

Public procurement for school breakfasts in the Bolivian Altiplan: Governance structures enabling smallholder inclusion



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ABSTRACT

Public food procurement offers the prospect for an alternative development path toward market inclusion, upgraded skills, and raised income for smallholder farmers. In Bolivia, the current public administration favors smallholder participation by regulating a preference of up to 40% for smallholders and local producers as opposed to other types of suppliers. However, smallholders' provision to local public institutions remains limited. To analyze the reasons for this, three municipalities with different approaches to smallholder procurement were investigated in a multiple-case study. Using transaction cost theory, our findings show that high transaction costs and pure market coordination act as strong barriers to smallholders' active participation. We found that hybrid governance structures, based on different types of relationship-oriented coordination and market exchange enable the inclusion of smallholders via: a) direct and active support from decision-makers, b) gate openers at the municipalities, and c) community embeddedness that supports trust-building and reduces uncertainty. Thus, our study contributes to opening up the 'black box' of hybrids in transaction cost theory by illustrating how social capital influences the mechanisms through which resources are distributed – a dimension inadequately considered in the traditional transaction cost theory approach.

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1. Introduction

The participation of smallholders in markets has been identified as a key factor for increasing smallholders' income and welfare (Barrett, 2008; Bernard and Spielman, 2009; Fafchamps and Vargas, 2005). In developing countries, however, smallholders are often at a disadvantage and face serious limitations when seeking to gain access to markets. Lack of information, weak contractual enforcement, high transport and communication costs, and poor access to credit are among the factors that restrict their participation (Dorward et al., 2005; Key et al., 2000; Poulton et al., 2010). Other barriers are limited technical skills, training to improve production, insufficient scale for effective product marketing, and lack of bargaining power to win a fair share of the value generated

in the market chain (Devaux et al., 2009; Kruijssen et al., 2009).

In recent years there has been growing interest in the use of public procurement as a policy tool for influencing behavior in the private and public sectors (Morgan and Sonnino, 2008; Sonnino et al., 2014), which includes, for example, promoting rural livelihoods. Public procurement nevertheless remains a politically sensitive issue because it involves significant amounts of public spending (Schapper et al., 2006). Existing research links the use of public procurement to the development of green or sustainable supply (Preuss, 2009; Thomson and Jackson, 2007; Walker and Brammer, 2009; Warner and Ryall, 2001); promotion and support of small businesses (Loader, 2013); and promotion of prioritized domestic industry sectors (Weiss and Thurbon, 2006). Morgan and Sonnino (2008) identify how various actors have used public food procurement strategies for school meal programs to favor local suppliers, mostly in European countries and the USA. In a study on public procurement for home-grown school meal programs, Sumburg and Sabates-Wheeler (2011) propose that the explicit objectives for this kind of public funding should be to create

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predictable demand and provide access to information, technology, credit, training, and long-term guidance and support. Such measures would strategically help stimulate the transfer of direct and indirect benefits to targeted groups, as well to the local population via multiplier and spill-over effects (Sumberg and Sabates-Wheeler, 2011). In a similar vein, Blanc and Kledal (2012) and Kledal et al. (2012) argue for the importance of establishing a supportive resource environment. This helps smallholders in developing countries overcome the high market entry transaction costs they often endure, thereby avoiding market failure despite demand.

In Bolivia, lobbying by smallholder organizations has led to the modification of public procurement laws and regulations to target smallholder access more directly. The current regulations favor smallholder participation in public procurement, granting smallholders up to 40% preference relative to other suppliers in the bidding process. The national procurement budget for food products reached Bs 1.32¹ million in 2011, equivalent to 7% of the total public procurement of equipment and materials and 0.8% of the general national budget, an increase from 0.5% in 2007 (Valdivia, 2013).

Within public food procurement, Bolivian municipalities are responsible for school breakfast programs, a potential market for rural smallholders. Every year, these municipalities launch a open call in accordance with the laws and regulations governing public procurement.² The law prescribes that school breakfasts should be based on local rural products and that preference should be given to smallholder suppliers. However, Valdivia (2013) shows that smallholders are actually supplying just 3.2% of food for school breakfasts. Despite clear commitment by the Bolivian state and an increasing municipal annual budget allocation³ for this program, poor smallholders have had very limited inclusion into more formalized market structures via public procurement. The aim of this study is to enhance our understanding of the reasons for this implementation gap.

The influence of transaction costs is a major theme in the analysis of smallholder market participation (Barrett, 2008). In fact, many authors affirm that transaction costs constitute an unsurmountable barrier for market access and one reason why smallholders are poorly incorporated into the market (Dorward et al., 2003; Holloway et al., 2000; Ortmann and King, 2007). Specific features of agricultural production such as seasonality, weather conditions, location and human and asset specificity, make agricultural products especially sensitive to opportunism. As a result, smallholders are often disadvantaged when dealing with trading partners (Allen and Lueck, 2005). These risks increase when considering smallholders' limited knowledge of food safety procedures, quality certification, processing, and delivery (Delgado et al., 2008; Rich and Narrod, 2010). Other additional factors are lack of managerial experience, low access to price information and difficulties in determining consumer demands (Bachev, 2004).

In this respect, transaction costs theory is useful to explain smallholders' actions and their consequences when engaging in different types of markets. Moreover, transaction cost theory explains the emergence of different governance structures, where actors organize in economic activities to secure their investments against risks and uncertainty (Williamson, 1979).

However, the transaction cost approach has been critiqued on several grounds for providing an incomplete account of the context or motivations that surround the transaction (Granovetter, 1985;

Martinez and Dacin, 1999). This shortcoming offers an under-socialized view of organization and market activity that ignores the social system of norms and informal relationships embedded in every exchange and in, multiple transactions (Martinez and Dacin, 1999). An important feature here is the role of social capital, which refers to the degree of social connectivity among actors, as well as the shared values and behavioral norms that allow and encourage cooperation (Fukuyama, 2001). Social capital can foster an environment of trust that reduces the need to organize special transaction arrangements and safeguards against opportunism. Intra-organizational trust can emerge through bonding among actors (Davidsson and Honig, 2003). Social capital can be a useful resource by enabling organizations to bridge external networks to obtain resources (Putnam, 2000). Trust, bonding and bridging in turn helps to reduce transaction costs (Fukuyama, 2001), as well as impact the nature of the governance structures actors establish. However, social capital is an asset that is difficult to encourage and depends mostly on the cultural and contextual characteristics of the population. A homogenous ethnic background, for example, is more likely to induce a shared consent about legitimate ways of cooperation (Bebbington, 1997; Knack and Keefer, 1997).

Against this backdrop we rely on transaction cost theory to analyze the factors that influence institutional arrangements governing the relationship between municipalities and smallholder suppliers. We ask the following research questions: What types of governance structures regulate smallholders' participation in the public procurement system in Bolivia? And how do these governance structures impact smallholders' market participation?

We address these questions based on three case studies carried out during 2011 and 2012 in three rural municipalities from the Bolivian Altiplan. These municipalities take part in the national public school breakfast program and were among the first to implement local purchasing. They therefore represent some of the very few successful experiences available. Moreover, since the use of the purchasing power of public procurement to favor smallholders is a relatively recent phenomenon, our research offers the additional empirical insight needed to ensure effective use of public procurement as a policy tool for improving rural livelihoods.

We found that various hybrid governance structures – based on different types of relationship-oriented coordination – support market exchange, and enable the inclusion of smallholders by means of: a) direct and active support from public sector decision makers; b) 'gate openers' at the municipality administrations; and c) community embeddedness that supports trust– building and reduces uncertainty. These findings contribute to opening the 'black box' of hybrids in transactions cost theory by illustrating how social capital influences the mechanisms through which resources are distributed, a dimension inadequately accounted for in the traditional transaction cost theory approach (Martinez and Dacin, 1999).

In the next section we present a brief review of the transaction cost literature related to smallholders' market inclusion, followed by a description of data collection and analysis methods. Results and discussion are then presented, followed by conclusions and implications for practice.

2. Transaction cost theory

Transaction cost theory argues that during a transaction there are costs unrelated to production such as drafting, negotiating, and safeguarding agreements (Williamson, 1985). These include information, coordination and management costs, as well as any related to legal affairs and supervision. Two behavioral assumptions trigger transaction costs: the first is *bounded rationality*, which encompasses decisions always made with limited information, i.e., when

¹ Approx. 150,000 Euro (1 Euro: 8.8 Bolivianos (Bs)).

² Law of Goods and Services Administrative System (SABS-181).

³ Municipal spending for school breakfast has increased from Bs 100.4 million in 2003 to Bs 529.7 million in 2012 (Valdivia, 2013).

the human mind cannot identify all alternative options and decision-making consequences (Simon, 1982). Bounded rationality is a significant issue for smallholders. It has been related to limited knowledge about food safety, agricultural inputs, processing and delivery and how to certify the quality of their products (Rich and Narrod, 2010; Delgado et al., 2008). It also relates to a lack of managerial experience, access to information about prices in alternative markets, and consumer demands (Bachev, 2004).

The second behavioral assumption is the possibility of *opportunistic behavior*, defined as astute self-interest seeking, i.e., any kind of lying, cheating, or stealing (Williamson, 1979, 1985, 1993). Both these behaviors become relevant to transaction costs when related to specific transaction attributes: *asset specificity*, *uncertainty*, and *frequency* (Williamson, 1985). Asset specificity arises when the more specific the investments, the more costly it is to assign an alternative use without loss of productive value (Williamson, 1981, 1985; Tadelis and Williamson, 2012). Different forms of asset specificity include a) site specificity, for example, a natural resource only available at a certain location (Joskow, 1988); b) physical specificity, for example, a specialized machine or tool (Joskow, 1998); c) human specificity, for example, specialized skills to perform certain tasks; and d) dedicated assets, for example, a specific asset such as machinery or other production input that cannot be used for other purposes (Williamson, 1998).

Uncertainty is defined as unanticipated changes in circumstances surrounding a transaction (Williamson, 1985), which in agriculture production, might be related to natural events or environmental conditions. However, the institutional environment might also be uncertain due to different factors, such as the high risk of opportunism, low level of trust and absence of adequate rules to protect contracts (Allen and Lueck, 2005). The frequency of a transaction is also relevant and a determinant of transaction costs because large and recurrent interactions may provide incentives for organization (Williamson, 1985).

In market transactions, different institutional arrangements arise spontaneously to overcome bounded rationality as well as to safeguard against opportunistic behavior (Williamson, 1979, 1985). Institutional arrangements involve agreements to exchange goods or services and to coordinate and enforce such agreements. Typically, the governance of transactions varies between two divergent poles. Under a spot market, nonspecific transactions occur between independent anonymous buyers and sellers with no other coordination means besides price signals. The opposite occurs when transactions are removed from the market and integrated within the firm (vertical integration) due to their highly idiosyncratic nature (Williamson, 1979). Between these two extremes, several hybrid governance structures can occur, defined as “transaction-specific governance” or “relational contracting” (Williamson, 1979). When the transaction is highly idiosyncratic and recurrent, the parties will tend to design specialized governance structures to fit the transaction characteristics. Ménard (2004) finds that hybrid governance develops when there is mutual dependence between partners, i.e., when specific investments can be transmitted among partners without losing the benefits of independent choices, and when uncertainties are so strong that organizing represents a better alternative to spot markets. Therefore, the higher the transaction costs involved in a given interaction, the more complex and specific the governance structures (Ménard, 2004). This means different governance structures will emerge, according to the attributes of the transaction which determine transaction costs. This was referred to as the “discriminating alignment hypothesis” (Tadelis and Williamson, 2012) and refers to the proposition that “transactions, which differ in their attributes, are aligned with governance structures, which differ in their adaptive capacities, so as to minimize transaction costs.” (Tadelis and Williamson, 2012:

pp. 18).

3. Methodology and data

We applied a multiple case study strategy which allows for the retrieval of data from complex social settings. Special attention is given to details of real-life context, relationships and practices – where the researcher has little or no control – and strives to understand the dynamics present within the setting (Eisenhardt, 1989; Yin, 2009; Stake, 2005). This approach is particularly appropriate for examining how transaction costs influence the social processes of smallholders' market inclusion (Bernard and Spielman, 2009; Barrett, 2008; Delgado et al., 2008; Shelanski and Klein, 1995).

To enhance robustness of the research findings, we chose to use a multiple case study design. We purposively sampled the three chosen cases, guided by the *a priori* established theoretical framework (Miles and Huberman, 1994). In our selection, we focused on rural municipalities with a high population of smallholders because they constituted the main target group of public procurement policies favoring local purchases. Since Bolivia is one of the most culturally and environmentally diverse countries in Latin America (Gigler, 2009), the Northern and Central Altiplan rural areas were chosen due to their similar geographical conditions, such as high altitude and extreme climate conditions, as well as a shared *Aymara* cultural background. We opted for literal replications (Yin, 2009) that were appropriate for predicting similar results by minimizing cultural and geographical variety. This enhanced the external validity of our findings.

On the other hand, the purposive sampling placed limitations on the generalizability of our study; including multiple cases embedded in Bolivia's different ethnical and agri-ecological zones could have contributed to a more precise domain definition to which our findings are generalizable (Yin, 2009). More cases with predicted different outcomes could have enabled us to rely on theoretical replication (Miles and Huberman, 1994) and possibly enhance the internal validity of our findings. However, only three municipalities in the selected area purchased from smallholders for their school breakfast programs and all of these were included in the study. While we were restricted by the practical limitations of the research setting, expanding the scope and number of cases is recommended for future research.

To enhance the study's reliability, a case study protocol, incorporating generally-accepted quality principles, was designed prior to data collection (Miles and Huberman, 1994). Construct validity was enhanced by using multiple data sources, such as archival material, interviews, and observation (Eisenhardt, 1989).

3.1. Data collection

Within-case data collection was carried out in 2010 and 2012. This began by interviewing the municipality employee responsible for the school breakfast program, who was asked to describe how the food purchase was organized and to identify the actors involved. Because our goal was to interview everyone involved with the program, we relied on snowball sampling (Miles and Huberman, 1994), a technique used in rural settings where identifying and accessing relevant informants can be difficult for the researcher (Ferguson and Kepe, 2011; Masuda and Garvin, 2008). We interviewed the initial actors and then invited them to identify others, who were progressively interviewed until we reached the point where no new actors emerged. To ensure complete coverage in each case, we purposively sought central and expected category actors if they were not identified through the snowball approach. The interviewed actors and selection criteria are described in

Table 1
Categories of data analysis.

Determinants	Bounded rationality	Opportunism	Asset specificity	Uncertainty	Frequency
Categories derived from literature	<ul style="list-style-type: none"> Limited knowledge^a Lack of access to information^b 	<ul style="list-style-type: none"> Not honoring agreements^c Cheating^c Withholding or distorting information^c 	<ul style="list-style-type: none"> Site^c Physical^c Human^c Dedicated assets Prestige and time as dedicated assets 	<ul style="list-style-type: none"> Primary uncertainty^c Behavioral uncertainty^c Political uncertainty 	<ul style="list-style-type: none"> Once^c Occasional^c Recurrent^c
Categories emerging from data	<ul style="list-style-type: none"> Language/communication limitations 				

^a Delgado et al. (2008); Rich and Narrod (2010).

^b Bachev (2004).

^c Williamson (1979, 1985, 1993).

Appendix 1.

Each person contributed to an evolving graphical mapping of the particular case governance structures, in particular details about how the provision was organized. These maps were used in subsequent interviews to verify previously-obtained information and as a facilitative device to obtain additional details. Using this collection strategy allowed us to extract a view of the shared reality and added to the reliability and interpretation of the data, which came from multiple sources. Secondary information was collected through related documents, including municipalities' administrative plans.

The unit of analysis was the transaction between the municipalities and the school breakfast suppliers. By definition, a transaction involves the exchange of an asset for payment, between a buyer and a seller (Williamson, 1981). Two dimensions of the transaction were operationalized: attributes of the transaction (asset specificity, uncertainty, and frequency) and attributes of human behavior (bounded rationality and opportunism). To ensure the transactions were not isolated but examined in their own settings, each was considered embedded in an institutional environment composed of people and/or organizations as well as both formal or informal norms and regulations.

3.2. Data analysis

The data analysis was conducted in four phases. First, we mapped the actors and their relationships, analyzing interviews and asking follow-up questions in the field. We also drew diagrams until we obtained a clear picture of how provisioning was organized. Secondly, we identified the transaction costs related to the transaction. Interviews and field notes were coded on the basis of pre-defined categories (Miles and Huberman, 1994; Russell and Ryan, 2010), such as the attributes of the transaction (Williamson, 1985). The categories are further elaborated upon in Table 1. The software Nvivo was used for interview analysis.

In the second phase, we used a deductive approach to our coding of data, by following predefined categories. However, the third phase involved iterative open coding of the interviews and field notes, through a grounded theory approach to data analysis (Strauss and Corbin, 1990). This enabled us to combine inductive and deductive interpretative analyses. The open coding was performed by identifying actions and/or relationships supporting or restricting smallholder participation in the school breakfast market. After these steps a report was generated for each case, describing the transaction cost determinants, governance structures, and actions and relationships that either supported or limited market participation. Finally we conducted a cross-case analysis, looking for patterns and causal explanations, as suggested by Yin (2009). This analysis was performed by creating tables for each case with transaction costs determinants. We also compared the different graphics of the governance structures drawn for each

municipality and found intervention by the indigenous authorities in Maya became more evident. So we decided to compare this with our interview codings, using the Nvivo 10 program to create individual comparison charts for each municipality. We also conducted a word query for the word 'mallku' (meaning indigenous authority), for each municipality, which resulted in a substantially higher mention in the Mayan case, compared to the other two. Although inconclusive, this analysis was useful for reflection and to deepen our knowledge about the small farmers who take part in this program.

3.3. The cases

The three municipalities in this study (*Kimsa, Maya, and Paya*)⁴ are all located in the northern and central Altiplan (3800 to 4300 m above sea level) in the department of La Paz. The primary economic activity in all three municipalities is agriculture, which includes small-scale production of milk, potatoes, barley, beans, quinoa,⁵ and vegetables, in addition to raising a small number of livestock, mostly for self-consumption. The municipalities have relatively similar populations, ranging from 11,309 to 20,040 inhabitants, of whom 88%–93% share an indigenous Aymara cultural background (INE, 2005) and 51%–69% live in extreme poverty (INE, 2005). The Aymara population follows a pre-colonial form of political and social organization called the 'ayllu', which is based on kinship and territorial relationships. The ayllu overlaps with modern political institutions. Through its indigenous authorities, known as 'mallkus', the Aymara maintain their traditional ways of life guided by principles of reciprocity, equity, turn-taking, leadership rotation, and direct decision-making by the ayllu's assembly (Mamani, 2007).

The municipalities contract for school breakfast suppliers every year. Although the purchasing is local, it is regulated through the national System of Norms for the Administration of Goods and Services Law (SABS-181). The law prescribes that local producers should be given up to 40% preference if they comply with certain conditions and that open bidding must be the main means of contracting. It is mandatory to enter into compliance guarantees in case the supplier breaches the contract, with a special clause for small producers, for which 3.5% of the contract amount is to be deducted directly from the monthly payments they receive for their products. At the end of the contract, their guarantee is returned, provided no breaches occurred.

Across the cases, the school breakfast program feeds between 2000 and 7000 children on 200 school days per year. Meals consist of a dry ration, such as different types of breads and cookies, and a liquid ration, typically quinoa juice, milk, and yogurt. (For more

⁴ All names in this study have been changed to preserve the identity of the actors interviewed.

⁵ Quinoa (*Chenopodium quinoa*) is a high protein seed grown in the Andes.

details, see [Appendix 2](#)). The budget for the school breakfast program ranges between 600,000 and 1,000,000 Bolivianos (equivalent to 68,200 to 114,000 Euros) in the studied municipalities, accounting for 6%–10% of the municipality's total budget.

Payments for the rations follow a bureaucratic procedure, which consists of the suppliers presenting sealed receipts for every delivery, together with a monthly report to the municipalities' administrative officers. After a verification period of around 15 days, a payment check will be issued if no irregularities exist. The particularities of the cases are described next:

3.3.1. Kimsa municipality

In 2010, the municipality of Kimsa was purchasing school breakfast products from a local family-based small and medium-sized enterprise (SME). Its main products were tarwi⁶ bread and cookies. Food procurement was coordinated by the municipal offices through a pure market exchange, with pre-bidding on price and delivery terms. Around 430,000 portions were provided each year at a value of around Bs 215,000 per year. All purchases were conducted through the administrative office in the same manner as would any other regular public purchases. However, in 2011 the municipality stopped purchasing from the local SME and contracted with external suppliers. A spot market transaction was conducted through open bidding, allowing for the entrance of external competitors with a better supply capacity than local smallholders.

3.3.2. Maya municipality

The Maya municipality had an office dedicated to the school breakfast program administration, where the person responsible worked alongside an assistant to coordinate provision. In 2010, the municipality invited potential local suppliers to organize themselves and provide for the school breakfast program, with 430,000 portions provided annually at a value of Bs 490,000 per year. The dry portion of the breakfast was awarded to a bread processor located outside the municipality. The external supplier delivered the products directly to the schools once a week, where members of the school board were in charge of receiving the products. The liquid portion of the school breakfast, consisting of two types of yogurt and quinoa juice, was awarded to four local suppliers: two producers' associations and two SMEs. There were five educational clusters in the area, each consisting of a number of schools, and each supplier was located in the vicinity of the clusters they supplied. Their main characteristics are described in [Appendix 2](#). The local suppliers manually processed their liquid products and delivered them every other day directly to the schools, either by foot or bicycle, sometimes renting a car. The four local suppliers worked independently of each other, though they interacted and met in emergency situations.

3.3.3. Paya municipality

The Paya municipality had been participating in the school breakfast purchasing program since 2003. However, in 2010 the liquid part was awarded to a dairy processing company located outside the municipality, while a joint organization of eleven smallholders' associations named PAMPA began providing the dry portion of the meal. Of the eleven associations in PAMPA, three are directly related to the school breakfast provision, providing staple foods like quinoa, amaranth, faba beans and carrots to be processed as flour for baked goods. The dry meal consisted of one piece of bread, cookies, cake, or banana, which was delivered directly to the municipality. PAMPA was responsible for the school breakfast

deliveries, taking care of tasks like: collecting raw materials from producers: monitoring processing in the bakery (which employed three people): purchasing additives: delivering meals: and collecting payment from the municipality. Each year 700,000 portions were provided at an annual value of Bs 350,000.

There was no specific municipal office for the school breakfast program administration, but two officers shared responsibility for coordinating purchases. This additional work was not part of their formal job descriptions. One officer was paid by the municipality to provide farmers with technical support for agriculture and livestock production. The other was employed by a government development agency that provides farmers with technical support for organic agricultural production.

4. Cross-case analysis: similar transaction costs, different governance structures

4.1. Transaction costs and smallholder market participation

We have identified the behavioral and transaction attributes that determine transaction costs in the three cases. As shown in [Table 2](#), the determinants of transaction costs related to engaging in the breakfast program are relatively similar in the three cases.

4.1.1. Behavioral attributes

Bounded rationality implies that decisions are taken with limited or incomplete information. This behavioral attribute increased because the suppliers lacked information and awareness about the implications of entering into contractual obligations for the school breakfast provision. In each of the three cases, they entered the contract without specific planning. In Maya, for example, one of the providers explained that they realized they had not planned how to coordinate raw material production, who should be in charge of processing, or how to transport the final products to the schools. The following quote illustrates this situation:

“We were so happy when we got the contract [...] but then we realized we had to start providing the school breakfast the next week, and we had no money to purchase the milk and the materials. We managed to get the milk. [...] After making the yogurt, we realized we didn't have anything in which to put it in order to deliver it to the schools. We had to ask our neighbors and family to lend us their milking tanks. Then we had to carry it on our backs in order to get it to the schools.” (Member of Ma1)

Since the providers' mother tongue was Aymara and the contracting process was only available in Spanish, access to information was once again dramatically reduced. In fact, a woman from one of the producers' association in Maya stated that usually they were embarrassed to speak in Spanish, since they were unsure if they were using the correct words.

The next behavioral attribute in [Table 2](#) is *opportunistic behavior*. The lack of coordination, planning, and accounting skills made it difficult for the smallholders' associations to gain an overview of the resulting balance of investments and returns. Keeping financial records was a major problem:

“It's complicated handling so many numbers. After dinner, I have to stay awake until one or two o'clock in the morning [to do the accounting]. A little mistake could make all the calculations wrong.” (Person responsible for school breakfasts, Paya)

These organizational limitation reduced transparency and fostered suspiciousness of opportunistic behavior among the

⁶ Tarwi (*Lupinus mutabilis*) is a high protein bean grown in the Andes.

Table 2
Behavior and transaction attributes.

		Kimisa	Maya	Paya	Expression
Behavioral attribute					
Bounded rationality		+++	+++	+++	Limited access to information Unawareness of implications of the contract
Opportunism		++	++	++	Suspiciousness about monetary calculations due to limited accounting skills
Transaction attribute					
Asset specificity	Human	+++	+++	+++	High need to develop specific skills
	Site	+++	+++	+++	No similar market available in terms of location, volume, and prices
	Physical	+	+	+	Possibility of assigning physical assets to other purposes
	Dedicated assets	+++	+++	+++	No possibility of recovering investments in terms of time and reputation
Uncertainty	Behavioral	+++	+++	+++	Possibility of unanticipated changes in decision makers (buyers) Possibility of not getting paid on time for the product delivered
	Nature	+++	+++	+++	Unforeseeable natural events related to agricultural production
Frequency	Recurrent	++	++	++	Contracting procedures Delivery

Key: + low; ++ moderate; +++ high.

involved actors.

4.1.2. Transaction attributes

Human specificity, a category of *asset specificities*, was high due to the need for specific skills to operate in a formal market. *Site specificity* was also high, due to the proximity of the school breakfast market and its continuous and fixed demand. The smallholders had no better alternative market in the area for their products. Physical investments were scarce due to the farmers' low investment capacity. Most of their equipment consisted of common kitchen equipment such as pots, stoves, and utensils, which were obtained by small donations from NGOs. *Physical specificity* was thus expressed in the small investments made by the smallholders, who usually personally contributed minor amounts of money at the beginning and reinvested any profits into the next production cycle.

Time and prestige represented *dedicated assets* for the smallholders, who spent substantial time lobbying authorities and organizing meetings among association members. Leaders performed most of the lobbying and processing tasks without salary or by the members taking turns. Selling to the school breakfast program took away time from the smallholders' crop-related activities, an investment that could not be recovered:

"Sometimes there was nobody to process the yogurt. Everybody was busy with their chores. We had to beg to the associates, or we ended up making it ourselves because in the school breakfast you can't fail." (Leader Ma2)

Whether associated or not, smallholders risked their prestige in the community when starting any business-like activity. The community expected that business activity would provide welfare for all community members. One of the neighbors of SME1 (in Maya) expressed disagreement about his neighbor's activities:

"[H]e has been doing business without telling anyone [...] since he's our neighbor, he was supposed to tell everyone [...], but we will handle this issue at the [community] meeting." (Neighbor of M-SME1)

Another example was an association in Maya, which had recently secured funding for the construction of a bakery. Here, an association member stated that the indigenous authority, the mallku, was observing them:

"We were already being blamed by the mallku that we weren't doing anything for the community. But now, when he saw the bakery being built, he changed his mind." (Member of Ma2)

Community expectations of reciprocity, held that businesses should favor not only their owners but the community as a whole. As a consequence, the association's next initiative was to respond by buying quinoa flour from their neighbors to produce bread.

Uncertainty created by a certain *behavior* was also high, mostly associated with the possibility that when the municipal government changed, its current 'buy local' policy could be discontinued. In Paya, smallholders stated that because the current mayor was completely against them, the association had to establish significant pressure in order to be included:

"[S]o far, the mayor hasn't understood us [...]. A few people don't want us to be there [...]. If they could hit us, they would. They don't want us, but we're fighting against all that." (Leader of PAMPA)

Uncertainty also arose from the bureaucratic procedures associated with settling accounts. Late payments led smallholders to suspect the municipality staff of *opportunistic behavior*, and their uncertainty increased when bureaucratic procedures – combined with mistakes in the reports – delayed their payments even further.

Yet another source of uncertainty related to the agricultural production itself. It is important to consider that school breakfast providers in these rural municipalities are also farmers. Therefore provision is highly dependent on their own agriculture production, which is subject to risks and uncertainty related to uncertain weather conditions and the price volatility of agricultural commodities and inputs. We asked the municipalities if the school breakfast could be easily replaced with alternative products in case of an emergency, or if they had plans to mitigate agricultural losses resulting from bad weather conditions, but no contingency plan existed in any of these cases.

Adapting to the *frequency* of delivery represented another source of transaction costs for small farmers, who emphasized how difficult it was for them to accommodate specific contracting procedures:

"If you sell to a market, you can either take your product or not. You can take it one day and not the other, no problem with that. But for the school breakfast, it has to be there every day with no failure." (M-SME2)

Integrating into a formal market structure such as the school breakfast program had a big impact on transaction costs for the

smallholder farmers. Before, the farmers undertook traditional agricultural work that was seasonally related, mostly to the weather conditions and to agricultural cycles in their area. Now they had to shift to the daily task of delivering a certain amount of products at a particular time of day. In Maya – and with their mayor's support – the farmers only provided manageable amounts to locations close to where they lived, while in Paya they joined an umbrella organization that took care of processing and delivery. The different governance structures that emerged to cope with transaction costs are described thoroughly in the next section.

4.2. Different governance structures to allow smallholder market participation

The three case municipalities had established different types of governance structures to reduce and coordinate transaction costs. The different governance structures are illustrated in Fig. 1. The type of coordination varied from a pure spot market in Kimsa to different types of hybrid-based coordination in Maya and Paya.

In Kimsa, the school breakfast transaction took place under pure market coordination. The municipality had no dedicated office for administering the school breakfast program. Instead, a central office processed all school breakfast purchases along with all other regular public transactions. One supplier stopped selling to the school breakfast program. When asked why, she responded: “It seems that the municipality has chosen to purchase from an NGO.” The supplier was unaware who the municipality had subsequently contracted or why it had done so, which indicated how little access to information she had about the contracting process. Market exchange was anonymous. The producer obtained no support from municipal staff and in fact, the NGO working in the area with a focus on tarwi, the same crop she was supplying, had ceased operating a few months earlier. Moreover, she did not know that she could lobby and insist that the municipality respected the procurement law.

Although the supplier had links with a producers' association from which she purchased her tarwi seeds, no effort was made to establish an alliance to press the municipality to continue its participation in the market. The supplier lacked both the support of – and connection to – the Kimsa indigenous authorities and the necessary lobbying strength to claim her rights as a local producer. As a result, the smallholder supplier exited the market because she lacked the backing to remain in the school breakfast program and could not afford the transaction costs by herself.

In Maya, the transaction coordination was a hybrid system that resembled a network in which four suppliers controlled the supply through strong informal links. They met regularly, and in case of emergency situations, they acted and lobbied together. Their transactions were overseen by the indigenous authorities and the community assemblies, both of which held a leadership position in the municipality and the power to veto the mayor and the municipal council, as well as decisions about commercial activities in the area.

In Paya, transactions were coordinated through a hybrid system based on leadership. The smallholder groups organized themselves into an umbrella association, PAMPA, which represented them, coordinating school breakfast processing and supply with the municipality.

The municipalities of Maya and Paya both display hybrid modes of coordinating the school meal exchange to overcome uncertainty and opportunism risks. In Maya, however, we found that the exchange itself could be characterized as a relational and governance network which consisted of relationally-based agreements among the suppliers, the municipality, the school boards, and the indigenous authorities. In the network, the mayor and members of the

municipal council explicitly supported local procurement. This led the municipality to create an office dedicated to coordinating and supervising the school breakfast provision. The municipality had also made targeted changes to the contracting process: for instance it split the breakfast provision demand into clusters that geographically matched schools with their local farms. This helped suppliers in a variety of significant ways, the most obvious being the reduction in transportation costs. But it also helped bring down other transaction costs associated with organizing, sourcing, and processing high volumes as well as enabling suppliers to build closer relationships with school boards and parents. This minor measure made a great difference in Maya and stood out in comparison to the other municipalities; although the providers in all cases faced similar transaction costs, this support strategy was crucial to keeping the Maya producers in the market.

Another difference between Maya and the other municipalities was the way business activities were socially controlled by a strong, culturally-based system. This was enforced by cultural norms of reciprocity and turn-taking, typical of the Aymara culture (Mamani, 2007). With the indigenous authorities overseeing both the activities of the suppliers and those of the municipality, possible conflicts were continuously monitored and addressed by the parties involved. Community embeddedness also safeguarded against opportunistic behavior and provided smallholders with political leverage when dealing with the municipality. This increased their negotiating power and reduced uncertainty. In addition the Maya suppliers lobbied school board representatives to secure support and sought the mallku's authorization and backing. As a result, Maya suppliers lacked a formal ‘umbrella association’ and united only when facing emergencies.

In contrast, the suppliers in Paya completely lacked support from their municipality. Their mayor showed them no support and to bypass him, they united as a group to lobby and win over the municipal council:

“The council has committed to us. We had to work hard to make them understand, and now they're supporting us.” (Officer 2, Paya)

A comparison of the two municipalities suggests that leadership coordination in Paya was a key factor in cutting transaction costs by: a) increasing negotiating power by lobbying and collectively securing positions on the municipal council, thus reducing uncertainty; b) reducing asset specificity since (in contrast to the Maya case) PAMPA provided meals for all schools in the municipality and the amount of product they provided increased the necessary investments; and c) PAMPA played a vital role in reducing opportunism by handling conflicts and the negotiation processes.

The different governance structures reflect not only how they relate to the narrow transactions *per se*, but extend to the political decision-making process. In fact, smallholders have a potential advantage over other suppliers, but their rights are enforced through political decisions at the local level. Thus lobbying activity can be considered a kind of ‘ex-ante and ex-post’ transaction cost required to secure a contract and reduce uncertainty and opportunism, issues proposed by Williamson (1985).

In both Maya and Paya, we found that smallholder participation was supported by highly motivated municipal staff, who we call ‘gate openers’. Apart from their regular jobs, they also performed multiple support tasks (see Appendix 4) to ensure smallholders' participation and to ‘open the gates’ that grant access to the market. The gate openers' intervention had a major impact on bounded rationality. They facilitated the flow of information from the municipalities directly to smallholders, reducing uncertainty and enabling the smallholders to take timely actions. In Paya, for

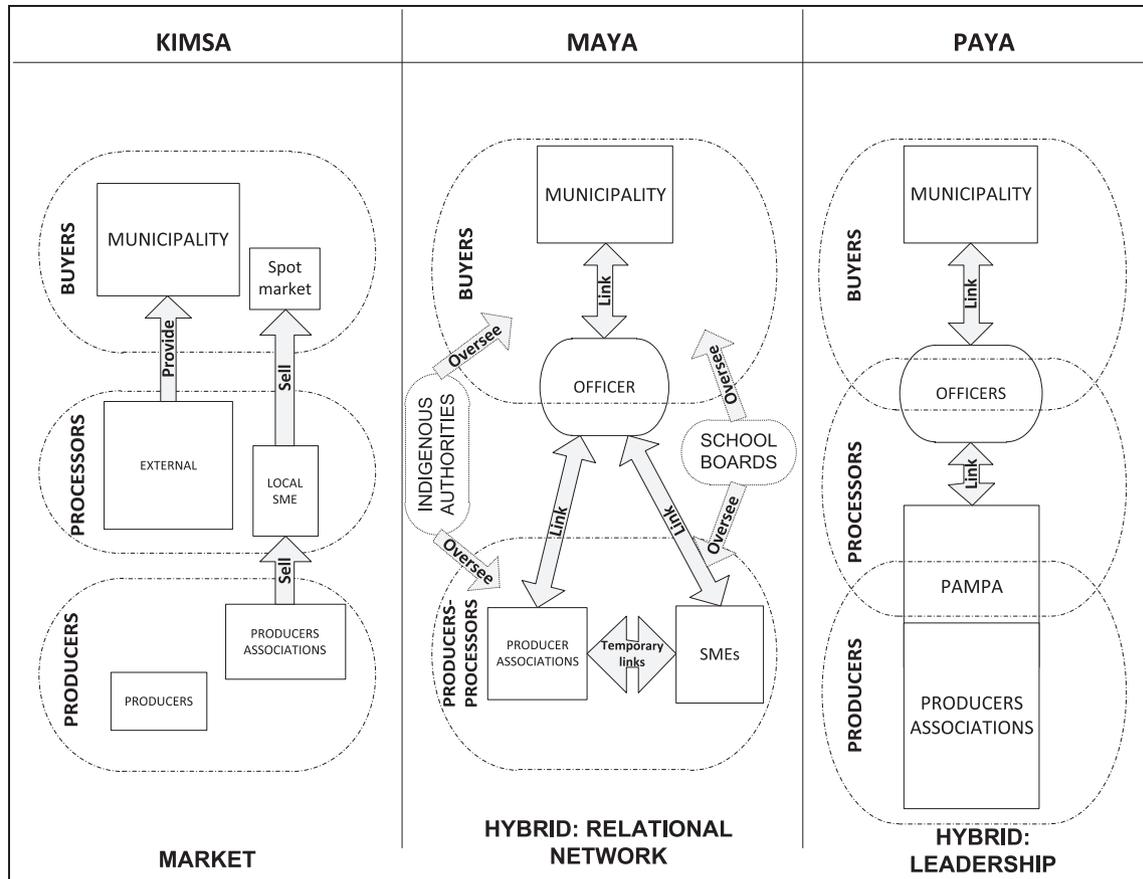


Fig. 1. Governance structures for school breakfast provision in the three municipalities.

example, there was no office for the school breakfast program, but two municipal officers – who were also members of producers' associations – coordinated activities 'undercover' for PAMPA:

"What has helped us is that the technician and I were working at the municipal government, and we gave the information to the producers and also gave them advice on making demands on their behalf." (Officer 1, Paya)

Since these gate openers belonged to both camps, they were able to help bridge the gap between the municipality and smallholders. However, their voluntary support mitigates an unsustainable system, which depends on the motivation and engagement of individual staff members. This also meant that they had less time available to perform their other job and farming duties, which caused them various problems:

"It's difficult to answer several stakeholders. I'm neglecting my work a little, but I think everything I'm doing now will be useful. I also belong to a producers' association, but due to lack of time, I can't attend their meetings." (Officer 1, Paya)

In a sense, the officers could be considered to have a vested interest and thus to be exercising illegal or unethical conduct. Summing up, Table 3 shows the elements of the governance structures that characterize the type of market coordination in the three case municipalities.

5. Discussion

5.1. Transaction costs and smallholder market participation

Prior to market entry and when operating within it, the smallholders in the three cases faced similar transaction costs, mainly related to bounded rationality and asset specificity. This confirms previous studies that suggest for smallholders, bounded rationality is expressed in terms of limited knowledge (Bachev, 2004) and limited access to information (Delgado et al., 2008; Rich and Narrod, 2010). However, we also identified that the farmers' reliance on indigenous language alone dramatically reduced access to information, thereby increasing bounded rationality. In addition, poor accounting skills raised suspicions of opportunism, which in turn undermined trust and kinship relationships that tie associations together. Other sources of high transaction costs included transportation costs and scale of production. The lack of human capacity thus restricted intra-organizational bonding and reduced trust levels.

Our study showed that local authorities could influence these transaction costs by, for example, resizing delivery requirements to farmers' production capacity and sourcing from adjacent areas only. In the Maya case, these measures enabled local suppliers to strengthen their relationships with the communities, and secure support "for the good of all community members." (Member Ma2). They also gained political leverage for their market participation, reducing uncertainty and therefore transaction costs. This illustrates that gaining improved access to state,

Table 3
Governance structures and modes of coordination.

Contextual features		Kimsa	Maya	Paya
Direct support from decision-makers	Mayoral support	–	+	–
	Council support	+	+	–
	Dedicated unit in the municipality	–	+	–
Enabling policies	Staff assigned to the program	–	+	–
	Subdivision of total demand into smaller lots	–	+	–
Community embeddedness	Alliance with indigenous authorities	–	+	–
	Alliance with school board	–	+	–
Gate openers	Highly motivated municipality staff	–	+	+
Governance structure	Coordination mode	Atomistic	Relational network	Formal authority
	Governance type	Market	Hybrid	Hybrid

Key: – not present; + present.

market and civil society actors is critical for resource-constrained smallholders' ability to improve their livelihoods (Bebbington, 1999).

We found that *prestige* can be categorized as a dedicated asset. Personal prestige is highly important for doing business in the Andean context since, to be able to operate, entrepreneurs are highly dependent on community approval. Prestige represents an important source of social capital for the farmers. In this respect, Devaux et al. (2009) suggest that Andean farmers' relationships in market chains are traditionally characterized by lack of trust and cooperation. Our findings show that, in the Andean context, high levels of trust and cooperation can occur in market chains when all actors are local. Moreover, market access is supported by pre-existing network structures and is highly dependent on maintaining a good reputation and strong relations with the community. This is in line with Walsh-Dilley's (2013: p. 659) study of Andean quinoa producers in which local reciprocity practices play a crucial role in the construction of "hybrid economic spaces". In this instance, economic strategies are "based on moral sentiments as well as market logic".

However, these "hybrid economic spaces" might not always emerge. In the case of the Kimsa municipality, even though the provider had links to other producers, we found no evidence that these communitarian links were used to improve her position in the market. Thus, in the Andean context, prestige can be seen as an important asset in terms of human capital. Prestige can give smallholders the *capability* to act (cf. Bebbington, 1999), influencing their well-being and economic production. It can also potentially constitute an important prerequisite for social change (Sen, 1997), for example, taking action to construct governance structures that enable control and efficient use of resources. On the other hand, our cases show that smallholders' capability to reduce transaction costs may not only depend on human capital, but also be highly dependent on social capital-related assets such as networks, social relations, and participation in associations.

Our study also identifies *time* as a dedicated asset. Operating in a more formalized market had a significant impact on the daily routines of smallholders who had previously supplied a traditional local market. Their activities now had to be synchronized with the requirements of the school breakfast program in terms of the types of products and frequency of delivery. Farmers responsible for deliveries neglected their other crop-related activities. In this respect, lack of time has similarly been reported as a factor that prevents smallholders from participating in new agriculture activities such as organic farming (Blanc and Kledal, 2012). In the smallholders' scenario, their livelihoods and food security depend on farming and they will eventually abandon new activities if these negatively affect the time necessary for their agricultural tasks.

5.2. Governance structures

Our study showed that hybrid modes of governance, such as relational networks in Maya and leadership in Paya, allowed smallholders to access and remain in the market. This suggests that, in the presence of similar levels of transaction costs, their market participation is more likely when adequate modes of governance are created in accordance with the institutional environment in which they are embedded. In our research this was specially reflected in the Maya case, where the providers operated under pre-existing forms of organization and reciprocity norms that constituted an antecedent social capital (Fukuyama, 2001). These social norms meant providers were able to obtain support which thereby reduced uncertainty. This finding parallels the centrality of the mediating role of formal and informal institutions and organizations that enable smallholders to carry out livelihood strategies based on their livelihood resources or capitals (Scoones, 1998). Also, in the two successful cases, forging informal alliances and lobbying the mayor, the council and the municipal officers, granted smallholders access to this market and the ability to remain in it. These strategies were facilitated by the strong traditions and behavioral norms perpetuated in these communities, such as reciprocity norms and the influence of indigenous authorities. Bebbington (1999, pp. 2013) highlights the relationship between access and social capital. He argues that connecting to other actors, i.e., bridging external networks is critical for resource access because "such relationships become almost *sine qua non* mechanisms through which resources are distributed and claimed, and through which the broader social, political and market logics governing the control, use and transformation of resources are either reproduced or changed".

Our findings also confirm previous studies that argue when institutions conflict, actors can find ways of manipulating the institutional environment by employing avoidance strategies to bypass rules – or to pretend that rules are being followed (Tingey-Holyoak et al., 2013; Tingey-Holyoak and Pisaniello, 2015). Smallholders in the Altiplan area use strategies of avoidance (Oliver, 1991). But they also gain leverage from traditional methods of organizing that are only indirectly related to market access and are instead oriented towards community life and agricultural production. These organizational forms constitute a reserve of social capital to which the producers appeal in order to face uncertainty and prevent risks. Such strategies correspond with previous studies of Andean lifestyles and means of production, which suggest that, in spite of globalization, Andean communities continue to ground their identities in tradition and in the past (McNeish, 2002). This use of non-market practices allows them to take advantage of the market and contest their exclusion from it (Walsh-Dilley, 2013). Thus, where ancient means of organizing exist, they may assimilate

new rules, so they become congruent with existing institutions (Acharya, 2004).

Our study adds to previous research by demonstrating that successful modes of coordination are also culturally and socially embedded, and highly reliant on collective action and social networking (Poulton et al., 2010; Devaux et al., 2009). This is particularly relevant because the transactions studied here are organized locally and are therefore subject to the influence of more immediate and personal relations granted by the proximity between actors (Hinrichs, 2000). Therefore when municipal governments strive to purchase locally, pre-existing relations and forms of social capital intertwine, affecting how the transaction is organized and making anonymity no longer possible.

Moreover, due to the Aymara cultural background, the case populations possess ancient methods of conducting social control and also rely on traditional authorities, represented by the *mallkus*. These authorities not only control and judge problems within the civil population but also informally influence municipal government and staff, as well as their local purchasing measures and decisions. This provides an extra assurance against opportunistic behavior by municipal government and providers. Therefore the pre-existing institutions and norms constitute a valuable source of social capital, which should be taken into account when designing pro-smallholders interventions, especially where indigenous and modern institutions co-exist.

Summarizing the three Altiplan cases, our findings show that for national policy objectives regarding market inclusion to succeed, it is necessary to foster an institutional environment to facilitate smallholder participation in public procurement markets. In particular, public policies, procedures, and procurement strategies are required to ensure agricultural development benefits for smallholders (Sumberg and Sabates-Wheeler, 2011; Blanc and Kledal, 2012; Kledal et al., 2012). Local procurement strategies, such as the creation of a specific unit to coordinate the relationship between smallholders and public procurement, appear to be crucial for consolidating smallholder participation because they help lower transaction costs for the farmers.

Our findings also show that even if farmers have the necessary resources and social capital to obtain market access, market involvement may not be to their advantage if they lack the necessary human capital to benefit from the engagement. As seen from our case studies, in some instances where not accompanied by guidance and support, market entrance constitutes a liability for farmers, specially when they are forced to adapt to unfamiliar forms of organization and production. This means that even when access is achieved, farmers may choose to exit the market. More successful governance structures seem to emerge when farmers rely on traditional ways of organizing while blending them with new practices. This constitutes the very nature of hybrid governance.

6. Conclusions and implications for practice

This paper examines the governance structures that enable smallholder participation in public procurement markets in the Bolivian Altiplan. We used transaction cost theory as a theoretical framework to analyze transaction costs, institutional arrangements and governance structures regulating public food procurement that involved smallholders in three rural communities.

We identified that these governance structures are successful when hybridized with pre-existing/established institutions and/or cultural norms. This highlights the influence of previously-

accumulated social capital, which is used in the case areas to bridge external networks in order to obtain resources to overcome risks and uncertainties.

Our findings show that hybrid governance emerged in response to transaction costs as well as the characteristics of the institutional environment. We find that when confronted with the same level and similar types of transaction costs, stakeholders develop different ways of organizing themselves, drawing upon resources and the social capital available in the institutional environment.

In our case, the hybrid governance structures impacted smallholder market participation by providing legitimate ways to negotiate and secure contracts with the municipalities, based on pre-existing norms and legitimized by indigenous authorities. In this way uncertainty was reduced and smallholders' permanence – not only entrance – in the market was enabled. This finding points to the importance of factoring the institutional environment into the design of governance systems to promote market inclusion, especially for vulnerable market actors such as smallholders in less-developed countries.

Our research suggests that, if governments or NGOs intend to promote smallholder market participation, it is important to support the entire business operation and not just address technical issues. Support for smallholder should facilitate organizational practices that enhance intra-organizational bonding as well as enables farmer associations to engage bridging their external networks, for example, traditional community structures, to obtain support and resources. Thus, the cultural contexts and local capacities should be taken into account when designing market-based public policies, aimed at promoting local development.

Transaction cost theory has helped us to explain the emergence of different governance structures in the three cases by analyzing transaction cost determinants together with the strategies and/or measures of support that help reduce them. Yet this perspective appears insufficient when it comes to examining the various social phenomena that take place within the governance structures – and their relationships with the institutional environment. An integrative approach, taking into account both transaction costs and social capital, will enhance the analysis and increase its explanatory power.

Data collection was confined to three municipalities in the Bolivian northern and central Altiplan, which are representative of the context in this area. However, the results of the cases may not resemble behavior in other institutional contexts; replicating this study in different regions would enhance the generalizability of the findings. The school breakfast program, though local, is regulated by state public procurement law. Nonetheless, in order to focus on the specificities of the cases, its analysis was not included in this article. Conducting such analysis could result in specific guidelines on how to improve the law at the macro level, to enhance its performance at the micro level.

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Appendix 1

A1.1: Selection criteria for interviewed actors.

Level	Actors	Details
Municipality	<ul style="list-style-type: none"> Responsible for school breakfast School breakfast nutritionist School breakfast supervisor Human development officer Mayor 	This is a list of possible actors, which may vary from municipality to municipality. At least two actors must be interviewed, corresponding to the high, middle, and operational levels
Suppliers	Managers and members of family enterprises and/or producers' associations	At least two actors must be interviewed: one at the managerial level and one at the member level
Cooperation (NGO or government)	Technical staff assigned to the area	At least one actor must be interviewed
Central government	Staff assigned to the geographical area, whether located in the area or not	At least one actor must be interviewed
Community	<ul style="list-style-type: none"> School board members or responsible individuals Communal authority, if any 	At least one actor must be interviewed

A1.2: Guide for participatory observation processes.

Process	Place	Time	Interest for research
Contracting of school breakfast suppliers	Municipality	Beginning of the year and/or mid-term	Transaction costs ex ante Formal and informal rules Negotiation/Lobbying
Processing of school breakfast meals	Associations	May vary	Transaction costs during processes Processing specificities
Delivery of school breakfasts to the school	Schools	Every school day	Transaction costs during delivery
Process of getting paid by municipalities	Municipality	Every 15 days or may vary	Transaction costs ex-post

A1.3: Guide for document analysis.

The review of documents related to school breakfast provision should include:

- Municipal administrative plans
- Public calls for the school breakfast provision
- School breakfast records or reports
- Established contracting procedures
- Agreements or resolutions affecting the suppliers or the program.

A1.4: Actors interviewed in total and in each municipality.

Level	Actors	Kimsa	Maya	Paya
Municipality	Individual responsible for school breakfast	1	2	–
	Municipal officers	–	–	3
Suppliers	Managers of family business and/or producers' associations	1	4	8
Cooperation	Technical staff in the area	2	3	2
Central government	Technical staff in the area	1	1	1
Community	Communal authority	1	2	3
	Neighbor of an SME supplier	–	1	–
Food industry	Related to smallholders or school breakfast provision	–	1(PIL)	1 (ILPAZ)
Total	(38)	6	14	18

Appendix 2

Main characteristics of the suppliers and their products.

Place	Type	Name	Characteristics	Member number	Main products	Processing
KIMSA	Family SME	K-SME	Husband and wife with help from family	2	Tarwi bread, cookies	Both share processing and administrative tasks. Processes take place in a dedicated room at their house.
MAYA	Associations	Ma1	Women's association	27	Yogurt, quinoa juice	Members take turns processing meals in small rooms leased at a municipal house.
		Ma2	Farmers' association	22	Yogurt, quinoa juice	Two of the younger members carry out processing in small rooms at a former health center.
	Family SME	M-SME1	Husband and wife with help from family	2	Yogurt, quinoa juice	Both share processing and administrative tasks. Processing takes place in a room at their house dedicated to processing.
		M-SME2	Father and son	2	Yogurt, quinoa juice	Both share processing and administrative tasks. Processing takes place in a room at their house, dedicated to processing.
PAYA	Associations	Pa1		11	Quinoa	Members of all three associations deliver the harvested products to PAMPA, which takes care of processing bread and other baked goods in the nearest city. PAMPA is currently building a facility in Paya.
		Pa2		38	Quinoa, potatoes, carrots	
		Pa3		22	Quinoa, potatoes	

Appendix 3

Bounded rationality and expressions across the three cases.

Bounded rationality	Expression	Kimsa	Maya	Paya
Limited access to information	Information about opportunities	<i>"I didn't know I could sell this bread."</i> (K-SME)	<i>"I didn't know, [I could sell to the municipality]. I used to make yogurt and take it to the [nearest] fairs."</i> (M SME1)	<i>"What we want is to sell our products at a good price. Do you know how we can do that?"</i> (Pa1)
	Language limitations	<i>"As women, we don't speak Spanish very well, and it's embarrassing to speak at the meetings."</i> (K-SME)	<i>"Dairy products [in Spanish: derivados lacteos] was a difficult word and seemed unreachable for me. I couldn't even pronounce it."</i> (Ma2)	
Limited knowledge	Partial knowledge	<i>"I don't know why they've rejected me. Maybe because I might need a huge facility?"</i> (K-SME)	<i>"We forgot what we learned in training."</i> (Ma1)	<i>"We've made some profit, but maybe we don't know if it will be enough."</i> (Individual responsible for school breakfast)
	Rules, norms, formalization	<i>"I'm missing some little papers."</i> (K-SME)	<i>"The requirements, the technical issues, the norms and all that stuff that we don't know."</i> (Ma2)	<i>"We've been providing without legal documents."</i> (PAMPA president)
	Food processing	<i>"I'm still learning how to process the seeds and make the bread."</i> (K-SME)	<i>"The yogurt fails ... Suddenly the incubation time passes, and it goes bad."</i> (Ma2)	<i>"We had doubts about how to process the raw products."</i> (PAMPA president)
	Planning	<i>"Processing tarwi is very hard. Maybe I could use a pressure cooker."</i> (K-SME)	<i>"We're not lazy, but we don't know how to plan."</i> (Ma1)	<i>"We hadn't considered that cookies take longer than bread."</i> (Officer 2)
	Coordination		<i>"We don't know how we're going to transport the yogurt."</i> (Ma1)	<i>"We hadn't put the transportation costs in the budget ... We failed in the calculations."</i> (Officer 2)

Appendix 4

tasks.

Personal motivation-related tasks compared to job-related

Task	Maya	Paya
Job-related	Organize the contracting process for the school breakfast. Monitor the delivery of the products in terms of quality, safety, and timely delivery.	<i>Officer 1:</i> provide smallholders with technical support in terms of agriculture and livestock production. <i>Officer 2:</i> provide smallholders with technical support in terms of organic agricultural production (staff paid for by central government project).
Personal motivation-related	Search for and encourage small producers (invitation). Support and monitor the development of the smallholders' proposals to respond to public calls. Look for NGO and government grants and assistance for smallholders. Link producers with NGOs and other producers. Look for training opportunities for smallholders. Write reports that should be written by suppliers.	Review the writing of public calls for the school breakfast program to ensure sure outside suppliers are locked out. Develop proposals together with the smallholders' association. Lobby the municipal council to ensure smallholder participation. Lobby the mayor and review his activities related to the school breakfast program. Look for NGO and government grants and assistance for smallholders. Organize protests and/or complaints when the municipality is about to purchase from an external supplier.

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