

**UNIVERSITA' CATTOLICA DEL SACRO CUORE**  
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Cycle XXVI

S.S.D: SECS-P/02; AGRI-01; SECS-P/06

**Innovative Regional Development Theories, Policies and  
Approaches for Food and Nutrition Security**

Candidate : Stefano Marta

Matriculation: 3911389

**Academic Year 2012/2013**



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**Coordinator: Ch.mo Prof. Antonio Albanese**

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**Candidate: Stefano Marta**

**Matriculation n. : 3911389**

**Tutor: Prof. Francesco Timpano**

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## Introduction

Despite the frequent references made in the food and nutrition security literature to the importance to reduce the disparities between lagging areas/populations and rich areas/populations and to reduce the distance between policies, generally made at the national or higher levels, and "*local*" needs, including through a stronger involvement in decision-making of local stakeholders<sup>1</sup>, only few scholars and researchers have attempted to address the linkages between territorial development and FNS. Most of the conceptual and analytical contributions to the approach proposed in this thesis are drawn therefore from two main strands of applied research: food and nutrition security (FNS) and regional (territorial) development literature.

The issue of FNS has been usually addressed at global, national or individual/household level, while the intermediate territorial level has been very often neglected. Rarely FNS policies have taken into account the geographical dimension, and in particular territorial disparities, which are an indicator of the different economic, environmental, social and cultural vulnerability of local communities.

In addition, the terms food and nutrition security, agriculture and rural development have been traditionally used as synonymous, which reflects a sectoral approach to the issue of FNS, while – as per FAO definition (2011) – food insecurity is a multi-dimensional and multi-sectoral problem, which include availability, access to food, utilization and stability. It is also recognized that the multi-dimensionality of FNS calls for integrated actions focusing on the interactions and interdependencies between sectors and actors.

Globally, the world produces enough food to feed everyone, yet 850 million of people suffer from hunger and malnutrition (FAO, 2012). “The principal cause of food insecurity remains poverty and inadequate incomes” (OECD, 2013, pag. 12). In many countries, access to food, more than food availability, seems to be the main challenge for food and nutrition security. “The foremost cause of food insecurity is a lack of access, which stems from people not having what Sen referred to as the “entitlements” necessary to provide them with adequate food and nutrition (Sen, 1984). Those entitlements can derive from production (growing food), trade (buying food), own labour (working for food), and inheritance and transfers (being given food). The foremost reason for households lacking access is poverty and deficient incomes.” (OECD, 2013, pag. 98).

Therefore, food and nutrition security should be addressed as a complex socio-economic development rather than as a food production issue. At the same time, its multi-dimensional and multi-sectoral nature as well as the territorial dimension characterizing this pressing problem needs to be considered and reflected in FNS policies and strategies.

The aim of this PhD thesis is to investigate, analyze and build empirical evidence on the relevance of territorial approaches for addressing the issue of food insecurity, both through a review of the literature on FNS and regional development and through qualitative and quantitative analytical methods.

The first Chapter and the majority of the second Chapter were developed during the one-year research period at the Centre for Urban and Regional Development Studies (CURDS) at the Newcastle University.

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<sup>1</sup> The literature on FNS includes documents from the United Nations, in particular the UN High Level Task Force on the Global Food Security Crisis Report (Updated Comprehensive Framework for Action, September 2010) which identifies the main issues, goals and future challenges towards food and nutrition security at international level, publications from FAO, especially the work on Zero Hunger describing the Brazilian experience on eradicating hunger (José Graziano da Silva, Mauro Eduardo Del Grossi, Caio Galvão de França Zero Hunger, the Brazilian Experience FAO, 2011), some researches on food security developed by other international organizations such as the WFP (World Food Programme), the World Bank, OECD and IFPRI (International Food Policy Research Institute).

The first Chapter of the thesis aims at analyzing - through both the literature on FNS and regional development - the potential effectiveness of the territorial/place-based approach for FNS policies. The analysis is strengthened by interviewing the main experts – from Academia and International Organizations – on the issues of FNS and regional development, which allowed to define a conceptual and policy framework for the territorial approach to FNS policies.

Given the key role of institutions and multi-level governance for implementing effective territorial approaches, the second Chapter focuses on these dimensions. In particular, this section stresses the importance of a well functioning multi-level governance system and of solid formal and informal institutions for the territorial approach to FNS, which entails a shift from a top-down, centrally-driven government system to a bottom-up multi-level governance system based on the involvement and participation of local stakeholders (local authorities, etc.) in the decision making process.

Another key issues in the formulation of FNS policies and strategies is the need for robust methodological and analytical tools as well as adequate information system to support decisions and policy-makers, in particular with respect to innovative approaches such as the territorial one. There is a need to identify, develop and apply tools to measure, assess and monitor FNS determinants and structural causes at all levels (global, national, sub-national), but in particular at territorial/meso level, given the lack of evidence and the limited focus on this dimension.

The second part of the thesis aims at filling this gap by developing tools and approaches to measure and assess the territorial structural determinants of FNS. In particular, it proposes two different tools to fill the above mentioned gap: the Territorial Capital Index (TCI) and the Social Accounting Matrix (SAM). The purpose of part of the thesis is to illustrate the food security policy implications of a combined approach based on the Territorial Capital Index (TCI) and the Social Accounting Matrix (SAM) which integrates the assessment of territorial tangible and intangible assets affecting food security (TCI), with the socio-economic flows among households and institutions within a given geographic area and among areas.

The Territorial Capital Index is analyzed in Chapter III. The TCI is a composite index that provides a synthetic measure of the physical, human, and natural assets contributing to food security and more in general to the development of an area. By highlighting the relative strengths of the various assets within a particular territorial space and among territorial spaces, it allows for mapping and benchmarking of food security situation and improvement opportunities. The TCI was developed in collaboration with the European Commission Joint Research Centre, Unit of Econometrics and Applied Statistics (Ispra). In particular, this part of the research benefited from the supervision of Paola Annoni, who guided me in the construction of the composite index when I spent some days at JRC during the second half of 2011.

The methodology is applied to Syria and in particular to Al-Ghab, an area situated in the Hama Governorate. The research benefited from the continuous collaboration with UN FAO, which in addition to providing the data of the household survey for the analysis, allowed a fruitful exchange of ideas and information, in particular with Vito Cistulli who supervised me during my work at FAO.

While TCI assesses the stock of territorial assets, SAM (Chapter IV) is a particular representation of the economic accounts of a socio-economic system, which capture the transactions and transfers between all economic agents in the system (Pyatt and Round) and the interaction between the various assets.

The SAM policies scenarios were developed in strict collaboration with the University of Macerata, Department of Economics and Law, in particular with Ciaschini Maurizio, Socci Claudio, Pretaroli Rosita, Severini Francesca, who constructed the SAM.

Through the TCI, a benchmarking system is established between the agro-ecological zones composing the area, in order to highlight the strengths and weaknesses of the territorial systems in view of

improving food and nutrition security. Based on the results of the TCI, which identifies the key drivers of FNS in Al-Ghab and shows a strong linkage between territorial assets and FNS, eight SAM policy scenarios were developed to analyse the impact of alternative policies on the different dimensions of FNS.

The combined TCI-SAM approach provides policy makers with comprehensive territorial information to target food and nutrition security strategies and policies and to better allocate resources. The integration of these “stock and flows” measurement tools will enhance the capacity to measure the multiplier effect of investments and policies and therefore help the decision makers to better target policy and investments for food and nutrition security.

# Chapter 1: theoretical, conceptual and policy framework for the territorial approach to FNS policy.

## Abstract

*The pressing nature of the issue of hunger and food insecurity, the first United Nations Millennium Development Goal, the fact that this MDG is far to be achieved by 2015 and the growing consensus around the inadequacy and ineffectiveness of the traditional approaches to tackle it, suggest that new approaches to food and nutrition security (FNS) policies and strategies should be explored, developed and implemented. In particular, the inadequacy of past policies suggests that there is a need to shift from one-size-fits-all, entirely top-down and sectoral-based approaches to integrated, context-specific and place-based approaches which would allow to capture and include the complexity of development, the importance of territorial endogenous development potential, the key role of both national and sub-national actors and stakeholders through the principle of multi-level governance in the policy-making process. The place-based approach to development policies, which the OECD defines as the new regional development paradigm, is built and developed on the basis of these key principles and concepts. This paper tries to explore and analyze the extent to which a place-based approach, which so far has been applied and implemented mainly in developed countries and in few cases in developing countries (eg. Cambodia) to address more generally the issue of development, could represent an effective and beneficial policy approach to tackle the issue of food insecurity. This research question is addressed both through a comprehensive literature review on food and nutrition security and on the innovative regional development approaches and paradigms, and by interviewing some of the main experts in terms of food security, place-based/territorial approach and its critique, namely the spatially-blind approach. The result of the research is a conceptual and policy framework for the place-based approach to food and nutrition security, which highlights the rationale, potential effectiveness and key concepts characterizing this innovative approach and tries to identify its potential limitations and ways to strengthen it. It is finally suggested that this territorial dimension should be more reflected in food and nutrition security policies and strategies.*

**Keywords:** Food and Nutrition Security; Place-Based Approach; Regional Development Policies.

## 1 – Introduction

Food insecurity is one of the most pressing and pending issues that International Organizations, National and Regional Governments, Civil Society are facing nowadays. The goal of halving the number of undernourished people from nearly 850 million in 2000 to 420 million in 2015 is not on track: in 2010 more than 900 million people were still food insecure and the food price spike in 2011 contribute to increase this number (FAO, 2011). This unacceptably high proportion of undernourished people stresses the need for different and more effective approaches to address the food insecurity issue and more generally the issue of development in developing countries.

The need for different development approaches and policies is stressed by many authors (Easterly, 2002; Rodrik, 2005, Pike et al, 2006; Rodríguez-Pose, 2011; Barca et al, 2012) and International Organizations (OECD, 2006, 2009 and 2010; European Commission, 2009; World Bank, 2009). In particular there is a growing recognition that in order to increase the effectiveness of development policies it is necessary a shift from one-size-fits-all solutions to context-specific policies and strategies (Rodrik, 2005; Pike et al, 2006; Barca, 2009; OECD, 2009; Barca et al, 2012). Rodrik's main conclusion, based on the analyses of, first, the so called Washington Consensus policies and approaches and then particularly of the World Bank Report "*Economic Growth in the 1990s: Learning from a Decade of Reform*" is that this Report "warns us to be skeptical of top-down, comprehensive, universal solutions - no matter how well intentioned they may be. And it reminds us that the requisite economic analysis - hard as it is, in the absence of specific blueprints - has to be done case by case"



(Rodrik, 2005, p. 986). According to Rodríguez-Pose (2011), “despite some progressive adaptations, development strategies and policies across the world have remained firmly anchored in top-down, centrally planned, often supply-driven, technocratic policies, whose impact on economic development has been, more often than not, questionable” (Rodríguez-Pose, 2011, p. 85).

With regards to regional development theories and policies, given this strong and widely recognized need for new regional development paradigms and approaches, in the last few years some relevant publications have been developed both by International Organizations, mainly the OECD (2006), and Academia, eg. Pike et al. (2006). These publications started to identify the need for an integrated, territorial or context-specific approach as one of the main pillars of a new regional development paradigm in antithesis to one-size-fits-all and to traditional sectoral approaches.

In addition to these theoretical and conceptual progresses, in the last three years there has been a growing effort by International Organizations (OECD, EC, World Bank, UNCDF, CAF) to try to apply these new paradigms into policy practice, generating a debate on development interventions. In 2009 and in 2010, five highly influential reports rethinking regional development policy interventions were published: the *Barca Report* for the European Commission (2009), two OECD publications, namely *How Regions Grow* (2009) and *Regions Matter* (2009), the World Bank *World Development Report* (2009) and the report *Desarrollo Local: Hacia un Nuevo Protagonismo de las Ciudades y Regiones* by the Corporation Andina the Fomento (2010). Although these influential reports address similar issues related to development policy interventions, they reach very different conclusions in term of policy approaches (Barca et al, 2012), generating a debate on the so called place-based versus spatially-blind approaches.

The key concept emerging from these OECD publications (2009 a, b) and from the Barca Report (2009) “is the place-based development approach, what the OECD calls the “new paradigm of regional policy”, which has been experimented within various parts of the world in the past two decades. Its objective is to reduce persistent inefficiency (underutilisation of resources resulting in income below potential in both the short and long-run) and persistent social exclusion (primarily, an excessive number of people below a given standard in terms of income and other features of well-being) in specific places” (Barca, 2009, p. xi). This approach stresses the importance of geographical context and its specific and unique economic, social, cultural and institutional features for development, while, on the contrary, the World Bank Report advocates for spatially-blind policies, “policies that are designed without explicit consideration to space” (World Bank, 2009, pag. 24).

This paper focuses on innovative regional development theories and policies for food and nutrition security (FNS). The links between FNS and regional development will be defined both on the basis of already existing works and publications, in particular Espindola et al (2005), which identifies the determinants of FNS at meso level, through the interviews of some of the main experts on this topic and through the effort and attempt to apply and to link these new regional development paradigms (OECD 2006 and 2009 a,b; Pike et al, 2006, Barca, 2009 and 2012) to the issue of food insecurity.

In this paper FNS, according to FAO definition and other relevant literature analyzed (Zezza and Stamoulis, 2003; FAO SOFI, 2011; Annoni et al, 2012), is considered as a multi-dimensional issue, which refers to availability, access, nutritional quality and stability of availability and access. In addition, the issues of hunger and malnutrition include “low incomes, inequalities in access to productive assets, unemployment, low health education and nutrition status, natural resource degradation, vulnerability to risk and weak political power. Therefore, in addition to agriculture, several other sectors play a vital role in food insecurity reduction” (Annoni et al, 2012)<sup>2</sup>. The approach to FNS developed in this paper stresses both the need to address it through a multi-sectoral and integrated territorial approach and the inadequacy of traditional entirely top-down and sectoral approaches.

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<sup>2</sup> FAO International Scientific Symposium on Food and Nutrition Security Information, Rome, 2012.

Another key concept arising from the place-based approach that will be applied to the issue of FNS is the recognition that all regions are characterized by development potential and for this reason the objective of development intervention should be to promote growth in all regions (OECD, 2009a; Barca et al, 2012). “And regions should promote their own growth by mobilising local assets and resources so as to capitalise on their specific competitive advantages, rather than depending on national transfers and subsidies to help them grow” (OECD, 2009a, p. 13). This approach based on the development and exploitation of territorial assets is also advocated by Camagni (2009a, 2011), who argues that regions should focus their competitiveness and sustainability policies and strategies on the valorisation and exploitation of the territorial capital.

These new development paradigms and in particular the territorial dimension of development policies appear to be relevant to address the food insecurity issue in developing countries. At the same time, in order to apply these concepts to FNS, it is necessary first and foremost to build a strong and solid theoretical and conceptual framework for the territorial approach to FNS.

With regards to the general framework of the work, Section II explains the research method, the design of the interviews and the selection of the interviewees. Section III introduces the issue of FNS, explaining its definition and its dimensions, the current FNS situation and the policy responses by the international organizations. Section IV presents and analyzes the innovative regional development paradigms with a strong focus on the place-based approach, its critique by the spatially-blind approach and the place-based counter-critique. Section V establishes and explains the links between territorial approaches and FNS, highlighting and discussing its rationale and its potential effectiveness. Finally in the conclusions, the conceptual and policy framework for the place-based approach for FNS is presented and the potential limitations are discussed.

## **2.1 – Aims of the work and research question**

Given the above considerations, which highlight both the emergence of new paradigms and approaches to development and in particular the need to identify and develop new approaches to address the issue of food insecurity, the objective of the paper is to apply these new regional development paradigms, in particular the place-based approach to development policy, to FNS. The main goal of the research is to build a solid theoretical, conceptual and policy framework for the place-based approach to FNS policies.

The research question the paper aims to address regards the potential applicability, effectiveness and relevance of the place-based (territorial) approach to face and tackle one of the United Nations Millennium Development Goals, namely the issue of FNS. Through a comprehensive literature review, it has been possible to verify that the place-based approach is increasingly implemented in development policies, mainly in developed countries (OECD, EC) and more recently also in developing countries (UNDP *ART Initiative*, UNCDF *Cambodia Local Development Outlook*) and in some cases even to address more specific issues, eg. the UNDP Initiative *Territorial Approach to Climate Change*. Apart from a recent FAO Initiative (2011), *The Territorial Perspective of Food Security Policies and Strategies*, and some cases in Latin American countries, the application of the place-based approach to the issue of FNS is still rather unexplored, both by Academia and by International Organizations.

The aims of the paper are first of all to explain the rationale for a territorial approach to FNS and to establish the links between territorial development and FNS highlighting the importance of the territorial dimension for this issue. Once these links are established, the research focuses on the application of the place-based approach to the issue of FNS. The study also considers the different position of the World Bank, the so called spatially-blind approach, advocated by the World Development Report (2009) and it tries to identify some potentially relevant concepts and ideas for FNS, with the overall goal of integrating these insights into the place-based conceptual framework.

In order to strengthen this theoretical framework, in addition to an extensive review of the relevant literature, some of the main international experts in term of place-based approach were interviewed to further analyze the potential benefits and limitations of this approach for FNS. Moreover, some experts in term of "spatially-blind approach", in particular the World Bank experts and authors of the WDR, are interviewed in order to discuss the potential usefulness of their approach for FNS.

## **2.2 – Methods and research design**

Geography is a broad field, which includes physical geography, human geography, economic geography, etc., and therefore it embraces a wide range of different research methods (Clifford et al, 2010). Both qualitative and quantitative methods characterize Geography and often an integration of the two (mixed methods) is used to address a research question (Clifford et al, 2010). According to Clifford et al, (2010) the research design is a process and it is the result of a series of decisions regarding the research question, the methods, data collection and elaboration, the potential limitations and obstacles to the research, ethical issues and the presentation of the results. "The decisions flow from our knowledge of the academic literature, the research questions we want to ask, our conceptual framework, and our knowledge of the advantage and disadvantages of different techniques" (Clifford et al, 2010).

In order to address the specific research question of this paper, in addition to a comprehensive literature review, a qualitative approach (semi-structured interviews) has been used to further develop and strengthen the main findings of the literature review. The use of such interviews will be helpful in understanding through the views and ideas of the main experts in terms of regional development and FNS the links and potential effectiveness of the proposed approach.

The rationale for choosing this method to further develop and strengthen the theoretical framework is related both to the strengths of interviewing (Hay, 2010; Clifford, 2010) and to the fact that these new paradigms, in particular the place-based approach, are very recent and still need to be further investigated. In addition, the application of these paradigms to the issue of FNS is still unexplored and the literature on this is very poor. According to Hay, the main strengths and reasons for using interviews, which support and justify the application of this method within this research, are i) "to fill a gap in knowledge that other methods, such as observation or the use of census data, are unable to bridge efficaciously, ii) to collect a diversity of meaning, opinion and experience. Interviews provide insights into the differing opinions or debates within a group, but they can also reveal consensus on some issues" (Hay, 2010, p.102).

In the case of the place-based approach to FNS, as explained above, there is a gap in knowledge on the application and potential effectiveness of this innovative regional development paradigm to FNS and the insights, opinions and suggestions from the main experts in term of place-based policies on the benefits and limitations of this approach to FNS appears to be crucial in order to focus the research on the main and most relevant aspects of this approach. "One of the main strengths of interviewing is that it allows you to discover what is relevant to the informant" (Hay, 2010, p. 103).

In this study, semi-structured interviews are used to further address and investigate the research question. The choice is due to the fact that semi-structured interview are characterized by "some degree of predetermined order" (Dunn, 2005, p.80), as the questions and the discussion points are formulated before the interview on the basis of the literature review and knowledge of the topic, but it allows for flexibility in the way the interviewee addresses the questions and in the way the discussion is managed and organized (eg. it is not mandatory to address the questions in the predetermined order, other relevant points can be identified during the discussion, etc). This flexibility is relevant for this research because it allows the experts not to narrowly focus on the specific questions identified or to answer in a close and too synthetic way, but they can express their concepts and ideas in an extensive and flexible way, which contributes to enrich the collected material and allows the researcher to identify the most relevant points to be address in the study.

In addition, the use of the interviews allows to triangulate the main findings of the literature review through a direct discussion with the main authors and policy-makers on the research topic and to benefit from their insights where the literature is rather poor, namely on the application of the new regional development paradigms to FNS. This mixed methods approach is also suggested by Valentine: “Often researchers draw on many different perspectives or sources in the course of their work. This is known as triangulation. ... researchers can use multiple methods or different sources to try to maximize their understanding of a research question” (Valentine, 2005, p. 112).

The candidates selected for the interviews represent the main international experts and the key informants with regard to the place-based approach and its potential application to FNS. The interviewees have been identified after undertaking a comprehensive literature review on the research topic. Accordingly to Cameron (2005) and Clifford et al. (2010), the interviewees, both from academia and from international organizations have been selected on the basis of their seminal papers and policy documents and publications. Usually the interviewees for semi-structured interviews are selected “on the basis of their experience related to the research topic” (Clifford et al, 2010, p.108). The group of experts includes both university Professors, the ones that mostly contribute to the emergence and definition of the place-based approach, and experts from international organizations, the ones who lead the debate on place-based vs spatially-blind approaches to development (OECD, EC and World Bank) and other experts who launched relevant initiatives related to place-based approach and FNS (FAO, UNDP, UNCDF and Rimisp).

On the basis of these criteria, the following experts have been identified and interviewed:

- **Giovanni Camilleri**, International Coordinator of the UNDP ART Global Initiative (*Articulation of Territorial and Thematic Networks of Cooperation for Human Development*) on the Territorial Approach to Development with a focus on developing countries. Geneva.
- **Vito Cistulli**, Senior Policy Officer, Coordinator of the initiative on Territorial Perspective of FNS Policies and Strategies, United Nations Food and Agriculture Organization (FAO). Rome.
- **Nicola Crosta**, Head of Knowledge, Policy and Advocacy, United Nations Capital Development Fund (UNCDF) and responsible for the UNCDF Local Economic Outlook in Cambodia. He was the Coordinator of the OECD New Rural Paradigm. New York.
- **Lewis Dijkstra**, Deputy Head of Unit, Economic and Quantitative analysis, European Commission, DG Regio. Brussels.
- **Jose Enrique Garcilazo**, Head of Unit - Rural and Regional Programme Regional Development Policy Division, Directorate for Public Governance and Territorial Development, OECD. Paris.
- **Indermit Gill**, Chief Economist of the Europe and Central Asia Region (World Bank) and Director of the *World Development Report 2009: Reshaping Economic Geography*. Washington.
- **Philip McCann**, Special Adviser to Johannes Hahn, EU Commissioner for Regional Policy and Professor at the Department of Economic Geography, Faculty of Spatial Sciences, University of Groningen.
- **Andrés Rodríguez-Pose**, Professor of Economic Geography, Department of Geography and Environment, London School of Economics and IMDEA.
- **Alexander Schejtman**, Rimisp Senior Research Fellow on rural development and on the Political Economy of Food Systems and Food Security. Santiago, Chile.
- **John Tomaney**, Professor of Regional Development, Director of the Centre for Urban and Regional Development Studies (CURDS), Newcastle University.

A list of questions and key discussion points were identified before the interview (Annex 1). The first part of the interview aimed at addressing the key issues related to the place-based approach (spatially-blind in the case of the interview with Indermit Gill) such as definition, meaning, rationale, debate on place-based vs spatially-blind approaches, the role of institutions, etc, while the second part at investigating the potential usefulness and effectiveness of the place-based approach for FNS in developing countries, how to shift from a sectoral to a territorial approach in addressing this issue and

the potential limitations of the place-based approach for FNS. The flexibility characterizing semi-structured interviews allowed to slightly modify the questions depending on the specific work and publications of the different participants.

The interviews have been undertaken directly or by skype depending on the location and availability of the interviewees, the interview with Indermit Gill was by phone. All the interviews were recorded, transcribed and shared with the interviewees in order to have their feedback and their consent to use the material for the research. The choice to record the interview allowed the researcher “to focus fully on the interaction instead of feeling pressure to get the participants’ words recorded in the notebook” (Clifford et al, 2010, p.110).

In terms of ethical issues, confidentiality is assured to all the interviewees. The transcriptions of the interviews were first shared with the experts for their feedback and approval before using it for this research. The consent to quote/cite the name, position and organization of the interviewees was asked to each participant.

### **3 - The issue of food and nutrition security.**

Food and nutrition security is defined by FAO as “*Food and nutrition security exists when all people at all times have physical, social and economic access to sufficient and safe food that meets their dietary needs and food preferences for an active, healthy life, coupled with a sanitary environment, adequate health services and care*”<sup>3</sup>. According to FAO the issue of FNS is a four-dimensional concept that includes the following dimensions: (i) availability of food; (ii) access to food; (iii) nutritional quality; (iv) stability of availability and access.

FNS represents one of the United Nations Millennium Development Goals, in particular the MDG1, Eradicate Extreme Poverty and Hunger, target 1C “halve between 1990 and 2015, the proportion of people who suffer from hunger” (United Nations, 2010, p.9)<sup>4</sup>. Despite this Goal, about 925 million people were still food insecure in 2010 and the food price spike of 2011 has thrown an additional 44 million people into hunger (SOFI, 2010). Figure 1 shows a slight decrease in the number of undernourished people from 2009 to 2010. Despite this decrease, the number of undernourished people is higher than in the Seventies and higher than it was in 1996, when the hunger-reduction target was established at the World Food Summit. The 98% of undernourished people are concentrated in developing countries which, as shown in Figure 2, have a proportion of undernourished of 16%.

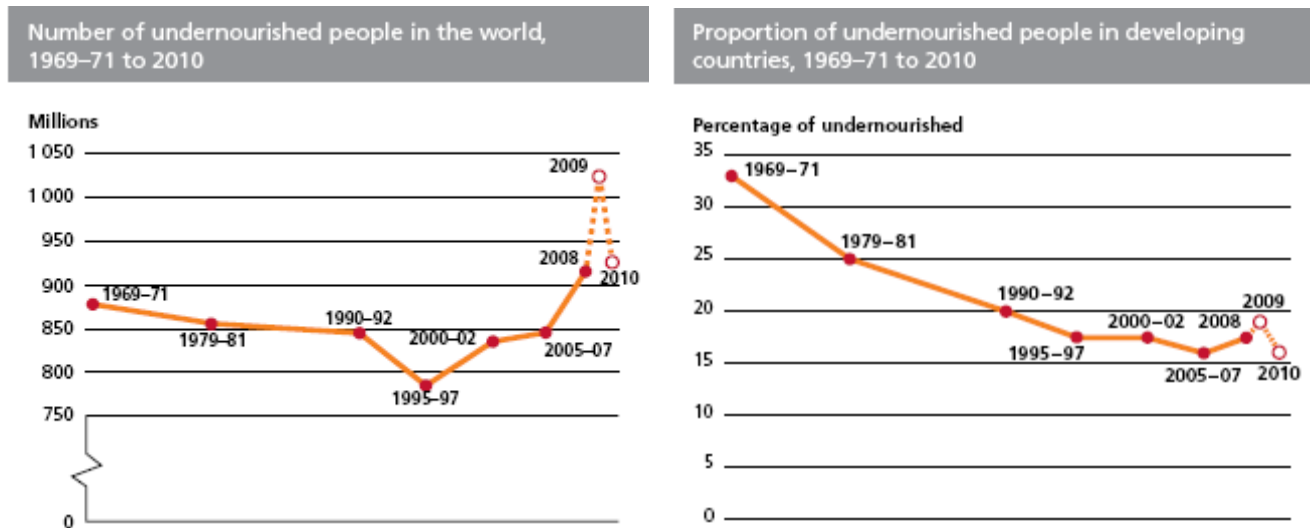
According to Figure 3, the highest levels of undernourishment (very high: 35% and above) is mainly concentrated in central Africa. From this map it is possible to notice that developing countries are characterized by strong disparities in terms of undernourished people. Moreover, as stressed by FAO (2011), the level of disparities in terms of food security and poverty is increasing both at national and sub-national level, in addition to the North-South divide, the geographical distribution of disparities in FNS and poverty is increasingly assuming a patchy distribution cutting across all countries (FAO, 2011)<sup>5</sup>.

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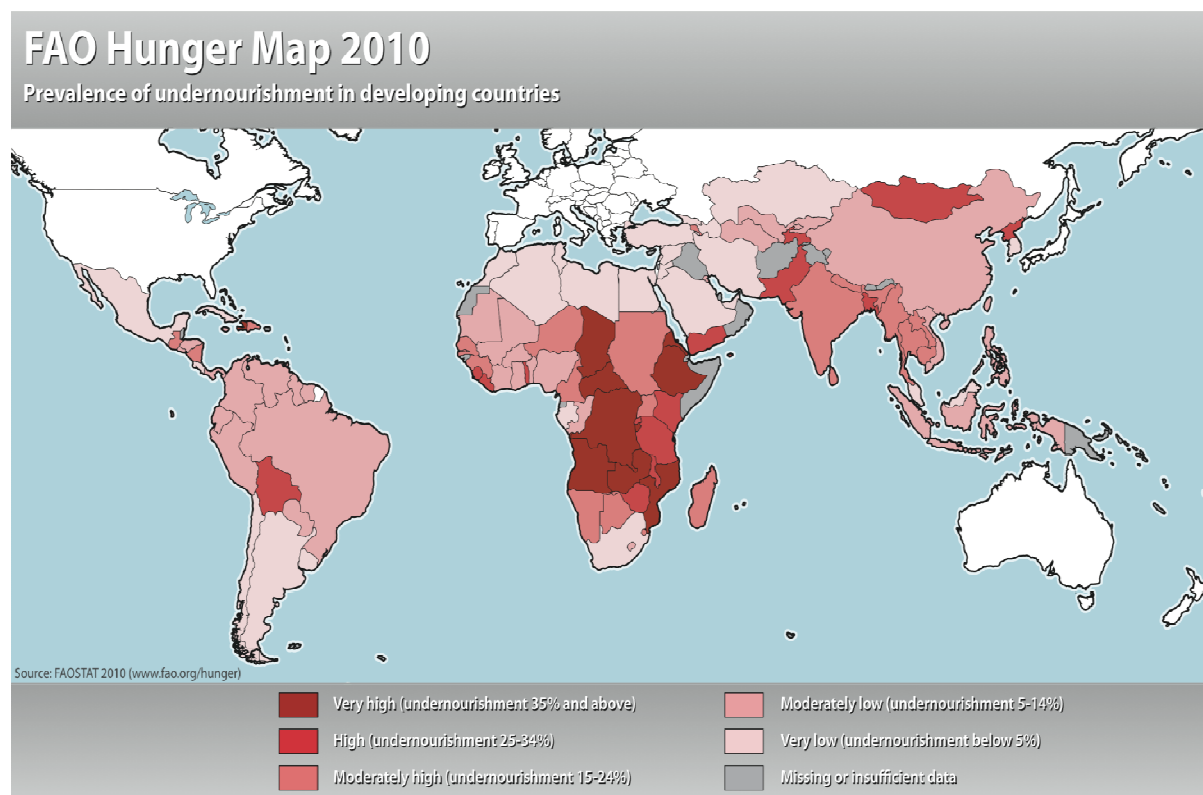
<sup>3</sup> FAO Division of Nutrition and Consumer Protection (2011)

<sup>4</sup> United Nation (2010) The Millennium Development Goals Report

<sup>5</sup> FAO Expert Workshop on the *Territorial Perspective of Food Security Policies and Strategies*, Rome, 2011.



**Figure 1-2:** Number of undernourished people in the world (1969-71 to 2010) and Proportion of undernourished people in developing countries (1969-71 to 2010). **Source:** FAO, SOFI 2010.



**Figure 3:** FAO Hunger map 2010. **Source:** FAOSTAT 2010.

On the basis of these considerations and with regards to the policy responses, the local and regional dimensions assume a growing importance in addressing the FNS issue. This implies that the territorial dimension should be reflected in FNS policies and strategies and therefore there is a need to develop context-specific and differentiated approaches that would allow to capture all the differences related to the area-specific determinants of hunger and food insecurity. The inadequacy of one-size-fits-all approaches and the need for context-specific interventions are also stressed by FAO, both regarding FNS policies, “it must be recognized that each country is unique in many respects. In order to take

account of different situations, each country should analyse its own circumstances and engage in policies appropriate to those circumstances. Country-specific experimentation along these lines should be encouraged” (SOFI, 2011, page 33) and more specifically regarding the impact of world food prices “the report emphasizes that the impact of world price changes on household food security and nutrition is highly context-specific” (SOFI, 2011, page 4).

In order to respond to the 2008 food price crises many initiatives and actions were established at the global level to encourage concerted responses to food insecurity: of the High Level Task Force on the Global Food Security Crisis (HLTF) in April 2008, the L’Aquila Food Security Initiative (ASIF) in July 2009, the Global Agriculture and Food Security Programme (GAFSP) at the G20 meeting in September 2009, the reform of the Committee of Food Security in November 2009. Among these actions, the Updated Comprehensive Framework for Action (UCFA) developed by the High Level Task Force on the Global Food Security Crises in 2010 represents the main United Nations initiative which addresses FNS. The UCFA was prepared with two main aims (twin-track approach): i) respond to the food price crisis and identify immediate actions to support the vulnerable people ii) define long-term responses to increase resilience to food insecurity. The UCFA is based on the twin-track approach and it describes all the actions and outcomes at Country, Regional<sup>6</sup> and Global level. The main priorities of the UCFA are environmental sustainability, gender equity, the determinants to improve nutrition and the needs of vulnerable population. It recognizes that in addition to States, which play a key role in addressing FNS, many other actors can contribute to promote FNS. (UCFA, 2010).

The UCFA also mentions the local and regional dimension of FNS: “it is understood that actions taken will be adapted to national and local conditions, will take into account initiatives to address global climate change and poverty reduction, reflect the need for long-term sustainability and avoid unplanned environmental changes. They need to be agreed on and taken forward jointly by the principal stakeholders, including national governments, civil society, and the private sector, with representation from the communities most affected by food and nutrition insecurity” (UCFA, 2010, p.19), but this dimension seems to be more declared than really reflected in the strategies and policies to address FNS, as in the UCFA main framework and proposed interventions it is rather neglected.

Other important initiatives on the FNS issue which address the sub-national dimension and recognize the need for an integrated approach are the Brazilian Programmes *Zero Hunger* (2003) and *Territories of Citizenship* (2008): the first one in the policy actions and recommendations states that these actions should be implemented through an integrated approach, otherwise none of them will be effective and that there is a need to overcome the separation and dichotomy between the economic and social dimensions which “lead to wealth concentration and poverty and then manage “social” policies to attenuate the latter”. (Graziano Da Silva et al, 2011, p. 21). The Territories of Citizenship programme stresses the importance of focusing intervention on decentralized local systems, both to increase participation and to achieve a higher effectiveness in the results.

Moreover, the FAO Thirty-first Regional Conference for Latin America and the Caribbean acknowledges that “territorial approaches are gradually becoming the rule in rural development strategies and are leading to a redefinition of the rural world in favour of a concept of spatial continuum and an integration of markets, social networks, institutions and culture, bringing together the urban and the rural. With this shift, rural development is now identified with territorial development and no longer with a strategy for the agricultural sector or with social policies focusing on vulnerable groups living in rural areas, disconnected from the dynamics of the whole area”. (FAO Thirty-first Regional Conference for Latin America and the Caribbean, 2010, p.5). In addition, a CEPAL Report (2005) proposes that food and nutrition security (FNS) should be addressed through rural local development (RLD) strategies, local development strategies applied to rural areas and it highlights that “some of the guiding considerations for territorial development are perfectly adaptable to RLD/FNS” (Espindola, 2005, p.67).

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<sup>6</sup> According to the United Nations, the term Regional refers to the supranational level.

In conclusion, there seems to be a growing consensus on the importance of territories, territorial development and multi-sectoral and integrated approaches, context-specific interventions to address FNS (Stamoulis and Zezza, 2003; FAO, 2010; SOFI, 2011; Graziano da Silva, 2011, Annoni et al, 2012), but these dimensions and approaches are rarely concretely included and reflected in FNS policies and strategies. Therefore, on the basis of this recognition, this paper will try to contribute to fill this gap by first identifying which are the innovative regional development paradigms and then by applying them to FNS and by assessing its potential effectiveness for FNS policies and strategies.

#### 4 – The emergence of new approaches to regional development.

##### 4.1 – New regional development paradigms.

Over the last few years there has been a growing debate towards the need to formulate, develop and apply new development paradigms to regional policy. This debate has brought to the emergence of new approaches to regional development which have been proposed by both international organizations and academics. “The failure of traditional top-down policies, together with the challenges generated by globalization, has led to a serious rethinking of local and regional development by practitioners and academics” (Pike et al, 2006, p. 16)

These new approaches are based on the recognition that traditional policies, mainly developed around two axis, namely infrastructural endowment and top-down industrialization policies, are no longer sufficient to face the new challenges of development and globalization (Pike et al, 2006). The key concepts characterizing the new regional development paradigms are summarized in figure 4.

	Old paradigm	New paradigm
Problem recognition	Regional disparities in income, infrastructure stock, and employment	Lack of regional competitiveness, underused regional potential
Objectives	Equity through balanced regional development	Competitiveness and equity
General policy framework	Compensating temporally for location disadvantages of lagging regions, responding to shocks (e.g. industrial decline) ( <i>Reactive to problems</i> )	Tapping underutilised regional potential through regional programming ( <i>Proactive for potential</i> )
– theme coverage	Sectoral approach with a limited set of sectors	Integrated and comprehensive development projects with wider policy area coverage
– spatial orientation	Targeted at lagging regions	All-region focus
– unit for policy intervention	Administrative areas	Functional areas
– time dimension	Short term	Long term
– approach	One-size-fits-all approach	Context-specific approach (place-based approach)
– focus	Exogenous investments and transfers	Endogenous local assets and knowledge
Instruments	Subsidies and state aid (often to individual firms)	Mixed investment for soft and hard capital (business environment, labour market, infrastructure)
Actors	Central government	Different levels of government, various stakeholders (public, private, NGOs)

**Figure 4:** New Regional Development Paradigm. **Source:** OECD, 2010.

According to OECD (2010) and Tomaney (2010), “in response to poor outcomes, regional policy has evolved, and continues to evolve, from a top-down, subsidy-based group of interventions designed to reduce regional disparities, into a much broader family of policies designed to improve regional competitiveness” (Tomaney, 2010, p.11). Therefore, on the basis of this new paradigm, the objective of regional policies is now the promotion of competitiveness and equity, based on the recognition that



potential for growth exists in all regions and that development strategies and policies should focus on endogenous local assets and unexploited territorial potential.

One of the key pillars characterizing this paradigm is a shift from a sectoral approach to development to an integrated, multi-sectoral and comprehensive approach. By recognizing that all territories have a potential for development and can contribute significantly to the overall aggregate growth, policies should target not only lagging regions (old paradigm) or main cities (spatially-blind approach), but all regions. “The aim is to maximize national output by encouraging each individual region to reach its growth potential from within” (Tomaney, 2010, p.11), moving beyond the consideration of regional policy as a zero-sum game (OECD, 2010; Tomaney, 2010). One of the main innovations introduced by the new paradigm regards the approach to development policies: the new paradigm, accordingly to the ideas proposed by others influential authors, eg. Rodrik (2006), Pike et al. (2006), Barca (2009), stresses the need to shift from a one-size-fits-all approach to a context-specific or place-based approach.

In terms of policy instruments, this approach emphasises the importance of investing in both hard and soft infrastructure, such as business environment, social capital, networks, labour market, infrastructure, rather than an approach based on subsidies and state aids. In terms of governance and actors involved in the development process, the new paradigm stresses the need to shift from a model based on the prominent role of the central government towards a multi-level governance system in which different levels (national, regional and local) and stakeholders (public, private, etc.) are involved in the decision-making process. A further assumption of this new paradigm regards the unit of intervention: policy-makers should look beyond the borders of administrative regions and consider functional economic areas in formulating and implementing regional development policies and strategies.

In line with to the objective of competitiveness and the focus on endogenous development characterizing this new approach, Camagni stresses the importance of promoting territorial competitiveness for a regionalized development strategy and proposes the concept of territorial capital (Camagni, 2009; Camagni and Capello, 2011). The author suggests that the issue of territorial competitiveness – which should be understood on the basis of the concept of competitive advantages developed by Porter and the “absolute advantage” principle by Smith rather than the Ricardian “comparative advantage” principle - must be at the centre of the policy agenda for local and regional governments and that these governments should identify, formulate and develop their development strategies and policies relying on the exploitation of the territorial assets and potential, which can also be defined as territorial capital. “Territorial capital may be seen as the set of localized assets – natural, human, artificial, organizational, relational and cognitive – that constitute the competitive potential of a given territory” (Camagni, 2011, p.61). The assets composing the territorial capital of a given area can be tangible and intangible, and they can be public, private or both private and public. The concept of territorial capital is crucial because it allows to increase the efficiency and improve the productivity of the activities taking place within that territory (Camagni, 2009). Therefore regional development policies and strategies should be designed on the basis of the place-specific territorial capital characterizing a particular region, enhancing the existing territorial assets and trying to exploit the ones which are still latent or untapped (EU, 2005; Camagni, 2011).

According to Pike et al. (2006), embracing a local and regional development approach to face the challenges of globalization and overall development can lead to significant advantages both from a social and economic point of view. In terms of social benefits, it allows to empower local societies, to promote dialogue between local stakeholders and it enables local actors to develop a more proactive role with regards to the decision-making process of their own territory. Moreover, this approach enhances and promotes transparency and accountability in the local institutional framework. From an economic point of view, “local and regional development strategies, because of their goal of embedding economic activity in a territory and making any economic activity located in it dependent on the specific economic conditions and comparative advantages of that place, generate sustainable economic growth and employment in firms more capable of withstanding changes in the global

economic environment” (Pike et al., 2006, p.19). On the other hand, a local and regional development approach presents also some potential disadvantages, in particular, given the involvement of many different local stakeholders, it is very demanding in term of time invested in the policy formulation process and the short-term success of the strategy is not guaranteed. In addition, it might be more subject to the vested interest of local elites and the involvement of local actors does not represents a guarantee of successful development policies and strategies.

An innovative and forward-looking approach to regional development should also re-consider the overall objectives of development: in order to face the new challenges, there seems to be a growing consensus that an undifferentiated focus on economic growth is no longer sufficient and that tackling social and territorial inequalities, the costs of which are increasingly evident, should be one of the main objectives at the centre of policy agenda (Pike et al., 2011). In addition, the approaches to address inequalities and poverty should not neglect and overlook that these processes are characterized by a strong spatial dimension: “place effects play a part in producing inequalities and exclusion” (Pike et al, 2011, p. 628).

#### **4.2 – The place-based approach to development policies.**

Among the new paradigms to development policies, the most debated, discussed and innovative is the place-based approach. The wide debate about the usefulness and effectiveness of a place-based or territorial approach to development policies and its critique, namely the spatially-blind approach proposed by the World Bank, emerged in 2009 following some key reports, in particular the Barca Report (2009), two OECD publications (2009a<sup>7</sup>, 2009b<sup>8</sup>), the World Bank World Development Report (2009), and it has intensified in subsequent years through many publications, debates, conferences, etc. This debate has been very important because it contributes to develop the area of policy implementation which has been poorly addressed and narrowly anchored to the economic based model for decades (Barca et al, 2012).

These two different and contrasting development policy paradigms – place-based and spatially-blind - are characterized by some common key pillars, namely the importance of geography, agglomeration and institutional reforms for economic development, but they reach different policy conclusions and advocate two competing approaches to policy interventions: the spatially-blind approach argues that the policy focus and aim should be “persons rather than places”, while the place-based approach suggests that the focus and aim of polices should be “persons within places” (Polish Presidency, 2011). *“The main difference of the place-based approach from the policies targeting people, in particular subsidies, is that you try to target the conditions, the structural conditions that enable the process of development in certain places that are suffering from poverty and that are characterized by some development gaps. This is the fundamental target of the place-based approach”* (Author’s Interview, Garcilazo, Head of Unit - Rural and Regional Programme, OECD, 2012).

The place-based or territorial approach<sup>9</sup> was lunched by both the OECD (2009 a and b) and by the EU through the Barca Report (2009). *“I see place-based approach as on the one hand responding to a dominant orthodoxy, mainly associated with the World Bank, but on the other hand emerging from a long experience of the study of regional development, building upon a series of insights that have been developed over time about what works and what doesn’t, linked closely to development theories, development and evolutionary economics and evolutionary economic geography, institutional approaches to the thinking about the economy”* (Author’s Interview, Tomaney, Director of CURDS, Newcastle University, 2012).

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<sup>7</sup> How Regions Grow (OECD, 2009)

<sup>8</sup> Regions Matter: Economic Recovery, Innovation and Sustainable Growth (OECD, 2009).

<sup>9</sup> In this paper, accordingly to Barca (2009), the terms place-based approach and territorial approach will be used as synonyms.

With regards to the rationale for a place-based approach to development policies, this new paradigm emerged first of all as a reaction to the traditional top-down, supply-side, sectoral and “one-size-fits-all” solutions which characterized many development policies and strategies in the past decades which brought to imbalance policies and to a relevant rise in territorial and social inequalities (Pike et al, 2006; Barca et al, 2012). These policies often neglected integrated, multi-sectoral, bottom-up approaches and the strategies were mainly based on state-aid, financial support and subsidies (Barca et al, 2012) resulting in a strongly assistance-led approach to development. According to Barca et al (2012), the area of development policy has not registered relevant innovations and improvements for decades and has not followed and addressed both new theories and the new territorial structures, designing and formulating very similar development strategies (Chien, 2008, Barca et al, 2012). These approaches are increasingly considered inadequate to face and address the new challenges posed by globalization (Pike et al, 2006; OECD, 2009 a and b; Barca, 2009; Barca et al, 2012). The economic geography of places has been enormously modified by modern globalization: these changes and the impacts of globalization should be considered and reflected in development policies and strategies (Barca et al, 2012).

The impact of globalization has also led to a renewed consideration and attention on the role of space and to the emergence of new factors of development, such as human capital and innovation, agglomeration and distance, the relations between institutions and geography, the role of history and the concept of path dependency, which also derived in the development of new disciplines, namely Endogenous Growth Theory, New Economic Geography, Institutional Economic Geography and Evolutionary Economic Geography (Barca et al, 2012). According to Rodriguez Pose (2011), through the process of globalization the importance of space and territories and their interactions for development increased. At the same time, on the basis of the agglomeration process and cluster creation, people, ideas, capital and goods are increasingly grounded, attached and concentrated in particular places (Markusen, 1996; McCann, 2008; Rodriguez Pose et al, 2008; Barca et al, 2012). Therefore, “globalization has made space and place more rather than less important. The unique aspects of a locality and the ability to create and strengthen a comparative advantage are at the hearth of economic development and success” (Barca et al, 2012, p. 136).

According to the Barca Report (2009), a place-based or territorial policy intervention aims at addressing two main objectives: the efficiency objective (economic dimension), namely increase income and growth, and the social inclusion objective (social dimension), namely reducing inequalities.

The economic rationale for a place-based approach to development is supported first of all by the OECD work (OECD 2011 a, b, c), by Barca (2009) and by Barca et al. (2012). The main conclusion of the these OECD publications is that “economy as a whole can reach its total output frontier by developing places of different size and densities, because it is the performance of the urban and regional system as a whole which is critical rather than just the cities at the top of the urban hierarchy” (Barca et al, 2012, p. 140). Moreover, according to the Barca Report, economic theory supports the idea that a place-specific policy intervention from outside can be needed to overcome two different typologies of failures: a government and a market failure. A policy intervention may be required when a particular place or territory is unable to exploit its potential (inefficiency) or is characterized by strong inequalities, as a consequence of an institutional lock-in, when a weak institutional regime is in place due to corruption, lack of capacity, institutions captured by local elites, etc, or when, according to the path-dependency principle, a weak institutional system undermine the possibility of having solid and efficient institutions even in the future (Barca, 2009). Moreover, a place-based intervention might be required in relations to the decisions – private or public – related to agglomerations. “Agglomerations are always the result of public as well as private decisions, the former consisting of the design of institutions which are tailored to places” (Barca, 2009, p. xi). These decisions are characterized by a high degree of risk related to the poor information about the potential efficient or inefficient effects of agglomerations, or might be subject to private pressure. A place-based intervention ensure a “cautious approach under which public intervention with a territorial impact are made visible and verifiable and submitted to scrutiny together with the initiation of a process whereby

everyone is given the opportunity and the information to participate and to voice their dissent” (Barca, 2009, p. xi).

The economic rationale and benefits of a place based approach were also stressed both by Rodríguez-Pose and Dijkstra during the interview: *“The rationale behind place-based approach is fundamentally that in a place-based approach you believe that there is economic potential in every territory and that their economic potential very often gets lost because it is untapped. The aim is to maximize the returns of interventions, of economic interventions, of any given territory and as a result, in aggregate term, of any given country or continent”* (Author’s Interview, Rodríguez-Pose, Professor of Economic Geography; London School of Economics, 2012). *“The more you have differences inside the country the more there is a need to differentiate your policies across the territory. The benefits of having a place based policy is that you capture externalities, basically every policy decision you take in a particular sector has impacts on other sectors, if you take those into account and adjust for them, the efficiency of your policy goes up, if you do not, you are not going for the most efficient approach”* (Author’s Interview, Dijkstra, Deputy Head of Unit, Economic and Quantitative Analysis, EC DG Regio, 2012).

With respect to the social rationale, the specific place where people live and the community they interact with influence both the nature of social disparities and the success or failure of policy interventions. *“In the inequality literature, this fact is generally recognized only as regards to immediate group within which an individual lives – the household. However, the circumstances and well-being of individuals are also influenced by the wider territorial community with which they interact, including its natural and cultural resources and public institutions”* (Barca, 2009, p. 32). Moreover, a weak institutional framework represents one of the main causes of social inequalities and both formal and particularly informal institutions are strongly context-specific (Barca, 2009). In addition, places have a strong influence on the effectiveness of policies aiming at reducing inequalities, the success of any sectoral policies is strongly dependent on other sectoral policies being implemented in a particular territory. Finally, a place-based approach has the capacity to mobilize local actors, involve local stakeholders and increase participation and consensus in policy interventions to reduce inequalities (Barca, 2009).

A place-based development policy is defined as *“a long-term development strategy whose objective is to reduce persistent inefficiency (underutilization of the full potential) and inequality (shared of people below a given standard of well-being and/or extent of interpersonal disparities) in specific places”*. (Barca, 2009, p. 5). The key concepts characterizing the place-based approach developed by Barca are inspired by the OECD new regional paradigms. In particular, this concept is based on the idea that interventions should be designed through an integrated approach with a strong focus on places given the fundamental role played by local knowledge and preferences, considering the highly context-specific nature of both the economic and social dimensions (Barca, 2009). *“A place-based approach is where in the thinking and the analysis of any policy you explicitly take the geographical, territorial and institutional dimensions seriously and you try to think about the extent to which institutions, governance, interact with geography, with economic geography, which may themselves be part of the obstacles to development, but also the possible solutions to improve development”* (Author’s Interview, McCann, Prof. Economic Geography, University of Groningen, 2012).

Therefore in the place-based approach, space or geographical context, defined in term of its social, cultural and institutional dimensions, is critical for the design and implementation of development policies (Barca, 2012). Moreover, the concept of knowledge plays a key role for interventions: in order to exploit untapped territorial potential to address both the efficiency and equity objectives, new knowledge generated by the interaction between local institutions, both formal and informal, and external actors (policy-makers working at higher administrative levels, etc.) is a key factor to face and overcome the persistent underutilization of the territorial capital or the protracted inequalities (Barca, 2012).

With regards to the debate on whether is geography or institutions more critical for development, the place-based approach argues that it is the interaction between institutions and geography that really matters. This generates some important implications, in particular i) it proposes an alternative approach in the organization of space in promoting development to the World Bank model built around the promotion of agglomerations, big cities, mega urban regions and it recognizes that all regions have a potential and can provide a substantial contribution to aggregate growth and to the output frontier of the economy (OECD 2009, Barca, 2012), ii) the development path of now-developed countries should not be interpreted and considered the only possible solution and model to reach long-term development, there are other possible pathways, “different territories may follow different development paths depending on a combination of time-space factors which are impossible to ignore” (Rodríguez-Pose, 2011, p.86).

Another key concept characterizing the place-based approach regards the issue of inter-regional convergence. Unlike the traditional approaches, arguing that convergence should be obtained, on the one hand by removing market barriers through a spatially-blind approach or, on the other hand through redistribution, the place-based approach does not consider convergence a primary policy objective. The place-based approach should be considered as a development-led approach and the main aim of development policies should be the promotion of development in all territories through the exploitation of their potential (Barca et al, 2012): “if convergence is to be promoted, this is to be done by development rather than by redistribution” (Barca et al, 2012, p. 146).

One of the main factors that support the adoption of a place-based approach to development policies is represented by institutions, both formal and particularly informal. Institutions are considered critical both for the economic objective and for the social objective and the context-specific nature of institutions is one of the three main pillar on which Barca’s place-based approach focuses. In some cases they can represent one of the main drivers of development, while in others institutional lock-in are one of the main obstacles to an efficient utilization of local potential and to social inclusion. Moreover, they play a fundamental role to ensure the multi-level governance mechanisms advocate both by Barca and by the OECD. According to Barca, it is the interaction of economic and political decision and institutions which determines the full capacity or potential of any given territory, the achievement of which represents the economic (efficiency) objective of a place-based approach, (Barca, 2009).

“The combination of formal and informal institutions in space results in different institutional set ups and ways in which institutions operate and function in every territory, creating an institutional environment which is unique to every city, locality, region or country. In particular, it is the informal institutions which tend to shape this unique environment”. (Rodríguez-Pose, 2011, p. 87). Informal institutions, such as culture, history, conventions, norms, customs, traditions, informal networks, identity, trust, etc, are highly context-specific and play a critical role for the valorisation and exploitation of the territorial potential and in promoting development (Rodríguez-Pose, 2011). Therefore, Rodríguez-Pose suggests that institutions should be considered an endogenous factor embedded in a specific territory and not exogenous and that every development policies which neglect this factor in the strategy formulation (eg. spatially-blind policies which usually tend to consider only the formal institutions) might be highly ineffective.

#### **4.3 – The spatially-blind approach and counter-critique by place-based approach.**

In contrast with the place-based development paradigm, the spatially-blind approach has emerged following the World Bank World Development Report “Reshaping Economic Geography” (2009). According to the WDR, density, distance and division are the three main geographic dimensions of development. “Understanding the transformations along the dimensions of density, distance and division helps to identify the main market forces and the appropriate policy responses at each of the three geographic scales – local, national and international” (WDR, 2009, p.7).

On the basis of this development model, the most important dimension at local level is density. Distance to density (between best performing and lagging regions) is the most important one at national level and development policies should aim at reducing firms and workers distance from density of economic activities, mainly through labour mobility and investment in infrastructure to reduce transport costs. Finally, at international level division is the most important dimension: North America, Northeast Asia and Western Europe are the most integrated regions, while the other regions which are not characterized by the concentration of economic activities are divided. These divisions, in addition to borders which are difficult to penetrate and differences in terms of both currencies and regulations, constitute stronger obstacles to development than distance (WDR, 2009).

Moreover, the spatially-blind approach proposes a development model based on the benefits related to agglomeration and spillover effects generated by the investment on and promotion of mega cities. “Rising densities of human settlements, migration of workers and entrepreneurs to shorten the distance to markets, and lower divisions caused by differences in currencies and conventions between countries are central to successful economic development” (WDR, 2009, p. 12).

The Report advocates for spatially-blind (or people-centred) policies, meaning “policies that are designed without explicit consideration to space” (World Bank, 2009, p. 24). According to this publication, too much emphasis has been given to spatially-target interventions in recent years and one of the main aims of the report is to reshape and rebalance the debate on development policies. “With regards to the policy approaches, so far there has been too much focus on places, while the focus should be on people, in this way there would be a different approach to policy. It is very important to keep the objective of policies realistic and it should be recognized that growth is spatially unbalanced” (Author’s Interview, Gill, Chief Economist of the Europe and Central Asia Region and Director of the WDR 2009, World Bank, 2012).The WDR is based on the assumption that development is not evenly spread and economic growth is unbalanced, “to try to spread it out – too much, too far, or too soon – is to discourage it” (Gill, 2011, p. 30), it represents a way to reduce prosperity, not poverty.

	Country type		
	Sparsely populated lagging regions	Densely populated lagging regions in united countries	Densely populated lagging regions in divided countries
What policies should facilitate	Labor and capital mobility	Labor and capital mobility Market integration for goods and services	Labor and capital mobility Market integration for goods and services Selected economic activities in lagging regions
<b>Policy Priorities</b>			
<b>Spatially blind “institutions”</b>	Fluid land and labor markets, security, education and health, safe water and sanitation	Fluid land and labor markets, security, education and health, safe water and sanitation	Fluid land and labor markets, security, education and health, safe water and sanitation
<b>Spatially connective “infrastructure”</b>		Interregional transport infrastructure Information and communication services Local roads	Interregional transport infrastructure Information and communication services Local roads
<b>Spatially targeted “incentives”</b>			Incentives to agriculture and agro-based industry Irrigation systems Workforce training

**Figure 5:** calibrating regional development policies. **Source:** World Bank, WDR, 2009.

The spatially-blind approach argues that governments have more powerful instruments than incentives to places. It proposes an approach based on the concept of integration between leading and lagging regions through three different types of interventions depending on the level of development and constraints to development of a country (figure 5): i) spatially-blind institutions, ii) spatially connective infrastructure and iii) spatially target incentives. According to the WDR policy-makers

should focus their efforts on the interactions between lagging and fast-growing regions. Within this context “migration is not seen as a failure of policies but as a measure of a desire of people to improve their lives and those of the children” (Gill, 2011, p.30). Therefore, spatially target interventions, which the WDR conceives as forms of incentives to agriculture, agro-industry irrigation systems, etc., are considered as the third step (least and last) of interventions to be used only in particular situations, when there are cultural, historical, linguistic constraints to development, and following the other two proposed interventions, spatially-blind institutions and connective infrastructure (Gill, 2011).

The place-based counter-critique, first of all, stresses the fact that a place-based approach should not be understood and misrepresented as incentives given to firms to relocate to specific areas or an approach which focuses on places rather than on people, “it is an approach aimed at persons living in given places, with the aim to make them free to choose whether to stay or go and where to go” (Barca and McCann, 2010, *vox*), characterized by the complexity and key ideas already described in the previous part of the paper.

Moreover, the place-based approach experts (Garcilazo et al, 2010; Rodríguez-Pose, 2011; Barca et al, 2012) are very critical with regards to the main concepts and theoretical assumptions characterizing the spatially-blind approach, in particular:

- the adoption of a Rostovian linear and a-historical view of development, which according to the place-based approach is unrealistic and ignores that the combination of time-space factors determines different development paths for different areas;
- the benefits of a model based on the effects of agglomeration related to the promotion of mega-urban cities: evidence highlights that backwash effects are more likely than spillover effects (Rodríguez-Pose, 2011);
- the assumption that migration is costless, while place-based experts agree that migration implies relevant social, political and transaction costs (Rodríguez-Pose, 2011; Barca et al, 2012);
- the World Bank concept of institutions, which includes only the formal institutions and neglects the role and importance of informal institutions with their highly context specific nature for development (Rodríguez-Pose, 2011).

In conclusion, “the problems associated with ignoring the interactions between geography and institutions, of confusing correlation with causality, of adopting a linear and a historical view of development, and of ignoring the importance of place, signal why spatially-blind strategies may be inadequate to address what are fundamentally heterogeneous development problems across space” (Barca et al, 2012, p. 146).

## **5 - A place-based approach to food and nutrition security.**

### **5.1 - The links between food and nutrition security and territorial development.**

In order to apply and assess the effectiveness of the place-based approach to the issue of FNS, it is first and foremost important to explain which are the links between the FNS issue and territorial development. This paragraph aims at explaining and clarifying these links.

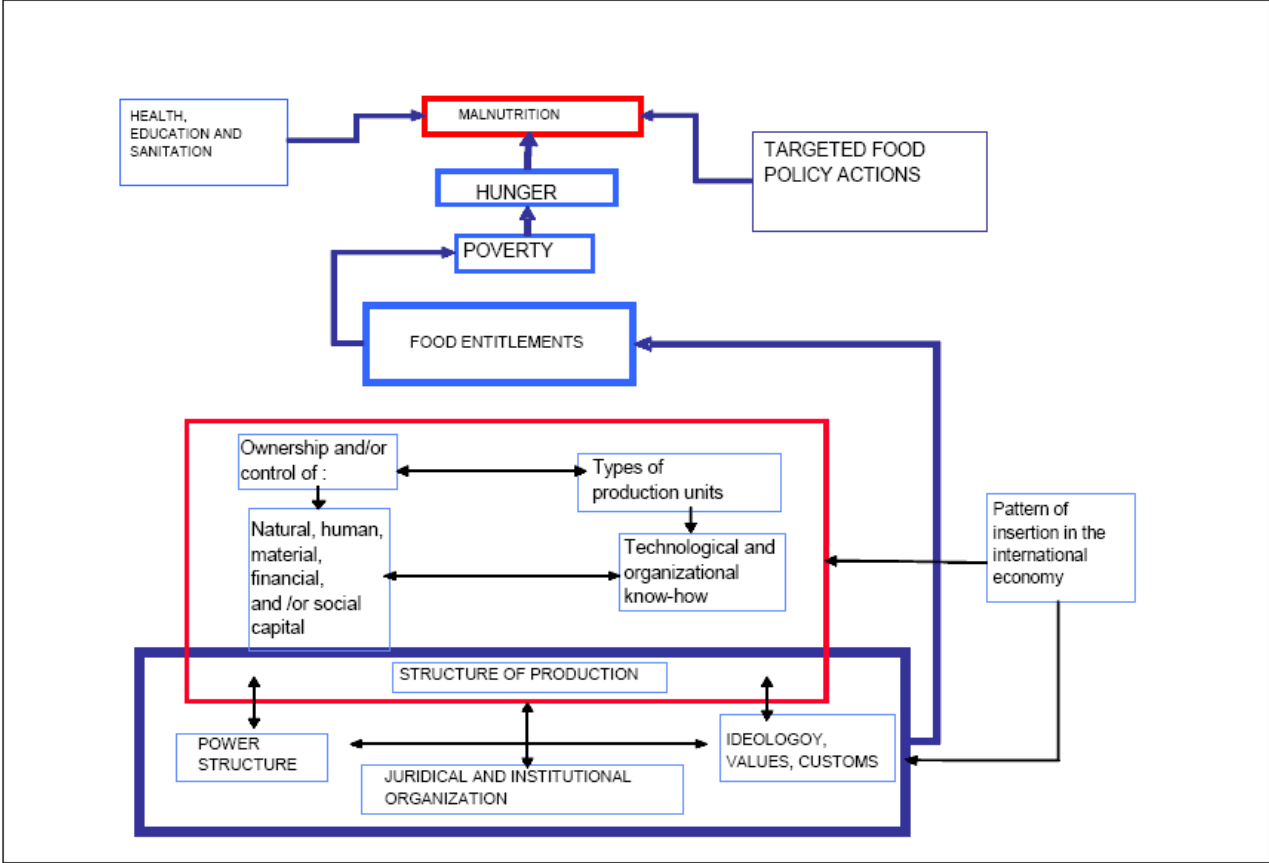
A key document which is used to support the effort in explaining these linkages is the CEPAL Report<sup>10</sup> by the Espindola et al. (2005). On the basis of this report, figure 6 describes the structural determinants of poverty, hunger and malnutrition. According to the authors, malnutrition should be considered a direct consequence of both hunger and weaknesses in terms of health, education and sanitation. Hunger is determined by a lack of “entitlements”, which are understood as access rights, which are also the determinants of poverty, and therefore are strictly related to the access dimension of

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<sup>10</sup> Espindola et al (2005) Poverty, Hunger and Food Security. CEPAL social policy paper series, N. 88.

FNS (Espindola et al, 2005). From a more detailed analysis of this figure, it is possible to notice that the structural factors and determinants of FNS are characterized by a strong territorial dimension. This includes juridical and institutional organization, the structure of production and the power structure: these factors, in particular the institutions, are strictly linked to a particular geographical space. It also includes ideology, values and customs, which are obviously very place-dependent and are defined by the literature as informal institutions (Martin, 2003; Rodríguez-Pose, 2011).

**STRUCTURAL DETERMINANTS OF POVERTY, HUNGER AND MALNUTRITION**



**Figure 6:** structural determinants of poverty, hunger and malnutrition. **Source:** CEPAL, 2005.

The links between FNS and territorial development are even more evident in the part of the figure describing and considering the natural, human, material, financial and social capital as structural determinants of FNS. These factors can be directly connected and linked with the Camagni argument of territorial capital, described as “the set of localized assets – natural, human, artificial, organizational, relational and cognitive – that constitute the competitive potential of any given territory” (Camagni, 2011, p.61), introduced by the OECD in 2001 and re-launched by the EC in 2005. The CEPAL Report also stresses the importance of the macroeconomic factors for FNS and their influence on the territorial determinants are acknowledged in this figure (pattern of insertion in the international economy) and separately addressed in the Report.

These linkages are also stressed by CEPAL in terms of policy interventions. By identifying the policy measures needed to address FNS at macro, meso and micro level, the CEPAL paper argues that “at the meso level, the most important factors are the territorial rural development policies adopted for food and nutritional security (TRD-FNS policies), which take as their starting point, or, if preferred, are structured around local development policies” (Espindola et al, 2005, p. 17).



The Report argues that direct transfers to people are useful in the short term in response to emergency situations, but in addressing structural determinants they necessarily need to be integrated into medium and long-term development strategies. It also stresses the need to better integrate FNS objectives, instruments and strategies with local development policies, as also suggested by an European Commission Report (2003). According to the CEPAL Report, one of the main mistakes in FNS policies has been to consider and identify food policy with agricultural policy and therefore reduce the issue of FNS to the availability and supply of agricultural products. This misleading identification can undermine the effectiveness of FNS policy for three main reasons (Espindola et al., 2005):

- the first reason is that a growing and often predominant part of the aggregate value of the goods composing the food pattern derives from non agricultural sectors;
- secondly, due to the linkages of the agricultural sector with the other sectors (sector providing factors of production, inputs and sectors receiving agricultural products, agro-processing, etc.), these sectors shape and influence the functioning and the performances of the agricultural sector;
- finally, aggregate availability of food products is not the only dimension of FNS and by addressing only the agricultural sector, the other dimensions will be neglected.

In addition to this, the functioning of the food system is also strongly affected by the features and the relations of the social agents defining the different socio-economic, technical and production relations and responsible for the different activities and interrelated sectors composing it: the food system should be considered as a social system and the role of the social agents should not be neglected in the design of policies to address the FNS issue (Espindola et al, 2005). Weak linkages between the agricultural sector and other sectors (industry, services, etc.) may contribute to undermine the efficiency of response to FNS policies as well as bad infrastructure, an under developed agro-processing sector, or high transaction costs in the food chain. Again, neglecting these factors limits the effectiveness of FNS policies and strategies. *“Food patterns are characterized by many local and traditional attributes, there is a high degree of identity elements in the food system. If you design policies that takes into account these attributes you will improve both quality and nutritional aspects and the pattern of use, in terms of health, etc., taking into account the problems that comes from those levels”* (Author’s Interview, Schejtman, Senior Research Fellow, Rimisp, 2012).

Moreover, according to Stamoulis and Zezza (2003) both rural and urban development should be key components of FNS policies and strategies as well as “to strengthen linkages between farm and non-farm sectors and promote participation by the poor in the non-farm activities” (Stamoulis and Zezza, 2003, p.39).

## **5.2 – A place-based approach to address the food and nutrition security issue.**

Given the strong links between FNS and territorial development described in the previous section and the potential ineffectiveness of FNS policies and strategies which neglect local and regional dimensions, it seems to be relevant and potentially effective to both address the territorial dimension and to apply the new regional development paradigm, namely the place-based approach, in the formulation of FNS strategies in developing countries.

First of all, both the economic and social rationale for a place-based approach explained in the Barca Report appear to be very relevant also for addressing the FNS issue.

The economic rationale stresses that a place-based intervention may be justified by three different market or government failures, namely i) weak economic institutional framework due to the vested interests of local elites, ii) institutional lock-in, meaning underdeveloped and weak formal and informal institutions also as a consequence of path-dependency. “A path-dependent process or system is one whose outcome evolves as a consequence of the process’s or system’s own history” (Martin and Sunley, 2006, p. 399) and iii) increase transparency and verifiability of public decisions regarding

agglomerations. Particularly the first two arguments are extremely relevant for the FNS issue. Both through the interviews and through the literature review, it has been possible to verify that one of the main limitations undermining the development process and FNS in developing countries is a weak institutional system, due to corruption, lack of capacity, local elites influence, etc. In addition, formal and particularly informal institutions are characterized by a high degree of path-dependency and can be considered carriers of history, which can generate a vicious circle preventing to overcome an institutional trap even in the future, “the less a place has effective institutions, the less likely it is to have them in the future and to be able to exploit its productive potential” (Barca, 2009, p.22). Moreover, according to the CEPAL Report (2005) the two main pillars of FNS policies should be production systems and institutions. Therefore, a place-based intervention might be extremely important to overcome these institutional weaknesses, both formal and particularly informal, in highly food insecure regions.

The social rationale for place-based policies can also be directly connected to the issue of FNS. According to Barca, social policies (and therefore also FNS policies) must be place-based because both the conditions and the well-being of an individual and the effectiveness of the policy actions to address inequalities are strongly place-dependent and influenced by the social capital, economy, natural and cultural resources, institutions characterizing the territorial context in which the individual lives. The inequality literature usually suggests to address the issue of social exclusion at household level, neglecting the above described territorial features influencing it. This argument can be applied also to FNS which is an issue strictly interrelated to inequalities and social exclusion and which is usually addressed at household level and the territorial dimension is often overlooked.

This was also stressed by Schejtman during the interview “*it seems statistically that beyond the peculiar attributes of the people in the territory, the territorial attributes themselves have also some impact in terms of poverty and inequalities, beyond the particular characteristics of the inhabitants*” (Author’s Interview, Schejtman, Senior Research Fellow, Rimisp, 2012). Barca stresses that usually traditional policies have followed a *de-contextualised individual approach*, while at the same time the place-based approach should avoid the mistake to apply a *de-personalised place-based approach* and he suggests that the social and the territorial agenda should be better integrated. “A new combination of the social and the territorial agenda is therefore required. The social agenda needs to be “territorialised”, the territorial agenda “socialised”. The place-based approach to social inclusion should be the result of these two shifts” (Barca, 2009, p.36).

The OECD argument that all territories have a potential and that policies should aimed at exploiting the potential in all territories is also very relevant and it is also supported by some empirical evidence. The paper by Rodríguez-Pose et al. (2007) *Local Economic Development in Sub-Saharan Africa* shows that even in Sub-Saharan Africa (SSA) there is potential for local economic development strategies, while it has often been argued that SSA requires exceptional solutions to address its development issues. The territorial dimension has been often overlooked in these development strategies. Therefore the paper calls for interventions less based and less focused on exceptional policies and solutions in favour of approaches which consider and try to exploit the place-specific LED potential of these regions. “Development policies in SSA have thus been generally at the two ends of the spectrum: either a combination of macroeconomic stability packages with supply-side sectoral measures applied throughout the continent with little regard for specific local conditions, or piecemeal development projects aimed at guaranteeing the survival of individuals often in extremely precarious conditions” (Rodriguez-Pose et al, 2007, p.532). These policies have been applied at the national level or at the neighbourhood or village level through a project-based approach: therefore the meso dimension and potential has been neglected.

With regards to both the rationale and potential effectiveness of a place-based approach to the FNS issue, almost all the experts interviewed agreed on the usefulness of this approach to address food insecurity. “*There is strong evidence that food and nutrition security levels are influenced by the territorial capital or assets, including human capital, infrastructures, local institutions as well as natural resources and environment, which vary across geographic areas. This diversity is however*

*often overlooked in policy making, which is generally centralized and does not take into account specific local opportunities and issues*". (Author's Interview, Cistulli, Senior Policy Officer, UN FAO, 2012). *"At a small scale, you have problems of food security which depends on land, you have this movement towards renewable energy, you have the use of land which can be used for other uses rather than food, so you have these big challenges in term of the use of land that takes you again into this place-based approach. How do you do efficient land use? You have to look at the places, you have to consider these issues into the whole package of the development of the place, make sure that it doesn't conflict with other parts, with any taxes and incentives that government might want to develop for the land and so on. It is highly connected with place-based policies"* (Author's Interview, Garcilazo, Head of the Rural and Regional Programme, OECD, 2012). According to Schejtman, the need to apply a territorial approach to FNS is supported by the recognition that *"in terms of income sources you have that, even in those places which are mostly rural, an important and an increasing part of their income is from non agricultural activities, so you have an increasing amount of employment which is non agricultural"* (Author's Interview, Schejtman, Senior Research Fellow, Rimisp, 2012).

One of the key pillars of a place-based approach to FNS should be the economic diversification, in particular a shift from a sectoral approach based only on agriculture to a multi-sectoral and integrated approach (OECD, 2006). The need for this shift has been strongly stressed by the majority of the interviewees and it is one of the key concepts characterizing the OECD New Rural Paradigm and more generally the place-based approach. UNCDF in the Cambodia Local Economic Outlook (2010) highlights the importance to abandon the mainstream policy approach to rural development entirely focused on agriculture in favour of an integrated and diversified approach and to build rural development strategies on the basis of territorial potential within and outside agriculture: in order to develop these kind of strategies a place-based approach is pivotal. *"Cambodia's rural areas hold enormous unexploited potential for economic diversification, and this is largely territorially differentiated (for instance between remote rural regions and rural areas in the plains). This calls for a modern, place-based approach to rural development."* (UNCDF, 2010, p. 30).

Moreover, in order to perform a more effective integrated territorial approach and exploit and untapped the local potential, it is fundamental to avoid a common mistake: *"for a strategic approach to rural development to be effective it is critical not to incur in two 'classical' policy mistakes: a) first, 'agriculture' should not be considered synonymous with 'rural', nor agricultural policy as synonymous with rural policy. This means that rural areas should be assessed in terms of their needs and potential across different sectors"* (UNCDF, 2010, p. 29).

Within this process of economic diversification and modernization of the rural economy to address and tackle the food insecurity issue, a place-based approach is again considered pivotal in order to formulate and implement effective policies and strategies. *"If you think about modernizing the rural economy, that largely means that you have to become more capital intensive, that you need to use better machines, start working with critical mass, that also means that you need to deal with some of the people that lose their jobs and for that you need to provide them with an alternative, you need local training methods, you need linkages between the agriculture with other sectors in your region, otherwise you might not be able to do this transition towards modernization because if people feel that they are just losing their jobs and there are no other opportunities for them, you will face rejection. You need a place-based approach for the modernization of the rural economy."* (Author's Interview, Garcilazo, Head of the Rural and Regional Programme, OECD, 2012).

According to Camilleri (UNDP) a territorial approach to FNS is important because it allows to address and capture the complexity of development and integrate the FNS issue within the whole process of development of a region and it also allows to avoid to create a dependency and assistance attitude in the areas of intervention. *"The limit of the traditional sectoral and assistance-led approach to food security is not only that it does not address and consider the complexity of the process of development, but it creates, even without the will, a passive approach to development, in many countries people say that food comes from international cooperation. Moreover, food coming from international cooperation in many cases don't facilitate the work of farmers because the costs of food is zero, food*

*is free, so you destroy the local economy of the young farmers that are in many case the first workers after a war or after a crises” (Author’s Interview, Camilleri, International Coordinator of the ART Global Initiative, UNDP, 2012).*

In addition, the FNS issue itself should be integrated within the whole picture of the process of development of an area by International Organizations addressing it. *“Food security should be considered part of the whole development process of an area, integrated with the social, the environmental, the economic dimensions, in this way you are providing not only something that is concrete (food security), but you are also providing a vision of development that is positive, that is dynamic, that is proactive, that is aware about the need to work together, not only between sectors, but also between the different actors managing the different sectors” (Author’s Interview, Camilleri, International Coordinator of the ART Global Initiative, UNDP, 2012).*

The usefulness of a place-based approach to FNS is also stressed by Crosta: *“when we talk about food security what I am seeing is that this approach makes even more sense, it is a very good demonstration of the validity of place-based approaches because food security is cross-sectoral by definition, it is related for instance to climate issues, to environmental issues, to geographical issues. So I think it is pretty easy to understand why you can not have only a sectoral approach or an entirely spatially-blind approach, think about food security in terms of the access to food or access to water, or again of climate conditions, of climate change, of floods, these are all aspects that have an influence on the food security level of a territory, you need to formulate policies that are adapted to these conditions of the places” (Author’s Interview, Crosta, Head of Knowledge, Policy and Advocacy, UNCDF, 2012).*

### **5.3 – The importance of formal and informal institutions.**

Both according to the literature and mainly to the interviewees, one of the key pillars and most critical issues for the implementation of a place-based approach to FNS in developing countries are institutions, both formal and informal. In particular the latter play a critical role for FNS: as explained by Schejtman and by figure 6, the determinants of FNS include components such as traditions, values of the places, habits, culture, social capital. Neglecting these factors may strongly undermine the effectiveness of FNS policies and interventions. The importance of informal institutions and their highly context specific nature is also stressed by Rodríguez-Pose (2011), who is very critical and sceptical regarding the potential effectiveness of the spatially-blind approach due to the partial and incomplete understanding of institutions proposed by the WDR which equates them with just formal institutions and completely overlooks the importance of the informal ones.

This idea related to the strong place-specific nature of institutions is also supported by Rodrik (2005), who criticizes the mainstream approach to institutional reforms in developing countries proposed mainly by the World Bank, IMF, WTO, based on a “heavily biased towards a best-practice model” (Rodrik, 2008, p.2). By supporting his argument through examples from different developing countries, the author proposes the concept of “second-best” institutions and argues that in order to achieve effective institutional reforms in these countries a second-best mindset is required, meaning an approach that considers the context-specific nature of market and government failures and the complications of implementing best-practice institutional reforms. “Best-practice institutions are, almost by definition, non-contextual and do not take into account these complications. Insofar as they narrow rather than expand the menu of institutional choices available to reformers, they serve the cause badly” (Rodrik, 2008, p. 10).

Moreover the role of institutions and institutional reforms plays a key role even in the debate between place-based or spatially-blind approaches in developing countries. The spatially-blind approach proposes the agglomeration and urban expansion argument in order to overcome institutional weaknesses characterizing developing countries (Barca et al, 2012). In contrast, Barca et al (2012) argues that “the ability of urbanization to overcome rather than to exacerbate institutional problems is not at all clear, because it depends on their interactions, which in turns may also depend both on the

level of development and also on the existing limited institutional arrangements” (Barca et al, 2012, p. 145). The place-based approach would instead allow to formulate and implement policies which aim at utilizing and enhancing the institutional capacity in place. (CAF, 2010; Barca et al, 2012).

Given the key role played by institutions for implementing an effective place-based approach to FNS and more generally to promote development and given the widely recognized institutional weaknesses in developing countries, particularly at sub-national level, as also stressed by Cistulli (FAO) and Camilleri (UNDP), institutional capacity building becomes a key policy action and objective and the efforts of international organizations are increasingly focusing on it. As highlighted particularly by Dijkstra, McCann and Rodríguez-Pose, this can be achieved by external actors, such as international organizations, donor agencies, etc. through conditionality, part of the aids programmes could be conditioned to institutional capacity building.

According to Tomaney, another key role of institutions for the place-based approach is that in the places which can be considered successful examples in the implementation of long-term development strategies, a fundamental common characteristics seems to be the capacity to establish a sort of mechanisms which allow to combine long-term strategies with short-term needs, in particular institutions such as RDAs, etc, that go beyond the short-term policy cycle and allow to develop and maintain a long-term strategy. These mechanisms can be identified with *“institutions which are separated but linked to the political structures which allow you to take a long term view”* and *“you need to have that because that is the way in which accountability is instituted, that is the way in which the political class is refreshed and so on. If you don’t have that, you are destined towards sclerosis”* (Author’s Interview, Tomaney, Director of CURDS, Newcastle University, 2012).

Therefore, given these and the previous considerations, both the strong influence of the territorial capital and the key role of formal and informal institutions and their highly context-specific nature on FNS, it appears clear that a FNS strategy entirely based on a spatially-blind approach which neglects all these factors and determinants, would be highly ineffective and it is very likely to fail in addressing the MDG1. A place-based approach which considers that these territorial place-specific features can constitute both the constrains and obstacles to reach FNS, but they can also represent the possible solutions to improve and tackle this issue, integrated with the macro-economic FNS policies through a multi-level governance principle, would therefore be a more effective approach.

## **6 – Conclusions**

The paper, after having explained the aims, the research question and the research design, in section III described the issue of FNS, the four dimensions composing it, the severity of the food insecurity and the unresolved MDG1 and finally the policy actions and interventions by the International Organizations, highlighting the lack of a territorial dimension in the Updated Comprehensive Framework for Action. Section IV presented the new regional development paradigms, in particular the place-based approach launched by the OECD and by the Barca Report in 2009, analyzing also its critique, the spatially-blind approach and the place-based counter-critique, both through the literature and through the interviews. Finally Section V tries to establish a link between the FNS issue and this new regional development paradigm, analyzing the rationale, the potential effectiveness and the main components of a place-based approach to FNS, arguing the potential ineffectiveness of an entirely spatially-blind approach, which neglects the importance of context-specific constraints and potential solutions and tangible and intangible territorial assets for FNS and strengthening the argument through the interviews of the main experts both from Academia and from International Organizations.

The main finding of the research is that context really matter, probably as highlighted by some of the interviewed experts even more with regards to the FNS issue than others given the place-specific nature of many of its determinants, and plays a critical role in formulating and implementing effective FNS policies and strategies. Therefore, FNS decision-makers should recognize the importance of this new territorial development paradigm, namely an integrated place-based approach, which effectively addresses the complexity and the multi-dimensional, multi-sectoral and multi-actors nature of hunger

and malnutrition: this should be reflected - and not only acknowledged – in FNS policies and strategies. The analysis highlighted a general and wide consensus around the ineffectiveness and inadequacy of sectoral-based one-size-fits-all solutions and approaches both for development policies and particularly for the FNS issue.

More generally, this paradigm shift, as argued by the OECD (2011), is also highlighted by Obama's strategy "Developing Effective Place-Based Policies for the FY 2011 Budget". "This paradigm shift was most recently illustrated by US President Barack Obama's decision in 2009 to engage in "an interagency process focused on investing in what works by evaluating existing place-based policies and identifying potential reforms and areas for interagency co-ordination". The White House directive made clear that "place-based policies leverage investments by focusing resources in targeted places and drawing on the compounding effect of well co-ordinated action. Effective place-based policies can influence how rural and metropolitan areas develop, how well they function as places to live, work, operate a business, preserve heritage, and more. Such policies can also streamline otherwise redundant and disconnected programs" (Memorandum for the Heads of Executive Departments and Agencies, The White House, 11 August 2009)". (OECD Regional Outlook, 2011, p. 171).

In addition to the key concepts discussed in the previous sections and summarized in the table 1, Camilleri (UNDP) suggests that International Organizations should play a role of "facilitators", they should support the country in the elaboration of its own diagnosis both at national and sub-national level, mainly through capacity development, in order to reach a common and shared diagnosis of the territory, instead of one different diagnosis for each International Organization, each one with its own criteria, its own calendar and its own technical approach.

The research also highlights that the place-based approach in general and its application to FNS in particular may present some potential limitations. The main one, on which also the majority of the interviewees agree, is that a territorial approach requires time and it is effective in the medium and long-term. The issue of FNS, as seen in the previous sections, not only requires medium and long-term solutions to address the structural determinants, but it also needs short-term interventions to address emergency situations. This is also highlighted by Gill "*There are issues that policy-makers can be "patient" about, such as spatial equalization of production and more specifically spatial equalization of production per square kilometre; this could even never happen and there are issues that policy-makers can be "impatient" about: per capita consumption, basic services (education, security, health, etc.) and even more impatient about, such as poverty and Food Security*" (Author's Interview, Gill, Chief Economist of the Europe and Central Asia Region and Director of the WDR 2009, World Bank, 2012). Therefore, according to the twin-track approach, a territorial approach should be integrated with short-term interventions to address emergency and temporary situations, but avoiding the mistake to use this emergency interventions in the long-term to address the structural determinants of FNS, which would create a passive and dependency attitude towards development (Camilleri, 2012; Cistulli, 2012).

Moreover, another risk and potential limitations would be to consider the territorial approach as the unique solution or paradigm to the issue of FNS: "*it can not be a stand alone paradigm, it has to be integrated and combined with other approaches to get the most appropriate mix of policies able to address both the causes of and the local opportunities to reduce food and nutrition insecurity*" (Author's Interview, Cistulli, Senior Policy Officer, UN FAO, 2012) and "*not everything has to be place-based*" (Author's Interview, Garcilazo, Head of the Rural and Regional Programme, OECD, 2012). In particular, with regards to the debate between place-based vs spatially-blind approaches, the majority of the interviewees agree that this is a false dichotomy, that both approaches have their rationale and their place and that they are not one the alternative of the other. In some cases an integration of the two approaches might be the most effective policy intervention. "*In many cases the question is: do you need a place-based approach to implement some of the spatially-blind policies? Most people would argue that you do.*" (Author's Interview, Garcilazo, Head of the Rural and Regional Programme, OECD, 2012).

PLACE-BASED APPROACH TO FOOD SECURITY: A CONCEPTUAL FRAMEWORK	
Problem recognition	Territorial and social inequalities, lack of competitiveness and unexploited territorial potential have a strong influence on Food Security
Policy Objective	Competitiveness and Equity (economic and social objectives)
Economic Objective	1 - Overcome institutional weakness and lock-in through an external place-based intervention and through capacity building, strong recognition of the importance of both formal and particularly informal institutions
	2 - By recognizing that every territory has a potential, maximize the returns of interventions of any given territory and as a result, in aggregate term, of any given country or continent
Social Objective	Recognition that context really matter for inequalities and food security, which are usually addressed only at household level: territorialized the social agenda and socialize the territorial agenda
General Policy Framework	Value and exploit territorial potential (expressed and latent) to reduce Food Insecurity
	Shift from and assistance-led to a development-led approach
Approach	Shift from an undifferentiated, one-size-fits-all to a place-based, context-specific approach
	Shift from a project approach to a programme and planning approach
	Food Security defined as a multi-dimensional concept, but usually addressed through a sectoral, mainly agricultural based approach: shift from a sectoral to a multi-sectoral territorial approach
	Aids to address food security provided on the basis of a "conditionality principle", in particular for institutional capacity building, etc.
	Diversification of the rural economy through a place-based approach which will allow in particular to provide alternatives and avoid rejection during the diversification process
	Emergency interventions and actions have to be used to address emergency issue, not structural conditions and determinants, otherwise they create dependency
"Entry point"	National Planning System
Time horizon	Long-term approach with short term assistance intervention for emergency situations, Integrate the twin-track approach with the territorial approach
Institutional Settings	Create and generate institutional mechanisms that would allow to overcome the policy-cycle (eg. Regional Dev. Agencies, etc)
Role of International Organizations	Role of "facilitators", support and advise the territories to develop their own diagnosis, integrating the interventions with the other IO activities.
Instruments	Shift from subsidies and state aids which contribute to create dependency to investment in territorial capital, tangible and intangible assets
Actors	Bottom-up multilevel governance approach, without neglecting the role of the central state
Unit of intervention	Functional areas

**Table 1:** conceptual and policy framework for the place-based approach to food and nutrition security.

An interesting interpretation of this debate is provided by Rodríguez-Pose. He argues that spatially-blind policies in reality are place-based policies, but partial place-based policies, which just focus on main cities and therefore leave a lot of potential untapped within the country: the goal should be to integrate these policies within the framework of a place-based approach. “They are a type of place-

based policies which will ultimately be more beneficial for a significant share of large city dwellers, but not necessarily for the rest of the population. We therefore need people-based development policies which, without rejecting their needs for cross-fertilisation and integration with what is known as a spatially-blind approach, put individuals at the centre” (Rodríguez-Pose, 2011, p.88).

In addition, a further potential limitations of the place-based approach which, according to Tomaney, should be addressed and improved, regards the role of the state. *“The weakness is that it doesn’t really address the role of the state in economic development, both in a positive and in a negative sense”* and *“I would say that the state has to remain critically important in the provision of infrastructure, in the provision of services and so on, in ways which are necessary if those place-based approaches have got a chance of working. And I think that in much of the debate around place-based approaches that has not been sufficiently discussed or acknowledged”* (Author’s Interview, Tomaney, Director of CURDS, Newcastle University, 2012).

These potential limitations and particularly the integration of the place-based approach with other approaches, should be considered in the implementation of such policies and further research is needed to overcome these weaknesses.

In conclusion, on the basis of both the literature and the interviews, a place-based approach to FNS policies and strategies, strengthened by the consideration of the above potential limitations, could represent an effective way of tackling the issue of food insecurity. As highlighted in this paper, there seems to be a growing recognition of the potential effectiveness of this approach, but this is seldom reflected in FNS policies and strategies. In particular, a stronger focus on the territorial approach to FNS within the framework of the Updated Comprehensive Framework for Action and particularly the integration of the place-based approach with the twin-track approach might represent a powerful, more effective and long term strategy to address the food insecurity issue.



## **Annex 1: example of questions for the interviews.**

Semi-structured interview, about 45 minutes.

### **Questions:**

- 1 Place-based vs spatially-blind policies:** what do you mean by place-based/territorial approach? What is the rationale for a place-based approach? How this approach should improve the effectiveness of development policies?
- 2 Spatially-blind (or people-centred) policies: debate with the World Bank:** what is the World Bank position (spatially-blind approach)? How do you explain this distance between OECD/EC and WB approach?
- 3 Role of governance and institutions.** Different role of institutions in the place-based and spatially blind approach. Where are more critical? Especially in developing countries characterized by weak institutions, how can a place-based approach be implemented?
- 4 Effectiveness of the place-based approach for Food and Nutrition Security.** Do you think that this place-based approach could be also useful to address the issue of FNS in developing countries? If, so why and how? What are the main differences between the application of the place-based approach in developed and in developing countries?
- 5 How to shift from a sectoral based (usually agricultural) to a territorial approach to FNS policies?** One of the key concept characterizing this new regional development paradigm is the shift from a top-down sectoral based approach to a bottom-up territorial approach: how can policies shift from a sectoral to a territorial approach?
- 6 Which are the main limitations of the place-based approach, in particular with regards to the FNS issue? Do you see any potential integration with the spatially-blind approach?**

## **Chapter II: The governance issues at the local level: the role of formal and informal institutions in sustaining and enhancing territorial development for food security**

### ***Abstract***

*Food and nutrition security is considered by FAO a four-dimensional concept, that includes: (i) availability of food; (ii) access to food; (iii) nutritional quality; (iv) stability of availability and access. Drawing on the twin-track and right-based approach proposed by FAO<sup>11</sup>, three additional dimensions subsumed in the food security concept are the governance issue, the geographic (space) and the equity (disparity) dimensions, which have considerable implications for FNS policy analysis and decision making. This chapter focuses on the governance and institutional dimensions of food and nutrition security.*

*There is an increasing recognition that to achieve sustainable food and nutrition security, national policies and strategies should place more emphasis on the role played by local institutions which can play a key function in addressing food security problems. In addition, good governance is considered a crucial premise to the twin-track approach to food security proposed by FAO. As recognized by the background paper of the FAO workshop on Food Security Governance (2011), “the continuing food insecurity is predominantly rooted in aspect of poverty, power and inequality, and good governance is recognized as playing an essential role in dealing with them” and “a proactive regime of food security governance operating at the national and local levels, under democratic conditions, will contribute significantly to reshaping national food policies and transforming them into food security policies” (FAO, ESA, 2011, p. 15).*

*The progressive shift from a government system to a governance system and the proliferation of intermediate organizations and institutions, especially at sub-national level, contributes to increase the importance of the concept of multi-level governance for territorial development and food and nutrition security. An effective and well-functioning multi-level governance system, able to address the multi-dimensional, multi-actor and multi-level nature of FNS, as well as solid and adequate formal and informal institutions, are pivotal and fundamental conditions for the application and implementation of a territorial approach to food and nutrition security policies.*

### **1 – Introduction: the importance of multi-level governance for FNS.**

The evolution of the concept of FNS which now goes well beyond the agricultural sector and it is no longer considered as an issue of food production – the world produces enough food to feed everyone (FAO, 2013) – and the recognition of its multi-dimensional and multi-actors nature highlight the inadequacy and the institutional incoherence of the FNS governance mechanisms to address the complexity of food insecurity. The National level is critical in the fight against food insecurity, but alone is not sufficient to find a long-term solution to this issue: an effective FNS governance system can be reached only by involving and engaging other actors and institutions both at the sub and supranational level and by strengthening the multi-level governance mechanics between these different levels (Marzeda-Mlynarska, 2011). In particular, “the subnational level is missing from this (FNS Governance) system, however, there can be observed new processes in this area. The most important is the emancipation of the regions functioning within the states on the international level. Decentralization processes, which took and takes place in a different part of the world (not only in Europe), makes the voice of these sub-state actors more heard” (Marzeda-Mlynarska, 2011, pag.6)

The importance of the sub-national level and of the local institutions and governance is also stressed by Paarlberg (IFPRI): “global markets and interstate institutions may be spreading and proliferating overall, but in the poorest countries where large numbers of people are still hungry, and particularly in

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<sup>11</sup> Stamoulis & Zezza, 2003

the rural regions of those countries, international food markets and global institutions still tend to have weak influence relative to local or national food markets and local or national food governance institutions”. (Paarlberg, 2002, pag. 2).

According to Pereira et al (2012), “the overriding consideration for governance and food security is that the most persistent forces producing hunger today tend to be local or national rather than global, and are still governed best at the local or national level (Paarlberg 2002, p.50; E. Young 2004). Yet prescriptions of good governance and indeed adaptive capacity at these levels consider, rather ‘unproblematically’, the ability of the state to respond where necessary” (Pereira et al, 2012, p. 45). These authors also stress that there is an “increasingly accepted rationale that food security requires a move towards adaptive governance beyond the state” (Pereira et al, 2012, p. 48). The need to shift from a monocentric, hierarchical top-down system of government to a more flexible, multi-level, cross-sectoral and adaptive governance system in addressing food insecurity issue is highlighted by this paper through the case study of South Africa.

This chapter aims at investigating and critically analyzing the issue of multi-level governance for the territorial approach to FNS policies. It also seeks to understand the role and the importance of institutions in territorial development to achieve food and nutrition security (Session III and IV). Session V addresses the issue of institutions analysis. The second part of the paper (Session VI) addresses the relationship between multi-level governance and development in Mexico with a particular focus on territorial disparities which represent one of the main problems of this country.

Through this case study, the paper will finally highlight the potential limitations of devolution, in particular in regions characterized by a weak sub-national institutional system. Food insecurity is first and foremost an individual and household level problem and therefore inequalities should be assessed in terms of disparities in income levels, access to resources, weakness in power relations of individuals and households. In addition, individual and geographic disparities seem to be correlated: some available evidence shows that the spatial distribution of hunger and food insecurity cross-countries and within countries matches with lagging and vulnerable areas.

## **2 - Governance and multi-level governance.**

In identifying the new territorial development paradigms, the place-based approach to development policies (OECD, 2010; Barca, 2009), it is emphasized the shift from a top-down development model with a prominent role of the central state to a bottom-up development model with the political and economic responsibilities distributed to different institutional levels and in particular at territorial level. This phenomenon is also highlighted by Pike et al “we are moving from an era of government to one of governance, and second, to a decentralized era of devolution and “new regionalism” (Pike et al., 2006, p 124). In this context, the concept of governance plays a key role. Given the importance that this concept is increasingly acquiring, there are many definitions of governance in the literature. According to Box, governance “is intended to include the entire range of activities of citizens, elected representatives, and public professionals as they create and implement public policy in communities” (Box 1998, p 2). Pike et al. argues that “above all notion of governance refers to governing styles in which the boundaries between and within public and private sectors have become blurred. The focus is on governing mechanism which do not rest on recourse to classical ideas of state authority and sanctions, but on the interactions of multiple actors” (Pike et al., 2006, p 128).

Therefore, this system of governance is based on the interaction of multiple actors and stakeholders - public, private, NGOs, etc. – situated at different levels of government.

A mutually dependent relationship characterizes the interactions between these levels of government: this relationship can be developed across different levels (vertical), at the same administrative level (horizontal) and between multiple actors, eg. public and private sector, citizens (networked) (Charbit et al., 2009). In this context the role of multi-level governance become fundamental in order to better manage the relationship between all these different levels of government. According to Charbit et al., the term “multi-level governance is used here to characterize the mutually dependent relationships –

be they vertical, horizontal, or networked – between public actors situated at different levels of government (Charbit et al., 2009, p 8). Thus, the concept of multi-level governance allows to capture and interpret the complex multilayered institutional relationships - vertical, horizontal and networked - occurring at different administrative levels, that shape territorial development.

The implementation of multi-level governance is challenged by some gaps hindering the management of relationships at different levels of government. Charbit et al. identify five main gaps confronting multi-level governance:

- **Information gap:** the information gap is generated when information asymmetry occurs between the central government and the sub-national institutions, which obstacles the effective design and implementation of territorial policies.
- **Capacity gap:** this gap is characterized by a lack of human and knowledge capital between levels of government. This can represent one of the main obstacles to the process of decentralization when responsibilities and functions are transferred from the central government to the sub-national institutions, which do not have the “capacity” to deliver these functions.
- **Fiscal gap:** it can be described as the “difference between sub-national revenues and the required expenditures for sub-national authorities to meet their responsibilities” (Charbit et al, 2009, p 8). This gap creates a financial dependence of the local institutions on both the central level (vertical dependence) and the other sub-national levels when transfers between richer regions to poorer regions occur (horizontal dependence).
- **Administrative gap:** it occurs when there is a lack of correspondence between the administrative regions and the functional socio-economic areas at sub-national level (such as metropolitan areas, etc.).
- **Policy gap:** this gap is the result of a purely top-down approach at national level to multi-sectoral local and regional policies and strategies. This may result in incoherent and ineffective policies and approaches to address local needs.

Improving vertical and horizontal coordination through the management of the five gaps described above can contribute to improve the effectiveness and the efficiency of the process of decentralization. The presence of solid and adequate institutions is key in implementing a decentralization strategy and capacity building represents a fundamental tool to strengthen the institutional capital of a region.

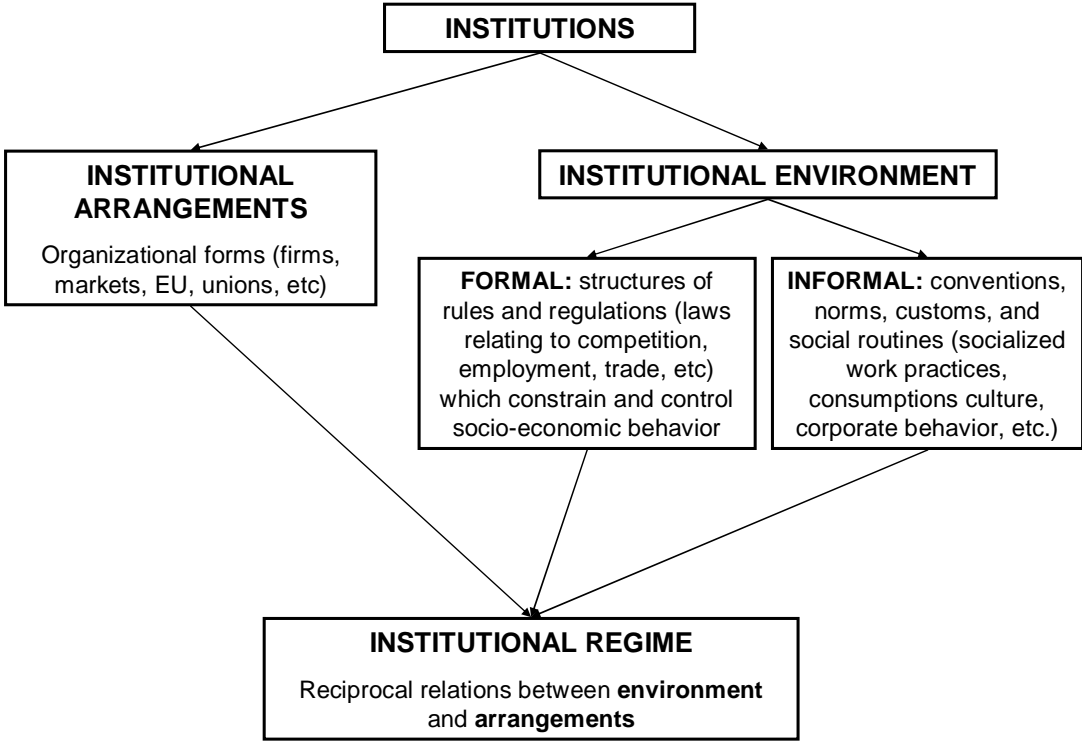
### **3 – Institutionalism in Economic Geography: the Institutional Turn.**

In the last two decades researchers have increasingly focused their analysis and studies on Institutional Approaches, both in term of theoretical and conceptual frameworks and in term of methodologies. Institutions are now recognized as one of the main factors driving socio-economic development at all geographical level: supra-national, national, regional and local. Even mainstream economists are increasingly recognizing institutions as one of the main drivers of development (Acemoglu et al, 2001; Rodrik et al, 2004; Rodriguez-Pose, 2010).

One of the field in which the Institutional Approaches are more and more researched and analyzed is Economic Geography: this brought to the so called “Institutional Turn” in Economic Geography (Martin, 2000; Peck, 2000, MacLeod, 2000). Martin describes this institutional turn as “the recognition that the form and evolution of the economic landscape cannot be fully understood without giving due attention to the various social institutions on which economic activity depends and through which it is shaped” (Martin, 2000, p. 77). The main reasons for the emergence of this “institutional turn” in Economic Geography are: a shift from a national Fordist (and Keynesian) to a post-Fordist (post-Keynesian) neo-liberal approach to the economy (regime of economic accumulation) (Martin, 2000; Peck, 2000), a strong recognition of the importance of social and cultural factors for economic development and the fact that institutions are a key component of the socio-cultural environment, the growing focus on institutionalism in other disciplines (economics, sociology and political science) and

a widespread acceptance that “institutions matter in the operation of the economy” (Peck 2000, p.62) and in particular institutions matter for territorial development (Rodriguez-Pose, 2010).

According to North, institutions can be defined as “the rule of the game in a society; (and) more formally, (as) the humanly devised constraints that shape human interaction” (North, 1990, p.477). Some authors (North, 1992; Rutherford, 1994; Martin, 2000) distinguish between “institutional arrangements” and “institutional environment”. The former refers to the organizational forms, such as firms, markets, labour unions, city councils, EU, etc (Martin, 2000), the latter is composed by both formal and informal institutions (figure 1). Formal institutions include the structures of the rules and regulations and in particular “laws relating to competition, employment, contract, trade, money flows, corporate governance, welfare provision, which constrains and control socio-economic behaviour” (Martin, 2000, p.80). Informal institutions are “informal conventions, norms, customs and social routines (socialized work practices, consumptions culture, corporate behaviour, etc)” (Martin, 2000, p.80). The reciprocal relations and interaction between institutional arrangements and environment constitute the “institutional regime” which is the main research focus of institutional approaches in Economic Geography.



**Figure 1:** delimiting institutionalist Economic Geography. **Source:** author’s elaboration on the basis of Martin, 2000.

In order to identify the most suitable methods to analyze institutions, it is important to define a solid theoretical and conceptual framework which allows to interpret and to understand institutions, their role for regional development and their main functions. Martin proposes three main conceptual frameworks/approaches to institutional analysis (figure 2): rational choice institutionalism, sociological institutionalism and historical (evolutionary) institutionalism. The main focus of rational choice institutionalism is on the role of institutions in generating particular organization form under capitalism and their functions in reducing transaction costs. Sociological institutionalism conceptualizes institutions as place and culturally specific formal and informal networks of trust and the economy “as a socio-institutionally embedded system” (Martin, 2000, p.82). Finally historical

institutionalism focuses on the historical evolution of institutions and their role in the economic development (regional and local development in the case of Economic Geography).

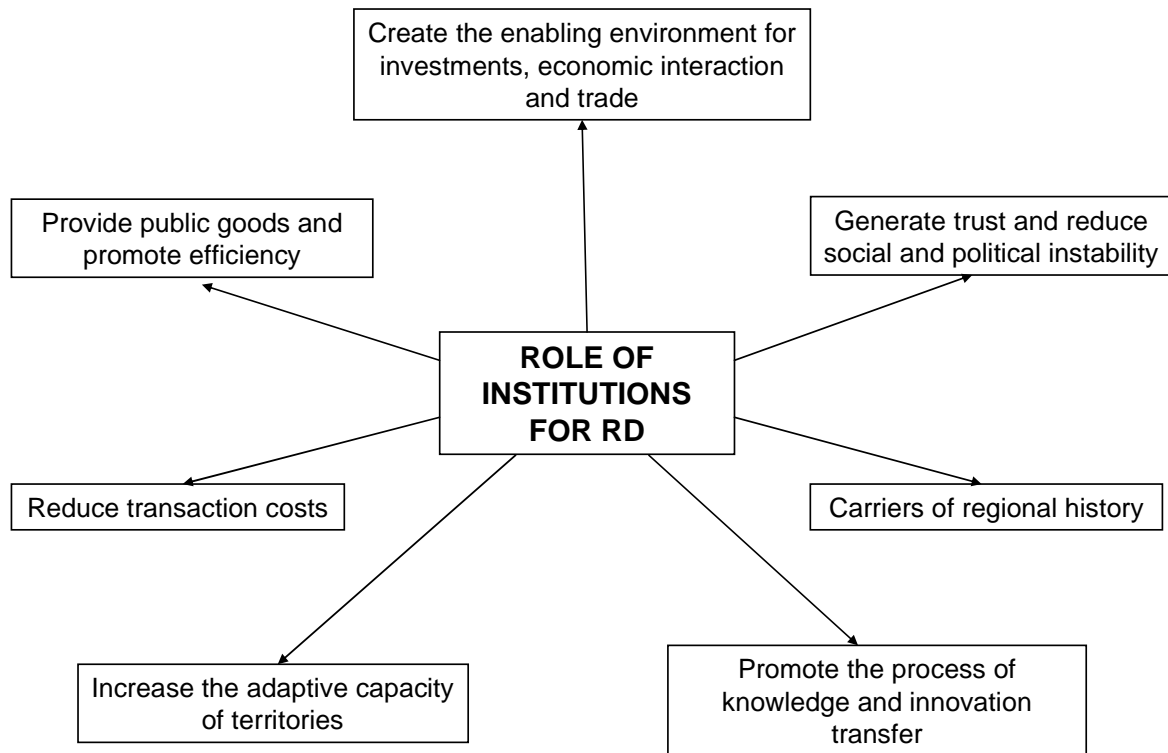
Perspective	Main focus	View of institutions	Theoretical basis	Account of institutional change	Geographical applications
<b>Rational choice institutionalism</b>	Understanding how institutions generate particular organizational forms under capitalism.	Institutions structure individual actions through constraint, information, or enforcement. Institutions judged according to whether they reduce transactions costs and increase economic efficiency.	Transaction costs economics, agency theory, contract theory, property rights.	Constantly changing as outcome of market behavior (relative price changes and changes in transaction costs). Evolutionary trajectory determined by competitive selection.	Spatial agglomeration and localization of economic activity creates specialized institutions which lower transaction costs.
<b>Sociological institutionalism</b>	Understanding the economy as a socio-institutionally embedded system.	Institutions as culturally specific social networks of trust, reflexive co-operation and obligation which underpin economic behavior and relationships.	Network theory (institutions as congealed networks), organization theory, group theory and cultural theory.	Institutional change as process of social construction around new logics of social legitimacy or new shared cognitive maps.	The role of locally specific formal and informal networks of trust, cooperation, and knowledge transfer (“untraded interdependences”) in fostering the local embeddedness of firms.
<b>Historical (evolutionary) institutionalism</b>	Understanding the role of institutional evolution in the historical dynamics of the capitalist economy.	Institutions as systems of social, economic, and political power relations, which frame the regulation and coordination of economic activity.	Eclectic, drawing on a range of heterodox frameworks, including post-Keynesian, and evolutionary economics, regulation theory, long-wave theory, and comparative politics.	Durable over long periods, built up through slow accretion, and subject to hysteretic path dependence and lock-in. Long-run evolution is episodic as result of interaction with economic development.	The nature and evolution of local institutional regimes and their role in the social regulation and governance of local economies.

**Figure 2:** alternative approaches to institutional analysis and their application in Economic Geography.  
**Source:** Martin, 2000.

The importance of addressing institutional analysis and issues is justified by the key role that institutions play in economic development both at national and supra-national level and particularly for territorial development.

#### 4 - The Role of Institutions for Territorial Development.

Solid and efficient institutions play a key role both to promote well-functioning and coordinated multi-level governance mechanisms and to implement an effective decentralization process, limiting the potential negative aspects and enhancing the benefits of devolution. With regard to the role of institutions, figure 3 summarizes the main functions they provide for regional development mainly on the basis of Rodriguez-Pose (2010).



**Figure 3:** the role of institutions for territorial development. **Source:** author's elaboration on the basis of Rodriguez-Pose (2010).

First of all, adequate local institutions represent one of the main drivers of territorial development as, by strengthening social and political stability, they create the enabling environment for investment, economic activities and trade (Rodriguez-Pose, 2010). Moreover, institutions promote the process of knowledge and innovation transfer among territories through the reduction of uncertainty and information costs (in particular informal institutions): “more than any other factor, they determine the learning capacity of any region” (Rodriguez-Pose, 2010, p 12). In addition, they represent one of their main determinants of territorial resilience by increasing the adaptive capacity of territories to changes and shocks.

One of the most important functions of institutions, and in particular of informal institutions, is the generation of trust among actors and stakeholders characterizing a specific territorial system, facilitating coordination and cooperation (Putnam, 1993; Fukuyama, 2000; Rodriguez-Pose, 2010). Solid formal institutions are also important because they contribute to create a suited legal framework for which facilitate the attraction of FDI and increase economic efficiency, in particular by reducing the risk of corruption (Chakravarti, 2005; Rodriguez-Pose, 2010). The reduction of transaction costs occurs by facilitating access to information (institutions provide sources of information, a normative framework, are carriers of past histories of business practices, etc) (Martin, 2000).

According to Martin, institutions are important carriers of the history of a particular territory: thus they provide information on the past development paths and trajectories, on the culture and traditions and also on the institutional changes of a specific area. Rodriguez-Pose argues that institutional thickness – which can be described as the interaction between the “intellectual capital” (knowledge resources), “social capital” (trust, reciprocity, cooperative spirit, etc) and “political capital” (capacity for collective actions) - “determines to a great extent the development potential of any territory” (Rodriguez-Pose, 2010, p 14).

While solid and efficient institutions can be considered one of the main drivers of territorial development, on the other hand, institutions can become one of the main obstacles to the development of an area. Institutions can generate and develop “vicious circles of suboptimal development trajectories through institutional lock-in” (Rodriguez-Pose, 2010, p 20) due to rigid institutions that are not able to adapt to changes and identify new development paths (eg. Italian Mezzogiorno). A regional lock-in can be the result of a strongly interrelated institutional regime, constituted by public institutions, local actors and stakeholders characterized by a high degree of “connectedness” which prevents the territory to respond to changes and thus constraint economic development (Martin, 2010).

“Institutional sclerosis” is another negative aspects related to institutions. Amin (1999) describes institutional sclerosis as a thin institutional regime in which elites control and manage the power relations in the region, discouraging the participation of local stakeholders in decision making and reducing confidence and trust in the policy-making process. Moreover, corrupted institutions represent one of the main factors undermining development and at sub-national level they prevent an effective and efficient implementation of the decentralization process, determining relevant gaps and obstacles for multi-level governance. Another possible negative aspects related to institutions emerges when, in the implementation of the decentralization process, the central government delegates some responsibilities to local institutions, but it does not provide them the necessary resources to perform those functions (unfunded mandate).

It is also difficult to identify standard models and settings for effective institutional arrangements, as institutions are characterized by a highly context and geography-specific nature (Rodriguez-Pose, 2010) and the interactions of a well-functioning institutional regime (in one place) with the local and context specific, particularly intangible, factors of another area may result in an inappropriate institutional system. This potential risk due to a “one-size-fits-all” approach to institutions is also highlighted by Rodrik, who argues that “moderate changes in country-specific circumstances (policies and institutional arrangements), often interacting with the external environment, can produce discontinuous changes in economic performances, which in turn set off virtuous or vicious cycles” (Rodrik, 2003, p 9). According to Rodrik (2008), this risk is particularly high when the so called “best-practices” institutions identified in developed countries are proposed as appropriate institutions for developing countries. He criticizes the best-practices approach adopted by some International Organizations (eg. World Bank, IMF, WTO) based on the assumption that it is possible to define a “unique set of institutional arrangements ex ante and views convergence towards those arrangements as inherently desirable” (Rodrik, 2008, p 2). Thus he proposes the concept of “second best institutions” for developing countries, which are more flexible, context-specific and adaptable to the local conditions and culture and which are not based on rigid and ex ante determined best-practice models.

Given the importance of institutions for economic development, it is necessary to identify the most suitable methods that allow to analyze and research institutions and understand their role and functions in a given region.

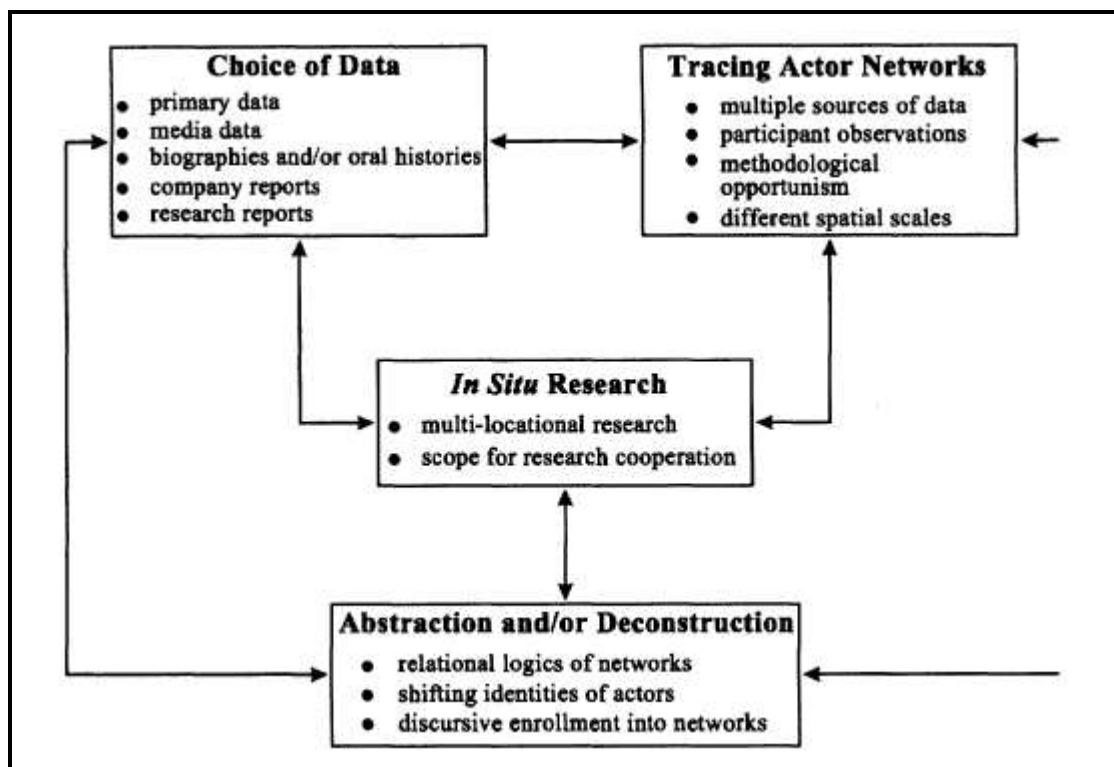
## **5 – Methods for Institutional Approach analysis: a focus on the process-based methodological framework.**

Given the complexity of the issue, a wide range of methods are usually used to research and analyze institutions: as suggested by some relevant authors in Economic Geography (Yeung, 2003, 2007; MacKinnon et al., 2009) it is no longer possible to rely only on established “scientific” (quantitative) methodology, but the support of specific qualitative methods (interviews, focus group, actor network analysis, in situ research, etc) and the integration of qualitative and quantitative methods is becoming increasingly important to capture the complexity of institutions. This section of the thesis seeks to identify the main methods for addressing institutional analysis and assess the value and limitations of these methods. In particular it focuses on the *process-based methodological framework* proposed by Yeung (2003), which is defined as “the creative and coherent deployment of different methodological



practices as different “moments” of a research process that is sensitive to specific research questions and/or context” (Yeung, 2003, p. 442).

The main value of the *process-based methodological framework* proposed by Yeung is that it goes beyond the classical philosophical dualism between quantitative and qualitative methods. The author proposes a methodology that: i) tries to combine qualitative and quantitative methods on the bases of the process of the research, ii) the choice of the methods is sensitive to the specific research questions and to the context of the analysis, iii) considers the “deployment of different methodological practices as different “moments” of a research process” (Yeung, 2003, p.442). The process-based methodological framework is composed by four different interrelated methodological practices or “moments”: i) the use of primary and secondary quantitative data, ii) actor networks analysis, iii) in situ research, iv) deconstruction and/or abstraction for the generation and development of theories (figure 4).



**Figure 4:** process-based methodological framework. **Source:** Yeung, 2003.

The choice of the typology of data (primary or secondary, qualitative or quantitative) and the “data collection tools” and sources is a crucial step in analyzing institutions and more generally in a research project. Secondary data, such as company/organization documents, research reports, oral histories, media interview, biographies, statistical quantitative data, are usually a very useful tool to interpret and understand some general trends (or stylized facts in the specific case of quantitative data) characterizing a particular institutional regime. The use of secondary data could constitute the first step in an institutional analysis: as discussed above, it allows to delineate some general institutional features and it does not represent a very demanding operation both in term of time and budget required.

The main limitations of secondary data are that they do not allow to deepen the analysis and to investigate some specific and contextual characteristic of an institutional regime: they would not allow to capture the complexity of institutional interactions and to interpret the context/environment in which some particular socio-economic actions are embedded. Moreover, secondary data which are not directly collected by the researcher, usually are not exactly tailored for the specific research questions or institutional context under investigation. For these reasons the use of primary – in particular qualitative - data (mainly collected through personal interviews, but also ethnography, focus group,

etc) in institutional approaches is rather crucial in order to deepen the analysis, explain particular behaviour and rationale of social actors, capture the richness of context in shaping economic actions, understand the structure and networks of power in a context specific institutional regime (Yeung, 2003).

Another important advantage of primary-qualitative data - which is not part of quantitative (both primary and secondary) data - is that the process of data collection and elaboration is characterized by a high degree of *reflexivity*, defined by Yeung as “the capacity of the research practice to allow the researcher to reflect upon his/her own situatedness in the research process” (Yeung, 2003, p.446). Reflexivity regards different aspects of the research process, such as considering the various external factors and conditions potentially affecting the phases and the results of the research, the *positionality* of the researcher, etc. (Yeung, 2003, 2007), and it contributes to increase the transparency of the whole research process (data collection, data processing, methodology, results, policy implication, etc.). Finally, the process of (data) triangulation – “the deployment of different research methods and thus different data to cross-verify the complement each other in an actual research process” (Yeung, 2007, p.286) – through the integration of qualitative and quantitative, primary and secondary data represents an important tool to provide a more comprehensive picture of a specific institutional regime.

A fundamental method characterizing institutional approaches is actor networks analysis. The aim of actor networks analysis is to capture and understand the “heterogeneous associations and relation among social actors” (Yeung, 2003, p.449) in order to better interpret the territorial context in which specific socioeconomic actions take place. According to Yeung (2003) actor networks include personal and social networks, organizational networks, inter-firm networks and business networks. Understanding the relations between place-specific networks of formal and informal institutions is crucial because it allow the researcher to identify the main actors and to interpret the power relations between firms, organizations, markets and unions, the structure of rules and regulations which constrain socio-economic behaviour, informal conventions, customs and social routines occurring in a particular place.

Three main dimensions should be considered in actor networks analysis: i) the autonomous power of actors; ii) the role of intermediaries; iii) the interconnections of nodes (Yeung, 2003). With regards to the autonomous power of actors, the critical operation is the identification of the key actors in a particular institutional regime through a prioritization process of power relations. For the achievement of this goal it is fundamental the application of qualitative methods - such as participant observation, personal interviews, focus group, close dialogue, ethnography, etc – which are based on the “immersion” of the researcher in the institutional network and which allow him/her to reach a deep understanding of the analyzed network. The second dimension, the role of intermediaries, is strictly linked to the identification of key actors and it aims both at identifying the intermediaries in a network and at linking them with the key actors. “Network intermediaries play a facilitating role in keeping actors together and materializing their power” (Yeung, 2003, p. 450). Intermediaries can be both human and nonhuman (institutionalized norms and rules, informal conventions, etc). Qualitative methods based on the immersion of the researcher in the network are again a fundamental tool to identify the institutional intermediaries. The third dimension is the interconnections of nodes: it is crucial, but at the same time rather complicated, to capture the interconnection of the key actors and intermediaries with their nodes, introducing the spatial dimension in the analysis. Identifying the spatial location of the nodes (global cities, etc.) allow the research to better understand the power relations within a particular institutional regime. From a methodological point of view, the nodes could be identified through the analysis of (tangible and intangible) social economic flows between different areas and the direct involvement of the researcher in the network (Yeung, 2003).

The main value of actor network analysis is that it is a powerful tool to understand the heterogeneous associations in a specific institutional regime, identify the power relations and the key actors in a territory, interpret the informal norms and conventions taking place in a geographical area. All these dimensions can not be captured through quantitative analysis which are not based on the direct involvement of the researcher in the actor network. The main limitations of this typology of analysis are: i) given the high degree of place and context specificity, the results of the analysis are not highly

replicable in another institutional regime, ii) there could be some problems in term of reliability, in particular in the long term, because these actor networks are vary dynamic, the key actors, the intermediaries and the nodes are continuously changing, iii) identifying all the main actors of the network might be very difficult, especially if they are located in other countries and regions, iv) some qualitative methods, such as personal interview, close dialogue, are often characterized by a lack of cross-references with other cases (Yeung, 2003). Moreover, it is a very time demanding practice, for the achievement of a deep knowledge of an actor network a long period of in situ research is required and in the application of this technique some ethical issues related to the personal relation of the researcher with the actors of the network may arise.

Actors network analysis, and more generally institutional approaches, are characterized by a strong spatial-geographical dimension: in order to deeply analyze and understand this territorial dimension, *In Situ Research* becomes a fundamental method to overcome neoclassical “remote sensing” approach which is useful to identify some general stylized facts, but it does not allow to capture the complexity of a socio-economic system (Yeung, 2003). *In Situ research* seeks to understand social, historical and cultural identities of all the local stakeholders involved in a territorial institutional regime and it is a very powerful tool to capture not only the formal institutions, but mainly the informal habits, behaviour, power relations that are usually excluded by the quantitative neoclassical models. In Situ research can be practiced through personal interview, focus-groups, etc. and it is considered by some authors as the “vanguard of ethnographic research” (Yeung, 2003, p.451).

The fourth methodological step of the process-based methodological framework – which follows the data collection and elaboration phases described above - is the deconstruction and/or abstraction for generating theoretical insights. Abstraction and deconstruction are proposed by Yeung as alternative and complementary theory generating methods to the neoclassical logical deductive approach, where the process of theorization begin with a model or some hypotheses identified “a priori” by the researcher and are subsequently statistically verified through empirical data and finally generalized (Yeung, 2003). Abstraction is a process with the function of identifying, selecting and abstracting the most relevant interrelations and connections characterizing a particular complex and multidimensional phenomenon (in this case institutions) from those which are not significant for the issue under investigation and it is an initial step for the generation and development of a concept or a theory (Yeung, 2003). Deconstruction “remains methodologically oriented towards unpacking the discourses and representations of such economic categories as firms, organizations (eg. labour unions) and institutions (eg. state economic agency)” (Yeung, 2003, p.453).

The process-based methodological framework proposed by Yeung is summarized in figure 5 where it is used to address the methodological implications of the three substantive (institutional) research issues characterizing economic geography: social embeddedness of economic action, shifting identity of economic actors and the role of context in economic behaviour. In addition to the four phases, a further methodological step is Triangulation. Triangulation (both in term of data and methods) represents a crucial phase as through the integration and comparison of different data, methods, theories and findings it allows to overcome their specific weaknesses and limitations and achieve more reliable results and interpretations. The process of triangulation is based on the assumption that every single stand-alone methods can present some limitations in the representation and interpretation of a complex issue such as an institutional regime of a specific socio-economic system: for this reason an interdisciplinary approach based on the integration of different methods would increase the reliability and the value of the research.

Substantive Research Issues	Data Requirements	Structures of Research Subjects/Objects	Research Location	Theory Development	Methodological Triangulation
Social embeddedness of economic action	<ul style="list-style-type: none"> <li>Contextualized quantitative data</li> <li>Locational data</li> <li>Qualitative relational data</li> </ul>	<ul style="list-style-type: none"> <li>Focus on subject-object social and power relationships</li> <li>Unravel spatiality in relationships</li> </ul>	<ul style="list-style-type: none"> <li>Close dialogue to appreciate intangible relationships</li> <li>Reflexivity of diverse research contexts and contingencies</li> <li>Cross-border research collaborations</li> </ul>	<ul style="list-style-type: none"> <li>Contextualized abstractions of causal relationships</li> <li>Theorizing relationships in a non-deterministic way</li> </ul>	<ul style="list-style-type: none"> <li>Use of different but complementary methods</li> <li>Triangulation of research results</li> <li>Comprehensive assessment of relationships at different spatial scales</li> </ul>
Shifting identities of economic actors	<ul style="list-style-type: none"> <li>Ethnographic data</li> <li>Textual and visual data</li> <li>Rich and thick in descriptions</li> </ul>	<ul style="list-style-type: none"> <li>Insider-outsider duality</li> <li>Intersubjective and intertextual understanding</li> <li>Search for empirical contingency and heterogeneity</li> </ul>	<ul style="list-style-type: none"> <li>Allow for multiple voices</li> <li>Participation in identity formation and discursive practices</li> </ul>	<ul style="list-style-type: none"> <li>Deconstruct theoretical categories and their underlying power relationships</li> <li>Explore multiplicity of meanings</li> <li>Reconstruct actor-specific relations</li> </ul>	<ul style="list-style-type: none"> <li>Matching textual and experiential data</li> <li>Opportunism in research strategies</li> <li>Question positionality</li> </ul>
The role of context in economic behavior	<ul style="list-style-type: none"> <li>Quantitative trend data</li> <li>Qualitative descriptive data</li> </ul>	<ul style="list-style-type: none"> <li>Specification of human and non-human actors</li> </ul>	<ul style="list-style-type: none"> <li>Relevance of expert reports</li> </ul>	<ul style="list-style-type: none"> <li>Building contingency into theoretical explanations</li> </ul>	<ul style="list-style-type: none"> <li>Quantitative and qualitative analysis of context</li> </ul>

**Figure 5:** substantive research issues and methodological implications for New Economic Geography. **Source:** Yeung, 2003.

It can be concluded that every “stand alone” method presents some potential limitations, in term of theories, qualitative-quantitative approaches, data collection tools, results, etc. In order to overcome these limitations a multidisciplinary approach able to combine different methods becomes essential for researching and analyzing institutions: this can be achieve through the process of triangulation proposed by Yeung. In addition, it also emerges the fundamental role of actor networks analysis and in situ research and the importance of qualitative methods which allow the researcher to “immerse” in the institutional regime under investigation, such as personal interviews, close dialogue, focus group, ethnography, etc.

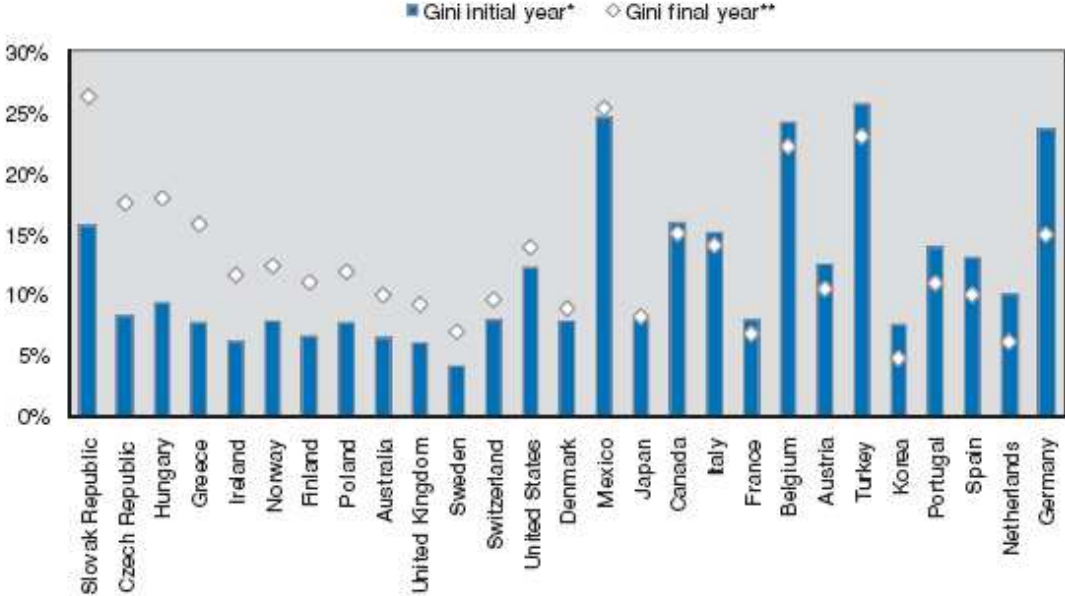
From a methodological point of view there is a general consensus on the need for more integrated approaches able to capture the complexity of institutions. According to Boschma and Frenken, “an Evolutionary Economic Geography advocates an empirical research program, both qualitative and quantitative, that can address the relative importance of organizational routines and territorial institutions for regional development” (Boschma and Frenken, 2009, p.151). Moreover, it emerges the need for more “comparable, transparent and cumulative empirical studies” (Boschma and Frenken, 2009, p.156), while Markusen (1994), who presents an approach for studying regions through the research and analysis of firms, calls for “less opaque and more rigorous research framework” (Markusen, 1994, p.489) in institutional approaches.

## 6 - The Case of Mexico: decentralization and territorial disparities.

Mexico is a federal constitutional republic characterized by a representative and democratic system of government located in North America. It is the fifth largest country in the Americas and, according to the World Bank classification, it is considered an upper middle income country. With regards to the governance system, Mexico is characterized by three territorial levels of government: i) the central (federal) government, ii) 32 federal entities (31 States and one Federal District), iii) about 2500 municipalities (OECD, 2003). Mexico has been a strongly centralized country for a long time, in recent years there has been a transition towards a decentralized and federalist country, with more and more responsibilities redistributed to the sub-national level of government. In term of economic performance, Mexico registered relevant economic growth in the last two decades, in particular during

the 1990s and the 2000s it was one of the OECD countries with the highest GDP growth. Despite this high level of growth, Mexico is one of the countries characterized by the highest regional disparities in the OECD and poverty is still a pressing and unresolved issue.

Figure 6 shows territorial inequalities in per capita GDP within OECD countries measured through the Gini Coefficient. From the figure it is possible to see that Mexico is one of the State with the highest degree of regional inequalities (the second following Slovak Republic) and that this situation has not improved from the 1980s to 2007, despite the GDP growth.

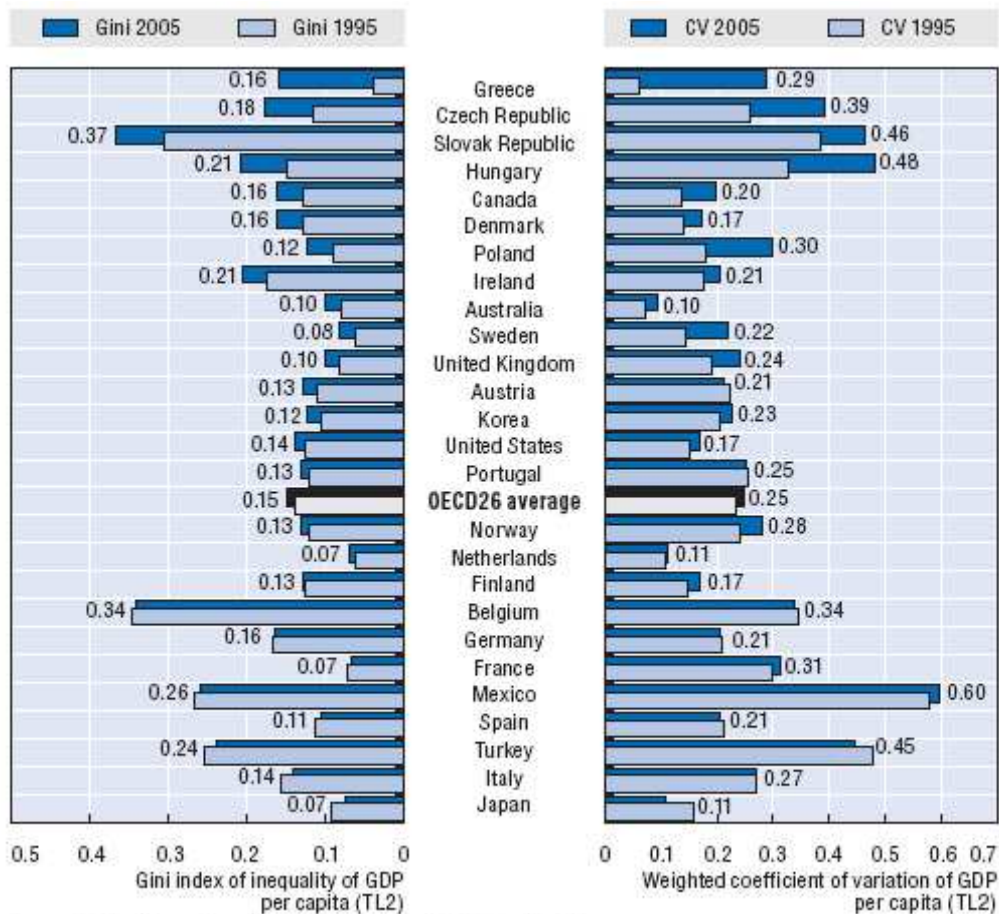


\* The initial year is 1963 for the United States, 1980 for Austria, Belgium, Finland, France, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, the United Kingdom; 1981 for Australia; 1985 for Korea; 1990 for the Czech Republic, Hungary, Poland, the Slovak Republic, and Turkey; and 1991 for Germany.

\*\*The final year is 2007 for all countries except for Korea and Norway (2005) and for Turkey (2001).

**Figure 6:** Territorial Disparities in per capita GDP within OECD countries. **Source:** OECD Regions Matter, 2009.

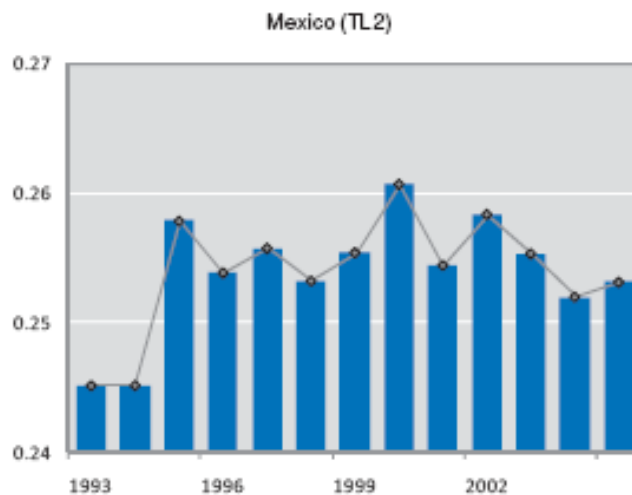
The high level of Mexican regional inequalities is also confirmed by figure 7, representing the territorial disparities within OECD at TL2 level and its variation from 1995 to 2005. Mexico is still one of the first countries in term of territorial inequalities, but the positive aspect is that the disparities present a slight reduction in the analyzed period of time. Figure 8 confirms this slight reduction in Mexican inequalities from 1995 to 2007, following a high increase from 1993 to 1995.



Source: Calculations based on OECD Regional Database (2008).

**Figure 7:** territorial disparities within countries (TL2 regions, 1995-2005). **Source:** OECD How regions grow, 2009.

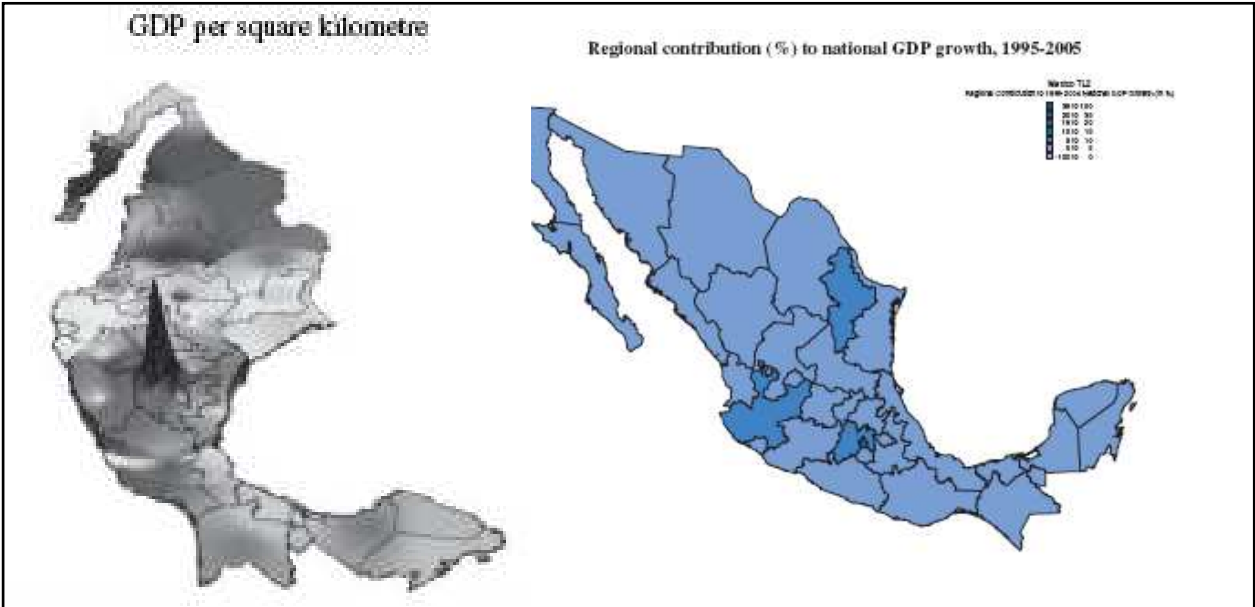
**Gini index of inequality of GDP per capita across TL2 regions, 1990-2007**



**Figure 8:** Gini Index of GDP per capita across TL2 regions in Mexico, 1990-2007. **Source:** OECD Regions Matter, 2009.

In order to better understand the current Mexican strong level of regional disparities, it is necessary to analyze the history and the development path of this country. According to the OECD Territorial Review of Mexico (2003), this situation is the result of the “spatial concentration of growth during both the phase of import substitution and the phase of economic liberalization” (OECD, 2003, p 12).

The phase of import substitution brought to a high spatial concentration of economic activity, in particular in the area of Mexico City, but also to Guadalajara and Monterrey. The spill-over effects of this agglomeration to the rural regions around these centres were very limited (OECD, 2003). The phase of economic liberalization (started in the mid-1980s) contributed to increase the level of regional disparities by concentrating production activities and infrastructures in few regions. The benefit of this economic agglomeration did not spread to other regions, also because of the lack of suitable policies to redistribute and balance the economic growth occurring in these few regions.



**Figure 9:** GDP per square kilometre and territorial contribution to national GDP growth (1995-2005) in Mexico. **Source:** OECD Regions Matter, 2009.

Figure 9 shows the high level of concentration of Mexican economy (30% more than the OECD average). In the Distrito Federal area it is concentrated the highest density of output (GDP per square kilometre), though the GDP annual growth rate in this area is not the highest. Moreover, the second part of the figure represents the regional contribution to national GDP growth. Even in this case there is a high degree of concentration: two regions, Mexico and Distrito Federal, are responsible for about one third (32%) of the national GDP.

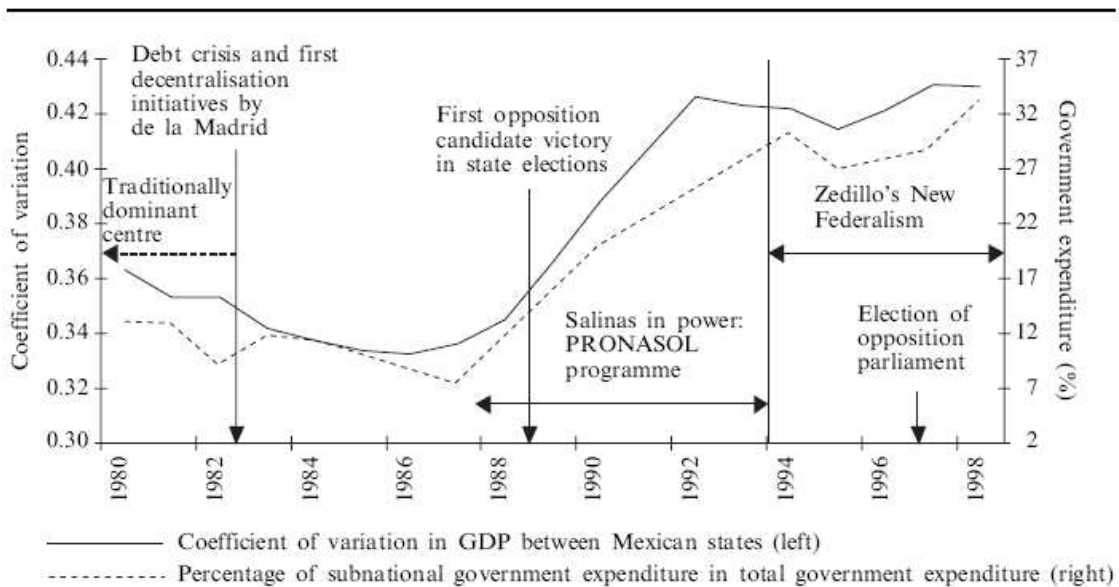
**Territorial development and Multi-level Governance Issue in Mexico.**

In terms of regional development policies and strategies for reducing disparities, many Mexican lagging regions are characterized by relevant unexploited potential, in particular the South of the country is endowed by significant unused natural and cultural resources, which could constitute one of the main pillars for a more comprehensive territorial development strategy. Some local industries, which could constitute potential clusters, are also located in these lagging regions, but they are unable to benefit from the advantages related to both networking and specialization (OECD, 2003). In addition, regional development is undermined by the challenging structure of human settlements: large cities, particularly Mexico City, are characterized by a highly concentrated population, while in other regions there is a high dispersion of human settlements. According to the OECD Report, there is a need for a more comprehensive territorial development strategy. Some efforts in this direction has been done (eg. the Office for Strategic Planning and Regional Development was created in the 2000s), but territorial development strategies and policies need to be further strengthened.

Governance and multi-level governance mechanisms are very critical for Mexican regional development. The weak multi-level governance system is indicated both by the OECD Territorial Review (2003) and by the World Bank publication “Democratic Governance in Mexico” (2007) as one of the main factor

undermining development and particularly territorial development (OECD) in this country. According to the OECD, lack of institutional capacity which obstacle an effective devolution process, especially regarding the tax revenue at sub-national level (generating a fiscal gap), lack of accountability, corruption and low security levels are the main obstacles to implement effective regional development strategies. “Transfer of responsibility and resources to sub-national governments should be accompanied by reinforced tools to enhance capacity building, transparency and accountability” (OECD Territorial Review, 2003, p 19).

The ineffective devolution process in Mexico is also highlighted by Rodriguez-Pose (figure 10). The figure shows the link between devolution (measured as sub-national government expenditure) and regional inequalities. It is possible to see that from 1980 to 1998 “the drive towards devolution has coincided with an increase in the magnitude of regional disparities” (Rodriguez-Pose et al., 2004, p 2103). It should be clarify that this is not a causal link between this two phenomena, but only a “temporal” relationship and that the rise in regional inequalities may be due to factors which are not related to the devolutionary process. The authors identify the potential determinants of this temporal relationship in a weak multi-level governance system, in particular related to the inequitable fiscal impact of devolution on highly heterogeneous regions, the lack of transparency in the transfers from the central government and the inefficiency implications of devolution (increased public costs, etc). As the authors highlight, this is not an argument against devolution, which presents many social, economic and political benefits, but it stresses the need to take into consideration also the potential negative aspects of devolution, in particular in a country characterized by a weak multi-level governance and institutional regional system, considering also the limited “equalized” role of the central state in a decentralized system.



**Figure 10:** Mexican inequalities and sub-national government expenditure. **Source:** Rodriguez-Pose, 2004.

## 7 - Conclusions

According to Pereira et al (2012), “although food security is recognized as a complex problem by officials, the response remain locked into traditional operations of the bureaucratic state” (Pereira et al, 2012, p. 54). Food and nutrition security is a complex multi-sectoral, multi-level and multi-actor issue: in order to formulate and implement effective responses to food insecurity, which are able to capture and address its complex nature, a shift from a top-down and monocentric to a bottom-up, multi-level and adaptive governance system based on the collaboration of different institutions – state, sub-national authorities, international institutions, private sector and civil society - is essential. At the same time, it is necessary to go beyond the divide between state-led and market-driven approaches and



recognize that effective multi-level governance system for FNS are based on the intersection between formal and informal rules and institutions and the creation of cross-sectoral partnerships able to address the complexity of FNS (Pereira et al, 2012). Devolution is often considered an effective tool to address this complexity and place-specific nature of food security and to increase the importance of sub-national institutions in fighting hunger and malnutrition.

This Chapter highlights both through the theoretical concepts analyzed in the first part of the work and through the Mexican case study, the fundamental role of multi-level governance to promote territorial development and to address territorial disparities and inequalities. Solid and adequate institutions are key for implementing an effective devolution process and more generally they are widely recognized as one of the main drivers of territorial development. On the other side, rigid and inadequate institutions can prevent and undermine development by causing institutional lock-in or because of the high level of corruption, the lack of capacity, transparency and accountability. “The effectiveness of social councils in governance for food and nutrition security has also been undermined by the lack of appropriate training and education among potential representatives from civil society. Local patronage and corruption are also obstacles to effective participatory governance in many municipalities”. (Rocha, 2009, pag. 62)

The Mexican case study stresses that in order to benefit from the positive aspects related to decentralization (foster accountability, identification and valorisation of comparative advantages across Mexican regions, etc), there is a need to improve the multi-level governance mechanisms and to address the gaps confronting it, in particular the fiscal, the capacity and the policy gaps. This is also confirmed by the OECD medium term agenda proposed for Mexico which is based on the following pillars: i) co-ordination and institutionalisation, ii) administrative capacity and reward mechanisms, iii) better allocation of resources to decentralized institutions.

Potential benefits	Potential costs
Devolved policies better reflect territorial preferences (allocative efficiencies)	Additional administrative costs of additional layers of government and/or governance institutions
Improved knowledge of territorial economic potential (productive efficiencies)	Loss of scale economies in policy formulation and delivery Increased ‘rent seeking’ by interest groups better able to influence subnational territorial rather than national institutions
Democratic accountability improves efficiency of policy formulation and implementation, fosters innovation	Weaker disciplines of monitoring and evaluation (national finance ministries as tougher drivers of efficiency than territorial institutions)
Fiscal autonomy provides hard budget constraints and (where applicable) tax-varying power allows marginal changes to taxation and spending	Budget constraints increasingly tied to territorial fiscal capacity Weak incentives due to lack of mechanism linking public spending with tax revenues raised within subnational territories
Lower coordination and compliance costs vis-à-vis the rest of the national territory	Reduced coordination with the rest of the national territory with possible negative spillover effects both on and from subnational territories.

**Figure 11:** Potential economic benefits and costs of devolution. **Source:** Pike et al, 2011.

The paper by Rodriguez-Pose et al. shows that there is a temporal link between devolution and territorial disparities (from 1980 to 1998) and suggests to carefully consider also the possible

limitations and costs of devolution (also summarized in figure 11 by Pike et al, 2011). However, regarding this temporal relationship, it should also be considered that the positive effects of devolution may not be “immediate”, but be visible and measurable in the medium term. The fact that territorial inequalities slightly decreased from 1995 to 2007 could also be interpreted as a positive effect of the process of devolution implemented in the previous decade.

## Chapter III. Al-Ghab Case Study: Territorial Capital Index

### Abstract

*According to FAO, the world produces enough food to feed everyone adequately, but 925 million people go hungry each day, 178 million children under 5 years of age are chronically malnourished and micronutrient deficiencies affect over two billion people. At the same time, an estimated one billion people are overweight and 300 million are obese with increasing geographic disparities between countries but also within countries.*

*Hunger and Food and Nutrition Insecurity (FNS) is a multidimensional socio-economic development issue resulting from, inter alia, low incomes, inequalities in access to productive assets, unemployment, low health education and nutrition status, natural resource degradation, vulnerability to risk and weak political commitment.*

*Socio-economic and policy dynamics of geographic areas at the sub-national level are very different from each other and depend on a set of physical, human, institutional and cultural resources that jointly constitute their development potential or “territorial capital” (EU, 2005; Camagni, 2009; Camagni and Capello, 2011). It is argued in this paper that a territorial (“place-based”) approach (Barca, 2009; Barca, McCann and Rodríguez-Pose, 2011) would be highly beneficial to increase the effectiveness of policies and strategies to address hunger and food insecurity as well as the increasing disparities between geographic areas.*

*In order to assess the “area-specific” determinants of hunger and food and nutrition insecurity, this work proposes the integrated use of two methods, the Territorial Capital Index (TCI) and the Social Accounting Matrix (SAM), which allows the analysts to take into consideration the combined effect on hunger and food insecurity of assets (tangible and intangible and formal and informal) and flows among households and institutions within a given geographic area and across areas.*

*The territorial capital index is developed and analyzed in this Chapter 3, while the social accounting matrix and the combined TCI-SAM results in Chapter 4.*

*An application of the proposed approach to the Al-Ghab Region in Syria highlights the strong cause-effect relationship between local assets and FNS. In particular, it shows that the main drivers of food and nutrition security in Al-Ghab are education, diversification of the economic sectors and labour market efficiency.*

*The combined TCI-SAM approach provides policy makers with comprehensive territorial information to target food security strategies and policies and to better allocate resources. It allows for balancing short term and ad hoc assistance-led policies to achieve social cohesion and equity with longer term and efficiency-based policies, by promoting endogenous development and by strengthening the capacity of local institutions to make the best use of local assets.*

**KEY WORDS:** Food Security, Place-based Approach, Territorial Capital Index, Social Accounting Matrix

### 1 - The Proposed Conceptual and Analytical Framework and Methodology

In terms of regional growth and development theories, a key contribution to the conceptualization of the Territorial Perspective of Food Security Policies and Strategies comes from Nijkamp and Capello (2011) who debate “the need for theories of regional growth and development to be more realistic and to better incorporate the complex and interactive behaviour and processes that take place in space and

to understand regional competitiveness in terms of endogenous factors” (Nijkamp and Capello, 2011, page 16)<sup>12</sup>

Finally, the concept of territorial competitiveness has been developed mainly on the basis of the key contribution of Kitson, Martin and Tyler (2004, 2006), Caroli (2006), Camagni (2002, 2009), Bruneckienè (2008), Camagni and Capello (2011) and by Porter (2006).

The concept of territorial competitiveness has become extremely influential in recent years, and today represents a dominant policy discourse among those concerned with the development of economies at the whole range of territorial scales (Oughton, 1997; Schoenberger, 1998; Lall, 2001; Bristow, 2005 and 2011; Wilson James, 2008; Sala-i-Martin, 2009).

A broad definition of regional competitiveness is the one reported by Meyer-Stamer (2008): “We can define (systemic) competitiveness of a territory as the ability of a locality or region to generate high and rising incomes and improve livelihoods of the people living there.” Another interesting definition of territorial competitiveness is the one proposed by Dijkstra et al (2011, page 4)<sup>13</sup>: “Regional competitiveness can be defined as the ability to offer an attractive and sustainable environment for firms and residents to live and work”.

Every country, as a socio-economic system, consists of several subsystems, such as regions, provinces or a particular territorial systems with different socio-economic dynamics competing among them. Bruneckienè (2008) further explains that “a region is defined as a composite part of a larger economic social space, which differs from other surrounding territories in economic, social, demographic, cultural, natural, and infrastructure systems connected by material and informational relations”. Kitson et al. (2004)<sup>14</sup> add that regional competitive advantages need to reach well beyond concern with ‘hard’ productivity, to consider several other (and softer) dimensions of the regional or urban socio-economy.

OECD (WTO, 2000a, p.47) also proposes a definition of regional competitiveness, which applies however to countries. It states that competitiveness is “the degree to which a country can, under free and fair market conditions, produce goods and services which meet the test of international markets, while simultaneously maintaining and expanding the real incomes of its people over the long term”.

According to Krugman (2003), who is very critical towards the idea of competitiveness applied to Nations (1994), however, the idea of “Regional Competitiveness” may make more sense than “National Competitiveness” because regional economies are more open to trade than national economies and factors of production move more easily in and out of a region than a national economy. Krugman (2003) argues that “At a regional level, however, the story changes drastically... Success for a regional economy ... would mean providing sufficiently attractive wages and/or employment prospects and return on capital to draw in labor and capital from other regions. It makes sense, then, to talk about ‘competitiveness’ for regions in a way one wouldn’t talk about it for larger units. This isn’t just a linguistic distinction: it makes interregional growth rates much more sensitive than international growth rates to differences in efficiency... Regional growth is much more sensitive to differences in productivity performance”. (2003, pp 18-20)<sup>15</sup>. Commenting this Krugman’s position on regional competitiveness, Martin (2005) states that “what Krugman seems to be suggesting is that regional competitiveness has as much, if not more, to do with absolute advantage as with comparative

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<sup>12</sup> Endogenous Regional Development, Stimson R., Stough R., Nijkamp P., 2011.

<sup>13</sup> A new European Regional Competitiveness Index: Theory, Methods and Findings. Dijkstra L., Annoni P., Kozovska K. (2011) European Union Regional Policy Working Papers, n. 02/2011.

<sup>14</sup> The Basis of Regional Competitive Advantage, Kitson M., Martin R., Tyler P., 2004 and Regional Competitiveness: An Elusive yet Key Concept? Regional Studies, Vol. 38.9, pp. 991-999

<sup>15</sup> Krugman, P. (2003) *Growth on the Periphery: Second Wind for Industrial Regions?* The Allander Series, Fraser Allander Institute, Scotland

advantage: that a region that is more efficient (productive) will be able to attract (and retain) labour and capital from other regions, and these factor inflows will tend to reinforce that region's (absolute) productivity lead still further" (Martin, 2005, page 9)<sup>16</sup>.

Also Camagni underlines the importance of regional competitiveness, based on the fact that "regions do not compete with each other on the basis of a Ricardian "comparative advantage" principle – which guarantees each region a role in the international division of labour – but rather on a Smithian "absolute advantage" principle, similar in nature to Porter's concept of "competitive advantage" (Camagni, 2009, page 119)<sup>17</sup>. A region may be thought of as having absolute competitive advantages when it possesses superior technological, social, infrastructural or institutional assets that are external to but which benefit individual firms in such way that no set of alternative factor prices would induce a geographical redistribution of economic activity. These assets tend to give the region's firms, overall, a higher productivity than would otherwise be the case (Camagni, 2002, Kitson et al, 2004).

The TCI-SAM Approach proposed in this research draws on the analytical approach provided by the territorial competitiveness concept. In particular it is based on the Regional Diamond Model from Bruneckienè (2008), which in turn is based on Michael Porter's Diamond Model for the Competitive Advantage of regions, the Double Diamond model from Rugman et al., the Nine Factors model from Cho, D.S., the Regional Competitiveness hat model from Cambridge Econometrics and the Pyramid Model of regional competitiveness from Martin et al.

In particular, Porter's Diamond model identifies the factors that determine the competitiveness of a region and connects them within a wider system of competitiveness, both with the highest national level (vertical relationship) and with the competitive systems of other regions (horizontal relationship). In this model, the factors that determine regional competitiveness are grouped into four different subsystems: factors increasing competitiveness of regional firms, demand conditions increasing regional competitiveness, factors conditioning the development of regional clusters, factor (Input) conditions. The identification of the determinants of territorial competitiveness is based on the key contribution by Kitson et al (2004), Martin (2005), Caroli (2004), Camagni (2009) and Camagni and Capello (2011).

The proposed approach focuses on the sub-national (meso) level and defines territory as a functional dynamic socio-economic "system" consisting of a set of actors, institutions (rules of the game) and resources of material and immaterial nature (assets), which, through their interactions, determine the allocation and distribution of resources (financial capital and labour, income)<sup>18</sup>. Interestingly these components of the territorial assets are similar to the ones proposed by the livelihood systems approach. In this definition the boundaries of the territory are defined by the socio-economic flows rather than by the geographical or administrative boundaries.

The contribution of the territorial perspective to FNS policies is that by defining the comparative advantages of the areas, policies can be calibrated to investments that are better suited to the endogenous development potential of the areas.

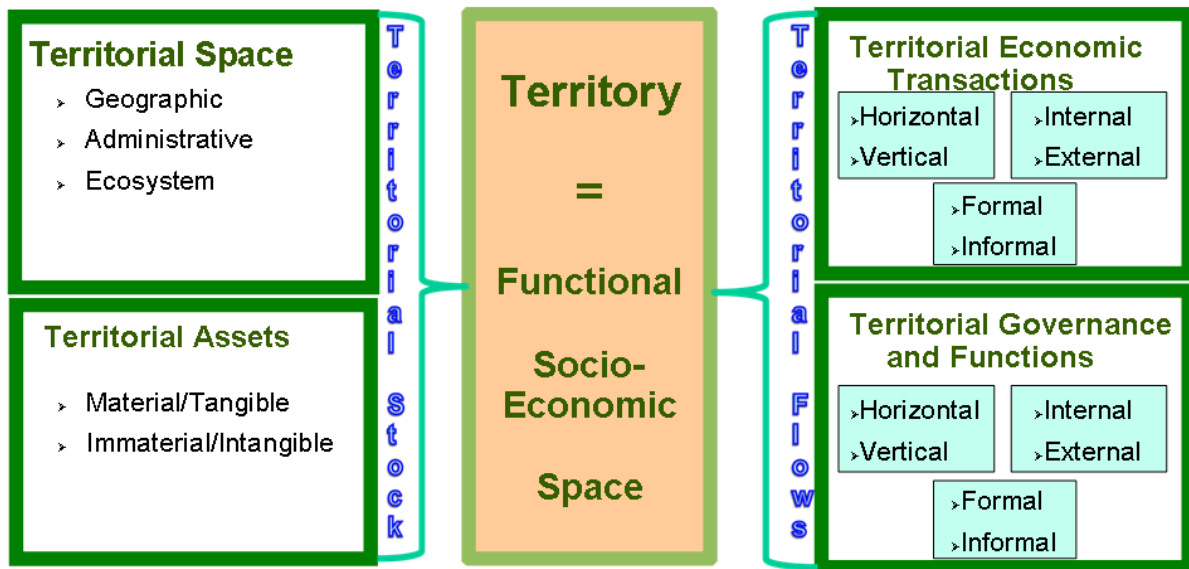
A visual representation of the applied analytical framework is provided in Figure 1, which defines the territory as an *homogeneous functional socio-economic space* characterized by *stock* factors (left-hand part of the figure) that include geographic features and territorial assets and *flow* factors that capture horizontal (within the territory and among territories) and vertical (between the territory and higher levels) interactions, as well as governance and institutional functions and interactions. Figure 2 further details the tangible and intangible factors and interactions taking place at the territorial level.

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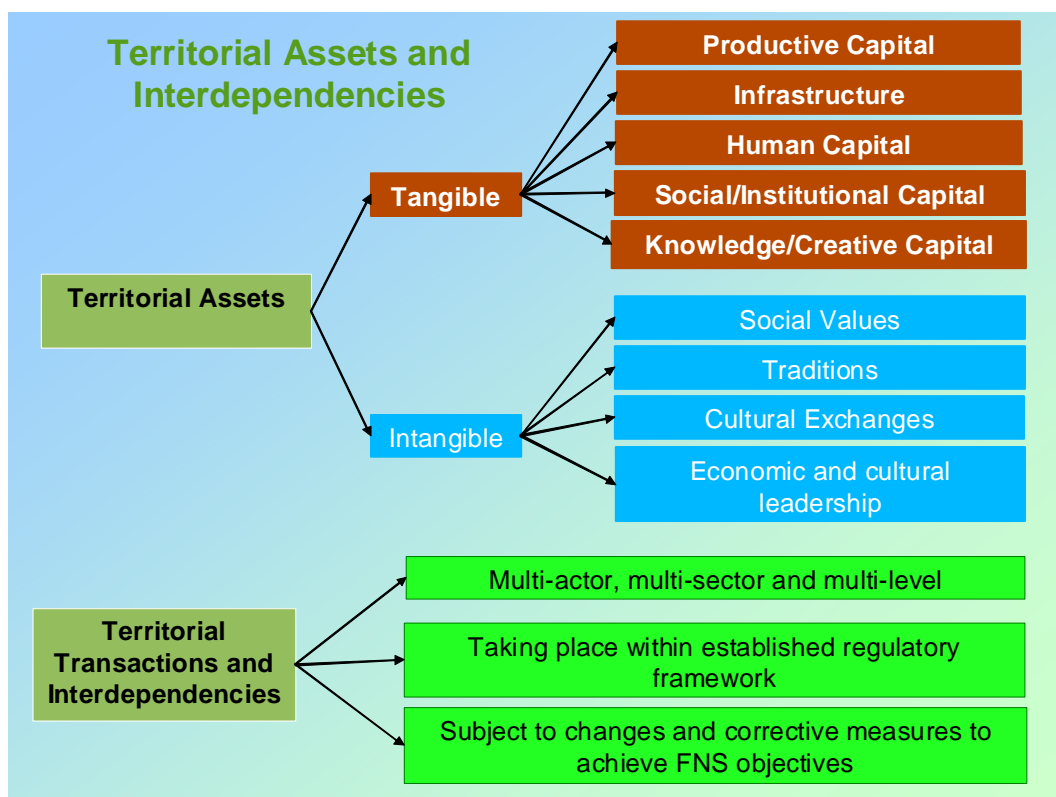
<sup>16</sup> Martin, R. (2005) *Thinking about regional competitiveness: critical issues* Background 'Think Piece' Paper Commissioned by the East Midlands Development Agency

<sup>17</sup> Endogenous Regional Development, Stimson R., Stough R., Nijkamp P., 2011.

<sup>18</sup> Kitson et al. (2004), Cairolì (2006)



**Figure 1:** Territory as a Functional Socio-Economic Space. **Source:** Author's elaboration



**Figure 2:** Territorial Assets and Interdependencies. **Source:** authors' elaborations on the basis of Caroli (2006), Kitson et al (2004), Porter (2006), Bruneckienè (2008), Camagni (2009), Camagni and Capello (2011).

## 2 - The TCI-SAM Approach

The proposed approach for the measurement and assessment of the territorial capital and competitiveness characterizing a particular regional system and the analysis of the links and policy implication between the territorial capital and food security is based on the integration of two tools: the Territorial Capital Index and the Social Accounting Matrix (analyzed in the following Chapter 4).

The Territorial Capital Index (TCI) is a composite index that provides a synthetic measure of the productive, human, physical and social assets (territorial capital) contributing to food and nutrition security and more in general to the development of an area. The use of a composite index allows to better capture and assess the complexity of territorial competitiveness which is characterized by the several dimensions and factors and by the interaction between all these determinants.

The issue of the measurement and assessment of territorial competitiveness is of increasing importance for the determination of development strategies at all geographical levels and especially at regional level. “Economic indicators – such as GDP per capita and employment – do not fully describe a region’s quality of life. Security, health, education and the quality of environment all contribute to a region’s “well-being”” (OECD, 2009).

As stressed by Bruneckienè, 2008 “The analysis of the main problems of regional competitiveness measurement (Simanaviciene, et al., 2007, Kitson et al., 2004, de Vet, et al. 2004, Huggins, 2003, Lengyel, 2003) showed that competitiveness cannot be completely defined by one or several economic and social indicators: thus, complex measurement of competitiveness is a must” .

For these reasons, this paper proposes the use of composite indicators for assessing the territorial competitiveness, in order to obtain a synthesis measurement of all dimensions (both tangible and intangible) of an area.

The construction of a composite index for the measurement of territorial competitiveness allows to build a benchmarking system which “would seem to be an essential prerequisite for informed and strategic policy-making. If done properly, regional benchmarking can help identify a region’s competitive strengths and weaknesses, and hence form the basis of policy formulation and priorities... Above all it helps pinpoint those industries and sectors in which the region is clearly successful and which should be built up and assisted...Regional benchmarking can also help determine whether and to what extent a region is falling behind in the development and upgrading of its fundamentals, especially education, entrepreneurial culture, and infrastructure” (Martin, 2005, page 39).

The Territorial Capital Index proposed for the TCI-SAM approach is based on some well-known composite indexes and approaches and in particular on the: i) Global Competitiveness Index by World Economic Forum (12 Pillars), ii) EU Regional Competitiveness Index (2010) by European Commission JRC (11 Pillars).

This paper adapts this approach to the analysis of the policy implications of the territorial perspective of FNS. The main assumption of the work is that FNS is the result of the socio-economic interactions within the whole structure of the economy, including income distribution and sectoral interdependencies. It is also assumed that local assets have a strong bearing on FNS situation and that they play a key role in policy decision making.

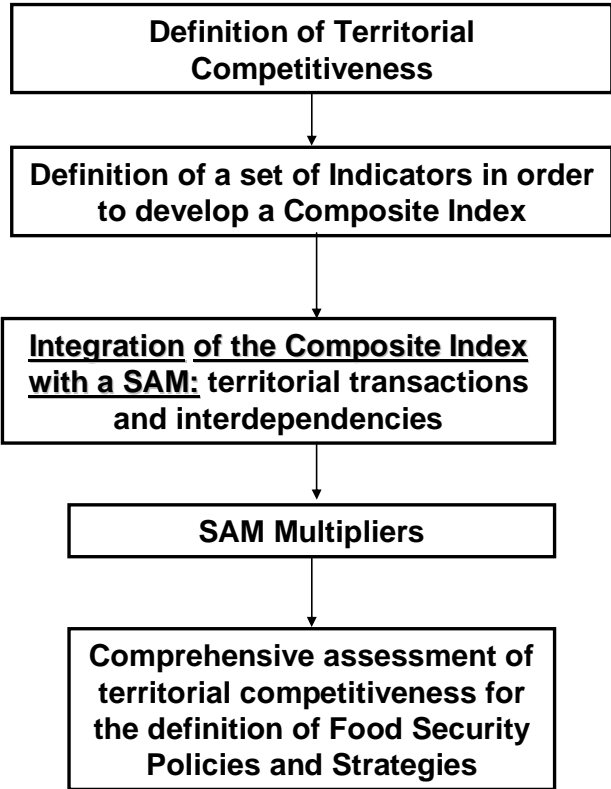
The conceptual framework proposed in this paper (described in figure 5 above) is based on the idea that territory is characterized not only by tangible and intangible assets (stock) – which are measured and assessed through the Territorial Capital Index –, but also by transactions and interdependencies (flows). The analytical tool identified in order to capture and measure the economic transactions and interdependencies occurring within and among areas is the Social Accounting Matrix (SAM).

A SAM is a particular representation of the macro and meso economic accounts of a socio-economic system, which captures the transactions and transfers between all economic agents in the system (Pyatt and Round, 1985; Roland-Holst, 1997). “The SAM is a comprehensive, disaggregate, consistent and complete data system that captures the interdependence that exists within a socio-economic system” (Thorbecke, 2000).

The following figure 3 represents the rationale and the methodological steps for the integration of the TCI with a SAM. The purpose of the TCI-SAM approach is to reconcile SAMs and Territorial Competitiveness Indicators. SAM is a device to collect data and some of the data needed for the TCI can be collected through the matrix: the income distribution and poverty indicators, the dependency on foreign markets and the level of interconnections in a regional/national economy are only three examples of possible raw indicators for the TCI pillars for Food Security analysis.

Then, SAMs can be seen not only as a framework for organising the accounting of an economy, but also as a relevant source of data to integrate the Territorial Capital Index for Food Security. The SAM contribution to the TCI regards not only the measurement of the economic flows between all the territorial actors, but also the possibility to assess different policy scenarios through the multipliers matrix: a SAM is a basis for modelling.

Accounting and marginal multipliers and CGE modelling are useful tools for using a SAM as a policy simulation device. Multipliers allow to understand in a better way the structure of the interdependencies and to evaluate policy injections and their short-term impact on the economy.



**Figure 3:** the TCI – SAM approach for analyzing Territorial Capital and Competitiveness. **Source:** own elaborations on the basis of Bellù et al. (2011).



### 3 - Application to the Al-Ghab region: description of the area

Al Ghab is a 140,000 ha plain situated in the Hama Governorate (Syria). It is paradoxically a resource rich poor area. Indeed, although it encompasses a huge reservoir of agricultural resources, the level of development and the level Food and Nutrition Security is not proportionate to its potential. The region's natural resource-based comparative advantages are yet to be converted into potential and sustainable sources of livelihoods and wealth creation, and into enhanced competitiveness through value addition. Resource-based opportunities are plenty, but opportunities are not guarantees of the factors that foster economically efficient, ecologically friendly and socially desirable pattern of development.



**Figure 4:** Geographical position of the Al-Ghab region.

A recent analysis surveyed 5000 out of 51123 households in the Al-Ghab region (The State of Socio-Economic Conditions of Al-Ghab, 2011). More than 300,000 people are living in 134 villages spreading over more than 140,799 hectares of land. Approximately 62% of this land is made up of fertile agricultural soils, 26.2 % forests in addition to 9.6 % of non-arable land and 2.3 % of grass-plains and pastures.

With regard to the Food Security situation among Al-Ghab population 12.4 percent are considered as food security poor or on border line. Gender is an important factor for the food security situation of the area: 12% of men-headed households is food insecure vs 20% of women-headed households. Moreover, poor food security individuals are more prevalent in households whose heads have no education. During 2010, 19.8 percent of Al-Ghab population experienced food shortages and 16.3 percent are expecting to suffer from food shortage in the following year (The State of Socio-Economic Conditions of Al-Ghab, 2011). The critical situation of the area makes it interesting finding out possible reasons related to territorial features.

#### 4 - The Al Ghab Territorial Capital Index Framework

In order to understand the determinants of food security, within the Al Ghab Development Programme, the Territorial Capital Index has been applied to the following five agro-ecological areas defined by the Syrian Central Bureau of Statistics (CBS):

- 1- Mountains villages;
- 2- Villages adjacent to the Western foot of the mountain;
- 3- Villages of Al Ghab valley;
- 4- Villages of El Zawya mountain,
- 5- Villages in Tar El Ola and El Asharna

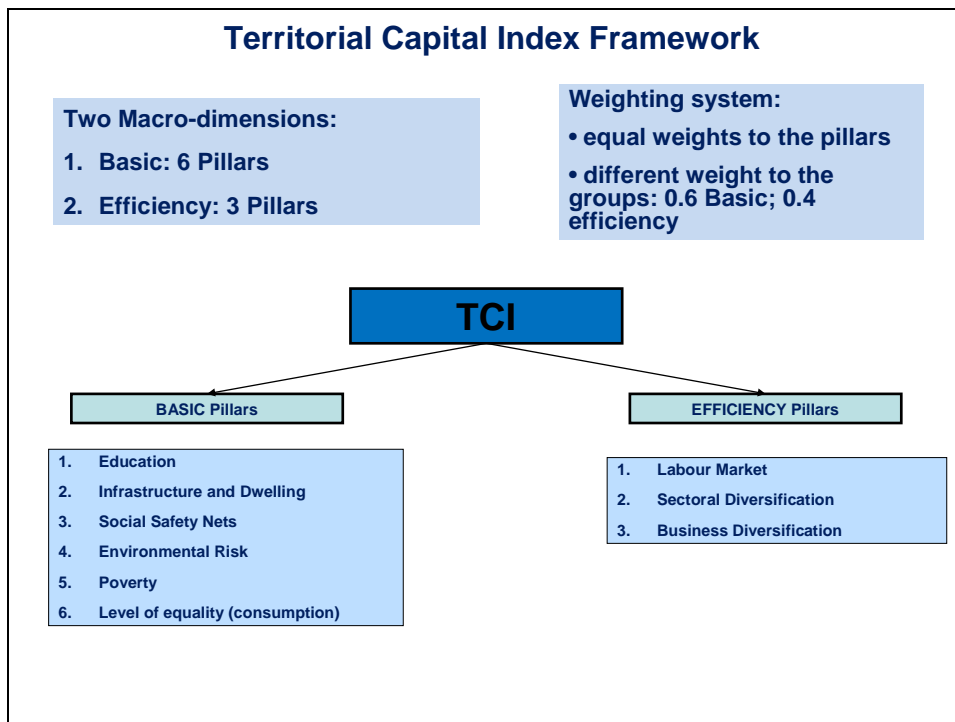
The data has been collected through a LSMS Household Survey and span from hard data on various economic indicators to the living standards of the households to information on social capital. The TCI builds on and appropriately modifies the approaches of the World Economic Forum Global Competitiveness Index and of the EC Regional Competitiveness Index. The Index is composed by 9 pillars grouped in the following two macro-dimensions (Figure 6):

- Basic group: 6 pillars
- Efficiency group: 3 pillars

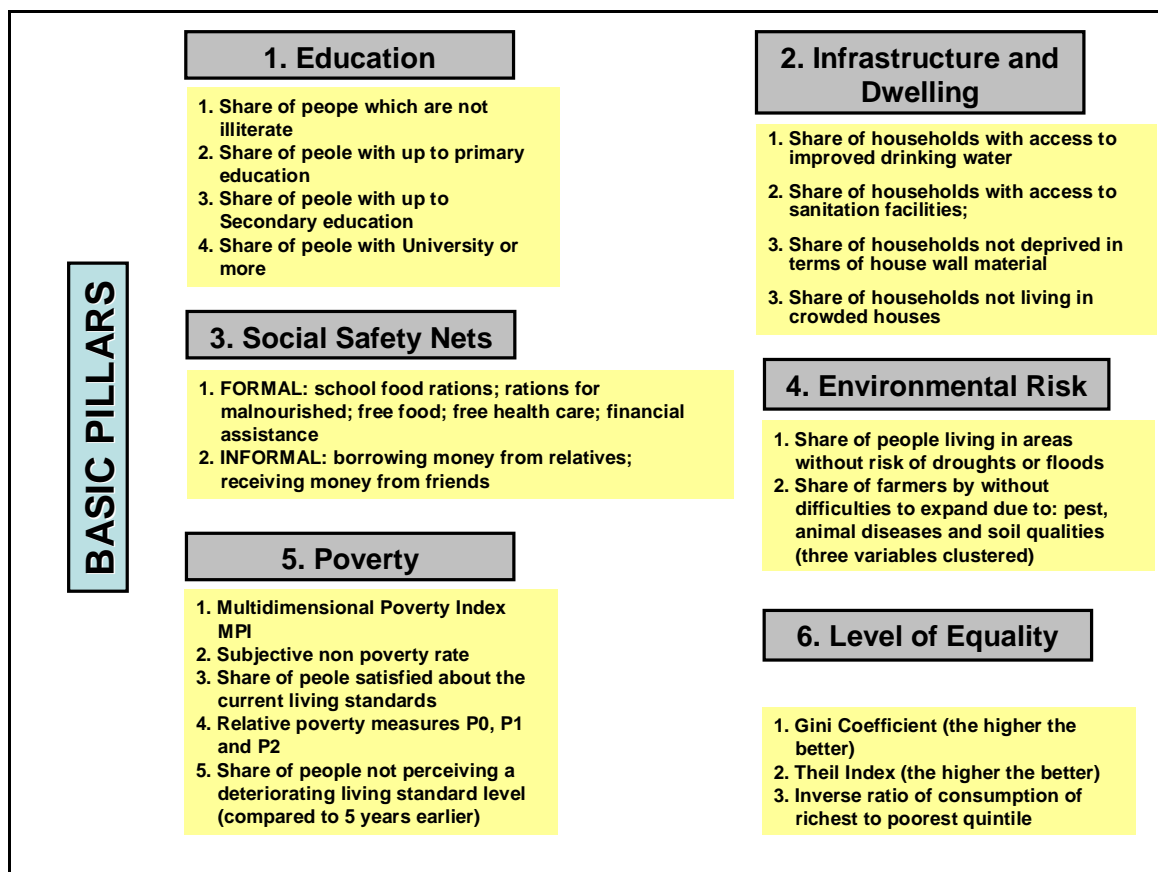
Figure 6 shows the pillars included in the two groups. The first group represents the key basic drivers of all types of economic system. Following the WEF and JRC approaches, the relative weights of the groups of pillars vary accordingly to the development stage of the area/region. On the basis of this approach, the Efficiency group weight would be higher than the Basic group in more advanced regions.

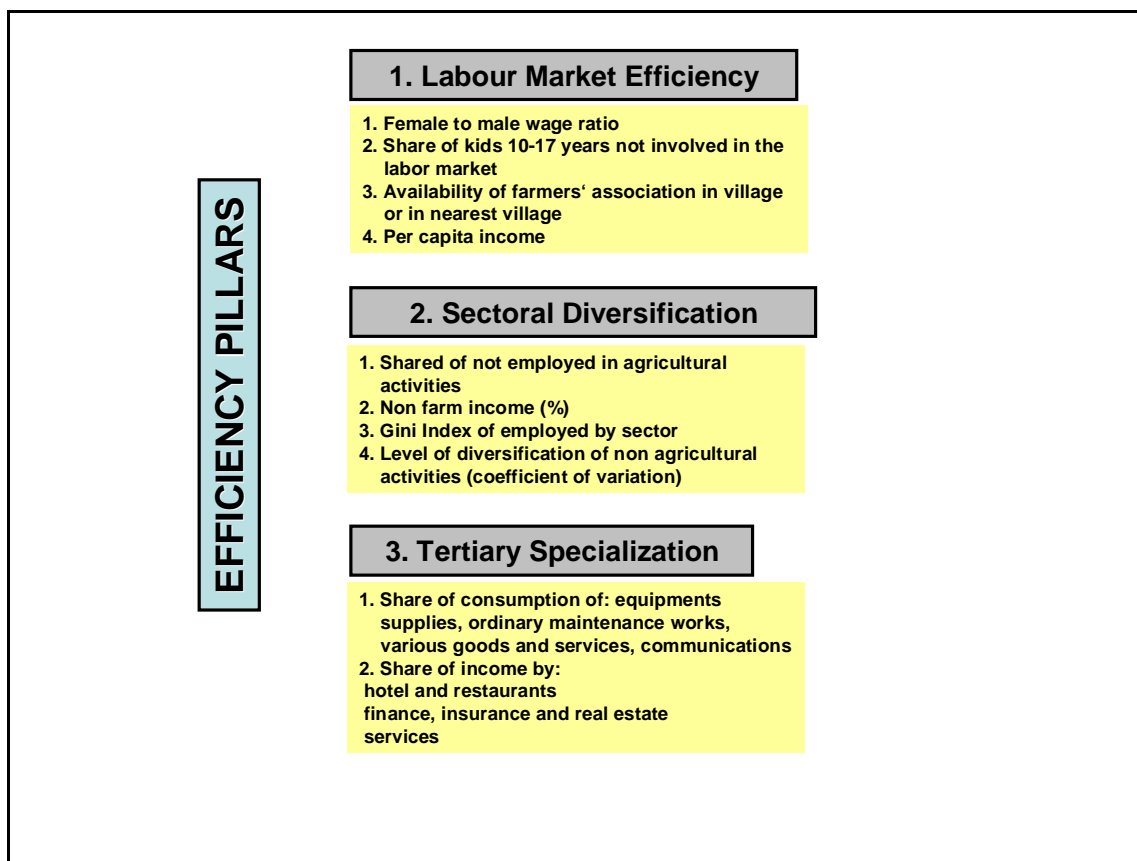
As Al Ghab is at its early stage of development, the decision has been made to attribute higher weight to the basic group of pillars. Accordingly to the two groups of pillars – Basic and Efficiency – are assigned the following weights: 0.6 to the Basic group and 0.4 to the Efficiency group. It is also worth noting that equal weights have been assigned to the variables describing each pillar of the two groups. Figures 7 and 8 list the variables populating each pillar. Each of them is oriented in order to have a positive direction with respect to territorial competitiveness, that is the higher the better. The full description of each pillar is provided in Section 6.

The aggregation method used is the geometric mean both within and across pillars. Unlike the arithmetic mean, geometric aggregation avoids perfect substitutability across variables/pillars while reflecting poor performance in any component of the composite index. It may be penalizing, still it represents a step forward with respect to the fully compensatory linear aggregation with equal weights. A preminent example of the use of geometric mean is the Human Development Index by UNDP where developers switched in 2010 from arithmetic to geometric aggregation.



**Figure 6:** TCI framework.





**Figure 8:** composition of the Three Efficiency Pillars.

In addition to the nine pillars described above, a Food Security composite Index (Table 2) is developed in order to measure and assess the Food and Nutrition Security level of the households living in the Al-Ghab region. This FNS Index is used as a “control variable” in order to verify the main assumption of this work: that Territorial Assets, described by the TCI pillars, do matter in assessing Food Security. The research question to be addressed is: **do territorial assets have an influence on food security?**

<b>FOOD SECURITY INDEX</b>
% of households experienced food shortage during the past 12 month
% household expected to suffer from food shortages next year
% of poor using FOOD poverty line <sup>19</sup> (P0)
gap between the observed expenditure levels of poor households and the FOOD poverty line (P1)

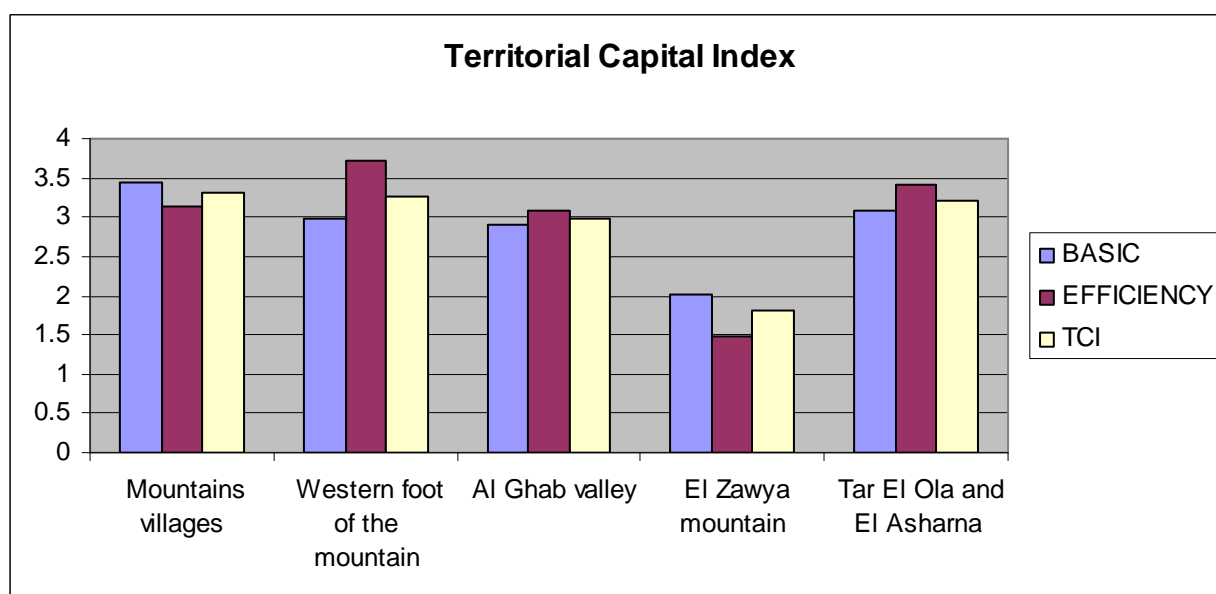
<sup>19</sup> **The Food Poverty Line (FPL)/Extreme Poverty Line:** The first step is to choose a food bundle that reaches the predetermined calorie requirements, with a composition that is consistent with the consumption behaviour of the poor. This bundle was defined for individuals in different age brackets, gender, and activity levels (using tables from the World Health Organization). Then, FPLs were set at the cost of the required calories, by how they are actually obtained in the sample (on average) by the second quintile. This food basket of the second quintile is thus priced using the differing prices for the food in each region and at each date<sup>19</sup>. Thus the relative quantities observed in the diet of the poor (proxied by the second quintile), and the prices they face, were maintained in constructing the FPL for each household in the sample. Households whose expenditure is below the FPL are referred to as the "extreme poor".

degree of inequality in distribution below the FOOD poverty line (P2)
distribution of households by adequacy of food expenditure; as perceived by household (%). Less Than Sufficient

**Table 2:** variables composing the Food and Nutrition Security Index

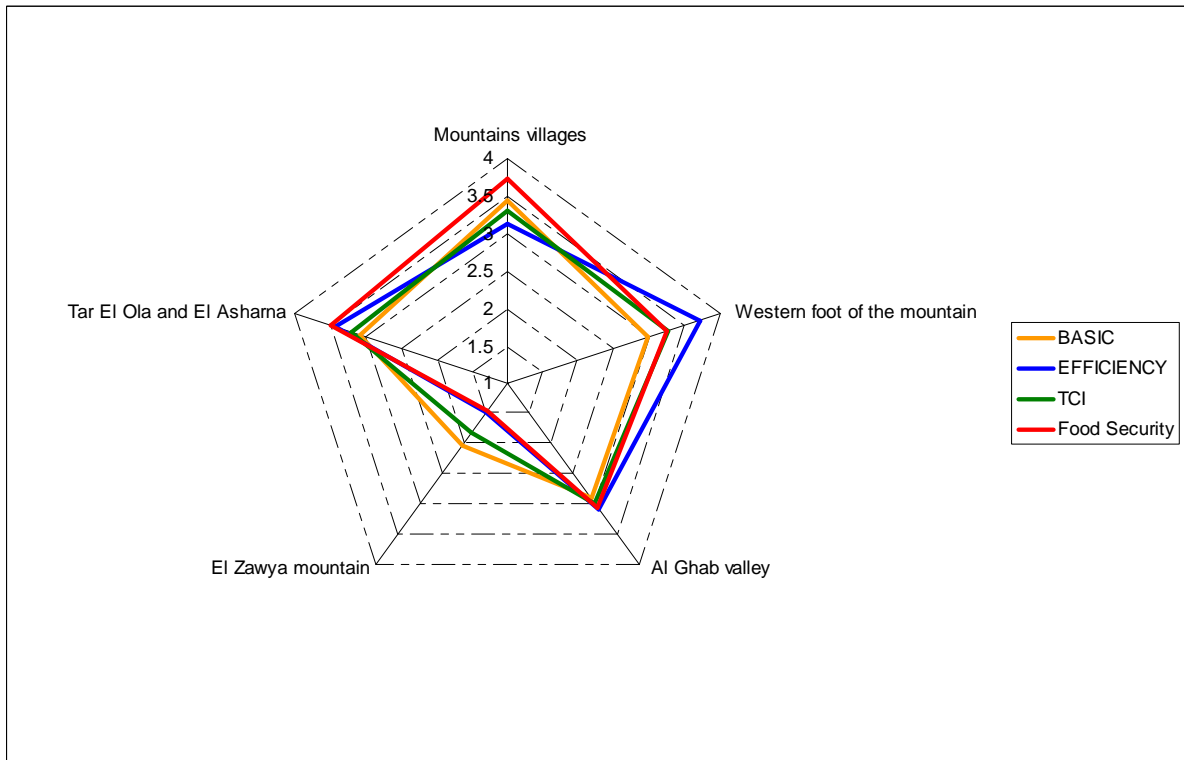
## 5 - Results.

This part of the Chapter describes the main results that can be drawn from the analysis of the Territorial Capital Index in the Al-Ghab region. Figure 9 compares the territorial competitiveness level across the five agro-ecological areas of Al-Ghab region. *Mountain Villages* is the area characterized by the highest values of TCI, followed by *Western foot of the mountain* and *Tar El Ola and El Asharna* (the TCI difference between these areas is minimal). *El Zawya Mountain* is by far the lowest performing area. When Basic and Efficiency groups of pillars are separately analysed, the best performer in the Basic sub-dimension is the *Mountain Villages* while the best one in the Efficiency Index is *Western foot of the mountain*.



**Figure 9:** Territorial Capital Index of the Al-Ghab agro-ecological areas.

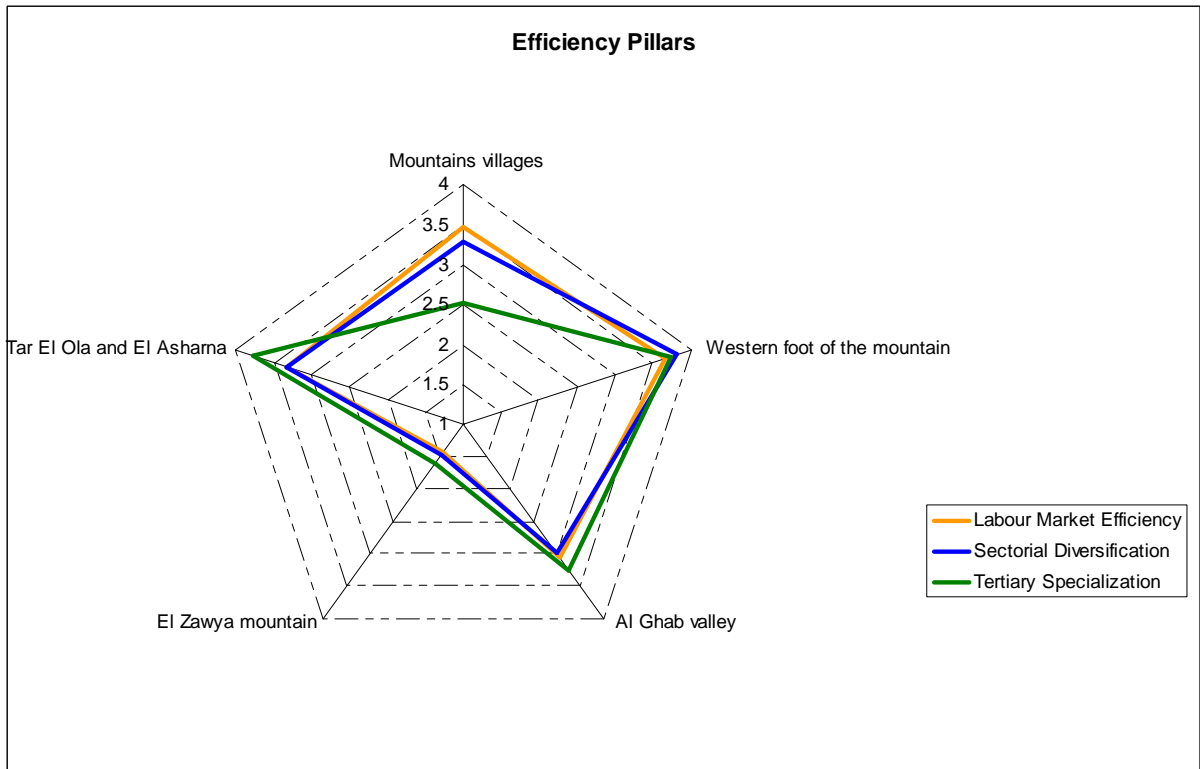
The first important finding of the analysis is that **areas characterized by a high TCI, also present a high and positive level of Food Security** (Figure 10): *Mountains Villages*, which is the area with the highest TCI (and in particular the highest Basic Index), is the best performing region in terms of Food Security, while *El Zawya Mountain* presents the worst situation with regard both to TCI and the Food Security Index.



**Figure 10:** TCI, Basic and Efficiency groups and Food Security Index in the Al-Ghab agro-ecological areas.

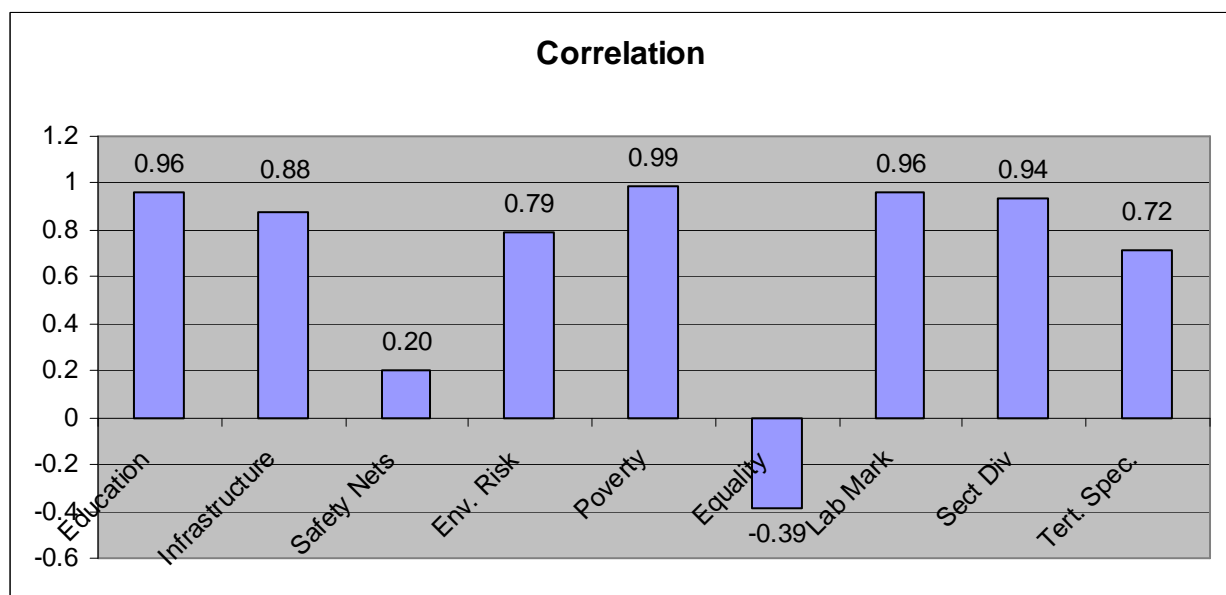


**Figure 11:** Six Basic Pillars of the Al-Ghab agro-ecological areas.



**Figure 12:** Three Efficiency Pillars of the Al-Ghab agro-ecological areas

Figures 11 and 12 show the levels of territorial competitiveness of the five agro-ecological areas respectively in the Basic and Efficiency groups of pillars. *Mountain Villages* area has high territorial assets values in almost all the nine pillars and in particular in the Basic group. *Western foot of the mountain* is a good performer in terms of Labour Market Efficiency, Sectorial Diversification and Tertiary Specialization and in the Basic pillars as well (with the exception of Social Safety Nets where it scores the lowest). Al Ghab Valley occupies an intermediate position for most of the territorial assets (with the only exception of the Level of Equality pillar where it scores the lowest). *Tar El Ola and El Asharna* scores better in the Efficiency rather than in the Basic pillars and, finally, *El Zawya Mountain* is characterized by the lowest level of competitiveness for most of the pillars.



**Figure 13:** Correlations between Territorial Assets and Food Security.

On the basis of the correlations between each pillars and the Food Security Index (Figure 13), the study shows that the **main drivers for FNS improvement in the Al-Ghab region** are:

- 1- **Education;**
- 2- **Poverty;**
- 3- **Labour Market Efficiency;**
- 4- **Sectoral Diversification.**

The negative correlation between the Food Security Index and the pillar Level of Equality may be explained by the very low level of inequalities in the *El Zawya Mountain* area, which, being the worst performer in all other pillars, scores the highest in this pillar. A more in-depth analysis of the pillar Level of Equality showed that this apparently good performance is caused by the fact that the population in this agro-ecological is homogeneously poor and, unlike the other regions, there is not a richer portion of the population that determines high inequality levels in the territory. This effect is caused by the intrinsic nature of the inequality indicators considered here which measure a level of diversification in the population. This result should therefore be interpreted as a negative situation and explains the negative correlation with the Food Security Index.

The results are a confirmation of the **strong and positive relationship between Food Security and Territorial Assets in the analyzed area**. Based on these considerations, it is possible to argue that, in the case of Al-Ghab region, **investing in local assets can improve Food and Nutrition Security as the regions characterized by a high TCI present also high FNS**.

## **6 - Pillar by Pillar Analysis.**

### **BASIC PILLARS**

#### **Education**

This pillar presents strong inter-regional (agro-ecological areas) disparities, in particular El Zawya mountain scores the lowest in all the variables. Disparities rise with the increase in the level of education. The percentage of Not Illiterate of the Al-Ghab region is 90.6, two areas (Mountains villages and Tar El Ola and El Asharna) area characterized by higher percentages - respectively 91% and 92%. The share of people who are not illiterate in El Zawya area is rather low (87.2) With regards to the share of people having up to primary education Mountains villages and Tar El Ola and El Asharna are the best performers, while El Zawya mountain scores very low. In terms of secondary education, the area presents higher disparities: the Al-Ghab level is 9 %, Western foot is the best performer (12.4 %), Al-Ghab valley presents a percentage of 7.1, while El Zawya mountain is characterized by a very low value: only 1.3% of the population reach a secondary education level. Finally, for the highest level of education (University and plus) the disparities are even higher, with the highest shares in Western foot of the Mountains (- 4.1%) and the lowest in El Zawya mountain (- 0.4%).

#### **Infrastructure and Dwelling**

The Infrastructure and Dwelling pillar is composed by four indicators: i) access to improved drinking water, ii) access to improved sanitation facilities, iii) % of households not deprived in term of house wall material, and iv) Crowdedness. Crowdedness indicator measures the average number of people per room and it is calculated as: household size/number of rooms.

As for the previous pillar, Al-Ghab shows high intra-regional disparities, in particular with regards to Access to improved sanitation facilities and Crowdedness. In terms of access to improved drinking water, a part from El Zawya mountains, with the lowest share of households 94.8%, all the other areas score above 98%. The situation is rather different for Access to improved sanitation facilities: Western foot (89.2%) and Tar El Ola (85.6%) have a good access, Al Ghab valley (69.3%) and Mountains villages



(46.3%) present a “medium” level, while El Zawya mountains is characterized by a very bad access (only 2%). The share of households not deprived in terms of house wall material is quite balanced, while the values of Crowdedness index are rather unequal.

### **Social Safety Nets**

This pillar includes formal and informal social safety nets. The **Formal** ones include: school food rations, rations for malnourished, freed food, free health care, financial assistance (considered as coping strategies). The **Informal** social safety nets are composed by: borrowing money from relatives, receiving money from friends/households.

Mountains villages is the area with the highest value of share of **formal safety nets** (62.9%), followed by Tar El Ola and El Asharma (44.12%), Al-Ghab valley (39.7%) and El Zawya mountain (35.06%). The region Western foot of the mountains scores a very low value (26.65%). In particular, Al Ghab valley is the area receiving more assistance with regard to both school food rations and rations for malnourished, while Mountain villages, the area with the highest formal safety nets, is the more assisted region in terms of Free food and Free health care from any sources. El Zawya mountain present the highest value for the category Financial assistance from social support projects. Rather different is the situation in term of **Informal safety nets**: the regional disparities are lower, Al-Ghab valley is the are with the highest share (23.03%), followed by Mountains villages (18.7%) and El Zawya (18.34%). Again, Western foot of the mountain is the region with the lowest value. Al Ghab valley is the area with the highest value of the indicator Borrowing money from relatives, while El Zawya mountain the lowest. El Zawya mountain is the area wit the highest percentage of the variable Receiving aids from households/friend, Western foot of the mountain presents the lowest percentage for this indicator.

### **Poverty**

The indicators included in the poverty pillar show strong intra-regional disparities for the Al-Ghab region. The Multidimensional Poverty Index (MPI)<sup>20</sup> presents very different value in the five agro-ecological zones: in El Zawya mountain the MPI is 20.9, while this value for the other areas is very far from this one: 4.2 in Al-Ghab valley, 1.05 in Tar El Ola. The level of multidimensional poverty is very low in Western Foot of the mountain and Mountains villages. This unbalanced situation is confirmed by some more subjective indicators, such as the Subjective Poverty Rate and the variable “Not satisfied about the current living standard”, even if according to this variables the standard deviation is not so large. The deteriorated living standard indicator also presents strong regional disparities: in El Zawya mountains 86.4% of the sample declared that their living standards are deteriorated with respect to the previous five years, followed by Western Foot of the mountain (30.2%), while in the Mountain villages this percentage is only the 7.2%. It is interesting to notice that the Western Foot of the mountain, which is the area with the highest per capita income, is characterized by a quite high percentage of “Not satisfied” people, a quite high Subjective poverty rate and a the second highest percentage of people indicating a deteriorated living standard.

As relative measures of poverty three aggregate measures are used in this pillar: poverty incidence, poverty depth and poverty severity. These are captured by the standard three Foster-Greer-Thorbecke (1984) decomposable poverty measurements: P0, P1, and P2 (The State of Socio-Economic Conditions of Al-Ghab, 2011):

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<sup>20</sup> The **Multidimensional Poverty Index (MPI)** identifies multiple deprivations at the individual level in health, education and standard of living. It uses micro data from household surveys, and—unlike the Inequality-adjusted Human Development Index—all the indicators needed to construct the measure must come from the same survey. Each person in a given household is classified as poor or non poor depending on the number of deprivations his or her household experiences. These data are then aggregated into the national measure of poverty.

1. The head count index (PO), measures the prevalence of poverty as the percentage of population that is poor, as defined by the poverty line (in this case the Total Poverty Line<sup>21</sup>). This measure is insensitive to the distribution of the poor below the poverty line.
2. The poverty gap index (P1), measures the depth of poverty by the gap between the observed expenditure levels of poor households and the poverty line.
3. The poverty severity index (P2) measures the degree of inequality in distribution below the poverty line, giving greater weight to households at the bottom of the expenditure (or income) distribution as it includes the squared gap in its computation.

Through the analysis of this pillar, it is possible to notice that Mountain villages is the area presenting the best performances in term of Poverty (3.63), followed by Tar El Ola and Al Asharma (3.55), Western Foot of the mountain (3.49) and Al Ghab valley (3.04), while El Zawya mountain is characterized by very bad performances in this pillar (1.28), according to this pillar it is the poorest region.

### **Level of Equality**

The level of equality is here measured on the basis of the level of total consumption. The three indicators are the Gini Coefficient, Theil Index and the quintile ratio, all adjusted in order to have the higher their value the higher the level of equality.

With regards to the final Level of Equality Index, El Zawya mountain is the area with the highest level of equalities (4.05), which means that it is the area with the lowest level of inequalities. Considering all the other data, and in particular the poverty indicators, this result has not to be interpreted as a good performance of the area, but as showing that the majority of the people living in this region are poor and there is not a part of the population with better living conditions. Mountain villages presents a high level of equalities (3.93) as well, followed by Western Foot of the mountain (2.99) and Tar El Ola and Al Asharma (2.12). Al Ghab valley is the area with the lowest level of Equalities (1.89).

### **Environmental Risk**

This pillar includes the share of households living in an area not at risk of droughts or floods (combined into a single, aggregated indicator using the geometric mean) and the share of farmers which do not experience difficulty to expand to pest, animal disease and/or declining soil quality. The final index is computed as the geometric mean of these two indicators. With respect to the final environmental risk index, Al Ghab valley is the area presenting the best score, followed by Tar El Ola, Mountain villages and Western foot of the mountain, while El Zawya mountain is the area with the lowest value.

## **EFFICIENCY PILLARS**

### **Labour Market Efficiency**

This pillar presents some interesting peculiarities. The correlation pattern between Total Employed and Per Capita Income we can observe that the Al-Ghab labour market is characterized by a relatively

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<sup>21</sup> **The Total Poverty Line (TPL):** When the FPL is augmented by an allowance for expenditure on essential non-food goods, it defines the total poverty line in terms of those households who have to displace food consumption to allow for non-food expenditures, deemed a minimum indispensable level of non-food requirements. Following Engel's Law, the non-food allowance can be estimated by identifying the share of non-food expenditure for households whose total expenditure was equivalent to the food poverty line. Any household that spends less than the TPL is considered poor.

higher share of employed, including female employment, with a lower income. This could be due to *i*) a bad functioning of the Al-Ghab labour market or *ii*) not reliable data on employment. An interesting indicator is the “Female to male wage ratio”: Mountains villages is the area with the highest score, indicating a relatively fairer condition in terms of gender bias, while El Zawya mountain is the worst one. The whole Al-Ghab region is characterized by strong intra-regional disparities with regards to this pillar. The indicator “share of children 10-17 not in labour” presents the same distribution of the “Female to male wage ratio” across the regions. The “Availability of farmers’ association in village” is higher in the Western foot of the mountain; Mountain villages area scores quite low and Al-Zawya mountain is the worst. Finally, the “Per capita income” is understood as an outcome indicator describing the good functioning of the regional market: Western foot of the Mountain is the area with the highest income per capita (23100), followed by Mountain villages (22976), Tar El Ola and El Asharna (17104) and Al-Ghab valley (16004). El Zawya mountain presents a very low level of income: 10950.

### **Sectoral diversification**

Sectoral diversification pillar is populated by the following indicators: share of employees in non-agricultural sector, share of non-farm income, Gini index of employed by sector and level of diversification of non-agricultural activities, (computed as coefficient of variation, CV, defined as the ratio between the standard deviation and the mean). Western foot of the Mountain presents the highest share of employees in non agricultural sectors, while El Zawya mountain is the area with the highest share of agricultural employees (65%). In terms of non-agricultural income, Mountains villages area is characterized by the highest share (46,67%), while in El Zawya mountain region only 5.42% of the income is provided by non-agricultural activities. The fact that the whole Al-Ghab region has a percentage of 24.67 of non-farm income indicates a strong agricultural vocation for this area. the Gini Index is computed in order to measure the level of diversification of the regional economy (distribution of employees by sector: public sector, private sector, household workers, self-employed, others) and it is meant to be a sort of measure of robustness of the economy. The higher the Gini coefficient, the higher the level of heterogeneity and, in this case, the more diversified the economy. The Level of diversification of non-agricultural activities (CV) is used to further capture the degree of diversification of the economy, in particular in terms of income sources regarding non-agricultural activities: *i*) industry, *ii*) building and construction, *iii*) hotels and restaurants, *iv*) transportation, *v*) finance and insurance and real estate *vi*) services. Through a more detailed analysis of this indicator, it is possible to notice that Al Ghab valley is the area characterized by the most diversified non-agricultural income sources, with building and construction as the leading sector, followed by Western foot of the mountains, where the transportation is the main income source. Tar El Ola is the third most diversified economy and the main income source for this area is Services, while the level of income sources diversification in Mountain villages is quite low because no income is provided by the sectors *i*) finance, insurance and real estate and *ii*) the services. Finally, El Zawya mountain presents the lowest degree of income sources diversification in the whole Al-Ghab region: in term of non agricultural activities, the only source of income is the industrial sector.

With regards to the final composite index of this pillar, Western Foot of the Mountains is the area with the highest level of sectoral diversification (3.78), followed by Mountain Villages (3.51), Tar El Ola (3.21) and Al Ghab valley (2.97). El Zawya mountain presents a very low level of economic diversification (1.42).

### **Tertiary Specialization**

This pillar is composed by the level of consumption (as percentage) of households on 1. equipment and supplies, 2. ordinary maintenance works, 3. various goods and services and 4. Communications. The other three variables included in the pillar measure the amount of income provided by the value added and knowledge intensive sectors like: *i*) hotels and restaurants, *ii*) finance, insurance and real estate and *iii*) services.

The Al-Ghab region is characterized by strong regional disparities in terms of Business Sophistication. Tar El Ola (3.75) and Western Foot of the Mountains (3.72) are respectively the two regions with the highest degree of business sophistication, followed by Al-Ghab Valley (3.24). Mountain Villages presents a medium level of Business Sophistication, while El Zawya mountain has a very low performance with regards to this indicator (1.60).

More specifically, with regards to the category “hotels and restaurants”, Al Ghab Valley and Mountain Villages are the regions with the highest amount of income provided by this economic sector, while Western foot of the mountain is the area more specialized in the finance, insurance and real estate category and Tar El Ola and El Asharna in the services sector. These three high value added and knowledge intensive sectors do not provide any income to El Zawya mountain area, which confirm to be very focused in the agricultural and in partially industrial sectors and the less diversified and knowledge intensive economy.

## **FOOD SECURITY INDEX**

As described in the previous Section, a Food Security composite Index is built to measure and assess the Food Security situation in the five agro-ecological zone. Moreover, the Food Security Index is used as “control variable” in order to measure, through correlations, the impact of the nine pillars (territorial assets) identified for the Al-Ghab region on Food Security. The Food Security Index is composed by the following variables (see also figure 4): i) % of households experienced food shortage during the past 12 month; ii) % household expected to suffer from food shortages next year; iii) % of poor using Food poverty line (P0); iv) gap between the observed expenditure levels of poor households and the Food poverty line (P1); v) degree of inequality in distribution below the Food poverty line (P2); vi) distribution of households by adequacy of food expenditure, as perceived by household (%) (Less Than Sufficient).

Mountains villages is the area characterized by the highest Food Security level (3.74), followed by Tar El Ola and El Asharna (3.47), Western foot of the mountain (3.25) and Al Ghab valley (3.04). El Zawya mountain is the worst performing zone and presents a very low level of Food Security (1.44). Through a more detailed analysis of the variables composing the final Index, it is possible to notice that El Zawya mountain presents a very severe food insecurity situation in all the dimensions. With regards to the indicators capturing the availability and stability dimensions, the area presents respectively 95.15% of the households experienced food shortage during the past 12 months and 94.19% of the households expected to suffer from food shortages next year. There is a strong gap between this agro-ecological zone and the other areas: the area presenting the second higher level of food insecurity is Al Ghab valley (24.71%) for the first variable and Western foot of the mountains (29.83%) for the second variable. In the El Zawya mountain area the value of both the % of poor using the food poverty line and the distribution of households by adequacy of food expenditure; as perceived by household (less than sufficient category) are very high, respectively 13.3 % and 97.26%. The same picture can be noticed through the analysis of the variables: gap between the observed expenditure levels of poor households and the Food poverty line (P1) and degree of inequality in distribution below the Food poverty line (P2).

## **7 - Main findings regarding the Al-Ghab TCI.**

The main purpose of this section is to illustrate the Food and Nutrition Security policy implications of the TCI approach based which allows to measure and assess the territorial assets influencing Food Security.

The application of the TCI approach to the Al-Ghab region has allowed us to highlight a strong and positive relation between Territorial Assets and Food Security in this area, which has led to two main conclusions:

- **investing in local assets can improve FNS:** the regions characterized by a high TCI present also high FNS;
- **the main drivers for FNS in the Al-Ghab area are:**
  - education;
  - labour market efficiency
  - sectoral diversification.

Moreover, these results support the introduction of a Territorial Approach in addressing the Food Security issue and show the need to invest in local assets and focus on territorial conditions that prevent Food Security and more generally the development of the Al-Ghab region.

## Chapter IV: SAM-TCI Approach

### 1 - The link between SAM and TCI Pillars.

The main purpose of this Chapter is to illustrate the Food and Nutrition Security policy implications of the TCI-SAM approach based on the integration of a Territorial Capital Index, which allows to measure and assess the territorial assets influencing FNS, with the Social Accounting Matrix, which focuses on the socio-economic flows among households and institutions. The SAM contributes to the territorial approach both by adding to the TCI key information for FNS on the economic flows (section 2) and by allowing the formulation and assessment of different policy scenarios through the multiplier matrix (section 3).

A SAM is a particular representation of the macro and meso economic accounts of a socio-economic system, which capture the transactions and transfers between all economic agents in the system (Pyatt and Round, 1985; Reinert and Roland-Holst, 1997). “The SAM is a comprehensive, disaggregate, consistent and complete data system that captures the interdependence that exists within a socio-economic system” (Thorbecke, 2000).

According to Jeffery Round, a SAM is characterized by three main features:

1. first of all, building a SAM is very useful in order to aggregate data from a lot of different sources; this helps to analyze the structural characteristics of an economy (SAM could be also important to highlight data needs and identify data gaps);
2. the SAMs are also an excellent tool for displaying information, as they show clearly the structural interdependence characterizing an economy at both macro and meso level: the linkage between the income distribution and economic structure is explicitly represented in a very simple way in a SAM;
3. SAM is a very useful analytical tool for the development of models.

From a technical point of view, a SAM is a square double entry table where each row and column represents an account. Each row reports the inflows of the account and each column reports the outflows. All receipts of an account are recorded on a row and the expenses on a column. In this way, all monetary flow in the matrix' cell corresponds to an expenditure for the column accounts and a receipt for the row accounts. Accounts are provided for:

- **Commodities and services.** These accounts record the origin of the goods available in the economic system (production and import activities) and their destination (including activities like intermediate consumers and institutions<sup>22</sup>).
- **Production Activities.** These accounts record, on the rows, the destination of the output of the activities, and on the columns, the way the value of the output of each activity is allocated to intermediate consumption, factor costs and profits.
- **Production factors:** these accounts give record on the rows the origin of factors' remunerations (essentially the production activities) and on the columns, the destination of factor incomes (Institutions, essentially households and firms). In general, work and capital are differentiated, but in certain cases it also includes natural resources such as soil and water.
- **Institutions (economic agents):** mainly households, private companies and governments. These accounts report on the rows the origin of institutions' income and on the columns their expenditures. The balance of the government account is the government deficit or surplus, which feeds the saving-investment account.
- **Capital formation:** or Savings-Investments (S-I), which records on the row the origin of savings and on the column the allocation of resources for the capital formation, i.e. for the purchase investment commodities and formation of commodity stocks.

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<sup>22</sup> In some SAMs, goods and services accounts are not separated from production activity accounts.

- **External transactions:** or Rest Of the World (ROW), which records on the row the income paid by the country to the ROW and on the column the income received by the country from the ROW.

With respect to the linkages between SAM and TCI, SAM can be considered as a tool for “a picture” of the economy at a certain point in time. Behind that picture, useful links can be introduced in order to connect the matrix to the TCI approach. There are at least two possible directions that should be considered to establish an interaction between SAM and TCI:

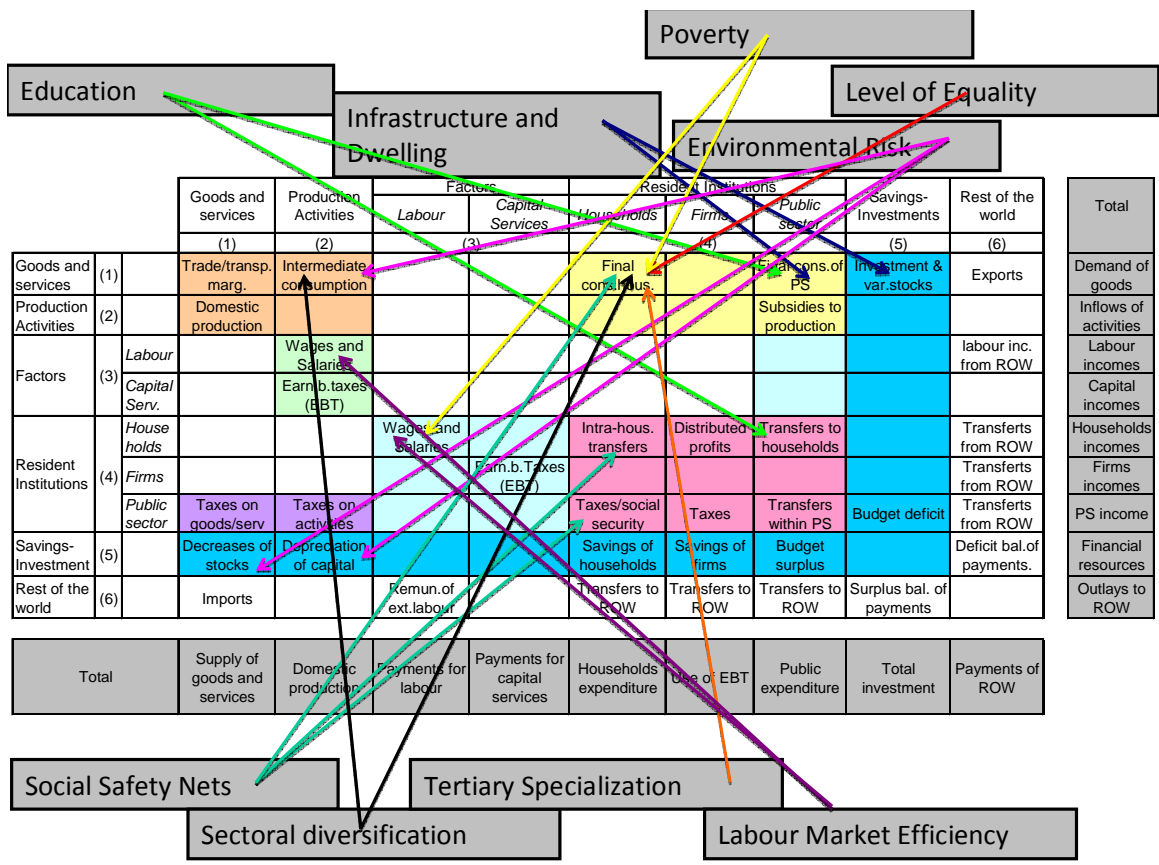
- SAM is a basis for collecting data according to the potential of the statistical system. Data are collected in a framework that is also a basis for planning and that allows to emphasize the basic structure of the economy;
- SAM is a framework aimed to study policy implications of alternative measures on the structure of the economy and to implement general equilibrium models.

The available SAM for Syria has been built up with a specific focus on food structure and it emphasizes the relationship between the whole economy (production, income distribution, consumption and demand side) with the most important dimensions of food production and distribution. In the SAM the provided framework allows a robust evaluation of the policy implications for food and nutrition security.

The main objective of the TCI is to connect the territorial capital with the food security performance, in order to confirm the theoretical idea that behind food and nutrition security there are relevant implications stemming out from territorial analysis. SAM can provide relevant information for the analysis of food security since the framework (data and models) can be linked in different ways to the TCI framework and impacts of policies can be studied in a general equilibrium framework.

The following matrix (figure 1) is an attempt to give a representation of the link between the TCI pillars and the information provided by a standard SAM.

All these links can be useful to the modeller in order to understand what kind of information can be raised by the SAM and exploited for the implementation of the territorial approach and what other information can be provided from the SAM to the approach. According to the proposed framework, there are still a number of information that can be more widely used. In the following paragraph an application to the Al-Ghab region is provided.



**Figure 1:** potential contribution of the SAM to the AI-Ghab Territorial Capital Index.

**2 - AI-Ghab SAM as a database to integrate TCI information.**

The TCI is composed by the nine pillars (Basic and Efficiency) explained in the previous paragraphs. The SAM contribution is to provide information for most of them. In the following table 1 a link between TCI pillars for the AI-Ghab region and Syrian SAM is provided.

<i><b>TCI pillars</b></i>	<i><b>Information about basic indicators from SAMs</b></i>
<b>Education</b>	<ul style="list-style-type: none"> <li>• Illiterate: no</li> <li>• Basic and primary education: household expenditure in basic and primary education</li> <li>• Secondary education: see above</li> <li>• University and +: see above</li> </ul>
<b>Infrastructure and dwelling</b>	<ul style="list-style-type: none"> <li>• Access to improved drinking water: expenditure in Water, electricity and gas – Building and construction – households expenditure in services</li> <li>• House wall material: no</li> <li>• Crowdedness: no</li> </ul>
<b>Social safety nets</b>	<ul style="list-style-type: none"> <li>• Formal: no - government expenditure (not available in the available SAM, additional information are available)</li> <li>• Informal: inter-institutional transfers (gov't-hhld) – Net lending borrowing and financial flows</li> </ul>
<b>Environmental risk</b>	<ul style="list-style-type: none"> <li>• Drought and flood: government expenditure (not available in SAM, additional information are available)</li> <li>• Distribution of farmers by difficult to expand: government expenditure (not available in SAM, additional information available)</li> </ul>



	<ul style="list-style-type: none"> <li>• Agricultural sector expenditure in chemical products (not available in SAM, since no chemical sector is available, additional information are required)</li> </ul>
<b>Poverty – Level of Equality</b>	<ul style="list-style-type: none"> <li>• SAM provides a full income distribution picture of the country and poverty and inequality might be measured on the basis of data available directly from the SAM under the constraint that institutions are defined on the basis of deciles.</li> </ul>
<b>Labour market efficiency</b>	<ul style="list-style-type: none"> <li>• Female to male wage ratio: no</li> <li>• Child labour: No</li> <li>• Association: no</li> <li>• Per capita income: yes</li> <li>• Account for hired labour is available and its distribution among institutions (households)</li> </ul>
<b>Business sophistication</b>	<ul style="list-style-type: none"> <li>• Consumption of equipment supplies, ordinary maintenance works: yes, but poor according to the sectoral structure available</li> <li>• % of income by hotel restaurants, finance, insurance, services: yes, according to the available sectoral structure of the SAM</li> </ul>
<b>Tertiary Specialization</b>	<ul style="list-style-type: none"> <li>• Employment in non agricultural activities: not available, but value added and gross income in non agricultural activities is available (average wage is needed)</li> <li>• Non farm income: value added to labour per sector</li> <li>• Gini index of employed by sector: yes</li> <li>• Level of diversification of non agricultural activities: yes, also from input-output coefficients, and in general information on diversification s largely available according to the sectoral structure of the SAM (very detailed for agrifood sector, relatively poor for the other sectors – additional information needed)</li> </ul>

**Table 1:** link between TCI pillars for the Al-Ghab region and Syrian SAM.

SAMs can also provide additional information to the TCI that are not currently considered in the available model applied to Al-Ghab.

According to the Syrian SAM, the following information are not considered:

1. Exports and imports: external constraint of the country
2. Investment expenditure and savings rate
3. Interregional transfers once regional matrices are available
4. Taxation and subsidies

Most of them are crucial to food and nutrition security analysis, namely the external constraint of the country and the effect of taxation and subsidies to food security seem to be crucial and should be considered in further analysis.

### 3 – Al-Ghab SAM and Policy Scenarios<sup>23</sup>

The SAM for the Al-Ghab region was built by the University of Macerata by i) constructing the National Accounting Matrix (NAM) for Syria, ii) deriving the Social Accounting Matrix (SAM) for the Syrian economy for the year 2010 with a high level of disaggregation and iii) providing the

<sup>23</sup> This part of Chapter IV was developed in strict collaboration with the University of Macerata, Department of Economics and Law, in particular with Ciaschini Maurizio, Soggi Claudio, Pretaroli Rosita, Severini Francesca, who constructed the SAM and technically developed the policy scenarios through the SAM Matrix.

regionalisation of the matrix in order to analyse the problem of food security and territorial development in the Al-Ghab region.

		Commodities	Activities	Primary Factors	Institutional Sectors	Capital Formation	Rest of World	Total rows
	n.	1	2	3	4	5	6	
Commodities	1	-	2.086.487		2.037.534	745.074	911.773	5.780.868
Activities	2	4.836.814						4.836.814
Primary Factors	3	41.448	2.661.975				9.294	2.712.717
Institutional Sectors	4			2.771.034	357.271		62.253	3.130.558
Capital Formation	5		88.352		629.220		182.966	900.568
Rest of the World	6	902.606		1.683	106.533	155.494		1.166.316
Total column		5.780.868	4.836.814	2.712.717	3.130.558	900.568	1.166.316	

**Figure 2:** Macro National Accounting Matrix for Syrian Economy for 2010 – millions SP. **Source:** Elaboration by University of Macerata on official data.

In particular SAM for Al-Ghab represents the appropriate database to develop the extended multisectoral model (Ciaschini and Socci, 2006-2007). The proposed model is an extension of the Miyazawa approach (Miyazawa, 1970) through the integration of secondary income distribution (Pyatt, 2001) that is able to evaluate the effects on the whole income circular flow of some policy scenarios for Al-Ghab Region.

The objective of this phase of the research is to develop the policy scenarios on the basis of the results of the TCI analysis. Given that the TCI analysis identified the main drivers of FNS for the Al-Ghab region, the SAM analysis focused on these three dimensions, namely economic diversification, labour market efficiency and education. The main goal is to identify the appropriate set of policies that allows to develop these three drivers of FNS in the Al-Ghab region in order to improve the food security situation of the area.

Based on these considerations, three different policy simulations were developed:

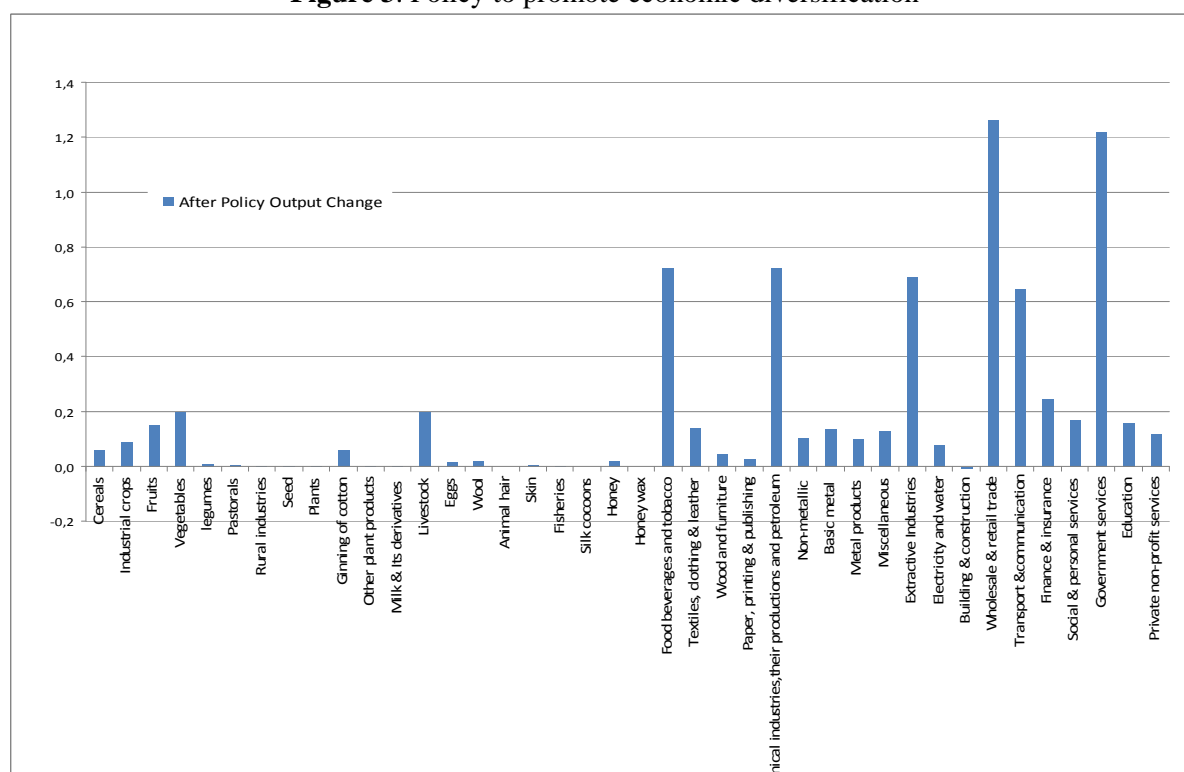
1. Policy to promote economic diversification: we increased indirect taxes on agricultural goods (from 1 to 21) and reduced indirect taxes on the other commodities;
2. Policy focused on education:
  - a) we increase the final demand of all commodities (+1,042 millions of SP) and measure the effects on education total output;
  - b) we increase the final demand of education (+1,042 millions of SP) and measure the effects on total output;
3. Policy for female labour: we compensate a higher use of female labour with the reduction of indirect taxes.

## 1 Policy to promote economic diversification

The Al-Ghab region economy is strongly dependent on the agricultural sector which is the main engine of growth and employment of the region. Food and nutrition security – and more generally development policy - of this region has been main characterized by an agricultural focus which limited the possibility of identifying other source of growth and development and of capturing the complexity of this region. Therefore, a more forward looking, integrated and holistic FNS strategy – as also identified by the TCI analysis – would be more effective for the development of the area. .

The diversification of the economy should be one of the main policy objective. This first simulation aims at stimulating the economic diversification through a fiscal policy that increases the amount of indirect taxes on a number of commodities by reducing indirect taxes on other commodities.

**Figure 3.** Policy to promote economic diversification



More specifically it simulates an increase in indirect taxes on agricultural goods (from 1 to 21) and reduce indirect taxes on other commodities by the same amount in order to maintain the total tax revenue.

The figure 3 shows the results in terms of After Policy output Change (APC)<sup>24</sup> and confirms the effectiveness of the policy since the reduction of indirect taxes on non-agricultural goods (from 22 to 40) generates an increase in manufacturing and services output. As a general result, the overall total output increases.

The output of this simulation confirms the result of the TCI analysis on the importance of the rural off-farm economy. Moreover, it suggests that given the production structure of the Al-Ghab region strongly affected by government subsidies to agricultural commodities, the transition from agricultural to non-agricultural economy can be achieved by reducing these subsidies (otherwise increasing indirect taxes) and stimulating non agricultural commodities production.

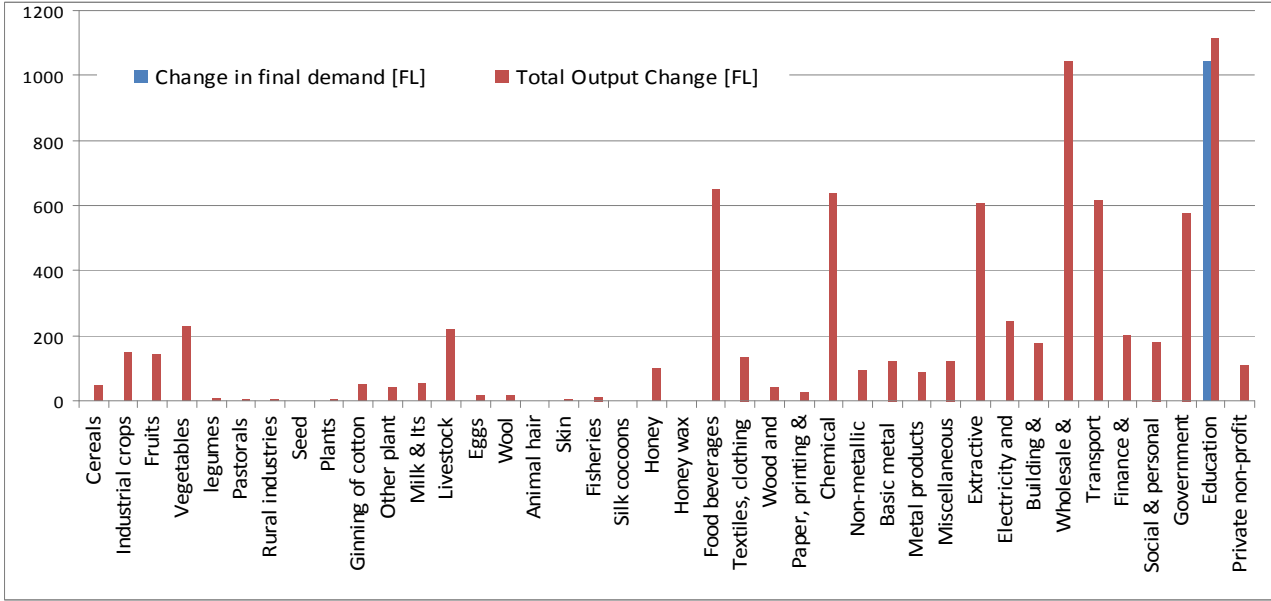
<sup>24</sup> The results are calculated in terms of output change [After Policy Change (APC) = output after the policy – output before the policy].

Investing in and promoting the other sectors of the economy and reducing the subsidies to the agricultural sector can have relevant effects on the manufacturing and service sectors.

### 2 Education as a strategic sector?

Given that education was identified by the TCI analysis as a strategic sector and one of the main drivers for food nutrition security and human capital development, this second policy scenario aims at assessing the effects of a policy oriented to “Education” sector on the Al-Ghab economic system.

**Figure 4.** Effects on total output of an increase in final demand of Education



This study focuses only on the effects of the policy on the production system and it can be observed that education has a weak relevance in terms of both backward and forward analysis. This means that the “Education” commodity does not affect the current structure of production and income distribution. Its production is strongly connected with the tertiary sector but less with the other commodities.

If we increase the final demand of all commodities (+1,042 millions of SP) and measure the impacts on education total output (forward side) we do not observe any important effects on this commodity.

On the other side, a peculiarity of this commodity emerges when observing the effect of the policy on consumption and total output in the backward dispersion analysis. When we increase the final demand of “Education” (+ 1,024 million of SP), the effect on total consumption (+3,713 millions of SP) is higher than the case when the same amount of resources is allocated to all the components of final demand (+3,509 millions of SP).

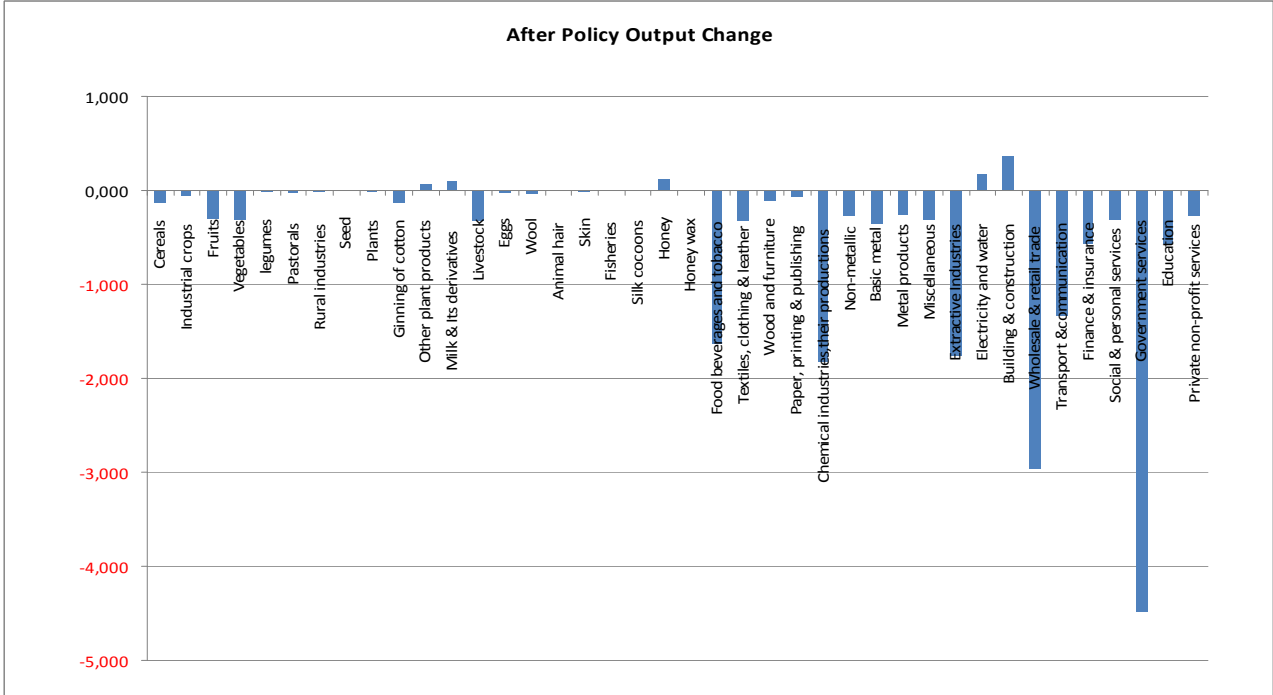
### 3 Policy for labour market efficiency (through female labour change)

Labour market efficiency is the third main drivers of the Al-Ghab economy identified by the TCI analysis. One of the variables composing the labour market efficiency composite indicator was “male to female wage ratio”. Given the data available, it was decided to focus the policy to promote labour market efficiency on this dimension.

Therefore, this policy aims to generate an increase in female labour by means of a change in value added composition. More specifically, it reduces indirect taxes on each commodity production and uses the tax revenue to increase female labour compensations. Then a shock is introduced on final

demand with this new value added structure and the effects of this policy in terms of total output change is discussed (figure 5).

**Figure 5. Policy for female labour**



A positive effect on total output of few commodities can be observed: “Other plant products”, “Milk and Its derivatives”, “Fisheries”, “Honey”, “Honey wax”, “Electricity and water” and “Building and construction”. The other commodities does not receive any positive effect from the new structure of the value added.

**4 – SAM-TCI Approach: joint conclusions.**

**Methodological issues in the Al-Ghab case study.**

The application of the TCI-SAM Approach to the Al-Ghab region has allowed to define a comprehensive framework for the measurement and assessment of the territorial capital and the territorial endogenous potential of the Al-Ghab region.

The Territorial Capital Index, composed by nine pillars (territorial assets) has allowed to identify which are the main drivers of FNS in the region: education, poverty, labour market efficiency and sectoral diversification were identified as the main pillars influencing FNS. These four drivers of FNS were specifically highlighted and disaggregated in the matrix. Other pillars of the TCI measuring the structural features of the Al-Ghab economy can not be directly included in the matrix (infrastructure, inequality, social safety nets, environmental risk, tertiary specialization, etc.), but they allow to integrate the information generated by the SAM with this additional information on the territorial assets characterizing the Al-Ghab region.

At the same time, the SAM has allowed to integrate the TCI information and analysis and further assess and define the territorial dimension in the Al-Ghab region. In particular, in the case of the Al-Ghab region, the additional information generated by the SAM refers to:

- intermediate consumption of production activities by commodities (*Use* table);
- the total output by activities (*Supply/Make* table);
- the generation of income: the value added generation;

- the primary income allocation;
- the secondary income allocation, describing how income is redistributed between institutional sectors by means of the payments and receipts of current transfers;
- the use of income, where it is shown how institutional sectors allocate their disposable income between final consumption and saving;
- the capital formation, including gross fixed capital formation, changes in inventories and net lending/borrowing;
- the Rest of the World, corresponding to the flows form and to the rest of the world.

The main methodological conclusion deriving from the Al-Ghab case study is that the TCI and SAM can be considered integrated and complementary tools for territorial and FNS analysis. In addition, the SAM allows to formulate and assess the impact of specific policies which, as in the case of the Al-Ghab case study, can be identified on the basis of the TCI analysis and results. The two tools can be better integrated to the extent to which it is possible to structure the national statistical system in a coordinated manner, otherwise some mismatches can be generated between data captured by TCI and data captured by SAM.

Another innovation of the TCI-SAM approach refers to the measurement of FNS. In the TCI a composite index measuring FNS has been calculated on the basis of the available data deriving from the household survey. In the SAM, it has been possible to identify some structural indicators, directly available from the matrix, which can be used to measure some dimensions of FNS (Herfindal Index on food nutrition diversification and an indicator of food availability derived from the household food consumption). This allows to directly assess the effect of the policy tested through the SAM on FNS.

### **Integration of the Results of the two tools.**

One of the main linkages and complementarities between TCI and SAM is that the TCI analysis allowed to focus the SAM policies scenarios on the pillars which have strongest influence on FNS. Therefore, with reference to the main drivers of FNS in the Al-Ghab region (education, labour market efficiency and sectoral diversification) the SAM multipliers analysis tried to identify, test and assess the effects of the policies which can better exploit these strategic territorial assets.

With regards to the **Sectoral Diversification** pillar, it has been possible to identify the policies to promote the diversification of the Al-Ghab economy: the outcome of the SAM analysis suggests that, given this production structure strongly affected by government subsidies to agricultural commodities, the transition from agricultural to non-agricultural economy is achievable only by reducing these subsidies (otherwise increasing indirect taxes) and stimulating non agricultural commodities production.

**Education** is another key driver of FNS in the region. In the Al-Ghab TCI, education is understood as a measurement of human capital. Given the lack of data (in the SAM) on the endowment of human capital, it was decided to consider education as a “commodity” and to look at the effect of education policies in terms of an increase in the final demand in the “commodity” education. Such policies have a higher impact on the final consumption compared to alternative policies aimed at increasing all the components of the final demand: when we increase the final demand of “Education”, the effect on total consumption is higher than the case when the same amount of resources is allocated to all the components of final demand.

The third key driver of FNS in Al-Ghab is **Labour Market Efficiency**. This asset in the SAM was analyzed as female to male wage ratio. To promote female labour, in the SAM indirect taxes on female labour on each commodity production were reduced and the tax revenue used to increase female labour compensations. The result is that the policy to promote female labour, through this redistributive action, has an important impact on the efficiency of the Al-Ghab labour market (4, 16%) (see table below).

Having derived from the TCI indicators the three main drivers of Al-Ghab FNS, it has been possible to measure the impact of the various policies implemented through SAM on two of these three drivers (given that education is not measurable through the Al-Ghab SAM, but in general it would be measurable in the presence of different data): economic diversification and labour market efficiency. In addition two indicator of FNS (food nutrition diversification and food availability) have been included in and calculated through the SAM.

The table 2 below shows that the tested policies contribute to promote **economic diversification** of the Al-Ghab region (high level of the Index means a low degree of diversification). With respect to **labour market efficiency**, policy 3 have a positive effect on labour market efficiency. The effects of these policies on the food and nutrition diversification index is extremely low, while they contribute to increase food availability.

**Table 2:** effects of the policies on economic diversification, labour market efficiency and some dimensions of FNS.

	<b>Economic diversification [Herfindahl Index (HHI<sub>e</sub>)]</b>	<b>Labour Market Efficiency (LME)</b>	<b>Food Nutrition Diversification [Herfindahl Index (HHI<sub>f</sub>)]</b>	<b>Food Availability [Households food consumption]</b>
	<b>% change<sup>+</sup></b>	<b>% change<sup>+</sup></b>	<b>% change<sup>+</sup></b>	<b>% change<sup>+</sup></b>
Policy 1	-0,2213%	-0,0650%	0,000014%	0,2937%
Policy 2	-0,2211%	-0,0651%	0,000014%	0,2933%
Policy 3	-0,2205%	4,1622%	0,000014%	0,2925%

<sup>+</sup> It is calculated as the % difference between the value of the indicator and its initial level.

In addition to providing a strong analytical framework to identify and assess the strengths and weaknesses of the Al-Ghab region, the integration of the TCI and SAM tools allowed confirm that the territorial dimension and investing in local assets can have a strong influence on food and nutrition security levels.

Moreover, it confirms that, in the case of Al-Ghab, the key concepts characterizing the territorial/place-based approach can be applied and are effective for the issue of food and nutrition security. In particular, the case study showed the need to shift from a sectoral to a multi-sectoral and integrated approach: the areas characterized by a higher level of economic diversification are more resilient to food insecurity than the areas which are strongly dependent on the agricultural sector. In addition, the SAM policy scenarios confirmed that policies which aim at increasing the diversification of the economy are beneficial for food and nutrition security.

## **Chapter V. Conclusions: towards a territorial (place-based) approach to FNS policies**

### **Conceptual and policy implications for the application of the territorial approach to FNS.**

The thesis first analyzed the potential effectiveness of territorial approaches for FNS policies, both through a literature review and through interviews of international experts and policy-makers, including experts supporting the spatially-blind perspective. This first part of the research concluded that FNS is a multi-sectoral and complex socio-economic development issue characterized by a strong territorial dimension which goes far beyond food production and it is the result of dynamic and complex interactions between economic, social, institutional and environmental policies.

In addition, this section explains that territorial approaches and policies are better suited to exploit “hidden” local economic, natural and human potential and therefore to boost sustainable endogenous development in food insecure regions. Being the access dimension of food insecurity the main issue in many developing countries, providing sustainable and long-term employment and income opportunities for poor food insecure people living in lagging regions appears to be the main challenge and possible solution to address FNS.

A territorial approach also allows to promote a shift from assistance-led policies to socio-economic efficiency policies: very often regional policies have been conceived as a tool to support lagging, remote and food insecure areas through a redistributive approach, while – as stressed by Barca et al (2012) – “a developmentalist approach aiming at maximizing the development potential of all regions should be the focus of development policy. What this implies for convergence is unclear, but the essential point is that if convergence is to be promoted, this is to be done by development rather than by redistribution” (Barca et al., 2012, pag. 146).

As stressed by Rodriguez-Pose (2011), spatially-blind approaches are not really spatially-blind, but can be considered as place-based policies which may benefit core, large agglomerations and urban spaces at the expenses of peripheral areas. Therefore spatially-blind policies could have a detrimental effect on rural, lagging and food insecure regions and could contribute to increase the disparities between core areas and these peripheral regions.

Multi-level governance and institutions are two key dimensions for an effective territorial approach to FNS policies. The research stressed that a sectoral approach is not sufficient to achieve sustainable FNS, but an integrated, multi-sectoral and holistic approach is needed for effectively address food insecurity as well as a balanced policy mix that better reflects the great heterogeneity of rural societies. Multi-level governance and institutions are critical for adopting this multi-dimensional and cross-sectoral approach, which requires strong coordination and coherence in order to capture the spillover effects that every sectoral policy can have on the other policies.

The institutional dimension has been often neglected by traditional FNS policies and approaches. By focusing almost entirely on improving agricultural production and productivity without considering the institutional dimension, they have weakened or even counteracted the impact of productivity improvements on inequality, rural poverty and FNS.

Formal and particularly informal institutions are highly context-specific and spatially-blind development policies which focuses only on formal institutions are likely to be highly ineffective in addressing the complexity and the multi-actor nature of the issue of FNS. In fact, by focusing the attention only on formal institutions, some factors (informal institutions) that play a key role in promoting economic development and food and nutrition security, such as trust, culture, history, religion, identity the values of a place, would be neglected and this would reduce the effectiveness of development policies. “The combination of formal and informal institutions in space results in different institutional set ups and ways in which institutions operate and function in every territory,



creating an institutional environment which is unique to every city, locality, region, or country” (Rodríguez-Pose, 2011, p. 87).

In addition, multi-level governance plays a key role in the transition from a top-down, centrally-driven and sectoral approach to a bottom-up, multi-sectoral and participatory approach which recognizes the importance of local institutions in confronting food insecurity. A solid and effective multi-level governance system allows to bridge the traditional gap between FNS policies and strategies usually formulated and developed at global or national level and the micro-level interventions and small-scale projects which are disconnected from the national strategies and planning instruments. The territorial level - through multi-level governance mechanisms - can play a coordination role by integrating macro and micro development policies with local development initiatives, previously limited to small-scale interventions focusing on short-term, relief-type interventions that are unable to internalize long term economic development objectives (Crescenzi and Rodríguez-Pose, 2012).

### **Methodological and analytical contribution and implications**

The thesis proposes two analytical tools to measure and assess the linkages between territorial capital and FNS, to identify the main drivers of FNS in the Al-Ghab region and to test some policy scenarios mainly on the basis of the results of the TCI analysis.

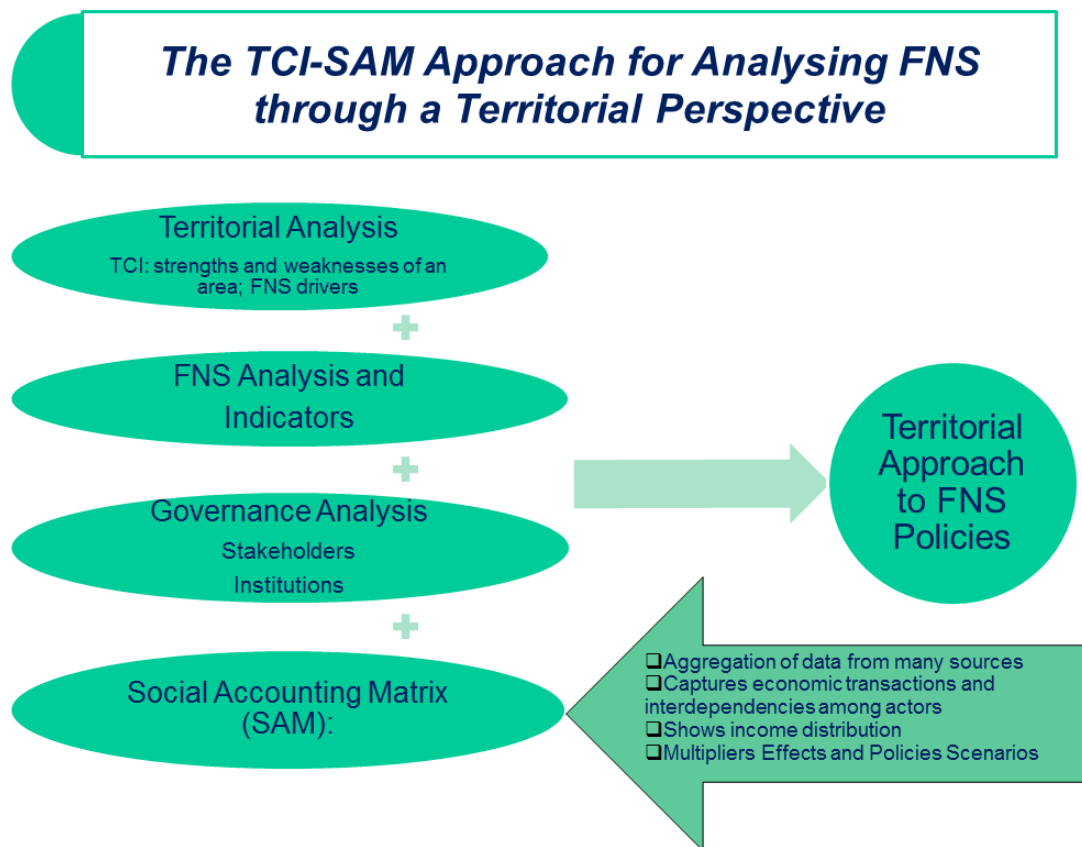
The TCI allowed to identify the main drivers of FNS in the Al-Ghab region: education, labour market efficiency and sectoral diversification of the economy. The fact that sectoral diversification is one of the main drivers of FNS in the region supports the idea of applying a territorial perspective and of shifting from a sectoral to a multi-sectoral approach with a key role of the off-farm rural economy.

These results allowed to focus the SAM analysis and policy scenarios on the main drivers of FNS defined by the TCI (in addition to other policies identified in a brainstorming with FAO). Therefore, the SAM multipliers analysis tried to identify, test and assess the effects of the policies which can better exploit these strategic territorial assets.

Figure 1 shows the TCI-SAM approach for the analysis of FNS. The figure also includes the institutional and governance dimensions characterizing the territorial approach. In the case study regarding the Al-Ghab region, it would have been useful and interesting to analyze the institutional and multi-level governance dimensions, but given the difficult situation of the Country it has not been possible to establish a dialogue with the central and regional government.

The proposed approach presents some pros and cons. In terms of pros, the TCI-SAM approach allows to capture and synthesize complex and multi-dimensional phenomena, such as territorial competitiveness and FNS, and it includes a multi-criteria analysis of the different determinants composing it (TCI). In addition it is a helpful tool in setting policy and investment priorities, in benchmarking and monitoring performances and assessing different policy scenarios.

It also presents some potential cons that need to be carefully considered. Availability of data and info, especially in developing countries is critical: the definition of a minimum set of data/indicators needed for the construction of the index might be useful. The TCI and SAM may send misleading policy messages if poorly constructed or misinterpreted or if dimensions of performance that are difficult to measure (or if data are missing) are ignored. For these reasons, methodological issues regarding both the construction and use of the TCI and SAM need to be addressed transparently in order to avoid data manipulation and misrepresentation.



**Figure 1:** TCI-SAM Approach for analysing FNS through a territorial perspective.

### Contribution to the broader debates

While the debate on place-based approaches is gaining increasing interest also in developing countries, there is little evidence of these approaches being implemented systematically and less so addressing food and nutrition security. Yet, developing countries are facing similar challenges than developed countries in terms of globalization, urbanization, decentralization, and spatial disparities which impinge on food security levels at both the geographic and household levels (Rodriguez-Pose and Tijmstra, 2007). The validity and the likelihood of success of territorial approaches in the developing countries is therefore not lower than for other countries if appropriate actions are taken by the governments.

In particular, actions should be taken in three main areas: i) governance and institutions, as analyzed in Chapter II of the thesis, ii) information generation tools and analytical methodologies for the formulation of evidence based policies and strategies. The proposed TCI-SAM approach tries to contribute to this dimension and iii) the promotion of innovative approaches, such as bottom-up and participatory approaches, integrated multi-sectoral and place-based approaches for policy and strategy formulation.

The potential effectiveness of territorial approaches in developing countries is also stressed by Rodriguez-Pose and Tijmstra, (2007) in their paper on Sub-Saharan Africa which highlights that LED has been undermined by a focus on exceptional measures. “Similar conditions elsewhere in the world have allowed for LED strategies to flourish. In SSA, a tradition of designing and implementing ‘exceptional’ policies for what was conceived to be an ‘exceptional’ case, together with an emphasis on pro-poor local or community development packages have prevented a similar LED boom” (Rodriguez-Pose and Tijmstra, 2007, p. 532).

The thesis analyzed the potential effectiveness for FNS of the two opposing development paradigms proposed by the New Geographic Economists, based on the theory of agglomerations and reflected by the World Bank in its Report (2009), and by the Economic Geographers, advocated by the OECD and EC and based on the place-based concepts. It concludes that spatially-blind approaches may event contribute to increase the disparities on FNS level between core areas and remote rural lagging regions. The unresolved question that requires more scrutiny is whether these models are incompatible or can be complementary depending on the context.

The research emphasizes that the advantages of territorial/place-based approaches lie on their capacity to address all the dimensions of food security (availability, access, nutritional quality and stability), better explain the determinants of food security and inequalities, which also depend on local conditions and specificities, ensure a more efficient allocation of resources through a better use of local potential, promote an inclusive and integrated approach to decision making, and finally allow for tailored policies as opposed to one-size-fits-all approaches.

Also the World Bank in a report on policies and interventions to tackle poverty in Ghana, stressed the need for territorial approaches to reduce poverty and promote development. “Tackling poverty in Northern Ghana will call for interventions that go beyond spatially blind policies and are well targeted within Northern Ghana with a view to supporting livelihood opportunities and reducing vulnerability to the various climatic, economic and political shocks that plague these regions” (World Bank, 2011, p. viii).

This PhD thesis provides some empirical evidence on the benefits of territorial approaches for FNS in developing countries, both by interviewing the main international experts and through the application of the TCI-SAM approach in the Al-Ghab region of Syria. Further research and empirical evidence – through the implementation of this approach in other developing countries - is needed to better understand and to further confirm how territorial approaches can reduce inequalities and food insecurity.

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