Virtual Social Networks at the Base of the Pyramid: a proposed model for understanding Shared Knowledge

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Abstract

Social networks have been studied since the end of the XIX century (Durkheim, 1893; Simmel, 1908). In recent years the internet phenomenon has created the necessity to understand the characteristics and peculiarities of a social network in the virtual space (Wasko & Faraj, 2005; Chiu el al, 2006; Arvidsson, 2008). Virtual social networks create new kinds of relationships since they allow people to share information quickly and globally (Wasko & Faraj, 2005). In these virtual networks one of the behaviors that draw attention is the phenomenon of knowledge sharing (Monge et al, 1998; Lin, 2001). In other words, what are the reasons for someone, without receiving any financial reward, to share information and knowledge? Based on some previous studies (Nahapiet & Ghoshal, 1998; Wasko & Faraj, 2005; Chiu et al, 2006), we identified four main motivations for people to share information and knowledge in the internet arena: (i) structural capital reasons; (ii) cognitive capital reasons; (iii) relational capital reasons, and (iv) personal motivations. Interestingly, financial rewards don't appear to be one important factor to join and participate actively in a virtual social network. Another recent phenomenon that has been discussed in business literature is the relevance of the so called Base of the Pyramid (BoP). Since the seminal article by Prahalad and Hart (2002) a lot has been studied about this subject. One of the issues that arise is the differences in BoP consumer behavior when compared to the upscale social classes (Van Kempen 2004; D'Andrea & Lunardini 2005; Barki & Parente, 2010). Besides the lower disposable income, low self esteem and the importance of relationship seems to be important differentiators that impact directly in consumption (Barki & Parente, 2010). Owing to these differences, the main objective of our research is to better understand the differences between a virtual social network and the ones focused on the BoP, especially regarding the reasons and motivations to share content. We also want to focus on the understanding of whether extrinsic and intrinsic rewards play a significant role for BoP virtual networks. In order to achieve our objectives, we conducted a case study in a social network (Itsnoon) oriented to the Base of the Pyramid, with 6,000 members and that stimulates a co-creation process, based on the idea of knowledge sharing and financial rewards to its members. Based on our research, six fundamental issues arose as important for creating and developing a virtual social network at BoP: Importance of a positive environment to attract users; easy and understandable 'cyber space'; involvement of the organization; involvement within the network, personal benefits and rewards.

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Introduction

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Based on some previous studies (Nahapiet & Ghoshal, 1998; Wasko & Faraj, 2005; Chiu et al, 2006), we identified four main motivations for people to share information and knowledge in the internet arena: (i) structural capital reasons; (ii) cognitive capital reasons; (iii) relational capital reasons, and (iv) personal motivations. Interestingly, financial rewards don't appear to be one important factor to join and participate actively in a virtual social network.

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Theoretical Background

The phenomenon of Virtual Social Networks

Social networks are intrinsic related to the concept of structural cohesion that is defined as a "group property characterizing the collectivity, a positional property that situates subgroups relative to each other in a population, and individual membership properties" (Moody & White, 2003, p. 103).

Despite the complexity of its definition, social networks are structured and developed by a given social system in order to meet members' needs (Kadushin, 2002). A social network can be defined as the minimum number of actors who, if removed from the group, would disconnect it as a whole (Moody & White, 2003).

Social networks have been proliferating and impacting individuals' life in modern societies, supported by the raising Internet access (Chiu et al, 2006). Despite being a new phenomenon, virtual communities can be simply defined as "online social networks in which people with common interests, goals, or practices interact to share information and knowledge, and engage in social interactions" (Chiu et al 2006, p. 1873).

Brown and Duguid (2001) define 'networks of practice' as larger, loosely knit, geographically distributed group of individuals engaged in a shared practice. Besides the fact that users may not know each other or expect to meet them face-to-face, they can share a great amount of knowledge. Wasko and Faraj (2005) go beyond and define 'electronic network of practice' as a special case of 'networks of practice', where the sharing of knowledge happens primary through computer-based communication technologies. The main characteristics of these networks are self-organizing, voluntarily choice to participate and an open activity system focused on a shared practice.

Since electronic networks "make it possible to share information quickly, globally, and with large numbers of individuals" (Wasko & Faraj, 2005, p. 36), there is an increasing interest in the study of online cooperation and virtual organizing.

Shared Knowledge in Virtual Networks

The participation in social networks is open to people interested in the shared practice, with no expectations of obligation and reciprocity (Wasko & Faraj, 2005). When members share a common practice, knowledge readily flows and it enables individuals to create sustainable social networks to support knowledge exchange (Brown & Duguid, 2000).

There is no doubt that content is the existence support of virtual networks and is absolutely hard to stimulate, being the willingness to share probably the largest challenge for practitioners and the most studied aspect for academics (Chiu et al, 2006). The process of knowledge contribution is socially complex and involves a variety of actors with different needs and goals (Wasko & Faraj, 2005). Virtual communities have limited value when they lack rich knowledge (Chiu et al 2006).

Shared knowledge is derived through a process of co-creation among social networks users. This process of social production always happened according to Social Science literature since people have always coproduced the value of goods giving them meaning and value on their own lifeworks. Nowadays, 58 to 83 percent of the population of industrial societies is engaged in some such activities of social production (Arvidsson, 2008).

The strength and visibility of this phenomenon is related to the diffusion of new information and communication technologies, but also to increasing activation of civil society through multiple expressions such as political activism, new social movements, increasing number of people that self-identify as artists, emerging social entrepreneurships, global solidarity movement, new forms of New Age spirituality and body practices and a host of alternative lifestyles (Arvidsson, 2008).

Arvidsson (2008, p. 326) defines the process of social production as "self-organized systems of (mostly immaterial) production that have evolved around the diffusion of networked information and communication technologies". This is an important economic phenomenon, stimulated by new media technologies (Benkler, 2006) that are usually "self-organized, emergent, bottom-up phenomena that are not primarily motivated by monetary concerns" (Arvidsson, 2008, p. 326).

One of the benefits of knowledge sharing is that active users can gain access to new information, expertise, and ideas not available locally, and they also can interact informally, free from the constraints of hierarchy and local rules (Bouty, 2000). Some studies show that,

surprisingly, contributions usually happen without expectations of reciprocity (Wasko & Faraj, 2005, p. 35)

Chiu et al (2006) proposed a model using the Social Cognitive Theory and the Social Capital Theory. The first one defines human behavior as a "dynamic and reciprocal interaction of personal factors, behavior, and the social network (system)" (Chiu et al, 2006, p. 1873). Once they suggest that personal cognition is not sufficient to explain this complex process, social capital, defined as the network sum of actual and potential relationships and the set of resources embedded within it, has also great impacts on the extent to willingness to share.

Despite antagonist discussions regarding the role of Internet in increasing or decreasing social capital, Uslaner (2000) states that Internet neither destroys nor creates social capital, but evidently facilitates interactions bringing people together by shared interests, goals, needs or practices.

Based on these studies (Nahapiet & Ghoshal, 1998; Wasko & Faraj, 2005; Chiu et al, 2006), we discussed the motivations to share according to (i) structural capital reasons; (ii) cognitive capital reasons; (iii) relational capital reasons, (iv) personal motivations and (v) rewards.

Structural capital can be defined as structural links or connections between individuals or the overall pattern of connections between actors (Wasko & Faraj, 2005). Collective action is easier to achieve when there are social direct ties between members, making them also more likely to sustain contributions (Wasko & Faraj, 2005). Tie strength is "a combination of the amount of time, the emotional intensity, the intimacy or mutual confidence, and the reciprocal services which characterize the tie" (Granovetter, 1973, p. 1361).

The most important motivation factors regarding structural capital are: cohesion or sense of community, centrality or individual's embeddedness, and transaction costs and visibility. Social networks tend to have denser cohesive structures when costs of interaction are low and visibility is high (Kadushin, 2002).

Cohesion is very important for networks 'support', once users are linked also because they satisfy basic needs and sustain "status quo" (Kadushin, 2002, p. 86). Chiu et al (2006) concluded that strong community ties and satisfaction with member-member interactions and organizer-member interactions could provide important environmental conditions for knowledge exchange, process called as "sense of community".

While cohesion or sense of community is related to the feeling of 'being part of it', embeddedness or centrality is related to 'how deeply is the involvement'. Wasko and Faraj (2005) use the term 'centrality' to describe how central is an individual to the network through social ties. Embeddedness is a "logic of exchange that shapes motives and expectations and promoted coordinated adaptation (…) actors do not selfishly pursue immediate gains, but concentrate on cultivating long-term cooperative relationships" (Kadushin, 2002, p. 87).

Cognitive capital is related to the cognitive capability to understand and apply the knowledge or those resources providing shared representation, interpretations, and systems of meaning among parties (Wasko & Faraj, 2005). The main motivational factors in this field are shared-language and vocabulary, expertise or tenure in the field, and shared vision.

The concept of shared language is broader than language itself, relating also to shared codes, acronyms, subtleties, underlying assumptions and symbols (Chiu et al, 2006). In Chiu et al. (2006) study regarding professional electronic networks, shared language showed positive significant effect on knowledge quality, but not on quantity of sharing.

Even motivated, an individual will contribute just if the person has the required 'expertise' (Constant, Sproull & Kiesler et al, 1996). Individuals would be likely to be more

motivated if they are confident in their ability to share that specific knowledge, especially in voluntary shared environments (Bandura, 1982).

Shared vision helps to integrate and combine resources, makes individuals more likely to become partners and embodies the collective goals and aspirations of the whole organization, once it helps individuals to see the meaning of their contributions (Chiu et al, 2006).

Relational capital can be described as strong relationships and positive characteristics shared or the kind of personal relationships people have developed with each other through a history of interactions (Wasko & Faraj, 2005). The central motivation factors concerning relational capital are: commitment, norm of reciprocity, identification with the collective, and trust.

Commitment is defined as "a sense of responsibility to help others within the collective on the basis of shared membership" and, for social networks, it is related to the willingness to give and receive content (Wasko & Faraj, 2005, p. 42). Since commitment is an "implicit or explicit pledge of relational continuity between exchange partners" (Dwyer, Schurr & Oh, 1987, p. 19), higher commitment should result in strong collaborations.

Commitment can be based on economic concerns, but also on intrinsic aspects, such as identification, social interactions and shared values (Barki, 2010) and decreases opportunistic behavior and uncertainty in networks (Shamdasani & Sheth, 1995).

Norm of reciprocity can be interpreted as the knowledge exchanges that are mutual and perceived by the parties as fair (Chiu et al, 2006), concept related to what Dholakia et al (2004) named as "group norms" that have deep impact on "we-intentions" and is positively related to contribution, once it justifies time and effort spent in knowledge sharing. In this sense, willingness to share is related to the desired experience of having meaningful social ties with others, known as *philia*, a scarce good in modern society (Arvidsson, 2008, p. 332-333).

Identification is defined as "one's conception of self in terms of the defining features of self-inclusive social category" (Bagozzi & Dholakia, 2002), in other words, the positive feeling toward the community and the sense of belonging that should also be positively associated with quantity and quality of sharing (Chiu et al, 2006).

One of the main characteristics of dense social networks is the sense of trust, which is exemplified in the following passage "if you act in a certain way towards the other, the other will in turn satisfy your needs" (Kadushin, 2002, p. 82). Trust creates positive atmosphere to enhance knowledge (Chiu et al, 2006) and influences how people interact with each other once it is an optimistic view and a belief that others have the same fundamental values (Uslaner, 2000).

Personal motivations are related to the expectation of individual benefits when access the network, review the questions, choose the ones that they are able and willing to answer, and formulate a contribution (Wasko & Faraj, 2005, p. 42). People are not just looking for enrich knowledge and information, but also seeking for outcome expectations such as support, friendship (meet people) and sense of belongingness (Chiu et al, 2006)

Some authors pointed that, even when altruistic reasons seem to be prevalent, other personal gains such as career indirect benefits (through networking and adding lines to a résumé), learning about one's community, expressing one's own deeply held values or moral principles and living up to the ideals of others are also important (Briggs, Peterson & Gregory, 2010).

Previous studies had confirmed that reputation is one of the strongest factors for intense participation (Donalth, 1999; Wasko & Faraj, 2005) and it is strictly connected to sense of approval and respect. Butler et al (2002) concluded in their studies that the expectation of being seen as skilled, knowledge-able or respected is one of primary reasons to

contribute in virtual networks. Networks are a measure of the extension of a person's social impact and reputation is a measure of the quality of this impact (Arvidsson, 2008).

Arvidsson (2008) states that self-expression is also an important motivator that people state for taking part in social production. According to Weber (2004, p. 137), "open source lets you show the world how creative you really are", equivalent to put your best work in a gallery. Individuals just want to see their efforts socially recognized as inventive, creative and beautiful (Arvidsson, 2008).

Some authors also emphasize the importance of friendship and sense of belongingness as personal reasons to be part of social networks. There are evidences that the increasing desire to construct new and alternative forms of social relations is a consequence of a weakening social structure and soaring manifestations of loneliness and alienation (Arvidsson, 2008).

There is still the altruist feeling of 'enjoy helping others' that Kollock and Smith (1996) suggested by prior researches as an important stimuli, but that Wasko and Faraj (2005) could not identify as a significant influence on the volume or value of contributions. This personal characteristic is much more related to the feelings of 'some new value will be created' or 'worth the effort' and maybe the understanding that something is going to come back to themselves (Nahapiet & Ghoshal, 1998).

Rewards and monetary motivations have been always complexly discussed by academics regarding social networks, electronic networks and volunteering.

Despite some conclusions that 'other-oriented' values and reasons seem to have more influence on pro-social attitudes than 'self-focused' ones, theorists of volunteering suggest that intrinsic and extrinsic rewards are two of the primary motives for this practice and the emerging consensus is that both altruistic and egoistic motives exist (Briggs et al, 2010).

The majority of surveys that we found related to social production and virtual social networks shows that monetary motivation (extrinsic reward) may exist to some extent, but it has been evaluated as least important or even not treated in most of surveys, once the majority of relationships and professionals virtual networks do not reward directly individuals shared-content (Wasko & Faraj, 2005; Chiu et al, 2006; Arvidsson, 2008).

Arvidsson (2008) brought two possible explanations for this. First, monetary value resources in social production are *labor time* and *access to information*, what is highly abundant because of a multitude of volunteers and once that are no distinction between labor and life. Second, there is simply too little money enrolled in social production to be a strong motivator, once social production moves outside the monetary economy of capitalism. For example, most of individuals that considered themselves as artists do not live from their creativity.

On the other side, according to social exchange theory, behavior can be understood under rational self-interest and knowledge can be stimulated when its rewards exceed its costs (Kelley & Thibaut, 1978).

Arvidsson (2008) states that people who have highest status and recognition in networks tend to have higher contributions in terms of strength, quality and endurance, but also easier to mobilize resources, motivate others and organize social cooperation.

Social Networks at the Base of the Pyramid

The term Base of the Pyramid is not precisely defined and different authors use distinct definitions (Barki, 2010). To be concise, we based our analysis in a broader definition that includes people living with less than US$ 8 a day as low-income populations (United Nations Development Program [UNDP], 2008).

Worldwide low income segment comprise 4 billion people (Prahalad, 2005) living on low income relative to the expenses they incur to meet basic needs, such as nutrition or health care (Prahalad & Hammond, 2002; Prahalad & Hart, 2002). Thus, BoP is the largest segment in number of people and is experiencing higher demographic and income growth (UNDP, 2008).

We consider as BoP in Brazil almost 70% of the population belonging to classes C, D and E (Barki, 2010), living with monthly family income bellow US$ 1,000. Historically marginalized, poor communities tend to have fewer opportunities to be heard, have less access to educational and job opportunities that develop critical thinking and expressive skills, and struggle with self-esteem issues that reinforce disempowerment and discourage civic participation (LaFrance, 2011).

The main characteristics concerning BoP segment are strong values and conservative behavior; the like for abundance in different contexts; high concerns with maintaining their dignity; brand loyalty for known brands, since the limited budget inhibits the risk; search for products with the inclusion ideal (feeling of belongingness); face-to-face contact likeness; and low self-esteem (Barki, 2005).

The reasons behind BoP brand loyalty for known brands help us to understand two important characteristics of this consumer. First, it indicates symbol of status and integration in society, once they have an evident need to feel that they belong to the society and are not excluded. Second, brands are also a way to separate them from extremely poor people, indicating the necessity of differentiation (Van Kempen, 2004).

Prahalad (2005, p. 20) reinforces the evidence of this 'inferiority complex' and this perception of themselves as 'second class citizens', but he states that when they become consumers, they "acquire the dignity of attention and choices from the private sector that were previously reserved for the middle-class and rich".

Qualitative researches in Brazil showed that BoP segment presents unconscious feelings of low self-image and, at the same time, they give high importance for dignity and are extremely concerned about maintaining their self-respect, being treated with dignity and affirm their honesty (Barki & Parente, 2010). They also have solidarity or sense of necessity in helping others, what are probably source of strong social ties.

Another important characteristic identified by Mattoso (2005) is the immediate gratuity, related to the impossibility to save, and the need of payment by installments for some products.

Despite the lack of formal education and low literacy rates, studies regarding marketing communication for BoP also bring another important difference related to the aspiration level: messages to the low income classes must be simple and highlight the idea of 'inclusivity', contrary the upper classes oriented communication that usually evidences 'exclusivity' (Barki & Parente, 2010).

Compared with upper classes, BoP people tend to create a stronger sense of community based on mutual help – from bargain tips to mutual cooperation, and more informal and friendlier relationships. BoP consumers want more personal services, they trust more people than institutions and value face-to-contact (Barki & Parente, 2010).

Relationships are the center of networks and trust plays an important role in the logic of exchange (Uzzi, 1997). Consumers tend to create stronger social networks and relationship is considered pre-requisite to create links with BoP (Barki, 2010). BoP networks are developed not just for economic reasons and "they are strongly embedded in the pre-existing social structure of the community" (Santos & Rufín, 2010).

BoP real networks are typically more geographically dispersed, since they usually live in rural areas or densely populated zones, such as slums in major conurbations (Santos & Rufín, 2010), tending to be relatively more isolated (Anould & Mohr, 2005), with "strong

local cultures and less contact with national or international consumer habits" (Santos & Rufín, 2010, p. 135). This broader informal structures and embeddedness leads BoP networks to be also more resistant to external shocks (Banerjee & Duflo, 2007).

Kadushin and Jones suggested after their studies in New York social networks that higher social classes tend to have more diverse social networks, while lower social classes tend to have more geographically local cohesive networks (Kadushin & Jones, 1992). The advantage of Internet may make it possible to minimize ties barriers and this statement may become weaker.

Because BoP populations usually live under weak institutional environments (Khanna & Palepu, 2000), social networks and organizations depend on traditional community norms and ties (London & Hart, 2004), legitimacy and trust (Wheeler et al, 2005), relationships rather than contracts (Santos & Rufín, 2010) and influential members of the community (Arnould & Mohr, 2005).

Santos and Rufín (2010) developed an important study analyzing the differences between BoP and 'Top of the Pyramid' (mostly of non-BoP individuals) networks. In terms of structural characteristics, BoP networks are usually more decentralized due to importance of non-market members; there is high density in isolated clusters, but few connections between clusters; and specialized intermediaries are scarce (Santos & Rufín, 2010).

Related to tie characteristics, BoP networks demand deep knowledge of counterparts to create trust; they are more informal due to the weakness of formal institutions; the frequency of interactions are higher and more personalized contact is required ('everybody knows each other'). The members' diversity and dynamics are also divergent: there are larger diversity and BoP networks are often more unstable and unpredictable regarding formal aspects, but at the same time, more stable and resilient relative to informal aspects (Santos & Rufín, 2010).

Some studies in the past with low-income populations also had evidenced the importance of rewards for this segment that can be intrinsic such as praise, respect, status and honors; or extrinsic, in form of money (Blau, 1964).

Despite the scarcity of studies regarding virtual social networks for BoP, the analysis of the specificities of real low-income networks and the differences between higher income networks have important implications and give us a basis to develop propositions about expected differences and reasons to share in BoP virtual communities.

Study Methodology

Since there is almost no academic literature concerning virtual social networks for the BoP and empirical qualitative research is more appropriate for examining new relationships, exploring conceptual models and describing new phenomena (Denzin & Lincoln, 2000), we started our studies through a case-based approach (Eisenhardt, 1989; Yin, 1994) using the following methodology:

In the first phase we identified a Virtual Network oriented to the BoP. After some researches, we chose Itsnoon, which is a private company that was originally an NGO and that has an important approach of co-creation with the BoP and that fits to our study proposals.

In the second phase (November and December 2010), nine interviews were performed with six stakeholders (founder, pedagogue, manager, client and partner), review of Itsnoon virtual network website and client reports and site visits observations were made.

In the third phase (January and February 2011), we developed focus groups with six members of the network. We also did three in-depth interviews (March 2011) with three

heavy users of the network to explore better some previous hypotheses. All this material was recorded, transcribed, read line-by-line and codified.

Itsnoon: reinventing citizen engagement

Itsnoon was created in January 2010 in Bahia, Brazil with the idea of building a virtual network of mostly young and low-income individuals who collaboratively produce creative works exploring important civic and social issues. Besides that, the organization recruits companies, government agencies and other large institutions to sponsor these creative dialogs in exchange for the knowledge developed about a specific topic of interest.

Network members are asked to think critically and bring their creations to meaningful topics in form of art works such as drawings, photos, films, songs, poems and radio programs. At the same time, they develop valuable skills, earn income in form of rewards, build community ties and learn to work with others.

On the other side, sponsors deep their understanding of underserved communities both through the process of creation and the content analysis, build credibility as socially responsible actors and gain fresh perspectives to stimulate innovation. Figure 1 illustrates how Itsnoon Business Model works.

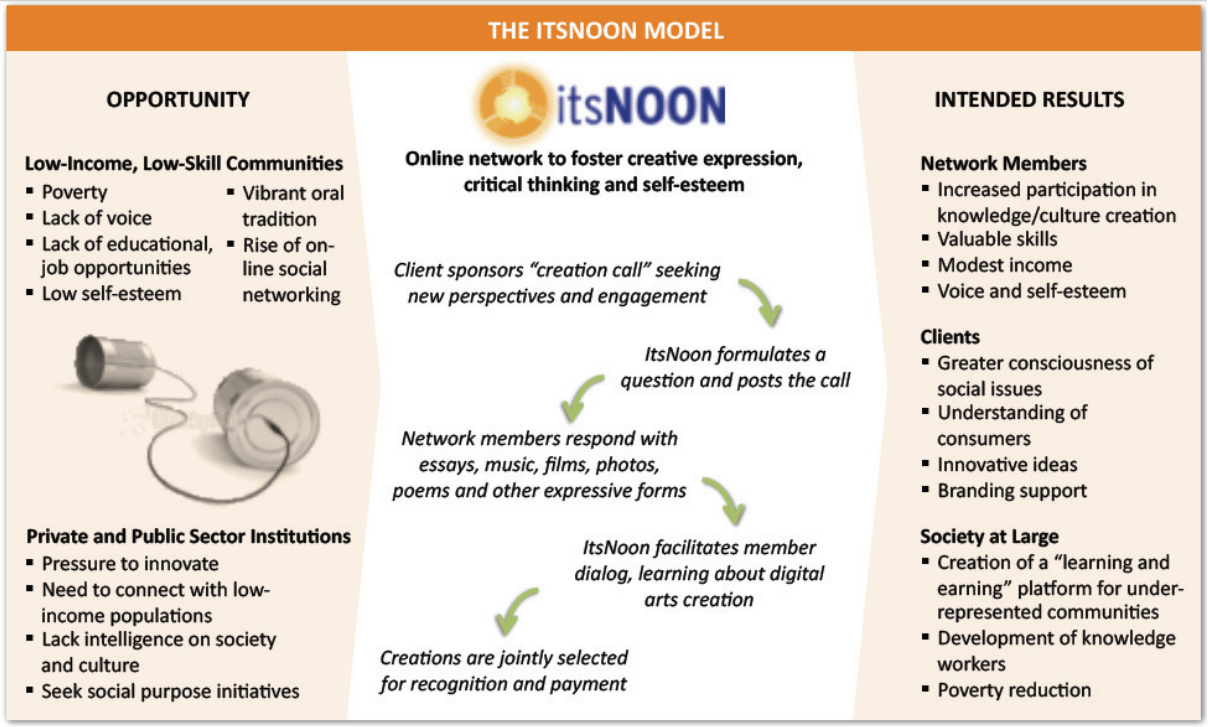

Figure 1. Itsnoon Business Model
Source: LaFrance, 2011

In the beginning of its second year, this virtual network has more than 5,000 members across Brazil and is starting operations in South Africa (around 700 members) and the Netherlands (50 members). Around 75-80% of them can be considered as low-income. More than 70% of the networks' members have contributed at least one submission, compared to YouTube's 3% (LaFrance, 2011) and more than 17,000 submissions were created.

Together with the sponsor, Itsnoon management defines the theme of the 'creation call', formulates the appropriated question (with the help of specialized pedagogues) and

posts it in the Internet platform, launching the new 'creation call', for what the users are given one or two months to share content.

After this planning phase, users generate submissions, discuss and co-create among themselves, developing a highly connected process of sharing knowledge. During this time, members of the management have the concern to create an easy learning platform where members really learn skills from each other. For that, they give them tips regarding possible references about the themes, indicate electronic tools to develop better creations – such as how to use photo-editing software for example and also give daily feedbacks to the creators. Members have also the possibility to share "virtual values" among them – they can 'love', 'happiness', 'inspiration', 'courage' or 'trust' for the users or creation they want.

Through a voting process that engaged the client, Itsnoon management and network members, they award, in average, R$ 300 each (= US$ 180) in cash payments for 80-150 contributors, depending on the duration of the 'creation call' and budget of the sponsor. Until February 2010, more than 2,040 winners had been paid the total amount of R$ 612,000 (= US$ 370,000). It means that one in eight submissions had resulted in earned (LaFrance, 2011).

Results

The theoretical discussion about social networks has pointed that BoP networks are usually more decentralized and more geographically local cohesive. The empirical research reinforces our hypothesis that Internet is playing an important role to minimize this distance and make BoP individuals more connected to the external world. Users mentioned that "thanks to Internet, I'm all the time connected to other people" or "I never turn it off, even when I'm sleeping, in the bathroom, wherever". They usually use Internet also for economic reasons, once it makes it easier "to promote my work and find buyers for it".

For these individuals, virtual social networks mean the best way to "socialize" and feel "freedom", once it allows low-income populations to share ideologies and get access to new ideas, express themselves, and connect them to people that are far from each other – "I live far from my home, family and friends, this is the way I have to be close to them".

We can conclude that Itsnoon is classified as an electronic network of practice and it is clearly unanimous among interviewed members that it does not fit in the same classification of relationship-based networks as Facebook, Twitter or Orkut. Despite the fact that most of them are also active members on this kind of virtual networks, they see Itsnoon through a broader perspective, besides relationship, related to 'culture', 'production', 'creation', 'art' and 'life experience sharing'. On Itsnoon, a member said, "there is no space for gossip; it was created to incentive art, culture, creativity of each one, to share how you live".

The active members declared that they had joint the network in order to share their work – "I wanted to show my photographs, my creations and it's amazing to have a place where people is interested on it"; to be recognized and receive feedback – "I don't know anything like Itsnoon that stimulates my work and my creation"; and to develop personal skills – "I started as a hobby, but now, it's important for me, I learnt a lot, I prepare and think about before posting".

Regarding **structural capital** motivations discussed before, it is clear that there are strong social ties between individuals with relatively deep emotional intensity and mutual confidence ("much more than Facebook friends that I add without criteria"). When the interviewer used the personification technique ("Define Itsnoon as a person"), Itsnoon was identified as "a friend to present to my parents".

There are many evidences that sense of community or cohesion are important factors that stimulate content sharing, once they satisfied their primary basic need (to share their

creations) and they are fulfilled with member-member interactions – "I feel part of it, I'm recognized on this network", but also with organizer-member interactions, "the difference between Itsnoon and the other virtual networks is that users interact to each other, but the network (viewed as the staff or the institution) also interact with the users".

In **cognitive capital** sphere, there are some evidences that digital access and shared language is a pre-requisite to be part of it, but no interviewed users had mentioned it as factor of motivation – "of course this network is mostly for young people that are digitally connected".

Regarding expertise or tenure in the field, two different conclusions were made:

First, there are little evidence about the importance of expertise on the type of content shared, that we called "technical expertise". Even though some interviewed members did not have any previous relation to any kind of art (such as photograph, film or drawing), they declared the creation process stimulated them, once it was exactly what Itsnoon is stimulating, "I lack knowledge about arts, image software and digital tools but something makes me have many ideas, start to think", said one of them. "You must go further, you must innovate with the tools you have, this is Itsnoon ideology", "I write what comes to my mind, I'm not a writer or a photographer, that's why is important to have the same people (from the network) evaluating the works, not specialists", said users.

Second, there are evidences, on the other side, that expertise on the theme of the "creation call" is deeply related to the motivation to share, "sometimes it's hard for you to create something about a subject that you don't know or that you don't like". This factor can be a barrier or a stimulus, once the effort is larger when they are not confident about specific knowledge and sometimes they just give up.

Still related to cognitive capital, shared vision shows to be highly related to knowledge sharing. All the users interviewed showed the "willingness to share good things to the others", awareness to Itsnoon vision, shared values (that they are all the time virtually exchanging among themselves) and concerns about their "role in society". They strictly believe in Itsnoon main principle of "*Sevirologia*", defined by the users as "it is possible for everyone to find a way to do something cool with the resources they have".

Concerning the **relational capital** factors, commitment appeared as a strong motivator of the quality of the content, more than the quantity. They mentioned that "when you are part of it, you have the purpose to share your point of view", "on Facebook or YouTube there is no commitment, you can post whatever you want; on Itsnoon is different, you have responsibility to be there" and "you must share your ideas once you are enrolled".

Norm of reciprocity as a factor related to "group norms" and "we-intentions" appeared as positive related to contribution. They mentioned many times that "what we have in common is the collective conscience, we think about the other", "we need to be always learning and teaching others, believe that we can be better". This factor was mentioned also as a differentiation between Itsnoon and other virtual networks once "the difference is exactly that we learn with other, we exchange, we share". Another situation desired by interviewed users was the promotion of face-to-face interactions or real meetings with other users, mentioned many times during the research.

The role of reciprocity was reinforced many times when they mentioned the concerns about "how can I cheer up someone that is down?" or "how can I give them strength?" and because they see each other as a connected entity "you must take care of others", "what makes the creations better is the sum", "you want to move forward and you want others to move with you".

Despite the fact that trust was not mentioned, we cannot discard that it can be unconsciously extremely important to understand motivations to share. During the personification, they said, "other user is someone that you want to take home" and many

times they showed that trust were intrinsically embedded in their relationships "we do not compete, we help and we are helped".

There is no doubt that despite collective reasons, **personal motivations** are strongly related to knowledge sharing for BoP virtual networks. Evidences shows that self-expression is one of the most important factors, as unanimously mentioned: "this is the space I have to express myself", "Itsnoon is where I can attribute my meaning for something collective", "what motivates me is the willingness to show my work", "I can share my ideas, incentive other, be investigated (…) everything we do in life we have the vanity to see if someone liked, if incentives anyone else".

Itsnoon appeared as an excellent platform to "join my works, to make my portfolio" and at the same time, to be seen, "I have a blog, but nobody sees, on Itsnoon people always see, post, discuss and share the meaning it has for them". This factor is probably stronger in BoP networks in reason of the low self-esteem issue discussed before, confirmed by the following passages: "it is related to my self-esteem, I feel more creative", "you feel as you are a writer when you win, it's extremely exciting", "there is this feeling of comfort, recognition, valued".

This way, reputation appears to be also a substantial reason to share, once they showed to be always concerned about self-image: "I feel good to be seen as a good writer", "the best feeling is when you post something and someone publicly comments good things about you, praises and recognizes you", and "in my street there is not this culture of art, I brought it to others to show them what I was doing, to promote it there, to bring beauty".

In contrast to theoretical discussion, our empirical evidences showed that **rewards** are extremely important as motivators to knowledge share in BoP virtual networks. According to users, this is not the primary factor, but "financial reward is a strong motivator", with the meaning of "recognition" and an "opportunity to begin". Many users mentioned that they do not share with the expectation to win, but "everybody needs money, it helps a lot".

There are also practical evidences that support our analysis. First, Itsnoon performed some non-financial rewarded calls ("attention calls") and in these cases the number of posts was usually lower. Second, Itsnoon number of users and number of posts' growth rates in the Netherlands, a developed economy and a high threshold for escaping poverty, are much lower than in Brazil and South Africa. It can be related to lower impact of the modest payments for winning creative submissions in higher-income networks. Deeper research must be done about this issue, once many other variables may influence the development of Itsnoon in different countries, such as leadership and staff, for example.

Another interesting fact regarding the monetary reward is that they see it as an "opportunity to invest in themselves to increase their performance in the network". Many users spent their first prizes buying photo and video cameras, computer software, computer hardware, etc.

Besides the evidences regarding money, intrinsic rewards tend to be as relevant. They mentioned that, even for non-financial rewarded calls, the winners' selection is fundamental, "it's important to know who are the best creators, who are the winners". At the same time, the virtual "values" that they can give one to others as sign of recognition are considered important. They also mention the possibility to develop "status" positions in the network, "I think that in some time, my role in the network will change to a position of stimulator or manager".

Finally, all the users mentioned that feedback is maybe the most important motivator for the continuity of their participation, "just the feedback I receive from the others and from Itsnoon (staff) worth the effort", "it's even better when feedback comes from someone that you don't know", "it's different than Facebook comments as 'cool' or 'beautiful', the feedback on Itsnoon are constructive, sincere and valid". This conclusion is strictly related to

the question of low self-esteem and inferiority complex of BoP individuals, discussed by many authors before.

Based on our findings, we developed a theoretical model to explain how BoP specificities influence on knowledge sharing motivations, summarized by in Figure 2.

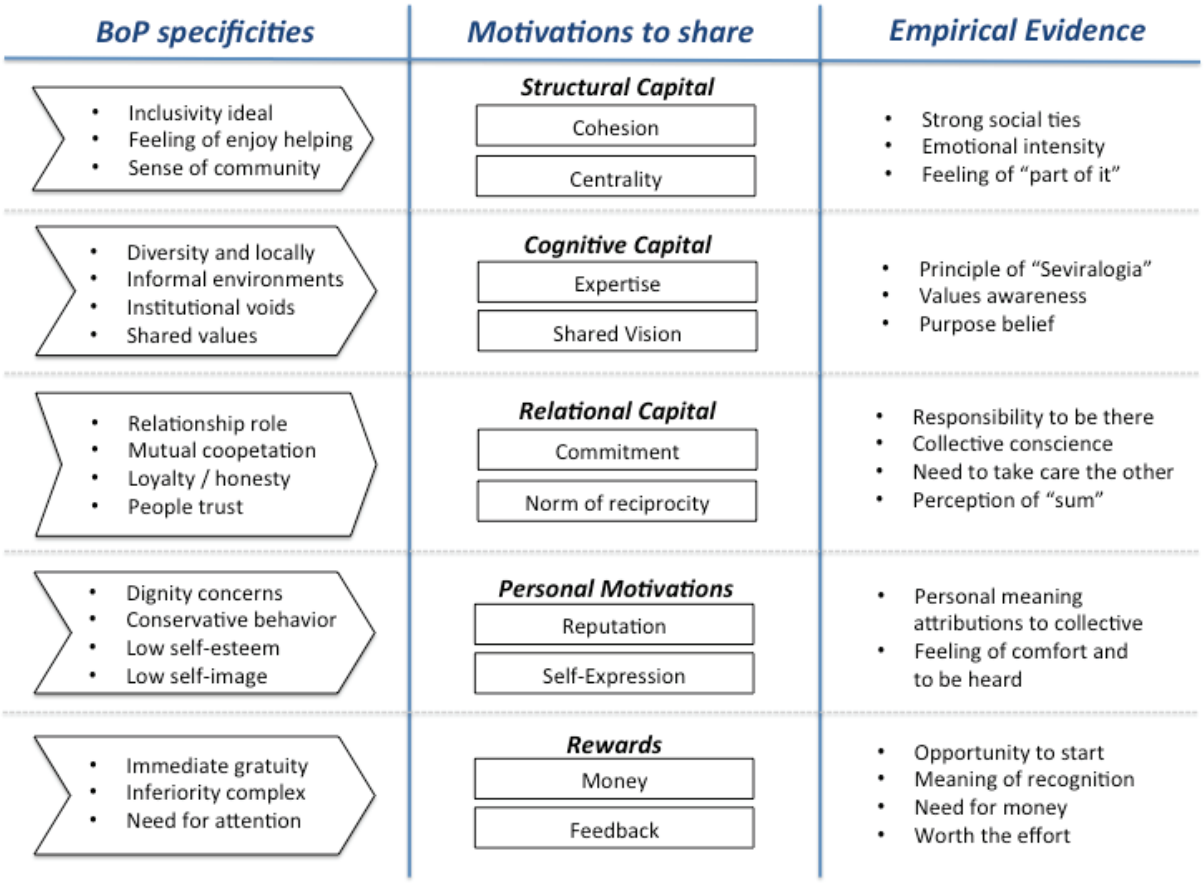

Figure 2 – Theoretical Framework of BoP virtual networks
Source: Elaborated by the authors.

Implications and Further Discussions

According to Itsnoon creator, "any strategy for tackling poverty must inspire and reward people, simultaneously building tangible skills and the self-confidence to put those skills to use". This idea complies with the purpose of Itsnoon that proved to meet BoP needs, as a learning platform that stimulates shared knowledge and give them tools to evolve.

For academics, this is just the beginning of the studies regarding virtual BoP social networks. Our work contributes to the emerging literature in this field by providing a theoretical model, identifying the main differences between virtual social networks for BoP and upper income populations, and focusing in the main concern that makes this type of association alive: the reasons to share knowledge and content.

We concluded that the wealth of virtual social networks at the BoP is much more in the intrinsic relationships and in the sharing knowledge process than in the created content. Social production is driven by a paradoxical combination of: other-oriented and self-interested reasons, emotional and rational explanations, common and BoP specific needs. For BoP individuals, it was proved the importance of self-esteem, the role of relationship and the ideal of inclusivity.

For practitioners, it is unquestionable that the complex issue is how to create community sense, making people feel that they belong to something nobler, important and giving them an appropriated environment to produce significant social ties. The fundamental challenge is to leverage the degree of individuals' embeddedness through informal links and long-term approach.

Based on our research, six fundamental issues arose as important for creating and developing a virtual social network at BoP:

1. ***Importance of a positive environment to attract users***: willingness to join and stay active can be achieved through high visibility ('If the other has, I want to have') and low transaction costs ('worth the effort').
2. ***Easy and understandable 'cyber space':*** For BoP population, common and simple language and codes are very relevant (especially when users are low educated), as well as the possibility of an easy communication, and content must be frequently renewed through diversified subjects (not restricting segments or being perceived as repetitive).
3. ***Involvement with the organization:*** common vision, clear goals and shared values play an important role to differentiate a particular network from the others, and organization-member relationship can help to increase users' participation.
4. ***Involvement within the network:*** an interactive place might allow the development of trust, identification, reciprocity and commitment to increase co-creation (meet BoP needs of inclusivity and relationship).
5. ***Personal benefits:*** friendship, reputation, learning and self-expression are necessary to meet BoP needs to be respected and approved (self-esteem issue).
6. ***Rewards***: Rewards appear as a sign of recognition, through intrinsic initiatives (points, virtual values, symbols) and constant feedback for the participants, and status and hierarchy systems to differentiate high-users, once they stimulate others. Finally, rewards can be perceived as a strong stimulator for knowledge sharing.

The BoP phenomenon is highly important and companies are developing new business models to meet this population needs and make them connected to the globalization. Our study tried to highlight the importance of adaptation in the virtual world, once operating at BoP new consumers requires sensitivity to understand local and cultural differences and flexibility to adjust to them. At the same time, managers must achieve the right balance to include them into integrated virtual networks.

Limitations

There are several limitations to this study, requiring further examination and additional quantitative research. The theoretical model developed can also generate hypotheses that can be tested with large samples and statistical tools to evaluate the significance and strength of each factor.

Whether our findings could be generalized to all types of BoP virtual communities, it is unclear and requires further investigations, once our study was based in a specific social network.

Our research may have been impacted by self-selection bias, once it was focused on active participants. We also did not investigate members that participate to receive knowledge but do not share.

References

Arnould, E., & Mohr, J. (2005). Dynamic transformations for the Base-of-the-Pyramid Market Clusters. *Academy of Marketing Science Review 33*(3), p. 254.

Arvidsson, A. (2008). The Ethical Economy of Customer Coproduction. *Journal of Macromarketing 28*(4), pp. 326-338.

Bagozzi, R., & Dholakia, U. (2002). International social actions in virtual communities, *Journal of Interactive Marketing 16*(2), pp. 2-21.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist 37*(2), pp. 122-147.

Banerjee, A., & Duflo, E. (2007). The economic lives of the poor. *Journal of Economic Perspectives 21*(1), pp. 141-167.

Barki, E. (2010). Distribution Strategies for the Base of the Pyramid: an exploratory study in Brazil. São Paulo: Escola de Administração de São Paulo da Fundação Getúlio Vargas.

Barki, E., & Parente, J. (2010). Consumer Behavior of the Base of the Pyramid Market in Brazil. *Greener Management International 56*, pp. 11-23.

Benkler, Y. (2006). The Wealth of Networks: How Social Production Transforms Markets and Freedom. *Yale University Press*.

Blau, P. (1964). Exchange and Power in Social life. New York: *John Wiley and Sons*.

Bouty, I. (2000). Interpersonal and Interaction Influences on Informal Resource Exchanges between R&D Researchers across Organizational Boundaries. *Academy of Management Journal 43*(1), pp. 50-66.

Briggs, E., Peterson, M., & Gregory, G. (2010). Toward a Better Understanding of Volunteering for Nonprofit Organizations: Explaining Volunteers' Pro-Social Attitudes. *Journal of Macromarketing 30*(61), pp. 29-76.

Brown, J. S., & Duguid, P. (2001). Knowledge and Organization: A Social-Practice Perspective. *Organization Science 12*(2), pp. 198-213.

Brown, J. S., & Duguid, P. (2000). The Social Life of Information, Boston, MA: *Harvard Business School Press*.

Butler, B., Sproull, L., Kiesler, S., & Kraut, R. (2002). Community effort in online groups: who does the work and why. *In:* Weisband, S., Atwater, L. (Eds.). Leadership at a Distance, Mahwah, New Jersey: Lawrence Erlbaum Publishers.

Chiu, C., Hsu, M. & Wang, E. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories, *Decision Support Systems 42*, pp. 1872-1888.

Constant, D., Sproull, L., & Kiesler, S. (1996). The Kindness of Strangers: The Usefulness of Eletronic Weak Ties for Technical Advice. *Organization Science 7*(2), pp. 119-135.

Dholakia, M., Bagozzi, P., & Pearo, L. (2004). A social influence model of consumer participation in network - and small-group-based virtual communities. *International Journal of Research in Marketing 21*(3), pp. 241-263.

Donath, J. (1999). Identity and Deception in the Virtual Community. In: Smith, M. & Kollock, P. (Eds.), New York: Routledge, pp. 29-59.

Durkheim, Emile. (1893) The Division of Labor in Society. Translated by W. Halls (1984). New York: *Free Press*.

Dwyer, F., Schurr, P., & Oh, S. (1987) Developing Buyer-Seller Relationships. *Journal of Marketing 51*.

Eisenhardt, Kathleen M. (1989) Building Theories from Case Study Research. Academy of Management Review, Vol. 14 Issue 4, p532.

Granovetter, M. (1973). The strength of weak ties, *American Journal of Sociology 78*(6), pp. 1360-1380.

Kadushin, C., & Jones, D. (1992). Social networks and urban neighborhoods in New York City. *City & Society 6*, pp. 58-802.
Kadushin, C. (2002). The Motivational Foundation of Social Networks. *Social Networks 24*, pp. 77-91.
Kelley, H., & Thibaut, J. (1978). Interpersonal Relations: A Theory of Interdependence, *John Wiley*, New York.
Khanna, T., & Palepu, K. (2000). The future of business groups in emerging markets: Longrun evidence from Chile. *Academy of Management Journal 34*, pp. 268-285.
Kollock, P. (1999). The Economies of Online Cooperation: Gifts, and Public Goods in Cyberspace. *In:* Kollock, P., & Smith, M. Communities in Cyberspace, New York, pp. 220-239.
LaFrance, Steven. (2011). Learning for Action. *LFA Group*.
London, T.; Hart, S. (2004). Reinventing strategies for emerging markets: Beyond the transnational model. *Journal of International Business Studies 35*(5), p. 350.
Lin, N. (2001). Social Capital. *Cambridge University Press*, Cambridge, UK.
Mattoso, C. (2005) Identidade, inserção social e acesso a serviços financeiros: um estudo na favela da Rocinha. *Instituto de Pós-Graduação e Pesquisa em Administração*, COPPEAD, Rio de Janeiro.
Monge, P., Fulk, J., Kalman, M., Flanigan, A. J., Parnassa, C., & Rumsey, S. (1998). Production of Collective Action in Alliance-Based Inter-organzational Communication and Information Systems, *Organization Science 9*(3), pp. 411-433.
Moody, J., & White, D. (2003). Structural Cohesion and Embeddedness: A Hierarchical Concept of Social Groups. *American Sociological Review 68*, pp. 103–127.
Nahapiet, J., & Ghoshal, S. (1998). Social Capital Intellectual Capital, and the Organizational Advantage. *Academy of Management Review 23*(3), pp. 242-266.
Prahalad, C. (2005). Fortune at the Bottom of the Pyramid. *Upper Saddle River*, NJ: Wharton *School Publishing*, Pearson Education.
Prahalad, C. & Hammond, A. (2005). Serving the world's poor, profitably. *Harvard Business Review*, pp. 48-57.
Prahalad, C. & Hart, S. (2002). The fortune at the bottom of the pyramid. *Strategy +Business 20*, pp. 1-13.
Santos, M. & Rufín, C. (2010). Global village vs. small town: Understanding networks at the Base of the Pyramid. *International Business Review 19*, pp. 126-139.
Shamdasani, N. & Sheth, J. (1995). An experimental approach to investigating satisfaction and continuity in marketing alliances. *European Journal of Marketing 29* (4), pp. 6-23.
Simmel, G. (1908). The Sociology of Georg Simmel. Edited by K. H. Wolf (1950). New York: *Free Press*.
United Nations Development Program. (2008). Creating value for all: strategies for doing business with the poor. New York: One United Nations Plaza.
Uslaner, E. (2000). Social capital and the Net, *Communications of the ACM 43* (12), pp. 60-65.
Uzzi, B. (1997). Social Structure and Competition. *In:* Interfirm Networks: The Paradox of Embeddedness. *Administrative Science Quarterly 42,* pp. 35-67.
Van Kempen, L. (2004). Are the Poor Willing to Pay a Premium for designer Labels? A Field Experiment in Bolivia. *Oxford Development Studies 32* (2), pp. 205-240.
Wasko, M., & Faraj, S. (2005). Why should I share? Examining Social Capital and Knowledge Contribution in Electronic Networks of Practice, *MIS Quarterly 29*(1), pp. 35-53.
Wellman, B., Carrington, J., & Hall, A. (1998). Networks as personal communities *In*: Wellman, B., & Berkowitz, S., Social Structures: A Network Approach, *Cambridge University Press*, New York, pp. 130-184.

Wheeler, D., McKague, K., Thomsom, J., Davies, R., Medalye, J., & Prada, M. Creating sustainable local enterprise networks. *MIT Sloan Management Review 47*(1), 2005, pp. 33-40.
Yin, Robert K. (1994). *Case Study Research: Design and Methods*. USA: Sage Publications.