

The Value Initiative
*Advancing urban value
chain development to help
millions of people work
their way out of poverty.*

Social Networks and Value Chain Development

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technical note

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About The SEEP Network

The SEEP Network is a nonprofit network of over 130 international organizations that believe in the power of enterprise to reduce global poverty. SEEP members connect in a global learning community to increase their impact in over 170 countries, where they collectively serve over 89 million micro-entrepreneurs and their families. Through SEEP's learning initiatives, microenterprise development practitioners co-create and exchange strategies, standards, and tools for building healthy economies with a sustainable income in every household.

www.seepnetwork.org

About The Value Initiative

From 2008 to 2011, with support from the Bill and Melinda Gates Foundation, the SEEP Network's Value Initiative advanced the knowledge and practice of urban value chain development to stimulate sustainable, large-scale, and poverty reducing economic growth, with a special focus on vulnerable populations. The \$6.5 million Value Initiative has two core Practitioner Learning Programs (PLPs):

Urban Value Chain Development

Although value chain development represents an innovative and systematic approach to address poverty, best practices for urban settings have yet to be well defined and broadly disseminated. In response to this need, the Value Initiative provided technical assistance with 3-year grants to four demonstration programs in Kenya, India, Indonesia and Jamaica. The SEEP Network facilitated capacity building, peer learning, and supported knowledge management process and research to advance and build the industry capacity in urban value chain development. The four Value Initiative Programs (VIPs) were implemented with the following partners:

Program Name	Lead Organization	Partner Organizations	Sub Sector	Location
VIP India	ACCESS Development Services	<ul style="list-style-type: none">• Jan Kalyan Sahitya Manch Sansthan (JKSMS)• Rajasthan Abhyudaya Sansthan (RAS)• Jaipur Jewelers Association	Jewelry	Jaipur, India
VIP Kenya	Academic Model Providing Access to Healthcare (AMPATH)	<ul style="list-style-type: none">• Export Promotion Council (EPC)• Fintrac	Passion Fruit	Eldoret, Kenya
VIP Jamaica	Jamaica Exporters' Association	<ul style="list-style-type: none">• The Competitiveness Company• Area Youth Foundation	Ornamental Fish	Kingston, Jamaica
VIP Indonesia	Mercy Corps Indonesia	<ul style="list-style-type: none">• SwissContact• PUPUK	Tofu & Tempeh	Jakarta, Indonesia

Business Planning for Sustainability and Scale-Up

The Value Initiative partnered with five organizations to foster learning on innovative business models for sustainable, larger-scale enterprise development that reaches a wider target group of marginalized communities:

- Entrepreneurship and Community Development Institute (Pakistan);
- Fair Trade Forum (India);
- LabourNet (India);
- SDC Asia (Philippines);
- KeBal / Mercy Corps (Indonesia).

For more information about the Value Initiative, including tools, additional learning products, photos and videos, please visit www.seepnetwork.org or contact Yibin Chu, Program Manager of Enterprise Development Community of Practice at chu@seepnetwork.org.

Acknowledgements

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Introduction

Never before in the history of the world has humanity been so mobilized to take on poverty. At the turn of the century, the United Nations set a Millennium Development Goal to reduce by half the number of people living in extreme poverty by the year 2015. So far, these efforts have focused on eliminating rural poverty, where the majority of the world's poor have always lived. Now, however, urban poverty has become significant, highly concentrated, and fast growing.

Cities have always represented a chance for a better life. The promise of urban opportunity has been the source of considerable growth in the world's cities throughout modern history. This, more than ever, is the case today, especially in countries with developing economies. For the first time, over half of the world's population—3.3 billion people—live in cities. By 2030, towns and cities in developing countries will hold 81 percent of the world's urban population (UNFPA 2007; Roseland et al. 2007).

The explosive growth of cities brings with it the significant task of sustainable development—generating income and employment for growing populations, and effectively managing the social and environmental costs that come with high density. In many ways, cities are growing far faster than they are developing. One billion people—one-sixth of the world's population—already live in slums, and this number continues to rise rapidly (Garau et al. 2005).

Because the SEEP Network and its members see urban poverty as a significant issue, in 2008, with the support of the Bill and Melinda Gates Foundation, the Value Initiative Program¹ (VIP) began to advance urban value chain development to assist millions in working their way out of poverty. To achieve this goal, the Value Initiative has funded four urban demonstration programs in cities around the world.

- VIP Indonesia: consortium led by Mercy Corps Indonesia in Jakarta with the tofu and tempeh value chains
- VIP India: consortium led by ACCESS Development Services in Jaipur, India, through its Jaipur Jewelry Artisans Development Project (JJADe), with the fashion jewelry value chain
- VIP Kenya: consortium led by Academic Model Providing Access to Healthcare (AMPATH) in western Kenya with the passion fruit value chain
- VIP Jamaica: consortium led by The Jamaica Exporters Association (JEA) in Kingston, Jamaica, with the ornamental fish value chain

¹ During the Value Initiative Program, SEEP members and its partners have held a public workshop at the 2010 SEEP Network Annual Conference and an on-line seminar for interested SEEP Network and Market Facilitation Working Group (MaFi) members; documented program and learning themes, sharing, and internal dialogues; produced publications that synthesize relevant literature and the experiences of the partners about the role of social networks in urban value chain development; and held public training events (2011).

Each partner identified relevant research themes to explore and shared their findings with the larger enterprise development practitioner community. VIP Indonesia and VIP India implemented action research programs to further develop promising practices in identifying and working with social networks to promote market and urban value chain development.²

When practitioners talk about social networks in the context of market development,³ they mean the personal relationships that people in markets have or lack—relationships that influence people’s economic opportunities. In many situations, social networks run along place of origin, ethnic, religious, class, gender, and caste lines. In urban settings, people who have migrated from the same rural villages often maintain social networks to advance their economic opportunities and social stability with housing and socio-cultural activities.

This document looks at the analyses (and related initiatives) developed by Mercy Corps Indonesia and ACCESS India for social networking and how social networks affect value chain development in an urban environment. Mercy Corps analyzed social networks within the tofu and tempeh production value chain in Jakarta, Indonesia, and ACCESS developed technical assistance services through its Jaipur Jewelry Artisans Development Project (JJADe) in Jaipur, India.

² See Appendix 1 for general descriptions of the VIP Indonesia and VIP India projects and how social networks are an integral aspect of their value chain projects.

³ The term “market development” is used loosely here to refer to programs that enhance livelihoods, develop enterprises, or strengthen small-scale enterprises and farming by facilitating commercial, sustainable access to services and markets.

Research on Social Networks

Mercy Corps Indonesia's interest in researching social networks arose from the fact that many producers and workers involved in the tofu and tempeh value chain follow traditional family occupations of cultivation, production, or sales, often rooted in their ancestral villages in east or central Java. The value chain actors connect from the urban sales points through the urban or peri-urban production to their rural origins. Business decisions are made based on trust and the information received. Consequently, these social relationships substantially impact the micro, small, and medium enterprises (MSMEs) involved, as well as, by extension, VIP Indonesia's ability to successfully achieve its goals: increase income, improve working conditions, and reduce any adverse environmental impact of tofu and tempeh production in Jakarta.

Characteristics of the Mercy Corps Indonesia and ACCESS India Social Networks

The social networks researched by these two partners had certain similar characteristics:

1. Strong social networks, based on place of origin
2. Markets organized and divided by social networks based on ethnicity, religion, and caste
3. Women marginalized in overlapping social and business networks
4. Exclusion of certain groups from social network circulation of information and opportunities

Mercy Corps Indonesia chose to investigate the social networks operating in the tofu and tempeh value chains to shed light on how these existing networks can be utilized to facilitate information and technology exchanges in production, labor recruitment, marketing, and improved access to finance.

ACCESS India found that, when it started the JJADe project, the fashion jewelry sector was dominated by social networks. The sector is controlled primarily by the jewelers and the Jaipur Jewelers Association (JJA), which formed 100 years ago. The artisans belong to various ethnic or religious communities, and each community often specializes in certain functions within the value chain. For example, trusted brokers contract out functions, such as metal crafting and stone embedding, to artisans who are mostly Hindu migrants from Bihar and West Bengal. Other functions, such as stone cutting, polishing, and drilling are allocated to other local Muslim communities in Jaipur. Furthermore, lacquer fashion jewelry producers are from the Lakhera caste among Hindus and the Manihar caste among Muslims.

The fashion jewelry sector is losing its competitive edge as design has become more important than the value and volume of the raw materials in jewelry. ACCESS is taking a market-driven approach to address working conditions and improve product quality and production practices.

To participate in labor, financial, or commodity markets, people often utilize their connections via social relations and knowledge of social institutions to achieve optimum benefit in participating in these markets.

Little research, in general, has been done on how markets are affected by interpersonal mechanisms that are embedded in the social landscape of a market (Moore 1994). In this document, the Value Initiative sheds some light on the importance of the role social networks play in value chain development.

Non-economic Factors Shaping Markets

In a perfect competitive market, prices create market equilibrium, all firms and consumers know the prices set by firms, and any firm may enter or exit the market when they so choose. But in the real world, this is not the case because all people do not have access to perfect information, and existing institutions shape economic behavior and affect how markets operate. And just what are these institutions? North (1992, 4) defines institutions as “the rules of the game of a society,” which comprise formal regulations and informal constraints that shape human interactions. Institutions are designed to achieve efficient outcomes and to reduce uncertainty for players in the game—the players being organizations which comprise groups of individuals with a common purpose to achieve common objectives. These groups include political, economic, social, and educational bodies (North 1998; 1999).

A social network operating in a value chain is based on social relations between people, who extend trust due to shared norms. This foundation of trust encourages and facilitates sharing information, skills, and contacts for labor and financial resources

Market institutions regulate, set prices, and communicate information regarding products, prices, quantities, buyers, and sellers, all of which establish how the exchange of products and services occur. The informal institutions embedded in customs, traditions, norms, and religion are the foundation of market institutions. All economic institutions are based on these factors. The formal regulations, which set out the rules of the game, are influenced by the informal institutions (Williamson 1998). The evidence points to the fact that all economic behavior is socially constructed (Harriss-White 1996).

To expand this idea that informal social regulations shape markets, people often use non-economic resources, such as people they know or goodwill they have cultivated with their buyers or sellers, to enjoy cost advantages in producing goods and services, buying, selling, or trading. Essentially, the economy is embedded in social institutions (Granovetter 2005). To state this another way, the specific norms of behavior for economic transactions, which include who buys and sells for whom, how trust is established, what sanctions are applied if there is a breach of trust or contract, and so on, are set out within the socio-cultural context. Thus, the institutions that socially regulate the economy are class, caste, ethnicity, gender, and religion—and all have prescribed norms, traditions, and mores (Harriss-White 2004). To participate in labor, financial, or commodity markets, people often utilize their connections via social relations and knowledge of social institutions to achieve optimum benefit in participating in these markets.

What Is a Social Network?

A social network is made up of all the people whom each individual actor knows and can illustrate all the relevant relationships among the individual actors when connections are mapped. Social networks are governed by shared norms. Simply put, it is who the actors know and how they associate with those they know. Norms are the ideas that are shared regarding the proper way to behave.

The number of connections in a specific social network among the individual economic actors or firms in a value chain indicates the density of the social network. The more connections that actors have make it easier for ideas regarding proper behavior to be transmitted and reinforced (Granovetter 2005). A social network, then, is based on socially active relationships shaped by the agreed-upon norms that govern the social connections. People living in poverty do not have much capital and have access only to limited resources, but they do have social connections through their religion, place of origin, kinship, ethnicity, race, and gender that are reflected in their social networks.

Within value chain development, social networks can illuminate how exclusive or inclusive a market is because social networks can determine who does what in the process of moving a product from raw materials to end consumer. The act of belonging to the group, based on common factors, can create interdependency among these individuals and be inclusive for actors possessing the “right” characteristics. If actors belong to a group, they have access to information, credit, buyers, and employers or employees. At the same time, if they do not belong to a social network group, the economic actors will more often than not be excluded from participating in a particular market if it is dominated by a specific social network.

The Role of Trust and Sanctions in Social Networks

Trust and informal sanctions regulate many markets in many contexts.

Doing business involves risk. Buying and selling have many components. In order to carry out a market transaction, economic actors need to identify and select who it is that they wish to purchase inputs from to be sure that the inputs are a good price and of a good quality. In addition, one needs to find buyers that can be trusted to pay in a timely manner. This requires efforts to conduct negotiations, which hopefully lead to a bargain or contract, and an inspection to make sure that the terms of the agreement are being observed. These are only some of the steps required, and all incur costs—costs of time and resources (Coase 1960).

Social networks play a key role for recently arrived migrants in large cities. Trust exists because of shared norms and values through kinship and ethnic lines.

In more formal economies, some risk-reduction methods include contracts, guarantees, securities, credit histories, and background checks. To reduce risks in informal economies, sanctions and trust are required. Trust has the expectation that one actor will not take advantage of the opportunities opened up by the other actor. For instance, the employee or laborer will not steal or underperform, or the seller will not cut the weight or volume of the good while charging full price. Sanctions for misbehavior can be enforced formally if there is a contract, or informally through the loss of reputation, which can result in losing current and future business partners and social rejection from a group (Humphrey et al. 1998). Trust and informal sanctions regulate many markets in many contexts.

In most societies today, it depends on who an individual knows to get where they want to go. Getting an interview for a good job or to getting credit with a low interest rate (outside a formal financial institution) may depend on contacts, as well as the individual's credibility and reputation. When someone moves to a new city or enters a new profession, it is who they know that opens doors or who vouches for them as dependable and trustworthy; otherwise it is risky for someone to trust the individual when they do not know the background or anything about the individual.

In established cities, where rural migrants are flocking in search of a better life for themselves and their children, the precarious neighborhoods (known as slums, barrios, townships, favelas, or ghettos) that lack utilities and services (e.g., schools and garbage collection) operate as enclaves of security for the new migrants. They often seek out others who have migrated from the same villages and live in ghettoized enclaves in cities. The earlier migrants provide an established social network that offers a sense of protection and security for the new migrants.

Traditional family and village relationships provide continuity, where familiar social mores and behavioral norms exist in the new environment, along with information about access to housing and employment, or the means to start a small business. Credit and contacts are critical pieces of information that are shared among individuals and groups who possess similar characteristics. Thus, the enclaves within the precarious neighborhoods, characterized by place of origin, ethnicity, religion, or caste, create and maintain a social network that is the outcome of a web of relationships connecting people from a village arriving in a city (Saunders 2010).

Because social networks play such a major role for recently arrived migrants in large cities, poverty alleviation strategies in urban environments that promote market development cannot underestimate the relevance and importance of social networks. The social networks establish trust, where trust has not been earned, per se; trust exists because of shared norms and values through kinship and ethnic ties, among other shared characteristics. And at the same time, if new migrants in a city misuse the trust extended to them through the offer of a job, a loan, or affordable shelter, then they risk losing their reputations in the community. This is a sanction in itself because they will be shunned from the social network and face greater economic hardships in breaking into the new environment.

Where Do Social Networks Fit into Value Chain Development?

A value chain is defined by the course from raw material to final product and reaching the end consumer. Value chains encompass the full range of activities and services (provided by market actors), which is required to bring a product or service to its end use. The chain includes producers, processors, input suppliers, exporters, and retailers, among others (both vertical and horizontal linkages). A value chain analysis reveals the system of interactions between the different firms and organizations influencing the operation of the market system in the value chain. Relationships between firms shed light on how a product is traded and between whom. They show the process of creating value, which in many cases is not just production but the value-added activities that increase the value of the product and, as is hoped, incomes for the economic actors along the chain.

Within the value chain framework, there are structural and dynamic factors. The *structural factors* include all individuals and firms involved in adding value and helping move the product to the end-market consumers, whereas the dynamic factors refer to the performance of the economic actors within the value chain and their effect on how the value chain functions. Table 1 presents these elements in a value chain analysis.

Within value chain development, a social network is not just a group of people that shares a similar religion, ethnic background, gender, or economic activity, such as trading or retailing. A social network is based on social relations between people who extend trust due to shared norms, which encourage and facilitate sharing information, skills, contacts for labor, and financial resources. Social networks can also influence who owns, controls, and inherits assets as set out by the norms regulating the social network.

Table 1 Elements of a Value Chain

Structural elements of a value chain	Dynamic elements of a value chain
<ul style="list-style-type: none"> • End-market opportunities • Business enabling environment <ul style="list-style-type: none"> – Formal regulations – Informal regulations • Vertical relationships • Horizontal relationships • Support markets <ul style="list-style-type: none"> – Input supplies – Infrastructure (i.e., transportation, storage) – Finance 	<ul style="list-style-type: none"> • Value chain governance: coordination of economic activities through non-market relationships and some sort of steering of activities • Relationships among firms: collaborative or antagonistic • Upgrading opportunities <ul style="list-style-type: none"> – Technical information – Skill building – Technology
Source: USAID (2009)	

In pro-poor market development, social networks are important to identify because they can be mobilized to advance the participation of vulnerable populations in value chain development—or they can present barriers to participation in the following ways:

- Allow people into the market OR keep people out.
- Provide advantages in the market OR support exploitation.
- Support OR undermine the flow of information, technology, skills, finance, and market linkages.

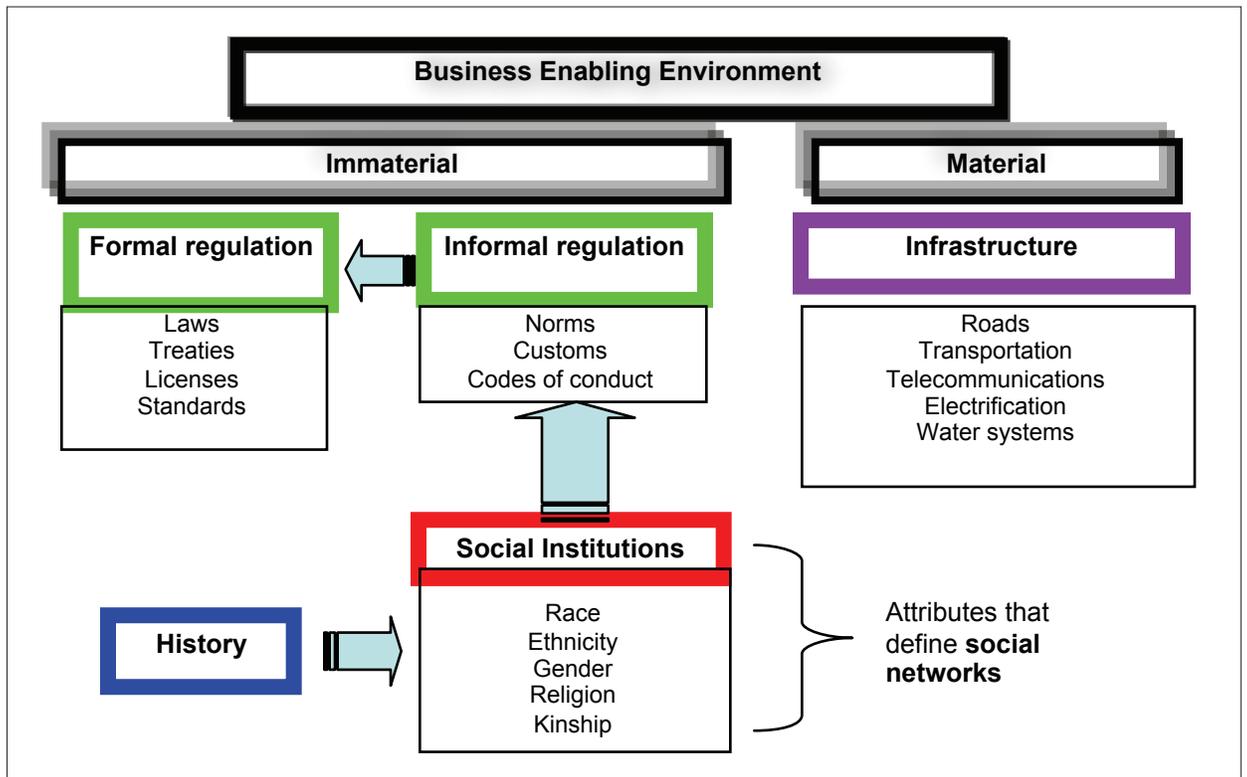
Social networks have the potential to support—or undermine—all aspects of value chain development. Value chain analysis assists in identifying what is missing, what is needed to improve competitiveness for a value chain, and how to incorporate the poor. The current value chain framework, however, remains weak in how to determine the factors that support effective trust building along vertical linkages and between horizontal linkages. Understanding the role of social networks within a value chain not only offers insight into trust and power, as well as those interventions that best include the vulnerable populations within the cultural context, but it also offers a deeper knowledge of the business-enabling environment.

Social Networks and the Business-Enabling Environment

A business-enabling environment facilitates or impedes business activities, and is comprised of formal and informal regulations, as well as material infrastructure. Figure 1 illustrates the components of a business-enabling environment. Formal regulations are laws, licenses, and treaties, standards, and so on—regulations that are written and enforced through contracts with repercussions if the contracts are not honored. Informal regulations are the unwritten regulations, which are determined by social norms and influenced by culture, tradition, and religion. Informal regulations within markets are enforced by trust and sanctions, and prescribe market roles by gender, tribe, ethnicity, religion, and caste.

The informal regulations in a society influence the formal regulations set out in the laws. For instance, in some agricultural economies, land title is awarded to men because the role of a man is to provide for the family. If the male provider of a family dies or leaves the marriage, this law thwarts the participation of women in agricultural markets because in many cases women lose access to productive land.

Figure 1 Components of a Business Enabling Environment



The history of a context defines how the social institutions of race, ethnicity, gender, and religion influence the norms and behavior in a market, which are the basis for many social networks. Markets are embedded in social environments, and the business-enabling environment is influenced by the norms of behavior dictated by the social institutions.

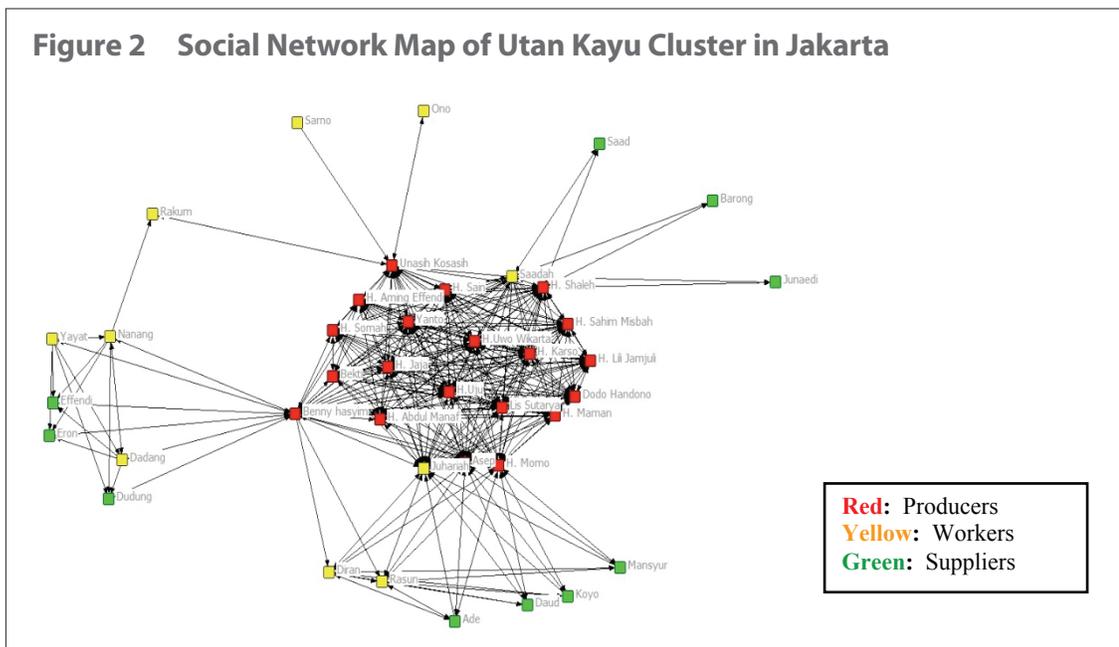
A value chain analysis identifies the actors and activities along the chain to point out the bottlenecks between actors (vertical and horizontal linkages). Knowing how the value chain activities (raw material, production, processing, trading, wholesaling, retailing, exporting) are influenced by social networks provides a much better understanding of entrance requirements (to networks and markets), flow of information, and opinion leaders, who can influence innovation within the value chain. These details promote a higher success rate in value chain development projects.

Tools and Instruments Used to Identify Social Networks

Mercy Corps Indonesia was the lead partner in this Value Initiative research initiative. Its initial findings in the tofu and tempeh markets in Jakarta indicated that social networks were active and controlled the market, which spurred it to map the social networks and identify leaders within nine clusters of actors. This research revealed subgroups within these clusters, and also identified both popular and influential actors within the clusters.

Mercy Corps Indonesia began its analysis by mapping out the social networks to understand the dynamics between the actors. Its social-network analysis program, UCINET, incorporates subgroup identification and role analysis, and integrates the NetDraw program to diagram the social networks.⁴ As part of the analysis, Mercy Corps conducted interviews with particular questions designed to elicit information on who knew whom and who did business with whom. This data was entered into the program and the resultant map of one cluster (Utan Kayu) is shown in figure 2.

ACCESS India, on the other hand, understood from the beginning of its research that it had to identify influential actors within the fashion jewelry social network in Jaipur. This was crucial information to assist it in animating and



disseminating information, and promoting participation in the JJADe program to improve the fashion jewelry sector. ACCESS field staff developed relationships with the artisans working in home-based enterprises and designed a survey, given to some of these workers,⁵ and included the following questions:

⁴ For an in-depth description of the UCINET software program capabilities, see <http://www.analytictech.com/ucinet/description.htm>.

⁵ ACCESS did not provide the number of participants in this survey; this may be from a preliminary test of the survey.

- Who are your opinion leaders and do they belong to the same community and trade?
- Is there any formal or informal body of such opinion leaders?
- What is the mechanism for bringing workers from West Bengal?
- What is the time period of the informal internship and what is the migrant intern's relationship with the masters?
- Who are the opinion leaders you are aware of?
- How do these opinion leaders help the new migrants establish themselves in this trade?
- What benefits do you receive while working in the home enterprise?
- Are you content with your situation?
- What things would you like to see done differently to improve your skill level and income level?

A social network map can identify which actors have the most connections and who the actors look to for information. The more connections actors have may indicate the influence they can have in technology transfer.

Findings from the Field on the Role of Social Networks in Value Chain Development

In Jaipur and in Jakarta, the social networks studied are defined by ethnicity, place of origin, and religion—anyone who is not a member of these socio-cultural groups cannot enter. Not being part of the social network means it is relatively difficult to enter the industry and bars access to skills training, valuable contacts for inputs, and output markets. There is less trust delegated in the value chain to non-members of the social network.

In the tofu and tempeh value chains in Jakarta, many producers and workers follow traditional family occupations of cultivation, production, or sales, often rooted in their ancestral villages in east or central Java. The tofu and tempeh value chains are dominated by the Javanese and Sundanese ethnic groups.

In the fashion jewelry value chains in Jaipur, India, different ethnic groups work with the different media used in making jewelry:

- Metal jewelry is produced by Hindu migrants from Bihar and West Bengal.
- Precious stone jewelry is produced by Muslims from Jaipur.
- Lacquer jewelry is produced by the Lakhera caste among Hindus and the Manihar caste among Muslims.

The research findings of the Mercy Corps Indonesia and ACCESS India projects, discussed in this section, illustrate how the role of social networks affects the functioning of the tempeh and tofu value chains in Indonesia and the fashion jewelry value chains

Skill Development and Labor Market Recruitment

In the tofu and tempeh and fashion jewelry value chains, skills are developed on the job. Opportunities for jobs rest with the employer seeking laborers. For the employer, labor recruitment is a risk. Employing people who must be trusted to be dependable and responsible workers is not always easy. Social networks are excellent mechanisms for recruiting labor because there is a basis for trust, defined by the membership of a group, with norms and behavior that are known to the employer (Humphrey et al. 1998). Yet, at the same time, the inclusion of some workers can result in the exclusion of others.

VIP Indonesia

Ethnic similarities and, in particular, the specific place (e.g., village) of origin, are a strong basis for social networks among producers, workers, and suppliers. Established tofu and tempeh factories recruit and hire people from the home village of the factory owner. Mercy Corps found that producers recruit workers from their hometowns and very often from their extended family circles, leveraging long-standing personal or family relationships.

Social networks are conduits for labor recruitment and skill transfer through apprenticeships.

A strong loyalty thus exists between the employer and the workers, resulting in low labor turnover. Mature workers in tofu and tempeh factories, who have undergone years of apprenticeship with an employer (a lead producer), are allowed to leave to start their own business; sometimes, they “graduate” to renting the facility and then set up their own shop. The employer willingly approves the decision and the relationship shifts from employer and worker, to mentor and mentee, and then to business colleagues, which reduces competition and opportunism for the employer.

In one of the clusters studied, a tofu factory owner in Bekasi City wanted to create employment for people from his village of origin. He purchased 100 vendor carts and hired people from his village to sell the fried tofu products made in his factory. In this situation, if one of the workers wants to become independent, the owner provides an installment plan for the worker to purchase the cart. As one of the requirements for purchasing a cart, the cart purchaser agrees to buy and sell the fried products from the tofu factory. Such an employment opportunity is only available to people from the owner’s place of origin.

This is an example of how social networks control opportunism and prevent economic actors from disregarding the accepted norms of behavior within the market system for self-benefit. Reputation and social norms are reinforced within a social network and mitigates opportunistic behavior, which makes interdependence between firms possible (Gereffi et al. 2005).

Mercy Corps Indonesia also found in their social network analysis that, where social networks are stronger, worker benefits are better. Tofu factory owners who recruited workers from their villages of origin provide food, coffee, and water, and pay for doctor appointments; some even provide loans for weddings to foster loyalty and reduce employee turnover.

The value chain activities of vending and trading are open to all ethnic groups. Relationships between the producers and their vendors and traders develop through recurring business transactions. To show appreciation and build trust with the vendors who are not related, tofu and tempeh producers give them monetary gifts every year during Lebaran, the end of Ramadan.

VIP India

Skills for metal-based jewelry are developed through apprenticeships. These artisans are Hindu migrants mostly from West Bengal, although some also come from the Bihar. Individual artisan enterprises use their social network to recruit their workforce from their place of origin in West Bengal through familial lines; only distant or close relatives are recruited.

Young male migrants (averaging 13–14 years old) work as apprentices for 2–3 years before becoming skilled workers. The terms of agreement between the enterprise owner and the migrant apprentice are decided with the parents before the young worker migrates. These arrangements include a small stipend, board, lodging, and all health-related concerns. In some instances, an advance wage payment is given to the parents of the migrant. Some may see this as bonded labor, but to the parents, who live in abject poverty, the needed cash is an incentive to apprentice their sons. The apprentices and workers work long hours with few amenities and comforts.

Historically, people from West Bengal have long migrated to Jaipur in search of better job opportunities and improved wages. Some of them graduate to start their own household enterprises in the Jaipur market. The migrants assist each other financially and socially.

To improve skill development opportunities for the precious stone jewelry value chain, the JJADe project pilot-tested a vocational training school for apprentices aged 14–16 years, to learn about design, financial literacy, life skills, reading, and writing.⁶ When the first cohort of students arrived, they had their younger siblings in tow, whom they were responsible for during the day. JJADe then opened up classes for children aged 6–13 years of age.

To achieve sustainability, JJADe is negotiating with the Indian government to connect the crèche for the 6–9 year olds to the state-run school, complemented by a private school to absorb the 9–13 year-old students. An advisory committee within the JJA (Jaipur Jewelers Association) sees the vocation training school as an opportunity to improve labor force competitiveness and they are interested in supporting this vocational training school.

Lacquer fashion jewelry has been produced in home-based enterprises by the Manihar caste among Muslims and the Lakhera caste among Hindus for centuries. These ethnic groups are activity-based within a broader caste system practicing the same livelihood. The Manihars believe that lacquer jewelry making is an occupation bestowed by birth, whereas the Lakheras believed that producing lacquer jewelry is a skill that is developed. Men make the bangles and women embellish the bracelets with designs given to them by the buyer. Skills are passed down from generation to generation, although the embellished designs are current and follow the instructions from the buyer

Technology Transfer

For a value chain to be competitive and efficient, upgrading is often required, incorporating innovations to meet consumer demands. More often than not, innovation requires technology. Technology transfer can be difficult when livelihood and enterprise operations are steeped in tradition and workers do things the way they have always been done. Mercy Corps Indonesia and ACCESS India found that social networks were effective mechanisms for technology transfer.

Social Networks and Labor Recruitment: ACCESS India in Jaipur

The artisans engaged in metal-based fashion jewelry are Hindu, and many are migrants from West Bengal. The migrant-owned enterprises in Jaipur use their social network connections to their villages of origin to recruit their workforce from West Bengal. Enterprise owners only recruit relatives or from their villages of origin. The migrants work as interns to learn and master the skill of jewelry making in home-based enterprises.

Vocational training for children and youth can improve labor force competitiveness.

⁶ To learn more about the school, see the video on You Tube, “ACCESS Dev. Initiative: A School for Working Children,” http://www.youtube.com/watch?v=C_qS292BLE8.

VIP Indonesia

Mercy Corps realized that the most important factor for successful technology transfer is ensuring that new technology is appropriate for the field and that value chain actors can see that it works: simply telling actors about changing technology was not effective at all. Identifying the opinion leaders was essential for successfully transferring technology and information. The social network analysis identified the actors who had the most connections in each of the nine clusters studied (see figure 1). These individuals interact directly with many other members of the cluster, enabling them to exert influence and provide support. They are often prestigious—lead producers of tofu and tempeh and the soybean suppliers—and are financially established. Other actors seek direct ties to these key individuals in the cluster to share information or to get links to other actors through them.

In South Jakarta, the leaders of the tofu and tempeh cooperatives, who are producers, encourage others to change technology. In some clusters, even if the cooperative does not have a good reputation, the lead producers still play an important role. Mercy Corps found that if the lead producers adopt the new technology, others will follow. This occurred in all the clusters where the technology was introduced and implemented by a key actor.

Being popular in a social network is different from being influential in a social network. An individual with influence has many connections in a social network and confidence to provide leadership.

In the Kuningan Barat cluster (South Jakarta), the tofu producers use kerosene stoves even though kerosene is difficult to find and the cost is high. The lead tofu producer was the first to use firewood and a blower to speed up the boiling process in tofu production. After the other tofu producers witnessed the improved efficiency, they were willing to replace kerosene with firewood and a blower. In

Kramat Jati (East Jakarta), an influential tempeh producer adopted greener technology— liquid propane gas and a stainless steel drum—for his production. Several neighbors then switched from firewood to gas as a result of seeing the benefits of the cleaner production technology.

Another tempeh producer in Bekasi with a large production capacity was willing to try new production methods. He had switched from firewood to gas in his factory on his own initiative. Mercy Corps shared the costs to upgrade his factory: the owner renovated the walls and floors of the factory and Mercy Corps invested in the stainless steel drum and the branding of his more-hygienic product. This inspired two of his neighbors to switch to gas to improve their production, which was a lower-cost upgrade.

Although this producer was extremely popular among the cluster in Bekasi, he lacked the confidence to influence others in the cluster to switch to greener production methods. Mercy Corps learned that popularity of actors is different from being influential; it is important to identify and include the influential individuals, as well as the popular actors, in any program requiring technology transfer.

Technology transfer requires that the new technology also be accessible. In one cluster, the soybean supplier was the center of the cluster and held much authority with producers, even outside Jakarta. Along with supplying soybeans, he also sold equipment for production. Mercy Corps identified this soybean and equipment supplier as influential in the cluster and connected him to the clean production technology manufacturer. He is now a distributor of the new technology. Tapping into his influential role as a hub in the cluster has facilitated technology transfer in the sector.

VIP India

To disseminate new technologies of casting, pavé setting, and stone setting, ACCESS utilized the social networks of the Hindu Bengali metal artisans and the Manihar Muslim lacquer artisans. JJADe facilitated meetings between the artisans and the Design Institute to create a space where artisans could communicate their training needs. JJADe found that they only had to contact one person from the social network, who would then gather 20 or more artisans for the meetings.

To make the training more accessible to the Bengali Hindu metal artisans, the Indian Institute for Gems and Jewelry (IIGJ), an autonomous institute established and promoted by the government of India, and the ARCH Academy of Design, a private institute, hired instructors and trainers from the Bengali community. IIGJ also produced literature in the Bengali language for dissemination, which also eliminated language and cultural barriers, and attracted participants and promoted technology transfer more effectively. The training institute also offered technology training that was appropriate for the artisans and the industry. Workshops were designed and delivered not only to the metal-based jewelry artisans but also the lacquer bangle producers. The participants then spread their learning to other actors in their social network.

Social networks are effective for promoting training and transferring technology.

Market Linkages

Links to input and output markets are critical for any enterprise. Information about who sells inputs for a good price and access to reliable buyers can be facilitated by social networks.

VIP Indonesia

Mercy Corps found that the tempeh and tofu value chains operate in clusters, which include tofu and tempeh producers, workers, traders, and vendors, plus a soybean supplier. Within the clusters are subgroups that provide the necessary market links for the actors. For instance, a subgroup may only consist of three actors—soybean supplier, producer, vendor—which constantly interact with each other through business transactions.

Social networks facilitate the interactions between actors. Social interactions are also times for sharing market information.

The leaders of each cluster have contact with all or most of the members of the entire cluster. The leader who appears in several subgroups within a cluster may be a lead producer or soy bean supplier. These leaders are critical to disseminating information about their respective markets. In the clusters, the actors have access to market information on soy bean quality and price. In clusters where the cooperative is reputable, tofu and tempeh producers may have access to loans to purchase soy bean. Vendors are not exclusively Javanese, but through repeated transactions these outsiders build trust with the tofu and tempeh producers.

Ethnicity and place of origin, and linguistic and religious similarities facilitate the interactions between the cluster subgroups, and the individuals involved visit each other frequently to share information. The men socially interact to recite the Koran (pengajian), which adds to easing the differences between actors.

VIP India

The controlling JJA includes manufacturers who have large firms, traders (aggregators), exporters, and brokers. Most members of JJA belong to the Vaishya caste. Through trusted brokers, JJA contracts out stone and metal piecework to artisans in individual enterprises, where different tasks are allocated to different religious, caste and ethnic groups, based on the traditional skill of each group. Members of JJA also link with individual artisan enterprises directly through the network of individual artisan enterprises. Everyone is also socially linked.

Circumventing Social Networks to Create Market Links

When social networks present significant barriers to market competitiveness or when they exclude some social groups from advancing in a market, practitioners often go around them. The JJAde program promoted fair trade as an alternative to traditional marketing channels, while at the same time seeking to reform the traditional business practices.

A program limited to fair trade only would have been smaller scale and may have threatened the jewellers, resulting in market leaders objecting to the program and potentially threatening the artisans' livelihoods.

7 Ten centuries ago in India, the caste system was devised from the four major castes in the Hindu religion: Brahmin, Kshatriyas, Vaishyas, and Shudras. The Brahmins were the knowledge bearers, who guided the rulers and people in their way of living and administration; the Kshatriyas were the rulers and administrators; the Vaishyas were traders and bankers; and the Shudras were responsible for all kinds of manual work. Initially, occupations were accessible by either choice or birth, but gradually occupation choices became restricted to one's caste at birth.

The individual artisan enterprises, which manufacture the jewelry, did not have access to design and higher-value markets before ACCESS India's JJADe project began. ACCESS tackled this bottleneck by introducing identification (ID) cards to undocumented migrant workers, which gave them security and pride to circulate in the city.

To break down the isolation of the artisans in their home-based enterprises, ACCESS and its partners helped form producer groups made up of these newly documented migrant workers. Producer groups were linked to design students at the Design Institute and design entrepreneurs, which improved the flow of market information about current and popular designs, as well as financing mechanisms. ACCESS identified that social security was critical to open up market opportunities for the undocumented migrant workers.

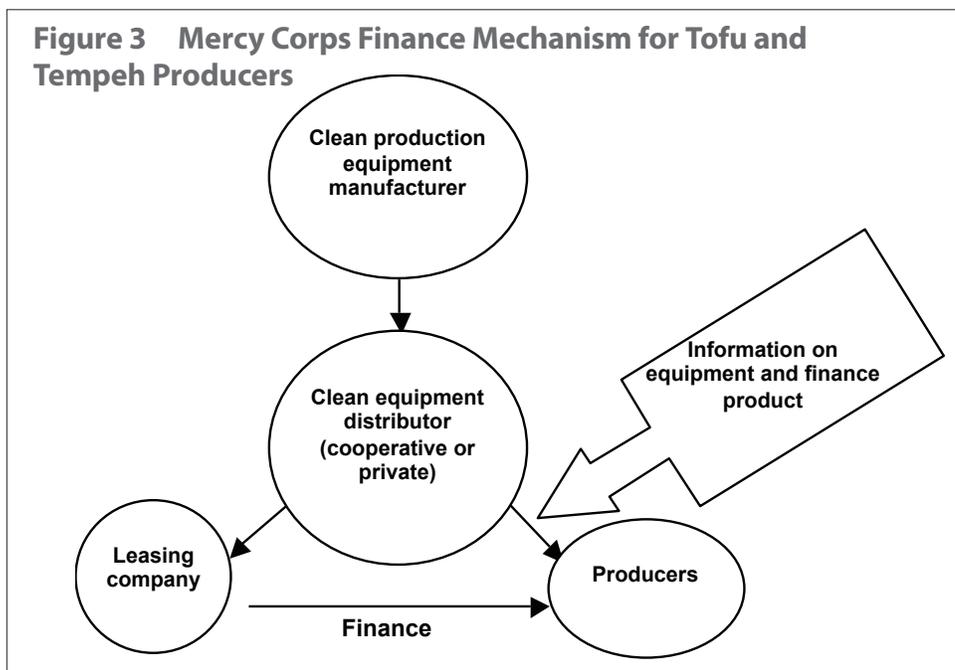
To improve market access for the artisans in home-based enterprises, ACCESS developed a data base of 20,000 enterprises of individual artisan enterprises and workers. The data base aimed to showcase the business potential to service providers, such as design entrepreneurs, the Design Institute, and financial service providers, who can offer specific financial products for the sector. The sheer numbers in the data base inspired the design entrepreneurs and Design Institute to develop training services for the artisans.

To break the monopoly of JJA, dominated by the elite Hindu caste, ACCESS through JJADe built up the capacity of one of their partners, Jan Kala Sahitya Manch Sanstha, to establish and register the social enterprise SRIJAN (which means "creating something new") with the fair trade forum of India. SRIJAN provides fee-based market services to small and individual artisan enterprises to help them reach national and international markets. Similarly Ode to Earth Enterprises Ltd, a for-profit company (ACCESS has also helped it build capacity, register its business, and market its services), is offering market and design services to individual artisan enterprises, producer groups, and non-governmental organizations (NGOs) that support the fashion jewelry artisans.

The lacquer jewelry value chain has its own input supply and output market channels, which are mainly local.

Access to Finance

Market-oriented training and the technology needed to upgrade to be competitive requires finance. Below are examples of how social networks can be used to create financial options for social groups excluded from the financial sector.



VIP Indonesia

Two of the clusters studied by Mercy Corps have active cooperatives that provide financial services for members. Each member puts a designated amount of money into a collective pot and a name is drawn to receive the collected money or prize. One of these schemes awards a motorbike, the other gives cash. The winner's name is removed from the hat each time, so everyone has a chance to win. In other clusters, where the tofu and tempeh cooperatives operated, members have access to loans to purchase the soybeans for the products sold by the cooperative.

Mercy Corps recognized that renovating factories and upgrading equipment requires a financial investment. If producers want to invest in high-cost construction and equipment, they need access to an affordable financial product. Leasing presented an attractive financing option when formal banks were not interested in providing a loan product to the sector. The leasing mechanism devised by Mercy Corps builds on the existing social network in clusters where the tofu and tempeh cooperative is reputable.

Mercy Corps links the producers in the cooperatives that need equipment with the clean production equipment manufacturers. The equipment manufacturer offers a quality guarantee and the cooperative arranges a buy-back system, in case the producers fail to pay back the loan installments to the leasing company. The interest rate is a maximum of 2 percent per month. If the tofu and tempeh cooperative is not reputable in a cluster, Mercy Corps will link the clean production equipment manufacturer and leasing company to a reputable distributor. (See figure 1 for a schematic of this finance mechanism that takes advantage of the social network linkages.)

VIP India

The West Bengali migrant metal jewelry workers and apprentices had no access to formal financial services prior to the JJADe project implemented by ACCESS. To fill the gap, a gang took advantage of the situation and offered the workers a financial product. It touted a 20 percent profit on savings deposited in 37 days if the members introduced 10 or more people to the scheme. This product was only available to the Bengali artisans. No other institution had offered them financial services before, so the workers were interested. To earn the trust of the workers, the gang ran a school for the workers' children. More than 7,000 people handed over their savings in trust and lost it all—more than INR⁸ 4,000 million (approximately US\$ 81.3 million). The news about this gang and its fraudulent scheme was contained within the social network. This is an excellent example of how closed social networks and their restricted flow of information can be exploited.

Social networks can be taken advantage of when market information regarding options and choices for financial products is not readily available

When ACCESS began the JJADe project, formal finance institutions would not provide loans to the home-based enterprises or artisans in the fashion jewelry sector. This was due to the insecurity of the loan (lack of collateral, loan history, or reliable income) and lack of formal documentation of the artisans, as well as lack of information flows between the artisans and the banks, and vice versa. When ACCESS facilitated the registration and distribution of ID cards for the artisans and the formation of producer groups, the artisans received information about financial services from the banks, which became willing to lend due to the reduction in credit risk. Improving the social security of the artisans improved their access to finance. ACCESS also organized producer savings groups as an alternative source of finance to artisans in need of financial services.

Gender and Social Networks

Typically, social relations within markets are not characterized by gender, but the active market actors are implicitly male (Robson 1999). In the fashion jewelry and tofu and tempeh value chains, women participate, but do not appear to interface with input and output markets. This does not imply that women are not active in these value chains, but it does indicate that market development practitioners can strengthen these value chains when the economic roles women do play are incorporated in value chain development interventions.

⁸ INR = Indian rupees.

VIP Indonesia

Tofu and tempeh factories are family-run businesses, where husbands and wives are partner-owners who manage the

Women have influence in how income and investment monies are utilized in the tofu and tempeh value chains.

business and benefit from the income, but there is a division of labor between men and women. Men are more heavily involved in the production, while women handle marketing and financial management. The roles are not mutually exclusive, but roles are complementary, especially at the firm-level of production and sales.

Women's roles in the tofu and tempeh sectors generally fall into one of the following categories:

- **Production process.** Most tempeh producers' wives are involved in some section of the tempeh production process (e.g., boiling, wrapping), while the husbands handle the washing process, which requires heavy lifting. In tofu production, especially in Bandung, workers are also generally women. The job requires accuracy and dexterity in the process of wrapping tofu, and women are perceived as doing the job better than their male counterparts.

Some women jewellery producer groups are comprised of mixed ethnicities—Muslim and Hindu. The women find commonality despite the cultural distinctions.

- **Business management.** In most family-owned businesses, the wives manage the business, especially the finances. Women collect payments from renters and from sales. Others also process payments for factory-related costs (e.g., soy beans, firewood, workers' wages, and electricity). Women have an important role in the decision-making process and have been known to prohibit their husbands from taking loans and purchasing new equipment for fear of over-extension.

- **Marketing tofu and tempeh in the wet (open-air or street) market.** Within the tofu sector, producers who rent their production spaces sell tofu either in the wet market themselves or through traders (loppers) to the market. Some tempeh producers market their products themselves as mobile vendors. If women are involved in sales, they sell with their husbands in the wet market.

VIP India

The jewelry sector in general is male-dominated, as are most industries in India. There are no women artisans in the metal-based fashion jewelry manufacturing, although in lacquer jewelry making women artisans embellish the lacquer bangles and work with precious stones. These artisans receive the inputs, embellish the jewelry (lacquer bangle) and are paid per piece they complete.

To improve income levels, JJADe helped form producer savings groups of these women artisans and facilitated access to training in design and access to finance.⁹ Interestingly, some of the savings groups are homogenous and delineated by ethnicity, while others are mixed. The mixed groups exist in mixed neighborhoods. The women find commonality, despite the ethnic differences regarding issues with their children and household. Focus groups have revealed that the public identity of the women artisans, who have received training in design and have access to finance, has been enhanced.

⁹ For more details, see the You Tube video, "JJADe Success Story of Financial Linkage and Enterprise Development," which profiles three women Lac fashion-jewelry workers, who are related, and their transformation when they gained access to design and financial services, http://www.youtube.com/watch?v=OhzBVvB1_8c.

Leveraging Social Networks for Project Implementation

“Leveraging” social networks for market development means utilizing social networks to introduce new technology, to link producers to markets, to promote formation of business groups, to promote or distribute inputs or services, etc.

VIP Indonesia

To identify the social networks, Mercy Corps analyzed social networks with cluster mapping, which showed central actors for each region studied in Jakarta. The social network map indicated that highly centralized figures are important change agents because of their level of connection within clusters of the social network. Their innumerable connections enable them to promote programs and facilitate technology upgrading. However, in the long run, these central agents must encourage the development of subgroups and foster leadership in them or the sustainability of the project can be affected if the central figure leaves for one reason or another.

Mercy Corps Indonesia found these general characteristics of the central actors:

- Seniority with regard to age and or work experience
- Financial success
- Trustworthiness
- Reputable family
- Recognition as providing services to the community (e.g., soybean suppliers, meeting places, factory rental)
- Provision of an information and business meeting nexus among producers and vendors (It is very important to involve central actors in any program interventions. A personal approach is the best way to reach them, followed by concrete program involvements. Personal capacity building for them, such as business coaching, allows them to become mentors and key figures for information dissemination.)
- Influential role in clusters (In the absence of a central figure, small cliques can play the role of motivators.)

If a project depends on a key actor in a cluster to promote market facilitation, the project can suffer setbacks if the key individual disengages from the cluster.

VIP India

At the initial phase of the project, ACCESS identified the Bengali Ornament Maker and Dharmik Kalimata Trust, an association that was organized and operated by the Bengali jewelry producers. Two influential members led it, and ACCESS approached them. When ACCESS explained its project to improve the benefits for workers in the value chain, which involved their members, they were very interested and became champions.

ACCESS found that the primary influential leaders within social networks in communities that are critical for project implementation have similar characteristics:

- Status in the community
- Ability to convince the community to be part of a project
- Good leadership skills
- Ability to communicate the importance of improving economic goals, and attract community members to new market opportunities

ACCESS conducted community mobilization meetings with groups of artisans, with the support of the opinion leaders in the existing Bengali Association. Working through the social network made community mobilization easier because the access to the artisans was provided by these trusted leaders.

Conclusion

The value chain framework offers market development practitioners a means to map a market from input supplies to the final consumer. It is a mechanism through which to develop projects to scale and reach thousands of micro, small, and medium enterprises, and promote a market that secures livelihoods for the most vulnerable. But too often, efforts pass over the most vulnerable because of their minimal, hardly visible participation in a value chain.

Markets are embedded in social contexts and each context has its own nuances that affect how the market operates. Table 2 synthesizes how social networks were utilized to remove constraints in pro-poor market development in the VIP India and VIP Indonesia projects.

Mercy Corps studied nine different clusters and found that it could not assume that what works in one cluster will work in another cluster—even when all nine clusters were part of the same social network and located in the same city. The influence of the cooperative was different in each cluster, as was the level of influence of specific actors: in

one cluster, there were three influential actors. To implement a project using the same approach to identify leaders does not work, as Mercy Corps learned from its research. Project staff must recognize the idiosyncrasies of each cluster.

At one point, socio-economic development was a central concept of initiatives to help the poor. It is time to reclaim this term. AC-

Table 2 Synthesis Social Networks Assistance in Market Development

Market requirement	Constraints	Building on social networks
Labor recruitment	Lack of trust	Capitalizing on the trust factor in social networks established by familiar, accepted norms and behavior.
Skill development	Isolation of workers, migrants, lack of social capital, traditional skills which are not adapted to meet current consumer demand	On-the-job training, mentoring, and coaching to new recruits through social network.
Technology transfer	Lack of knowledge about new technology	Engaging reputable actors in a social network to influence the dissemination and promotion of information about new innovations and technology.
Market linkages	Market access restrictions requiring more effort in bargaining, which requires knowledge of pricing	Sharing market information regarding input and output markets and prices through social networks.
Access to finance	Lack of access to finance to purchase technology, inputs, equipment, etc.	Utilizing social networks to reduce risks to create leasing schemes and/or savings groups.

CESS India identified the isolation of the migrant, undocumented Bengali artisans in the individual artisan enterprises. Their social isolation, a result of the low caste and low social status of the migrants, was exacerbated because they had no understanding—or source of information—of how to acquire formal identification or access existing government programs. This lack of documentation negatively impacted their development and the development of the value chain because it also denied them access to new designs, new technologies and finance.

ACCESS wisely contracted community-organizing groups to disseminate information to the migrants about acquiring formal identification, help workers fill out forms, and take them to the government offices to get the identification cards. This alone has shifted the social network from a closed network to a more-open network where migrant workers now circulate more freely to share skills and learning. Some even are choosing to set up their own shops.

Women are often overlooked in value chain development because, in many contexts, they do not interface with input supply or output markets. They are often invisible workers at home, who time and time again been found to contrib-

ute substantially to the transformation of a product in a value chain. Mercy Corps discovered that women were as critical to the production of tofu and tempeh as their husbands and, most importantly, that the women ultimately made the financial decisions which affected the purchase of technology. Mercy Corps realized that it needed to devise a mechanism to teach women about new technology and its benefits, and included them in financial management skills training.

Market development requires creativity, ingenuity, and an understanding of the social landscape that dominates the context within which a market operates. Identifying and analyzing social networks provide a fuller understanding of the business enabling environment within a value chain, which in turn will enable the development of better programs to assist the most vulnerable, so that their participation in a value chain moves from the periphery to the center, where they can be more successful and improve their lives.

Appendix

VIP Indonesia: Tofu and Tempeh Project

Project location: Greater Jakarta (Jakarta, Bekasi, Depok, Tangerang, and Bogor)

Project goals:

- Increase income, improve working conditions, and diminish environmental impact of production for 15,200 enterprises in greater Jakarta.
- Provide safe food to 4 million consumers in greater Jakarta.

Project description

In Indonesia, tofu and tempeh are consumed daily by some 40 million people. Not only are these food sources high in protein, they are also an affordable food product for the 40 percent of the population living on less than US\$ 2.00 per day. The tofu and tempeh value chains are dominated by the Javanese. The majority of the tofu and tempeh producers and vendors in the urban areas of Jakarta use rudimentary, outdated technology for cooking, straining, and storing their products, resulting in poor hygienic practices and increased pollution in production. In most cases, improvements in technology can increase production, reduce costs, and improve the hygiene and quality of the final output. Mercy Corps Indonesia found that the producers in the various clusters studied came from the same villages of origin and it explored transferring new technology, improved production techniques, and finance through the producers' existing social network.

Constraint #1: Poor quality production techniques

- Low productivity due to lack of access to finance and improved technology
- Inefficient and unhygienic production from the use of firewood, overuse of cooking oil, and use of formaldehyde in tofu production
- Environment pollution—odor pollution, uncontrolled disposal of liquid waste, and smoke and fumes from the fires used in production

Intervention and activities: Improve production for tofu and tempeh.

- Focus social marketing on community leaders in clusters and cooperative to raise awareness of clean production, access to finance, branding and marketing.
- Upgrade one tofu and one tempeh factory as pilots to model the new techniques and technology.
- Identify small scale manufacturers for tofu and tempeh equipment.
- Identify actors interested in leasing and providing new services to their clients.
- Link small scale manufacturers, equipment distributors, and leasing companies to established tofu and tempeh cooperatives or equipment dealers, which provide services to producers

Constraint #2: No-differentiation between healthy and non-healthy products

Intervention and activities: Introduce branding for marketing purposes and consumer education.

- Encourage producers already using clean production equipment to brand their products.
- Identify branding companies and link producers interested in branding to company.
- Identify and support a well established tofu and tempeh cooperative interested to provide new services to their members with a specific logo to differentiate healthy products.
- Link branding company to cooperative and support them in identifying producers in order to promote branding on a larger scale.
- Support the cooperative in establishing “one stop services” that market both clean production equipment and branding.

VIP India: Jaipur Jewelry Artisan Development Project (JJADe)

Project location: Jaipur, India

Project goal: To increase income and improve working conditions for fashion jewelry artisans

Project description

Jaipur, India is a renowned hub for fashion jewelry production where ethnic, religious, caste, and gender relations contribute to the way this historic and very informal industry functions. The sector is largely influenced by the Jaipur Jewelers Association (JJA), a trade union established over 100 years ago. The members of JJA include manufacturers, exporters, brokers and traders. They contract out stone and metal processing to artisans of both Muslim and Hindu faiths through a network of brokers, other manufacturers and sometimes directly through Home Based Enterprises. The artisans work independently with brokers taking their products from stage to stage of different skilled tasks. They are all linked socially, yet the artisans are isolated in the home based enterprises. In order to remain competitive, the sector needs to be able to respond to consumer demand with new designs, improved quality and more efficient production methods.

Constraint #1: Lack of social security impeding access to finance and government services

Intervention and activities: Make documentation accessible to artisans

- Sensitize artisans to the importance of social security—identification cards, artisan cards
- Build capacity of artisans,
- Mobilize community and brokers in helping artisans to register for and fill out forms
- Inspire government institutes, gem trade bodies, and NGOs to become card-issuing agencies for artisans.

Constraint #2: Lack of technical skills and production techniques to produce to buyer specification

Intervention and activities: Improve access to design and technical skill development.

- Facilitate development of customized training modules and training delivery.
- Develop a market-based school for the children of artisans that includes skill development and encourages innovation.
- Facilitate and promote design entrepreneurs.
- Facilitate linkages between artisans and the Design Institute and design interns.

Constraint #2: Lack of market access

Intervention and activities: Improve market access with new market links.

- Promote and build capacity of social enterprises (SRIJAN and Ode to Earth) to penetrate newer market avenues, such as fair trade.
- Facilitate participation of artisans in trade fairs organized by government, NGOs, and market promoters.

Constraint #3: Lack of access to new and improved technology

Intervention and activities: Improve links between technology service providers and artisans.

- Stimulate technology service providers.
- Facilitate linkages between artisans and technology service providers.

Constraint #4: Lack of access to finance services

Intervention and activities: Make financial services (insurance, savings, loans) accessible to artisans.

- Build capacity of artisans.
- Mobilize community organizations and brokers to help artisans fill out forms.
- Encourage locals to be agents who fill in forms for a fee.
- Link insurance companies with NGOs and agents, which then become insurance brokers for a fee.
- Develop institutional linkages with financial service providers.
- Mobilize artisans to form savings led producer groups.

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