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Sourcing for the base of the pyramid: Constructing supply chains to address voids in subsistence markets

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ABSTRACT

Substantial work has described downstream distribution systems for subsistence markets, but little is known about how upstream supply chains support these efforts. We suggest that a multinational corporation (MNC) entering these markets must resolve the institutional voids in product, labor, and capital markets, as well as address issues of regulatory ambiguities and the lack of contracting mechanisms that exist at the raw material, manufacturing, distribution, and marketing stages of the supply chain. We analyze the nature of these voids and their challenges, map them onto the value chain, discuss their interconnections, and suggest that they do not impact all firms equally. We provide examples from the food, beverage, and textile industries of how four firms have addressed institutional voids in constructing their supply chains. We conclude by providing implications, both across the value chain and regarding the trade-offs of partnering with non-profit agencies. Our analysis highlights the importance of going beyond the broad impact of the institutional environment to understanding its more nuanced and multi-faceted effect on supply chains.

1. Introduction

Base of the pyramid (BOP) or subsistence markets are highly attractive to Multinational Corporations (MNCs) since growth opportunities are limited in developed markets and since social responsibility has become paramount. These markets include an estimated 2.7–4 billion people (Karnani, 2007b; Prahalad, 2005), with average daily incomes of $2 or less (Prahalad and Hart, 1999; Viswanathan et al., 2010b; Weidner et al., 2010), and a combined purchasing power of approximately $5 trillion (Hammond et al., 2007). However, expansion into these markets has been significantly more challenging than originally expected, especially due to challenges in the supply chain (Karamchandani et al., 2011). MNCs must cope with a lack of intermediaries and formal institutional support in the product, labor, and capital markets, as well as ambiguities in regulations and a lack of formal contracting systems. These factors, termed institutional voids (Khanna and Palepu, 1997; Khanna et al., 2005; Mair et al., 2012), are gaps in the business infrastructure, market failures that impact each stage of the supply chain.

Philip's expansion into rural Ghana with solar lanterns illustrates the challenges faced by MNCs entering subsistence markets with the goal of pursuing growth while helping the poor (Van den Waeyenberg and Hens, 2012). The presence of institutional voids at every stage of the supply chain led the firm to find innovative ways to address these challenges. Poor infrastructure and voids in product markets, for instance, led to the production of these lamps in developed countries, despite the associated additional costs, and to reliance on local NGOs for market research to understand these consumers. These organizations also helped fill labor market voids by providing training. Limited consumer financing options led the firm to appeal to the Ghanaian government and World Bank for help in obtaining subsidies for consumer loans. These connections also helped Philips be aware of, and influence, potential changes in regulations. Finally, Philip's engagement with a local firm allowed it to rely on informal interactions to govern distributor relationships, since it could not use written contracts in these communities. Thus, Philips had to address institutional voids at every stage of its supply chain to successfully operate in this subsistence market.

To date, there has been limited research into how institutional voids affect the supply chains of MNCs that provide goods to subsistence market consumers. There is some work that explores the

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challenges of BOP distribution and marketing (London and Hart, 2004; Seelos and Mair, 2007; Vachani and Smith, 2008), but little on upstream supply chains. Most studies on the impact of institutional voids in emerging and subsistence markets have focused on discussing their significance and delineating different types (Khanna and Palepu, 1997; Khanna et al., 2005; Mair et al., 2012), rather than connecting them to supply chains.

The key objective of this paper is to analyze the significance and challenges of institutional voids for MNCs in subsistence markets and to suggest how MNCs can overcome these challenges as they construct their supply chains. By explicating the nature and influence of institutional voids, we offer several contributions to the literature. First, we expand and deepen the concept of institutional voids by discussing the nature of each void, its level of analysis, its activity- and firm-specific impact thresholds, and its interconnections with other voids. Second, we contribute to the supply chain literature by mapping the types of institutional voids onto the stages of the value chain (Khanna and Palepu, 1997; Khanna et al., 2005; Porter, 1985). We argue that different institutional voids exist at different stages of the chain and that similar institutional voids can span several stages of the chain, creating linkages and interconnections with important implications for supply chain construction. Third, we contribute to the BOP and subsistence market literatures by explicitly connecting the competitive and institutional environments to the construction and management of supply chains in subsistence markets (e.g., Karnani, 2007b; Ricart et al., 2004; Viswanathan and Rosa, 2010). Fourth, this research can assist managers in understanding the importance of informal relationships and the trade-offs of different partnering solutions for addressing institutional voids.

Our paper proceeds as follows. We begin by discussing supply chains, institutions, and voids in subsistence markets. We highlight the distinction between dyadic-level and network-level voids and present implications for managing supply chains. We then map the voids onto the different stages of the value chain, discussing how the voids interrelate. Next, we provide examples of several firms that have successfully navigated the challenges of these voids, but have done so in different ways. We conclude with a discussion of managerial and scholarly implications, offering suggestions for future research.

2. Supply chains, institutions, and voids

Supply chains involve all the activities associated with the flow and transformation of goods from raw materials to the ultimate end user (Handfield and Nichols, 1999; Mentzer et al., 2001). They include multiple partners to exchange and manage flows of material, money, and information. Activities within the supply chain include raw material procurement, production, assembly, distribution, inventory management, and marketing. To support these activities, firms must search for appropriate suppliers, select them carefully, create contracts, and manage these relationships (Krause et al., 1998). Supply chains can be understood through a value chain lens that decomposes the chains into stages of raw material procurement, manufacturing and operations, distribution, and marketing (Porter, 1985).

We focus on the manufacturing firm, in the center of the value chain, and how it must design its supply chain and form relationships with other organizations to satisfy end users. In a developed country context, this focal firm can clearly identify raw material suppliers, verify the inputs, and establish contractual agreements. Focal firms can also set up manufacturing facilities, as sufficient financing and staffing are available. They can use existing distribution channels, often with industry-standard terms and agreements. Marketing activities are characterized by open communication with well-informed consumers and brand development, supported by oversight activist groups and robust product liability laws.

All supply chains are ensconced within a set of institutions, which provide the foundation for economic exchange. Institutions establish the "rules of the game", including the formal laws and practices that provide sufficient transparency, protection of property rights, and efficiency for markets to function (Mair and Marti, 2009; North, 1990). If these formal institutions are absent, weak, or have limited enforcement power, economic exchanges will be thwarted, leading to inefficiencies in the market.

Subsistence markets are characterized by poverty and isolation from mainstream markets, which has important consequences for the business environment in these markets, both in terms of the institutions that govern business transactions and of gaps in business ecosystems (Ricart et al., 2004; Webb et al., 2010). Khanna and Palepu (1997) found evidence of these gaps, which they termed institutional voids, in emerging markets and defined them as the lack of the formal "institutions that are necessary to support basic business operations" (Khanna and Palepu, 1997: 41). Scholars have extended this concept to subsistence markets and concluded that these markets are characterized by even more severe institutional voids (Mair et al., 2012; Rivera-Santos and Rufín, 2010).

2.1. Institutional voids

Khanna and Palepu (1997) identify five types of institutional voids: voids in product markets, labor markets, capital markets, regulations, and contracting. These five types of voids affect business transactions throughout subsistence markets, even though the level of analysis at which they are relevant varies. Although conceptually distinct, these voids co-exist and are connected to each other because they originate in the same poverty context. We build upon prior discussions of voids by adding the level of analysis and suggesting that the impact of each type of void on an exchange may vary. We suggest that product market and contracting voids occur mostly at the dyadic level, as they impact transactions between a buyer and a seller. By contrast, institutional voids in labor markets, capital markets, and regulations impact the subsistence market network as a whole, rather than specific exchanges. Moreover, some simple, small and/or local exchanges may not be affected by these voids, suggesting the existence of impact thresholds that determine the severity of the voids based on characteristics of the exchange. Table 1 summarizes our analysis of the different types of institutional voids, levels of analyses, and impact thresholds.

The first type of institutional void corresponds to failures in product markets. Stemming from severe information asymmetry in economic exchanges, product market voids affect interactions between a supplier and a firm, or between a firm and its consumers. Since it is specific to a product and its exchange, this is a dyadic-level void. Between suppliers and firms, the lack of intermediaries or standards to help in identifying potential suppliers or to provide an assessment of input quality, makes it more difficult for a firm to identify a capable supplier. Between a firm and its consumers, a lack of information and of product understanding, stemming from low education and literacy levels in subsistence markets, leads to consumers who can be easily deceived (Karnani, 2007a; Weidner et al., 2010). However, the importance and impact of product market voids varies across product type. Some basic or common products have easily recognizable attributes, which can be assessed regardless of the lack of education of consumers, while some basic inputs are readily available in subsistence markets, meaning that a firm would have no problem in identifying a supplier or connecting with consumers. In contrast, product market voids for more complex products or inputs are likely to impact firms more profoundly.

Contrasting with product market failures, labor market voids, the second type of void identified by Khanna and Palepu (1997),