Information Strategies to Support Full Information Product Pricing: the Role of Trust

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Abstract

In this paper, we report the importance of trust in the development and operation of distribution networks that attach non-price information to products to mitigate market dynamics introduced by information asymmetries. Often this non-price information is transmitted from producers to consumers through trusting networks or under certifiable labels such as “Organic” or “Fair Trade.” We are calling such networks Full Information Product Pricing (FIPP) Networks. This study is part of a larger project aimed at understanding the characteristics of FIPP networks. This initial exploration on four cases in Canada and Latin America indicated that trust, in the forms of institutional trust, calculative trust, and relational trust, plays key roles in FIPP operations and expansion. It is critical for building collaboration, coordinating network activities, and mitigating the risks associated with information asymmetry.

1. Introduction

Most products consumed within the NAFTA trading zone are produced and distributed through cost-effective distribution networks that typically do not reveal certain types of information to end consumers. This information asymmetry makes difficult for the consumer to assess the quality of the products, offering producers incentives to offer low quality products [1].

However, a growing number of consumers and producers are increasingly paying attention to information about where, when, how, and by who our goods are produced. In these cases, producers strive to attach non-price information, thereby reducing information asymmetry and adding value to their products. Often this non-price information is transmitted from producers to consumers through relationship-based networks or under certifiable labels such as “organic” or “Fair Trade.” We are calling such networks of relationships among consumers, producers, and distributors “Full Information Product Pricing (FIPP) Networks”.

FIPP production and distribution networks can sustain networks of small producers, enable SME creation in rural or under-developed areas, and in general fuel region-wide economic development [2-4]. However, FIPP benefits to producers vary on particular contexts [5]. Moreover, some analysts pose important questions about the real benefits or the long-term sustainability of FIPP networks [6-8].

Initial explorations of FIPP systems in Canada and Latin America suggest that several factors play a role to explain differences in the operation of each network. Some of these contributing factors are trust, social capital, governance mechanisms, work processes and Information Technologies (IT). Among them, trust appears to be a recurrent theme in the initial four cases explored by the research team. Moreover, trust can be a governance mechanism playing an important role on asymmetric markets. In this way, the purpose of this paper is to explore the importance of trust development in the development of FIPP networks.

To accomplish this purpose, the paper is organized in six sections including this brief introduction. The following section consists of a review of the literature on FIPP networks and trust. The third section of the paper briefly describes the research methods. The fourth section of the paper describes the four FIPP systems explored. The last two sections of the paper
contain the main findings and implications for policy making and future research.

2. Literature Review

This section of the paper is organized in three subsections. The first introduces a conceptualization of FIPP networks, and their relationships with information asymmetry in markets. The second includes a brief review of the trust literature as it relates to FIPP networks, and the last subsection poses a possible motives and role for Governments in FIPP regulation and promotion.

2.1 What Are Full Information Product Pricing Networks?

Information asymmetry has been identified as an important element to explain market dynamics [1]. Information asymmetry refers to the fact that in some markets, some players (usually the seller) have better information than others about product quality (usually the buyer). Although in most markets it is possible to find “good” and “bad” products, both kinds of products have to be sold at the same price because consumers have difficulties telling the difference between them. As Akerlof [1] points out in his seminal paper, pricing mechanisms in an information asymmetrical market offer an incentive to sellers to offer low quality products, driving out the high quality products, which cannot survive in the market given that producers cannot afford production costs. On the other hand, this phenomenon can also introduce several issues of externalities in production methods (pollutants from production, exploited workers, etc.) that might not be fully incorporated into final market prices.

Although information asymmetries decline over time as markets grow and mature due to quality information acquired by repeated use [9], some products such as tomato, coffee or beef are less susceptible to experiencing such dynamic because they are not always linked to other information but price.

As an alternative strategy to reduce information asymmetry, a growing number of “artisan”, “Fair Trade”, and “green” consumers and producers are increasingly paying attention to information about where, when, how, and by who our food, consumer, and durable goods are produced. In some cases, non-price information related to the ways in which food products are being grown and handled is becoming a requirement for exporting or marketing the products because of known health hazards like in the case of beef, pork or veal [10]. We are calling such networks of relationships between consumers and producers “Full Information Product Pricing (FIPP) Networks”. Full Information Product Pricing (FIPP) distribution networks are often non-traditional. On the production side, they often involve small and medium size enterprises (SMEs) frequently banding together into production cooperatives or networks. FIPP distribution systems often depend on trusting networks involving distributors and retailers who specialize in niche markets that sustain customer loyalty based on trust in non-price product information.

Typically FIPP production and distribution occurs with fewer negative externalities such as adverse environmental impact or workers living in poverty without adequate health care. FIPP production and distribution also fosters the creation of social capital. Most importantly, because FIPP practices can fuel economic development, they can increase the cash value of exports from producer to consumer nations (or market segments within a nation) [6].

Fair trade, for example, is a “commercial partnership, based on dialogue, transparency, and respect, the aim of which is to create greater equity in world trade. It contributes to sustainable development by ensuring better trading conditions and guaranteeing the rights of producers and marginalized workers, particularly in the global South” [5].

Fair Trade Arrangements constitute only an instance of FIPP systems. Other examples include relationship commodities, supply chain information systems to consumers, local product branding schemes, and organic products.

2.2 The Role of Trust

As suggested by the literature on information asymmetry [1, 11-13], institutional mechanisms such as guarantees, certifications, brands and chains reduce the uncertainty associated with information asymmetries in the market. Moreover, the literature points out the importance of trust in these market transactions. These observations are consistent with our own from the four cases presented in this paper. In this way, we will briefly discuss in this section of the paper some relevant concepts related to trust and trust development.

Although there is not a generally accepted definition of trust [14, 15], there are some common themes and general understanding of its nature. Some of the common themes in the literature include vulnerability, risk, and the role of positive expectations or optimistic belief [15]. Trust is usually seen as a two-party relationship, in which one party A (an individual or an organization) accepts the inherent risk of a
relationship with another party B [14]. In fact, some authors point out that different kinds of relationship between the same participants can have different levels of risk. In this way, A can trust B for taking care of his or her dog, but maybe do not trust B for doing business.

Trust has been considered as an alternative governance mechanism in most collaborative relations [16, 17]. In transaction cost analyses, for example, varying levels of trust, or the hazards resulting from untrustworthiness influence the structure of interorganizational relationships—more or less hierarchical and bureaucratic [16, 18]. Higher trust levels lead to lower costs resulting from the need to protect against opportunism [19]. These structural approaches, however, do not account for how trust develops.

Researchers have identified several mechanisms of “trust production.” In a review of the literature, Rousseau and her colleagues [15]—for example—distinguished three mechanisms associated to trust development: institutional trust, calculative trust, and relational trust. Institutional trust refers to the existence of an institutional framework that regulates the relationship between the main actors in the collaboration. These institutional frameworks include the basic institutional mechanisms discussed by Akerlof such as contracts, guarantees, certifications, as well as the laws, regulations and other institutions oriented to enforce the contracts. Information systems and information technologies can also be considered as sources of institutional trust [20]. Calculative trust refers to an estimation of the risks and pay-offs intertwined in the interaction. We may conceptualize a ratio of pay-offs and risks for each interaction between individuals or organizations. It is conditional, and only arises when the beneficial intention and competence of another are indicated by reliable information. Finally, relational trust is associated with emotional bonds, shared values or objectives between the actors, or recognition of benevolence, ability, and integrity of other participants in a repeated relationship. Compared to calculative trust, relational trust is more resilient to environmental changes and may cover a broad array of interactions. According to Rousseau et al. [15], these three mechanisms are interrelated. For example, institutional mechanisms of trust creation relate to calculative mechanisms by reducing the perception of risk associated with a particular transaction or relationship. The calculative trust plays a more important role at the beginning of a relationship, and after repeated positive interactions, greater elements of relational trust arises and plays a more important role in the interaction between individuals and organizations.

2.3 A Possible Role for Government in FIPP regulation and promotion

Governments around the world might be interested in FIPP practices because of several reasons. FIPP networks are important to governments because they are important to promote national exports, small and medium enterprise formation (SMEs) and regional development. In the North American market, for example, imported cantaloupes were recalled from the market after the Food and Drug Administration (FDA) found out that they were contaminated by salmonella [21]. Wal-Mart and other retailers have pushed their importers to sign contracts to guarantee that their products are not contaminated [22]. Moreover, restrictions to import products into the US are increasing over time [10].

One of the most important aspects of regional economies is the development of their production chains. FIPP networks offer alternative organizational forms to promote local and regional development. Exploring and understanding FIPP practices offers an opportunity to explore policies to promote this kind of development.

Fair trade practices attract wealth to regions and localities, improving communication between producers and end consumers through interorganizational networks [23]. Additionally, FIPP practices constitute a production alternative with low environmental impact because of their organic and social practices.

Information and Communication Technology (ICT) constitutes tools to facilitate and promote the development of this kind of production and distribution chains. Technological capabilities of the Internet, together with traceability technologies, allow the producer to communicate relevant information about their product, adding value to the consumer by providing information that is not traditionally shared through market mechanisms. Current ICT has the potential to improve the necessary relationships in the networked environments proper to FIPP systems [24].

On the other hand, FIPP networks recognize the importance of the locality and the region as natural places to promote economic development in the global world, integrating localities into the Information Society. In this society, competing for a place in the global network, leads to a space in which cities and regions interact in the search for development [25].

While there are many reasons why government already does intervene and may intervene in the future, this paper explores information-intensive strategies as
they relate to trust development and information asymmetries.

3. Method

This paper reports on the initial findings of a three-stage, multi-method project. The initial stage consists of the analysis of several FIPP Networks in Canada, United States and Latin America following a case study approach [26, 27]. This initial stage has the main objective of characterizing the structure, dynamics and main issues associated with FIPP networks. Data obtained through the case studies will be used in a second stage to develop formal models to get a better understanding of FIPP networks, using methods such as system dynamics [28, 29]. Formal models will be used to develop and test hypotheses about effective public policies to promote the development of sustainable FIPP practices. Finally, the objectives of the final stage of the project are the development of practical tools and prototypes to support policy implementations or FIPP practices, based on Smart IT principles and practices [30].

In this paper we report findings from four initial case studies conducted during January, February, and March 2008. The initial sample of cases includes two cases from Canada, one from Mexico and one from Central America. Data gathering for the case studies included document analysis, as well as semi-structured interviews with managers and participants from each case. The interview protocol was developed collaboratively in English by the research team, and then was translated into Spanish and French to be applied in Canada and Latin America. The interview protocol consisted of two main parts. The first part included 11 questions related to the organizational characteristics of each organization, IT use, government relationships and other institutional factors affecting their activity. The second part of the protocol introduced a policy scenario to explore the reactions of managers from each organization towards some initial ideas related to information policy and systems to support policy (contact authors for Interview Protocol).

4. Description of the Cases

In this section, we present preliminary results from five case studies.

4.1 Tosepan Titataniske (Together we win)

As a response to the coffee market crisis of the 90’s, coffee producers in Mexico adopted the concept of fair trade. The concept of fair trade involves a series of quality, organic and social standards devised to differentiate coffee produced under these norms, increasing sales price and reducing risks of price fluctuations. Tosepan Titataniske is a cooperative in the northern mountains of the State of Puebla in Mexico, which produces and exports organic and fair-trade coffee to the US, Japan and Europe. The Tosepan cooperative groups about 1400 small producers from about 70 communities in the mountains. Tosepan is organized as a network of local cooperatives, which collaborate to sell coffee through a central warehouse at Cuetzalan, the main city in the area.

Tosepan is certified as an organic/fair-trade coffee producer by Fair Trade Mexico, Certimex, Ocia International and by the Fair Trade Labeling Organization (FLO). The certifying process involves certification of local small producers by visiting their lands and establishing production quotas for each of them. The total amount of organic or fair-trade coffee that Tosepan can sell/export is the sum of each small producer quota.

Tosepan has a manual traceability system to control individual quotas. Although they use the Internet (e-mail) and some basic productivity applications (spreadsheets and word processing), information technologies have the potential to facilitate certification and traceability of coffee in the network of producers. However, one of the interviewees showed cautious about the use of a traceability system like the one described in the appendix. His reaction was “we like systems to have traceability and transparency, but when a system is big, it can be heavy as a rock and it need to be carried [...] if the system is too rigid, it can leave out many possibilities to producers.”

Moreover, and according to Tosepan’s interviewee, Fair-trade exports could benefit from having clearer government standards and regulations, which are much more developed for organic products. However, Tosepan relationships with government have been limited, and difficult. As the informant expressed “Today government is interested in organic and fair trade because of the market, and not the philosophy. They realized after 6 or 7 years that conventional producers are out of business. They did not believe all people who approach them before. Our relations with government have been complicated [...] Although there are government officials that show a lot of interest in their work, there is a huge bureaucracy that makes hard for us to see government as our partner.”

Institutional Trust. Tosepan producers rely heavily on institutional mechanisms to introduce their products in the international market. Organic and Fairtrade seals provided by Certimex, Ocia International and FLO are important instruments to inform coffee producers and consumers in the international markets about the environmental and social practices at Tosepan. Their current traceability
system not only is a requirement from all certification authorities, but also a tool to promote transparency and trust among members of the cooperative, reducing opportunistic behaviors such as paying friends Fair trade or organic price when they do not meet the requirements.

**Calculative trust.** The robustness and strength of the institutional mechanisms used by Tosepan helps to build Calculative trust. Calculative trust plays a role when starting a relationship with a new client, who needs to rely on Tosepan capabilities to meet the requirements of a transaction on time. However, even in those initial processes, relational trust has proven more important as we will discuss in the following section.

**Relational Trust.** Relational trust plays an important role in Tosepan success. First, shed identity and value has been important to consolidate the network of producer cooperatives, which need to trust each other to work together.

Relational trust has been important to build export capabilities in Tosepan through its relationships with other Fair Trade cooperatives in Mexico. According to the interviewees, these relationships were key for them to start exporting, and currently, they are helping other cooperatives to enter the market by selling their products.

Moreover, it has also played an important role in the creation of contacts with buyers. As one of the interviewees commented, “exporting is difficult because of the language and the need to learn many rules and terms. Selling to a national broker has its intricacies, but it is easier. Exporting requires more responsibility during the negotiation, logistics and follow-up. We have learned slowly, and we have been able to learn because of conscious buyers who know that it is difficult and have helped us to do it.”

### 4.2 Certification, Traceability and Québec’s Food Exports

The information that businesses outside a given country have to gather and communicate in order to get the right to export their goods to that country or earn these goods a leading national certification should get more complex in the coming years. For example, the recent *Action Plan for Import Safety: A Roadmap for Continual Improvement* submitted to the American president by the Interagency Working Group on Import Safety contains 14 recommendations to complement the “variety of actions and plans [...] already underway to improve import safety” in the United States [31].

Beef and sheep production is a $ 1.1 billion business in Québec. For farmers who raise these animals, the adoption of stricter safety measures poses a major challenge that they have started to address in 2000. With the support of Agri-Traçabilité, an autonomous non-profit organization subsidized by the Québec government, producers have had to install traceability systems in their farms since the adoption of Québec’s Regulation respecting the identification and traceability of certain animals.

According to Agri-Traçabilité, Québec’s permanent identification and traceability system rests on three main characteristics: industry and government agencies manage a single multi-species database; farmers must identify each animal a few days after its birth; and animal movements are recorded in the database.

By making it possible to rapidly identify Québécois farms affected by major animal health problems such as the hoof-and-mouth disease or the mad cow disease, Agri-Traçabilité’s traceability system helps prevent propagation from one site to another and, therefore, reduces the risk that consumers lose confidence in Québécois beef or sheep meat.

Québec’s traceability system is robust and powerful, but it only covers certain types of animals, it does not cover other kinds of food products (e.g. lettuce), it cannot help determine if a contaminated product (e.g. a sick cow) has been in contact with other products during transport and it cannot track a product outside the borders of Québec. Moreover, many producers dislike the system (or resist its introduction in new areas) because they don’t see how much value, if any, it adds (or would add) to their products.

**Institutional Trust.** The use of Agri-Traçabilité’s system serves as an institutional mechanism to promote trust by producing reliable and consistent information regarding an animal’s health. It helps open interesting markets for Québécois producers. Since the traceability system is “the first in North America to benefit from a complete tracing system with reporting procedures for all livestock movement between geopositioned production sites”,1 they might be in a good position to increase their share of beef and sheep exportations made to the U.S. market.

By producing institutional guarantee regarding an animal’s quality, Agri-Traçabilité’s system could also benefit producers from a marketing standpoint. For example, that system apparently gives Québec’s sheep producers a competitive edge in Japan, because it gives them the possibility to provide buyers with the precise age of each calve.

It seems likely that developing an extended version of Agri-Traçabilité’s system — e.g. a version that could track meat or vegetables from any Québécois

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1 See http://www.agri-tracabilite.qc.ca/en/why.html
farm to the plate of any North American consumer — may prove even more valuable in the future.

**Calculative Trust.** In this case, institutional-based trust can make it easier to build calculus-based trust. The efficacy of *Agri-Traçabilité’s* system as a trust-building mechanism derives in good part from the fact that the database’s owner (a not-for-profit supported by the Québec government) and the processes used to collect the database’s information are considered trustworthy by other players.

**Relational Trust.** In Québec, creating relational trust does not help a beef or sheep producer convince government authorities that his animals are healthy. However, because of relational trust, a farmer sometimes can more easily convince distributors or retailers of the quality or market attractiveness of his products. For example, it took a few years for the makers of Natur’Boeuf, niche beef meat produced in Québec’s Bas-Saint-Laurent, to convince a regional grocery chain that it should carry their brand [32].

### 4.3 Central American Fair Trade Craft Cooperative

The hub of this FIPP network is a women-owned and operated cooperative located in Central America that produces non-traditional crafts using traditional fabrics. The women of the cooperative use the proceeds from the sales of their products to pay themselves a just wage and then to provide a broad array of social services for their children and community including schools, a medical clinic, and new business development opportunities.

The coop is certified as a fair trade producer by the Fair Trade Federation (FTF). It works directly with a number of fair trade distributors, the largest of which are SERRV International, Ten Thousand Villages, Oxfam, and Mayan Hands. These distributors sell the coop’s products in the United States, Canada, Europe, New Zealand, and Australia. However, they account for a relatively small percentage of the coop’s sales. Approximately 80% of the coop’s products are sold through *UPAVIM Crafts*—a small US business that sells exclusively for the coop. *UPAVIM Crafts* distributes to more than 300 shops in the US and Canada. Many of these shops have personal relationships with the coop, its members, and the owner of *UPAVIM Crafts*.

While the organization does use the Internet to manage its order flow and it does have an on-line URL, it does not yet have a well-developed strategy to use ICT to connect to its customer base. The coop is skeptical about the future possible role of government intervention to support its business out of a belief that governments help larger organizations, not small producers such as themselves.

**Institutional Trust.** Fair Trade certification as a form of institutional trust plays a key role in maintaining the relationship between the coop and the larger distributors. FTF members have to keep the Federation updated annually on the ways in which they currently practice FTF’s eight principles of fair trade. The coop also has to pay yearly dues to the FTF. In exchange, it receives the right to label its products as FTF certified—assuring distributors and individual customers that the coop is, in fact, a fair trade certified producer. If the coop does not comply with the FTF’s principles, it loses its certification.

Many of the coop’s larger distributors require additional fair trade “checks” before they market the coop’s products. Some of these “checks” take the form of legal contracts, which obligate the coop to comply with certain labor policies and production standards. Other distributors take a less formal approach and only require that the coop fill out a questionnaire detailing its wage structures. Almost all of these distributors make annual or bi-annual visits to the cooperative. If distributors find that the coop reported false information on the questionnaire, it loses its right to sell to them. Although the contracts and questionnaire are control mechanisms, they essentially promoted trust development because it lessened the expectation of opportunistic behaviors.

**Calculative Trust.** Calculative trust plays a very large role in the coop’s acquisition of new distributors, and, consequently, the coop’s sales growth. The majority of the coop’s distributors begin their relationship with the coop through a visit to the cooperative building in Central America. The distributors take a two to six hour tour of the building, led by one of the senior members of the coop, and then eat lunch with the coop members in the production workshop. Coop members share their personal stories and explain how the coop directly helps them to improve the quality of their life. Distributors leave with an intimate and emotional look at how the coop is working to change women’s lives in Central America. As well, the coop’s labor policies and production practices are made fully transparent to these future distributors.

2 Starting in January 2009, FTF members will no longer be allowed to place the actual FTF logo on their products. They will only be able to write that they are members of the FTF. The federation fears that non-fair trade producers will start placing the FTF logo on their products, thus devaluing the Federation’s fair trade “brand.”
Relational Trust. The coop’s relationships with its distributors are mostly governed by institutional and calculative trust, whereas its “relationships” with individual customers, who are not shopping through these large distributors, are a product of relational trust. Each coop product is hand-signed by the women who produced it. This hand-signature helps to mitigate customer risk, assuring customers that the product was produced in a dignified work environment and that the artisan was paid a just wage, as the product label suggests. As no customer actually has a personal relationship with the coop members and very few individual customers has visited the coop, the hand-signature works to approximate feelings of relational trust between women and women. Moreover, each product label contains a one-paragraph summary of the organization’s history and mission. These labels attract consumers who are aligned with the stated values and goals of the coop. Many small shop owners report that the coop’s labels are what sell the coop’s products.

4.4. Serres Natures Jardin Organic Tomato

More and more, North American consumers, (and therefore) retailers and middlemen want to know where the food they buy come from, how it’s been made, by whom it’s been made and so on. In some cases, players along the value chain are even ready to pay more for products made a certain way, by a certain type of producer. For example, Gifford and Bernard [33] found that in the United States, organic milk, pasta and soup carry a price premium of 59% to 92% over conventional products.

Québécois firms like Serres Natures Jardin (SJN), a small firm (sales: $1.2 million dollars in 2006) from the Gaspésie region that owns a greenhouse complex of 12,000 m² that exclusively produces certified organically grown tomatoes, are actively trying to take advantage of that trend.

SJN’s total production is distributed in Ontario, Québec, Atlantic Canada and, since 2007, the northeastern and mid-western United States. Following an agreement concluded with Loblaw’s, Canada’s largest food distributor, SJN produces organically grown tomatoes under the name President’s Choice Organic Produce. That brand is certified by Quality Assurance International, a firm based in San Diego whose mission is to provide assurance that a product destined to enter into market distribution is indeed organic. Half of SJN’s sales are made to Loblaw’s.

As a member of Québec’s most important association of organic horticulture producers, Les producteurs biologiques Symbiosis, SJN also markets its tomatoes under the name Symbiosis. Symbiosis tomatoes can be bought in major grocery stores such as Sobey’s, Métro and A&P, in addition to specialized outlets that offer organically grown products. The brand Symbiosis is certified by Ecocert Canada (a partner of Europe’s Ecocert SA), which guarantees “that production and marketing rules and regulations for organic agricultural products have been respected throughout the entire manufacturing process”.

SJN does not really rely on FIPP technologies to convince buyers that its products are organic and, hence, deserve a premium. SJN’s strategy mostly consists in getting credible third-party organizations to certify its products. It is not clear that IT presently plays a role in obtaining that certification.

Institutional Trust. SJN relies on institutional trust to find new markets for its tomatoes. More precisely, it uses credible third-party certification to convince buyers and consumers that its products are, indeed, real organic food.

The firm’s management believes building that kind of trust is critical since consumers are sometimes puzzled by the commercial claims made by retailers, distributors and producers (in Québec, a large portion of consumers falsely believe that one of SJN’s main competitors produces organic tomatoes when it does not). As a matter of fact, SJN’s marketing director would like it if it became even more difficult for food producers to get certification for their products, since that would result in the disqualification of lower-quality producers.

Calculative Trust. It seems clear that the certifications received by SJN’s products played a key role in signaling to major chains like Loblaw’s or Métro that the Gaspesian firm is competent and that its tomatoes deserve a place on the shelves of their stores.

Relational Trust. SJN’s management believes that the firm’s future growth will depend on its capacity to increase relational trust. Indeed, SJN does not sell directly to US chains at the present. It sells to a wholesaler/dealer that takes care of transportation and delivery. For example, to sell its products to the U.S.-based Stop and Shop supermarkets chain, SJN deals with a wholesaler from Lévis, Québec, that has a warehouse in New Hampshire. This wholesaler imports tomatoes into the U.S., and then it sells them to Stop and Shop.

The problem with that method is that the company does not have regular, direct contacts with retailers. SJN’s marketing director’s objective for 2008 is to link directly with a few American retailers, while continuing to work with a middleman. Eventually, the firm would like to operate in the U.S. without using a distributor.
5. Discussion

Looking across the four cases, it is apparent that trust played very important roles in the development and operation of FIPP networks. The FIPP network involves multiple actors, including but not limited to producers, producer networks, distributors, retailers, and customers. Trust is critical for mitigating risks, ensuring standard and quality, building collaboration, and coordinating the activities of these multiple actors. More importantly, in order for the survival of FIPP production, FIPP producers need to prove to the end consumers that their products are handled in certain ways that meet consumers’ health needs and delivers superior social and economic value than the standard products. What really differentiates FIPP product and the standard products is the information associated with the production and the trustworthiness of sources of the information. As a result, trust is of fundamental importance for building the confidence of the consumers, mitigating the risks associated with information asymmetry, and ultimately, driving the demands for FIPP production. In a way, trust is essential lubricant for two major types of relationships in FIPP networks. One is the relationship among producers, producer networks, and distributors; and the other is the direct relationship between producers and customers.

In order to coordinate the complex relationships in FIPP networks, we also could discern consistently that multiple trust mechanisms are at work. None of the networks had relied on a single source trust. Each network mobilized a various combinations of institutional framework, calculating evidences, as well as good-will relationship and identity alignment to promote trust. Each of these plays overlapping yet unique roles. Institutional factors, based largely on certification and traceability systems, create conducive environment for collaboration among producers and distributors, as well as passages for trustworthiness to be forwarded from producers over the long chain to the customers, thus reducing the risks of information asymmetry. The importance of calculative trust, however, is limited, and may only be useful in establishing initial relationship between producers and distributors. Since consumers do not engage transaction directly with the producers, calculation of risks and gains may not be a realistic action to take. The role of relational trust is surprisingly significant for both the relationship among producers and distributors, and the relationship between producer and consumers. Throughout the value chain, affection based on reciprocal interactions and shared identities are critical for actors to share knowledge and information, build relatively permanent reliance on each other, and coordinate the productions and distribution activities. In addition, we can observe that the producers are also trying to reach to the end consumers and bridge the connection through identity alignment, such as women to women connection built through the hand-signed labeling in the case of Central American craft cooperative.

Another observation we had is that trust is not static, and it is evolving, during which three forms of trusts interacts. For example, institutional trust may ease the way for the development of calculative trust and relational trust. In FIPP networks, because of the information asymmetry problem, it is difficult for consumers to calculate the risks and differentiate the qualities. In the Québec food export case, certification and traceability essentially established standard and information transparency. The result is that the evaluation of competence and trustworthiness can be more effective, and second guessing of ill-intention became less necessary, which in turn, drive the development of affection and shared identity. Similar mechanism is also observed in the other cases.

Calculative trust can turned into relational trust after a certain period of positive transactions. Conscious calculation of a producer can be replaced with volunteer association with a distributor as belonging to the same community and sharing the same set of principles and values, and vice versa. This phenomenon could be especially apparent in FIPP network as it promotes certain social and environmental objectives.

What seemed to be different across the cases, however, is that the trust development may not take a single path. In the case of the Central American craft trade coop, distrust of government came first, driving the need to establish other trusting relationships that circumvent the national government and establish direct international relationships. Thus, relational trust fills into the gap—women trusting women and deep trusting relationships with a distributor and retailer. Institutional and calculative mechanisms later developed to institutionalize these pre-existing trust relationships.

On the other cases, institutional trust comes first, either in the form of a third party certification or an information system providing reliable information about the products. However, the institutional trust is not always a sufficient condition to succeed. In the case of Tosepan, for example, relational trust has played an important role in taking advantage of certification. In the case of SJN, relational trust is also recognized as an important requirement to promote business growth. The case of Québec food export, on the other hand, indicated that the deployment the
traceability system may have been impeded by a lack of trust between the farmers and Agri-Traçabilité.

6. Summary, Implications and Future Research

In summary, the initial exploration on four cases indicated that trust plays key roles in FIPP operations and expansion. It is critical for building collaboration, coordinating network activities, and mitigating the risks associated with information asymmetry. More specifically, institutional framework serves as an institutional guarantee for the trustworthiness of the producers, as well as a springboard based on which trust can be developed because acceptable behaviors are guided by rules and principles. Calculative trust is important for initial transaction between distributors and producers, while relational trust play broader and more resilient roles in building relationship among producers and distributors, as well as bridging the distance between consumers and producers. These three trust mechanisms also interact in a sense that institutional trust eases the way for the development of calculative and relational trust and calculative trust may be transformed into relational trust after positive reciprocal transactions.

The conclusion is consistent with the literature on information asymmetry and trust [11-13, 15], and extend the literature by detailing the different roles played by trust derived from different types of sources.

This study also provides preliminary guidance for government policy and ICT development. From the case, we could anticipate the potential of deploying automated traceability system to strengthen the institutional means for trust development. There is two questions, however, deserve serious deliberation. The first question is that the development of a certification and traceability system does not necessarily guarantee the development of trust. In the case of Canadian beef traceability, although the system is robust, there is a problem of gaining the buy-in from the farmers. They are concerned that the system means additional burden while not enough concrete gains. In this case, it is not enough to establish an institutional mechanism and expect that trust would grow naturally. What is needed perhaps is the relationship building with the farmers, helping them to see the benefits and assisting them to overcome the technical and financial difficulties. The other is the question of who should be the owner of the system. In Latin America, different from Canada, there is a lack of trust of government. Non-government organizations and producers generally distrust the heavy hand of the government. Government investment to build a system may not deliver the level of trust that is needed. Therefore, future research should carefully study the implication of network governance on transparency and accountability.

In addition, this case also illustrates the potential of using ICT to shorten the distance between producers and consumers. FIPP production may benefit greatly from future study on the use of social networking technology to connect consumers with the production and distribution network.

7. References

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