

## **Knowledge management and communication to address information access and power asymmetries for resource-poor producers in value chains**

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### **Introduction**

Integration into the world market is an increasing challenge for resource-poor producers: new and demanding quality standards arise as a consequence of food safety concerns in industrialized countries and due to a growing civic and corporate social and environmental responsibility (Schröder 2003, Tallontire 2007, Weatherspoon and Reardon 2003, Page and Slater 2003). Asymmetries between the different stakeholders of value chains regarding access to information and resources undermine the ability of the weakest members of the chain to meet these requirements. However, very little is known about who in the chain needs what type of information and knowledge in order to make well-reasoned decisions, to learn and innovate constantly and finally to upgrade to meet shifting market conditions (Vermeulen and Ras 2006). It is also unclear, how communication and knowledge management can contribute to bridge these gaps and lead to a better coordination and integration of all value chain stakeholders.

The value chain approach has frequently been used in order to analyse the flow of goods and resources along the chain, to identify problems and possible solutions in order to improve the overall performance of the chain and enhance possibilities of upgrading (e.g. Dolan, Humphrey et al. 1999, Dolan and Tewari 2001, Berg, Bercher-Hiss et al. 2006, Fleury and Fleury 2001). However, the analysis of information and communication flows between persons, focusing on the social relations between the key stakeholders, has become short.

This paper will provide some evidence about the role of knowledge management and communication in establishing effective value chains with resource-poor producers. It first introduces some terms and definitions regarding value chains, social networks and information, knowledge and communication. This leads to a conceptualization of a theoretical framework on knowledge management and communication in value chains. The next chapter presents some results of value chain analysis from Colombia and Ecuador, where information and knowledge flows have been analyzed. The guiding question is: (1) who in the chain needs what type of information and knowledge? Different types of information and knowledge problems will be presented as well as the effects they produce. The third chapter shows some possible solutions in order to overcome the problems. The key question is here: (2) how can communication and knowledge management contribute to bridge the identified gaps and lead to a better coordination and integration of all value chain stakeholders? Two different approaches

will be presented: the use of media (traditional and ICT-based media) and a strategy to increase social capital through network-building. The last chapter sums up some of the lessons learnt through this action oriented research process.

## **Conceptualizing knowledge management and communication in value chains**

### **The value chain approach**

The term value chain has been perceived as being the most inclusive term within the vast and fast expanding value chain literature (Gereffi, Humphrey et al. 2001). Gereffi<sup>2</sup> (2001: 1618 and Gereffi & Korzeniewicz 1994) defines value chains as the whole range of activities involved in the design, production and marketing of a product. They mention four dimensions as key:

1. The *input-output*-structure of the chain, linking the flow of tangible resources with the flow of intangible knowledge.
2. The spatial structure of production- and distribution networks (*territoriality*).
3. The *governance*-structure and the related power relations between the actors of the value chain, which determine the distribution of financial, material and personal resources along the chain.
4. The *embeddedness* of actors within an institutional framework.

It seems that in most of the value chain literature the (industrial) firm is put in the centre of research, from where their value adding activities and their forward and backward relationships are investigated. Little research is available from the suppliers' / producers' perspective. Besides, there is a tendency to emphasize the flow of goods and money between organizations rather than the flow of information and knowledge between persons. Chain approaches have been criticized for presenting a linear and overly static view of agro-food-systems and for its productionist focus (Goodman and DuPuis 2002, Lockie and Kitto 2000, Raynolds 2002: 406, as well as Leslie and Reimer 1999 and Reimer and Leslie 2004: 251). Hughes (2000), in her study of the cut flower trade, suggests the metaphor of the network, as capturing most effectively the vast webs of interdependent relationships along a value chain, and emphasizes the central role of the flow of knowledge through this network.

### **Social network theories**

Social network theories might enrich the value chain approach by emphasizing the horizontal relationships between value chain stakeholder and focusing on social capital and learning as key sources of value creation. A Dutch group of researchers made the attempt to integrate both lines and developed the so-called netchain approach (see Lazzarini, Chaddad et al. 2001, Jonkers, Donkers et al. 2001 and Diederer and Jonkers 2001). They define a netchain as:

*a set of networks comprised of horizontal ties between firms within a particular industry or group, such that these networks (or layers) are sequentially arranged based on the vertical ties between firms in different layers.*  
(Lazzarini, Chaddad et al. 2001: 1)

In the field of agro-food studies the network analogy has been adopted:

*to emphasize the fluid multidirectional flows of material, discursive, and knowledge resources among a variety of individual and collective social agents.*  
(Raynolds 2002: 408)

Amanor (1999) conceptualizes value chains as strategic networks of independent organizations, which recognize the need to cooperate in order to achieve a common objective. Social networks evidence the social capital, understood as the norms, institutions and organizations enhancing trust, mutual support and cooperation which are crucial in order to reduce the costs of transaction and perform effectively (Durstun, 2000).

Two strands of research within the social network theory could contribute to a better understanding of the role of social networks within the value chain approach: the concept of embeddedness and the development of innovation through networking.

The idea of embeddedness, drawing on Polanyi (1957), argues that the performance of either an individual or an organization depends on how that actor is tied into a larger web of social connections. Hence, it stresses that economic relationships cannot be easily separated from social ties, see Granovetter (1973). The concept of embeddedness is closely associated with Granovetter's concept of 'weak ties': weak ties are more likely to link members of different small groups than are strong ones, as:

*those to whom we are weakly tied are more likely to move in circles different from our own and will thus have access to information different from that which we receive.* (Granovetter 1985)

Weak ties are more likely to diffuse information and traverse social distances than strong ones. They can act as a bridge, connecting two points of a network by providing the only path between them (Granovetter 1973).

Another strand of research analyzes the diffusion of information and the adoption of innovations through networking (Rogers 2003). Regarding networks, which involve the creation and circulation of knowledge as well as the enhancement of innovative capacity, Thompson (2003) critically comments, that:

*if 'knowledge networks' are to do any real business in terms of constructing genuinely new knowledge, they must involve this different sense of what knowledge is and how the network itself encourages innovation through 'learning by monitoring' and 'pidgin conversation'.<sup>3</sup>*

He refers to the tacit and explicit dimension of knowledge and the ignorance of economic approaches, which fail to recognize the often tacit knowledge flow between organizations.

### **Concepts of knowledge management and communication**

Most of the knowledge management literature considers knowledge as a resource, next to raw materials, work and capital (Soukup 2000: 198ff). Hence, within this strand of literature, knowledge management pretends to maximize knowledge and transport it elsewhere in order to be used most effectively. In contrast, within their knowledge creation model Nonaka & Takeuchi (1997)<sup>4</sup> differentiate between 'implicit'/'tacit' and 'explicit' knowledge. 'Implicit'/'tacit' knowledge must be transformed and mobilized into 'explicit' knowledge in order to be accessible and useful for others. As knowledge is context specific a common experiential background is necessary to externalize and use it (ibid). Probst (1999) understands knowledge as all cognitive skills and abilities, which apply individuals to solve problems and tasks. Hence, knowledge in contrast to data and information enables to act.

Communication is key within a value chain in order to establish and strengthen relations between stakeholders and effectively circulate information and knowledge as well as resources and agreements. In this context, communication is understood as a process of social interaction with the aim to mediate between different stakeholders and establish common codes (Beltrán, 1972). The process of communication can strengthen social capital, creating spaces for common action and facilitating knowledge management and innovation along the chain.

### **Approaching knowledge management and communication in value chains**

From the perspective of value chains as a set of vertical and horizontal networks, the ability to establish effective relationships through communication as well as the capacity to access and distribute information and knowledge is highly relevant. Especially within the context of rapidly changing markets with new and challenging standards the constant development of innovations is key. Based on the theoretical foundations we conclude:

- Value creation takes place not only through the material input-output structure of a value chain, but also through the social capital existent within social networks and the ability to establish effective relationships.
- The tacit / implicit dimension of knowledge and its person and context specificity must be recognized in order to enable innovation processes through knowledge sharing. In this context different information and knowledge needs must be addressed in a differentiated fashion.
- The ability to codify a message and choose the right communication channel is a key capacity for stakeholders. However, asymmetries regarding the access to and use of media between different stakeholders may complicate the communication process along the chain.

## Information and knowledge barriers for sustaining market relations

### Communication problems along the coffee value chain – the case of Fapecafes (Ecuador)

Fapecafes, founded in 2002, is a regional federation of four smallholder farmers' organizations, which are localized in three departments in the southern highlands of Ecuador. The object of the development of an umbrella organization was to commercialise coffee and improve efficiency and competitiveness at national and international levels through increased volumes and higher coffee quality.

Communication and knowledge management became an important issue in Fapecafes, when in 2005 the expected volumes of exportable coffee were over-estimated and too much coffee was pre-sold. Fapecafes, having made a big effort to negotiate higher volumes with their clients and increased credits with their creditors, faced the reality of a bad harvest as well as disloyal behaviour of farmers: only 64% of the expected coffee arrived at the warehouse. This caused trouble with Fapecafes' buyers and finally a debt of 9.200 kg remained, expected to be paid off with the next harvest.

In short, what happened? Several driving factors have been identified during discussions and meetings with the organizations' members. First, farmers are not well informed about important issues, like the price definition and negotiation mechanisms, the type of clients and contracts, the functions and roles of Fapecafes as well as the composition of the costs of operation and administration. Second, the formal democratic information and communication structure (introduced by Fairtrade), which assumes representativeness of leaders and active participation of members in the decision-making process, might not always be as effective as supposed. Leaders of the grassroots organizations are neither aware about their role nor trained in their function as information and knowledge brokers. As written information is very rare and communication infrastructure is deficient in rural areas, much of the information discussed in Fapecafes' directory meetings does not arrive at farmers' level. The same applies the other way around: farmers' concerns never will reach the directory. A third critical issue is the fact, that most of the information transmitted and disseminated is much more data and information-like than tacit or knowledge-like. Hence, discussions about harvest problems or diseases as well as informal meetings and horizontal exchange of experiences among farmers groups and organizations are very



**Picture 1: Meeting between farmers and staff of FAPECAFES. Geographical distances and poor infrastructure difficult communication between grassroots groups and the directory.**

rare.

The demonstrated information and knowledge problems may also present a barrier for further upgrading and innovation. The technical staff, possibly as a consequence of the many years of donor-funded assistance by external NGOs, seem to work parallel to the chain instead of as an integral part of it. Consequently, the programming of technical assistance does not respond to the problems of the chain, nor is it linked with the relevant nodes of the chain. The changing preference of clients regarding coffee quality cannot be met if they are not communicated through the whole chain, including all staff members (the regional quality manager, the local warehouse manager, the technical staff) and the farmers.

Summing up, unclosed communication loops as well as unclear roles and functions of leaders, unable to link the different nodes of the chain through unhampered information and knowledge flows, can limit the sustainability of market relations and block new development paths.

### **Conflicting relations among stakeholder of the silk value chain – the case of Corseda (Colombia)<sup>5</sup>**

The corporation for the development of silk production in the Department of Cauca (Corseda), founded in 2000, comprises 160 member families, grouped in 10 associations. The objective is to improve the commercialization process of silk products as well as the efficiency and the competitiveness of the whole chain. Its origin is in an initiative of 150 women who intended to generate incomes and diversify the main activities of coffee production.

The first development phase of the organization is characterized by an increasing product differentiation and an improved access to niche markets. The silk producers started to harmonize their production parameters and prices, which triggered an increase in demand. As a consequence of rising prices, members decided to dedicate themselves



**Picture 2: Working Group. Meeting to exchange experiences in the silk chain. The concentration of information in the hands of a few members produced conflicts and mistrust.**

full time to silk production and the organization grew to include about 300 families by 2003. Their certification as organic producers, the creation of a brand, Yu'USXA (an Indian goddess, initiating the art of silk production), as well as the introduction of a quality label 'hand made' contributed significantly to the positioning in national and international high quality markets for silk products. During this era, Corseda, pioneering the silk niche in Colombia, realized high profits.

However, in 2004 cheap silk products from Asia overstocked the international

market and prices fell significantly. In order to compete, the Corseda Board of Directors applied measures to minimize production costs. In 2005, the number of member families declined to 150, the board of directors resigned and silk producers run out of raw material. As a consequence, the volume of finished products decreased by 58% from 2003 to 2005.

What happened? After having finished the capacity building process, meetings between silk producers became more sporadic. The lack of an adequate space for discussions and negotiations about the costs of production in each step of the value chain and the concentration of information in the hands of a few members produced conflicts and mistrust. The producers of the raw material noticed, that the value generated was distributed asymmetrically along the chain. They perceived their margins as very low, especially in relation with the high risks of silk worm diseases. Raw material production became unprofitable and caused the withdrawal of many producers. This situation put the whole chain at risk: following the shortage of raw material the prices of cocoons increased significantly and thus boosted price competition in the international market.

This crisis demonstrated the interdependencies between the different stakeholders of the value chain and the need to establish new spaces for meetings between producers of raw material, silk processors as well as the Corseda Board of Directors in order to acknowledge and assess work load, time and costs at each node of the chain. This was essential to redefine fair prices, profitability and sustainability for the members as well for the organization itself. At the end, the board of directors was reduced and raw material producers learnt to spin yarn and add value to their product. Another important initiative was the exchange of information with clients about their costumers' needs and the market trends in order to access differentiated markets with higher margins. Higher price differentials allowed the development of incentives and improved conditions for producers and were expected to result again in increasing membership. In 2006, improved competitiveness and reduced organizational costs resulted in an increase of sales of 48%.

### **Barriers for innovation in *panela* value chains (Colombia)**

Panela, unrefined sugar or 'jaggary', is produced on small farms (between 5 and 20 ha) and cottage industries (producing 100-150 kg/hour) or in smallest mini or micro parcels (with less than 5 has, producing <50 kg/hour) in Colombia. The latter ones can be found mostly in resource poor Departments, like the Department of Cauca. 17.000 families are involved in the *panela* sector in the Department of Cauca, generating at least one job per family and 6.000 indirect jobs (Ministerio de Agricultura y Desarrollo Rural 2005, López Daza, F. E. 2002). The small-parcel owners (or peasants) process sugarcane in collective groups, in which one is owner of the motor- or animal driven small sugar mills.

Two associations are key actors within the production, processing and commercialization process of *panela* in the Municipalities of Sandander de Quilichao and Cajibío, located in the north and central part of the Department of Cauca: Asopanela and APC. Both have a registered brand (*Panela Quilichao*) as well as bar

code and health registry. Within several studies<sup>6</sup> the following major problems have been identified:

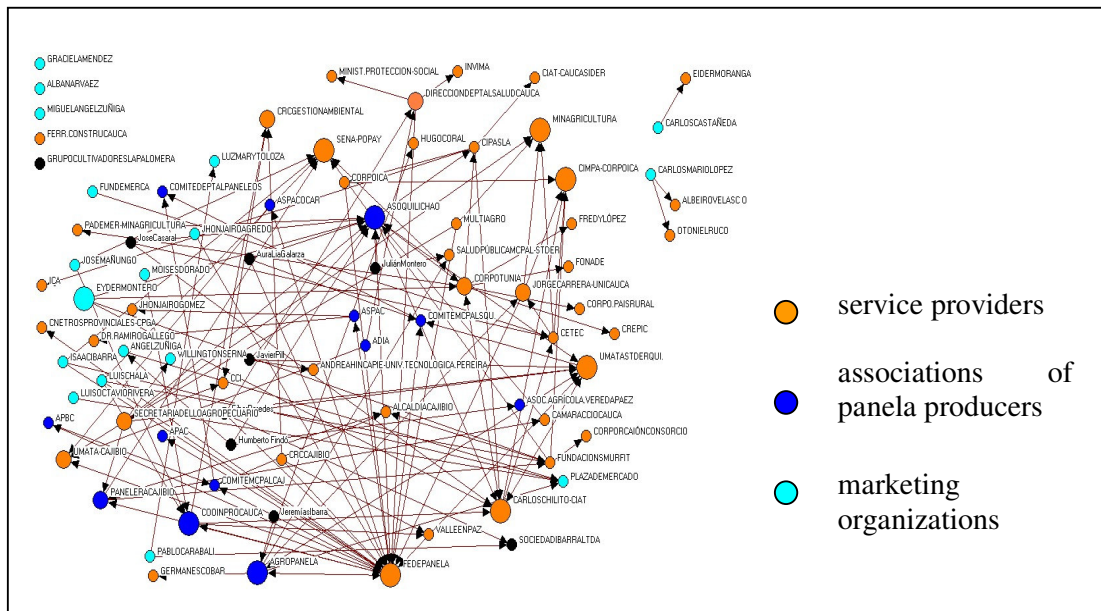
1. Deficiencies in the agronomic management of sugarcane (insufficient knowledge regarding the selection of varieties, application of fertilizers, harvest practices etc., causing low productivity rates<sup>7</sup>).
2. Limited adoption of processing technologies (like design and construction of stoves) as their benefits are unknown, leading to poor quality of products, high production costs<sup>8</sup> and negative environmental externalities.
3. Lack of market information (e.g. sanitary norms) and consumers' preferences, weak organizations and limited access to credits.

Most of the problems are associated with the lack of access to and sharing of relevant information and knowledge. While some information needs are generic along the whole chain (such as information about prices, markets, volumes, financial services etc.), others are specific according to the needs of each stakeholder. For example, producers and processors of panela need more information about the agronomic management of sugarcane, processing technologies and quality standards. Associations require specific information about markets (weekly price variations, markets and buyers, sanitary norms, types of presentations etc.).

On the other hand, each actor possesses valuable information and knowledge. However, the sharing of information and knowledge is not organized in a structured way. One reason for this is that communication media are missing, not accessible or not useful for some of the stakeholders. Digital and web based information is especially difficult to access for producers. Another reason is, that a lot of highly valuable knowledge is tacit and difficult to make explicit. Thirdly, information generated by different organizations is not shared with other associations or with the Municipalities. A regional information exchange system does not exist.



**Picture 3: Showing how an improved mill works. Most of the problems are associated with the lack of access to and sharing of relevant information and knowledge.**



**Map 1: Social network of the panela value chain. The connections between the actors indicate exchange of information and knowledge.**

A social network analysis of the key stakeholder of the panela value chain in Sandander de Quilichao and Cajibío shows that producers and processors are poorly linked with other stakeholders, especially with those who could provide more information and knowledge (see map 1). Instead, they rely on trusted networks of family members, neighbours and friends as primary sources of information and knowledge. Only a few associations are in a central position and able to generate links with other stakeholders. Mistrust and a limited interest in cooperation characterize the relationships between the associations. Both are the result of their historic development accompanied by conflicts, diverse interests and reorganization. A lack of coordination, clear roles and functions characterizes the relations between the service providers. Consequently, alliances to develop joint actions and projects do not exist.

### Summing up

All three case studies give evidence of the importance of trust-based horizontal relationships as well as the interdependencies between the stakeholders of value chains. Missing communication and poor exchange of information and knowledge may impact directly on the overall chain performance, leading to a mismatch between products offered and clients' needs (e.g. regarding quality and volumes in the case of the coffee value chain). If different interests of the diverse stakeholder are not acknowledged, conflicts may arise and put at risk the whole chain (e.g. conflicts concerning the unequal distribution of the value generated in the silk value chain). Poor linkages between information and knowledge providers and users can prevent the development of innovations and upgrading and finally lead to reduced competitiveness of the chain (e.g. non-compliance with quality standards in the panela value chain).

## **Bridging the gap: instruments for integrating value chain stakeholders**

This section will present some instruments, which have been developed and applied in the above-mentioned value chains, in order to overcome the communication and knowledge management problems.

### **Use of traditional media**

Internal communication problems within Fapecafes have been addressed by the use of traditional media, such as radio, newsletters and flyers. First, one person in each of the associations and the umbrella organization was employed for communication and information management. Contracts with local radio stations have been made and the content has been developed based on the information needs expressed by farmers. A bi-monthly newsletter is circulating across all organizational levels – from the federation until the farmer level – providing news regarding prices, actual contracts, volumes required etc. Each organization has some space within the newsletter to share their own information. Flyers with training material have been developed to support farmers' activities to renovate and maintain their coffee plantations. Despite these efforts, experiences of one of the four farmers' organizations demonstrated, that the most effective instrument for learning and developing innovations on farm level have been organized field-trips and the horizontal exchange of knowledge between farmers.

### **ICT-based solutions**

One strategic instrument for Corseda to improve their competitiveness within the international silk market has been the development of a website with information in Spanish and English. Consumers can visit the online product catalogue and order the desired product. This portal turned into the main source of contacts for Corseda, as most orders from abroad came in due to the good online visibility of their products. Key in this process has been the participation of Corseda in a project, financed by the European Union (called LINK-ALL, Local Communities Insertion Network for Latin America). The project provided free and permanent access to high speed Internet and facilitates the online search for market trends, competition, clients and new products.

Within the panela value chain, a new instrument (or combination of different instruments) has been developed by the International Center for Tropical Agriculture, CIAT. The CaucaSider<sup>9</sup> links a virtual network as a source of information (webpage) with a social network of community communicators, facilitating the understanding and diffusion of information. The contents, like market prices, technological information, entrepreneurial development etc. have been developed and prepared jointly between producers, processors and service providers. Complementary, electronic and paper based newsletters, radio programs and other media have been linked to the information system in order to facilitate information access for all stakeholders. Young people have been trained as community communicators or information brokers, bridging the gap between information access points and end users.

### **Strengthening network relations and social capital**

After having introduced a series of media (radio, newsletter, flyers) and having defined community communicators in each organization, Fapecafes realized that one important

issue is missing: strengthening local leaders, who play a key role in bridging the different organizational levels and facilitating the flow of information and knowledge across the chain. Thereupon they started a capacity building process with the goal of increasing the social capital of local leaders. A first important part of this process was the clear definition of roles and functions of leaders within the communication process. A second issue was the re-orientation towards common goals and strengthening cooperation in order to achieve these goals.

Cooperation between different stakeholders of the chain has been key for Corseda. In order to improve the design of products, to meet quality standards and consumers' preferences, cooperation between a designer, specialized in silk products, and some artisans producers of finished silk products, was initiated. This was the way to combine technical knowledge with traditional knowledge and create a new product. The co-innovation process has been validated by a quality control committee, made up of two producer representatives in order to take into account the economic, social and cognitive frame conditions of all value chain stakeholders.

The participation of all member families in the analysis of the costs of production and the negotiation of fair and competitive margins was fundamental for Corseda and contributed to the resolution of conflicts between the different stakeholders. At the same time, this process increased the awareness of interdependencies along the whole chain and strengthened the capacities of members to communicate and mediate different interests. Based on these experiences, Corseda initiated the construction of social spaces for learning and exchange between members, according to their geographical zones and as complementary to the annual plenary meeting and the monthly meetings of the board of directors.

A highly important issue for Corseda has been the direct relationship between the final consumer and the producers via national and international fairs. This feedback mechanism has been crucial in order to know and understand consumers' preferences and make the needed adjustments in production and processing practices. On one hand, the client is interested in the different steps of production and processing the product he/she buys while the producers wish to improve their way of life.

CaucaSider has successfully introduced as a regional information and communication system, by strengthening the social capital of its users. Different stakeholders of the panela value chain have been trained in the use of ICT-based media. Local knowledge brokers have been drawn from local social networks of panela producers and processors. These people have been trained in the use of traditional media and their role as communicators. Finally, CaucaSider contributed to a process of integration of different stakeholders of the panela value chain as well as other local organizations and service providers (like radio stations, telecentres, NGO's etc.), linking information and knowledge providers with users. As a consequence of having better information, some producers accessed credits and new markets.

## **Lessons learnt**

This section sums up some lessons learnt regarding the instruments and approaches for integrating the different value chain stakeholders and improving the information and knowledge flow along the chain.

### *Horizontal and vertical communication*

The acknowledgement of horizontal social networks along the value chain, mainly perceived as vertically structured, opens the perspective for a new human dimension within economic relationships. Horizontal and vertical communication is essential in order to include all stakeholders of the chain. Appropriate mechanisms, which enhance learning and the development of innovations, are (non-virtual) face-to-face events, like workshops, excursions and field-trips.

### *Strengthening social capital*

The role of leaders is crucial to bridge different pools of knowledge and link different types of networks (like primary / family and neighbourhood networks with secondary / value chain networks). Leaders are critical in the process of appropriation of information and knowledge as well as innovations, as they support others in developing innovations. Strategies to strengthen value chains should include investments in social capital. This means establishing cooperating and trust-based relationships, the re-definition of common objectives and strengthening the negotiation and conflict resolution abilities.

### *Co-innovation*

In order to match supply and demand, the process of co-innovation is key. The generation of new knowledge should integrate traditional knowledge bases with market-oriented, technical knowledge. Hence producers, thinking from the perspective of clients, are able to adjust technical requirements regarding quality, design etc. to their environment. Clients, having seen the local context, can acknowledge the speciality of the producers' environment and contribute to explore the competitive advantage of the production site. This requires the ability to overcome cultural and linguistic differences and make sense of new information and contexts. Again, leaders act as mediators in this process.

### *Differentiation of information and knowledge needs*

Different stakeholders of a value chain have different information and knowledge needs. Overloading actors with all available information may have negative effects. According to the type of information, appropriate instruments (or a mix of different instruments) should be used. The process of generating useful contents should be progressive in order to provide solutions within a short period of time.

## **Conclusion**

The experiences presented show that problems regarding knowledge management and communication are common, especially in value chains with resource-poor producers, who lack access to adequate communication media. While in some cases limited access

to information is the key problem, in other cases the lack of information diffusion or a cognitive problem of understanding is key. In many cases, a limited ability and willingness to share relevant knowledge and learning is present.

ICT can improve access to information, especially for those, who are able to use digital information. For producers' associations and their heads it can be a strategic instrument to identify niche markets and market their products via the web. However, ICT based media are not useful for every stakeholder. For example producers with a low educational level have difficulties to select the right information, read and understand it and apply it in their context. Hence, ICT can't replace the human dimension of face-to-face communication. The panela value chain example shows, that local communicators or reporters can bridge the gap between digital information sources and resource-poor producers as users. Consequently, solving information access problems requires strengthening ties between different groups of stakeholders of the chain and adapting complex information to an easily understandable language.

The silk and coffee value chain examples show that a mutual understanding of common problems is key in order to overcome problems which have impact on the whole chain. Again, improved communication along the chain through stakeholder meetings and a joint analysis of the different situation of each stakeholder is needed.

The consolidation of horizontal and vertical network relations between different stakeholders of the chain is especially useful in order to facilitate the development of innovations based on farmers' knowledge and consequently to enhance their competitiveness. The development of trust and transparency is key in this context. Closed communication loops with regular feedbacks, which reflect the consumers' demand for example on product quality, is critical for further upgrading. Leaders as agents of change can act as brokers in the process of information and knowledge diffusion and appropriation. They act as a bridge between different organizational levels and types of stakeholders and contribute to the development of innovations.

Hence, intervention strategies to improve competitiveness of value chains should recognize the value of social networks which support the communication process as well as the central role of local leaders. The task of development interventions is then to identify the existing social structures along the value chains and strengthen social capital.

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## Abstract

This paper emphasizes the role of knowledge management and communication in value chains from the perspective of resource-poor producers. Based on value chain literature, social network theories and concepts of knowledge management and communication, it develops some basic principles of a concept of knowledge management and communication in value chain. Then it presents three value chains (coffee, silk and jaggery) and their information and knowledge problems as barriers for sustaining market relations and/or improving competitiveness. Their effects are conflicting relationships between stakeholders of the value chain, low innovation rates and incompliance with contracts, which put the whole chain at risk. The use of media, including ICT-based media, and the strategy of network-building to increase social capital are presented and discussed as instruments to overcome these problems. While media, especially ICT-based media, can overcome information access problems for ICT literate stakeholders, strengthening horizontal ties is key in order to translate, diffuse and appropriate information and knowledge. Local leaders can act as bridges, linking consumers' demand and producers' supply, facilitating the development of co-innovations. Finally, acknowledging the human dimension of economic relationships means putting the person and their social relationships into the heart of research and development.

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2 Former studies of Gereffi applied the term global commodity chains, which will be used synonymously with the term global value chains in this work.

3 Pidgin conversation means the use of local expressions and dialects in brainstorming in order to make implicit knowledge explicit.

4 See also the article of Nonaka, Toyama and Konno (2000) and Nonaka and Konno (1998).

5 This experience is based on a research project of Conciencias, the University of Cauca and the Regional Center of Productivity and Innovation of Cauca, CREPIC.

6 Several institutions have analyzed the panela value chain in the Department of Cauca and identified its main problems: CIAT, CREPIC, CORPOICA, FEDEPANELA, COLCIENCIAS.

7 Productivity rates with 30-50 to/ha are low in comparison with 70-100 to/ha in other regions of Colombia (COLCIENCIAS – CREPIC).

<sup>8</sup> While in the Cauca Department productivity rates are 18.5 kg/hour/person, they reach in other regions 40kg/hour/man.

<sup>9</sup> Sistema de Información para el Desarrollo Empresarial Rural (SIDER), [www.caucasider.org](http://www.caucasider.org).