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Editorial

Cross-functional Management and Base-of-Pyramid Issues in Logistics and Supply Chain Management

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INTRODUCTION

In this issue, we present a Special Topic Forum (STF) covering questions related to the Base of the Pyramid (BoP), as well as two additional articles covering cross-functional topics. Crossfunctional research remains a key topic in our field. The two cross-functional articles included in this issue advance our understanding by (1) providing a synthesized definition and measurement scale for functional integration and (2) looking at the roles of the procurement and engineering functions in the supplier selection process. The BoP STF focuses on the subject matters of supply chain efficiency, corruption, and success factors for social enterprises. The remainder of this editorial is an introduction to the STF and is followed by a summary of each individual contribution in the issue.

Over the last decade, the significance of emerging economies in Africa, Asia-Pacific, and Latin/South America in global logistics and supply chain management (LSCM) has been increasing. Using these regions as a context, research attention is beginning to be devoted to a market commonly known as the "Base of the Pyramid" (or BoP), recognizing its poverty reduction imperative and market growth potential (Karnani 2007; Prahalad 2009; Rivera-Santos and Rufin 2010; Viswanathan et al. 2010; Acosta et al. 2011; Singh et al. 2015). The BoP includes the majority of the world's population, predominately residing in the least developed countries, who make up the bottom of the world' s economic pyramid. In addition, while countries such as China and India have been growing affluent classes that are comparable to the economic middle class in other advanced economies, a considerable number of people in these countries can also be considered to belong to the BoP, due to their often very low income level.

The BoP context provides opportunities for scalable business solutions to create social and economic value, while at the same time requiring mechanisms to address resource scarcity (Calton et al. 2013; Sutter et al. 2014; Chliova and Ringov 2017). As such, involving the BOP as a significant pool of potential customers requires vigorous private and public partnerships that are willing to assume shared responsibility and implement sustainability practices beyond narrowly defined economic/productivity-based goals (Porter and Kramer 2011; Berger and Nakata 2013; Calton et al. 2013).

Within this context, supply chain management, in general, and logistics, in particular, have a special responsibility due to their focus on enhancing wealth creation, designing successful delivery of products and services, determining socially responsible distribution, and managing global complexity (Gold et al. 2013; Guanasekaran et al. 2014; Hong and Park 2014; Vachani and Smith 2008). It is therefore time for LSCM researchers to consider emerging issues related to BoP markets (Gold et al. 2013; Fawcett and Waller 2015; Rodriguez et al. 2016).

THE BASE OF THE PYRAMID AND THE TOP OF THE PYRAMID

The Base of the Pyramid (BoP) concept has distinctive characteristics and stands in contrast to the Top of the Pyramid (TOP). The BoP is generally referred to as the more than 4 billion people who live on less than $2.00 a day. This population, however, constitutes a combined purchasing power of $5,000 billion a year (Perez-Ale- man and Sandilands 2008; Prahalad 2009; Acosta et al. 2011). The population not belonging to this group is generally referred to as the Top of the Pyramid. As such, while the ToP is often associated with advanced economies, the BoP includes vast segments of the population in the least developed or developing countries (Sutter et al. 2014; Maksimov et al. 2017).

Table 1 summarizes ToP and BoP parameters across population, region, annual income per capita, demographic characteristics, capital availability, technology capabilities, and logistics infrastructure, as anticipated for the next 20 years.

THE INTERFACE BETWEEN TOP AND BOP

Figure 1 conceptualizes the nations of the world into two groups: the Top of the Pyramid (ToP) and the Base of the Pyramid (BoP).

Although individuals and organizations from countries in different groups may interact directly, such as ToP countries with BoP countries, ToP countries are significantly separated by

Table 1: Comparisons of ToP and BoP (2020-2040)

Parameters	Top of the Pyramid (ToP)	Base of the Pyramid (BoP)
Population	2-3 billion	5-8 billion
Regional concentration	North America, OECD Countries (Western Europe, part of Eastern Europe, Japan, South Korea, Taiwan, Australia, and New Zealand)	China, India, South-East Asia, Africa, and Latin America
Annual income per capita	>$25,000	<$ 2,000
Demographic characteristic	Slow population growth and stagnant demographic base	Fast population growth and/or very large demographic base
Capital availability	Abundant capital resources searching for investment opportunities	Inadequate capital system resources for developing market potential
Technology capabilities	Innovative capabilities for vibrant social safety nets, virtual economies with automation, artificial intelligence, and sustainable quality of life	Resource challenges for essential necessities and innovation; opportunities for affordable products; and services for essential needs of life
Logistics infrastructure	Complex intermodal transportation and logistics network	Segmented and developing/ underdeveloped logistics network

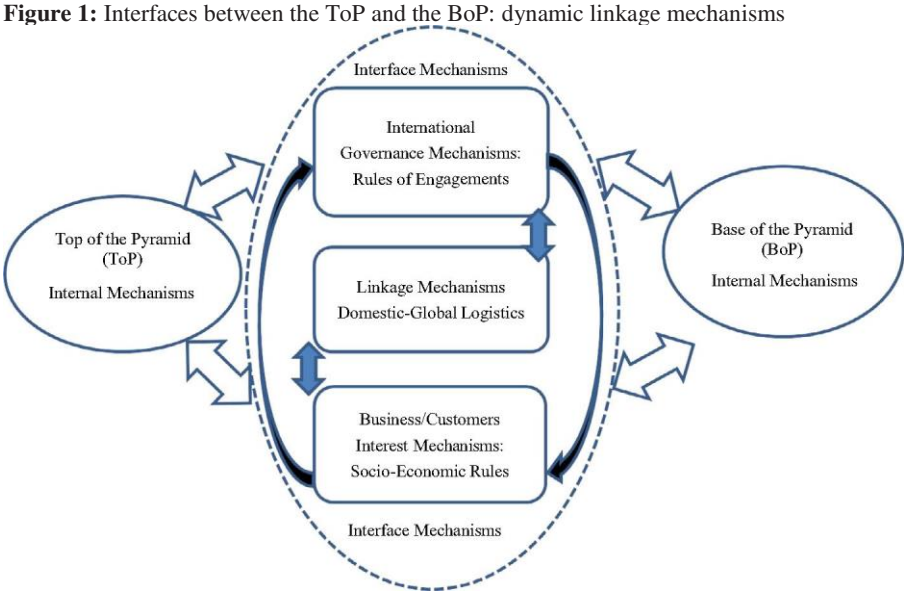
geographical distance and societal characteristics. For example, major value flows may be directed by countries' internal mechanisms (e.g., rule of law and engagement processes and marketer's mindsets), such as the objective to develop the BoP market (Bharti et al. 2014). Significant value flows between the ToP and the BoP, however, require interface mechanisms, such as international political governance mechanisms (e.g., WTO, FTA, and international treaties) that define rules of engagements, infrastructural linkage mechanisms through domestic and global logistics, and business case mechanisms that are cognizant of socio-economic rules. Within this context, political factors affecting such development of interfaces between the BoP and the ToP may be quite challenging, as indicated by the mixed responses to China's recent OBOR (One Belt One Road) initiatives with other BoP nations (Crandall and Crandall 2017; Selko 2017; Liu et al. 2018). The current trade "war" between the United States and China, as well as Brexit debates, further provides evidence that international politics influence business case mechanisms directly. This interplay may be especially felt at the interface between the ToP and the BoP. At the same time, significant business/customers' interests affect international governance mechanisms and require changes in rules of engagements through domestic political processes. This context makes the investigation of the BoP context even more critical and intriguing.

THE CHANGING ROLES OF LOGISTICS

Logistics is a critical element for both competitiveness and growth requirements. On the one hand, the traditional roles of logistics in the ToP involve economic value creation and delivery for traditional logistics. On the other hand, changing roles of logistics in the context of the BoP aim to achieve inclusive growth and poverty alleviation through political-social-economic interactions (e.g., CSR practices) and humanitarian logistics (Hirschinger et al. 2016; Kaplan et al. 2018). Given this context, several dimensions are worthy to be noted to delineate the two environments of traditional logistics in the ToP context and emerging logistics in the BoP context.

First, emerging logistics requires careful examination of logistics practices in advanced economies, with the objective to adapt these to emerging economies. Innovative logistics practices prevalent in the United States and Europe, for example, may face challenges when implemented without adaptation, due to the diverse organizational and infrastructural environments present in the BoP context, such as divergent standards for information, product, and financial flows, as well as differing rules of business value creation and

Figure 1: Interfaces between the ToP and the BoP: dynamic linkage mechanisms



delivery. In addition, consumers in the two contexts may have very distinct expectations on the roles of logistics. While consumers in ToP markets demand comprehensive value and
innovation outcomes, customers in BoP markets may place greater emphasis on basic but reliable logistics.

Second, emerging global logistics can serve as a crucial linkage mechanism in emerging economies to effectuate greater transformations of the communities for better engagements and greater interactions. In recent Indian national election, voting booths were installed even in the most remote and rural areas, with transportation and logistical support being critical to success (Regan et al. 2019). As such, logistics can be the conduit of innovation and development, offering remote regions the ability to connect to the larger world, participate in political processes, and achieve the advancement of their interests. Supply chain management, in general, and logistics, in particular, can thus be seen as fundamental elements for the furthering of the economic and developmental agenda of BoP markets. With enhanced access enabled by logistics and supply chain management, improvements in the level of development and quality of life can be expected.

And third, global LSCM can bring out the underlying market potential of the BoP and further enhance their growth. For example, logistical capabilities can improve how traditional small entrepreneurs promote and deliver their products beyond their local and regional market boundaries. Such extensions may result in “internationalization of new ventures” from emerging economies to advanced markets (Yamakawa et al. 2008). In addition, new digital technologies remove “uncertainty inherent in
entrepreneurial processes and outcomes” and create vibrant global customer base (Nambisan 2017). High rates of business growth also expand value frontiers in BoP markets that can foster investment capital flows from advanced economies (Christensen et al. 2019). Within this setting, global LSCM can yet again serve as a foundation for growth for BoP markets and to some degree also for ToP markets.

CONTRIBUTIONS TO THIS ISSUE

The article by Pellathy, Mollenkopf, Stank, and Autry refines the definition of cross-functional integration and develops a scale for its measurement. The scale benefits academics and practitioners alike. The research starts by identifying inconsistencies in prior measurements of cross-functional integration and then applies techniques of middle-range theorizing to develop and validate a cross-functional integration construct. The research also contributes to practitioners as it clearly defines the concept, thus guiding goal collaboration, activity coordination, and information sharing. A clearly defined concept should inform firms of the key variables related to cross-functional integration and use the scale to track progress and focus on problem areas.

The article by Brewer, Ashenbaum, and Wallin examines supplier selection from a cross-functional perspective. Using case- study methodology, the authors study how two separate functions, procurement and engineering, approach supplier selection given their respective priorities and visions. Their findings suggest that engineering personnel tend to dominate decision making in higher risk environments. In contrast, when risk and uncertainty are low, a more equal arrangement is likely. However, when competitive environment risk is low but uncertainty is high, considerable disagreement arises over which function “leads” this decision. Higher risk environments drive higher goal congruence through shared vision and consensus on who makes supplier selection decisions.

The article by Mahapatra, William, and Padhy, the first article in the STF, is set within the handloom sector, in which about half of the individuals working in it live below the poverty line. Within the context of this sector in Odisha, India, the authors analyze the supply chains of four handloom retailers, representing cooperative and private organizational systems with varied levels of operational integration. The findings lead the authors to theorize about factors contributing to operational cost-effectiveness, enabling them to issue recommendations for the improvement of the sector characterized by an economically weak producer base. Alternative supply chain alignment practices are assessed for their usefulness in promoting efficiency, innovation, and equitability among BoP constituents, and a set of propositions is developed that link motivations, strategies, practices, and performance in handloom supply chains.

The article by Rao, Nilakantan, Iyengar, and Lee, the second article in the STF, assesses the viability of benefit transfers for the poor in a supply chain context that has been characterized by corruption and pilferage (also sometimes referred as leakages). This problem can be tied back to the practice of price subsidization for products, with these products then, however, being sold elsewhere at full price. The authors investigate how this problem can be addressed with an alternate approach to help the poor, namely with benefit sharing. One type of regional rural bank in India (District Central Cooperative Banks) serves as the context. The focus on India is fitting, since India has the world's largest subsidized product distribution program for the poor, as is the focus on this type of bank, since it only serves the BoP market. The authors look at how the banks' branching out to reach the poorest customers can impact the banks' performance. Overall results suggest, however, the commercial scalability to be questionable and question it as an effective, large-scale solution for BoP constituents. Based on these findings, the authors issue a call for joint distribution and partnerships.

The article by Nezih Altay and Raktim Pal, the third article in the STF, identifies key success factors for social enterprises serving BoP markets through an analysis of value chain complexities. Relying on Porter's value chain framework and basing their analysis on secondary data on 23 social enterprises from 11 countries and seven industry sectors, the authors analyze complexities founded in the value creation role (consumer vs. coproducer) and income level (poverty vs. extreme poverty) of the local population. Findings illustrate the multitude of challenges these enterprises face in fulfilling differentiated customer demand patterns. Given these realities, the authors develop an affordability-accessibility framework that can help in identifying favorable and unfavorable situations for the ability of social enterprises to meet the challenges in BoP markets. The paper culminates in the development of a set of four propositions that may be useful for social enterprises in coping with the difficulties associated with affordability and accessibility.

REVIEWER ACKNOWLEDGMENT

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