possibilities of a self-sustained development lie on two main factors that determine the success of a development strategy under an endogenous perspective: these are the revision of leaks in the social system and the reduction of dependence levels, which in the case study are certainly high.

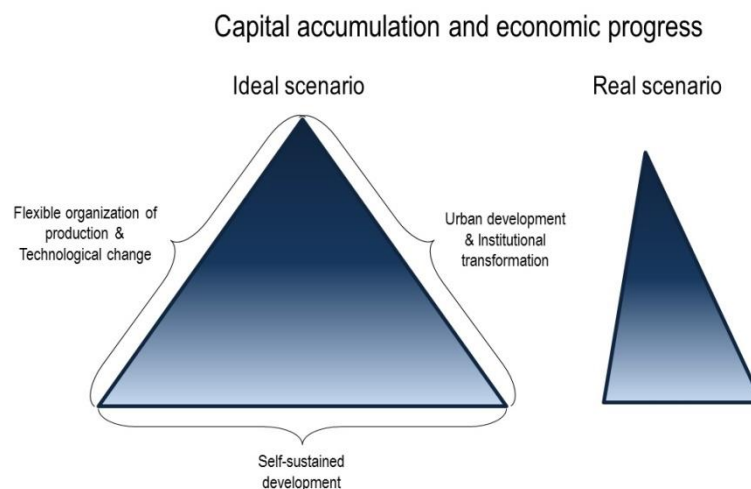


Figure 14. Empirical conditions of Capital accumulation and economic progress in Italva with respect to an ideal scenario. Own elaboration, 2015.

- Local policy development

Continuing with the above stated, the creation of enterprises and the establishment of a governmental model which main objective is development is not possible to reach in the presence of such high dependence levels. Despite the construction of a modern urban structure can represent a waking effect on the commercial area and the population level increase in the following years, it all still depends on the necessary resources to build up the new city, which once again, come from external sources and cannot be created by the own means of the municipality. Once an endogenous model has been adopted, an interaction and synergy is necessary, to produce the common understanding between policy proposals and real facts and with this, the subsistence of the model.

Dissemination of knowledge is a process taking place currently, although in a very slow way. The introduction of new techniques for the management of production in yards and small properties has led to the improvement of environmental conditions in a restricted level, but at the same time is functioning as a way to bring a change in the local ideology towards environment and the relevance of sustainable practices.

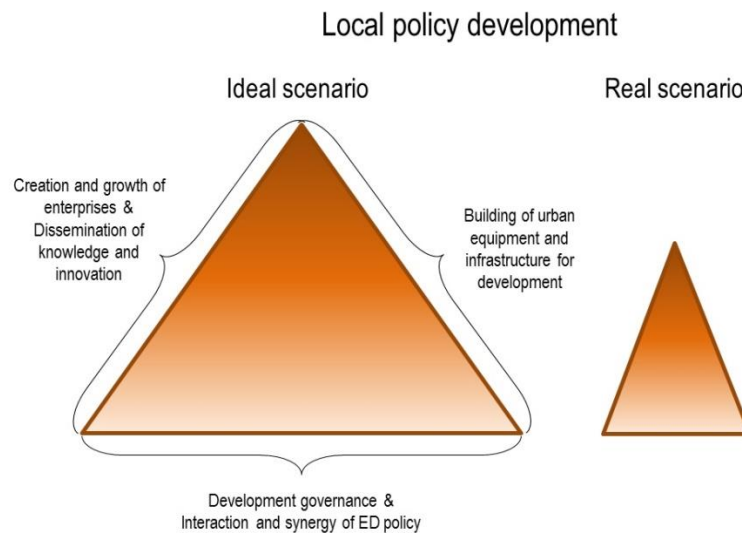


Figure 15. Empirical conditions of Local policy development in Italva with respect to an ideal scenario. Own elaboration, 2015.

From a general view, the elements assumed as key drivers of development processes from an endogenous perspective are poorly established or don't count on a solid basis in the context of the municipality of Italva. Undoubtedly, there is

evidence of a meager cultural life and there are factors within the system interrupting the process of accumulation. Within a wider framework, these four main categories are represented in the figure below, in a comparison between ideal conditions and the one found in the case study. The purpose of this comparison is to contrast both normative and positive perspectives of ED in Italva.

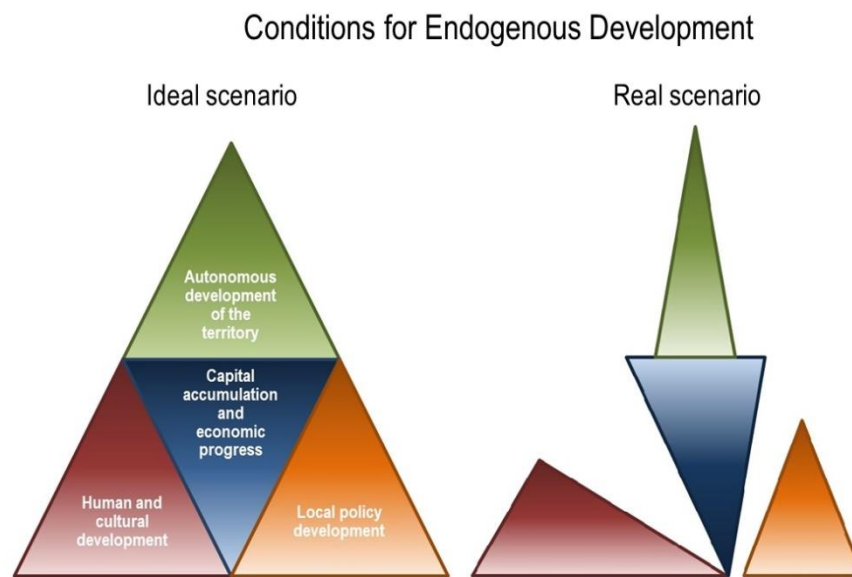


Figure 16. Empirical conditions for Endogenous Development in Italva with respect to an ideal scenario. Own elaboration, 2015.

5.1.2 PEST analysis

The PEST Analysis was conducted taking into consideration all of the factors that are basically out of control of the unit chosen as case study, which in these terms is constituted by the whole territory of the municipality of Italva and its different dimensions of development, from an endogenous perspective. So, the first level of analysis is regarding to find the factors considered for the construction of ED, which were mentioned in the previous section. Secondly, the identification of macro-factors in the outside takes place considering the four areas of the analysis which respond to Political, Economic, Social and Technological forces. For the purposes of this stage of analysis, the information based on observation and interviews was also employed, in order to provide supported image of results, using all the information available.

In order not to extend even more the content of this Chapter and in an attempt to avoid the repetition of information, results of the analysis were

summarized in a table, were all the elements involved receive a justification based on the comments made in the description of the facts observed and the results of the interviews, which are specified in the following section.

	Political	Economic	Social	Technological
Opportunities	Environmental legislation	Tourism potential	Good quality education	Technology in agricultural production
	Institutional networks	Potential markets for the diversification of the economic spectra	Social Programs at the regional and national scale	Climate change mitigation methods
	Legal framework for producers	Potential investors	Development of local food programs at schools	German technologies
	Public policies towards development	Options for the diversification of production		Machinery and instruments for production
				Alternative energy sources
Risks	Budget dependence	Milk market and pricing	Hospitals and health infrastructure	Adaptability of technologies
	External political values	Unemployment policy and strategies	External lifestyles, media and urban consumption models	Lack of innovation and capacitation
		Cities with competitive employment sources	Cultural depression	Cost of the different soil treatment techniques
			Education options at the university level	

Table 13. PEST analysis for the municipality of Italva. Own elaboration, 2015.

5.2 Observation process

For the development of this process, the simple observation was conducted as a way to notice the most relevant facts. There positive and negative findings, but the second ones were more evident and outstanding. Following the methodology proposed, these facts were enlisted and were explained afterwards by the people who had an idea of the reason behind them. Punctual interviewees with a clearer awareness of the local reality were asked about these facts and information was compiled and it's explained in the following lines.

The governmental dynamics at the local scale is closely associated to regional plans and the budget is distributed from the federal to the regional level and transmitted to the local level. Considerations for the assignment of this budget are based on the population level of the municipalities, which according to policy makers and legislation represents the rate of needs and the quantity of resources required to provide welfare and services to the people. Nonetheless, one of the most important facts observed as a consequence of the adoption of this model in the distribution of the public funds was that the local government wanted to change the local executive power headquarters, acquiring financing compromises that supposed a reduction in the rest of the budget for the social, economic and environmental programs. In addition, the economic petroleum crisis affecting the whole national budget also represented cuts in the amounts of public funds available. The situation became so critical, that even the realization of events like the anniversary of the city (one of the most important annual cultural events) was just suspended, for the first time since the creation of Italva as a territorial unit.

A low level of competency was found in some of the local secretaries' offices, were people in charge had poor or very basic experience in the management of public policy, so their designation does not obey directly to their capacity level. Administrative processes are highly bureaucratic and the time for the realization of errands, transactions and administrative procedures in general is very long, this is related to the use of manual procedures, lacking of automation and very complex considering that the scale were they take place is relatively small. Also, they are very dependent on the approval or signature of governmental representatives in higher levels, which delay the fulfillment of the necessary steps to put policies into practice, this happens especially with environmental projects, for which local initiatives have only found a way to be developed due to the participation of external programs.

Economic activity is based on milk in a considerable rate and agricultural initiatives are finding new opportunities and becoming part of the local agenda. Some other activities took place in the zone years ago, like mineral exploitation and sugar cane, rice and coffee production, being unsuccessful with the time and changed for other fields like milk of meat production, which were receiving good results before the last-years drought came. Agricultural products like tomato, bell pepper, rice and beans still occupy a place in the local branch of products, although they do not have a very high significance. One of the milk producers visited also counted on a fish farming system, revealing their interest in alternative sources of income. There is also a Scholar Food Program, where local producers have found a secure destiny for their production, and the local needs of food security are covered at least in the infantile level. This is a very positive fact, since from local actions, problems find solutions created at the internal context, which afterwards is translated into benefits and the diminution of dependence levels.

Years before, milk was sold directly from the farmers to the milk companies, who sent trucks to cover rural routes collecting the daily production. This methodology was not very convenient for producers, since these trucks passed in the early morning and generated a certain level of schedule pressure for farmers, implying the risk of loss of their production when they couldn't manage to reach the trucks' schedule. So, they found the way to organized themselves and create associations of producers, where a refrigeration tank was acquired for every small locality, allowing them to have more flexibility to take their daily production to the tank closest to their properties. The production nowadays is collected by dairies and other milk corporations every other day and producers receive monthly the amount of money equivalent to the quantity of milk they have presented during thirty days, calculated with the regional price of milk as a reference. They all give a percentage of their income in order to contribute to the maintenance of the tank and in order to cover the salary of the person in charge of receiving the daily milk production and control the administration of the corresponding proportions that every one of the producers receive as an income.

Although this is a first step in the adoption of fair and convenient production processes, there is still a big level of vulnerability in front of market fluctuations and the level of dependence on a basic and unique product makes their income very sensitive to changes. Although there are options to diversify their production, they exist in a very insignificant proportion at the level of local producers, and all of them remain waiting for the necessary investment and institutional support.

During the visits to the local land properties, it was noticed that normally women stay at home as housewives and don't develop any other activity, spending their time only taking care of the house. It was a repetitive fact found in different cases and it followed a certain trend in the rural areas of Italva. Women have low participation in local activities, being involved in barely few programs. There is a local female association, but it was closed most of the time of the field work, so no interview could be conducted, for which another representative was selected: the president of the local producers association, a woman who actually was aware of their role but in certain questions showed low level of domain beyond her duties, which was a proof of the necessity to enhance the activation of female participation in the local affairs.

Tourism is not an activity of any relevance, there aren't proposals that may serve as an attractive factor for tourists or guests and some of the historically valuable places are in decaying conditions. In one of the properties visited, there is an ancient house which was occupied by slaves and was built in the 19th century, and an old wheel next to the Macaé River which was employed to generate electricity during the very first years of the 20th century. These infrastructures have a very high historical value and could be used as a reference of the municipality, and an interesting stop for visitors; nevertheless nowadays they're in poor conditions and exposed without any kind of preservation regime or maintenance. There is not suitable infrastructure for the attention of tourists, neither in the city nor in the rural zones, only few of it was observed and the public ways to get to this accommodation places require maintenance. Nonetheless, the potential for alternative activities like agritourism is certainly very high.

The location of the city in a road corridor allows it to enjoy the benefits of transportation of goods and to be in the middle of important trade routes; nonetheless, the advantages of this location have not been seized. On the contrary, this location of the city between bigger urban complexes seems to represent a disadvantage, since industries, employment sources and other services are wider and more active in these close cities. The behavior of local development has a lot to do with this, based on the proposals of Geographic Economy and the establishment of regional development poles and the interaction of forces in favor and against the accumulation of capital.

According to the observations, the cultural life is not very active, given that the sectors of tourism, sports, recreation and culture are very poor and not attractive for external agents, like investors or visitors. This fact, the reduction of budget and the suspension of the local anniversary celebration are elements that

make the cultural dimension one of the weakest within the case study. Like in different areas of the Northwest Region, the influence of immigrants is perceptible in gastronomy and festivities, in this case the influence from Syria and Lebanon are the most important in Italva.

In the city, there are different churches that live together and guide the religious life of the population. Normally for a city of this size, the main church placed in the downtown and a couple more of chapels would be enough to receive the population religiously active; however, as it was mentioned in the description of the case study, there are around 30 temples dedicated to religious activities, 2 main catholic churches and the rest of groups of protestant roots. The reason of this dissemination was explained for one of the interviewees as an institutional phenomenon related to the lack of a representative nucleus. According to the answer received, despite Brazil is a country of catholic majority, a considerable part of the population belongs to Protestantism and other groups: these groups don't count on the nucleus that Rome represent for Catholicism, so they have to organize by themselves in associations that survive from the contribution of faithful in the form of tithe, corresponding to the ten per cent of the salary of every believer and allowing the construction of churches throughout the country. In addition, they receive donations and support from members with economic power. The reason for such level of reproduction is assumed by the interviewee as misunderstandings and disagreements between the religious leaders, promoting the opening of new temples, even in the same space.

Another fact of relevance was the observation of several local schools in the rural areas that had been closed. This was explained as a wrong bet of the government at the national scale, intending to reunite educative centers in nuclei, in an effort to simplify the distribution of scholar benefits logistic processes. Although consequences of this action does not reflect necessarily that students stopped receiving attention and classes, this actually represents the loss of rural values for municipalities like Italva, where rural life rules the culture of families, with the early inclusion of children in quotidian activities; situation that changes when scholars adopt consumption patterns from other students of the urban zones and come back interested in products from particular brands and unnecessary luxuries.

Considering the observation from the environmental perspective, it was found that there is a set of Eucalyptus crops planted in the decade of 1980, but most of them have been already retired. There were evidences of a wrong environmental management in the past, since this municipality of the Northwest

Region presents one of the highest devastation levels within the Mata Atlantica, due to the use of wood in the mineral industry. In this sense, a strong intervention of highly sensitive areas through a strong degradation has led to reinforce droughts and the affection of the soils, which has represented a big risk in terms of what climate change is producing at the local scale, beyond the consideration of global effects. These effects can be reflected in the reduction of the production capacity and water scarcity. Among other facts noticed, there were institutes going all over the zone, interested in the conduction of research in reference to the compacting of the soil as a result of the livestock production, which in a massive way may bring troubles to the water cycle in a reduced scale, associated to the capacity of the soil to absorb water, diminishing infiltration levels and enhancing the surface run-off levels. Furthermore, there are big land properties exposed to extensive livestock production which is noticeable in most of the places observed. These places are becoming dryer with the time and the dry season extended for the last two years consecutively, so despite rain was expected, it didn't show up in the right time. By the time of the visit, new rainy shorts events were appearing in an interrupted and disperse way.

In this sense, there are local projects directed to revert these effects by protecting the water sources against deforestation, closing rivers and streams' nascents in order to reduce the impacts on the areas of agricultural and livestock production, and putting into practice the rotation of pastures, at the time that environmental policies are gaining more space throughout the years. Nowadays, legislation prohibits deforestation especially in areas close to rivers' banks and special zones protected permanently.

5.3 Interviews

There were three different kinds of interviews conducted: The first, to the producers, in order to know their perspectives about the economic dynamics and their position in front of it: how do they face the current problems and how do they think on possible solutions; the second, to the actors involved in development processes as representatives of different dimensions, within governmental offices, local producers organizations and local industries. The third and last type of interview was conducted taking advantage of the visit of a freelance consultant working for the World Bank, intending to make an assessment of the performance of the Rural Rio project until the moment. The three of them were structured in different ways, and based on the condition of the interviewee in terms of pertinence, knowledge and relevance of the questions in every case.

Since the name of the participants is not relevant, the information will be described in terms of the answers provided by all of them in general without pointing out their role within the local scenario, as a way to summarize their positions about the different questions made. In this sense, the answers are going to be presented by categories, involving all the actors.

Type of Interview	Quantity	Directed to	Topic
Type I	5	Producers	Production dynamics
Type II	9	Local actors	Development of the area
Type III	1	Specialist World Bank consultant	Rio Rural performance

Table 14. Interviews conducted in the field work by types and content.

- Type I – Producers

The first kind of interview was oriented to know what the producers' reality was, beyond of what simple observation showed. Since their main efforts were put on the production of milk, there were high levels of dependence and even vulnerability, since they were exposed before market dynamics.

Producers were dedicated basically to milk production, one of them is more focused in fruits. They entered to develop this activity as a result of the generational transmission of values and production methods. In most of the cases they assumed that the benefits received from milk production are enough to cover most of their needs, without big commodities; even though fruit production was not described as a profitable activity. When they were asked about the needs that remain unsatisfied, some of them offered examples like water, workforce to improve productivity levels, food for the livestock, support and time available for the development of other activities, enjoy leisure time or travel. The level of the income is normally variable, depends on the price of milk and it behaves seasonally, with higher prices in January and low prices and income in May or June.

The advantages of milk production were the availability to receive an income weekly, every fifteen days or monthly according to what their producers association establishes. They like what they do, and they stated to feel pleased in the field of milk production. For others, there was just no other way, given the lack of support and the high costs of workforce, so they are partly limited to diversify their production or think about an alternative income source. Also, one of the benefits

pointed out was the independence they enjoy by working by themselves and for themselves.

Difficulties found for this activities were once again the cost of the workforce in order to wide production, but the price of milk was their main concerning and the biggest problem they described, since they don't have any kind of control over it and during the last years, crisis have been affecting them in a negative way. National and regional prices respond to the behavior of the market and the results of sales month by month.

Milk is sold to companies through the associations, in some cases producers are not associated and they treat directly with the company like years before, when these associations didn't exist. Most of them belong to an association of producers or are intending to be part of one. However, the ones belonging to associations demonstrated to have found it as a good idea which is showing positive results for all of them every day.

When they were asked about changes in the environmental area, they actually they exposed that certain changes have been taking place, especially regarding to temperature levels, precipitation regimes and water availability. Besides, the landscape presented variations through years due to the occurrence of deforestation events. In general, water is the main concerning.

According to their answers, the solutions to face the situation are based on the provision of water reservoirs in farms, finance support, the installation of irrigation systems via local institutional guidance and investment, and the creation of stronger associations of producers, enhancing their possibilities to act in front of market conditions and defending their right in an effective way. None of them want to change their activity, some of them argue they don't count on resources enough to do so, and some others explained their previous experiences with agricultural products without relative success. Some other limitations were the size of properties, being very small in most of the cases for the development of additional activities; the lack time availability, which was actually reduced to attend different tasks and the lack of knowledge on a different productive line.

Their vision about local potentials regarding to alternative areas of production, is oriented to the support of agriculture, remaking the quality of the land for the production of sweet fruits, with a particular flavor and full of benefits to health. Then the areas of fruits, sugar cane and tomato were the ones highlighted. One of the producers found meat production a profitable activity in

which he would invest if he had the opportunity. Nonetheless, among these answers they pointed out that the most important barrier for the development of agricultural activities was the absence of a concrete market where to put and sell successfully these agricultural products.

From their perspective, more support it's necessary, from the availability of veterinarians, to the provision of organic fertilizers, capacitation in organic practices, much more technical guidance, machinery, technological support, water and the creation of solid marketing strategies for new proposals like fishing.

- Type II

The second model of interview was directed to personalities involved in local development processes with an active participation in the local life and governmental responsibilities, including members of the local government, local leaders, gender representatives and directors of local industries.

Area	Charge
Social	Secretary of Social Assistance
Politics	Legislator of the Municipal Camera
Economy	Chairman of Bela Vita Diary
Economy	Secretary of Finance
Environment	Secretary of Environment and Public Cleaning
Technology	EMATER Supervisor
Gender & Local Organization	President of the local producers association
Culture	Secretary of Culture, Sport and Leisure
Agriculture	Secretary of Agriculture

Table 15. Interviews Type II conducted in the field, enlisted per area and charge of the interviewees.

The interview was structured in different questions aiming to know particular visions of the same context as a way to generate an integrating approach that completed the whole picture of the local reality. In this sense, the interviewees were asked to give an open description of the municipality, of the productive and cultural life (which were attention points after the observation process), a description of the problems of the municipality and possible solutions to overcome

the situation with the corresponding resources they considered required in this respect.

- Description of the municipality

The municipality was described in the interviews as new since it was emancipated in the 80s; as a small territorial unit, with only 15 thousand inhabitants, welcoming, with richness and possibilities to grow, and a region in the middle of a development experience. Culturally, it holds a high influence from Lebanon and is known as “the city of Kibbeh”.

Plenty of times, the level of dependence of the local economy was highlighted, especially from the regional and national governmental levels. Besides, the diminution of the budget was one of the most concerning aspects considered, since this fact is currently affecting the governmental plans. Sources out of the governmental sphere pointed out the ineffectiveness of the local servants and policies. Some difficulties associated to the lack of machinery for the agricultural work, maintenance and support were mentioned in addition to lacks in the health area.

Furthermore, it was described as a traditional and well-known producer of minerals like marble and granite and as good producer of cement. The local mayoralty and the rural agricultural and livestock production field are recognized as the main employers of the zone. Also, the local infrastructure is considered as valuable in comparison with other municipalities of the same size and with the same population level.

Environmentally, the devastation of the Mata Atlantica was mentioned several times as an antecedent of the current problems related to land use and current drought events. The local actors assumed that changes in legislation would lead to bring changes associated to sustainability towards the environmental management.

- Productive life

Most of the interviewees coincided in remarking the relevance of milk within the local productive scheme, and the good performance of the dairy located in the city. Also, some secondary products were mentioned, such as rice, bell pepper, tomato and vegetables, with an emphasis in the need of support for the development of this sector. Some other activities of relevance were the textile field

(garment manufacturing) and the mineral industry, which used to be the strongest economic activity in the past. Nowadays this industry is based in the transformation of rocks coming from Espirito Santo, a state in the northern border.

Some of the interviewed actors insisted in the limiting conditions of the area, by being small, lacking and dependent in an effort to explain the limitations of production. Once again the mayoralty was pointed out as the main payer agent or the main employment source.

- Cultural life

Culture was categorized as a weak area; the region nowadays is characterized by a low and “forgotten” cultural and touristic dynamics, but with possibilities to recover, though. According to the answers analyzed, the local reality is losing a lot in front of external influences even at the global scale, regarding to the impact of television on adolescents’ behavior and the loss of traditional values, among which dances and local celebrations were enlisted. In this regard, there are only two main traditional local parties per year: The anniversary of the city and the “Festa do Kibe” which is a music festival with the presentation of regional artists and that has been organized by the Lebanese community for 42 years, being even older than the municipality itself. Nonetheless, once again the incapacity of the local budget to finance local events was mentioned among the answers.

One of the reasons exposed by the interviewees as a justification of such backwardness was the geographic situation of the urban center of Italva, since it is located between two big cities: Campos dos Goytacazes and Itaperuna, where people can find whatever they need in reference to cultural entertainment. On this point, there are few options for entertainment and recreation, one of the most outstanding points exposed were the lack of infrastructure (cinemas, theaters, parks) and the need to receive incentives in order to create these facilities. For the people involved in development processes, there is a lot to do in the cultural dimension, pointing out that its development has been also affected by the reduction of public funds. In addition, they manifested that when it comes to make a reduction in the budget, culture and recreation expenses occupy the first place, since first-necessity budgets like education or health are not going to be cut initially.

One of the local values pointed out regarding the cultural particularities of the zone, was the transmission of the agricultural tradition throughout generations. The potential for tourism was validated with the mention of different natural zones

not far from the city and the explanation of what the local traditions such as “Boi Pintadinho” and “Folias de res” are about. Also, the two main local celebrations were described as possible attractions for tourists, nonetheless the lack of an ideal infrastructure respecting to accommodation and services in order to receive visitors impede the success of any local strategy.

- Main problems

The poverty in the Northwest Region was highlighted as one of the most important situations limiting local capacities. Also, one of the problems of highest relevance mentioned was health, given that the locality is lacking of an ideal infrastructure. Once again, the location of the urban center between two big cities was the reason given to issues like health and unemployment.

In certain way, the city loses opportunities for development due its localization: in terms of health, the city of Itaperuna (42 km) is recognized as one of biggest poles where big hospitals and clinics function serving as a reference even at the national scale. In terms of employment, the city of Macaé (168 km) lives from the exploitation of petroleum and is able to employ a wide range of professionals and sub-qualified personnel, offering very high salaries and being very competitive in the attraction of workforce. For this reason, the sight of young people is put in this industry, pursuing better levels of income and adopting a way of life very distant from rural activities.

According to the information collected, industrial and commercial activities only benefit to a small part of the population and it's restricted to the people involved in the local business. Most of the workforce is concentrated in the agricultural and livestock area, public services of the local government (Mayoralty) and the rest leaves the city searching for opportunities, especially towards Macaé. With the coming of the petroleum crisis, local budget was reduced in 30% and many workers have been fired during the last months, so people is returning to Italva but work market is still weak and insufficient. In addition, local productivity has suffered the consequences of this budget cuts, since operative costs for the acquirement and maintenance of agricultural machinery have also been restricted, bringing problems to the local production.

Tourism faces a very difficult issue with the absence of appropriate infrastructure to receive tourists and the poverty of local cultural services and installations (cinemas or theaters) and is one of the reasons that cause the mobilization of the population to the cities in the nearby to enjoy cultural life. So,

there are few representative cultural activities and they are not attractive enough to call the attention of potential visitors.

Education was stated as one of the strengths of the municipality, since it has been recognized for its quality several times in regional encounters. Work during childhood is not allowed according to law, and there are several social programs active: like *Projovem*, for the attention of adolescents and other plans associated to take care of old age population. Nonetheless, is possible to evidence the lack of values since childhood time, as in homes as in schools about environmental awareness and deforestation. In this vein, environmental problems still represent a threat in terms of sanitation and waste management, leading to the rise of illnesses as a result of pollution of hydric resources.

Precisely, consequences of an improper environmental management have led to the rise of problems like the extension of dry seasons and the diminution of water availability during the last years, like never before in the last one hundred years. In these terms, there's an important need of legislation tools and legal mechanisms to regulate deforestation in a stricter way and more investment is necessary for the development of environmental projects at the local scale.

- Main obstacles

In different answers, the geographic situation of the municipality and especially the city of Italva was mentioned as one of the main barriers to reach development. In this case, the interviewees repeated that Itaperuna and Campos dos Goytacazes entrap most of the opportunities coming from outside the region. They have considered this fact as positive for one side in terms of commercial communication and for being part of a regional economic corridor; but from another perspective the level of challenge is recognized as relatively unequal and even unfair.

At the governmental level, there is a lack of compromise and politic willing of the local agents. Honesty and tenacity at work are values missing in the public administration, so bureaucratic processes must be revised and reduced as much as possible. For the interviewees, the different local institutions and secretaries should work in a common scheme of planning, sharing the same agenda and unifying efforts to deal with the local problematics. Additionally, they mentioned the necessity to open the local discussion in order to include more social groups in the debate of the local situation, so that producers can receive the level of attention and accompany they really need and conditions they require can be generated

punctually. In this sense, there's the need of an enhancement of participation rates of local actors in the discussion and development of municipal and regional plans.

Economic obstacles are basically the reason for so many of the current problematics, and the solution of these difficulties could actually be the first step of the local way towards development. Besides the economic crisis at the national level, which is actually bringing important financing issues, the price of milk is too low to guarantee the subsistence of this activity and an acceptable level of income for producers. For the interviewees, a way to deal with this situation would be to attract investment of companies and industries, so that local workforce can be effectively employed, giving an answer to the critical levels of unemployment present in the zone. They also found that there is an important rate of adolescents with idle time, representing a high risk to the appearance of social vices like violence or drugs addiction.

- Main potentials

The potential for agriculture was put in first place, due to the availability of a big rural area where different crops can grow and relatively good climate conditions, despite of the extension of dry seasons during the last years. Familiar agriculture is an option of sustainable production in a reduced scale that is acquiring more relevance for the locals and is being studied as a valid solution for the economic troubles, analyzing possibilities to organize its positioning in local market through initiatives like ferias or weekly events for the promotion and distribution of local agricultural products.

There is also a very relevant initiative which is the organization of a Scholar Food Program, where children receive food based on the organic local production and is supported by an institutional cooperation network, with the participation of governmental and local actors. Main potential for these options lie, according to the interviewees, in the strategic union of institutional efforts between Rural Rio and other programs improving production, market and quality conditions. As an example of this, the reopening of a small cheese factory closed years ago was mentioned several times as a valid possibility to wide producers' capacities and opportunities, acting also as a starting point towards diversification of the local economy. Nevertheless, they don't count on own mechanisms to do it by themselves, that's why they need finance support and technical assistance in order to success in this kind of activities, although there was mentioned that exist a group of producers that already received technical training for the development of this activity.

Also, there is very high potential for milk production, even though structural problems must be revised and solved in order to provide sustainability conditions to this activity. According to the information collected, the region has potential to receive more investments in agriculture and is able to work in the attraction of industries and transformation enterprises. Resources in subsoil like rocks and minerals still represent a significant source of wealth and its exploitation is a valid option in order to strengthen the local economic variety of options. In addition, garment manufacturing was mentioned plenty of times as an activity in development and with very strong potential but still with a low level of representativeness in the economic local scheme. Furthermore, the potential for the transit of trade routes was pointed out as an advantage given that the BR-356 national highway crosses the entire municipality, including the city of Italva.

Another of the potentials resides in the building of institutional networks and association, since the cooperation of EMATER-RIO and its involvement in the local reality has been creating strong links between institutions and producers making easier the introduction of alternative technological resources.

Among the potential options for the diversification of the local production matrix, some of the products mentioned were banana, sugar cane, tomato, fish, meat and fruits in general. Regarding to agricultural activities, one of its advantages highlighted was the level of independence it enjoys, since it does not depend on governmental salaries like the labor force associated to public administration sector and consequently, has nothing to do with the commercial activity associated to consumption chains. In order to strengthen agriculture in the zone, one of the external potentials is the workforce living in big urban areas, since sometimes they have difficulties trying to find a good life level; having the possibility to be enjoying a better lifestyle working in the rural areas if there were enough incentives.

In a reunion during the field work developed with local actors, producers and members of the community in general, they gave different suggestions among which rice, beans, maize, tomato, sugar cane, banana, guava, sweets made out from fruits and milk, cheese, yogurt and more products from milk received special mention.

Culturally, some of the potentials are linked to the Lebanese heritage, costumes and gastronomy. Local events can be a potential attractive for tourists in the future, although touristic infrastructure needs to receive more attention and more investments need to be addressed.

- Resources required

Among the most relevant resources mentioned as a need in order to take advantage of the potentials above enlisted, investment was the most significant answer. Also institutional association and support was found several times among the answers obtained: incentives for production, strength of local programs like the Scholar Food Program and the technical assistance for the adoption of sustainable productive methods. In addition, a remarking factor named was the necessity of support for transportation of agricultural products since producers lose a lot covering shipping costs and the creation of specific positions for the local production in markets, in order to ensure the continuity and economic feasibility of the agricultural sector.

For the interviewees, it is important to create and bring new enterprises and open possibilities for the private investment. Also, an important concerning was the necessary support in the management of policies towards the control or regulation of milk price dynamics in order to protect producers in front of markets threats. Additionally, the spread of awareness towards sustainability principles and a proper environmental management were mentioned as a requirement in order to achieve local goals.

At the governmental level, requirements found in answers are related to personnel compromised with the rural mean, the creation of economic incentive plans and credits, support through the supply of trucks, an analysis of the tributary charge which was described as too high, more support to local institutions in charge of rural extension and the creation of legal instruments that defend the local production and generate a pertinent framework for environmental conservation. On the other hand, governmental support to culture was described as too low, so it should be increased and improved. The organization of local events also depends on governmental resources, which makes difficult to cover the realization the most important events within the municipality. In this sense, the configuration of a diverse investment committee where commercial investors and sponsors were included is an idea considered as a prerequisite for the recovery of the cultural potential of Italva.

As a possible solution for the current challenges of the region, some of the interviewees explained that one option would be the distribution of local products in the local market, since actually demand is partly covered with products coming from other regions and municipalities; in this sense, external dependence and

problems related to the distribution of local products can be moderately diminished.

- Type III – World Bank Consultant

The World Bank consultant was asked about her work in the field, specifically the one related to Rural Rio. Firstly, the interviewee pointed out that she was a freelance worker, working for the World Bank through a temporary contract. She is an Economist, and her work consisted in an assessment of the results of Rural Rio, obtained until the moment, in order to know if the program is being actually profitable.

According to her answers, the World Bank makes loans to determined nations in order to finance projects oriented to improve environmental and social conditions, especially in the areas of food security, education and health. Also, the World Bank provides support in the organization of the activities within projects and monitors goals. These objectives are explained for the interviewee as the improvement of the life level and life conditions. In Brazil, the World Bank is focused in the improvement of productivity and in the provision of support to agricultural sustainable initiatives at the local scale.

Additionally, she described Rio Rural as a Program born from the GEF (Global Environmental Facility) with the intention of supporting production methods, more focused to the economic arena. Nonetheless, after an extension received by the program, the whole scheme grew as in objectives as in financing.

For her, the results of Rio Rural are positive, she thinks the project is very well thought and have addressed with accuracy the situation of the families. The evaluation carried out by this institution is based, according to the interviewee, in three “ideas”: efficacy, efficiency and pertinence or relevance. Efficacy is measured in terms on how well the proposed goals were reached or not, efficiency (her task) about the evaluation of profitability of the activities ad pertinence or relevance which has to do with the appropriateness of the policies and how these practices are inserted in the State policies.

Leaving aside what correspond to the rest of the areas, she thinks that the project has shown positive results and definitely will serve as a platform for the introduction of future changes. From the beginning they have received a very kind welcome from producers, and they recognize producers make a space in their diary agenda in order to receive them with arms wide open. Nonetheless, time is not

enough to talk about everything they want to expose and in the conduction of visits to rural properties, they learn a lot from every one of the producers' revelations.

Some of the problems during the development of the activities according to her appreciations, were the growth of the compromises and beneficiaries involved in the project, for which reason sometimes the quantity of technical assistants is limited and it has implied the expansion of institutional accompaniment programs at the local scale. Also, it's necessary to revise the range of the project and to consider if all the population will end up being benefitted, given that the investment capacity is limited.

For the interviewee, an important point that is being forgotten is the demand analysis necessary to carry out economic projects, which imply an investment, the use of resources and the development of a whole production process and could all be lost if market conditions are not revised first. So, alternative proposals are always welcome as long as they are formulated within an economic feasibility framework.

Finally, her contribution to the program would be the creation of monitoring mechanisms that allow the producer to find the way to solve difficulties in production and could limit their participation in local initiatives. Despite the World Bank is not going to be there in the years to come, local institutions would play a key role in the permanent support they require in order not to permit the loss of the current achievements.

During the conduction of all the interviews, the answers were related to geographical facts and the assumption of influences in the area. The cities mentioned with more frequency were Itaperuna, Campos dos Goytacazes, Macaé, Rio de Janeiro, Sao Paulo and Cachoeiro de Itapemirim in the state of Espirito Santo.

Results obtained with the use of MAXQDA in the analysis of the information obtained is presented in the following Chapter, as a way to provide visual evidence of the analysis process and work as a complementing element in the interpretation of the results above described.

VI. Discussion

6.1 Description of the current facts

Most of the facts pointed out in the last Chapter describe by themselves the reality of the region, and highlight where the critical points are, acting like determinant elements in the flow of events and consequently guiding the entire cycle of the socioeconomic local scheme. Some of these determinant facts are linked to historical, geographical, economic and sociological effects on the current scenario that the municipality presents nowadays, and are described according to the results found through the analysis of interviews, always in combination with the observed particularities.

In the first group of interviews, the results showed a clear concern for the situation faced by production today and most of the comments were directed in a first image to the economic dimension of the local life. Also, other lines of discussion that received special attention were the requirements for the conduction of plans at the local scale, where water was qualified as the most important and critical lack, followed by governmental and institutional support and technical assistance.

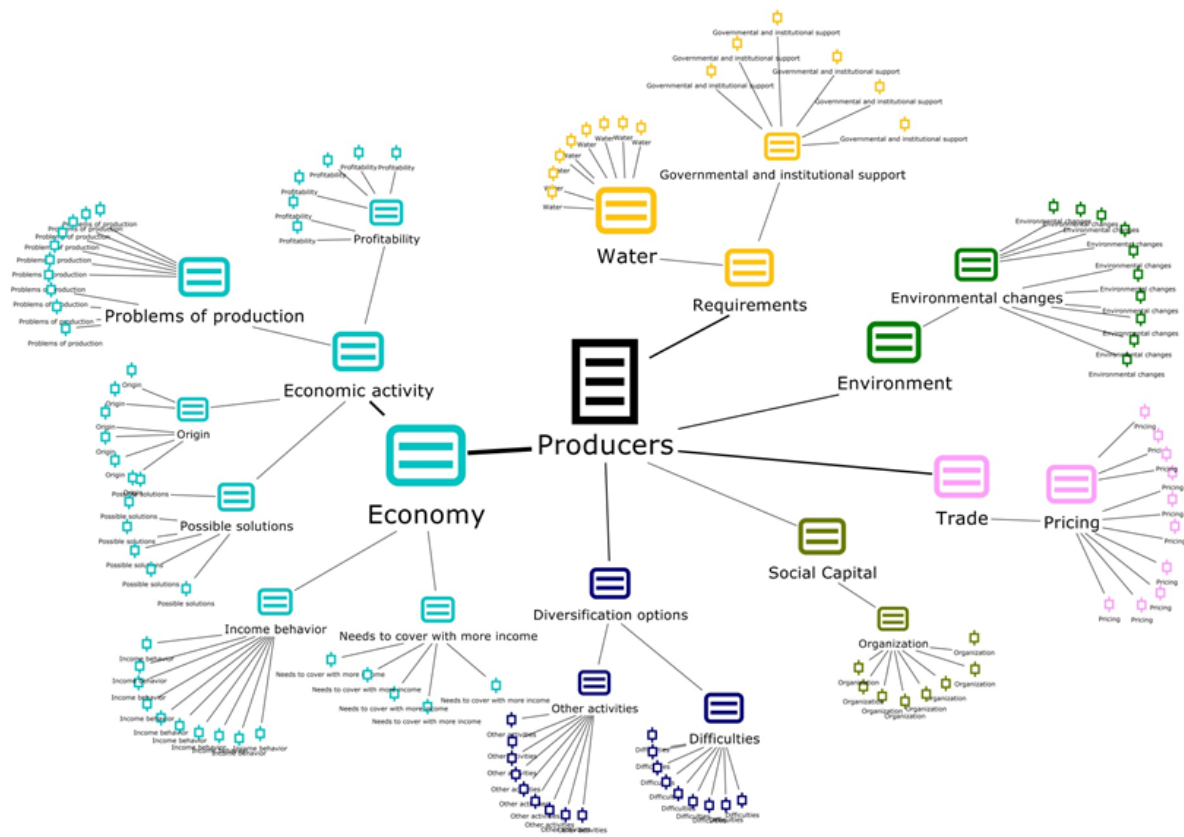


Figure 17. MAXQDA map for the results obtained in the model interview directed to producers. In the image, the link of Economic activity refers in a 90% to milk production. Own Elaboration, 2015.

Among other relevant answers obtained, were the environmental changes experimented by the local context throughout the years; explanations about the trade line managed nowadays; the comments related to organization methods towards the construction of a solid basis for the social capital; and some options proposed for producers regarding to the diversification of production.

From the economic perspective, producers have a very high concern about the price of milk, which confirms their incapacity to deal with market fluctuations and uncertainties associated to the development of this economic activity. This is a sign that explains why changes in the productive field have been so slow in terms of time, since individual efforts haven't been enough to generate the conditions for an increase of productivity levels. Additionally, when it came to think about alternative options, few ideas were barely taken out; which responds to important facts like the cultural stick to milk production, limitations for the conduction of other activities and low levels of local knowledge and entrepreneurship in areas out of milk production.

Water and institutional and governmental support received special mentions as the most relevant requirements to put into practice encouragement programs in order to activate once again the dynamism of the local economy; revealing an important deficit of the local production system: a high level of dependence from external sources and a poor or null management of self-built options.

Furthermore, the occurrence of changes in the landscape, deforestation and water scarcity are an evidence of the impact of the economic model adopted locally; directed to satisfy external necessities, acting as a mean for the exit of the local wealth, since the income from these activities is also invested outside in the acquisition of commodities instead of being invested in capital goods. This also reveals important characteristics of the system: the presence of lacks respecting to the productive model and its unsustainability in terms of time.

Nonetheless, there are initiatives working for the mitigation of these effects in a corrective level, implementing measures to face water scarcity and introducing sustainable production methods in agricultural activities. The goals are oriented to adopt economic activities in a logic harmony with natural process, stop the degradation of soils and the expansion of damages in the landscape, considering a change of the scope from the corrective to the preventive level.

From the perspective of the actors involved in development processes, local problems have another explanation and obey to additional reasons. In this model of interview, the objective was to identify obstacles for development processes and obtain a set of proposals towards their overcoming. However, the areas object of main attention were the description of local problems and what does the municipality need in order to be inserted into a proper way towards development. So, once again self-created solutions seemed to be absent of the local paradigm, which is a sign of how dependent the local system is.

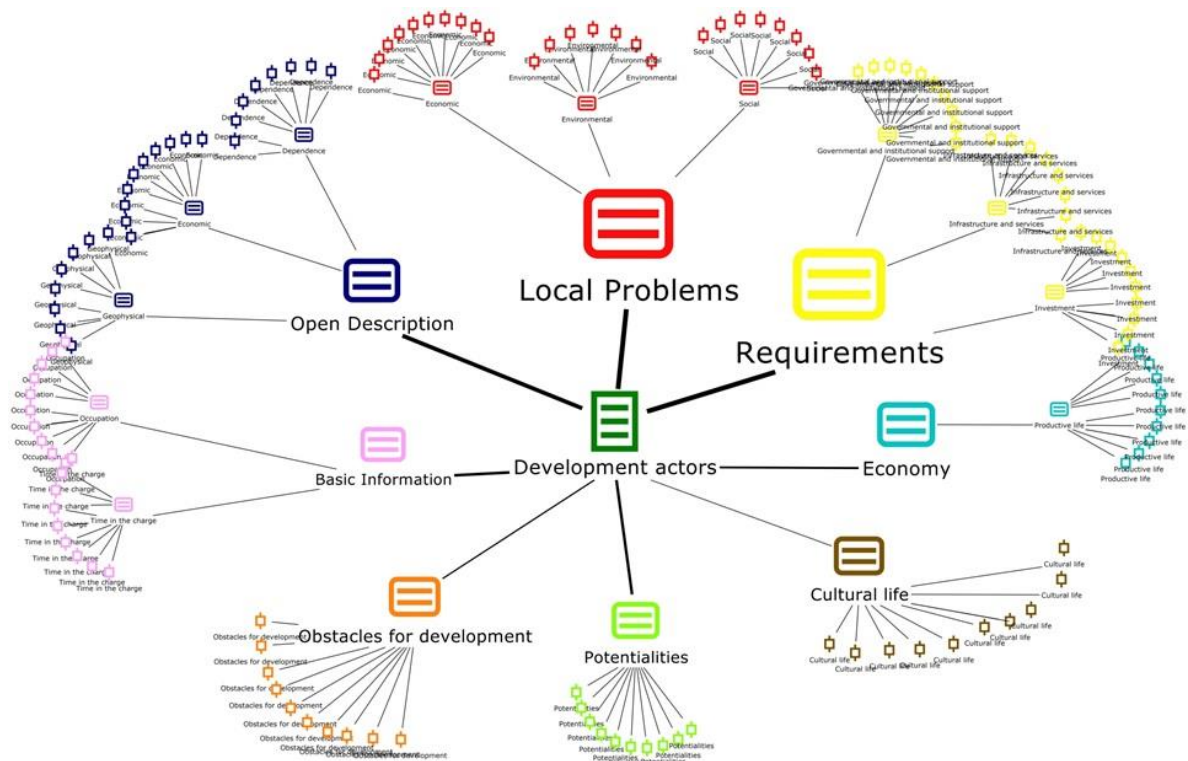


Figure 18. Resulting map of the analysis conducted for the interview Type II, directed to Development Actors in Italva. (Every square represents a sentence referred to the corresponding topic). Own elaboration, 2015.

A problem in the analysis conducted was identified as a situation that is currently taking place and is affecting negatively the local context, while obstacles were labeled as those facts that could represent a barrier in the conduction of development plans from a hypothetical perspective. The main problems are referred basically to the massive migration of workforce, financing limitations, health lacks and the poverty of cultural life. The migration of workforce is caused by the high competitiveness of cities located near Italva, although this phenomenon not only obeys to the strength of the petroleum labor market, but also to the absence of productive activities that report a relatively good level of income in Italva. In order to activate employment, is necessary to activate the local productive life by the creation of activities related to the capacities of the region, in order to employ the permanent rest of workforce.

As an example of this, it was possible to recognize two circumstances that influence the *modus operandi* of the local reality in terms of time and productivity: First of all, the role of women is underestimated, since they spend their lives as housewives, attending home affairs and taking care of family; although they are

willing to participate in more activities like dressmaking, where they receive almost no support. During the stay in the field, it was possible to visit installations in a small producers association where these practices normally take place, nonetheless women attended irregularly and infrastructure and instruments were certainly basic and rudimentary. On the other hand, religion plays an important role in the life of inhabitants, to the extent to imply considerable investments and monetary flows; and count on the participation of an important sector of the population, who dedicate part of their time to devotion and reduce the time invested in activities linked to the economic or academic spheres.

Financing limitations are possibly the most uphill difficulties to face, since the creation of local income requires the building of a whole economic structure, which raw materials are available locally and which benefits are invested in the local economy to promote growth and lead to the reduction of dependence levels. Subsequently, health and cultural lacks in infrastructure would be covered as an effect of the growth process, once it reaches a dynamic performance. However, reality reflects that this level of dependence is exactly the responsible for the impoverishment of local ideology and the weakness of values like creativity, entrepreneurship, association and empowerment.

In summary, the geographical situation of the city of Italva represents a very significant disadvantage in terms of regional development and is basically one of the drivers for the leak of capital. In the same way, this fact and the governmental model under which this society have developed such dependence levels, are the two most relevant paradigms to address in the local context in order to access to a state of permanent progress.

6.2 Identification of outstanding potentials and obstacles for ED in Italva

As it was pointed out in the exposition of results, the main obstacles enlisted were the location of the city between urban poles, the social lack of values especially in the exercise of power at the local scale, the existence of bureaucratic processes, the vulnerability of milk market and the possible rise of subsequent negative environmental effects.

From the Economic Geography perspective, the consequences of the location of Italva in such dynamics between other big cities, confirms the presence of strong centrifugal forces that limit the accumulation capacity of the economic system and delay urban and infrastructure development. So, it is important to start recognizing

the relevance of this finding and operate addressing the threats of external influence on local growth.

From the side of positive aspects found, sustainable agricultural options present good possibilities of success since they would diversify the local income based on milk, they would provide quality agricultural products to the community increasing food security levels, and they would reduce dependence on external products. Likewise, despite tourism was not mentioned in answers like a valid possibility for the diversification of the local income, the potential for agritourism is relatively high, so an evaluation of the necessary investments should be conducted in order to have a first image of the feasibility of this activity in Italva.

In the same way, the local context possesses unemployment rates constituted by people that in many cases are willing to learn about a given technical process or occupation, and could be included in the wide of the productive chain based on milk: production of yogurt, cheese and butter at the industrial level. This second stage in the productive chain would bring the increase of the representativeness of milk production and its corresponding benefits: employment, creation of added value and growth of the local sense of belonging.

6.3 The role of INTECRAL within the context analyzed

According to what has been discussed until now, actions of projects like INTECRAL within a framework of institutional cooperation, should be based on the transfer of knowledge and the creation of conditions for sustainability in the local economic activity. Disadvantages like the lack of suitable production methods and the inexistence of permanent monitoring strategies expose any attempt of investment to suffer inconsistency effects and the consequent loss of efforts and values added to the local scenario.

In this sense, the participation of the project in the creation of punctual plans for the mitigation of drought effects and the improvement of conditions for the reactivation of the local market is fundamental. These two big objectives may be conducted through the transference of technology and the participation in capacitation programs that start the way to the construction of local capacities, making use of means like workforce and the inclusion of potential workers in the new rurality. So, the participation of the project within the local dynamics would act as a force generating conditions and promoting ideas for the formulation of policies towards the use of sub-employed local resources.

In summary, the conduction of a rigorous and formal economic analysis of the potential for diversification of income would be a first step; the evaluation of the links between personnel requirements and the realization of particular plans at the local level as a methodology for the inclusion of women and young would be a second step and the transfer of knowledge through the capacitation of personnel would generate a third representative impact. About this last point, despite capacitation tasks are not possible in a permanent way, the provision of a structured set of guidelines towards sustainable productivity to be spread by local institutions or partners would open spaces for the transformation of the local mentality.

In addition, the promotion of association mechanisms during the conduction of micro projects is a significant contribution to the future organization methods of the locals, remaining as a structured scheme that makes easier the involvement of community in common problems and strength the formation of a solid and qualified social capital.

The influence of INTECRAL in the factors considered for the PEST analysis of Italva can affect positively several elements like the ones shown in the table below:

Political	Economic	Social	Technological
Institutional networks	Cities with competitive employment sources	Strength of social capital	Technology in agricultural production
Public policies towards development	Milk market and pricing	Social Programs at the regional and national scale.	Climate change mitigation methods
	Potential markets for the diversification of the economic spectra	Sense of belonging	Adoption of German technologies
	Unemployment policy and strategies		Innovation and capacitation
			Soil treatment techniques

Table 16. Elements of the PEST analysis where INTECRAL could act as a driver of changes. Own elaboration, 2015.

In the political arena, institutional cooperation and the participation in the construction of networks, with more partners involved, is an activity that this project may seize in order to evolve and expand, having a stronger presence in the context of RJ and establishing more links with Brazilian and German institutions related to science, research and technology. Even though the period established for the development of the project will come to an end in 2016, the dissemination of its results in Brazil and Germany, may conduct to the establishment of stronger networks with high possibilities to create new initiatives with a similar scope or even wider, like happened in the case of Rio Rural.

Additionally, the project may participate in the creation of economic conditions for the establishment of a stronger local market, which can be strengthened through the definition of strategies for the diversification of production, research about the adoption of alternative crops, soil studies, a market research and a demand assessment in order to know real economic possibilities, and may also contribute to the improvement of the local labor market.

Furthermore, the contribution of the project in the social arena might be related to the institutional support to local activities, its participation in the financing of projects with women in the creation of handicrafts, textile pieces and others, and the organization of local markets where milk and organic products are sold at a low cost. Finally and most important, the acquisition and transfer of technology and new means to produce are the most representative impact that this project could manage to generate in the local reality. In addition to the steps given towards the establishment of silvopastoral systems, actions for the mitigation of strong dry seasons are needed: the scarcity of water requires the creation of efficient catchment and distribution systems and the creation of better irrigation methods, it's also necessary to search for the way to guarantee food for animals during the dry season in order to avoid so many losses, there's an evident need to work on reforestation and recovering of degraded lands and to provide to farmers natural means to face the presence of plagues in crops and illnesses in animals.

In this sense, contributions of INTECRAL could go beyond the transfer of technology, and start dealing with weightier impacts in the local scheme. Nonetheless, the focus of further ideas could not embrace the entire state of RJ due to logistic, time and budget limitations. Considering this, the North and Northwest Regions possess the most critical profile with respect to the environmental and productive conditions, for which any of them could be a good starting point.

6.4 Endogenous Development in Italva

As a result of this work, comparisons between theoretical statements and empirical findings show certain differences to describe. There were categories of the societal dynamics observed that responded exactly to the ones established by the theoretical proposal of ED and no other categories were found, since most of the elements discovered can be included in the existing matrix of analysis. Nevertheless, analyzing also the possibilities to carry out policies based on *endogeneity* principles, some of the limitations arose, demonstrating the low possibility of success of ED policies in Italva.

6.4.1 Key findings

Despite there are elements considered as positive and even desirable in the context analyzed such as an increase of the association mechanisms, a relatively recoverable social capital, the existence of local talents, a wide range of resources available and possible options for the diversification of the economic activity, there are two elements not considered in theory, that actually represent the main barriers when it comes to consider *endogeneity* logics and may probably be found in many other case studies: dependence level and leaks.

Dependence levels of Italva are extremely high, and go direct against the capacity building and entrepreneurship values exposed by the theoretical proposal of ED. The municipality depends on the distribution of the regional budget which is based on population level as a reference, where Italva doesn't have how to compete in front of other municipalities: the higher the population level is, the more resources are assigned. Besides, the geographic location of the city plays against the independent growth of the urban area and the improvement of quality of life in rural areas, since it is subject to its satellite condition in the regional panorama.

Also, through the revision of the results obtained, it is possible to evidence that most of the initiatives in the local desks were stuck due to financing limitations. One of the reasons given in order to explain the situation was the recent occurrence of an oil crisis, which has affected the entire economy at the national level. So, once again the existence of dependence relationships between the different governmental scales (and social vices like bureaucracy and corruption) retard the provision of financing resources and slow down the movement of the local dynamics. In an alternative scenario, the local capacity could deal with situations like this, by the adoption of economic activities that enlarge the

monetary flux within the municipality and provide the necessary level of investment that lever economic growth.

In the same way, the leaks of the system permit the exit of every investment made, impeding the accumulation of capital, as the theoretical model of ED suggests. These leaks are identified mainly as the migration of workforce, the loss of cultural heritage and the centrifugal forces acting in the cities around Italva against any attempt of accumulation. So that's the reason that justifies for example, the failure of many industries that were installed in Italva but closed their doors and never came back.

During the analysis of the situation, opinions and positions were often directed to mention three important facts:

- The lack of movie theaters, cinemas and recreation spaces.
- The existence of very good employment conditions in other cities.
- The existence of better infrastructure conditions and health services in other cities.

These three facts represent the reason for the losses of Italva in the cultural and socioeconomic areas. Students and workers migrate and don't take part in the construction of the local economy, leaving this process to take more time and making it ineffective due to the lack of participants. Also, the almost inexistence of proud and love for the local identity, represents for the city a big loss, since it becomes a place where people live, eat and sleep, but don't feel proud of, it's like a settlement in the middle of the road where nothing is possible and everyone has to find what they need driving at least 40 min. Although it is very difficult for plants to grow surrounded by huge trees, the adaptive nature of species has made them take advantage of the proper quantity of solar energy and nutrients in the soil in order to survive. Likewise, territorial dynamics involve the pertinent utilization of resources around and especially within local systems, since they are the main source of potentials, where particular wealth lies.

Hence, as long as adequate infrastructure and employment sources are not created in Italva, the scape of vital resources is not going to stop or even diminish. Then, a local policy towards development should firstly consider investments directed to solve infrastructure and employment issues, if the goal is to generate subsequent conditions for growth.

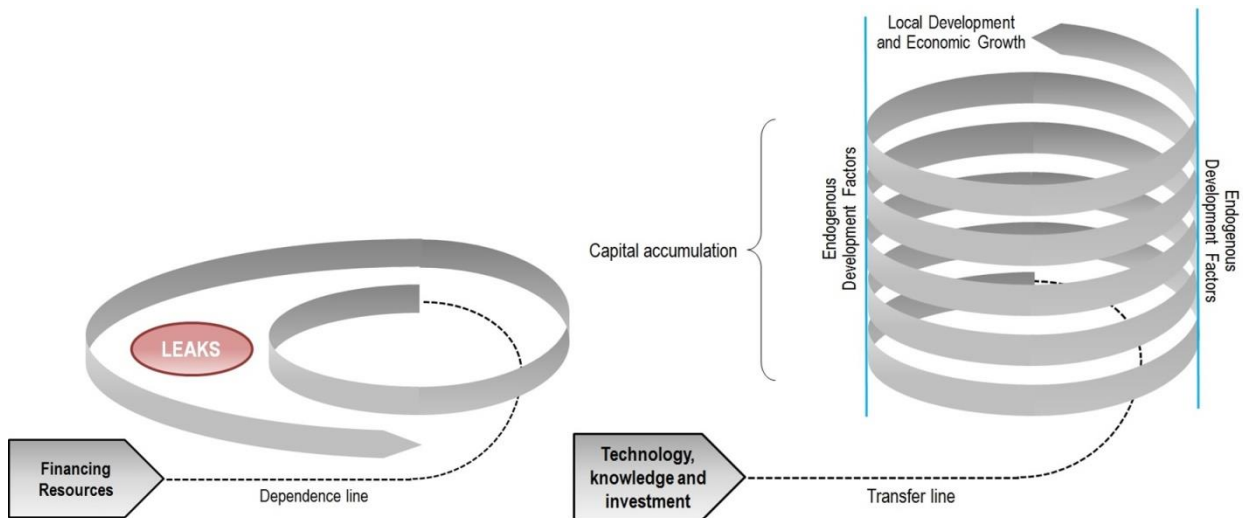


Figure 19. Leaks in capital accumulation and dependence relationship between internal and external contexts in an ED scenario. Own elaboration, 2015.

So, as a concluding lesson of this approximation carried out, is possible to state that feasibility levels for ED in a determined context go beyond what theory establishes from a normative position, since there are elements in reality that differ from desirable ones and there are no considerations in theory for such a common situation in real scenarios. In the same way, every context is different in size, characteristics, lacks and potentials; for which these considerations about dependence and leaks may also differ from place to place and affect in a more (or less) representative way the course of actions within local systems.

VII. Conclusions

Development studies have covered the analysis of objectives towards progress and welfare from different perspectives, being historically in a constant change considering elements from societal models, like is evident in the study of the different development theories. Nevertheless, aspects like the human vision of development and the redefinition of the direction of efforts has received little attention. Endogenous Development is a proposal that takes into consideration

elements from inside the social systems at the local scale in order to address issues and use internal potentials in the achievement of goals towards development under sustainable productive means.

The municipality of Italva is an example of how a space where previous efforts for the establishment of structural economic activities has seen its opportunities go and have been seized by other urban areas with a highly competitive labor market and better infrastructure conditions and services networks. So, it was found that in such scenario, Endogenous Development could not take place with successful results, given to deficiencies in structural conditions.

In addition, environmental consequences of an improper management of resources in Italva have led to the impoverishment of the natural heritage (also considered as part of the richness of the region in the shape of natural capital), through actions like deforestation, soil degradation and the inattention and overexploitation of water sources, affecting climate dynamics at the local scale. In this sense, the adoption of new development policies subscribed in the sustainability framework, represents a valid and rising alternative taking place nowadays within rural communities in RJ, and requires the necessary support through the provision of investment and knowledge in order to make locals capable to conduct a sound environmental policy without the permanent assistance of external institutions conducting monitoring programs. This would definitely get to the construction of a strong social capital: aware and capable.

Development processes under an endogenous approach, consider elements like social capital, reduction of transactional times and the exploitation of local resources for the satisfaction of local needs. Despite of this, theoretical assumptions of ED are not totally adaptable to different realities given to the existence of disruption elements responding to particular contextual features in every case study. These elements interfere in the creation of ideal conditions for the implementation of development plans.

So, as a previous step in the formulation of any kind of development policy especially at the local level, is necessary to analyze the reasons for the delay of the region in comparison to others when it comes to talk about cultural, economic and social fluxes. In this sense, during the assessment of the conditions found in Italva, two main disruption factors were identified: the existence of high levels of dependence with respect to the external context and the presence of significant leaks within the system. The level of external dependence, especially respecting to political functions, budget distribution and financing resources makes an uphill

task the creation of production measures based on local resources and the rise of opportunities for entrepreneurship, growth of social capital and self-guided development processes at the local scale. In the same way, the lack of infrastructure and a structured labor market enhances losses in the socioeconomic and cultural spheres, representing systematic leaks that impede the realization of any strategy intending to the accumulation of capital in order to stimulate development processes within the local context.

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