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Sustainable Demand Chain Management: An Alternative Perspective for Sustainability in the Supply Chain

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Abstract

Sustainable supply chain management (SSCM) has gained significant attention during the last years due to the increased attention paid to sustainable development targets both at the macro policy levels and at the individual organization levels. However there is a gap in the current SSCM literature that misses the link between demand chain management (DCM) and incorporating sustainability to the supply chain organization. This paper aims to contribute to the literature by offering an alternative perspective to SSCM that takes customer demand into consideration when designing, developing and producing sustainable value propositions which consequently result in competitive advantage. The paper builds up a conceptual framework for sustainable demand chain management (SDCM) and calls for further research on the integration between marketing and SSCM both at the theoretical and empirical levels.

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1. Introduction

Besides the extant literature on supply chain management (SCM) gathered around operations management and logistics literature, a new perspective which is called demand chain management (DCM) is on the rise which aims to approximate marketing function with SCM processes (e.g. Jüttner et al., 2007). DCM criticizes the dominance of

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efficiency view and production orientation in SCM and defends that effectiveness and customer orientation should be aligned with efficient supply chain operations in order to achieve competitive advantage and superior customer value. Within this perspective, the chains are triggered with target market profiling and a flow of information regarding customer value drivers.

The case is the same for sustainable supply chain management (SSCM) where the main focus is on push processes and about how sustainability can be disseminated to, practiced and controlled with suppliers at the upper tiers of the supply chains by focal organizations. The sustainable supply chain organization is seen as a one-dimensional and linear unit rather than a network of organizations working in a dynamic network horizon (Frostenson and Prenekert, In Press). This network horizon consists of many stakeholders and essentially, customers.

There are few studies taking a stakeholder perspective to address SSCM issues other than purchasing focus and furthermore, there are very few studies that address economic, environmental and social issues in the supply chain with a holistic manner and a stakeholder perspective (Meixell and Louma, 2015). After a systematic review of extant SSCM research Carter and Easton (2011) emphasize the dominance of the firm as the unit of analysis and they call for future research on the individual as the unit of analysis. Touboulic and Walker (2015) propose the utilization of Maslow's hierarchy of needs in order to explore how individuals may have various needs and motivations for dealing sustainability issues throughout the supply chain and how these needs and motivations can be used to help implementing sustainability in the supply chain.

In addition to these, there is a need for marketing to be combined with SSCM and adoption of a market-orientation at the supply chain level for achieving competitive advantage (Green Jr. et al., 2006). There is recent attention to the need for an integration between marketing and operations for achieving business sustainability (e.g. special issue of *Industrial Marketing Management*, 2014, Volume 43, Issue 1). However, to the best of the author's knowledge, there are almost no studies exploring the integration between DCM and SSCM or no conceptual efforts to approximate marketing with SSCM activities.

This paper tries to fill the gaps that are mentioned above by proposing a conceptual framework for sustainable demand chain management (SDCM). Together with the new terminology, SDCM framework is an effort to involve market information to SSCM activities and align SSCM activities with customer expectations regarding sustainability. Matching customer needs with SSCM practices has been investigated at the green marketing level and depending on the environmental expectations of customers (Brindley and Oxborrow, 2014). However a holistic perspective is still missing. Santos and D'Antone (2014) have concluded their systematic review on DCM research with future study opportunities on DCM contributions to business sustainability. Vermeulen and Seuring (2009) also indicate that concept and theory formulation in SSCM field for advancing the first attempts made so far are required. Looking at the traditional research on SSCM activities starting with sourcing (e.g. Hassini et al., 2012), a market oriented perspective to SSCM is considered as a promising research avenue for a new point of view in the field.

For achieving the aim of framework development for SDCM, first existing literature on SCM is explored and right after that DCM perspective in the literature is analysed. At the third section, sustainability issues in SCM and the general SSCM literature is examined where required proof is found for the integration of marketing view into the field. The second part of the third section elaborates the discussion on new terminology of SDCM. The last section proposes a conceptual framework depending on the theoretical discussions and the conclusion provides opportunities for further research and implications for SSCM practitioners.

2. Supply Chain Management (or?) Demand Chain Management

2.1. Supply Chain Management: Basic Concepts and Perspectives

Kent and Flint (1997) have proved to be right within the last 20 years of related research with reference to their classification on logistics thought. The last era that they introduced and named as the behavioral and boundary spanning era highlighted the potential rise of extension of logistics processes throughout the supply chains and required increase in inter-functional cooperation and collaboration. Since then, supply chain management (SCM) has gained significant attention from both scholars and practitioners. With a very frequently cited and widely accepted proposition, today the competition is not between organizations anymore but it is between different supply chains (Christopher, 2005). Understanding and pursuing a well-facilitated SCM strategy is expected to enable all companies

positioned in the same supply chain reach resources and achieve competitive advantage in a holistic manner. The inter-organizational collaboration within the supply chain would result in a win-win situation for all of its members.

SCM, which has been defined in many ways (e.g. Christopher, 2005; Cooper et al., 1997; La Londe and Masters, 1994; Houlihan, 1988; Stock and Boyer, 2009) can be described as a combination of a management philosophy, a set of activities needed to implement this management philosophy and a set of management processes that extend the boundaries of an individual organization to the ultimate supply chain (Mentzer et al., 2001). The supply chain on the other hand is an existing business entity that is composed of different companies and organizations that are aligned together in order to produce value in the form of goods or services (Christopher, 2005). Mentzer et al. (2001) differentiate between the direct supply chain, the extended supply chain and the ultimate supply chain but regardless of the scope, the majority of the approaches towards describing supply chains acknowledge the final consumer as a member of the supply chain (Lambert et al., 1998; Cooper and Ellram, 1993; Mentzer et al., 2001).

Despite the recognition of the final consumer as a member of the supply chain, the conceptualization efforts towards the SCM concept is based on the product and service flows from the point of production to the point of consumption. The flow within the pipeline, at least the physical flow, is inevitably resulting in a top-down manner unless the focus is not on reverse channels. Although the ultimate goal of SCM is achieving superior customer value (Christopher, 2005), the operationalization of this goal is mainly through the establishment of efficient SCM practices. SCM aims to match market demand with supply with as less resources as possible but this perspective is not adequate to comprehend what the ultimate customer perceives as valuable and how this perception can be converted into value-based market offerings (Jüttner et al., 2007). The operational perspective which was prevalent in the beginning of the term's entrance to the scholarly and business world is still prevalent where the "supply" view is focused on minimization of disruptions in linear flows within supply pipelines, elimination of uncertainty within the pipeline for reduction in bullwhip effect, buffer inventory levels and long lead times (Holweg and Helo, 2014). However this view of SCM solely by itself is not able to increase customer value and satisfaction (Rainbird, 2004).

2.2. Demand Chain Management: An Alternative Perspective to SCM

Value, in competitive terms, is defined as the amount that a buyer is willing to pay for a market offering and it is created by the distinct activities of an organization which altogether form the value chain (Porter, 1998). However it is essential to underline that value is not composed of the activities and the margin of a single value chain but rather a channel of chains and therefore named as channel value (Porter, 1998). Customer value, on the other hand, is defined as "a customer perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate achieving the customer's goals and purposes in use situations" (Woodruff, 1997: 142). According to this definition, customers define the value depending on their goals in using the supplied market offerings. The "goal of using the market offering" concept is similar with the buyer value chain concept and the alignment of an organization's value chain with its buyers' value chains is one of the main sources of its differentiation and competitive advantage (Porter, 1998).

As already underlined, the competition today is not between individual companies but between different supply chains and consequently competitive advantage is no longer a standalone goal for single organizations but for entire supply chains. For a supply chain to seize competitive advantage, it is essential that all members of that specific chain have the same goal and the same focus on serving customers (La Londe and Masters, 1994). However, in order to that, first the members need to explore, analyze and understand customer value which requires a marketing lense. For achieving this purpose an integration between purchasing and marketing activities of the classical value chain is required (Ivens et al., 2009). A solution to this challenge is introduced with demand chain management (DCM) concept which "puts emphasis on the needs of the marketplace and designing the chain to satisfy these needs, instead of starting with the supplier/manufacturer and working forward" (Heikkila, 2002: 749).

It was first Vollmann and Cordon (1998) who proposed that DCM, a radical change in value chain thinking that starts with the customers, should replace SCM which focuses on improving purchasing through exertion of power to suppliers. SCM should be replaced with DCM and the emphasis should be shifted from efficient supply flows from top to down, to responding customer requirements (Vollmann et al., 2000). DCM is viewed as a pull strategy where the aim is to facilitate the flow according to customer requirements and SCM is viewed as a push strategy driven by

the downstream operations to the upstream operations (Lee et al., 2011). Rainbird (2004) defines value chains as complex networks of demand and supply chain partners and attracts the attention to the conflict between the efficiency focus of supply chains and effectiveness focus of demand chains.

De Treville et al. (2004) take an operation management perspective to DCM transformation in supply chain research and differentiate between supply chains that focus on market mediation and supply chains that focus on efficient supply of physical products. Their focus is on decreasing supply lead times against changes in demand. Green Jr. et al. (2006), on the other hand, take a marketing perspective and underline the requirement for the establishment of a supply chain level market orientation and alignment of marketing strategies throughout the supply chain members in order to achieve competitive advantage. This is a form of policy integration as advised by La Londe and Masters (1994). Another important integration to assure DCM throughout the supply chain is to employ information technology tools and especially Internet, in order to integrate demand and share data between planning and control functions of the supply chain (Frohlich and Westbrook, 2002).

In order to design a holistic demand chain strategy, it is essential to identify the specific markets to be targeted, identify the overall corporate strategy for responding these markets's requirements and highlighting core competencies and resources (Childerhouse et al., 2002). Jüttner et al. (2007) develop a three-dimensional conceptual framework for DCM consisting of demand and supply process integration, DCM configuration and relationships between marketing and SCM functions. According to their framework, firstly the demand processes and supply processes should be aligned according to customer buying life cycle stages through the help of marketing's power to disseminate market related information and marketing activities' effect on process integration. Configuration dimension focuses on the determination of customer segment focused demand chain organization. Finally the social interaction focuses on removing the borders between marketing and SCM and to facilitate relationships and information sharing between these functions.

Recently Santos and D'Antone (2014) adopt a critical perspective to the existing DCM research and define the term as an organization's dynamic way of positioning its activities in rapidly changing markets that are shaped by different market actors. They call for further research on DCM and developments in business sustainability. Despite this call, it is hard to find scholarly research on sustainable demand chain management (SDCM). Although stakeholder pressure is a frequently visited driver for the adoption of sustainability by SCM (e.g. Seuring and Mueller, 2008a), a large part of SSCM research focuses on operational decisions and only a small portion of the literature take a marketing perspective to sustainability issues within the supply chain (Gupta and Palsule-Desai, 2011). This paper tries to underline the production and purchasing orientation in current SSCM research and propose an alternative perspective to sustainability within the value chain: sustainable demand chain management.

3. Sustainable Supply Chain Management (or?) Sustainable Demand Chain Management

3.1. Sustainable Supply Chain Management

Sustainable supply chain management (SSCM) has stemmed from the diffusion of sustainability concerns that arose at the international level with reference to the way that today's generations meet their needs and its potential adverse impacts on future's generations' abilities to meet their own needs (WCED, 1987). The recognition of an alternative way for national development, sustainable development, had some implications on national policies as countries were required to obey certain regulations lying on three main pillars of the triple bottomline. Triple bottomline refers to success evaluation on three main facets of economy, society and the environment (Kleindorfer et al., 2005). This perspective alteration at the national level was consequently reflected to organizational level as organizations are the engines of growth and development in market economies today. Corporate sustainability approach requires the organizations to achieve success not only at their financial bottomline but also respond to societal and environmental expectations in a holistic manner. The transfer of sustainable development goals and concepts to business level can be defined as corporate sustainability (Zink et al., 2008) where the organizations should be careful in satisfying their organizational needs in order to enable future's organizations keep satisfying their own needs (Dyllick and Hockerts, 2002).

However organizations are not operating in an isolated environment. On the contrary, especially in today's global environment where production, supply and sales facilities are spilled all over the world organizations are required to

work in integrated supply chains to facilitate value creation in the form of products or services. Therefore, the sustainability focus in a single organization is not able to stay within the boundaries of that organization but expand to the boundaries of its supply chains. Especially due to the high rate of outsourcing, focal organizations which are generally the companies that govern the supply chains, have a direct contact with the final customer and (/or) possess know-how regarding the design or configuration of the critical supply chain outputs (Handfield and Nichols, 1999; Schary and Skjøtt-Larsen, 2001), are under the close attention of pressure groups and consumers. This pressure does not cover only their corporate activities but also the negative impacts of their supply chain members' actions on the environment and the society.

SSCM has been defined as “the management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e., economic, environmental and social, into account which are derived from customer and stakeholder requirements” (Seuring and Mueller, 2008a: 1700). Carter and Rogers (2008) introduce four main facets supporting the triple bottomline of SSCM as risk management, transparency, strategy and culture by reviewing the literature on sustainability. Risk management is frequently cited together with sustainability because majority of the ignorance on corporate activity’s adverse impacts on the environment and the society is expected to incur considerable risks in terms of energy inputs, supply disruptions due to accidents, environmental disasters, demand disruptions due to societal unrest and loss in soft assets such as reputation. Supply chain risk is viewed as a potential incident in inbound supply flows which causes an inability to meet customer demand (Zsidisin et al., 2000). Carter and Rogers (2008) suggest that companies need to understand the potential environmental, social and economic risks within their supply chains and take necessary measures. Transparency supports the monitoring of sustainability processes throughout the supply chain and also the communication of these activities with stakeholders. In addition to these, strategy and organizational culture are important issues that have to back SSCM practices because without a congruence between them, it would be very difficult to implement actions and reach sustainability goals through the supply chain.

Another perspective emphasizes that the goal of SSCM is the maximization of supply chain’s profitability while at the same time minimization of environmental impacts and maximization of social well-being (Hassini et al., 2012). However, the perspective adopted in this paper is Seuring and Mueller’s (2008a) and Carter and Rogers’ (2008) perspectives that underline the alignment of goals coming from all three dimensions of the triple bottomline. This is similar with the alignment strategy according to Halldorsson et al.’s (2009) classification of current research on SSCM. This perspective is configured as shown in Figure 1 with venn diagrams with shaded intersection sets. Venn diagrams represent members of the supply chain and the double sided arrows indicate a two-way flow between resources, markets and members.

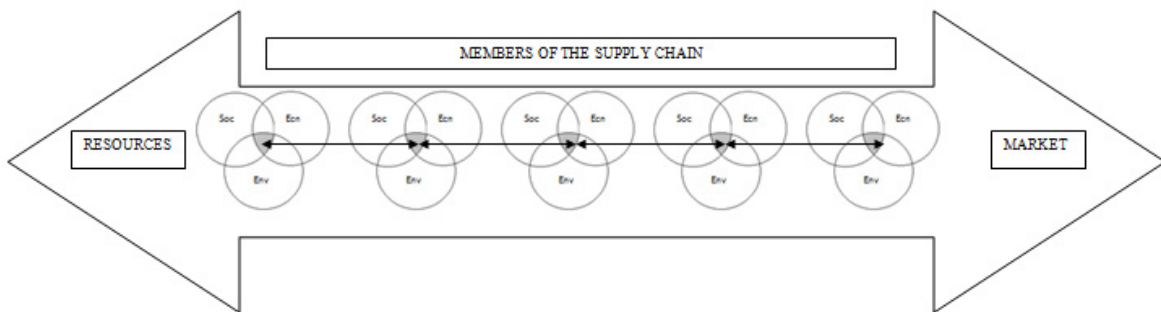


Figure 1. Sustainable Supply Chain Management

Source: Göçer et al. (2012)

According to a Delphi study, the core issues in SSCM are gathered under four main topics which are pressures and incentives, identifying and measuring the impacts on SSCM, supplier management and managing the supply chain in a sustainable way (Seuring and Mueller, 2008b). A significant part of research is spared for developing performance measures for SSCM but it seems difficult to find common measures for all supply chains and for all supply chain members within a single chain. Therefore Hassini et al. (2012) suggest to develop composite indicators that would represent the sub-indicators for the whole chain.

The theoretical background of SSCM research is based to the propositions of resource dependence theory, transaction cost economics, population ecology and the resource-based view (Carter and Rogers, 2008). Markley and Davis (2007) adopt natural resource-based view of the firm and propose that the existence of a sustainable supply chain would create competitive advantage for an organization in terms of better stakeholder ratings and profitability. Gold et al. (2010) use the propositions of relational view in order to emphasize that the resources in complex networks such as supply chains are hard to imitate and create a competitive advantage for the whole chain. When these resources are backed up with sustainability paradigm for a specific supply chain, the overall competitive advantage of that chain would increase.

SSCM research is highly focused on sustainable procurement and especially the sustainable purchasing of well-known large goods or goods related services (Haake and Seuring, 2009). Product stewardship and green supply chain management are very widely covered topics in SSCM research (Halldorsson et al., 2009). The dominance of the environmental dimension of the triple bottomline is prevalent in literature reviews exploring existing SSCM research (e.g. Seuring and Mueller, 2008a).

Seuring and Mueller's (2008a) framework for SSCM includes two norm strategies which are supplier management for risks and performance and SCM for sustainable products. The former focuses on improving suppliers' sustainability performance through improving quality, speed, flexibility and dependency, and avoiding triple bottomline risks. The latter focuses on products' life-cycle assessment by training and setting standards for production by suppliers. Supplier partnerships and collaboration is seen as one of the most important indicators of performance in SSCM (Akamp and Müller, 2013; Cruz, 2013; Leppelt et al., 2013; Steven and Merklein, 2013).

For the sake of transparency and public information, organizations tend to announce their sustainability performances via their annual sustainability or corporate social responsibility (CSR) reports. Some studies analyze these reports in order to measure the congruence of actual corporate action with scholarly frameworks (pls see. Closs et al., 2011; Altuntaş and Türker, 2012; Türker and Altuntaş, 2014). However the reflection of these reports indicate a focus on suppliers and production again. Pagell and Wu's (2009) cross case analysis shows that only three out of the ten examples that they researched collaborated with customers for SSCM. A customer-centric approach seems to be missing in SSCM research and the congruence of DCM concept with SSCM models can provide an opportunity to introduce a marketing perspective into existing SSCM literature. In order to seize such an opportunity SDCM is introduced and discussed as a new concept and a conceptual framework derived from previous studies is proposed for SDCM.

3.2. Sustainable Demand Chain Management: An Alternative Perspective to SSCM

“In sustainable supply chains, environmental and social criteria need to be fulfilled by the members to remain within the supply chain, while it is expected that competitiveness would be maintained through meeting customer needs and related economic criteria” (Seuring and Mueller, 2008a: 1700). How about the environmental and social criteria that is demanded by the customers? With a demand chain perspective, companies need to explore and analyze the demand chain profile of their target markets, describe their customers' value drivers and develop value propositions according to this market intelligence activities (Walters, 2008). This information should be disseminated across supply chain partners and each partner has to provide the necessary inputs in order to meet the needs of the ultimate customer in the best possible way. From a SDCM perspective it is essential that the demand chain profile of target markets should be explored together with their requirements in terms of triple bottomline dimensions.

In order to adopt such a perspective, first the supply chain organization needs to adopt a sustainability focused market orientation. It is essential to critically examine how target markets and consumers value the sustainability oriented value propositions of the supply chain. Supply chains should collect market information regarding the sustainability preferences of target markets, customer priorities regarding sustainability measures, customer

satisfaction levels regarding the sustainability performance of the supply chain and voluntary customer involvement in the design and the control of the upper echelons of the supply chains in terms of sustainability performance. As Seuring and Gold (2013) emphasize, the inclusion of various stakeholder groups for defining and monitoring the related environmental and social standards or codes of conduct in supply chains increase the societal embeddedness of supply chain actors. Customers are among the most important stakeholders and also supply chain members.

Svensson (2007) criticizes the existing focus of SSCM literature on first-order supply chains and attracts the attention to second or third order supply chains that operate beyond the conventional boundaries of marketing channels starting with production and ending with consumption. In such second or third order supply chain the products' life cycle continues and they deliver alternative values in alternative value chains. Customers may demand longer but useful product life cycles in order to increase the transferability of such products in alternative supply chains such as second hand clothes or alternative designs from waste. This may require changes in the supply chain design and product life cycle assessment phases for SSCM. Sustainability should be integrated into activities beyond core supply chain activities: market related activities where customer is also involved such as by-products produced during product use, product life extension, product end-of-life and recovery processes at end-of-life (Linton et al., 2007).

As suggested by Frostenson and Prenekert (In Press) the traditional view in SSCM literature is located around a focal organization that manages the sustainability activities in a one-dimensional and linear way towards to the suppliers. However sustainability is not able to be managed in a traditional way in supply chains because the focal node does not control all the resources required to control the suppliers and also to control the economic, environmental and social expectations of others. It is valid for the sustainability expectations of the customers as well. Therefore it is suggested in this article that supply chain organizations should position their sustainability activities according to the demand of their rapidly changing markets which are shaped by many different actors similar with Santos and D'Antone's (2014) DCM conceptualization. In order to achieve this aim, SSCM practices should be aligned with SDCM practices.

DCM perspective defends that the interaction between marketing and SCM functions should be enhanced (Jüttner et al., 2007) and the supply chain organization should have a common market orientation at the network level (Green Jr. et al., 2006). Similar propositions can be derived from relationship marketing literature and industrial network approach. Relationship marketing theory defies the traditional focus on market transactions (Webster, 1992) and defines marketing as relationships, networks and interaction (Gummesson, 1994: 5). For the relationships in SDCM, Möller and Halinen's (2000) description for network-based relationship marketing characteristics can be adopted which involves complex, organizational and mutually dependent relationships and which requires contingent management approaches suitable to their environment.

In addition to these propositions, the interaction notion in industrial network approach challenges the passive market view of the marketing management perspective and acknowledges the active role of the buyer in initiating, developing and designing the market transactions (Ford and Hakansson, 2006). The similar perspective should be acknowledged for delivering sustainability value through the supply chains and the customers should be involved in initiating, developing and designing sustainable market offerings which are delivered via supply networks. After all with a network approach, the firm is no longer viewed as an isolated entity surrounded by external actors but a highly complex entity created by actors, resources and activities that it interacts with (Möller and Halinen, 1999).

In accordance with Frostenson and Prenekert's (In Press) empirical proof, sustainable supply networks do not have a single hub; they are not owned by any of the companies located in the network and does not have clear boundaries (Ford et al., 2002). This article suggests that, the sustainable supply networks should involve their customers into the management of their sustainability activities and convert their perspective to SDCM. They should align the sustainability activities of their supply networks according to the sustainability expectations and requirements of their customers. After all, value is not the performance indicators determined by the supplier of a good or service (Gummesson, 2010), it is rather a concept defined from the perspective of the customer and is measured in terms of the outputs of an offering delivery process (Porter, 2008). Service centered view states that value is co-created with the customer, so a supplier offers a value proposition to the market but the value that it intends to create is actualized by the customer at the end (Vargo and Lusch, 2004). Similarly, sustainability value delivered by a supply chain will be co-created and actualized by the customers that it is directed to. Therefore the sustainability value proposition should be developed in accordance with the needs and desires of sustainable demand chains' customers.

4. A Conceptual Framework for SDCM

Depending on the previous discussions in the related literature and the propositions made by DCM frameworks, a conceptual framework for SDCM is presented by Figure 2. The figure includes the DCM processes proposed by Walters (2006), SSCM activities proposed by Seuring and Mueller's (2008a) systematic literature review and the SCM processes listed by Cooper et al. (1997). The framework starts with demand chain profiling which is required to identify the critical issues to be considered in the supply network's sustainable value proposition. At this stage the macro and micro market characteristics (Walters and Rainbird, 2004) should be identified together with triple bottomline dimensions. Essential activities are analysis of the business environment according to the triple bottomline dimensions, identifications of their influences on the markets' buying preferences, analysis of consumption patterns and chains.

After that the target customers and markets should be determined again in accordance with the triple bottomline approach. Here the target market segments should be identified and segment sizes should be determined. This step is similar with the configuration dimension of Jüttner et al's (2007) DCM framework. Customer segment focused SDCM activities should be designed according to the environmental, social and economic requirements demanded by different segments. This may require the design of alternative sustainable demand chains that process different activities and alternative sustainability evaluations for the suppliers that take part in these distinct chains.

The analysis of market segments will provide information about the customer value drivers. The sustainability value drivers that are perceived by the customers should be determined as they will be used as inputs for the creation of sustainable customer value propositions. In a sustainable demand chain, the value proposition should include the sustainability dimensions that are demanded by the customers. Benefits and costs related with sustainability should be profiled. The customer value attached to sustainability activities should be monitored. At the end of this stage the sustainable value propositions are co-created with the customers.

After the creation of sustainable value propositions, it is essential to consider the sustainable delivery of them. This is where the sustainable supply network should design its activities according to the information flow coming from the demand side and configure the processes that are required to undertake for sustainable value delivery. The framework in this paper acknowledges the sustainable supply network perspective of Frostenson and Prenekert (In Press) where there are multiple actors reaching multiple resources required to achieve sustainability within a value chain instead of a single focal organization controlling all resources and exerting power on the suppliers in a one-dimensional and linear way. In the SDCM framework, any actor in the sustainable supply network may reach the resources and especially the information for demand chain profiling, customer targeting and creating the sustainable value propositions.

At the supply side of the framework, all members of the sustainable supply network should manage their supply chain processes for fulfilling the sustainable value proposition co created in the demand chain. In addition to that, each member of the network should evaluate their suppliers according to the sustainability considerations received from the target markets. After all, any marketing paradigm should be based on the marketing concept which is defined as *the notion that a firm is best off by designing and directing its activities according to the needs and desires of customers in chosen target markets* (Grönroos, 1994: 349). If DCM requires the adoption of a supply chain level market orientation (Green Jr. et al., 2006), then sustainable demand chains should direct their activities according to the sustainability needs and desires of their customers in chosen target markets.

This conceptual model takes its basis from Vollmann and Cordon's (1998) suggestion on demand chains that take a customer perspective and transforms the traditional purchasing oriented flow of supply chains. That is the reason why the model starts with demand chain profiling. The model underlines an interaction between purchasing and marketing (Ivens et al., 2009) at the sustainable value delivery stage where the considerations and implications for sustainable value delivery is integrated with sustainable supply network activities. All DCM activities take goals from the three components of the triple bottomline approach (Kleindorfer et al., 2005) and therefore aim to explore and co-create the sustainability value that is desired by the customers. Cooper et al's (1997) SCM processes should be managed in an integrated manner and with a sustainability focus in order to produce the demanded sustainable value propositions and the suppliers in the whole echelons of the network should be evaluated according to sustainability demands coming from the markets.

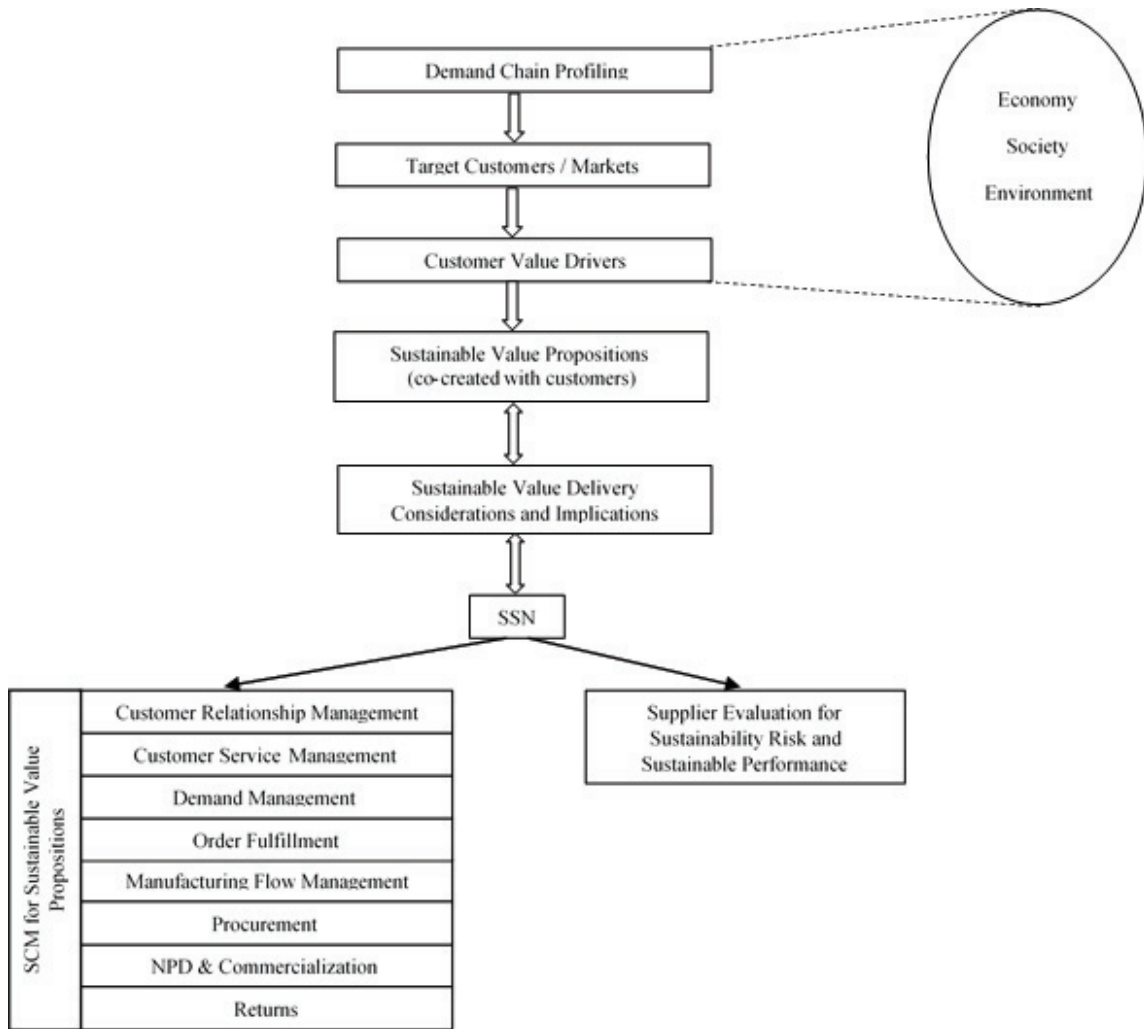


Figure 2. A Conceptual Framework for Sustainable Demand Chain Management

5. Conclusion

SSCM research recalls for further effort in holistic analysis of sustainability throughout the supply chains, particularly including the social and human aspects of triple bottomline and especially from alternative views rather than from the already dominant macro competitive paradigm (Touboulic and Walker, 2015). This paper made a modest effort to SSCM and tried to combine rising theory in DCM with SSCM taking a network and value perspective.

According to Hassini et al’s (2012) systematic review on SSCM research, majority of the papers written in the field focus on the manufacturer due to the high focus of operational research on the manufacturing industry and the high sustainability expectations from factories with more visible adverse impacts especially on the environment. They can detect only one paper focusing on the customer in SSCM research. This paper’s main theoretical contribution is its customer-centric perspective to SSCM research and its call for an alternative perspective to the dominant focal organization and production centered view in SSCM literature.

Seuring and Gold (2013) emphasizes the importance of inputs, critical supervision and active inclusion of stakeholders to SSCM activities and calls for further inter-organizational sustainability management research. With the SDCM framework proposed by this paper, the inclusion of customers to the creation of sustainable value

propositions by sustainable supply networks is proposed. Such a framework would benefit practitioners in terms of aligning their sustainable supply network activities with existing demand for sustainable products and services. A better match in supply operations with market demand would increase the effectiveness of DCM in a sustainable manner.

The paper certainly has its limitations. First of all, this is a very early conceptual effort that aims to combine marketing perspective with SSCM. The proposed framework requires theoretical and empirical proof to be generalized for further research. Until now, Williams et al. (2002) employed resource-based view of the firm and transaction cost economics theory to DCM activities. According to their research, RBV is useful to design DCM because it is focused on the capabilities and TCE can be employed to explain where a demand chain will face certain constraints. Similar theoretical research is required for establishing the basic premises of SDCM. RBV and TCE can also be used to develop theory regarding SDCM together with stakeholder theory, network theory, natural resource-based view of the firm and resource dependency theory.

In addition to that, the economic results of SSCM has not been well documented with empirical evidence yet and requires further research (Halldorsson et al 2009). It would be an interesting research avenue to explore the sustainability actions that the markets demand and align those actions with SSCM practices for succeeding in the economic facet of the triple bottomline. One similar effort was undertaken in corporate social responsibility (CSR) research. According to Webb et al's (2008) socially responsible consumption scale there are three different consumption habits such as (1) purchasing based on firms' CSR performance; (2) recycling; and (3) avoidance and use reduction of products based on their environmental impact. Configuration of markets depending on their sustainability demands, designing demand chain management strategies and aligning supply chain activities towards meeting these demands would provide interesting research opportunities for researchers.

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