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**INCOME DIVERSIFICATION IN RURAL REGIONS
AN INTEGRATIVE LOCATIONAL AND SECTORAL APPROACH**

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Alle Meinungsäußerungen geben die aktuellen Einschätzungen der Verfasser wieder, die nicht notwendigerweise die Meinungen des Programms widerspiegeln.

ABSTRACT

The present paper has the objective to illustrate the development and usability of an integrative locational and sectoral matrix for approaching alternative income diversification activities in rural areas. The importance of owning a “multiplicity” of enterprises in terms of risk reduction, the “New Rurality” perspective, the overlay of approaches in the literature to rural income diversification, and the simultaneously need for a further systematic empirical examination of the topic, validate the need for an integrative conceptual approach that unifies diverse concepts regarding income diversification. This paper describes, how the simplicity and unifying nature of the here described integrative approach could contribute to the standardization of concepts for future research.

Keywords: diversification, rural income diversification, pluriactivity, on-farm, off-farm, farm, nonfarm.

INTRODUCTION

Over the last decades of the twentieth century, the dominating assumption in developing countries was that rural producers depend exclusively on their agricultural production for their livelihood and food security (Crole-rees & Consultants 2000). Nowadays, the importance of owning multiple businesses outside agriculture has been recognized as a crucial strategy for minimizing low-income risk in rural regions, where economies of scale can be reached very early (Carter 1999). Though agricultural sources of income remain critically important for rural households in all countries, the largest share of households has diversified sources of income, and the largest share of income stems from off-farm activities (Davis et al. 2010).

Though, nonconventional income generation in rural areas is a crucial issue for the analysis of rural development, the analysis of rural household incomes has been quite difficult due to the lack of harmonized data (OECD 2003b). Nonconventional income generation activities

have been different conceptualized in the literature, e.g. as part-time farming (Carter & Ram 2003), diversification (Bishop & Evison 2010; Montibeller & Franco 2010; Minang et al. 2014; Start 2001; Alavalapati & Mercer 2005; OECD 2003a; FAO 2005; Barreiro 2009), multiactivity (Reardon et al. 2001), pluriactivity (Błąd 2010; Bessant 2006; Evans & Ilbery 1993; OECD 2003b; Gonçalves Dourado & Oliveira Jr. 2010; Carter 1999; Hansson et al. 2013; Dantsis et al. 2010; Carter & Ram 2003; Alsos et al. 2014), rural nonfarm employment - RNFE (Pal & Biswas 2011; Graziano da Silva & Eduardo Del Grossi 2001; Reardon et al. 2007), nonfarm income diversification (Barrett et al. 2001; Escobal 2001), off-farm activities (Janvry & Sadoulet 2001; Evans & Ilbery 1993; Błąd 2010), off-farm employment (Bessant 2006; Janvry & Sadoulet 2001; Evans & Ilbery 1993; Hansson et al. 2013), off-farm income (Bessant 2006), multiple business ownership (Carter 1999; Carter & Ram 2003), portfolio entrepreneurship in nonfarm sectors (Carter 1999), among others. This overlay of approaches to rural income diversification has generated an overlapping of concepts that drive to significant differences in the interpretations, and to permanent contradictions in the rural development literature. Other authors, like Bessant (2006) and Huang et al. (2015) among others,

consider that several aspects of the “New Rurality”, like pluriactivity, rural restructuring, farm depopulation, multifunctional agriculture and ecosystem services, were late regarded and need to be further analyzed and integrated. Those aspects usually share common questions, when regarding income generation. However, its integration is difficult because of the multiple approaches, and the different economic grouping used for statistical purposes (farmer, household, holding).

If the different sectoral and locational approaches and economic grouping perspectives used in rural income diversification studies could be integrated into one common categorization, the interaction and exchange between different scientific communities could be facilitated. Evans & Ilbery (1993) suggest, for example, that the analytical distinction between farm-centered diversification and off-farm employment within the broader pluriactivity of farm households, could provide a focus for empirical work. In this context, the aim of this analysis is to develop a locational and sectoral matrix that enables the integration of different sectoral and locational approaches already present in the literature.

First, this paper contains a review of the basic terms, classifications, and approaches to rural income diversification. Then, the analysis towards the constitution of an integrative approach to income diversification is explained step by step.

LITERATURE REVIEW ON RURAL INCOME DIVERSIFICATION

Basic Concepts

Diversification

The concept of diversification in the farm business literature differs from strategic management definitions of business diversification. While the latter commonly involves adding product, services, location, customers and markets to a business's portfolio, there is not an agreed standard definition for diversification in the rural business literature. Some definitions suggest, that a farm can be considered as diversified, if it uses its resources for activities different to the conventional production of crops and livestock to generate income (Hansson et al. 2013). In line with this definition, the Farm Structure Survey (FSS) of the EU-27, understands diversification as the creation of gainful activities not including any farm work, but necessarily using the resources or products directly related to the holding (OECD 2003b). Others, like Knickel et al. (2003) understand diversification as the sources of income based on simultaneous farm activities on the property, and go further to argue that diversification is a new form of agricultural production, but specifically oriented at non-food use, e.g. energy crops, fiber crops, medicinal herbs, agro-forestry for wood or biomass production, etc. These approaches differ with regard to the use or not of agricultural production to generate new sources of income, as well as with regard to the final use of the agricultural products. However, the approaches have something in common, namely that they describe diversification as related to economic activities in the farm and the use of resources from the property. However, not all researchers comply with this approach, since some economists and rural sociologists have explored the varied bases of on-farm and off-farm diversification (Bessant

2006), giving diversification the property to be executed through activities outside the farm. This use of the term “diversification” to describe economic activities outside the property is also common in the literature. Loyns and Kraut (1992), for example, describe “part-time farming” (i.e. pluriactivity) as “a particular form of diversification”. Démurger et al. (2010) regard off-farm diversification as an efficient mechanism for households to reduce income risks; and McNamara & Weiss (2005) studied on- and off-farm diversification in Austria, suggesting that they are related to farm and household characteristics

Rural production units

Rural production units are used in the rural development literature for the collection of structural and population data (FAO 2005). They can be classified in two main groups: agricultural holdings and households.

Agricultural Holding

Agricultural holdings are the production units used for the collection of structural data for agricultural activities. Agricultural holding refers to the “economic unit of agricultural production under single management comprising all livestock kept and all land used wholly or partly for agricultural production purposes, without regard to title, legal form, or size.” (FAO 2005). Usually, the location of a holding is identified by where the farm buildings and agricultural machinery are located. Often, the holder’s residence is used as the holding location, so it is ambiguous. Agricultural holding is the techno-economic unit of agricultural production (United Nations 2008).

Household

The concept of household is based on the arrangements made by persons, individually or in groups, for providing themselves with food and other essentials for living. A household is the production unit for collecting population data and may be constituted by one individual (one-person household) or by several persons living together, who make common provision for food and other essentials for living. They may be related or unrelated (United Nations 2008). Household can be defined more broadly than the nuclear family, i.e. more than one generation of adults and/or adult siblings can be included. This imprecision in the definition strongly influences the results of analysis regarding the share of labor income (OECD 2003a).

The sectoral and locational approach of rural income diversification

The sectoral approach of rural income diversification regards two possible economic activities of the household: agricultural or “farm” activities and nonagricultural or “nonfarm” activities.

The locational approach of rural income diversification has been commonly related to the analysis of nonfarm economic activities. Bessant (2006) explains how the term “pluriactivity” has evolved during the 20th century, and how its interpretation has changed along the time. He describes how institutions like the Dominion Bureau of Statistics from Canada, as well as many researchers, have made use of data resources (e.g. census and taxfiler information) regarding off-farm activities for

studies about pluriactivity. The paper uses as example the common use of the indicator “number of days of off-farm work” for pluriactivity analyses, and highlights how the terms “off-farm and “nonfarm” are sometimes used interchangeably in the literature. Janvry & Sadoulet (2001) have found that among off-farm income generation activities in the Mexican rural communities, the nonagricultural activities are far larger than the agricultural ones. McNamara & Weiss (2005) analyzed the relationship between on-farm enterprise diversification and off-farm labor allocation, being the latest focused on the non-farm income stabilization strategies.

Fundamentally, the locational approach of income diversification classifies the income diversification activities according to its location, i.e. if the economic activity is carried on inside or outside the production unit.

Farm activities

“Agriculture” or “farm” activities are a subset of primary activities (i.e. agriculture, mining and other extractive activities) of national accounting systems (Start 2001). Agricultural or farm activities are associated to activities that can be considered as normal for farm households (Haggblade et al. 2010) (Pal & Biswas 2011) (Escobal 2001), i.e. the cultivation of animals, plants and fungi for food.

Non-Farm activities

“Non-farm” or “non-agricultural” activities are all economic activities other than crop and livestock production (Haggblade et al. 1989).

Pluriactivity

The term pluriactivity is a very common concept used to describe how farmers and households behave in order to diversify their income. This term is the result of the evolution of the “Part-time farming” approach, which saw this phenomenon as the result of inefficient agriculture in the 1930’s (Bessant 2006). Between the 1930’s and 1950’s the concept changed to “Multiple job-holding”, and after many debates between the 1970’s and 1980’s changed to the expression “Pluriactivity”, that characterizes the phenomenon until nowadays (Gonçalves Dourado & Oliveira Jr. 2010).

Pluriactivity has been defined as the combination of agricultural and non-agricultural sources of income, being the latest through activities performed away of the farm by the farmer or members of the household (Durand and van Huylenbroeck 2003 in Błąd 2010). In the case that members of the household perform the non-agricultural sources of income in the farm, it must be understood as a combination of diversification and pluriactivity. Contradictory, the latest case is the only one understood by the EU-27 as diversification. Pluriactivity has also been called „Multiactivity“ (Graziano da Silva & Eduardo Del Grossi 2001).

Rural Non-Farm Employment

Other term commonly used for analyzing income diversification in rural regions is RNFE - Rural Non-Farm Employment; understood as employment of rural household members in the nonfarm sector and not depending on location, i.e. at home or away from home (Reardon et al. 2001).

The RNFE approach and its derived term RNFI - Rural Non-Farm Income, i.e. the income generated by RNFE, have highlighted the importance of the regional factor for the analysis of rural development. In this context, some researchers understand RNFI as income earned only in rural areas, while others understand RNFI as earnings from nonfarm employment anywhere (Barrett et al. 2001). Whether one or the other approach is more appropriate is difficult to know, especially under the ambiguity of the spatial definition of rural areas.

Sub-categorization of income activities

The research of income activities uses multiple sub-categorizations, amplifying the spectrum of approaches for further analysis, for example: crop production, livestock production, agricultural wage employment, non-agricultural wage employment (further disaggregated by industry), non-agricultural self-employment (further disaggregated by industry), transfer (divided in public and private), and others (Davis et al. 2010). In addition, Barret et al. (2001) mention also the two broad categories of the spatial (rural - countryside) categorization and subcategorization of the income generation activities in several researches. To the first broad category belong the “local” activities with two sub-categories: (a) at-home (on farm); and (b) local away-from-home, with subcategories of (i) countryside or strictly rural, (ii) nearby rural town, and (iii) intermediate city. The second category refers to activities “distant away-from-home” (or the ambiguous term, “migratory”), with subcategories: (a) domestic rural (e.g., inter-zone migration), (b) domestic urban (such as to a distant metropolitan area), and (c) foreign.

Diversification within the “New Rurality” perspective

Today’s rurality is partially characterized by the temporary movement of high-income urbanites into rural areas for weekend or summer stays, as well as for the permanent movement of lower income urban households into rural areas to build affordable homes. This “rural urbanization” demands the provision of personal services, leisure activities, as well as services linked to other economic activities (Graziano da Silva & Eduardo Del Grossi 2001). Incomes of farm households have been an important issue for rural development, but in recent years objectives related to the environment, sustainability, and food safety have also become important (OECD 2003a). This situation is considered as part of the “New Rurality”, a perspective that highlights the decreasing participation of agricultural employment as source of income in rural regions. Davis et al. (2010) contend that diversification and not specialization is the norm in the new rurality, where the largest share of income in rural space stems from off-farm activities. The “New Rurality” also emphasizes the increasingly difficulty to establish the limit between rural and urban, as well as the rising consciousness of preservation of the biodiversity and the protection of the identity and cultural heritage of rural communities (Romero Avendaño 2010). Contrary to the productivity-driven

approach of the “Green Revolution”, the “New Rurality” perspective highlights the importance of adopting sustainability practices over a merely focus on maximizing agricultural productivity. The adoption of sustainability practices generates externalities that improve the quality of life of rural communities, but that at the same time, could be the source of alternative income diversification strategies for farm households.

TOWARDS AN INTEGRATIVE APPROACH TO INCOME DIVERSIFICATION IN RURAL REGIONS

Diversification is assessed in the literature at the level of the holding, while pluriactivity is assessed at the level of the household (Błąd 2010). Both, diversification and pluriactivity approaches use to subdivide the analysis in sectoral and locational categorizations, according to the objective of the research. In this context, both approaches can be aggregated in two main common lines: the locational, i.e. the on-farm and the off-farm activities, and the sectoral, i.e. the farm and non-farm activities. Though the drivers of non-farm and off-farm income diversification activities have been widely researched, as well as their implications in poverty reduction in rural areas, researchers differ with regard to the conceptualization of the locational and sectoral lines of analysis, as well as with the classification of the corresponding activities.

The following definitions are intended to facilitate the integration of the different approaches to income diversification.

Farm household

Farm household is here understood as the farm-manager and/or other people who live with him in the same farm holding and share at meals or living accommodation. It may consist of the immediate family of the farm-manager and/or some other grouping of people working under his management. A farm household exercises the single management of a farm holding.

Rural income diversification activities

They must be understood in this paper, as economic activities carried on by any of the farm household members, in addition to the one agricultural activity traditionally executed on the farm. In this context, from a sectoral point of view, this paper considers two kinds of income diversification activities: conventional and alternative forms.

Conventional income diversification activities

They are all economic activities in addition to the one agricultural activity traditionally executed on the farm, concerned with cultivating land, raising crops, and feeding, breeding, and raising livestock (cattle, poultry, sheep, horses, fish, etc.) in a conventional way.

Alternative income diversification activities

They are all economic activities, other than conventional crop and livestock production, in addition to the one agricultural activity traditionally executed on the farm.

Regarding the location of the income diversification activities, they are considered in this paper as “on-farm holding” and “off-farm holding”.

Farm-holding

It is here understood as the rural economic unit of production, comprising resources (incl. human) and structure for agricultural and nonagricultural production, inside the geographic limits of the farm.

On-farm-holding income diversification activities

It must be here understood as all economic activities inside the farm area, using its resources (incl. human) and structure for agricultural and nonagricultural production.

Off-farm-holding income diversification activities

They are all economic activities developed outside the area of the farm holding, using its human resources for agricultural or nonagricultural production.

In this context, Figure 1 represents the four quadrants where income diversification activities can be graphically classified. The horizontal arrow represents the locational dimension of classification of an economic activity, while the vertical arrow represents the sectoral classification. Agricultural activities are taken as reference for the sectoral classification, because they keep being the main source of rural income (Davis et al. 2010).

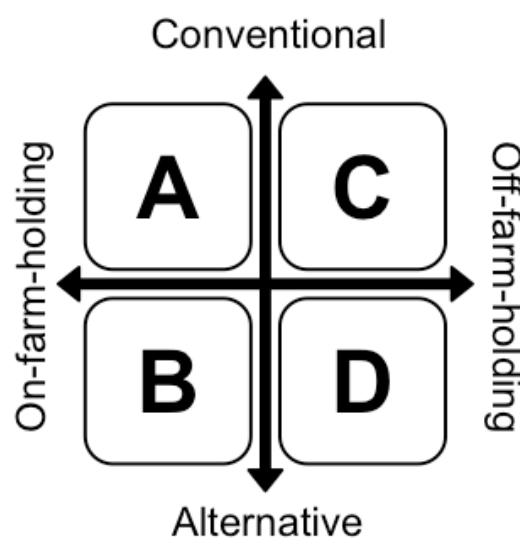


Figure 1: Locational and sectoral classification of rural income diversification activities.

Classification of rural income diversification activities in the matrix

Quadrant A

Conventional income diversification activities executed on-farm-holding are classified in quadrant A (i.e. all economic activities in addition to the one agricultural activity traditionally executed on the farm), concerned with cultivating land, raising crops for harvest or trees for timber, and feeding, breeding, and raising livestock (cattle, poultry, sheep, horses, fish, etc.).

Quadrant B

It corresponds to the nonconventional income diversification activities executed on the farm. These activities can be classified as follows:

Tourism: All economic activities in tourism (e.g. handicraft, rural tourism, agrotourism, educational tourism, sport and recreation activities, etc.), where the area, the buildings or other resources of the farm holding are used. Also accommodation services for tourists or other groups, like historical farms, farm hotels, rural hostels, etc.

Agroindustry: All economic activities involving the processing of a primary agricultural product to a value-added secondary product on the farm holding, regardless of whether the raw material is produced on the holding or bought from outside. This includes, roasting and milling coffee, processing meat, making cheese, wine production, etc. Sale of the farm products directly to consumers is included here, except if no processing at all of the product is taking place on the holding (for example milk sold directly to neighbors is not included, since no processing is required). Production of farm products for self-consumption only or the sale of a possible surplus of such products is not included (OECD 2003b).

Renewable energy production: Economic activities for producing renewable energy for the market (e.g. windmills, biogas plants) are considered here whereas renewable energy produced only for the holding's own use is not included here.

Payment for ecosystem services – PES: Payment offered to farmers or landowners in exchange for managing their land to provide some sort of ecological/environmental services falling under this category. The party supplying the environmental services normally holds the property rights over an environmental good that provides a flow of benefits to the demanding party in return for compensation (Nehren et al. 2012). There are different groups of PES, depending on their purpose: a) Cultural services: for recreation, aesthetic pleasure, spiritual fulfillment and ecotourism. b) Supporting services: for soil formation, nutrient cycling, and conservation of genetic diversity. c) Provisioning services: for fibers, food, raw materials for pharmaceuticals, construction materials, and water. d) Regulating services: for waste disposal, disease, climate, land degradation, pollination, floods, water quality, and drought (Becker Guedes & Seehusen 2011).

Renting of resources: Rental of resources that belong to the farm holding (e.g. areas for crops or pasture; buildings for stock, permanent living, or business; machinery, etc.) is considered here.

Organic products: This includes production and/or commercialization of certified organic products. The certification represents the service of a nonconventional production to the client, and permits the farmer a better retribution for his service.

Quadrant C

It includes all income diversification activities executed outside the farm, and related to conventional farm activities, i.e. cultivating land, raising crops for harvesting, or trees for producing timber as well as feeding, breeding, and raising livestock. Usually, it is the case of members of the households working under wage employment as freelancers or employees for other farms, or having their own agricultural enterprises in other farms.

Quadrant D

It comprises all income diversification activities executed outside the farm, and with no relation to conventional farm activities. The palette of options is really broad here, because it could be any wage-employment activity, or any entrepreneurial activity, anywhere outside the farm and different to agriculture.

DISCUSSION

Political institutions supporting rural development use to encourage rural populations to adopt good practices and sustainable production systems. The new rurality opens the possibility to farm holdings to execute economic activities derived from these adopted innovations, e.g. energy production, ecosystem services, agrotourism, among others.

The integrative approach described in this paper, could be the answer to the demands for less ambiguous and more standardized approaches to rural income diversification.

It could be useful as a "concept" for further empirical studies in rural development, as well as for further systematic empirical examination of the topic by different scientific communities.

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