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Chazuta: subnational governments and internationalization of the agro-industrial value chain

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Abstract

Purpose – The purpose of this paper is to examine the role and contribution of San Martín and Chazuta subnational governments in promoting development and internationalization of the cocoa and chocolate value chain from the stakeholders' perceptions. This work was based on a qualitative approach in which information triangulation method, information processing with evaluation rubric and WebQDA software were used. The results showed that stakeholders of both value chains perceive that the subnational government's actions taken to develop and internationalize these value chains are poorly valued and insufficient. Likewise, six internationalization barriers were identified in which two are perceived as the main limitations: low productivity levels and access to innovations and technology. These results contribute to enrich the decision-making process of political authorities and public officials from the San Martín subnational governments. Moreover, they provide information, according to the Peruvian national requirements, on the perceptions needed to rethink and improve the governmental services available, especially productive activities in the rainforest area (Presidencia del Consejo de Ministros, 2015; Wiener Fresco, 2010). This can improve or create new extension services to increase the quality of the Chazuta's cocoa and chocolate products and to facilitate their entry into more demanding and profitable markets (Shapira, y otros, 2015).

Design/methodology/approach – This paper has been developed by using a qualitative approach with an exploratory and descriptive scope. The objective was to examine a study case of how subnational governments contribute in the promotion of development and internationalization of agro-industrial value chains as alternatives to illicit crops (Hernandez, Fernandez, & Baptista, 2010). The Chazuta case was selected because it is representative of the region in terms of coca eradication and is located between two regions of high biodiversity – Cordillera Escalera Regional Conservation Area and Cordillera Azul National Park.

Findings – One of the issues hindering the ability of the Chazuta cocoa and chocolate producers is based on their perception that the subnational governments' efforts are focused on meeting already-established goals and little emphasis is placed on solving productive problems. On the other hand, at an articulation level, the most relevant efforts have been connecting the cocoa and chocolate customers to Chazuta producers through events. In spite of this, such events are not considered a permanent activity and the producers do not perceive that these mechanisms enable them to maintain these long-term trade relationships. This can be explained by the fact that Chazuta cocoa and chocolate organizations recognize that they still have incipient productive capacities to meet the foreign market's demand. Furthermore, associations, cooperatives and SMEs are not able to maintain constant levels of production quality, except the family-based business. Knowledge and techniques provided by subnational governments and private organizations are not fully used or implemented by the associations' members. This low level of knowledge application can be explained by cultural factors and also because the producers receive multiple and sometimes contradictory information from various providers of technology extension services. This leads to inadequate use or non-implementation of productivity improvements, thus generating a virtuous circle in which production and quality of the goods remain at low levels, which hinders their entry into demanding and profitable markets.



Research limitations/implications – This paper has been developed with a qualitative approach considering an exploratory and descriptive scope. Chazuta case was selected because it is representative of the region in terms of eradication achievements and it is located between two regions of high biodiversity. A rubric is an evaluation method of individuals or organizations performance, taking into consideration the evaluator's pre-established criteria to determine if the objectives and goals are being met. Based on these criteria, evidence and performance information is collected. Following, performance is graded based on the researcher's predetermined criteria and finally a merit-based judgment is made on the performance.

Practical implications – The results contribute to enrich decision making of political authorities and public officials from San Martín subnational governments. They provide information, according to Peruvian national requirements, on the perceptions needed to rethink and improve provided government services, especially in rainforest area productive activities. This adds up to improvement or creation of new extension services to increase the quality of Chazuta's cocoa and chocolate products, and to facilitate their entry into more demanding and profitable markets.

Social implications – The situation of San Martín region and Chazuta district is contextualized and emphasis is given to socioeconomic conditions and the value of cocoa as an alternative crop to coca. From 1980 to early 2000, Peru lived a period of generalized violence due to narcoterrorism, which had large-scale outreach in southern highland and rainforest areas. To deal with this situation, subnational governments in collaboration with international cooperation decided to consolidate agro-industrial value chains in order to generate legal income for rural populations. For this purpose, alternative crop policies were implemented and San Martín region achieved the best results.

Originality/value – This fieldwork was carried out as part of the undergraduate thesis but after fieldwork, with the use of online software tool WebQDA, codes were created to systematize and quantify the collected information in the content manager. The codes were created taking into account assessment and evaluation variables. Each value represented a code referred to a performance level as perceived by Chazuta cocoa and chocolate value chains stakeholders.

Keywords Value chains, Amazon area, Productive integration

Paper type Research paper

Introduction

This paper focuses on examining the role and contribution of the San Martín Region subnational governments, located in Peru, in order to promote development and internationalization of the agro-industrial cocoa and chocolate chain (UNODC & DEVIDA, 2014). This chain has been prioritized in official documents by subnational governments, such as the Concentrated Development Plan with its strategic plans, policies and alternative crop programs (DRASAM, 2016). Emphasis has been given to the case study of associations and companies in the Chazuta district because they concentrate 53 percent of the cocoa production in the San Martín province. In addition, this district has great cultural and environmental diversity, which is reflected in the iconography embodied in its chocolate and cocoa production (Coronel & Solórzano, 2017; DRASAM, 2016). The environmental and productive importance of Chazuta has to do with its location, that is, between the Cordillera Escalera – a regional conservation area and the National Park called Cordillera Azul. This represents a special work for the subnational governments regarding the prevention of expansion of the productive frontier into environmentally protected areas (Bartra & Naráez, 2012).

For this purpose, the present article first addresses the research problem to understand the role of the San Martín region subnational governments in promoting the development and internationalization of the cocoa and chocolate chain. Second, a theoretical framework focusing on the key points of agro-industrial value chains and the role of subnational governments in the introduction of innovations through technology extension services is described. In this sense, the situation of the San Martín province and Chazuta district is contextualized. Emphasis is also given to socioeconomic conditions and to the value of cocoa as an alternative crop to coca as this region stands out as a successful case of eradication of coca crop (SIMDEV, 2011).

Subsequently, the applied qualitative methodology is presented. Information collection involved 38 interviews and 20 surveys with stakeholders of the Chazuta cocoa and chocolate value chain. This field research was carried out as part of the undergraduate theses of three

students from the Faculty of Management and Senior Management of the Pontifical Catholic University of Peru (Cajavilca, Miranda, & Vega, 2018). As part of the methodology, the WebQDA software was used for systematization in order to facilitate information analysis through codification. Finally, analysis of results and conclusions are presented.

Research problem

From the 1980s to early 2000s, Peru underwent a period of generalized violence due to narcoterrorism, which achieved a large-scale outreach in the southern highland and rainforest areas (Morales *et al.*, 2015). To deal with this situation, subnational governments, in collaboration with international cooperation, decided to consolidate agro-industrial value chains in order to generate legal income for rural populations. For this purpose, alternative crop policies were implemented and the San Martin region achieved the best results. Thus, the region received the status of success for incorporating an alternative productive development in Peru (Morales *et al.*, 2015; Cabieses, 2010; Kuramoto, 2008).

In San Martin, a specific work was carried out with an alternative crop of cocoa which increased to such an extent that in 2016 this region provided 43 percent of the total production nationwide (Ministerio de Agricultura y Riego, 2016; SIMDEV, 2011). Although San Martin is currently the main cocoa producer, barriers related to quality production are still identified and should be managed to ensure that the San Martin's cocoa and its derivatives (i.e. mainly chocolate) can enter more demanding and profitable markets (Cajavilca *et al.*, 2018). To achieve this, it would be necessary to promote the internationalization of the cocoa and chocolate value chains, which generates high-added value to the region's producers (DRASAM, 2016). In this context, the research problem focuses on the need to know whether the effectiveness of this region's subnational governments, in their effort to promote the internationalization of the cocoa and chocolate value chains, has been sufficient. This will be evaluated by addressing specific knowledge on the Chazuta district stakeholders' perception of the cocoa and chocolate value chains. They have been the main producers of the San Martin province since the eradication of illicit coca crop on the basis of subnational government's actions taken for internationalization of the cocoa and chocolate value chains. This is in accordance with the Peruvian Government requirements, which state that the services delivered ought to have an evaluation component regarding the beneficiaries' perceptions in order to introduce improvements in the services provided (Presidencia del Consejo de Ministros, 2015).

Theoretical framework

The following section examines the theoretical framework focused on two points regarding how the internationalization of the agro-industrial value chains occurs, including introduction of innovations in these chains to improve their capabilities. Next, the role played by the subnational governments in the promotion of technological extension services (TES) is described. This was an introduction to innovation and technologies in order to overcome the barriers to the internationalization of the agro-industrial value chains.

Internationalization and innovation of agro-industrial value chains. Value chains are considered a sequential articulation of stakeholders aimed at improving productivity, promoting trade integration and increasing added value to goods or services delivered to final consumers (CODESPA, 2011). In this system, stakeholders can be classified as direct and indirect, with the first one being involved with each other and with the product or service delivered in different stages. Indirect stakeholders provide some types of support service to the direct ones, such as financing, technical assistance or communications, among others (Heyden, 2006).

On the other hand, these value chains consist in links that are fundamental interconnections for exchanging information, goods, services and technologies to generate added value (Isaza, 2008). Also, the number of links varies according to the type of industry,

level of centralization and extension of the chain. The most extensive chains are more complex in terms of production processes (Kaplinsky, 2000).

Value chains, particularly the agro-industrial ones, are considered opportunities for the development of rural areas and especially as means of overcoming poverty (Kuramoto, 2008). These chains generate greater value from a primary product, such as the agricultural ones, because they can adapt to demand requirements, enrich the product's nutritional value and reduce post-harvest losses (CEPAL, 2012).

In spite of this, there are multiple limitations to the development of agro-industrial value chains, which consequently makes it difficult to integrate the communities socioeconomically. Among the main obstacles, one can cite the high concentration of benefits and profits by intermediate stakeholders who distribute the products without added value, as opposed to other stakeholders who transform them (Barrientos, 2014). Against this, an alternative would be to enable the stakeholders, who are the weakest links, to enter more demanding markets, in which consumers can pay higher prices for higher quality goods and services (Ayres & Del Huerto Delgado, 2016).

Agro-industrial value chains in Latin American are made up of rural enterprises, micro and small companies (SMEs) (Sanchez García & Garcia, 2007). These SMEs have access only to local, regional and national sales, in addition to lacking capacity to enter or articulate with more profitable demanding markets, which could reduce their dependence on local markets (Stezano, 2013). Among the main causes of this problem are the limitations of SMEs in intensively attracting qualified manpower, the lack of enough financial capital, minimal technologies and innovations, and the lack of articulation capacity with other stakeholders preventing them from complying with quality standards (CEPAL, 2012).

Public policies of support and development play an important role in the promotion of the integration of agro-industrial SMEs into global markets. These should focus on the improvement of organizational, human and financial capacities of these companies by implementing innovations and technology. To this end, a case study is presented regarding the incidence of technological innovation capacity – the so-called TES, which are mostly delivered by government institutions.

The role of subnational governments in the promotion of technological extension services. Sustained economic development and overcoming of poverty are based on the ability to introduce social, institutional, cultural and technological innovations to the regional productive sectors. For this purpose, programs and policies are presented (Rendón, Roldán, Hernández, & Cadena, 2015).

TESs have been introduced to primary productive sectors, especially in agriculture, and applied by public institutions (Tostes, 2014). The purpose of these services was to provide information, knowledge, innovations and technology in order to boost companies' productivity and value chain competitiveness (Sierra, 2012; Christoplos, 2010).

These services are provided as training, technical assistance, workshops, financing and machinery delivery. The purpose is to improve production processes, to implement good practices, to develop workers' skills and to promote the sustainable management of natural resources (Rogers, 2013; Sierra, 2012; Crespi, 2010).

Additionally, these services have an impact on the improvement of product and service quality, costs reduction and collaboration network so that barriers to enter global markets can be overcome (Pavón, 2014; Swanson & Rajalahti, 2010; Romero, 2009).

Therefore, TESs are aimed at improving the already existing organizational capacities through new knowledge, innovations and technologies available in the market at low or even no cost (Medina, 2016). To a large extent, these services are provided by the government because they can repair market failures, such as information asymmetry and poor access to technology, which affect SME (Shapira *et al.*, 2015).

In this sense, public institutions promote services to facilitate the development of quality products in agro-industrial SME chains in order to integrate the most profitable global markets. With this information, the context of the San Martin region and Chazuta district will be described as a case study.

Contextual framework

The following section describes the context of the San Martin region and the measures taken to promote development of its agro-industrial value chains. These chains generate high-added value for its citizens and are an alternative to address violence and poverty. With regard to the region, the study focuses on the Chazuta district and how support has been given to both cocoa chain internationalization and generation of value for chocolate production.

The San Martin region and the promotion of cocoa and chocolate chains: the Chazuta case. Within their competencies, the Peruvian subnational governments have among their functions to promote a sustainable development through the use of human and territorial potential. For this purpose, they provide advisory services, technical assistance, information dissemination and economic support, among others (Law No. 27867, 2002; Law No. 27972, 2003). In San Martin, many policies and interventions aimed at replacing illicit crops had enhanced the violence locally, which placed the populations' safety and development at risk.

The San Martin region is a high rainforest area located in northeastern Peru, occupying the middle sector of the Huallaga River valley (MINCETUR, 2006). During 2015, this region contributed with 1.1 percent to the national gross added value, and of these, 24.8 percent was due to extractive activities regarding agriculture, hunting and forestry (BCRP, 2016). Therefore, agriculture is considered the first activity generating employment and production in the region, followed by services and trading activities (Instituto Nacional de Estadística e Informática, 2016).

The San Martin region has favorable climatic conditions with mild weather and excellent soils, favoring the diversification of plantation crops among which one can cite oil palm, sugarcane, yellow corn, cocoa and coffee (UNODC & Resa, 2014; DRASAM, 2016). In 2016, oil palm (54 percent) and cocoa (43 percent) had the highest productions, with the latter replacing the illicit coca crop, which had created situations of generalized violence, terrorism and human trafficking in the region (DRASAM, 2016; García, Namihás, Novak, & Masías, 2011).

The San Martin subnational government, together with international organizations such as USAID, TechnoServe and DEVIDA, has introduced alternative crops to eradicate coca plantation since the beginning of 2000s. They did so through projects and programs including technical assistance, machinery delivery and subsidies (UNODC & DEVIDA, 2014). These policies, programs and actions had positive effects on the reduction of illicit crops in the region, which fell from 17 percent in 1994 to less than 1 percent in 2012 regarding the regional GDP (García, 2013).

After the implementation of these alternative development policies, San Martin is considered a role model nationally and a reference for other regions facing similar situations (Morales *et al.*, 2015). The highest level of eradication of illicit crops in the San Martin region was achieved among the ten provinces of the San Martin province (SIMDEV, 2011).

These two subnational governments (i.e. regional and provincial) have the same management levels in their hierarchical structures, being responsible for promoting economic, social and environmental development (Gobierno Regional de San Martín, 2016). Likewise, at a strategic level, the mission of both government levels implies the need to promote integral and sustainable development of the San Martin territory (Gobierno Regional de San Martín, 2015).

At an operational level, on the other hand, the development of agro-industrial value chains was promoted through alternative crop programs to provide rural entrepreneurships,

SME with TES in the region and province of San Martín. In the San Martín province, Chazuta was the district with the highest performance and efficiency after the implementation of these programs, representing 51 percent of the production in the past six years (DRASAM, 2016).

The district of Chazuta is located in the south of the San Martín province, having access to land and river. Its population is approximately of 9,563 inhabitants, mostly dedicated to the agriculture of coffee, sugarcane and especially cocoa, which are sold in the local markets of Tarapoto and Chazuta (INEI, 2016; Gobierno Local de Chazuta, 2016). In this district, alternative crop programs and TES were used to tackle the increase in violence caused by narcoterrorism (Bartra & Naráez, 2012). Within the context of San Martín and Chazuta, the actions taken locally to reduce technological gaps and improve the productivity of micro and small enterprises linked to the cocoa and chocolate value chain will be detailed.

Reduction of technological gaps in the San Martín region for productivity improvement focused on international markets. Innovations and technologies were introduced to SMEs, associations and cooperatives producing cocoa and chocolate in the San Martín region through policies, programs and public organizations. These actions were concentrated in coca eradication, alternative crops, technical assistance, machinery, financing, and beneficiary groups in order to establish local productive organizations (García, 2013; Cabieses, 2010). They provided advisory services for improvement of cocoa crops regarding pruning, harvesting, post-harvesting, fermenting, drying and processing, including reduction of the negative impact on the environment to increase productivity and quality levels (TECHNOSERVE, 2015).

With regard to activities to promote the entry to international markets, the San Martín regional and provincial governments and local Chazuta authorities, together with organizations such as DEVIDA and Alianza Cacao, promoted and financed the participation of associations of cocoa and chocolate in international events (UNODC, & DEVIDA, 2014). This situation was concretized when the Chazuta's Mishky Cacao Association received the women entrepreneurs' recognition award at the Chocolate Salon held in Paris in 2014 (Rice, 2014).

The importance of this award lies on the fact that the above-mentioned Chazuta women's entrepreneurship achieved quality standards enabling them to participate in an international event, which is difficult for organizations without innovation and technology. The current market of cocoa and chocolate is focusing on the production of higher quality grains and chocolates, as demanded by the European Union, especially Switzerland (ICCO, 2017). These countries require certifications and standards regarding organic origin and fair deal, among others, to allow the entry of cocoa beans and chocolates into their markets (Ministerio de Agricultura y Riego, 2016).

In parallel, the Peruvian Cocoa Route was developed, covering the San Martín and Chazuta regions with the objective to promote tourism and increase the local, regional and national consumption of Peruvian cocoa and chocolate (Rice, 2014). In spite of this, there is still a gap in the public investment to enhance infrastructure and public service conditions, such as roads, water supply, sewage system and permanent electricity supply (IPE, 2016).

Methodology

This paper has been developed by using a qualitative approach with an exploratory and descriptive scope. The objective was to examine a study case of how subnational governments contribute to the promotion of development and internationalization of agro-industrial value chains as alternatives to illicit crops (Hernandez, Fernandez, & Baptista, 2010). The Chazuta case was selected because it is representative of the region in terms of coca eradication and is located between two regions of high biodiversity – Cordillera Escalera Regional Conservation Area and Cordillera Azul National Park.

A process of information triangulation was carried out between what theory indicates, what the subnational governments plan and what stakeholders of the Chazuta district cocoa and chocolate value chains perceive about the governmental role. To this end, an evaluation rubric was created to quantify qualitative information so that the perceptions about governmental activities for internationalization of cocoa and chocolate chain could be valued.

A rubric is an assessment method to evaluate the performance of individuals or organizations, taking into consideration the evaluator's pre-established criteria to determine whether the objectives and goals are being met (Brown, 2005; Angelo & Cross, 1993). Based on these criteria, one can collect evidence and information on performance, which is then graded according to the researcher's predetermined criteria. Finally, a merit-based judgment of the performance is made (Salinas & Cotillas, 2007).

For this research, the following evaluation criteria were taken into consideration based on the literature review on particularities of the San Martin and Chazuta subnational governments and on the case of cocoa and chocolate in these areas. A score level of 0, 1, 2, 3 and 4 was established to indicate the type of situation or performance and predict services for internationalization (Table I).

Two field trips were made to Chazuta in order to gather information, rendering a total of 36 interviews and 20 surveys with stakeholders of the Chazuta cocoa and chocolate value chain. These tools had an ethical component as informative consent forms were signed by the interviewees and respondents in order to formalize the use of the provided information only for research purposes (Ponce & Pasco, 2015).

After the fieldwork, scores were created to systematize and quantify the collected information by using the online software tool called WebQDA. These scores were created taking into account the evaluation variables. Each value represented a score for the performance level perceived by the stakeholders of Chazuta cocoa and chocolate value chains. The image of the aligned scores from the WebQDA and valuation obtained is shown in Figure 1.

Figure 1 shows the use of software for systematization and quantification of collected qualitative information (Table II).

The maximum score of 16 compared to that previously obtained (i.e. 6.27) shows that actions taken by subnational governments for internationalization are still perceived as insufficient. Negative perception was the greatest for introduction of improvements to increase the quality production of cocoa and chocolate. In addition, some barriers related to a slowing down internationalization were identified, as perceived by the stakeholders of cocoa and chocolate chain. These barriers were classified into six types and quantified based on the number of references reported by the stakeholders as shown in Table III.

As shown above, the two main barriers perceived by direct and indirect stakeholders are related to each other. One barrier is the poor access to innovations and technologies affecting the quality of their products, whereas the other is related to low productivity levels, which is related to the former. Both barriers are related to each other because new techniques, methods, machinery and knowledge generate productivity improvements in the organizations (Rogers, 2013). The presented results were analyzed by connecting the theory with the San Martin and Chazuta context.

Analysis and discussion

One of the issues hindering the ability of the Chazuta cocoa and chocolate producers is based on their perception that the subnational governments' efforts are focused on meeting already-established goals and little emphasis is placed on solving productive problems.

On the other hand, at an articulation level, the most relevant efforts have been connecting the cocoa and chocolate customers to Chazuta producers through events. In spite of this, such events are not considered a permanent activity and the producers do not perceive that

Author	Evaluation variable	Valorization
Ayres & Del Huerto (2016)	Product quality improvements	<p>0: There has been no improvement provided by subnational government or other organizations</p> <p>1: Improvements have been provided by organizations other than subnational government and without governmental coordination</p> <p>2: Improvements have been directly provided by the subnational government</p> <p>3: Improvements have been provided by organizations other than subnational governments with governmental coordination</p> <p>4: Product services are continuously delivered by subnational governments and private organizations coordinately and constantly to improve quality</p>
Ayres & Del Huerto (2016), Barrientos (2014)	Interworking improvements at link level	<p>0: There has been no improvement provided by subnational government or other organizations</p> <p>1: Organizations other than subnational governments have carried out activities to connect customers to producers or to direct and indirect stakeholders of the cocoa and chocolate value chains</p> <p>2: Subnational governments have carried out activities to connect customers to producers or to direct and indirect stakeholders of the cocoa and chocolate value chains</p> <p>3: Private organizations and subnational governments have carried out joint activities to connect customers to producers or to direct and indirect stakeholders of the cocoa and chocolate value chains</p> <p>4: Private organizations and subnational governments have managed to connect customers to producers and to direct and indirect stakeholders of the cocoa and chocolate value chains</p>
CEPAL (2012)	Improvements in human capacities	<p>0: There has been no improvement provided by subnational government or other organizations</p> <p>1: Improvements have been provided by organizations other than the subnational government and without governmental coordination to improve workforce skills</p> <p>2: Improvements have been provided directly by the subnational government to improve workforce skills</p> <p>3: Improvements have been provided coordinately between organizations other than subnational governments to improve workforce skills</p> <p>4: Product services are continuously delivered by subnational governments and private organizations to improve workforce skills coordinately and constantly</p>
Shapira, Youtie, Cox, Uyarra, Gök, Rogers and Downing (2015), Stezano (2013)	Organizational capacity improvements	<p>0: There has been no improvement provided by the subnational government or other organizations</p> <p>1: Improvements have been provided by organizations other than subnational government and without governmental coordination to improve management, production and organizational capacities of direct stakeholders</p> <p>2: Improvements have been provided by the subnational government directly to improve management, production and organizational capacities of direct stakeholders</p> <p>3: Improvements have been provided coordinately between organizations other than subnational governments to improve management, production and organizational capacities of direct stakeholders</p> <p>4: Product services are continuously delivered by subnational governments and private organizations coordinately and constantly to improve management, production and organizational capacities of direct stakeholders</p>

Table I.
Rubric evaluation for promotion of the internationalization of cocoa and chocolate value chains



Figure 1. WebQDA: systematization of the fieldwork collected information, 2017

Table II. Evaluation of the perceptions on the actions to promote the internationalization of the Chazuta cocoa and chocolate value chains, 2017

Internationalization promotion variables	Grading (references)				Total references	Evaluation formula	Weighted score	
	0	1	2	3				4
Product quality improvements	8	9	16	3	0	36	$[(0 \times 8) + (1 \times 9) + (2 \times 16) + (3 \times 3) + (4 \times 0)] / 36$	1.39
Interworking improvements at link level	9	3	16	5	0	33	$[(0 \times 9) + (1 \times 3) + (2 \times 16) + (3 \times 5) + (4 \times 0)] / 33$	1.52
Improvements in human capacities	4	4	18	3	0	29	$[(0 \times 4) + (1 \times 4) + (2 \times 18) + (3 \times 3) + (4 \times 0)] / 29$	1.69
Organizational capacity improvements	5	4	22	3	0	34	$[(0 \times 5) + (1 \times 4) + (2 \times 22) + (3 \times 3) + (4 \times 0)] / 34$	1.68
Sum of weighted score								6.27

Table III. Chazuta: perception of the main internationalization barriers identified by cocoa and chocolate chains stakeholders, 2017

Author	Identified barriers	No. of references in interviews
Shapira <i>et al.</i> (2015)	Little access to innovation and technologies	23
CEPAL (2012)	Low skilled or low qualified labor	13
Heyden (2006)	Meager financing capacity	15
Sierra (2012), Christoplos (2010)	Low productivity levels	21
Rendón, Roldán, Hernández, & Cadena (2015)	Ineffectiveness of public management, laws and policies	11
CEPAL (2012)	Low articulation levels	10

these mechanisms enable them to maintain these long-term trade relationships. This can be explained by the fact that Chazuta cocoa and chocolate organizations recognize that they still have incipient productive capacities to meet the foreign market's demand.

Furthermore, associations, cooperatives and SMEs are not able to maintain constant levels of production quality, except the family-based business. Knowledge and techniques provided by subnational governments and private organizations are not fully used or implemented by the associations' members.

This low level of knowledge application can be explained by cultural factors and also because the producers receive multiple and sometimes contradictory information from various providers of technology extension services. This leads to inadequate use or

non-implementation of productivity improvements, thus generating a virtuous circle in which production and quality of the goods remain at low levels, which hinders their entry into more demanding and profitable markets.

Conclusion

The main conclusion is that essential requirements are not met by the Chazuta cocoa and chocolate producers in order to enter more profitable and demanding markets, such as Switzerland (McCarthy, 2015). Of the five cocoa producer associations, only one has organic certification and they recognize that not all their members meet the required standards. Of the chocolate producers, only one association is internationally recognized despite having no international certification (Rice, 2014). With regard to this, the subnational governments provide services to increase the product quality and to strengthen the associations' productive capacities (Cajavilca *et al.*, 2018). Nevertheless, the efforts made by these agents are poorly valued, achieving a score of 6.27 out of 16 points. This reveals that subnational governments still should make more efforts to ensure the internationalization of agro-industrial chains that have been socially and economically beneficial.

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