COLOMBIAN RURAL YOUTH DECISION-MAKING PROCESS REGARDING MIGRATION, UNIVERSITY EDUCATION AND CAREERS

by

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To my mother and my father, your support made my dreams come true.

To my wife and my kids, you are my biggest motivation.

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To all my family, I am proud of you.

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GLOSSARY

RURAL: In Colombia, are municipalities with less than 25,000 inhabitants and densities lower than 100 inhabitants per squared kilometer (Departamento de Planeación Nacional, 2014).

ADULT: In the Colombian context, is a person older than 18 years old (Barceló, 2007).

YOUTH: For recommendation of the Colombian Rural Youth Network, in this study are persons between the ages of 14 and 33 years.

COMPROMISE: *"A process by which individuals sacrifice roles they see as more compatible with their self-concept in favor of those that are perceived to be more easily accessible"* (Gottfredson, 1981, p. 569).

CIRCUMSCRIPTION: *"A process by which individuals discard unacceptable options based on their perceived fit with ones developing self-concept"* (Gottfredson, 1981, p. 575).

IDEALISTIC ASPIRATIONS: *"Can be regarded as wishes comprising the value-oriented level of desired outcomes that are not limited by constraints on resources"* (Gottfredson, 1981, p. 548).

REALISTIC ASPIRATIONS: *"Career accessible alternatives that are adapted to changing situations and/or barriers"* (Gottfredson, 1981, p. 548).

SOCIAL BOUNDARIES: *"Are objectified forms of social differences manifested in unequal access to and unequal distribution of resources (material and nonmaterial) and social opportunities"* (Lamont & Molnár, 2002, p. 168).

MARGINALIZATION: *"A persistent unequal participation of social groups in developmental processes and the access to their benefits"* (Cortes, 1994, p. 10).

PRIMARY EDUCATION: For the Colombian system, this level corresponds to the first five grades in the school system (Ministerio de Educación Nacional, 2018).

SECONDARY EDUCATION: For the Colombian system, this level corresponds to the grades 6th to 9th in the school system (Ministerio de Educación Nacional, 2018).

MIDDLE EDUCATION: For the Colombian system, this level corresponds to the last two grades in the school system (10th and 11th grades) (Ministerio de Educación Nacional, 2018).

ABSTRACT

Three research studies were conducted to explore and explain the Colombian rural youth decision-making process regarding migration, university education and careers. The first study was a review of literature about Latin American rural youth. Forty-five peer-review articles that conducted in 13 Latin American countries, including Colombia, during the last 20 years were reviewed and analyzed. After conducting a systematic review, four main approaches of research were identified: (a) rural youth migration, (b) education and/or communication programs (e.g., rural extension), (c) rural youth expectations or futures perspectives, and (d) characterization of rural youth. Regarding methods, quantitative, qualitative, and mixed-method analyses were performed in these studies. Finally, main findings suggested that the rural context in these developing countries imposes socio-economic barriers for rural youth academic or professional development. Some authors also highlighted the importance of education or extension programs developed by local governments to empower Latin American rural youth.

The second study was a quantitative analysis that explored factors concerning the Colombian rural youth migration expectation using a multi-level approach (Level 1 = individual variables; Level 2 = family variables). Data came from 945 Colombian rural youth that responded to a national survey in 2016. Results showed that age, gender, and school grade were positively correlated to the migration expectation. Moreover, the family socioeconomic status was negatively correlated to the outcome. Family level variables explained 9% of the total migration expectation.

The third study explored and explained the Colombian rural youth perceptions about barriers they experienced during their career decision-making. This study used a convergent parallel mixed-method design. Participants of the quantitative phase were 155 Colombian youth that responded to a survey. On the other hand, the qualitative phase was made-up by five female and five male. These 10 people participated in an interview and wrote a short essay. All participants were members of the Colombian Rural Youth Network. Results showed that the career decision-making process for this Colombian occurred in a marginalized context, in which they did not have the same resources and/or tools to compete for university careers access with their urban peers.

As general conclusion of this dissertation, the Colombian rural context imposes restrictions for rural youth to pursue their career aspirations, which results in a push factor for youth to migrate to urban areas for career opportunities.

CHAPTER 1. INTRODUCTION

Colombian rural areas play an important role in the economic, environmental, and cultural development of the country. People living in these places provide urban areas with food and help conserve natural resources that are important in environmental sustainability. For example, Colombian rural areas produce 84% of the food that is consumed in Colombia. On the other hand, rural communities preserve cultural traditions associated to the way to dress, cook, eat, or speak native languages. These intangible goods are not only important for the rural people´s lifestyle, but also for the nation's history. In this scenario, rural youth emerge as a key element in the rural and national development. For instance, they could play the role of maintaining all the rural traditions and transmitting those to future generations. In addition, regarding agriculture, rural youth could produce the Colombian food during the next decades. As such, rural youth should be provided with good living conditions to work or study; otherwise, there could be migration issues and risks for preserving rural traditions and/or for sustaining Colombian food production.

Accordingly, this dissertation focused on the Colombian rural youth decision-making process regarding migration, university education and careers. Both migration and career decisions were analyzed from economic and/or sociological perspectives to explain some situations concerning these phenomena.

To provide some context of the Colombian rurality, this chapter presents the meaning of the concept of "rural or rurality" in Colombia, the main differences between Colombian rural and urban places, and some challenges that have been defined by the Colombian society

to support national rural development and the typical conditions youth experience in rural communities.

What does "Rural or Rurality" for the Colombian Context Mean?

These two concepts are commonly used by Colombian researchers and/or public policy institutions; however, in Colombia there is not a unique definition or meaning (Departamento de Planeación Nacional, 2014). The term rural is an object of a constant academic debate (González, 2011).

The word "rural" comes from the Latin word "rurālis," which means "relative to the countryside live and its labors" (Real Academia Española, 2014, definition 1). This generic definition has been the root of three different definitions in the Colombian context. First, for decades, while referring to rurality, people associated rurality to agricultural activities. This situation occurred because of the importance of the agriculture in the rural economy (Fernández et al., 2019). Second, because the first definition was not inclusive and did not recognize other economic, social, and cultural activities that are developed in the rural space, Colombian institutions have used demographic parameters to redefine the concept. Therefore, the National Planning Department defined rural as all those municipalities with less than 25,000 inhabitants and densities lower than 100 inhabitants per squared kilometer (Departamento de Planeación Nacional, 2014). From this definition, approximately 84% of the Colombian territory and 19% of the Colombian population are considered "rural." Finally, the third way to define rurality is based on sociological and anthropological elements. Accordingly, rurality is a construct of cultural, economic, political, and social elements. This definition is framed on human interactions, traditions, and values

that are specific for rural communities. For example, family and neighborhood relations in rural areas have different meanings than in urban places (González, 2011).

From a dialectical perspective, we are defining what is not rural as "urban." As such, it is important to define some economic, cultural, and social differences between these two places or contexts.

Economic Differences Between Rural and Urban Areas

The most important difference between rural and urban areas is related to the historical economic development in Colombia. Since 1970, Colombia started a population densification process known as "urbanization process" (Externado, 2007). Consequently, the national economic development in Colombia was oriented toward urban activities, such as industry, manufacturing, and banking services (The World Bank, 2008; Balcázar, 2003; Murad, 2003). This process reduced the importance of the rural economic activities in the Gross Domestic Product (GDP). As such, the contribution of agriculture, the main economic activity in rural areas, to the Colombian (GDP) dropped, from 25.3% in 1970 to 4.2% in 2019 (Departamento Administrativo Nacional de Estadística [DANE], 2020).

As result of this urbanization process, there is a gap between urban and rural people´s economic empowerment. Therefore, they do not have the same ability to succeed economically nor the power to make or act on economic and/or career decisions. For instance, while the 89% of the urban population is above the monetary poverty line, 54% in rural areas do not live in poverty (DANE, 2019). This difference has been also evidenced in the gap of the living conditions of rural and urban people. For example, 85% of urban households in Colombia have basic public services such as electricity, water, sewer, internet, and natural

gas compared to 41% for rural people. Regarding transportation networks, in 2012, less than 20% of rural roads were in optimal conditions for traveling from urban to rural areas, or among rural areas (Yepes & Quintero, 2013).

Regarding education, both the academic infrastructure and the academic performance of the rural people show the extent to which this inequality in economic development has created differences between rural and urban societies in Colombia. The National Education Ministry documented that the rural infrastructure does not provide rural students with the same facilities (e.g., labs), or services (e.g., internet connection) as urban institutions (Ministerio de Educación Nacional [MEN], 2018). Moreover, official statistics have shown that 70% of illiterate people in Colombia live in rural areas (DANE, 2019). When comparing academic performance using national and international standardized tests, rural students perform 13% lower than urban students (Organization for Economic Co-operation and Development [OECD], 2018; Viana-Barceló & Pinto-Prieto, 2018).

Because of the relevance of the economic differences between urban and rural students, Chapters 3 and 4 will follow in-depth discussions regarding this issue. Economic inequality was discussed as an element promoting rural youth migration and bounding rural students´ career decisions.

Cultural Differences

In addition to the population density and economic empowerment, some outstanding traditions differentiate rural from urban Colombian people. Rural areas have not experienced the combination of several Colombian traditions, nor the influence of international cultures through social media and interactions with different cultures. Moreover, the rural population

preserves some precolonial characteristics; for example, the music they listen, the clothes they wear, the food they prepare or eat, and the dialects they speak (Centro Económico Para América Latina [CEPAL], 2019). From a historical patrimonial perspective, these differences do not imply a problem itself, as it happens to the economic differences, but a cultural value of respecting and preserving traditions to strengthen the Colombian history, especially from a rural and agrarian perspective.

Social Issues

The impact of the historical internal conflict between the Colombian government and illegal armed groups that developed in Colombia between 1950 to 2017 is another important difference between rural and urban areas. Although the conflict impacted the entire country, the most negative events occurred in rural areas. Rural people were more affected by the conflict than those living in urban areas (Franco, 1998). For Colombian rural areas, this social issue resulted in human trauma. For instance, more than five million families were forced to leave their original regions, more than 200,000 civilians died because of the war, and 25,000 Colombian citizens disappeared (Centro Nacional de Memoria Histórica, 2015).

As observed, the internal conflict has played an important role in the Colombian rural development. Accordingly, issue of rural development is associated to Colombian rural youth decisions regarding migration and post-secondary careers, which is discussed and explained in Chapters 3 and 4.

What Are the Challenges Associated to the Rurality in Colombia?

The Colombian government and the illegal guerrillas (i.e., FARC) conducted the peace process during 2014 and 2017. As a result, an initiative defined as The Colombia's Rural Mission (In Spanish: Misión Para La Transformación del Campo) defined a roadmap for reducing the poverty and increasing the economic productivity in Colombian rural areas (Ocampo, 2014). The strategy included five components oriented toward the economic, environmental, and social sustainability, as follows:

- Reduce the urban-rural gaps by providing rural areas and their population with public goods and human rights (e.g., education, food, health, water, and sewer).
- Promote the productive inclusion by providing small farmers with material and non-material resources to increase their economic sustainability.
- Develop a competitive rurality based on the provision of rural goods to the agricultural sector (e.g., innovation, science, technology, markets information).
- Promote the environmentally sustainable development to preserve the Colombian natural resources (e.g., rivers, lakes, forestry) and preserve the biodiversity.
- Promote a structural institutional reform to support the rural development, allowing rural people to be engaged in policy formulation processes.

Since 2014, when the Colombia´s Rural Mission document was released, most of the Colombian rural initiatives were aligned to these recommendations. In addition, the peace deal signed by the Colombian government and the illegal guerrillas included a component to reduce the urban-rural gaps, especially in regions affected by the internal conflict (Presidencia de la República & FARC-EP, 2016).

Dissertation Content

This dissertation addresses topics related to the Colombian rural youth based on the previous general definitions and explanations about the Colombian rurality. For this study,

rural youth was defined as those Colombian citizens aged 14-33 that live in rural areas in Colombia. To address the topic, the dissertation presents three studies: Chapters 2, 3, and 4 (Figure 1).

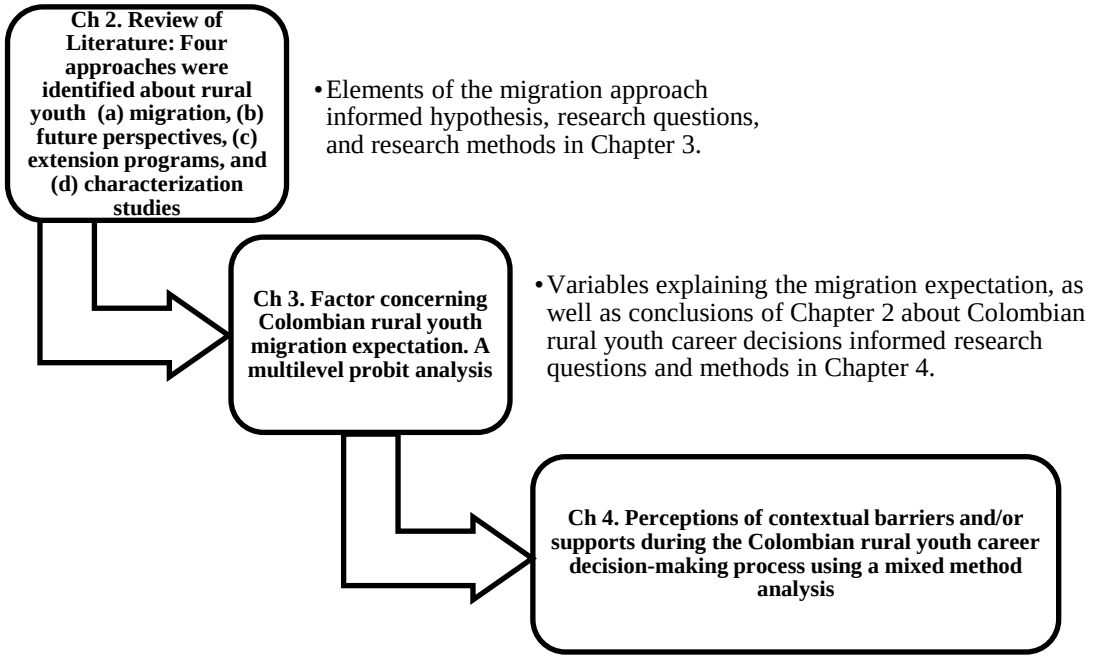

Figure 1. Sequence of the dissertation content

The first study presents a review of literature about research studies in Latin America, including Colombia (Chapter 2). This chapter shows research approaches related to rural youth that have been addressed by researchers in Latin America between 2001 to 2019. In addition, methods, methodologies, participants, and main findings of the studies included in the review were discussed and presented.

Second, based on one of the approaches identified during the review of literature, Chapter 3 presents a quantitative analysis of the Colombian rural youth migration expectation.

Research questions, hypotheses, and design were informed by findings of the Chapter 2 (Figure 1). This research study was a multi-level analysis, using both individual and family variables to explain the migration expectation.

Third, Chapter 4 is an empirical convergent parallel mixed-method study. The findings in Chapter 2 and 3 informed the research questions and design in Chapter 4 (Figure 1). This study was conducted with Colombian rural youth to study their perceptions regarding barriers and/or supports that were imposed by the rural context when they were school students and their decisions regarding postsecondary educational and/or occupational careers. For the quantitative phase, 155 Colombian rural youth responded to a survey. This information was analyzed using descriptive statistics, dimension reduction techniques, and linear regressions. On the other hand, the qualitative phase followed a narrative case study that was made-up by five females and five males. Research themes emerges after data were coded and analyzed. Finally, both quantitative and qualitative findings were triangulated following economic and sociological discussions.

Finally, Chapter 5 is a summary of cross-cutting themes based on the findings of the three studies (i.e., Chapters 2, 3 and 4). This part of the document discusses general implications for field-based practices and Colombian public policies and for networks and/or associations focused on rural youth programs. This chapter also presents general recommendations for future research to advance youth career decision-making in Colombia.

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CHAPTER 2. A REVIEW OF RESEARCH STUDIES OF RURAL YOUTH IN LATIN AMERICA AND CARIBBEAN DURING 2001-2019

Abstract

Forty-five research studies that focused on Latin America rural youth were analyzed for this review of literature. The studies were published in peer-reviewed research journals between 2001-2019. The analysis was divided into research approaches, methods, participants, and findings. Four approaches of research were identified: (a) rural youth migration, (b) education and/or communication, (c) rural youth expectations or future perspectives, and (d) rural youth characterization. Although traditional definitions of "youth" range from 14-25 years, a broad criterion to select participants was observed. Regarding methods, it was identified that quantitative, qualitative, and mixed-method analyses were conducted by authors; however, in some cases, elements such as the qualitative approach of inquiry, the statistical representativeness (for quantitative studies), and the triangulation strategy in mixed-method analysis were not mentioned or followed. In regards to the findings, the four research approaches coincided that Latin America rural contexts impose socio-economic barriers for the rural youth development; therefore, rural youth perspectives are more oriented toward urban activities. In addition, some authors highlighted the importance of education or extension programs developed by local governments to empower Latin American rural youth.

Keywords: rural education, rural migration, youth characterization, youth development, youth expectations

Introduction

Rural youth are a key element in the Latin American and Caribbean rural development. For example, they have the potential to increase the rural economic productivity by innovating or integrating modern techniques to traditional activities such as agriculture or mining (Food and Agricultural Organization [FAO], 2008). For Latin American countries, this fact implies opportunities and challenges. Regarding opportunities, these countries could promote new policies oriented toward rural youth to ensure food, fibers, or minerals production (FAO, 2014). On the other hand, regarding challenges, these countries must be able to engage rural youth to rural activities, avoiding migration. This challenge is aligned with the aging of the population phenomenon (Jurkowski, Krout, & Hash, 2014). According to the United Nations (2015), Latin American population aged 65 and above will increase up to 71% by 2030. Consequently, this demographic change will have social, economic, and cultural implications in rural areas.

Regarding literature, few researchers have analyzed the level of knowledge reached in this topic. For example, Kessler (2006) analyzed and discussed approaches related to youth identity, family and gender relations, educational problems, job opportunities, social and political participation, migrations, and native issues. The author defined his review as a "first mark of gaps" about this issue. Moreover, Guiskin (2019) reviewed the main findings about Latin American rural youth between 2008 and 2018. This study described and discussed demographic dynamics, socio-economic characterizations, priority groups, and topics of interest.

As observed, the authors of these two documents reviewed, discussed, and presented approaches of research about Latin American rural (e.g., education, migration, work).

Nonetheless, these studies did not address research elements such as methods and/or participants. In both cases, researchers suggested to increase the knowledge about rural youth in Latin America. This suggestion was aligned with some Latin American rural development institutions´ recommendations. For instance, the Food and Agricultural Organization and the Latin American Center of Rural Development recommended research, design, and/or evaluate initiatives focus on the empowerment of the Latin American rural youth.

This document aimed to fill this gap by presenting a systematic literature review. As an innovative element, this qualitative review is focused not only on approaches of research, but also on the way researchers have developed studies about this issue (e.g., participants, methods, and main findings). To do so, we present the description, analysis, and discussion about 45 articles that were published in peer-reviewed journals during 2001-2019.

Materials and Methods

Articles published in peer-reviewed journals during 2001-2019 served as the data source. Articles were searched using the Purdue University online library, Google-Scholar, SCOPUS, and the Scientific-Electronic-Library. These datasets were used based on the accessibility to download and analyze the articles (i.e., there were no monetary costs for using these datasets). Moreover, by using more than one source, we ensured a broader range of authors and articles. The following keywords, written in English, Spanish, and Portuguese, were used: "rural-youth," "rural-youth-initiatives," "Latin-America-and-Caribbean," "youth-expectations," "youth-motivations," and "rural-youth-migration." Criteria for selecting papers were: (a) published in an indexed journal, (b) approved after a peer-review

process, (c) addressed an issue about Latin-America rural youth, and (d) published during 2001-2019.

Once papers were selected, an Excel spreadsheet was used to organize the data. This database included variables such as year of publication, participants or human subjects, objectives, methods, results, conclusions, and keywords. All the papers were read entirely to obtain this information. Using the data in the spreadsheet, articles were manually coded by one researcher and categorized into four groups (Table 1). The analysis followed an inductive approach, and a unique category was applied to each article. Studies´ main purposes and/or titles were used to define the category to which each article was included.

Table 1. Definition of categories (approaches) addressed by articles

Category	**Definition**	**Example**
Rural Youth Migration	Processes of demographic migration from rural to urban areas or economic migration to non-agricultural rural activities.	"Expulsion and retention factors in the migration decision of rural youth in Manizales, Colombia"
Rural Youth Expectations and/or Future Perspectives	Youth´s perceptions about their own future.	"Pedagogy and virtual education in a rural extension program"
Education and Communication (Rural Extension)	Studies about education, Extension, or knowledge transfer processes to rural youth.	"Young rural people and postsecondary transitions: expectations and strategies for accessing higher education"
Rural Youth Characterization	Analysis or diagnosis of rural youth characteristics.	"Livelihoods of young people in a rural and indigenous space of Mexico"

To facilitate the reading of results and tables, codes were used to identify approaches: Migration = A; Expectations = B; Education and Communication = C; Characterizations =

D. Moreover, each group was analyzed based on methods (i.e., articles were divided into quantitative, qualitative, or mixed-method analysis), objectives, participants, results, findings, and implications. Finally, Creswell's (2007) definitions about qualitative approaches served as guide to the analyze those studies that used qualitative methods; definitions are : (a) Narrative research: *"understood as a spoken or written text giving an account of an event/action or series of events/actions, chronologically connected" (p. 86),* (b) Phenomenology: *"describes the meaning for several individuals of their lived experiences of a concept or a phenomenon, focusing on describing what all participants have in common as they experience a phenomenon" (p. 88),* (c) Grounded theory: *"the intent of this kind of study is to move beyond description and to generate or discover a theory, an abstract analytical schema of a process" (p. 90),* (d) Ethnography: *" is a design in which the researcher (based on observations) describes and interprets the shared and learned patterns of values, behaviors, beliefs, and language of a culture-sharing group" (p. 91),* and (e) Case Study: *" involves the study of an issue explored through one or more cases within a bounded system" (p. 92).*

Results and Discussion

After conducting the search, 45 articles from 13 Latin American countries met the selection criteria. These studies were conducted in the following contexts: Argentina = 2, Bolivia = 1, Brazil = 14, Chile = 2, Colombia = 12, Costa Rica = 1, Cuba = 2, Ecuador = 3, Mexico = 7, Peru = 2, Venezuela = 2, general Caribbean = 1, and general Latin America = 1. According to the research purpose and content, articles were grouped into four categories: (a) 12 articles were categorized as rural youth migration, (b) 15 articles were categorized as

education and/or communication (this approach is defined as “rural extension” in the Latin American context), (c) 13 articles were categorized as expectations or futures perspectives, and (d) five articles were categorized as characterization of rural youth. Each category presents studies´ purposes, locations, methods, participants, and relevant findings.

Rural Youth Migration Approach

Locations and Perspectives of Migration Studies

Twelve research studies addressed the migration approach from sociological and economic points of view. Studies were conducted in Mexico, Colombia, Brazil, Ecuador, and Chile (Table 2). Moreover, authors addressed three perspectives of migration: rural-urban migration (6-A; 7-A ; 8-A; 10-A), international migration from Mexico to the United States (3-A; 5-A), and internal migration among rural areas (2-A; 9-A; 12-A). Some researchers combined more than one perspective in three articles (1-A; 4-A;11-A).

Methods Used in Migration Studies

Studies followed qualitative (1-A; 2-A; 4-A; 8A), quantitative (3-A; 5A; 12A), and mixed-method analyses (6-A; 7-A; 9-A; 10-A). The article coded as 4-A followed a case study, as described by Creswell´s (2007). The three other qualitative analyses (1-A; 2-A; and 8-A) followed general descriptive analysis in which the method of inquiry did not match Creswell´s categories. With regard to the mixed-method analysis, studies 6-A; 7-A; and 9-A used concurrent designs, and the research study 10-A followed a sequential Quan-qual design. Even though these four documents presented and discussed both qualitative and qualitative

data, researchers did not present information about the data triangulation, or about the way they contrasted and/or compared quan-qual data.

Participants of Migration Studies

Researchers used different criterion to select participants; for example, age, academic grade, or participation in any specific activity such as agriculture. Five research studies focused on the academic grade; four of those collected data from secondary students (3-A; 4-A; 10-A; and 12-A) and one from undergraduate students (8-A). Moreover, two other research studies used the criterion of age; one selected participants aged 12-25 (6-A) and the other young people aged 14-25 (5-A). Finally, five research studies did not bound the selection criteria to age or any other parameter. The authors of five articles discussed rural youth migration from a general perspective (1-A; 2-A; 7-A; 9-A; and 11-A).

Generalizability of Migration Studies

With regard to the geographic implications of these research studies, two articles had general-country orientation. The study coded as 11-A presented a general discussion about rural youth migration in Colombia, while the 1-A discussed the same issue for Mexico. On the other hand, the other 10 research studies had territorial orientation, in which data collection were conducted in one specific region (e.g., municipality, province, or department).

Principal Findings of Migration Studies

Most of the authors coincide that the rural youth migration process occurs due to a lack of factors of agricultural production, such as capital, land, and labor (3-A; 4-A; 6-A; 9-

A; 10-A; 11-A; 12-A). These researchers emphasized that agriculture, as the main economic activity in rural areas, does not provide enough income for youth to increase their living standards. Thus, the decision to live in rural areas is associated to poverty and marginalization. On the other hand, another research study concluded that an important factor promoting youth migration from rural areas was searching for educational opportunities (8-A); due to low offer of higher education in rural areas, youth migrate to urban areas. In addition, some authors highlighted that migration as an expected effect of the demographic transitions (2-A; 7-A), in which youth's identity seems to be built on the imaginary of the urban areas. This demographic change has different effects depending on characteristics such as gender and/or ethnicity. For instance, for ethnic rural populations, the migration process implies a creation of urban ethnic settlements. These settlements could be defined as "ethnicities of displacement" (1-A).

Table 2. Main Components of the Articles Focused on Rural Youth Migration

Code	Author(s) (year)	Country	Participants	Method	Purpose	Relevant Findings
1-A	Urteaga (2008)	Mexico	Mexican indigenous	Qualitative	"Conduct an ethnographic review about indigenous peoples between 1950-2000"	"Being young, Indian, or a migrant are border positions to the extent that the actors' senses on these three terms are being built within a new area and outside the borders of the worlds that until recently seemed fixed and immutable, and which still serve as important references in the construction of their ways of life"
2-A	Castro (2016)	Colombia	Youth from the Coffee Cultural Landscape	Qualitative	"Describe attributes of the internal migration patterns in the municipalities located in the coffee growing region of Colombian"	"Trends associated with the population rebuilding phenomenon are: (a) migration can languish the demographic structure, and (b) the effect of urban concentration and its conurbations in major cities is reinforced"
3-A	Amavizca et al. (2017)	Mexico	Secondary students	Quantitative	"Analyze the migration processes of adolescent population"	"There are differences in the personality traits between those who wish to migrate and those who wish to remain in their countries of origin"
4-A	Méndez (2016)	Colombia	Secondary students and recently graduated youngsters	Qualitative	"Identify the retention and expulsion factors of young people, members of farming families, in the rural area of Manizales"	"Regardless of the decision, who decides to stay, or leave should do in possession of several tools that will allow a dignified life project either in the country or the city"
5-A	Mercado-Salgado and Nava-Rogel (2013)	Mexico	Youngsters aged between 15 and 24	Quantitative	"Describe the quality of life and expectations of U.S. migration of young rural northeastern state"	"By improving the quality of life of rural youth population, their migration expectations would be lower and would increase gender equality"
6-A	Mendonça, Ribeiro, Galizoni, and Augusto (2013)	Brazil	Family farmers from Alto Jequitinhonha, Minas Gerais	Mixed	"Analyze the emigration trajectories of two generations of farmers"	"Compared to previous generations, fewer young people remain in rural areas. But this does not endanger the reproduction of the family unit, as successors continue to exist, although they tend to take over the productive unit with more age and education than previous generation"

Table 2 continued

Code	Author(s) (year)	Country	Participants	Method	Objective	*Relevant Findings*
7-A	Jurado and Tobasura (2012)	Colombia	Youngsters from the Colombian Coffee Growing Region	Mixed	*"Understand the way in which demographic, migratory and productive transitions contribute to the construction of young identities and their life projects in rural environments of the Colombian coffee region"*	*"Although rural environments tend to be highly valued as a desirable life spaces, the identity of rural young people seems to be built on the imagery of the city"*
8-A	Zago (2016)	Brazil	Undergraduate students from the Santa Catarina region	Qualitative	*"Social transformations in rural areas, demand for higher education, and socio-professional destinations of children from small farms"*	*"Migration is supported by the limited extent of land for children wishing to stay in agriculture, low financial income, and adverse working conditions"*
9-A	Enríquez (2017)	Ecuador	Youth from 3 regions	Mixed	*"Explore the working conditions of agriculture as the main determinants of rural migration in three regions"*	*"Precarious working conditions, low economic income, and labor exploitation in agriculture are the main causes for migration and the abandonment of agriculture"*
10-A	Vásquez and Vallejos (2014)	Chile	Secondary students	Mixed.	*"Analyze territorial mobility processes experienced by rural youth"*	*"Youth perceived that is not necessary to migrate to have a good living standard. However, employment opportunities for young people are limited in their local territories; most of the employment is related to agriculture"*
11-A	Plazas (2011)	Colombia	Colombian youth	Qualitative	*"Describe rural migration processes in Colombia"*	*"Causes of migration are the crisis in the sector represented in land, poverty, violence, education and job opportunities. These situations have led young people to see in illicit crops and domestic service the best option for economic independence"*

Table 2 continued

Code	Author(s) (year)	Country	Participants	Method	Objective	*Relevant Findings*
12-A	Eche (2018)	Ecuador	Secondary students	Quantitative	*"Analyze migration and generational renewal in the indigenous family farming as part of the "desagrarization" process"*	*"Problems such as migration, the change of economic activity, and the scarce generational renewal demonstrate the existence of a "desagrarization" in the indigenous family agriculture, which lead to demographic, economic and labor changes"*

Education and/or Communication (Rural Extension)

Locations and Perspectives of Rural Extension Studies

Fifteen articles addressed this research approach (Table 3). These studies were conducted in Colombia, Venezuela, Mexico, Brazil, Bolivia, and Chile. An additional research study focused on Latin-American youth, in general. Regarding the general purpose of these studies, the main topics were: impact relation between work and education (1-B; 9-B; 15-B), entrepreneurship school projects for rural students (2-B; 7-B), students or teachers´ traits, such as, self-management, motivation, or aspirations (3-B; 11-B), general discussions and/or analysis about rural education policies (5-B; 8-B), students´ barriers regarding their future (4-B; 6-B; 14-B), virtual education and social networks (12-B; 13-B), and rethinking of education concepts for a new rurality. That is, switching traditional concepts of education for alternative training from school and local rural communities (10-B).

Methods Used in Rural Extension Studies

Eleven out of 15 articles were qualitative analysis (1-B; 2-B; 3-B; 4-B; 5-B; 6-B; 8-B; 9-B; 12-B; 13-B; 14-B). As such, six studies were case studies (1-B; 4-B; 6-B; 9-B; 12-B; 13-B), two were ethnographies (2-B; 14-B), and one was a phenomenology (3-B). Those that reported ethnography as a methodological approach, conducted participant interviews; this fact suggests that these research studies were not aligned with recommendations described by Jones, Torres, and Arminio (2013) for this kind of qualitative approach. Jones described the ethnography analysis as an observation-based study. Regarding other qualitative approaches, the research coded 6-B addressed a hermeneutic critique (Simpson, 2021) about the new rurality and education in Latin America. Moreover, studies 8-B and 11-B followed descriptive analysis about policies of

access to higher education and motivations of smallholder contemporary rural youth, respectively. With regard to studies that followed mixed-method analysis (7-B, 10-B, and 11- B), they did not report neither the type of design (e.g., concurrent or sequential) nor qualitative and qualitative data triangulation. Finally, one study (15-B) conducted a quantitative analysis using descriptive statistics.

Participants of Rural Extension Studies

Research participants were selected depending on the purpose of each study. That is, articles coded as 1-B, 2-B, 7-B, 10-B, 11-B, and 14-B only studied rural school students. Whereas the research study 3-B collected data from rural school´s teachers. In contrast, some other articles included more than one kind of participants. For example, research studies 4-B, 9-B, and 10-B included not only students, but also households and/or school´s teachers for collecting data. On the other hand, research studies 6-B, 8-B, 13-B, and 15-B used age as criterion; these articles did not limit the participants' selection to any education institution.

Table 3. Main Components of the Articles Focused on Education and/or Communication

Code	Author(s) (year)	Country	Participants	Method	Purpose	Relevant Findings
1-B	Serrano, Serrano, Mármol, and Rivera (2015)	Colombia	Rural school students	Qualitative	*"Study the negative effect of child labor on the academic performance of the adolescents involved in the family´s production chain in rural communities and remark the student´s perception of the added value provided by education"*	*"There is a lack of motivation in some of the students surveyed. This fact is reinforced by the lack of discipline in the household to formulate a life project that generates expectations for the future"*
2-B	Cifuentes and Rico (2016)	Colombia	Rural high school students	Qualitative	*"Characterize the social representations of rural youth against productive educational projects and entrepreneurship in the context of the new rurality"*	*"Findings evidence the way youth conceive productive pedagogical projects, from the perspective of identity, territoriality, productivity and education, and how they recognize entrepreneurship as attitude of excellence, creation of a new project and aspiration for a better future"*
3-B	García, (2014)	Venezuela	6 rural teachers	Qualitative	*"Analyze the academic self-management through the strategic planning in rural schools"*	*"Factors affecting self-management are the teaching initiative, leadership or management, working capital or investment, land availability, strategic planning, zonal support, climate, weather, community participation, demand, assessment of products, corresponding permits, provision of equipment and tools, and technical assistance"*
4-B	Hernández and Raczynski (2014)	Chile	Rural students, students´ parents and teachers	Qualitative	*"Analyze the transition to secondary education and the educational trajectories of students in rural localities"*	*"Students have high aspirations and a favorable disposition towards secondary education. However, factors such as the lack of financial resources, the poor support and orientations from schools during the transition, the deficit of information handled by students and their families as barriers to achieve the desire".*
5-B	Camacho et al. (2011)	Latin America	ND	Qualitative	*"Analyze some of the principal curriculum contents, which should be taken into consideration for plans and training for rural teachers"*	Nine challenges were identified (because of the length, these challenges are not described in the table)

Table 3 continued

Code	Authors (year)	Country	Participants	Method	Purpose	Relevant Findings
6-B	Silva (2005)	Brazil	Rural youth between 15 and 25 years	Qualitative	*"Describe projects intending to diminish drop-out and illiteracy rates"*	*"There was a combination of the "anticipation of sexuality, work and emergence of needs" that mark the "present moment" for youth. Young people leave school because they often find themselves in a process of repetition, either because they have to migrate to complete family income; abandon it temporarily to assist parents in planting when the rainy season comes; or because their school does not offer them prospects for a professional future"*
7-B	Panciera, Jacinto, and De-Oliveira (2007)	Brazil	23 rural students	Mixed	*"Describe the professional projects of university students who live in rural area"*	*"Most of the young university students in the studied area (75%) live in rural communities, but intend to work, study, and live-in urban areas in the future"*
8-B	Redin (2017)	Brazil	Rural youth	Qualitative	*"Analyze educational policies of access to higher education, which were introduced in Brazil, in particular the program "Universidade para Todos" (Prouni) and its relations with rural youth, that is an economic disadvantage"*	*"The Prouni program provided an opportunity to the rural youth attend higher education in private institutions; however, the majority of rural youth remains in a marginal condition, mainly by the cultural capital inherited from their peasant condition in which habits of reading, access to books and dedication to studies are in a duel with the work in the fields"*
9-B	Punch (2004)	Bolivia	Households and school children aged 8 to 14	Qualitative	*"Indicate the ways in which the structural constraints of primary education impact upon young people's school-to-work transition".*	*"Although many children enjoy their experience at school and appreciate the opportunity to gain literacy and numeracy skills, formal education is unlikely to increase their future livelihood options"*
10-B	Ramos (2016)	Colombia	A rural school	Mixed.	*"Present a formal stance to rethink and transform teaching practices, changing traditional concepts of education and opening new alternative training from school and local rural communities"*	*"Migrant populations of coffee growers prevail. These types of day laborers, as well as their families, have some knowledge for being recognized and valued. This lack of recognition is made invisible by economic hegemony and the need to continue existing, ignoring the potential of values for being transmitted to their generations to come"*

Table 3 continued

Code	Author(s) (year)	Country	Participants	Method	Purpose	Relevant Findings
11-B	Meza-Jiménez, García-Barrios, Saldívar-Moreno and Vera-Noriega (2016)	Mexico	46 teens from rural school	Mixed	*"Identify and reflect on the opinions, actions, and motivations of 14 to 17 years old in an area of the Sepultura Biosphere Reserve in Chiapas, to use agricultural and natural patrimony PAN in the future"*	*"The study allowed a) identify at least four discourses of the teens regarding the use of their PAN, and b) reveal to the teens the preferences for land use, levels of diversification and intensification, and their disposition toward behaviors of dominance/subordination, competition, cooperation, coordination, equity, and solidarity that emerge from their decision-making regarding PAN"*
12-B	Parra and Mendez (2005)	Colombia	Agricultural extensionists	Qualitative	*"Seek alternative models for university extension where pedagogy promotes developing professional competency"*	*"Virtual communication represents an instrument for establishing a new social relationship; the university-region relationship becomes strengthened, giving it greater continuity and quality"*
13-B	Lima and Santos (2013)	Brazil	Youngsters aged 17-26	Qualitative	*"Understand how youth, subject to the contingent condition of access to material and symbolic, use a proposal that defend the local development via communication strategies on a global social network"*	*"Youth are embedded in dynamics of social networks, but the technological mediations are not redemptive for the formation of international collectives"*
14-B	Alves and Dayrell (2017)	Brazil	High school students	Qualitative	*"Discuss some aspects of the educational process of rural students"*	*"Reaching high school was a great achievement for students with a family history of low educational level. However, the dream to go beyond come across frustrations such as poor learning conditions in rural areas, meaninglessness of the curriculum, which is inconsistent with the reality they live in"*
15-B	Santos, (2017)	Brazil	Young people aged 15 to 29 living in the countryside	Quantitative	*"Explore connections between the different types and stages of labor integration and the educational conditions of the subjects"*	*"There are linkages between the forms of labor integration, the age in which it occurs, and the years of studies gathered by people living in the countryside"*

Principal Findings of Rural Extension Studies

Studies that focused on the relationships between work and education concluded that there could be discouragement and lack of motivation because absence of family discipline in rural households. This situation avoids rural youth to generate expectations through the formulation of a life project (1-B). In addition, although many children enjoy and appreciate their experience at school, formal education is unlikely to increase their future livelihood options (9-B). Moreover, other results suggest a positive correlation between the forms of labor integration and the years of studies gathered by rural youth (15-B).

Research studies focused on school´s projects for rural students (i.e., entrepreneurship) concluded that participants perceive entrepreneurship projects as the creation of a new project and aspiration for a better future (2-B). In most of the cases, this life project and their future are mainly oriented toward urban activities (7-B).

Documents focused on students or teachers´ traits (i.e., self-management, motivation, or aspirations) identified that educational socio-environmental games are tools that promote students and teacher´s motivations toward agricultural and natural patrimony topics (11-B). Moreover, factors such as teaching initiative, leadership or management, working capital or investment, land availability, and strategic planning were associated to rural teachers´ self-management (3-B). In the same way, papers related to virtual education and social networks concluded that rural youth are embedded in social networks (13-B) and these tools represent an instrument for establishing social relationships (12-B).

Researchers who studied rural students´ barriers found that factors such as, low family incomes or poverty (4-B; 6-B), poor support from their schools (4-B), and/or low quality or decontextualized education (4-B; 6-B; 14-B), do not allow them to reach their

goals or dreams. Finally, a research study that focused on rethinking of education concepts for the new rurality (10-B), concluded that school achievement indicators with agricultural empowerment, promote interdisciplinary activities for rural students, helping them to understand local issues from different perspectives.

Rural Youth´s Expectations or Futures Perspectives

Locations and Perspectives of Youth´s Expectations Studies

Thirteen articles followed topics related to rural youth perspectives and/or expectations (Table 4). These articles addressed this approach from three sub-categories: (a) General factors about rural youth expectations and perspectives (1-C, 5-C, 6-C, 7-C, 9-C, 12-C), (b) the relation between agriculture activities and/or initiatives and the rural youth´s perspectives. These documents emphasized how do participants perceive agricultural activities as a career alternative for their future (2-C, 3-C, 4-C, 8-C, 10-C, 13-C), and (c) factors related to rural the youth´s civic engagement, or how do participants are actively involved in social activities that concern to their communities (9-C). Research studies were conducted in Peru, Argentina, Brazil, Colombia, Cuba, and Mexico. The document coded as 11-C followed a general discussion about the Caribbean rural youth.

Methods Used in Youth´s Expectations Studies

Eleven articles conducted a qualitative analysis. Among them, three studies reported ethnographic elements during data collection (e.g., observations and/or interactions) (1-C; 10-C; 12-C). As such, studies 10-C and 12-C combined ethnographic observations with other methodological techniques, such as interviews. Regarding the study 1-C, the researchers defined it as an ethnography; however, it was limited to interviews for data collection and/or analysis. As it was discussed before, this method is

not aligned with ethnography recommendations, as defined by Jones, Torres, and Arminio (2013). Furthermore, studies 3-C and 4-C used cases studies analyses, and 6-C a grounded theory. Finally, five documents, which followed a general qualitative analysis, were not aligned with Creswell´s definitions. Regarding quantitative analysis, the document 2-C conducted logistic regressions to analyze general factors concerning rural youth development. This document collected data from a random sample (N = 400). Among all studies discussed in our paper, this is the second study that used a probabilistic sampling. Compared to other strategies, this kind of sampling allows researchers to generalize results and identify sociodemographic differences (Bornstein et al., 2013). Finally, the research study 9-C was a mixed-method analysis; however, the authors did not mention neither the type of design nor the way to triangulate qualitative and quantitative data.

Participants of Youth´s Expectations Studies

Along with the condition of being rural youth (12-29 years old), some studies used other criteria to define participants. Research studies 3-C, 4-C, and 5-C were conducted with families belonging to rural settlement or cooperatives. In addition, studies 8-C and 13-C were focused on young farmers. Moreover, the study 6-C defined participants based on the gender condition, so only females were included in the study. Among all the papers included in our analysis, this is the only document focused on rural youth females. According to Díaz and Fernández (2017), given the gap of opportunities and barriers between male and female youth in Latin America, it is necessary to conduct studies to investigate this issue. Finally, research study 1-C was conducted with rural youth that finished the secondary school a year before the study was conducted.

Generalizability of Youth´s Expectations Studies

According to the scope of each study, research results can be generalized in three levels. First, study 11-C had a regional-continental analysis; in which discussion and/or findings are oriented toward Latin American policies. Second, research studies 2-C and 9-C have analysis and discussions with national orientation (i.e., Argentina and Ecuador, respectively). Finally, other studies were oriented toward youth in a specific local community (e.g., province, settlement, municipality).

Principal Findings of Youth´s Expectations Studies

In general terms, research studies that focused on rural youth´s expectations concluded that there are multiple desires in youth´s life. Thus, projects were planned from different ways with the objective of "being someone" (7-C). In some situations, these projects implied the destabilization of traditional subjectivities and/or practices established in their communities (e.g., agricultural activities) (12-C). In addition, rural academic institutions play an important role on the construction of rural youth´s vocational interests (6-C). Studies also found that rural youth face economic, cultural, and educational constraints related to their career-decision making process (1-C; 6-C). For example, they were commonly marginalized because of work structures (13-C). Regarding family influences, there was a strong relation between those and youth´s expectations. Thus, rural young people were willing to continue their family activities, which were mainly oriented toward agricultural practices (3-C; 4-C; 5-C). Despite this desire, limited opportunities of work or low incomes forced youth to leave their family property or their original career plan (5-C). Finally, regarding the relation between agricultural initiatives or programs, and youth´s perspectives, belonging to cooperatives, settlements, or families of farmers increased the willingness of rural youth to pursue agricultural activities in the future (2-C; 8-C; 10-C).

Table 4. Main Components of the Articles Focused on Expectations or Futures Perspectives

Code	Author(s) (year)	Country	Participants	Method	Purpose	Relevant Findings
1-C	Villegas (2016)	Peru	Young people who finished secondary school the previous year	Qualitative	*"Analyze the young people's expectations and strategies to develop their life projects"*	*"Expectations and educational strategies are mediated by a complex combination of economic, cultural, and educational factors that constrain youth transition".*
2-C	Sili, Fachelli, and Meiller (2017)	Argentina	400 young people from Argentina	Quantitative	*"Analyze the factors that influence the rural youth engagement in agricultural activities"*	*"Belonging to farming families and studies related to agricultural activity are key factors that allow youth to settle in rural areas and engage in agriculture"*
3-C	Boessio and Doula (2016)	Brazil	Rural families that belong to an agriculture cooperative	Qualitative	*"Investigate the perception of rural young children of families associated to an agricultural cooperative on encouraging institutions for their stay in agriculture"*	*"Youth is interested in staying in rural and family activity. Compared to the family stimulus, the stimulation of cooperative is less"*
4-C	Lopes and Carvalho (2016)	Brazil	Youth from a rural settlement organized by Landless Rural Workers Movement in Brazil	Qualitative	*"Discuss the (re)construction of rural youth life projects, based on a case study of a settlement project organized by the Landless Rural Workers Movement"*	*"The activities developed and oriented towards the settlement itself strengthen the relationship of the settler with the space in which he lives. Despite living in the countryside of a large city, rural youth have a strong connection with the countryside"*
5-C	Costa and Ralisch (2013)	Brazil	27 young people from a rural settlement in Brazil.	Qualitative	*"Know desires, future perspectives and the reality experienced by the young residents of the rural settlement"*	*"Participants have great interest in continuing living and working in the batches with their parents, but the limitation of the family earnings in agricultural activities and the lack of their own income force young people to seek new opportunities"*

Table 4 continued

Code	Authors (year)	Country	Participants	Method	Purpose	Relevant Findings
6-C	Pizzinato, Petracco, Hamann, Cé, and Rosa (2017)	Brazil	48 rural women from countryside areas in Brazil	Qualitative	*"Promote reflections about the education and future perspectives of young rural women living in different cities in the countryside of Rio Grande do Sul"*	*"The school has a function beyond formal learning, consisting of a space of leisure and coexistence, of construction of identifications and also of projection for the future beyond the professional field; however, also evidences the lack of a work of particularized orientation to those youths"*
7-C	Alves and Dayrell (2015)	Brazil	A group of young people from a rural municipality of Minas Gerais state	Qualitative	*"Analyze the category life projects of a group of young people from a rural municipality of Minas Gerais state and reflecting about the importance of this category to the contemporary discussion on youth"*	*"Young people had different ways of organizing their life projects, most of them are related to the desire to be someone in life"*
8-C	Diez (2013)	Argentina	Young farmers	Qualitative	*"Understand life experiences concerning the transition to adulthood of young producers"*	*"Three important milestones present in the process of transition to adult life for young producers were observed: the entry into the world of horticultural work, secondary education and, finally, access to property"*
9-C	Schmitt (2010)	Ecuador	Citizens from rural communities in Ecuador	Mixed	*"Analyze socioeconomic, political, and cultural sources of civic engagement"*	*"Volunteering strongly depends on the cultural tradition. Additionally, a pure application of the theoretical assumptions and operationalization from the OECD–world is misleading, when analyzing social processes in developing countries"*
10-C	Hernández, Tielves, and González (2018)	Cuba	Rural youth from Cuba	Qualitative	*"Propose a plan of actions that encourages the permanence of youth in the rural environment, through their integration into cooperatives of agricultural production in contribution to the satisfaction of their needs and the improvement of their quality of life"*	*"Agricultural cooperatives play an important role in the participation of young people in local development"*

Table 4 continued

Code	Authors (year)	Country	Participants	Method	Purpose	Relevant Findings
11-C	Webster, Ganpat, and Chester (2013)	Caribbean region	General analysis	Qualitative	*"Offer a model of promoting youth development in the Caribbean through agriculture investment"*	*"It is necessary to promote agriculture as an alternative for the rural youth career development. Experiments in some countries are a good starting point but need to be enhanced through the analysis of worldwide experiences, and incorporate Caribbean social nuances and culture"*
12-C	Aquino-Moreschi and Contreras-Pastrana (2016)	Mexico	Young people from Oaxaca, Mexico	Qualitative	*"Analyze how young people construct and experience youth in different communities in the North Sierra of Oaxaca"*	*"Youth have inherited the struggles of their predecessors and generally maintain a strong commitment to their communities. The results also propose other ways to be young that destabilize subjectivities and/or strong community engagement, they are considering other ways of being young that destabilizing subjectivities and practices established in their communities"*
13-C	Silva and Cantillo (2009)	Colombia	Farmers from Boyacá, Colombia	Qualitative	*"Explore dynamics of rural youth in a context where they are forced to exert a productive role, even when there are no conditions to exert it"*	*"Youth simultaneously faces disarticulation of the labor structures of the rural sector and barriers of their insertion to work within other scenarios. In the midst of uncertainty, the illicit economy is one of the closest exits to ensure an economic future. In other cases, youth wait and seeks a moment of luck to be able to integrate into a stable social role"*

Characterization and/or Diagnosis of Rural Youth

Locations and Perspectives of Characterization Studies

Five research studies characterized and/or diagnosed rural youth´s socioeconomic conditions (Table 5). These studies were conducted in Cuba (1-D), Mexico (2-D), Chile (3-D), Peru (4-D), and Colombia (5-D). Main topics addressed by these studies were: (a) Rural youth socio-political, economic, and ethnicity identity (1-D and 4-D), and (b) diagnosis of rural youth challenges and potentials (2-D, 3-D). Both perspectives were addressed by study 5-D.

Methods Used in Characterization Studies

All studies were qualitative analyses. Two of them reported approaches that matched the types of studies reported by Creswell (2007). The study coded as 2-D followed a case study, in which the "case" was made up by rural youth indigenous from a community in Chiapas, Mexico. Moreover, the study coded as 4-D reported an ethnography as approach of inquiry; however, because interviews were developed to collect data, its method could match with a different approach, as suggested Creswell (2007). Finally, studies coded as 1-D, 3-D, and 5-D used descriptive qualitative analyses.

Participants of Characterization Studies

Studies coded as 1-D, 3-D, and 5-D addressed a broad national analysis for Cuban, Colombian, and Chilean rural youth, respectively; therefore, no primary data were collected. On the other hand, the two other studies supported their analysis on data collected from rural youth, as follows: (a) the study coded as 2-D collected data from Mexican rural youth indigenous (the study does not report the total number of

participants); and, (b) the study coded as 4-D along with the ethnographic analysis conducted in a rural community in Peru, collected individual data from 18 rural youth.

Principal Findings of Characterization Studies

Regarding studies focused on the rural youth identity, authors concluded that the concept of "rural youth" transcends a definition based on age and context, and is closely related to youth participation in economic, political, and social activities in rural contexts (5-D); nonetheless, it was also suggested that this participation is underdeveloped, so youth experience limits to become part of rural communities (2-D, 4-D). Finally, regarding the gender gap, studies concluded that being female in rural contexts supposes a disadvantage for social, economic, or political participation (1-D). On the other hand, those studies focused on the diagnosis of rural youth challenges and potentials concluded that rural youth have the potential to participate not only in agricultural labors, but also in socio-political and economic activities (e.g., public administration) (2-D). Rural youth must be empowered and supported to take advantage of socio-political and economic activities (3-D).

Table 5. Main Components of the Articles Focused on Rural Youth Characterization

Code	Author(s) (year)	Country	Participants	Method	Purpose	Relevant Findings
1-D	Rodríguez (2017)	Cuba	Cuban rural youth (general)	Qualitative	*"Classify the youth of Cuba's countryside in terms of their sociopolitical participation, employment, gender and ethnicity"*	*"Rural youth political participation is underdeveloped. Moreover, rural economic activities are the main opportunity for rural youth employment. Finally, the national gender gap is one of the most important issues to work on"*
2-D	(Juárez et al., 2011)	Mexico	Youth indigenous from Chiapas, Mexico	Qualitative	*"Know the direction of reproduction strategies of young people to current changes in society, culture and the economy"*	*"Lifestyles of the younger generation are different to that of their parents. Moreover, reproduction strategies of new generations are directed towards agricultural, labor and pluri-active strategies"*
3-D	(Duhart, 2004)	Chile	Chilean rural youth (general)	Qualitative	*"Diagnose the potentials and challenges of rural youth"*	*"To address rural youth challenges, it is necessary to empower this population, promoting their participation in economic, political, and social activities"*
4-D	Rodríguez (2009)	Peru	Rural youth from Chaquira, Perú	Qualitative	*"Analyze and think about social space of rural youth as spaces that enable or hinder the formation of participatory citizen".*	*"Rural youth establish connections with the school based on what they conceive as social value. The school provides them with values, content, and skills to have greater possibilities of future social insertion. Moreover, there are economic and cultural conditions that limit the full participation of young people in their village"*
5-D	Osorio (2005)	Colombia	Rural youth from several regions in Colombia	Qualitative	*"Explore some practices of collective action carried out for rural young people in the midst of adverse conditions"*	*"Being rural in Colombia transcends parameters of age and context. Being rural youth requires collective to have a "social position" to be visible"*

Discussion and Conclusions

This next section discusses elements identified through the review of the 45 research studies. To maintain the same sequence of the results section, the discussion was divided into four sections: (a) rural youth research topics, (b) research methods, (c) participants, and (d) themes of findings.

Rural Youth Research Topics

We concluded that researchers followed relevant topics that have been suggested by academic and rural development institutions in Latin America. For example, the first three categories identified (i.e., rural youth migration, rural youth education and communication, and rural youth expectations or perspectives) coincided with results discussed and recommended by Kessler (2006) in a review about rural youth in Latin America. Regarding migration, CEPAL (1995), FAO (2013), the International Fund for Agricultural Development (IFAD, 2019), and the Latin American Center for Rural Development (RIMISP, 2018) highlighted that this is an important issue that impacts the socio-demographic development in Latin American countries. Consequently, they recommended further research on migration issues. Twenty-six percent of the studies included in this review addressed rural youth migration topics. On the other hand, FAO (2014) and the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2014) recommended to develop initiatives or research studies about rural extension and/or rural youth expectations. This topic was performed by 15 and 13 studies, respectively. Regarding the fourth approach (i.e., rural youth characterization or diagnosis), this was aligned with the need for having reliable and updated data to conduct initiatives for rural development in developing countries (Contreras, Lafraya, Lobillo, & Rodrigo, 1998). Rural youth analysis documents, such as IFAD (2019) and RIMISP

(2018) are examples of the utility of this type of diagnosis to formulate public policy recommendations.

Research Methods

We concluded that researchers used different research methods to conduct their research studies. They used quantitative, qualitative, and mixed method analysis. However, we also concluded that in several cases, they did not address research rigor elements, such as data triangulation in qualitative and mixed method analysis, or statistical representativeness in quantitative studies. Most of the studies (i.e., 73%) followed qualitative analysis. From the theoretical perspective, this method of inquiry allows researchers to explore rural issues and generate research findings; especially in marginalized contexts (Harvey, 2010). However, a relevant element among studies following a qualitative analysis is that one-third of these studies did not report the approach of inquiry, as explained by Creswell (2007). This suggests a limitation for generalizing research findings. For qualitative methods, research rigor is strongly connected to the justification of the methodological choice (Carter & Little, 2007). Moreover, another issue identified in those studies following qualitative ethnographic studies, is that some of these studies based their analysis on data collected via interviews. Although we are not saying that they did not conduct analyses with ethnographic elements, their data collection procedures were not aligned with conventional methods of ethnographic studies (Jones, Torres, and Arminio, 2013). Regarding studies in which a quantitative analysis was used (i.e., quantitative and mixed-method analysis), only two of them reported a probabilistic sample. This implies a limitation for making statistical inference from the results obtained by authors. In this sense, FAO (2015) suggested that is essential to use surveys with statistical representativeness for studies with rural population in Latin America. Finally, studies that followed a mixed-method analysis, did not state how qualitative and

quantitative data were contrasted or compared (aka, data triangulation). Triangulation is a key element in the analysis and conceptualization of mixed methods studies (Fielding, 2012).

Participants

We concluded that researchers used an extended definition of the concept "youth." This finding depended on research requirements, or on contextual elements in which studies were conducted. The observed differentiation in the criterion to selected participants could be associated to the breadth of the concept "youth," especially in the rural context. Although youth is defined in general terms "*as those persons between the ages of 15 and 24 years*" (United Nations, 1981), some authors have increased this range up to 29 (Román, 2003) or 40 years (Becerra, 2004). Moreover, the definition of youth implies a contextual dynamic, in which aspects such as family relations, education, labor, and socio-political participation played an important role (Kessler, 2005). As such, the definition of the participants in a research study focused on youth, depends on the context that informed the study.

Themes of Findings

Four themes emerged from the findings of the 45 studies. First, rural contexts impose barriers for rural youth lives. Because of the scarcity of goods and services, rural youth are not able to develop economic or academic activities in optimal conditions. Other authors, such as Berdegué, Escobal and Bebbington (2015) argued that Latin American rural contexts are poverty traps for youth and children regarding academic or labor activities.

Second, there is an unequal economic development between urban and rural areas in Latin America. This social inequality is defined as a social boundary (Lamont & Molnár, 2002a), in which rural youth have less access to technology, information, knowledge, and/or basic services

such as internet. Moreover, this boundary creates academic gaps between urban and rural students, so rural youth are less likely to pursue university careers.

Third, rural youth motivations and expectations were more oriented toward urban activities, so migration to urban areas is a real alternative. Aligned with the first theme, because rural youth do not find tools or resources in rural areas to develop academic or economic activities, their expectations are oriented toward urban life. The socio-economic gap between urban and rural areas in Latin America is the main factor promoting migration (Kay, 2006; DeJanvry & Sadoulet, 2000).

Finally, education and/or extension activities were a key to link rural youth to rural activities. In this regard, a study conducted by FAO-UNESCO (2004) concluded that, because of the singularities of the rural context, rural youth require education programs focused on specific rural issues (e.g., agriculture or natural resources) to help reduce the gap between rural and urban youth.

Implications and Recommendations for Future Studies

Rural youth play an important role in Latin America rural development. However, rural contexts do not provide youth with optimal conditions to develop economic or academic activities. Accordingly, we present three implications for public policies or practitioners, and recommendations for future research studies.

First, Latin American countries should promote rural development polices oriented toward the reduction of the economic gap between urban and rural youth. These policies should provide rural youth with the same conditions as their urban peers to study, work, or just live in rural areas. For example, countries could increase investments in rural areas to build schools, universities, or roads. By doing this, there could be job opportunities for rural people, and better opportunities for youth to pursue school or university careers.

Second, Latin American institutions should promote programs to reduce the rural youth migration. These programs are important for the economic sustainability of rural regions. Accordingly, these programs could use conditional cash transfers to rural youth to conduct academic and/or economic activities only in rural areas. These programs must be aligned with the first implication, so rural youth would receive not only cash transfers, but also investment in physical infrastructure.

Finally, Latin American governments and institutions should increase the extension programs that aim to link rural youth to rural economic activities, such as agriculture and/or natural resources. To do so, it would be necessary to promote investments in rural public goods, such as irrigation systems and/or roads. These investments could increase the economic productivity of agriculture, and rural youth could perceive this as an optimal alternative in their lives.

Regarding recommendations for future studies, it is necessary to perform national and territorial studies based on rural youth. In addition, research elements such as qualitative trustworthiness, mixed-method data triangulation, or statistic representativeness should be strengthened to increase the scientific relevance of findings. Moreover, we recommend performing longitudinal studies to analyze patterns of aspirations, expectations, or motivations of rural youth through the time. These analyses could also include impact assessments of public policies implemented in rural areas. Finally, we recommend including variables such as gender and family´s socioeconomic status in research. By doing this, it would be possible to find internal differences among rural youth.

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CHAPTER 3. FACTORS CONCERNING THE RURAL YOUTH MIGRATION EXPECTATION IN COLOMBIA: A MULTILEVEL PROBIT ANALYSIS

Abstract

Approximately 12% of rural youth in Colombia migrate from rural to urban areas every year. A multilevel probit analysis was conducted (Level 1 = individuals; Level 2 = families) to explore and analyze family and individual factors concerning the migration expectation of this population. Observations were 945 Colombian rural youth between 12 and 16 years, nested in rural families. Data came from a survey conducted in Colombia every three years (the survey conducted in 2016 was used). Results showed that individual variables, such as gender, age, and school grade explained the migration expectation; these variables were positively correlated to the outcome. Regarding the family level, only the socioeconomic status was significant to the outcome; this variable was negatively correlated to the outcome. Moreover, the family level explained 9% of the total variance; the other 91% could be explained by individual attributes. We conclude that rural youth migration expectation can be explained not only by individual attributes, but also by family level characteristics. Finally, because the addition of family characteristics improved the model, we concluded that the multilevel analysis is a useful tool to analyze the migration phenomenon in comparison to the model in which only individual characteristics are analyzed.

Keywords: Colombia, multilevel analysis; rural migration; rural women; youth expectations.

Introduction

Some Generalities of Migration

Migration is a global phenomenon that supposes demographic movements within nations and/or internationally across borders (World Economic Forum, 2017). From the positive perspective, this phenomenon has played an important role in the economic development of urban and rural societies. For example, migration allows people to look for better socioeconomic opportunities or for better living standards in remote places (OECD, 2014). On the other hand, from the negative perspective, this phenomenon has been the cause of some economic issues, such as reduction of labor force an aging of populations in rural areas; or the consequence of non-desired conditions, such as war, poverty, and inequality (FAO, 2018a).

Migration can be explained from different theoretical perspectives. For instance, sociologists define migration as a collective phenomenon promoting social change and affecting several aspects related to the regional development, the households, and the human being path (J. Rodriguez & Busso, 2009). Moreover, anthropologists explain the concept as a movement that implies a relatively permanent change in the political, social, and/or cultural environment of a specific group of human beings (Salazar, 2009). Furthermore, economists define migration as a result of socioeconomic gaps between the most populated regions and their peripheries (e.g., urban and rural areas). From this point of view, migration follows a benefit-costs analyses, in which individuals aim to maximize their affordability of living (Ravenstein, 1885). Finally, political sciences address the concept as a decision-making process oriented by lack of public actions or interventions (J. Rodriguez, 2004).

Internal Migration Processes in Colombia

The Colombian population has experienced processes of concentration in urban areas during the last decades (The World Bank, 2008; Balcázar, 2003; Murad, 2003). Approximately 12% of rural youth migrate from rural to urban areas every year (Pardo, 2017). Moreover, because of the internal conflict in Colombia, millions of families have migrated to populated cities during the last 40 years. Two theoretical approaches were chosen to explain this phenomenon.

The first approach explains Colombian migration as a social evolutive process, in which there are "push" and "pull" factors, and economic motivations (Castro, 2016). According to this approach, migration is an effect of regional gaps (e.g., salaries, goods and services), so migrants, as economic agents in a cost-benefit analysis, search for jobs, better incomes, or the improvement of their living standards (Arango, 1985).

Pull factors are associated to the socioeconomic gaps between urban and rural regions in Colombia. Because of those gaps, 85% of the Colombian GDP is concentrated in urban activities (Banco de la república, 2020). Therefore, urban regions offer better opportunities of employment, social living, education, and/or professional development (Murad, 2003). In addition, due to differences in the physical infrastructure, rural migrants can find basic services, such as electricity, water and sewer, and internet (Méndez- Sastoque, 2016). Especially for rural youth, these differences can impact career aspirations and goals (i.e., educational and/or occupational), which are built on the imagery of the city (Jurado & Tobasura, 2012).

On the other hand, push factors are highly related to the productivity of agriculture. From the "economic openness era" (i.e., 1980´s and 90´s), food and fiber prices dropped as consequence of imports, reducing financial incomes for local farmers (Kalmanovitz & Lopéz, 2005). Further, because of the aging of rural population, some regions experienced land fragmentation processes (i.e., when an old farmer dies, the farm is divided among his or her heirs). Therefore, people left

rural areas because new land owners were not interested in developing agricultural activities, or because agriculture was not viable in the new small farm (Machado, 1998).

The second theoretical perspective explains rural migration as a result of the Colombian internal conflict between the Colombian government and illegal armed groups, such as guerillas and paramilitary organizations. Some authors have used the concept "forced displacement" to establish a difference between this and the "evolutive process" (Ibañez & Querubín, 2004). The main difference between these two approaches is that the forced displacement does not have rational pull factors. As such, migrants do not have the desire to leave rural areas, but it is the only option they have (Castrillón, 2009).

During the last four decades, approximately 5.7 millions of people were forced to leave rural areas (Centro Nacional de Memoria Histórica, 2015). Although the cause of the Colombian internal conflict was a political issue, during 1980´s and 90´s, illegal groups accumulated rural lands, forcing farmers to migrate to urban areas. A positive correlation between land owners and migrants was identified in this period (Ruiz, 2011).

Previous Studies of Rural Youth Migration in Colombia

Both research studies (i.e., dissertations and/or journal articles) and technical documents developed by Latin American rural development organizations have addressed the Colombian rural youth migration issue. Six research studies were identified (i.e., four journal articles and two thesis dissertations). Jurado and Tobasura (2012), Castro (2016), and Méndez Sastoque (2016) studied the rural migration phenomenon in the Colombian coffee region. These authors followed qualitative and mixed-method analysis, using descriptive statistics for the quantitative phase. They found that several factors, such as academic expectations, lack of labor opportunities in the rural context, family´s socioeconomic disadvantages, and/or lack of factors of production to develop

rural economic activities promote the rural-urban migration decision or expectation in this region. Moreover, Plazas (2011) conducted a qualitative descriptive analysis, in which socioeconomic (e.g., poverty) and intrapersonal (e.g., expectations) variables were associated to the rural youth migration decision. Siaucho (2014) and Florez (2017) conducted regional studies of this topic in rural municipalities in Colombia as their dissertations. Siaucho's dissertation followed a mixed-method analysis, using descriptive statistics for the quantitative phase, and the second phase used a phenomenology qualitative approach. These researchers found that rural areas in Colombia did not provide youth with enough financial or education resources to pursue successful careers. In addition, the authors suggested that the internal conflict between the government and illegal armed groups is a push factor for rural youth migration.

Regarding technical documents, RIMISP addressed this topic twice (Díaz & Fernández, 2017; Pardo, 2017). As a relevant finding, both studies highlighted that the gender is a factor promoting rural youth migration in Colombia. Thus, 55% of the youth migrants are women.

The cited documents have shown that the rural youth migration in Colombia depends upon several contextual factors. However, they did not analyze the extent to which each variable explained the phenomenon. In this regard, some researchers have concluded that the rural youth migration phenomenon requires more specific or sophisticated analysis; for instance, those that use multi-causal quantitative approaches (Pardo, 2017; Castro, 2016). In other words, the migration analysis should focused on questions such as, "why migration occurs" or "why people go or stay" (Haug, 2008).

Research Purpose, Research Questions, and Hypotheses

Responding to the mentioned gap, the purpose of this study was to explore and analyze individual and family factors concerning the rural youth migration expectation in Colombia. To do

so, we performed a multilevel probit analysis (MLM) with individual (Level 1) and family characteristics (Level 2). MLM is a linear regression that allows to analyze data of individuals that are nested in families or groups (Noé, 2017). Observations were rural youth nested in families. This kind of model is an alternative to the previous research studies conducted in Colombia, allowing to analyze the migration as binary outcome (1 = migrate ; otherwise = 0) with individual (e.g., gender, age, school grade, previous migration experiences) and family characteristics (e.g., socioeconomic status, number of living parents, size of the family, distance to the populated town) as independent variables (Park & Kim, 2015).

Research questions (RQ) and hypothesis (H) addressing the study were:

RQ 1: To what extent do the individual attributes explain the migration expectation of the Colombian rural youth?

RQ 2: To what extent do the family attributes explain the migration expectation of the Colombian rural youth?

H1: Personal attributes, such as age, gender, or level of education, affect the migration expectation of the Colombian rural youth.

H2: Family attributes, such as size or number of living parents (at home), affect the migration expectation of the Colombian rural youth.

H3: Socio economic family characteristics (SES), such as richness, or the distance of the household to the populated area of the town, affect the migration expectation of the Colombian rural youth.

Methods

Data

The Longitudinal Survey of Colombia, ELCA (by its acronym in Spanish) served as the database. This survey is conducted every three years to collect data from a probabilistic sample of rural and urban families in Colombia (i.e., 2010, 2013, and 2016). The main objective of this survey was to understand social and economic changes at individual and family levels in Colombia. The most recent 2016 database was used for this study, which contains family and individual information from 13,400 observations. Children, youngsters, and young adults provided individual information (Level 1). On the other hand, a representative adult (e.g., father, mother, or any other adult who can take family decisions) provided family information (Level 2). Based on the objective of this paper, data was filtered by age (i.e., only observations aged 12-33 was used); in addition, only observations that responded the question about migration expectation were included in the analysis. In total, 945 observations were included in the analysis, and no missing data were identified.

Variables

For the purpose of this analysis, the dependent variable was migration expectation of the rural youth in Colombia. This binary variable had values of 1 for expectation of migration and 0 for null. In addition, previous experiences of migration, gender, age, and school grade were used as independent variables at the individual level. Moreover, the following variables were used as independent variables at the family level: the distance of the household to the populated area of the rural town (i.e., municipality – a cluster of houses), the size of the family, and the number of living parents at home, and socioeconomic status (SES). Regarding the SES, this variable was constructed

based on the household assets (e.g., real estate, vehicles, agricultural tools, appliances, and electrical and telecommunication services) (ELCA, 2016), which was an index of the level of richness of rural families. Table 6 presents the definition of the variables, the type of variable, the way they were coded in the models, and the level (i.e., family or individual).

Table 6. Definition of Variables Used in the Multi-level Probit Analysis

Variable (level)	**Variable**	**Definition**
Dependent	Migration	Expectation of migration to other municipality during next years, 1; otherwise 0.
Independent (Individual)	Age	Age in years.
	Gender	Female = 1; Male = 0.
	Education	Current school grade (from 1st to 11th).
	Previous migration experience	Yes = 1; otherwise = 0.
Independent (Family)	Socio economic status (SES)	Level of family multidimensional richness: 1 = low, 2 = middle, or 3 = high.
	Parents living (at home)	Number of living parents at home. Those who live with the respondent; 0, 1, or 2.
	Family size	Number of family members, those who live at home with the respondent.
	Location of the household inside rural area	Living in the municipality = 1; otherwise (for example living in a farm) = 2.

Analysis

The statistical analysis was divided into two steps. First, individual level data were analyzed with binary logit and probit models. Previous experiences of migration, age, and school grade were included as independent variables in these analyses. After performing these models, the Akaike Criterion of Information (AIC) was used to compare and select the best fit model (Seghouane & Amari, 2007). Second, using the best fit model, a multilevel analysis was performed. Two models were obtained: (a) only with predictors for the individual level (in the same way they were used in the probit and logit models); and, (b) with predictors in both individual and family levels. These two models were compared to conclude to what extent the addition of family variables could improve the model. In order to conduct these analyses, variables were centered on their grand mean.

To evaluate effects sizes, coefficients were converted into marginal effects. These values allowed to determine the change of the dependent variable after increasing the value of any independent variable in one unit, keeping all other independent variables at a fixed level (aka, ceteris paribus condition). In addition, the coefficients symbols (i.e., negative or positive) were used to define the correlation between independent and dependent variables.

Because probit or logit models do not allow to calculate the interclass correlation (ICC), the explained variance σ^2 of levels 1 and 2 were calculated using the Rho (ρ) equations, as follows:

For Logit models $$\rho = \frac{\sigma^2}{\sigma^2 + \pi^2/_3}$$

or For Probit models $$\rho = \frac{\sigma^2}{\sigma^2 + 1}$$

The models were estimated using the software Stata (Version 16.0), and equations were defined as follows:

Level 1:

$$Y = \beta_0 + \beta_1\ (gender) + \beta_2\,(age) + \beta_3\,(education) + \beta_4\ \ (Previous\ migration)$$

Level 2:

$$\beta_0 = \gamma_{00} + \gamma_{01}\,(tertile) + \gamma_{02}\,(size) + \gamma_{03}\,(parents) +$$

$$\gamma_{04}\,(location\ of\ household) = \mu_0$$

$$\beta_1 = \gamma_{10}$$
$$\beta_2 = \gamma_{20}$$
$$\beta_3 = \gamma_{30}$$
$$\beta_4 = \gamma_{40}$$

Where β_0 to β_n are marginal effects of the independent variables and γ_{10} to γ_{n0} are regression coefficients of the fixed part of the model.

Results

The Description of the Observations

After filtering the database, 945 observations were included in the study. No missing data were identified. These 945 observations corresponded to populations living in rural Colombian areas.

Table 7. Description of Variables Used in the Multi-level Analysis

Variable	***N***	***M***	***SD***	**Min**	**Max**
Gender	945	0.55	0.50	0	1
Age	945	13.56	1.13	12	16
School Grade	945	7.53	1.72	1	11
Previous Migration	945	0.36	0.47	0	1
SES	945	1.87	0.80	1	3
Family Size	945	3.50	2.11	0	15
Number of Parents at Home	945	0.96	0.79	0	2
Location in Rural Area	945	1.78	0.41	1	2

Table 7 presents the description of the observations used in the model (i.e., Level 1 and Level 2). Observations were rural school students from 1^{st} to 11^{th} grade in the educational Colombian system. Colombia has an eleven-year system of primary (1^{st} to 5^{th}), secondary (6^{th} to 9^{th}), and middle education (10^{th} to 11^{th}), consisting of five years of primary education, four years of secondary education and two years of middle education (Immerstein, 2015). The students in the sample were 12 to 16 years old. The female variable shows a relative equal value between male and female participants. Mean values of socioeconomic status and number of living parents at home are close to the median. Even though the family size reports maximum values of 15 persons, the mean is between 3 and 4, which is consistent with the national mean (3.1 persons per family) (DANE, 2018).

Table 8. Observations´ School Grade and Age Classification

School Grade	Age					
	12	13	14	15	16	Total
1	0	0	0	2	1	3
2	5	0	1	2	0	8
3	4	1	1	0	0	6
4	14	3	7	3	0	27
5	25	20	5	1	0	51
6	71	47	18	12	1	149
7	91	48	41	27	1	208
8	18	86	73	27	1	205
9	0	20	97	58	4	179
10	0	1	20	60	4	85
11	0	0	1	19	4	24
Total	228	226	264	211	16	945

Moreover, Table 8 shows the distribution of the observations according to their age and school grades. This information shows a common phenomenon that occurs in rural areas in Colombia. In comparison to urban areas, rural schools have students of different ages in the same grade. Consequently, no multicollinearity problems were reported in the model.

The Best Fit Model for the First Level Variables

Results of the estimation of logit and probit models (Table 9) showed that these two models had the same results for the correlation between independent variables and the outcome (i.e., migration expectation). In addition, these two models were also consistent in the significance value. In both cases, variables and constants were significant, $p < 0.05$; except the variable related to previous experiences of migration. Regarding the percentage

of correct classified values, logit and probit also presented the same values (68.36). No multicollinearity problems were observed.

Table 9. Estimation of Logit and Probit Models

Variable	Logit	Probit
Age	.164*	.099*
Gender	.508***	.309***
School grade	.110*	.067*
Previous migration	-0.41	-0.249
Constant	.789***	.485***
N	945	945
AIC	1156.23	1156.07
Correct Classified	68.36	68.36

* p<0.05; ** p<0.01; *** p<0.001

For the purpose of the study, the most important parameter was the AIC. This criterion provides a good performance to select a model among different models (Seghouane & Amari, 2007). Because the probit model showed a lower value in this criterion, this model was selected to conduct the MLM analysis. The probit model was specified as follows:

$$\Pr(Y = 1 \mid X) = \phi(X^T \beta)$$

Where Pr represents the probability and ϕ is equal to the Normal distribution function (cumulative) (Cakmakyapan & Goktas, 2013).

The Multilevel Probit Model

After estimating the multilevel probit model**,** results showed that age ($p < 0.05$), gender ($p < 0.01$ or 0.001), and school grade ($p < 0.05$), explained the Colombian rural youth migration expectation. In contrast, "previous experiences of migration" was not significant for the outcome (Table 10). All these variables were positively correlated to the dependent

variable. Moreover, marginal effects explain the change of the dependent variable after increasing the value of any independent variable in one unit while keeping all other independent variables at a fixed level. As such, margin effects showed that the gender variable had the greater effect on the migration expectation for rural youth. Thus, being female supposes that the migration expectation increases 10% (ceteris paribus). Regarding age, an additional year of age increases the probability of the migration expectation by 3.2% (ceteris paribus). Finally, by increasing one school grade in the respondent, the migration expectation probability increases by 2.5% (ceteris paribus). These results were consistent through the three models presented: probit, MLM1, and MLM2. In addition, the constant was also significant in the model ($p < 0.001$).

Regarding the family level variables, only the SES was significant ($p < 0.05$). This variable was negatively correlated to the migration expectation. That is, if the level of richness increases, the rural youth migration expectation decreases. The marginal effect of the family´s SES supposes that by increasing in one unit that variable, the migration expectation of those observations belonging this family decreases 4.8% (ceteris paribus).

Comparing the Basic Probit Model vs the MLM

In comparison to the basic probit model, results showed that in model 3, the family level explained the 9% of the total variance (ICC = 0.09). The other 91% could be explained by the individual level. This value improved from model 2 (ICC = 0.075) to model 3. This result is consistent with the nesting test, which showed that by introducing the family variables, the model improved ($p < 0.05$; LR chi2 = 10.18; degrees of freedom = 3). Both, the nesting test and the ICC value showed that a multi-level probit model, with individual

and family level variables, is a useful tool to analyze the migration phenomenon in comparison to the basic probit model.

Moreover, values of the interval of confidence (95%) allowed to conclude about the research hypothesis of this study, as follows: there were no relationships neither between the migration expectation and the family size, nor between the migration expectation and the number of living parents at home. In contrast, there was no evidence to reject the hypothesis that being female, the age, the school, grade and the family´s socio-economic status were related to the rural youth migration expectations in Colombia.

Table 10. Description of Probit and Multi-level Models

	Model 1 (Probit)					Model 2 (MLM1)					Model 3 (MLM2)					
Migration	Coef.	SE	P>z	95% Conf. Interval		Coef.	SE	P>z	95% Conf. Interval		Coef.	SE	P>z	95% Conf. Interval		dy/dx
Individual level																
Age	.099	.045	*	.011	.188	.104	.047	*	.010	.197	.098	.0478	*	.005	.192	.032
Gender	.309	.087	***	.137	.481	.319	.092	**	.137	.501	.321	.0938	**	.137	.505	.105
School grade	.067	.029	*	.009	.125	.069	.031	*	.008	.130	.078	.0319	*	.016	.141	.025
Previous Migration	-0,25	0.24		-0.72	0.22	-0.27	0.25		-0.77	0.23	-0.29	0.25		-0.8	0.21	-0.09
Constant	.485	.043	***	.400	.570	.505	.058	***	.391	.620	.512	.059	***	.396	.628	
Family level																
SES											-.148	.0596	*	-.2655	-.031	-.048
Number of parents											.069	.060		-.049	.188	.022
Location in rural											-0.00	0.11		-0.21	0.21	-0.00
Family size											-.036	.022		-.049	.188	-.012
var(_cons)						.081	.153		.0020	3.231	0.088	0.155		0.002	2.73	
ICC								0.075					0.09			

* p<0.05; ** p<0.01; *** p<0.001

Likelihood-ratio test LR chi2(3) = 10.18

(Assumption: mlm1 nested in mlm2) Prob > chi2 = 0.01

Conclusions and Discussion

Three independent variables at the individual level and one at the family variable explained the rural youth migration expectation in rural Colombian context. This finding supported that the migration of youth from rural to urban areas responds to several individual and family (i.e., socioeconomic) factors. Moreover, this finding is aligned with the Food and Agriculture Organization of the United Nations´ report about migration (FAO, 2018b). This report presents several elements as drivers of the rural urban migration, especially in developing countries. These elements include personal aspirations or desires, age, gender, education level, and/or the socioeconomic context, and are included in a set of micro and macro factors affecting migration. Similarly, some regional research studies, conducted in similar conditions to the Colombian rurality, have concluded that not only one aspect, but several elements affect migration expectations or decisions for Latin American rural youth. For instance, Zago (2015) found that career aspirations along with productive transformations in rural areas, especially transformations in agriculture, are push and pull factors determining the rural youth migration in a specific rural area in Brazil. Moreover, Eche (2018) concluded that environmental factors such as soil degradation and/or water scarcity reduce the productivity of family farming in indigenous rural communities in Ecuador. This fact, in turn, pushes rural youth to look for other economic activities outside the farm; most of the times in urban areas. Finally, Amavizca-Ruiz et al. (2017) concluded that education and economic motivations, and some psychological traits such as the need for family reunification, or just the prestige of living in urban areas are factors affecting rural youth migration in Mexico.

By desegregating the results, there was not enough empirical evidence to corroborate the finding the variable "age" as being positively correlated to the migration expectation (e.g., longitudinal studies about migration expectation). As such, it could be associated to philosophical evidence provided by developmental stages theories. For example, both the Piaget´s theory (Brown & Desforges, 1979) and Gottfredson´s theory of circumscription and compromise (Gottfredson, 1981) posit that children move through mental development stages, experiencing a hierarchical progression with later stages building upon earlier ones (Mascolo, 2015). Therefore, older children are aware of the context they live in, being engaged in a conscious decision-making process in which contextual barriers (e.g., poverty, inequality, marginalization, the internal conflict) are an important factor for their expectations or decisions (Greenhaus, Callanan, & Gottfredson, 2013). From the migration perspective, older children are aware of those contextual barriers pushing them to leave rural areas.

In regards to the "school grade" variable, positively correlated to the migration expectation, along with the developmental stages, the result can be associated to two factors. First, students in primary grades see the school as their short-term life project, so they do not perceive migration as an alternative. Second, because of the lack of academic postsecondary options or because there are not enough economic activities to be employed in rural areas, rural students finishing the secondary education are aware that they must migrate in order to pursue education or occupational careers. Researchers who conducted studies in Latin American rural areas (Méndez Sastoque, 2016); Junguito, Perfetti, & Becerra, 2014; Castro, 2016; Jurado & Tobasura, 2012; Cifuentes Garzón & Rico Cáceres, 2016), concluded that rural youth migrate to urban areas looking for education opportunities they do not have in the rural contexts in which they live (e.g., universities, colleges, factories to get a job, or

technical training academies). In this case, the desire of pursuing a postsecondary education and/or occupational career plays as a pull factor to live in urban areas.

Regarding gender, the results were aligned with recent discussions oriented toward marginalization issues in rural areas in Latin America. For instance, authors of an analysis conducted for planning the Colombian rural areas for the post-conflict era concluded that the Colombian rural population can be labeled as a discriminated population, and, inside this context, being rural female supposes a double discrimination; for being rural and for being female (Ocampo, 2014). Ocampo argued that specific studies and/or programs must be oriented toward Colombian rural women during the post-conflict era. Similarly, the Latin American Center for Rural Development (Díaz & Fernández, 2017) and the Food and Agriculture Organization of the United Nations (FAO, 2018b) agreed that rural women are more likely to migrate to urban areas. This happens because rural economic activities are mainly oriented toward men roles. Researchers of regional research studies conducted in Latin America have also discussed this issue. Mercado-Salgado and Nava-Rogel (2014) concluded that Mexican rural women´s welfare is vulnerable, so their migration expectancy is greater than the expectancy for men. In the same direction, Vásquez and Vallejos (2014) found that Chilean rural women perceived rural areas as a place of gender inequalities because of no ideal to develop their lives, which pushes them to migrate. For the Colombian context, Plazas (2011) also concluded that rural women are more affected by the socioeconomic crisis than men, so they have more push factors to leave rural areas.

Finally, regarding the result of the socioeconomic status variable, this fact is explained by the economic gap between rural and urban areas in Colombia. Because of an inequality of historic development during the last five decades, Colombian rural areas have presented greater rates of multidimensional poverty (DANE, 1973; DANE, 2020). As such,

rural youth under the poverty line perceive migration as an alternative to overcome this condition. Several research studies have discussed this topic. Machado (1998) and Rodríguez Bravo and Ramírez Robledo (2006) agreed that during the second half of the 20th century, the rural poverty in Colombia decreased not as a result of an improvement on the rural living standards, but as a result of migration phenomenon from rural to urban areas. That is, the poorest rural population migrated to urban areas looking for employment or better socioeconomic conditions. Researchers explained that rural areas do not provide enough economic activities for people to increase their living standards. In the same way, Amavizca-Ruiz et al. (2017) highlighted that the poverty is the greatest push factor for rural youth from the coffee production region in Colombia to leave rural areas. These findings were corroborated by Zabala and Knobloch (2021), who stated that the lack of factors of production (e.g., land and/or financial resources), along with scarcity of economic activities in rural areas are push factors promoting Latin American rural youth migration. In some cases Latin American rural areas play as poverty traps for people living there, especially youth (Bebbington, Escobal, Soloaga, & Tomaselli, 2016).

Implications and Recommendations for Future Studies

Regarding implications for public policies, Colombian government should promote investments for improving living conditions of rural youth and their families. These investments should be oriented toward public goods to create jobs for rural people. For example, building roads, universities, schools, or common areas. In this way, government could promote economic development in rural areas; thus, reducing poverty levels. In addition, investments should cover conditional cash transfers for rural people to stay working or studying in rural areas. Moreover, for those rural youth who perceive urban areas as their

living aspiration, government should promote programs for transitioning them to the new context, avoiding conditions of poverty or scarcity. These programs should include alternatives of jobs and university careers for migrants.

In regard to the recommendations for future studies, it would be useful to maintain the multilevel approach strategy. If possible, we recommend including more levels of analysis. For example, regions to analysis differences within the national territory or time to conduct longitudinal analysis as second or third level variables. Moreover, we recommend performing quantitative, qualitative, and mixed methods studies to address the complexity of the rural youth career decision-making. This would allow researchers to conduct in-depth analyses of this issue.

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CHAPTER 4. PERCEPTIONS OF CONTEXTUAL BARRIERS AND SUPPORTS DURING THE COLOMBIAN RURAL YOUTH CAREER DECISION-MAKING PROCESS: A MIXED-METHOD ANALYSIS

Abstract

A convergent parallel mixed-method analysis was conducted to explore and explain perceptions of barriers and/or supports experienced by a group of Colombian rural youth during their career decision- making process, as well as their idealistic and realistic career aspirations. There were 155 Colombian rural youth between the ages of 18-33 for the quantitative phase. For the qualitative phase, a case of five males and five females participated in the qualitative analysis. Once data were collected, multivariate analysis techniques were applied in the quantitative phase. Moreover, to find themes and categories, qualitative data were coded and triangulated. Next, both sets of data were converged to perform a meta-analysis and theoretical discussion. Regarding results, both the quantitative and the qualitative analysis showed that participants aspired to pursue university careers and/or entrepreneurship activities after finishing the last school grade (11^{th}). However, most of them were not able to pursue their ideal career aspirations because of the marginalized context in which they lived. In addition, we found that barriers were related to school-related activities, family economic conditions, and community situations. These community situations, in turn, limited students, their families, and teachers. We concluded that most of the barriers perceived and/or experienced by participants were imposed through a historic marginalization process between Colombian rural and urban areas. This process originated a social boundary in which rural youth are not able to compete for post-secondary careers in the same conditions as their urban peers. We also concluded that the solution strategy to reduce these gaps implies a community-development approach, in which the Colombian

government should invest in public goods to reduce rural poverty and establish a differential system for rural people to access to post-secondary education.

Keywords: social boundary, marginalization, compromise process, idealistic aspiration, realistic aspiration.

Introduction

After finishing the last school grade (11^{th}), rural and urban Colombian students must decide about their educational and/or occupational careers. That is, based on expectations, aspirations, and financial and/or academic constrains, they can apply for post-secondary education (i.e., technical no professional, technological no professional, or professional University careers), Colombian military careers (e.g., police, military forces, or air forces), or just for low-skilled jobs (Delgado, 2014; OCDE, 2016).

Although both rural and urban Colombian students are enrolled in the same standardized academic system, the career decision-making process is not the same for all. For rural students, this decision is bounded by contextual barriers such as lack of family resources, low quality education, and lack of infrastructure. Consequently, in most of the cases, students must pursue educational and/or occupational careers that do not match with their idealistic aspirations. As such, youth decide their post-secondary careers based on financial and/or academic constraints, rather than on aspirations or motivation. Official statistics show that only 22 out of 100 rural students access to post-secondary university education after finishing the school level compared to 42 out of 100 urban students who pursue post-secondary education (MEN, 2018). Because education plays an important role in developing youth and preparing them for careers, the Colombian education system will be described to provide background of the context.

The Colombian Education System

The Colombian government established an standardized education system for urban and rural students, which is divided into preschool, school, and superior academic levels (MEN, 2006). Regarding the school level, this is an eleven-grade system divided into primary (1^{st} to 5^{th} grades), secondary (6^{th} to 9^{th} grades), and middle (10^{th} to 11^{th} grades) education (Delgado, 2014). During this period, students are enrolled in formal education institutions, including public and private, in which they acquire general knowledge about science, humanities, and social areas (MEN, 2013). The purpose of this academic level is to prepare students for the post-secondary education, as well as for the academic standardized test (aka, SABER) that is taken during the latest grade of the middle stage (11^{th} grade) (MEN, 2006).

Factors Affecting the Post-Secondary Decision

Some Colombian analysis have identified socio-economic gaps or social boundaries between rural and urban areas that affect the rural youth career decision-making process. First, rural areas have suffered a process of socioeconomic marginalization. This condition has been mainly created by the inequality of economic development during the last 50 years (Balcázar, 2003; Murad, 2003). Consequently, rural zones do not have enough infrastructure (e.g., electricity, internet connection, transportation networks, and school infrastructure) to provide rural people with optimal conditions for living or studying (Junguito, Perfetti, & Becerra, 2014). This inequality is also observed in the economic poverty in rural areas. In 2019, 36.1% of people living in these zones were under the monetary poverty line, which is 12% more than in urban areas (Ocampo, 2014; DANE, 2019). Because post-secondary university education implies higher costs in comparison to those associated to primary, secondary, and/or middle education, this level of poverty reduces opportunities for rural

people to pursue university degrees. According to the Colombian legislation, the primary and secondary education, in public institutions, must receive complete financial support from the government. It does not happen for post-secondary education, in which students must pay for universities tuition and fees.

Second, national and international academic tests (Figure 2), have evidenced an academic gap between rural and urban school students (OECD, 2018; Viana-Barceló & Pinto-Prieto, 2018). These tests have shown that the mean of the rural students´ performance is 13% lower than their urban peers.

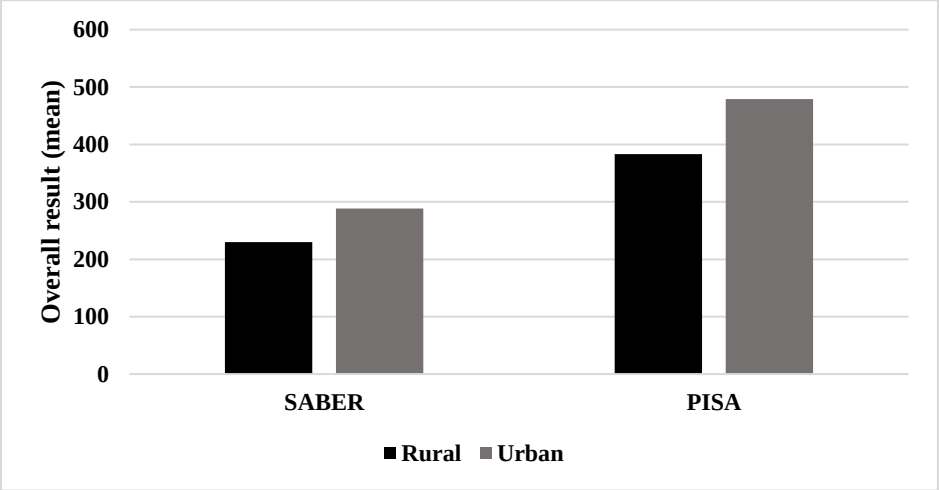

Figure 2. Results of Rural and Urban Colombian Students in PISA (international) and SABER (national) Tests in 2018

These academic gaps imply barriers for rural students to pursue high-level university careers. That is, because the standardized test is a pre-requisite for applying for some Colombian universities, those students with lower scores are less likely to be admitted for this academic level (ICFES, 2018). Some national statistics have shown that only 10% of

rural youth can pursue university degrees after finishing the secondary school, compared to 33% for urban youth (DANE, 2019).

Another fact is related to the internal conflict between the national government and illegal armed groups. Because this conflict was developed in mainly rural areas, it was defined as a negative factor affecting academic, social, and economic rural processes (Ibañez, 2004).

Literature Review

Silva (2009) and Florez (2017) conducted descriptive qualitative studies to analyze rural youth issues in two municipalities in Colombia. In both cases, they found that aspirations of the rural youth were mainly oriented toward professional careers that require university degrees. Moreover, authors highlighted that rural youth aimed to pursue post-secondary activities that were not related to rurality. Finally, they found that the rural areas impose barriers during this decision-making process. For instance, rurality does not provide youth with academic institutions, so the decision of pursuing these careers implies migration to urban areas and higher costs. This finding was aligned with findings that emerged in another qualitative analysis developed by López-López (2010) in the Colombian Andean zone. López-López suggested that rural youth career decisions are opposite to their aspirations because the scarcity of resources they have in the rural context. Along with the previous studies, Méndez (2016) and Castro (2016) concluded that in some municipalities of the Colombian coffee region, rural schools promoted agricultural activities among youth as career alternatives; nonetheless, youth´s families push them to decide for non-rural activities during the post-secondary education stage. These authors performed descriptive quantitative and qualitative studies, respectively.

As mentioned, different researchers have addressed this topic in different rural municipalities in Colombia. Moreover, researchers have identified differences between aspirations and decisions because of contextual barriers. However, they have not specified neither the type of careers the rural youth aspire to pursue, nor the kind of barriers they experience during the process (e.g., distal, proximal, environmental and/or intrapersonal). In addition, because researchers were focused on descriptive qualitative and quantitative methods, it is not possible to desegregate the importance of components such as aspirations, supports, and/or barriers during the rural youth career decision-making process.

As an innovative element, the researcher of this study investigated the type of careers rural participants wanted to pursue, as well as the contextual barriers and/or supports they experienced for making a career decision when they finished the secondary school. By using both quantitative and qualitative methods, the researcher aimed to respond not only what were those careers and barriers, but also why those barriers were present during the process, and how this was aligned with the final career decision.

Theoretical and Conceptual Frameworks

In 1981, Linda Gottfredson developed the Circumscription and Compromise Theory (Gottfredson, 1981). This theory explains how career choice develops in young people, and suggests that youth build a cognitive map of careers by picking up occupational stereotypes from those around them (Greenhaus et al., 2013). Therefore, career choices are reflections of one´s self-concept (Cochran, Wang, Stevenson, Johnson, & Crews, 2011). This process occurs through four developmental stages, which Gottfredson adapted from Van den Daele's (1968) work. First, orientation to size and power (age 3–5; preschool) is when children become aware that their parents or other adults have roles in the world. Occupations as adult

roles are specific elements during this stage. Second, orientation to sex roles (age 6–8; grades 1-3) is when children categorize the context around them with concrete and simple distinctions. Gender and sex-type elements interact in perceptions of self and others. Third, orientation to social values (age 9–13; grades 4-8) is when children encounter a wide range of job roles, classifying these in terms of sex-type and/or social status. Based on their environment, they designate some jobs as unacceptable because they fall below the tolerable level boundary. Finally, orientation to internal, unique self (age 14+; grades 9+) is when youth become aware about roles remaining in their social space. Using concepts such as work-life balance, abilities values, interests, and personality they sacrifice options they perceive are not accessible.

Main variables of this theory are prestige, supports, barriers, self-concept, prestige level, sex-type, idealistic aspirations, and realistic aspirations. Regarding both idealistic and realistic aspirations, Gottfredson (1981) suggested that *"these can be measured by analyzing preferences and perceptions of accessibility (i.e., supports vs. barriers). If preferences are given great weight and perceptions of accessibility given little weight, the resulting alternatives are idealistic aspirations; if the reverse is true, the alternatives are defined as realistic aspirations"* (p. 548).

These variables are analyzed in two developmental processes: (a) Circumscription is when individuals discard unacceptable options based on their perceived fit with ones developing self-concept. In the early stages, this process tend to be inaccurate and crude, but it is lasting; and, compromise is when youth sacrifice aspirations they perceive as more compatible with their self-concept in favor of those that are seen to be more easily accessible (Greenhaus et al., 2013).

The advantage of using this theory in marginalized conditions, such as rural areas in Colombia, is that it includes the context (e.g., barriers and supports) as an important predictor of final career choices. Especially regarding compromise processes, this theory allows researchers to analyze how people sacrifice alternatives, based on the real context they live in such as poverty and marginalization.

Based on Gottfredson´s theory, the conceptual framework in this study was informed by circumscription and compromise processes that were perceived and/or experienced by Colombian rural youth in their career decision-making process (Figure 3). These processes, in turn, are related to personal inputs, students´ academic background, and barriers and/or supports that have been imposed by the Colombian rural context. In order to categorize both barriers and supports, these are divided into proximal (i.e., school and family barriers and/or supports perceived during the secondary and middle level; not associated to social issues), distal (i.e., school and family barriers and/or supports perceived during the primary level; not associated to social issues), environmental (i.e., situations associated to social issues that could affect the career decision-making process), and intrapersonal categories (i.e., constructs) as suggested Lent, Brown, & Hackett (1994).

For qualitative analysis, Gottfredson's theory was used as theoretical perspective. Accordingly, the qualitative analysis was not strictly bounded by the conceptual framework shown in Figure 3. Therefore, the qualitative analysis was framed into chronological and social elements that were included in the narrative analysis. Chronological elements were divided into participants´ experiences that occured during primary and secondary school levels, while social elements were related to experiences associated to the Colombian internal conflict. This framework is further explained in qualitative results and shown in Figure 5.

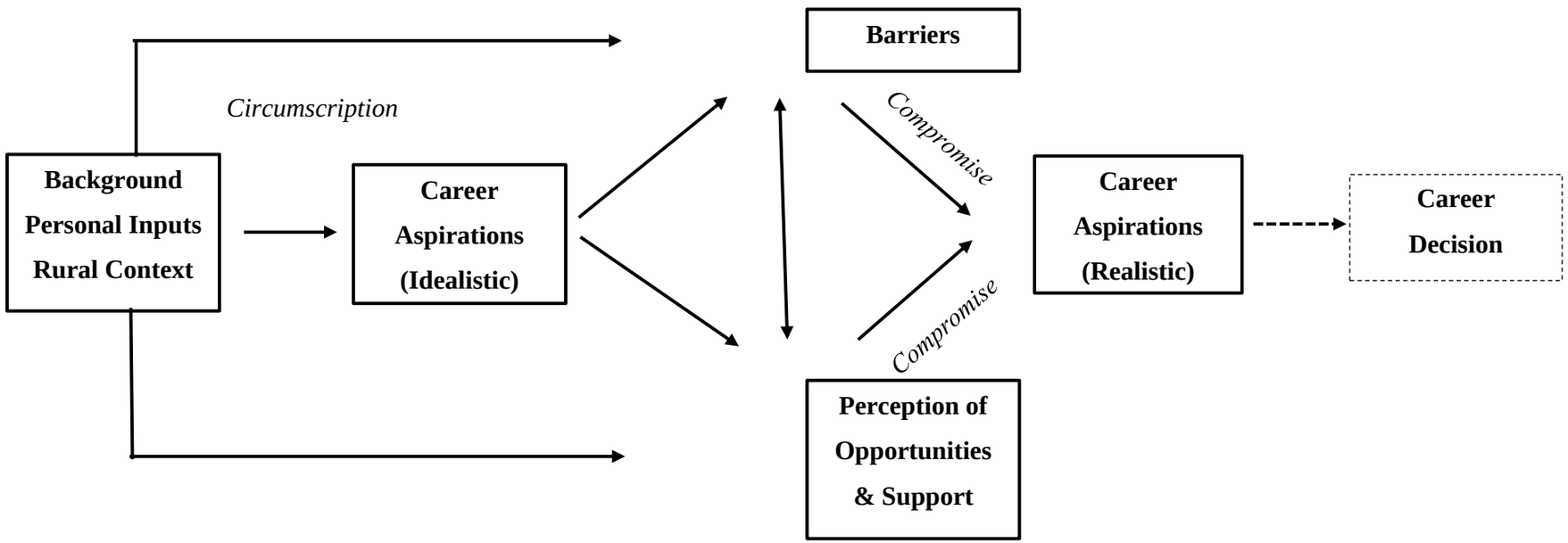

Figure 3. Conceptual Framework to Explore Barriers and/or Supports Related to the Colombian Rural Youth Decision-Making Process

Research Purpose and Research Questions

The purpose of this convergent parallel mixed-method design was to explore and explain how Colombian rural youth experienced barriers and/or supports for their career decision-making process (i.e., educational and/or occupational). Four research questions guided this study: (a) What were the contextual barriers and/or supports, both perceived and/or experienced, by participants during their career decision-making process (through primary and secondary school)? (b) What were the participants' career aspirations--both idealistic and realistic while they were school students? (c) What was the participants´ final career decision upon completing the middle school (i.e., do they experience compromise processes)? (1d) Were participants' final career decision (upon completing the middle school) related to contextual barriers and supports they experienced or perceived? (2d) What contextual factors were related to the compromise process during the career decision-making process?

Methods

A convergent parallel mixed method analysis (QUAN-QUAL) served as research design (Teddlie, 2006). Both qualitative and quantitative data were collected from participants during the last two months of 2020 and the first two months of 2021 in two independent strands. Participants were Colombian rural youth adults (aged 18-33) that finished the secondary school level during the last 15 years. In addition, they were enrolled in a Colombian rural youth initiative defined as “The Colombian Rural Youth Network.” Regarding the research paradigm, pragmatism guided the overall analysis (Morgan, 2014). James (1907) defined pragmatism as a practical way to analyze each situation and its

consequences, avoiding interminable metaphysics disputes. Moreover, Allmark and Machaczek (2018) highlighted that a pragmatist analysis starts with an objective problem or issue and ends with resolutions for this issue. Accordingly, our study was focused on a specific career decision-making process of the Colombian rural youth, and both quantitative and qualitative sets of data were analyzed and triangulated to explain and explore the issue from statistical and qualitative findings.

Furthermore, the quantitative phase was guided using a positivist paradigm and the qualitative phase was guided using a post-positivist "way of thinking" (Lather, 2006). Regarding differences of positivism and post-positivism paradigms, Patomäki and Wight (2000) argued that researchers include their own subjectivity in the analysis when guided by a post-positivist way of thinking. As such, researchers go beyond the simple process of testing hypotheses and/or theories and reflexively monitor their own biases to analyze facts and obtain research findings. For example, researchers studying their own communities not only follow theoretical assumptions, but they use negative and positive life experiences to understand facts and state conclusions about the research topic. In the same way, Jones et al. (2006) highlighted that while post-positivist inquiries suppose that observer and observed are dependant elements, positivist analyses assume that researchers are neutral elements that do not use their own biases during the research process. Accordingly, the quantitative analysis of our study was based on Gottfredson´s theory constructs and premises. For example, the quantitative analysis assumed that contextual barriers explain the Colombian rural youth compromise process. On the other hand, the qualitative analysis was guided research questions that were framed using Gottfredson's theory. Purdue University Institution Review Board approved the study on November 16, 2020 for human subjects (Protocol IRB-2019-844).

Quantitative Phase

A convenience sample of 155 Colombian rural youth adults (older than 18) responded a 4-sections structured survey: (a) personal information, (b) idealistic career aspirations during the school stage, (c) contextual barriers and/or support that were experienced and/or perceived during the primary, secondary, and middle school education; and, (d) final career decision (Appendix A). Section 2 included 36 professional, technical, technological, military, and occupational options that are available for Colombian youth after finishing the middle level. Moreover, Section 3 included 28 situations expressed as distal, proximal, intrapersonal, or environmental supports and/or barriers. These four sections included 65 variables, and a 6-point Likert scale was used for Sections 2 and 3.

Statistical analyses were conducted with the STATA software, version 16. The content of the survey was validated by representatives of the Colombian Rural Youth Network, by an expert panel of social science researchers at Purdue University, and by a Colombian agricultural researcher enrolled in the Colombian Agricultural Research Corporation (AGROSAVIA). An online field test was conducted with 30 Colombian youth (different than those who were in the convenience sample). Due to limitations imposed by COVID19, participants completed the online survey using QualtricsXM software.

After the data collection period, data were entered and managed in a database to conduct the analysis. Data analysis followed three steps. First, descriptive statistics parameters were used (e.g., mean, standard deviation) to determine careers aspirations and contextual barriers and/or supports that were most common among participants during their career decision-making process. Furthermore, an analysis of variance (ANOVA) was conducted to identify differences among male and female aspirations. Second, a Correspondence Analysis (CA) was conducted to explore how career aspirations and barriers

and/or supports identified in the previous step were related to the final career decision (i.e., if participants sacrificed their idealistic career aspirations due to contextual barriers--compromise process). Finally, a logit model was conducted to determine the extent to which those variables identified in the CA explained the final career decision. Logit model is a multiple regression technique that analyzes the odd of occurrence of a certain event using a binary dependent variable. For example, making a career decision or not. Consequently, the compromise process was defined as a dependent variable. Variables used in the model are summarized in Table 11.

Table 11. Definition of Variables Used in the Logit Model

Variable	Type of Variable	Description
Compromise Process	Dependent	Final career decision in comparison to the observation´s career aspiration. If the decision did not match to the aspiration (compromise process) = 1; otherwise = 0.
Good Quality Secondary Education	Independent	Perception of the quality of the secondary and middle education. Ranked from 1 to 6, where 1 is low quality and 6 is high quality education.
Standardized Test Score	Independent	Perception of the score in the national standardize test (SABER). Ranked from 1 to 6, where 1 is low quality and 6 is high quality education.
Family Resources in Secondary Education	Independent	Perception of family resources to support the academic process during the secondary level. Ranked from 1 to 6, where 1 is low and 6 is high.
Fear of Migration	Independent	Perception of fear to migrate to urban areas after finishing the secondary level. Ranked from 1 to 6, where 1 is low and 6 is high.
Gender	Independent	Observation´s sex. Female = 1; Male = 0.
SES	Independent	Observation´s family socio economic status. Ranked from 0 to 4 (according to the Colombian rural scale; aka, SISBEN).
Internal Conflict Experiences	Independent	Perception of internal conflict situations affecting the school process. Ranked from 1 to 6, where 1 is low and 6 is high.
Good Quality Primary Education	Independent	Perception of the quality of the primary education. Ranked from 1 to 6, where 1 is low quality and 6 is high quality education.
Self-efficacy	Independent	Perception of abilities to perform the idealistic career aspirations. Ranked from 1 to 6, where 1 is low and 6 is high

Qualitative Phase

A narrative case study served as research approach during the qualitative phase of the study (Jones, Torres, & Arminio, 2013; Creswell, 2007). There were 10 participants (five females and five males) who participated in a one-hour semi-structured online interview. In addition, they wrote a short essay about their career decision-making process. The 10 participants also responded the quantitative survey, but the quantitative data was not used

during the qualitative analysis. The semi-structured interview was guided with a seven-topics protocol related to the participants´ career decision-making process (Appendix B). Once interviews were conducted and recorded, data were transcribed and coded in Spanish. Based on the purpose of the study, which was focused on responding to the four research questions, two cycles of coding guided the data analysis. First, a structural coding technique was used to find relations among the segments of the interviews and the research question. Next, based on general categories identified in the first cycle (e.g., barriers and/or supports experienced during the different school stages), elements of axial coding were used to find chronological relations among barriers, aspirations, and career decisions (Figure 5) (Saldaña, 2009). After that, categories and themes were identified to conduct the analysis.

To ensure trustworthiness (Loh, 2013), data from interviews were triangulated with the essays written by participants and external official information about municipalities in which participants grew-up. Regarding the researcher´s reflexivity and positionality (Bover, 2013), previous research experiences related to the Colombian rural youth addressed this analysis. One of the researchers was a Colombian graduate student who conducted the interviews and data analyses. In his previous job, he was involved in rural development projects in Colombia, and has knowledge related to the Colombian rurality. The analysis was based on the researcher's experience working with Colombian small farmers. This experience allowed him to observe lack of opportunities for young farmers in the Colombian context. Consequently, this researcher´s opinions were based on his contextual understanding of the phenomenon. For example, his biases came from his parents´ experiences, who were rural-urban migrants four decades ago. In addition, because his mother worked as a rural schoolteacher for 30 years, he was able to perceive socioeconomic disadvantages and injustice in rural communities in comparison to his own privileges. Moreover, the other

researcher is a professor from a land-grant university in the United States who supervised the graduate student and engaged in extensive peer-debriefing of this study. He visited Colombia rural communities four times and serves as an adjunct faculty member at the Universidad de Caldas in Manizales, Colombia. He has led research studies focused on Colombian rural youth entrepreneurship programs. He has conducted numerous of studies on career development in the U.S. context. This researcher provided the study with theoretical objective elements that could bound the participant´s career decision-making process.

Quan-Qual Data Triangulation and Discussion

After conducting both the quantitative and the qualitative analyses separately, findings were converged and validated as data triangulation. This triangulation was different than the qualitative triangulation conducted for ensuring trustworthiness. For example, the researcher used different sources of data (e.g., essays, interview transcripts, information about municipalities) to corroborate and address gaps in the qualitative results. A second phase of triangulation was conducted in comparing and/or contrasting quantitative and qualitative data (Fielding, 2012). The purpose in this phase was to describe and analyze logical relations between qualitative and quantitative findings, as well as those theoretical concepts behind the Colombian rural youth career decision-making process. As suggested by Östlund (2011), we went from an empirical level of quantitative and qualitative findings to a theoretical level of propositions about the studied issue. For example, the researcher started comparing quantitative and qualitative results that had similar meanings. The researcher also identified new meaning from the results to complement both quantitative and qualitative results. In some cases, there was new meaning in the qualitative results (e.g., experiences of

the primary school level). Next, the researcher connected the meta-analysis themes to sociological and economic theories of development.

Results

Quantitative and qualitative findings are explained in separate sections. The results of quantitative and qualitative data triangulation follow the separate quantitative and qualitative findings.

Quantitative Findings

First, we present variables that were analyzed using descriptive statistics of the 155 Colombian rural youth who participated in the survey, such as idealistic career aspirations, realistic career aspirations, and perceptions of barriers and/or supports. After that, we present results obtained with multilevel analyses techniques, such as Correspondence Analysis and Logit model.

Idealistic Career Aspirations

Table 12 summarizes idealistic career aspirations of the rural youth sample while they were middle school students (10^{th} and 11^{th} grades). For the analysis, 6 represented the highest value of interest and 1 the lowest. The two most aspired careers, for both female and male, were related to entrepreneurship activities to be conducted in their own towns. As such, those idealistic aspirations did not imply migration processes to urban areas. In a second group of career aspirations, with values higher than 3, were technical, technological, and professional careers, such as psychology, business administration, agronomy, veterinarian medicine, civil engineering, and agribusiness administration. As observed, half of these careers were not

related to activities commonly developed in Colombian rural areas such as, agriculture, food, and natural resources. It is important to highlight options such as being a daily worker for agricultural activities or working in mining activities reported low values. These two activities are common low-skill job options for rural youth people in Colombia. None of the military careers (e.g., police, air force, navy, and/or soldier) had values greater than 3, which suggests youth had lower interest.

Based on male and female aspirations, statistical differences (p-value < 0.05) were observed in 7 out of 36 options that were asked in the sample. That is, careers or occupations such as civil engineering, architecture, being an athlete, working as a car mechanic, in mining activities, and/or as a daily worker in farming were significantly higher for males than females. Regarding aesthetics, females were significantly higher than males.

Realistic Careers Aspirations

Results showed that 64.5% of the rural youth experienced a compromise process (i.e., the final career decision did not match with the idealistic career aspiration). The career decisions that participants made upon completion of the middle school were distributed as follows: 24.2% were enrolled to agricultural activities, mainly as daily workers, 2% to mining activities, 23.2% were enrolled to other kind of jobs, different to farming and mining, 12.2% pursued any professional career, 33.3% pursued technical or technological careers, 2% were enrolled to legal military forces, and other 7% stayed at home. As observed, 58.4% of the observations that experienced compromise processes did not pursue post-secondary education, as it would be expected according to the Colombian education system.

Table 12. Idealistic Career Aspirations of the Rural Youth Participating in the Study

Career aspiration	Male		Female		Statistical Differences
	Mean	***SD***	**Mean**	***SD***	
Owning a business in town	3.91	1.66	4.04	1.84	N
Owning a farm	4.38	1.82	3.86	1.79	N
Studying at SENA	3.30	1.56	3.39	1.57	N
Studying a technical career	3.34	1.64	3.34	1.70	N
Studying psychology	2.34	1.52	3.31	2.08	N
Studying business administration	3.17	1.72	3.27	1.92	N
Studying agronomy	3.62	1.99	3.14	1.96	N
Studying agribusiness administration	3.25	1.81	3.10	1.84	N
Doing a course of aesthetics	1.57	1.17	3.00	1.89	Y
Studying medicine	2.86	1.91	2.96	1.92	N
Studying vet	3.26	1.79	2.94	1.78	N
Studying for being a teacher	2.75	1.60	2.79	1.89	N
Studying arts and/or music	2.81	1.73	2.78	1.89	N
Studying law	2.40	1.70	2.68	1.87	N
Studying economics	2.64	1.67	2.62	1.75	N
Being an artist	2.68	1.83	2.57	1.87	N
Studying nursing	2.03	1.48	2.53	1.88	N
Studying journalism	2.45	1.55	2.44	1.70	N
Being an athlete	3.18	1.80	2.40	1.62	Y
Studying software	2.91	1.75	2.32	1.51	N
Being a police	1.90	1.35	2.30	1.60	N
Having an urban job	2.17	1.37	2.29	1.47	N
Studying sociology	2.36	1.49	2.29	1.64	N
Studying to be a chef	2.86	1.75	2.26	1.81	N
Studying civil engineering	2.99	1.75	2.10	1.54	Y
Going to the navy	2.03	1.46	1.97	1.60	N
Studying physical education	2.32	1.55	1.96	1.46	N
Studying architecture	2.57	1.63	1.94	1.39	Y
Being a soldier	1.95	1.49	1.91	1.60	N
Going to the air force	2.17	1.69	1.81	1.39	N
Caring his/her family	2.10	1.54	1.71	1.35	N
Working as a car mechanic	2.40	1.67	1.58	1.27	Y
Working in mining activities	1.82	1.38	1.38	0.99	Y
Working as a daily worker in farming	1.68	1.24	1.21	0.77	Y

Note. Careers options were ranked from 1 to 6, where 1 is low and 6 is high.

Contextual Barriers and/or Supports

Following Lent, Brown, and Hackett (1994), the contextual barriers and or supports were divided into four constructs: (a) distal from primary education, (b) proximal from secondary and middle education, (c) intrapersonal associated to psychological traits, and (d) environmental associated to social issues (Table 13).

Table 13. Summary of Barriers and/or Supports Reported by the Sample

	Distal	**Proximal**	**Intrapersonal**	**Environmental***
Mean	3.71	3.66	4.10	3.33
SD	1.15	0.78	1.00	0.77

Note. Barriers and/or supports were ranged from 1 to 6. 1= Strongly disagree; 2= Disagree; 3= Slightly disagree; 4= Slightly agree; 5 = Agree; 6= Strongly agree. *High value means high agreement with negative experiences.

For the first three constructs, in which situations were presented as positive experiences and/or perceptions related to the career decision-making process, the highest value was reported as intrapersonal supports (M = 4.10; SD = 1.00), followed by distal (M = 3.71; SD = 1.15) and distal (M = 3.66; SD = 0.78) supports. From the opposite perspective, it means that participants perceived more barriers during the secondary and middle education levels than in the primary level, when they were about to finish the school education. Moreover, results show that perceptions of intrapersonal supports (e.g., self-efficacy) were greater than those associated to family or school supports during primary and secondary education. Regarding the environmental construct (M = 3.33; SD = 0.77), which was presented as negative situations (e.g., social issues) experienced and/or perceived by the sample, the mean value is lower than the median of 3.5. It shows that there was not an important recognition of social issues affecting the school process.

Multivariate Analysis

A Correspondence Analysis was conducted as a first exploratory step to analyze all the variables. This dimension reduction analysis allows to graph relationships among variables and individuals using dimensions as axis and inertia as the variance explained by each dimension (Sourial et al., 2010). Because of the purpose of this study, the plot only includes those careers that reported high values of aspiration.

Table 14. Statistical Results of the Correspondence Analysis

Principal Dimension	Inertia	Cumulative Percentage	Percentage
Dimension 1	.0217	33.95	33.95
Dimension 2	.0085	13.37	47.32
Dimension 3	.0059	9.36	56.68
Dimension 4	.0041	6.45	63.13
Dimension 5	.0024	3.89	67.01
Dimension 6	.0014	2.34	69.36
Dimension 7	.0010	1.63	70.98
Dimension 8	.0008	1.28	72.27
Dimension 9	.0003	0.58	72.85
Dimension 10	.0002	0.43	73.28
Dimension 11	.0001	0.25	73.53
Dimension 12	.00009	0.15	73.68
Dimension 13	.00001	0.03	73.71
Dimension 14	5.79e-09	0.00	73.71
Total	.0639	100.00	

Results of this analysis, which are divided into axis (Table 14), and are presented in a four-quadrants plot (Figure 4), showed that 14 dimensions explain 73.71% of the total inertia of the data modeled. Regarding Figure 3, it shows dimensions 1 and 2 in x and y axis, respectively. These two axes explain 47.32% of the total inertia and allow to observe that both female and male that did not experience compromise processes are in the quadrant #2, along with high perceptions of family resources to support the school academic process, high

perceptions of supports during the school academic levels, and high perceptions of the score in the standardized test. Regarding careers aspirations, previous variables coincide in quadrant #2 with high values of aspiration to study veterinary medicine, medicine, and nursing. Quadrants 1, 3, and 4 show that the compromise process is associated to low perceptions of family resources, low perceptions of supports during the academic school levels, and the desire of studying professional careers such as agronomy and agribusiness administrations.

Based on the CA results, a logit model was performed to determine to what extent some of those barriers and/or supports explain the compromise process experience. Variables included in the logit model are using explained in Table 14. The logit model is specified as follows:

$$\Pr (Y = 1 \mid X) = S (X_i \beta)$$

Where $(S(t) = 1 / 1 + \exp (-t))$ is the logistic function, and β is a k x 1 vector of coefficients.

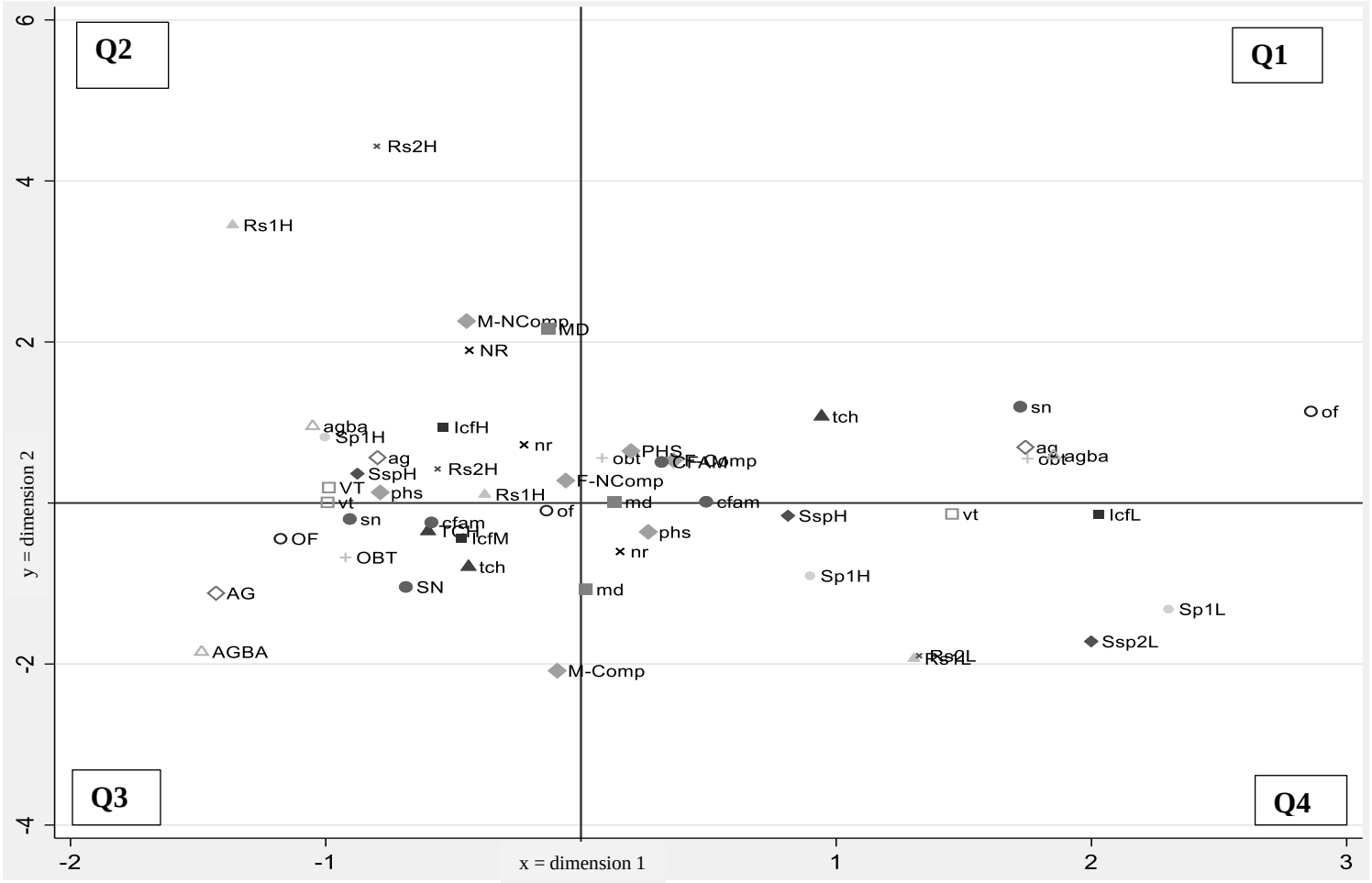

Figure 4. Correspondence Analysis graph about Colombian Rural youth career decision-making process

Rs1 = Family resources during primary education. Rs2 = Family resources during secondary education. Icf = perception of performance in the national standardized test. Sp1 = Perceptions of family support during primary education. Ssp = Perceptions of family support during Secondary education. NR = Nursing. MD = Medicine. OF = Own farm. OBT = Own business at town. AG = Agronomy. SN = Technical or technological career at SENA. AGBA = Agribusiness administration. M-NComp = Male that did not experience compromise process. F-NComp = Female that did not experience compromise process. For supports and/or barriers, L means low perception and H means high perception. For career aspirations, uppercase letters mean high aspiration and lowercase letters mean low aspiration.

Coefficients were converted into odds ratios to evaluate the effects sizes of independent variables, (Table 15). These ratios allowed to determine the change in odds of the dependent variable after increasing the value of any independent variable in one unit, keeping all other independent variables at a fixed level (ceteris paribus condition).

Table 15. Statistical Results of the Logit Model

Logistic regression	Number of observations	= 155
	LR chi2(9)	= 31.07
	Prob > chi2	= 0.0003
Log likelihood = -83.493662	Pseudo R2	= 0.1569
	Correctly classified	= 70.86
	Area under ROC curve	= 0.7468

Compromise	**Coef.**	**Std. Err.**	**Z**	**P>z**	**dy/dx**
Good Quality Secondary Education	-.38	.17	-2.18	0.030	-.07
Standardized Test Score	-.34	.16	-2.13	0.029	-.06
Family Resources in Secondary Education	-.40	.13	-2.99	0.003	-.07
Fear of Migration	.22	.11	1.97	0.049	.04
Gender	-.40	.39	-1.03	0.305	-.07
SES	.06	.18	0.34	0.736	.01
Internal Conflict Experiences	-.09	.11	-0.83	0.407	-.01
Good Quality Primary Education	.07	.16	0.48	0.628	.01
Self-efficacy	-.02	.16	-0.15	0.880	-.00
Constant	3.56	1.17	3.04	0.002	NA

After performing the logit model with 11 variables, 74.86% of the data were successfully classified with the adjusted model or appear under the ROC curve. In addition, four variables and the constant reported statistical significance (p-value < 0.05) to explain the compromise process. As such, perceptions of good quality education during secondary and middle education, perceptions of a good score in the standardized test, and perceptions of enough family resources to support the academic process were negatively correlated to the

outcome. In contrast, the variable "fear to migrate" was positively correlated. In regards to the marginal effects (dy/dx) performed in the model, both the perceptions of good quality education and the perception of enough family resources reported a 7% (dy/dx). That is, by increasing any of these variables in one unit, maintaining all the other variables constant (ceteris paribus conditions), the outcome would reduce by 7%. The perception of the performance in the standardized test reported an odd of 6% (negatively correlated) and the fear of migration variable by 4% (positively correlated).

Summary of Quantitative Results

The quantitative analysis showed that rural youth that responded to the survey aspired to pursue university and/or entrepreneurship careers after finishing the school. However, some intrapersonal and contextual barriers limited these aspirations; consequently, most of them experienced compromise process. Regarding variables explaining the compromise process, perceptions of family resources to support the school process, perceptions of good quality secondary education, and perception of good scores in the standardized test were negatively correlated. On the other hand, the fear to migrate to urban areas to pursue the idealistic career aspiration was positively correlated. These quantitative results will be presented in Table 17 in conjunction with qualitative results to show how quan-qual meta-analysis categories were constructed.

Qualitative Findings

After presenting the quantitative findings, this part of the document shows results obtained from the 10 interviews. These results, in turn, were triangulated with essays written by participants and participants´ municipality information.

The career decision making-process not only depends upon students´ aspirations and/or school-based activities, but also depends on community-related elements such as regional salaries, family incomes, school infrastructure, and social issues. Consequently, to understand the participants´ career decision-making process, it is necessary to understand the context in which decisions occur.

Qualitative results were divided into five themes (Table 15). The first theme discusses participants´ perceptions regarding their career aspirations and final career decisions. The second theme was related to the participants´ self-concept, or about their collective identity as rural citizens. This identity was constructed by participants in dialectical experiences with urban people and helped explain academic differences between them and urban students. The third theme was associated to the families´ socioeconomic conditions while participants were school students. Perceptions of family´s resources were analyzed as barriers and/or supports during the participant´s career decision-making process. The fourth theme was associated to the school context. It presented elements such as lack of infrastructure or academic resources as barriers during the participants´ career decision. In addition, this theme addressed the academic context as a barrier for rural teachers to perform optimal academic activities. Finally, the fifth theme was associated to the municipality context in which participants and their families lived. It included experiences related to the internal conflict.

Themes and categories were constructed based on redundant experiences expressed by participants--when the same experience was expressed by more than three participants. In addition, some remarkable quotes expressed by participants (Participant 1 to Participant 10) were used to support the main idea of each theme. Moreover, to identify themes, the analysis was framed into chronological academic and social experiences that were mentioned by participants. The chronological analysis was divided into primary and secondary education

levels, and the social issues into regions that experienced (or not) the internal conflict (Figure 5). The analysis showed that participants experienced lack of family and school resources during primary, secondary, and middle school levels. In addition, those living in internal conflict zones reported experiences of family migration, teacher absence and/or psychological trauma. It was not mentioned by participants from no internal conflict zones. Participants associated all those situations with perceptions of low quality education or low scores in the standardized test.

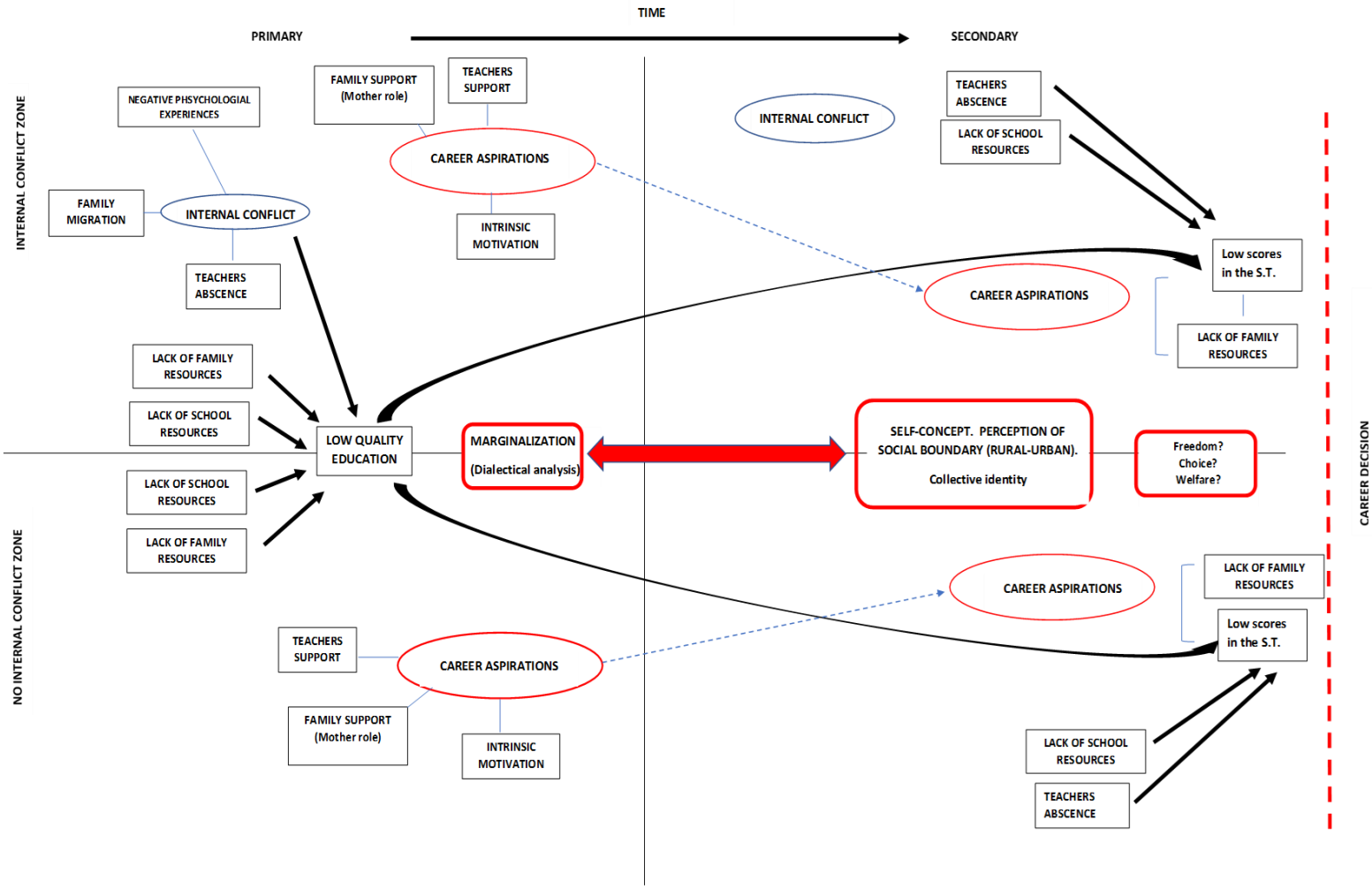

Figure 5. Framework Used to Analyze the Qualitative Data About Participants´ Career Decision-making Process

Table 16. Themes and Categories that Emerged From the Qualitative Analysis

Themes	Categories
1st Dreams vs Real options.	• The compromise process implied switching a university career for other (academic barriers). • The compromise process implied switching a university career for a job (academic and financial barriers).
2nd An inequal competition for post-secondary careers.	• Experiences that allow to observe financial differences between them (participants) and urban people. • Experiences that allow to observe academic differences between them (participants) and urban people.
3rd The family socioeconomic status bounding the career decision.	• Financial barriers experienced during the primary school. • Financial barriers experienced during the secondary and middle school. • Financial barriers during the career decision (last school grade).
4th The school context bounding the career decision.	• Academic barriers experienced during the primary school. • Academic barriers experienced during the secondary and middle school. • Academic barriers during the career decision (last school grade). • Participants´ perceptions of negative conditions for teachers to live in their towns. • Participants´ perceptions of negative conditions for teachers to work in the school.
5th The social context bounding the career decision.	• Internal conflict experiences. • Perceptions of supports to pursue university careers.

Table 16 shows five themes and categories that emerged from the qualitative analysis. The first theme is related to the participants´ career dream and the final career decision. The second theme is related to the participants´ self-concept as rural youth, and how they defined themselves in comparison to urban students. The themes 3, 4, and 5 were related to family,

school, and municipality situations that bounded the participants´ career decision-making process.

Dreams vs Real Options

When asked about their career dreams, participants responded they aspired to study university careers after finishing the secondary level. For example, they mentioned careers such as *"medicine," "computers engineering," "law,"* and *"veterinary medicine."* However, while discussing about their final career decisions, some of them recognized that they were not aligned with those "*dreams*;" consequently, they defined these aspirations as "*unreachable dreams.*" In some cases, participants expressed this situation as *"something normal"* because in their families nobody were able to pursue university careers. On the other hand, some participants evidenced frustration while talking about this decision. They saw this experience as a negative moment in their lives. Some participants said, *"I knew that by aspiring to go to the university I was putting a hard responsibility on my mom….because she did not have resources to support that aspiration," (Participant 5),* and *"I wanted to go to the University to study something related to software, but I knew that my family did not have resources to support that aspiration, so I decided to work to save money to study later." (Participant 6).* When participants were asked about their final decision, they recognized that it was oriented by *"accessible," "possible," "real," "doable,"* or *"viable"* options. For example, for those participants with financial resources, but low scores in the standardized test, the "real" option was another university career in which the score required was lower than in the idealistic aspiration (e.g., audiology instead of medicine or economics instead of law). On the other hand, those participants who recognized either financial barriers or financial and academic barriers decide for rural or urban low-skill jobs (e.g., daily workers

in agriculture, construction, office secretary). This suggests an inequality of competition for post-secondary careers.

As mentioned, this study only included rural youth participants; however, it is necessary to conduct a rural-urban dialectical analysis to better understand the participants´ career decision-making process. From this point of view, some academic situations that are experienced by rural youth are not barriers itself, but these can be defined in this way because of the gap they create between rural and urban students. For example, results of rural students in the national standardized test were defined as barriers because rural students' scores are lower than urban students´ scores and this difference, in turn, limits them to pursue university careers.

From this dialectical perspective, participants perceived themselves as "rural youth" or "peasant youth." Although these definitions can be associated with cultural traditions or economic activities such as agriculture, participants expressed this condition as a disadvantage for them to acquire knowledge during the school process, in comparison to urban students. It is important to highlight that those disadvantages were not referred to human capacities, but to academic knowledge or tools that were learned or needed during the school stage. As a participant said:*"[for pursuing a university career] I had the same human capacities [as urban youth], but I did not have the same tools or knowledge" (Participant 4).* Regarding this self-concept, participants expressed it was created through the school stages by sharing moments with non-rural people (e.g., family living in urban regions). Baxter and Scharp (2015) defined these experiences as "dialectical interplay processes." In this regard, some participants highlighted: *"I used to go to the city, at these moments, I noticed that I was a step behind in comparison to my cousins. I felt that I was in disadvantage about my [academic] knowledge. For example, in math or language" (Participant 9)* or *"I had urban*

classmates, and they had a computer to do the tasks or to do research. In my home we did not have that." "Even, because of temporal migration processes, two participants were enrolled to urban academic institutions" (Participant 3). Based on that, the participants´ career decisions were conscious processes, framed in a self-concept, in which they were aware about the disadvantages of being rural people, in comparison to urban people. These disadvantages were explained in the following themes.

The Family Socioeconomic Status Bounding the Career Decision

Most of the participants described themselves as rural youth belonging to low socioeconomic status families. Participants used words such as *"poor family,*" "*low incomes family,*" *"low economic capacity,"* or *"low resources family*" during this self-definition. In addition, they perceived this family condition as a constraint during their academic process. For example, to buy school supplies during the primary level or to pay for postsecondary education. Some youth said: *"It was not easy for my mom to buy my school supplies, so I preferred to say her use the money to buy my siblings´ supplies;" (Participant 4)* and "*some students in my primary school did not have shoes or school uniforms to go to the school, so some teachers had to go to their homes with those elements. After that, these kids could go to the school" (Participant 1).*

Regarding the reasons behind these financial situations, some of the participants highlighted that the rural economy did not provide their parents with good jobs to get good salaries. Other remarked that their parents did not have jobs for long periods of time. For example, a participant belonging to a peasant family, who aspired to study software engineering, said: "*In my household my father played the role of getting the money, and my mother stayed at home. My father used to work in our small farm, but the incomes he got were not good enough to pay for my university education, only for us to eat and to cover the*

household necessities" (Participant 6). In the same way, two other participants whose parents used to work in farming activities mentioned: "*My father always told us that agriculture is only for subsistence, that it is not a good activity for getting money*" *(Participant 4),* and *"I was born with the idea of migrating because my parents said that the situations with the crop and prices were not easy because of the national policies" (Participant 7).* Other participants, whose parents used to work in non-agricultural rural activities experienced and expressed similar ideas. For example, *"during the secondary school, we had to migrate to Bogotá because my mom´s economy was not good. She was self-employed, but she did not get incomes" (Participant 2),* and, *"My father used to work repairing trucks in our town, and one day he told me. I cannot support you for the post-secondary education, so you have to work with me" (Participant 10).*

In summary, these participants recognized the rural economy as a factor limiting financial capacities in their households. This situation, in turn, was prioritized as the main determinant for them to not pursue university careers after finishing the secondary level. As it will be discussed, this situation was related to the level of poverty and the lack of profitable activities in rural areas.

The School Context Bounding the Career Decision

Although participants shared the lack of financial resources played a major role in their career decisions, some participants experienced other kind of barriers. For example, some participants had financial support to pursue university careers, but they had low standardized test scores to be admitted to the career they aspired the most. As a relevant element, this situation was experienced by participants with relatively high scores in rural areas. A participant expressed: *"I was the best student in my municipality [in the SABER test],*

and I applied to study medicine; however, my result was not good enough to be admitted; it was frustrating for me" (Participant 1). The same situation happened to another participant, who mentioned: *"my family encouraged me to study Law because it is a career with prestige, but when I applied, I was rejected because of my score [in the Saber test]" (Participant 7).* These two participants had three common elements: (a) being rural, (b) having outstanding scores in the standardized test in comparison to their rural peers, and (c) being rejected in the universities to study their idealistic aspirations because their scores were not good enough in comparison to urban students. Based on that, a question emerged: Why do rural students have lower scores on the standardized test in comparison to urban students? When participants were asked about possible reasons for this question, they identified that their schools did not provided them with optimal conditions to learn during primary, secondary, and middle education levels. For example, one of them shared a story that was also experienced by two other participants (Participants 3 and 9): *"in primary we had to share the same teacher and the same classroom with other grades [at the same time]*. Moreover, *"the teacher divided the board, so 1st graders paid attention to the right-hand side, and 2nd graders to the left-hand side"* (*Participant 1).* Other participants mentioned physical infrastructure as inadequate for learning. On one hand, they recognized lack of academic elements such as computers or labs to learn about science and/or technology. Regarding the secondary education level, participants mentioned lack of teachers during some periods of time or specific courses as possible reasons for their low performance.

Not only participants and their families, but also participants´ teachers experienced contextual barriers for developing optimal academic activities. Although no teachers or rural schools' staff were interviewed, this theme emerged because some participants recognized that the context in which they grew-up was not ideal for their teachers to conduct classes or

live in the rural community close to the school. This situation pushed some teachers to migrate or just to reduce the standards of the education they taught. For example, primary-level teachers taught more than one grade at the same time, dividing the board. Social issues also affected some teachers' abilities to teach as noted by a couple participants. *"There were classmates with family in the guerrillas, if the teacher requested some activity to these students, and they did not like this, they said that to their families and the illegal groups threated the teacher, so the teacher had to migrate. For this reason we did not have teachers for some periods" (Participant 2).* Furthermore, *"I remember that some teachers preferred to migrate from our municipality because of social issues; it affected our education" (Participant 7).* These participants shared evidence that the Colombian rurality imposed barriers for both the primary and secondary students and their teachers. Therefore, better living conditions in rural communities is part of the solutions to improve rural youth´s academic performance.

The Social Context Bounding the Career Decision

As mentioned before, our "case" of analysis was bounded by the context in which participants grew-up, by the participants' ages, and by the participants´ minimum academic level. However, results allowed the researchers to identify differences among participants related to the level of supports of barriers they experienced in the school process. These differences were mainly constructed through the intersectionality of their local experiences (e.g., social issues associated to the internal conflict) and their families´ socioeconomic status. For marginalization analyses, this intersectionality helped analyze differences among persons belonging to the same social group (Mughal, 2021). First, some of the participants mentioned experiences associated to the Colombian internal conflict that started in 1950; this

information was corroborated with information of municipalities where the participants resided. Although the conflict was the most relevant negative event in rural areas during the last half century, it is necessary to highlight that not all the rural areas suffered or experienced the same negative consequences. This difference was observed among the participants.

When asked about situations of the internal conflict, four participants remembered recalled barriers regarding their education during primary, secondary, and middle schools. Participant 2 shared he had to migrate with his family because they were threatened by the guerrillas. In addition, another participant remembered that when she was a primary school student during the 1990s, the guerrillas attacked the police station in her town, and it was a negative situation that she never forgot. She shared: *"I remember that one day the guerrillas arrived to the town, and we have to put ourselves below our desk until the attack finished. After that, I wondered why we have to experience this, why a child has to live this?" (Participant 5).* Moreover, a participant that was previously mentioned because her standardized test score was not good enough to study medicine, remembered a situation she experienced during her last school grade when she had to go prepare the standardized test. *"Somedays I could not go to take the classes for preparing the standardized test because the course was in the city, and nobody could be out of home after 5 p.m. If we went out, my parents could be kidnapped by paramilitary groups" (Participant 1).* In contrast, other participants, who lived in rural zones that were not directly affected by the internal conflict. These participants had a reaction of "surprise" when the topic was addressed: *"it was a peaceful zone; in fact, I used to go alone to my school when I was a first and second grader. Despite the fact all the houses were far among them, we knew each other in the village, so we care each other" (Participant 7).* These differences demonstrate that for some participants, because of living in regions directly affected by the internal conflict, there were not only

barriers associated to the lack of financial and/or academic resources, but also those associated to the violence. Words such as "fear," "unfear," or "trauma" were used by participants to talk about what they felt at those moments.

Another difference among participants is related to the opportunities they had to pursue the university career they aspired the most. Despite of barriers, some of them could go to the university after finishing the school. To do so, they reported supports such as teachers who provide them with counselling sessions, external family (i.e., family living in urban areas), and own family´s resources. Although our analysis was focused on the final career decision, not about what participants experienced in the post-secondary stage, some situations they lived in the university helped reinforce the idea that the rural context imposed barriers in comparison to urban students. After finishing the school, Participant 2 was enrolled to an urban university, in which he studied electrical-mechanical engineering. Because lack of financial support in his household, he worked in construction activities to pay for his university costs (i.e., meals, rent, school supplies, tuition and fees). Regarding this experience, the participant said: *"the contrast between my town and the city was pretty big. First, the economic situation because I had to work with my uncle to pay for my university. Somedays, I did not sleep because I arrived to do my homework, so my performance was not good in comparison to my classmates. Second, in some courses, for example math, I did not understand some concepts because I never learnt the basic concept in my school. And the other thing was that I missed my family, I remember I cried for that reason."* After living this experience, this participant dropped-out of the university and returned to his town.

Qual-Quan Data Triangulation and Discussion

After presenting both quantitative and qualitative findings separately, this part of the document shows the convergence of the two sets of results. To do so, this triangulation analysis combined the six qualitative themes and four groups of quantitative results to explain the career decision-making process from sociological and economic theoretical perspectives (Table 17).

Both the quantitative and the qualitative analyses showed that most of the participants aspired to pursue either university careers or entrepreneurship activities after finishing the last school grade. However, most of the participants experienced a compromise process because of contextual barriers. As a result of the triangulation analysis, the discussion presents four new meta-analysis categories. These four categories were created to discuss and explain the career decision-making process from individual, family, school, and municipality levels. Moreover, the analysis used a dialectical approach between urban and rural students, families, schools, and municipalities, as follows: (a) "self-recognition of marginalization and social boundaries," (b) "the economic marginalization process and its relation to the families´ resources," (c) "academic resources and results in comparison to urban areas," and (d) "rural social issues."

This theoretical analysis was based on economic and sociological theories. For the economic perspective, the analysis followed the modernization theory, which argues that the adoption of modern urban practices allows social development (Vargas-Hernandez, 2008). On the other hand, the sociological perspective followed the rural marginalization theory, which explains rural inequalities because of the historical urbanization process. This theory includes elements such as social boundaries and academic inequalities (Cortes, 1994).

Table 17. Qualitative and Quantitative Data Used to Construct Meta-analysis Categories

Qualitative Findings (Themes)	Quantitative Findings	Meta-analysis Categories that Emerged after the Triangulation Process
An inequal competition for post-secondary careers. (1)	No parallel quantitative findings emerged.	Self-recognition of marginalization and social boundaries: This category was created using the theme (1). It was used as the core for the further triangulation and discussion.
Longitudinal Financial Barriers. (2)	Perceptions of family´s resources during the secondary and middle school. dy/dx = 7%. Negatively correlated to the compromise process. (i)	The economic marginalization process and its relation to the families´ resources: This category was created based on themes (2) and (4) and quantitative findings (i) and (iii). It discusses and explains how the historical economic marginalization bounded the families´ economic empowerment.
Longitudinal Academic Barriers. (3)	Perceptions of good performance in the standardized test. dy/dx = 6%. Perceptions of good quality during secondary and middle education. dy/dx = 7%. Both were negatively correlated to the compromise process. Realistic careers: most of the respondents of the survey experienced compromise process. (ii)	Academic resources and results in comparison to urban areas: It was created using themes (3), (4), and (5) and findings (ii) and (iii). It was used to explain and discuss how the historical marginalization limited the academic development in rural areas (compared to the urban).
Dreams vs Real Options (4)	Idealistic careers associated to entrepreneurship activities and University careers. (iii)	
Not only students experienced disadvantages. (5)	No parallel quantitative findings emerged.	Rural social issues: Created using themes (5) and (6) and the finding (iv). It discusses and explains the career decision as an intersectionality process.
Differences among participants (6)	Perceptions of fear to migrate to urban areas to pursue the idealistic career. dy/dx 4%. Positively correlated to the compromise process. (iv)	

Self-Recognition of Marginalization and Social Boundaries

Participants recognized an invisible frontier between them and urban people. It occurred through a dialectic interplay process when they spent time with non-rural people. From this finding, two emerging concepts were established as the core of our discussion. First, from a sociological perspective, this study described the division as a "social boundary." Lamont and Molnár (2002) defined this as an objectified form of social differences that results in unequal distribution of social opportunities or material and/or nonmaterial resources. Second, because this situation was expressed and supported by the logit model as a collective pattern related to a specific rural population, the concept of "socioeconomic marginalization" also helps explain the historical gaps between urban and rural areas in Colombia. For the Latin American context, Cortés (1994) defined this as a persistent unequal participation of social groups in developmental processes and the access to their benefits. This phenomenon is objectified in communities (e.g., rural), and occurs to groups, not to individuals. That is, some individuals belonging to a marginalized community can have enough material and/or non-material resources for developing their lives or for pursuing high-quality careers or jobs. Bock (2016) highlighted that the urban-rural socioeconomic marginalization causes gaps in cultural and education terms.

The Economic Marginalization Process and its Relation to the Families´ Resources

Qualitative findings showed longitudinal financial barriers as one of the possible reasons for participants to experiment compromise processes. In addition, the scarcity of family resources had the greatest value of explanation in the quantitative analysis. These findings are connected to the socioeconomic development in rural areas in Colombia compared to urban places. During the last five decades, Colombia experienced a transition from an agriculture-based economy to an

urbanized one (The World Bank, 2008). Although this transition was accompanied by national economic growth and improvements in living standards (DANE, 2019), the impact was not the same for rural and urban areas. In other words, the social boundary was strengthened. Hence, 36.1% of rural people were under the monetary poverty line in 2018 compared to 11% in urban areas. Moreover, by analyzing rural households, the longitudinal Life Quality Survey (DANE, 2019) shows gaps between the rural and urban basic services coverage. As such, in 2018, the rural households´ services connection coverage were: 16% had internet connection (63% in urban areas), 8.1% had natural gas (80.3% in urban areas), 51% had clean water (97% in urban areas), and 90% had electricity (99.8% in urban areas); in addition, 8% did not have any electrical service (0.1% in urban areas).

As observed, the historic economic development model in Colombia created a clear differentiation between rural and urban economic conditions (Junguito, Perfetti, & Becerra, 2014). The problem lying behind this inequality is that the Colombian academic system does not have differentiated requirements for rural and urban students to pursue post-secondary careers. Hence, rural youth face a "competition" without the same tools that urban students have (Jurado & Tobasura, 2012). For instance, the fact that most of the rural families do not have enough incomes or services (e.g., internet) to provide their children with access to technology and/or information implies a clear disadvantage for them to acquire knowledge in comparison to urban people. This disadvantage, in turn, limits their options to compete with urban peers for professional careers when finishing the school level. Another situation is related to those rural youth aiming to pursue rural entrepreneurship activities. The family socioeconomic conditions and/or the scarcity of assets limit this decision, and play as a push factor for migrating to urban areas (Méndez Sastoque, 2016; Florez, 2017).

Different studies, conducted not only in Colombia, have provided empirical evidence about the positive correlation between the students´ socioeconomic status and the academic performance (Ramirez, Devia, & León, 2011; Aguado, Girón, & Salazar, 2006; Asta, 2006). Hence, it is necessary to promote public policies aiming to reduce poverty levels in rural areas to reduce academic gaps between rural and urban youth.

Academic Resources and Results in Comparison to Urban Areas

Participants perceived situations of the school context as barriers during their career decision-making process. The narrative qualitative analysis showed those situations as a longitudinal issue. In addition, the logit model results showed that good quality education during secondary and a good performance in the standardized test are factors that reduce the odd of experiencing compromise processes. As it happens to the families´ economic conditions, these barriers are closely related to the historically marginalization experienced by Colombian rural areas. It could say, it works as a "vicious circle."

With regard to the academic infrastructure, rural schools do not have the same services coverage or the same infrastructure facilities as urban schools do. The Interamerican Development Bank found seven infrastructure gaps between urban and rural schools in Colombia (Gargiulo & Moreno, 2011): (a) academic locations, (b) school offices, (c) public services, (d) sewer and water, (e) health services, (f) multipurpose areas, and (g) recreation and sport areas. These gaps reinforced by the lack of services experienced by rural families highlights historically inequalities. Moreover, the Colombian Education Ministry found that because of the age of the school buildings (37 years in average), 27% of the rural schools experience problems of floods (MEN, 2018). Public investments in rural school infrastructure need to increase to improve the rural education quality in Colombia (Burgos, 2011; Rodriguez, Sanchez, & Armenta, 2007).

Rural school teachers play an important role in the academic context. Although some participants perceived that their teachers were not good enough to teach them, this perception is also associated to the historically rural marginalization. That is, the economic and infrastructure gap between urban and rural areas also bounded rural teachers´ work. As it happens to rural students in comparison to the urban students, social boundaries and marginalization mean disadvantages for rural teachers in comparison to their urban peers. The Colombian Social and Economic Research Center (FEDESARROLLO, 2019) conducted an analysis about investments in the rural education sector. They found that teachers with graduate degrees and/or higher teaching experience preferred to work in urban areas because of the barriers imposed by the rural context, such as lack of infrastructure for living or teaching, social issues, and time spent for moving from rural areas to the most populated cities. As such, while 43% of urban teachers have a graduate diploma in education, only 23% of rural teachers have this academic level (Forero & Moreno, 2019). Another example is related to the number of places that are assigned for teaching in urban and rural areas. In 2012, the Colombian government only assigned 20% of the total places available for rural schools; it happened because of a low rate of applicants. In contrast, the government assigned more than 70% of urban vacancies (MEN, 2018). Regarding rural teachers´ salaries, some Colombian regions eliminated an 20% extra payment that was paid until 1990´s for teaching in rural schools, known as a rural bonus (República de Colombia, 1959). Therefore, currently rural teachers do not receive any significant compensation for teaching in rural schools. For public policies, an extra bonus for teaching in rural areas could be an option not only for attracting teachers to rural schools, but also an option for improving the education quality. Some impact assessment programs conducted in rural areas in developing countries have shown that teacher

incentives policies can improve the education quality and/or the students´ performance (Mbiti et al., 2019; Banerjee & Duflo, 2011).

Rural students have reported lower scores in national and international standardized tests in comparison to their urban peers, which are likely a result of the conditions of rural education. The Organization for Economic Co-operation and Development (OECD) and Viana-Barceló & Pinto-Prieto (2018) have documented that this difference is close to 13%. In addition, official statistics have shown that this gap is persistent through primary, secondary, and middle education (MEN, 2018).

Rural Social Issues

Participants reported experiences associated to the internal conflict during their school stage. National statistics show that this social issue affected both rural and urban areas; however, people living in rural regions experienced the worst part of the war. That is, because illegal groups were concentrated in rural areas, Colombian government could not develop rural public goods in order to increase the economic productivity in remote regions (Ibañez, 2004). In addition, because illegal groups accumulated rural lands to extend their territorial domain, rural people were forced to leave rural areas, losing their farms and crops. Approximately 312,000 people experienced the "forced displacement" phenomenon (Ruiz, 2011).

For rural youth, the Colombian internal conflict implied negative consequences, increasing the gap between them and Colombian urban youth (Franco, 1998). Studies focused on Colombian rural youth have identified several effects associated to negative experiences during the internal conflict, or during forced displacement processes (Centro Nacional de Memoria Histórica, 2015). Barceló (2007) investigated the consequences of forced displacement of rural youth living in a populated city. Barceló (2007) concluded that 52% of youth reported or were diagnosed with

psychological trauma, and 38% reported aggressive behavior as a consequence of this experience. In addition, rural municipalities that were affected by the internal conflict reported greater levels of depression and stress than urban municipalities (Torres & Barrios, 2018). Moreover, other authors have highlighted that internal conflict not only affected rural youth because of the forced displacement, but also because some of them were forced to be enrolled to illegal or official armed groups (Pachón, 2009 ; Romero Picón, & Chávez Plazas, 2008).

Conclusions and Discussion

This convergent parallel mixed-method research study explored and explained perceptions of contextual barriers and/or supports of the Colombia rural youth career decision-making process, as well as the final career decision of the participants when they finished the last school grade. As result of this analysis, there are six conclusions based on the empirical evidence that came from the quantitative and qualitative findings.

Conclusion 1

Participants experienced the career decision-making process in a socioeconomic marginalized context. That is, participants recognized a social boundary between the rural context they lived in and the Colombian urban places. This marginalization implied an inequal "competition" between them and urban students, in which there were differentiated conditions to acquire knowledge, but a standardized system of requisites for pursuing post-secondary careers (e.g., the national standardized academic test SABER).

This conclusion is aligned with sociological theories of human development that explain the marginalization as an element bounding academic decisions (Bock, 2016). As explained, the Colombian economic model created differences between urban and rural areas during the last 50

years. Therefore, rural populations have not been provided with the same infrastructure or economic opportunities (Kalmanovitz & Lopéz, 2005). As result, neither rural education institutions, nor rural families have been able to support rural students with material and/or non-material resources to study in the same conditions of urban students (e.g., school supplies, internet connection, science labs, and libraries). Consequently, there has been a historical academic gap between Colombian urban and rural students, in which rural people perform lower academic scores and have lower rates of access to university education (Viana Barceló & Pinto Prieto, 2018; Delgado, 2014).

Conclusion 2

Participants aspired to pursue either university careers or entrepreneurship activities when finished the last school grade. In addition, those university careers were not only related with rural economic activities, such as agricultural or natural resources areas.

This conclusion is aligned with official statistics that show that, when available, Colombian rural youth pursue economics or business administration careers (40%), human and social sciences careers (25%), engineering, architecture, or urbanism (19%), and agronomy and/or veterinarian medicine (5%) (MEN, 2018).

During the qualitative interviews, participants expressed that their aspirations were not oriented toward rural activities (e.g., agriculture) because of family-related experiences in which their parents were not able to get enough financial resources. This finding was aligned to socioeconomic analysis of Colombian rural youth in which lack of family resources have been associated to rural youth´s expectations of living in urban areas (Siaucho, 2014; Jurado & Tobasura, 2012).

Conclusion 3

Two out three participants experienced compromise process when they finished the last school grade. Although most of the participants aspired to pursue either university careers or entrepreneurship activities after finishing the last school grade, they decided for different options because of academic (i.e., the academic standardized test) and/or financial barriers. Depending on the type of barrier, participants decided between two realistic aspirations: (a) when the barrier was only related to the academic performance, they decided for careers with lower academic requirements (e.g., medicine for audiology, or law for economics), and (b) when the barrier was not only academic, but also financial (or only financial), they decided for low-skill jobs mainly associated to agricultural activities. In total, 65% of the respondents of the quantitative analysis and 100% of the qualitative participants experienced this process.

This conclusion was aligned with Gottfredson´s theory regarding predictors of the career decision (Gottfredson, 1981). According to this theory, because of contextual constraints, youth must sacrifice their academic or job aspirations, deciding for those that are in the feasible region. In addition, the conclusion supported previous studies about Colombian rural youth that found the poverty levels and the academic urban-rural gap as factors explaining the career decision process (Siaucho, 2014; Ospina, 2019; Díaz & Fernández, 2017).

Conclusion 4

Families´ financial resources bounded the academic process of most of the participants. In addition, these barriers were perceived by participants through primary, secondary, and middle school levels. As explained, because of the economic marginalization, Colombian rural families are less likely to get enough incomes to overcome poverty situations, in comparison to urban families (DANE, 2019). The poverty situation imposed restrictions for families to support the

academic process of their members. As such, most of the participants expressed that the rural context did not provide their parents with good jobs, so they were not able to provide them with academic tools and resources while they were school students. this conclusion was aligned with previous studies that found a positive correlation between the family´s richness and the students´ academic performance (Ramirez, Devia, & León, 2011; Aguado, Girón, & Salazar, 2006; Asta, 2006).

Conclusion 5

Participants did not have enough academic tools or resources in the school to acquire competitive knowledge in comparison to their urban peers. They expressed that because of the historical marginalization process, neither their town nor their schools had optimal conditions for them to learn. For example, they highlighted the lack of science labs, community libraries, and computers to do research. In addition, they mentioned that for some periods of time they did not have teachers, so they did not learn specific concepts that were evaluated in the standardized test.

According to the Colombian Ministry of Education, one of the biggest differences between urban and rural regions is related to the academic physical infrastructure. This gap has affected Colombian rural students (MEN, 2018). Some studies have concluded that these differences of academic resources implied a negative impact on the academic performance of rural areas in standardize tests (Viana-Barceló & Pinto-Prieto, 2018).

Conclusion 6

Contextual barriers bounded students´ academic process and the conditions for rural teachers to work. Participants recognized that their teachers were also limited by the lack of optimal infrastructure both in their towns and in their schools. For example, the participants

explained that because of lack of computers and/or labs, their teachers were not able to do research or to explain them through experienced-based activities. In addition, some of them suffered social issues that were imposed by the Colombian internal conflict (e.g., threatens by the illegal groups). In these cases, teachers also suffered process of forced displacement to urban areas.

This conclusion reinforces the idea that the marginalization has affected community-process, such as education or convivence. For instance, official statistics show that teachers with higher academic development prefer to work in urban schools, mainly because of lack of infrastructure to work in rural schools (FEDESARROLLO, 2019).

Implications

As observed, participants shared that the rural youth career decision-making process was bounded by school-related and external conditions that were imposed by the historical marginalization process in Colombia. In addition, barriers were persistent during different school stages (i.e., primary, secondary, and middle education). Therefore, implications both for policy makers and practitioners should be oriented toward a combination long-term and short-term impact strategies.

Implications for Policy Makers

Because the biggest problem of the Colombian rural areas is associated to the multi-dimensional poverty level, it is necessary to promote investments in public goods to reduce this gap. Without reducing these levels of poverty, any other policy could not have the expected impact. Academic monetary investments should include, among others, household and school internet coverage, science labs, libraries, and sports facilities. Moreover, the Colombian government

should promote rural development policies to increase rural people´s living standards (e.g., better employments and better incomes).

Regarding the academic system, the government should promote an alternative structure for rural areas in which students acquire knowledge through experience-based activities. For example, a system in which STEM areas are learned using contextual elements from forestry, agriculture, and natural resources.

In addition, the Colombian government should promote scholarships for rural teachers to improve their professional development. By doing this, they could acquire knowledge about different strategies to teach under non-optimal conditions.

Public policies should create a differential system for rural youth to access to university careers and/or entrepreneurship activities in comparison to their urban peers. For instance, eliminating the standardized test or increasing to their scores a percentage (e.g., 13%) to recognize a historically difference between them and urban students. By doing this, the government would be recognizing a historically marginalization that have affected rural communities. Moreover, because rural youth not only aspire to pursue agricultural and natural resources careers, but also to pursue those related to urban activities, this alternative system must be oriented toward all the areas that are available for urban people.

To overcome the barriers associated to the students´ families, public policies should be oriented toward the reduction of the poverty by giving monetary subsidies to rural students. These monetary subsidies can be used by families to get school supplies, to develop entrepreneurship activities, or to pursue university careers. This need is reinforced by the fact that due to the historically marginalization, most of the Colombian universities are located in urban areas, so for rural youth aiming to pursue university careers, this decision implies an extra cost for moving from

their municipalities to the city. Another way to reduce this inequality is by increasing university programs and/or initiatives that are offered in rural areas (e.g., Universidad en el Campo program, or Utopía program), including not only agricultural and natural resources careers, but also programs that are focused on non-rural economic activities.

Regarding the teachers´ working conditions, public policies should be oriented toward creating incentives to retain and motivate teachers. Moreover, policies should increase the professional development of teachers in rural communities (e.g., scholarships for rural teachers to obtain graduate degrees in education).

Implications for Practitioners

Rural teachers, counselors, and school staff should create strategies to optimize resources that are given in the rural context. For example, because the standardized test prioritized some specific areas such as math, physics, chemistry, social sciences, and reading, rural schools could focus only on these areas to prepare students for the test, reducing the academic gap. Because this prioritization would imply a trade-off between prioritized areas and other activities such as music, arts, or sports, families and local communities should promote community activities in which youth can learn about these areas. For example, social programs to promote music or arts among youth. Moreover, aligned with the latest implication for policy makers, school teachers could implement a system in which students learn the prioritized areas of the standardized test through practice-based activities. For example, using elements of the rural context, such as agriculture, mining, or natural resources to teach STEM areas.

Because most of the middle school students (10^{th} and 11^{th} graders) are likely to have lack of knowledge related to the primary (1^{st} to 5^{th} graders) and secondary (6^{th} to 9^{th} graders) school levels, teachers and counselors should focus on teaching areas that are prioritized by the

standardized test, and providing students with information of university careers (e.g., university careers academic requirements, university locations, university costs). By doing this, last grade school students, such as students in middle schools, could have a better score in the national test for applying to university careers, and have more information related to their idealistic career aspirations.

Implications for Rural Youth Networks and/or Organizations

Because of the importance of the rural youth networks and/or associations in rural territories, these networks should play a role of contact between national governmental policies and the rural youth, using a bottom-up approach. By doing this, rural youth networks should recognize differences among territories and/or Colombian departments to provide public policy institutions with information related to the rural youth´s necessities and/or expectancies regarding their career aspirations and education. From the opposite perspective, these youth institutions should provide rural youth with information regarding career opportunities (e.g., financial information, universities careers availability, etc.), rural youth entrepreneurship programs, and/or any other topic related to the rural youth career decisions.

Study Limitations and Recommendations for Future Studies

Because of the COVID19 pandemic in 2020, both qualitative and quantitative data used in this study were virtually collected. It was not possible to have a representative sample nor to include rural youth in regions in which there was no internet connection services. Aligned to the previous limitation, because only rural youth with internet connection was able to participate, it was not possible to find differences among Colombian regions or departments. Another limitation is related to the fact that Colombia does not have official databases focused on rural youth for

researchers or the academy to do research with secondary data. Regarding the qualitative interviews, the fact that those meetings were virtually conducted imposed restrictions to establish a deeper connection between researchers and participants. Therefore, some intrapersonal topics were not deeply discussed or addressed (e.g., psychological or material affectations of the internal conflict).

Recommendations for Future Research

For further studies, we recommend increasing the number of respondents of the sample in the quantitative analysis. By doing this, results could report a national statistical representativeness and possible differences among Colombian regions. The analysis of these differences among rural youth, also known as intersectionality, is a topic that should be developed in more detail in future studies as it could allow to observe different levels of rurality in Colombia. In addition, we recommend performing longitudinal studies to observed changes of barriers and/or supports and careers aspirations through the students´ life. Align with that, it would be useful to perform causality analysis, using comparison techniques among urban and rural groups, or pre-post analyses of intervention projects (e.g., effects of learning activities in the rural youth standardized test scores, effects or impacts of monetary transfers to rural teachers or students in the rural youth students' academic performance). Another recommendation for future studies is to analyze experiences of rural youth while they are enrolled to post-school education. Researchers should investigate to what extent those contextual barriers that are imposed during the school stage persist through post-secondary education or occupational careers.

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CHAPTER 5. CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Introduction

This thesis dissertation explored and explained the Colombian rural youth decision-making process regarding migration, university education and careers. First, the Chapter 2 identified research approaches, methods, and previous findings about Latin American rural through a review of literature. This review analyzed research studies published in peer-review journals. Second, the Chapter 3 performed a quantitative analysis to explore factors associated to the Colombian rural youth migration expectation. This multilevel analysis included individual and family variables. Finally, the Chapter 4 explored and explained perceptions of barriers and/or supports experienced during the Colombian rural youth career decision-making process. This analysis used a convergent parallel mixed-method design. Results from these three studies were integrated and summarized with three cross-cutting themes: (a) a context surrounded by poverty and inequality; (b) aspirations and expectations associated to urban activities; and (c) rural youth research must be supported and strengthened.

A Context Surrounded by Poverty and Inequality

The main conclusion of this dissertation is that the rural context imposes restrictions for rural youth to pursue their career aspirations, which results in a push factor for youth to migrate to urban areas for career opportunities. Rural Colombian youth navigate their career decisions based on socioeconomic restrictions in rural communities, which overpower their intrapersonal aspirations or desires. As mentioned in Chapters 2, 3 and 4, rural Colombian youth live in marginalized conditions in comparison to the Colombian urban youth. This marginalization, which

has been historically and politically reinforced since 1970 (Junguito et al., 2014), has created a social boundary between rural and urban communities, and resulting in higher levels of multidimensional poverty for rural people (Machado, 1998). This parameter showed that the difference between rural and urban areas was 36% in 2019 (Rural = 39.8%; Urban = 13.9%) (DANE, 2020).

A relevant conclusion of chapter 3 is that is that, after finishing the last grade of the middle school (11^{th}), Colombian rural youth do not see viable options for developing economic or academic activities in rural areas. The real alternative is for rural youth to move to urban communities. In addition, this analysis demonstrated that women youth have higher levels of migration expectation. This situation is related to the historical labor conditions in rural areas that are mainly oriented toward men activities. As such, there is a double discrimination for women; for being rural and for being female (Ocampo, 2014). Finally, the multilevel analysis showed that, although the rural population can be labeled as a marginalized social group, there are socioeconomic differences inside this group. Accordingly, there is a greater motivation for migrating for youth in lower socioeconomic status families. This finding reinforces the idea that the marginalized context and the poverty level are key factors for the rural youth decision-making process (Jurado & Tobasura, 2012; (Méndez Sastoque, 2016; Siaucho, 2014).

Aspirations and Expectations Associated to Urban Activities

The second conclusion of this dissertation is that aspirations and expectations of Colombian rural youth are not only oriented toward rural activities, but also toward urban careers and jobs. As it was mentioned in the review of literature in Chapter 2, because of better living conditions and a broader academic offer in urban areas, rural youth expectations (aka, idealistic aspirations) are mainly constructed in the imagery of the city (Jurado & Tobasura, 2012; Méndez Sastoque,

2016). In addition, Chapter 2 showed that when youth are about to finish the secondary and middle school (11th grade), their expectation for leaving the rural areas increases. This conclusion was reinforced by findings in Chapter 4. It was evidenced that most of the rural youth participants aimed to pursue university careers that are commonly oriented toward Colombian urban activities (e.g., business administration, economics, law, medicine). This statement was aligned with national statistics about careers pursued by rural youth. This statistics show that only 4% of the rural people studying university careers pursued agriculture or natural resources careers, which have been historically associated to rural activities (MEN, 2018).

From the opposite perspective, this conclusion stated that rural youth do not necessarily aspire to pursue low-skill jobs in rural areas (e.g., as daily workers in agriculture, mining, or construction) nor military careers (e.g., being a police officer or a soldier). The same official statistics (MEN, 2018) show that those are real options for them after finishing the last school grade. It happens mainly because lack of financial resources and/or low scores in academic tests.

Further, Chapter 4 showed that most of the participants of the qualitative analysis aspired to pursue urban activities or careers based on their parents´ experiences in rural jobs or activities. Youth participants perceived that rural activities, such as agriculture or mining, are not good enough to have good living standards.

Rural Youth Research Must Be Supported and Strengthened

The discussion of previous studies focused on Colombian rural youth, followed in Chapters 2, 3, and 4, demonstrated that several rural youth issues have been studied from different disciplines (e.g., education and/or communication programs, migration, expectations). These studies have been aligned with research topics conducted in other similar countries in Latin America. Regarding findings of these studies, there is an alignment between them, and the

marginalized socioeconomic conditions previously mentioned. That is, authors of most of the studies concluded that the socioeconomic conditions in Colombian rural areas are not optimal for youth to study, develop agricultural activities, or increase their living standards (e.g., Méndez Sastoque, 2016; Silva, 2009). In addition, the analysis of methods and methodologies evidenced that it is necessary to strength research elements such as the statistic representativeness, the qualitative trustworthiness, the qualitative approach, the mixed-method analysis triangulation, and the collaboration among researchers in studying Colombian rural youth and communities.

Implications for Public Policy

As mentioned in Chapters 1 through Chapter 4, rural youth experience marginalized living conditions in the Colombian rural context. Because of that, any policy oriented toward improving the living conditions of this population should be framed in a community-development approach.

First, there is a necessity for recognizing rural communities as a population that has been historically marginalized. Although this has been repeatedly mentioned through this dissertation, the Colombian government has not implemented this definition when formulating rural development policies. As result, most of the initiatives have tried to solve specific issues (e.g., programs to increase technology transfer to youth farmers) without using a holistic strategy. An effective strategy should focus on structural solutions because marginalization implies a structural problem.

The first structural policies should be oriented toward the reduction of poverty in the rural areas. Without doing this, any strategy implemented will not likely have a positive impact on the rural youth lives. Youth will continue migrating or experiencing compromise processes regarding their career decisions. In the long-term, this reduction can be reached by increasing investments in public goods such as roads, services (e.g., internet, water, sewer) and education infrastructure.

These investments must increase the economic productivity of rural activities such as agriculture, tourism, and mining. In the short-term, it is necessary to provide rural youth with grants or scholarships to buy school supplies or to develop entrepreneurship activities. These conditional grants or scholarships have been used in other developing countries to engage youth to academic and/or occupational activities in marginalized (urban-rural) or segregated (urban-urban) conditions. For example, in Brazil, Honduras, and Mexico (Adato & Hoddinott, 2010). By doing this, the Colombian government could reduce migration processes and increase the school students´ academic performance.

Because the rural scores in the standardized tests have shown longitudinal differences between urban and rural students, and participants reported this situation as a barrier for pursuing their idealistic careers, it is necessary to recognize this difference as a result of the historical marginalization, and not as a normal consequence of being rural. There are two options to address the historical marginalization of rural education: (a) Eliminate standardized academic test scores as a requisite for rural people when applying to university careers, and (b) recognize the historical difference as a percentage that must added to the rural students´ scores (e.g., if the historic difference is 13%, and a rural student get a score of 70%, the modified score must be 83%). By doing this, rural students might have equivalent condition as urban students for applying to university careers.

It is necessary to provide rural youth with grants for moving to the cities, or scholarships to pay universities tuition and fees because most of the universities are located in urban areas. On the other hand, programs such as "Universidad en el Campo," which provide technical, technological, and professional careers to rural students in-situ, should be implemented by other

Colombian universities, providing not only agricultural-related careers, but also other areas, such as economics, law, medicine, and other professional careers.

Finally, the Colombian government should promote monetary incentives for teacher to teach in rural areas, as well as improvements in the physical infrastructure of the rural schools. In addition, the government should promote scholarships for rural teachers for studying graduate programs because of the difference in the level of professional development between urban and rural teachers.

Recommendations for Future Studies

Because there were no Colombian studies oriented toward the characterizations of the Colombian rural youth, we recommend performing studies to characterize and measure socioeconomic, cultural, and intrapersonal variables. If possible, this research should include a representative sample from different Colombian regions. By doing this, Colombian researchers could use this as a baseline for developing research and initiatives focused on topics such as education, entrepreneurship, and migration. Based on Chapter 2, another recommendation is to strengthen research elements such as the definition of the qualitative approach (i.e., following guides like the provided by Creswell), the representativeness of the quantitative studies, and the triangulation in both qualitative and mixed-method analysis.

Regarding Chapter 3, we recommend performing research studies focused exclusively on the rural youth migration issue. Because the data used for this analysis was not oriented to this topic, we faced a limitation to include more independent variables. In addition, we recommend maintaining the multi-level strategy for analyzing the rural youth migration issue. To better-explain this phenomenon, more levels of analysis should be included. For example, as second or

third level variables, different regions could be included to analysis differences within the national territory or different periods of time to conduct longitudinal analysis.

Regarding Chapter 4, we recommend more research studies be conducted using mixed-method strategies. As observed, this method provides researchers with rich data to perform an in-depth analysis, while performing statistical analysis. In addition, future studies should increase the number of respondents of the sample in quantitative analyses. By doing this, results could report a national statistical representativeness and possible differences among Colombian regions. The analysis of these differences among rural youth, also known as intersectionality, is a topic that should be developed in more detail in future studies as it could allow to observe different levels of rurality in Colombia. In addition, we recommend performing longitudinal studies to observed changes of barriers and/or supports and careers aspirations through the students´ life. Aligned with that, it would be useful to perform causality analysis, using comparison techniques among urban and rural groups, or pre-post analyses of intervention projects (e.g., effects of learning activities in the rural youth standardized test scores, effects or impacts of monetary transfers to rural teachers or students in the rural youth students' academic performance). Another recommendation for future studies is to analyze experiences of rural youth while they are enrolled to post-school education. That is, to research the extent those contextual barriers are imposed during the school stage persist through post-secondary education or occupational careers.

As a strong recommendation, future studies should analyze academic differences between urban and rural Colombian students, performing multilevel analysis, in which level 1 corresponds to students, level 2 to regions (urban – rural), and, if possible, level 3 to different periods of times (years). This study would allow to observe to what extent academic differences are associated to intrapersonal and/or contextual variables.

Summary

Colombian rural youth are part of the future of Colombia's social and economic prosperity. Investing in rural youth in the context of rural community development will be essential to help address structural and long-term challenges of marginalization and inequities, and help Colombian rural youth pursue their ideal career aspirations. In doing so, rural youth and families will be given a new hope to pursue careers that may transform the conditions of rural communities with a new generation of professionals and entrepreneurs.

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APPENDIX A PERCEPTION OF CAREER BARRIERS AND SUPPORTS QUESTIONNAIRE

SECTION A1 (RIASEC codes)

Rank the following sentences* in order of preference. 1 being your favorite, and 6 being your least favorite.

When I was high school student, I liked to tinker with machines/vehicles, work outdoors, be physically active, use my hands, build things, tend/train animals, and/ or work on electronic equipment. (R)

When I was high school student, I liked to explore a variety of ideas, work independently, perform lab experiments, deal with abstractions, and/or do research. (I)

When I was high school student, I liked to attend concerts, theatre, art exhibits; read fiction, plays, and poetry; work on crafts, take photography, express myself creatively, and/or deal with ambiguous ideas. (A)

When I was high school student, I liked to work in groups, help people with problems, do volunteer work, work with young people, and/or serve others. (S)

When I was high school student, I liked to make decisions, be elected as school representative, start my own business, campaign politically, meet important people, and/or have power or status. (E)

When I was high school student, I liked to follow clearly defined procedures, use data processing equipment, work with numbers, type or take shorthand. be responsible for details, and/or collect or organize things. (C)

***These sentences were adapted from Holland´s codes (Holland, 1959) following the Purdue Career Center guide.**

SECTION A2. (Idealistic Aspirations)

Think about the dream you always had about your career before finishing the school. Then, please rate how much next options are related to this dream. There are no wrong answers!

	Extremely disinterested	Somewhat disinterested	Little disinterested	Little interested	Somewhat interested	Extremely interested
Going to the University to study Medicine.	⬭	⬭	⬭	⬭	⬭	⬭
Going to the Police force.	**1**	**2**	**3**	**4**	**5**	**6**
Pursuing a career as a sportsman.						
Going to the University to study Nursing.						
Going to the Air Force						
Going to SENA to study a technical career.						
Going to the University to Study to be a schoolteacher.						
Having my own business in my town.						
Going to the University to study Architecture.						
Having my own farm to sell food or fibers.						
Working in mining activities.						
Going to the University to study Business Administration.						
Going to the city to work in any activity.						
Going to the military forces						
Doing a course about hairdressing and/or aesthetics.						
Going to the University to study Law.						
Staying at home having and caring of my own family.						
Going to the University to study Agronomics.						
Going to the University to study Arts.						
Going to study to work in Religion services.						
Being an artist.						
Going to the University to study Veterinary.						
Going to the University to study Physical Education.						

Going to the University to study Computing.						
Working as an automotive mechanic.						
Working on farms in Agriculture activities.						
Going to the University to study Agribusiness administration.						

SECTION A3

Regarding the option you aspired the most, select the option that matches with your career decision-making process.

a. I wanted to pursue this because it was an opportunity to stay close to my family or my village.
b. I wanted to pursue this because it was an opportunity to migrate from rural areas.
c. I wanted to pursue this because it was an opportunity to gain knowledge to be applied in my town or village.
d. By pursuing this, it was not important for me if I had to migrate to urban areas or to remain in my town.

SECTION B. (Barriers and Supports)

Please rate your next sentences according to your experience …

	Strongly disagree	Somewhat Disagree	Slightly disagree	Slightly Agree	Somewhat Agree	Strongly Agree
During my childhood I had enough resources at home to be prepared for my career aspirations. (D)	⬭	⬭	⬭	⬭	⬭	⬭
During primary school, I received good education to be prepared for my career aspirations. (D)	**1**	**2**	**3**	**4**	**5**	**6**
My primary teachers encouraged me to pursue my career aspirations. (D)						
When I was a primary school student, my family encouraged me to pursue my career aspirations. (D)						
When I was at primary student, the school provided me with tools and infrastructure to pursue my career aspirations. (D)						
Currently, my family had the needed resources for me to pursue my career aspirations. (P)						
My academic background allowed me to get good results in test for applying for my career aspiration. (P)						
I had enough information about institutions and costs related to my career aspiration. (P)						
I had information about financial options to pursue my career aspiration. (P)						
I knew persons or contacts in the institutions that provided a major for career I wanted to pursue. (P)						

My career aspiration was too expensive for my family and me. (P)						
During the secondary school, I received a good education to pursue my career aspiration. (P)						
My secondary teachers encouraged me to pursue my career aspiration. (P)						
My family encouraged me to pursue my career aspiration. (P)						
My secondary school provided me with tools and infrastructure to be prepared to pursue my career aspiration. (P)						
I was afraid to leave home to pursue my career aspiration. (IP)						
I had the same capabilities of urban youth to pursue my career aspirations. (IP)						
I was prepared to migrate to other towns, cities, or departments (States) to pursue my career aspiration. (IP)						
I had the same resources of urban youth to pursue my career aspirations. (IP)						
Pursuing my career aspirations resulted in traveling long distances. (IP)						
I needed to care for my family or any other person before pursuing my career aspiration. (IP)						
I was psychologically prepared to start the career I want to pursue. (IP)						

SECTION C. (Realistic Aspirations)

After finishing the high school, did you pursue the career you aspired the most?

Yes. ⬭

No. ⬭

Please write the activity (career) you pursued after you finish the school:

_____

What were the main reasons why you pursue this activity (career)?

_____

_____

_____

_____

_____

SECTION D

(Demographics)

What is your current age? _____

What is your sex: _F/M_____?

What is Municipality did you live in during high school: type in_____

What Department is your high school located in? [drop-down choice]

What was your household's SES while you were a high school student? 1 to 6_

(or) SISBEN level (of your household while you were a high school student): 1 to 3

How many people lived in your household while you were a high school student: [drop-down choice]

Which persons live in your household while you were a high school student?

Relationship	Yes	No	Number (if apply)	Was in charge of the household? (Y/N)
Mother			N/A	
Father			N/A	
Siblings				
Grandparents				
Other				

Did your mother live with you while you were in high school? Y N

Did your father live with you while you were in high school? Y N

How many siblings lived with you while you were in high school? 0, 1, 2, etc.

How many grandparents lived with you while you were in high school? 0, 1, 2, etc.

How many other people (not including parents, siblings or grandparents) lived with you while you were in high school? 0, 1, 2, etc.

Who made the most money to support your household while you were in high school?

Drop-down choice (Mother, Father, Sibling, Grandparents, Self)

What is your father's level of education? (drop-down)

What is your mother's level of education? (drop-down)

What was your father's occupation while you were in high school? (text box)

What is your mother's occupation while you were in high school? (text box)

Who influenced you most to pursue your career? (text box)

APPENDIX B. INTERVIEW PROTOCOL

RESEARCH and RESEARCHER INTRODUCTION

Before the researcher start the main conversation, he or she will introduce himself (e.g., name, occupation, region of origin, etc.). Moreover, the researcher will introduce the research project, explaining the purpose and the importance of this data for the Colombian rural youth career decision analysis. He will explain participants about their rights (during the research project) and about the confidentiality of the data collected. Finally, the researcher will request the participant´s consent to follow the conversation.

PERSONAL INFORMATION: no identification data (e.g., ID, name) will be requested from participants. All data will be anonymized, and only a participant number will be used as a code to differentiate a participant from other participants

Municipality _____
Department _____
Village _____
Age _____
Gender _____
Participant # _____

MAIN CONVERSATION: in order to collect data for the analysis, 7 topics will be followed. These topics will not be read as open-ended questions, but these will be a guide to help the researcher to get the required information to conduct the QUAL analysis.

Topic 1: How was the context in which the participant grew-up (family, social, economic)?

The researcher will orient this conversation topic toward relevant memories related to the participant´s school, neighborhood, municipality, and/or family, especially those that could impact the career decision-making process. The researcher will identify relevant characteristics of the socio-economic context in which the participant grew-up.

Topic 2: What were the participant´s career aspirations during primary and secondary school (focus on the process)? did those aspirations switch? Why?

The researcher will orient this conversation topic toward career aspirations that the participant had through the school process (i.e., while the participant was a primary and secondary school student). Key words such as “dreams”, “goals”, and/or “career” will be used to identify career aspirations. The researcher will identify different aspirations during the different developmental stages (see Gottfredson´s theory) and will ask the participant about reasons for these changes.

Topic 3: What barriers and/or supports (related to these aspirations) did the participant perceive during primary and secondary school?

The researcher will orient this conversation topic toward those elements that the participant perceives as barriers to pursue his/her dreams. This part of the conversation will be focused on intrapersonal, environmental, distal, and proximal elements that affected the career decision.

Topic 4: What supports did you find to help you develop your career choice? Explain me these supports.

The researcher will orient this conversation topic toward those elements that the participant perceives as supports to pursue his/her dreams. This part of the conversation will be focused on intrapersonal, environmental, distal, and proximal elements that affected the career decision.

Topic 5: what is the relationship between those barriers and supports and the context in which the participant grew-up? Are those related only to rural areas? Why?

Using information provided in Topics 1, 2, 3, and 4 , the researcher will conduct a loop conversation to analyze how the rural context affected those aspirations.

Topic 6 did the participant pursue his or her dream (most desire career aspiration), or did he/she sacrifice this for another career? What was the main reason?

The researcher will orient this conversation topic toward the final career decision the participant took. Causes and implications of this decision will be discussed.

Topic 7 regarding career barriers and/or supports that were perceived by the participant, what he/she would modify to help other rural students in order to pursue their idealistic career aspirations? Why?

The researcher will ask the participant to share what barriers and/or supports should be addressed to help rural youth pursue their idealistic career aspirations. This will be the last topic for the participants to share their final comments during the interview.