Chapter 15
What Hybrid Business Models Can Teach Sustainable Supply Chain Management: The Role of Entrepreneurs' Social Identity and Social Capabilities

Lydia Bals and Wendy L. Tate

Abstract Integrating triple bottom line (TBL; economic, social, and environmental) sustainability into supply chains is a major challenge. Progress has been made to address the economic and environmental dimensions in supply chain management research; however, the social dimension is still underrepresented. This chapter reflects on research that looked at the literature on hybrid business models and social entrepreneurship in order to bridge these streams of literature to literature on sustainable supply chain management. Following the literature analysis, case-based research related specifically to social businesses in catastrophe-ridden Haiti was performed. The insights provided by the entrepreneurs of these businesses showed organizations that target TBL objectives from their inception, the specific social capabilities employed to obtain the desired TBL objectives, and the specific supply chain structures that were needed to execute and achieve the TBL goals. The purpose of this chapter is to reflect on that research as it relates to the social businesses, consider the primary results of that research, and discuss how those results might guide further research in the field of sustainable supply chain management.

Keywords Sustainable supply chain management • Corporate social responsibility • Triple bottom line • Social entrepreneurship • Shared value • Design

L. Bals (✉)
University of Applied Sciences Mainz, Lucy-Hillebrand-Str. 2, 55128 Mainz, Germany

Department of Strategic Management and Globalization (SMG), Copenhagen Business School (CBS), Kilevej 14, 2. Floor, 2000, Frederiksberg, Denmark
e-mail: lydia.bals@hs-mainz.de; lb.smg@cbs.dk

W.L. Tate
University of Tennessee, 315 Stokely Management Center, Knoxville, TN 37996-0530, USA
e-mail: wendy.tate@utk.edu

M. Brandenburg et al. (eds.), *Social and Environmental Dimensions of Organizations and Supply Chains*, Greening of Industry Networks Studies 5,
DOI 10.1007/978-3-319-59587-0_15

15.1 Introduction

Assessing worldwide poverty rates and environmental degradation shows that integrating triple bottom line (TBL; economic, social, and environmental; Elkington 1998) sustainability into global supply chains is still a major challenge (UN Water 2013; WWF 2012; World Bank 2015). While sustainable supply chain management (SSCM) is increasingly becoming an important area of research (Pagell and Shevchenko 2014), most still concentrates on economic and environmental aspects, whereas the social dimension is relatively understudied (Yawar and Seuring 2015; Müller and Stölzle 2015; Seuring and Müller 2008).

Research on hybrid business models and social entrepreneurship covers the economic and social dimensions and/or even all three dimensions (e.g., Di Domenico et al. 2010). Therefore, this area of research can offer insights into how a business model is actually conceived and executed if TBL incentives are present at inception rather than having to redesign ex post to adapt to changing stakeholder or regulatory requirements (e.g., in the context of CSR pressure). This chapter seeks to derive lessons to SSCM from this ex ante approach to promote further research, particularly at the interface of SSCM and social entrepreneurship.

Choosing the individual actors and their incentives as the level of analysis can shed light on the social capabilities needed for subsequent supply chain design. Instead of looking at established firms and their existing structures, the social start-up environment allows researchers to study social capabilities in action, while the business is still formed and as it begins operations.

The chapter seeks to build a bridge between SSCM and social entrepreneurship research. For this purpose, it presents the major results of an ongoing research project where social businesses in Haiti were studied. While the results from the research are in focus, one primary goal of this chapter is to make suggestions regarding future research stemming from lessons learned in how to collect data in such a setting and how this cross-disciplinary research has been received at conferences and during the peer-review processes. The chapter begins with some of the conceptual background supporting this research and concludes with a summary of future research directions.

15.2 Conceptual Background

While SSCM research has been mostly covering the economic and environmental dimension and rather centers on how to retrofit existing supply chains according to sustainability criteria, the social entrepreneurship literature offers insights on how to tackle sustainability, including the social dimension, when creating businesses. As background for the following sections, key terms and definitions are first provided.

15.2.1 Sustainable Supply Chain Management and Design

SSCM comprises "The *management* [emphasis added] 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 Müller 2008, 1700).

Within that research area, to think and act differently in SSCM is increasingly called to the attention of researchers. For instance, in the 50th anniversary issue of the Journal of Supply Chain Management, Pagell and Shevchenko (2014, 44f.) highlighted the need for further research regarding "how to create truly sustainable supply chains" and "what new practices and processes are needed to create truly sustainable supply chains."

The existing SSCM research focuses mainly on the economic and environmental dimensions of the TBL but suggests, "[a] comprehensive analysis of sustainable business operations should consider all three TBL dimensions *simultaneously*" (Wu and Pagell 2011, 589). Therefore, a clear need for additional research regarding "how *to create* [emphasis added] truly sustainable supply chains" (Pagell and Shevchenko 2014, 44f.) can be identified. Similarly, it has been highlighted that as "stewards of knowledge creation and dissemination, it is necessary to conduct in-depth, nuanced research to help decision makers understand how to think, *design* [emphasis added], and deliver differently" (Fawcett and Waller 2015, 238).

So far, research on the TBL performance of supply chains has been predominantly focused on how to improve environmental performance in existing supply chains (e.g., Wu and Pagell 2011; Zhu and Sarkis 2004; Melnyk et al. 2003; Christmann 2000; Handfield et al. 1997) and not on how to design sustainable supply chains. In order to make a contribution toward addressing this gap, this research investigates how supply chains can be deliberately structured to achieve TBL objectives from inception rather than how existing chains try to reduce negative TBL outcomes later (or retrofit the supply chain to meet different stakeholder needs). Therefore, this research's focus is on the design phase.

Supply chain design involves "The design or reconfiguration of a supply chain which is considered as a strategic goal aiming at determining the number, location and capacities of manufacturing plants and distribution centres, the set of suppliers to select and the effective flow of *material* [emphasis added] throughout the supply chain" (Varsei et al. 2014, 243). Literature on supply chain modeling during the 1990s has predominantly focused on costs. Hence, supply chain design (or supply chain network design) literature shows an emphasis on the more traditional metrics of economic performance, resulting in a rather narrow scope of delivery from a TBL perspective.

15.2.2 Social Entrepreneurs

The primary mission of a social entrepreneur is to create social value by providing solutions to social problems (Dacin et al. 2011). The characteristics of the mission-driven entrepreneur are important for successful social business model development. Social entrepreneurs have distinct characteristics that evolve from their perceived membership in a relevant social group (Tajfel and Turner 1979), which drives and helps to develop a strong mission-based approach to solving a social problem (Tajfel 1982). For example, the social entrepreneur may have a background in finance, specifically microfinance, that allows him or her to design and develop social business models that utilize aspects of microfinance to solve the problem (Tyler and Blader 2003). The social entrepreneur may identify with the particular community or context in which the problem resides (Tajfel 2010).

Social entrepreneurs have to have the ability to think and act differently in terms of developing and executing sustainable business models and programs that make them accountable to their stakeholders and for the outcomes (Dees 1998). The entrepreneurs tend to have a strong mission-based approach to creating and sustaining TBL social value (Sullivan Mort et al. 2003). They engage in a process of continuous innovation, adaptation, and learning (Dees 1998). Continuous improvement is designed into the social business models with the recognition that stakeholder relationships also adapt as the models mature.

Social entrepreneurs excel at recognizing and taking advantage of opportunities, without being limited by the resources currently available (Dees 1998), to deliver the social value of their mission (Sullivan Mort et al. 2003). Social entrepreneurs exhibit a high tolerance for risk, innovativeness, and proactiveness (Smith and Woodworth 2012). The notion of balanced judgment and clear purpose is also a critical characteristic (Peredo and McLean 2006). It is the social entrepreneur's identity that helps to deliver these innovative or novel social business models that help to deal with complex TBL needs of emerging or developing economies. These identities also include entrepreneurial spirit and social passion (Moss et al. 2010). For success, the "mission" of the entrepreneurs must be both entrepreneurial and product oriented as well as socially and people oriented (Moss et al. 2010).

Sullivan Mort et al. (2003) argue that social entrepreneurship is a multidimensional construct defined by intersecting these types of individual characteristics. For example, social business entrepreneurs tend to exhibit a balanced judgment, a coherent unity of purpose, and an action in the face of complexity. The social entrepreneur is also well adapted to balancing the interests of multiple stakeholders while maintaining the sense of mission which is a requirement for successful design and execution of the business model (Peredo and McLean 2006). The ability to recognize the various stakeholders and their interests allows them to understand and deliver the appropriate shared stakeholder value. Another key goal of the entrepreneur is to attract funding that sustains the business model from inception to profit. These aspects underline the role of the social entrepreneur for value chain design.

15.2.3 Impact Investing and Hybrid Organizations

An impact investment is defined as an investment with the intent to create measurable social or environmental benefits in addition to financial return (Wood et al. 2013). Impact investing plays a critical role in helping social entrepreneurs source funding to design and execute the appropriate social business models, especially in the early phases of business model development and execution when the social business is most vulnerable (Grabenwarter and Lichenstein 2011).

Traditional commercial investors focus almost exclusively on projects that are attractive purely for their financial returns, such as the natural resource extraction and low-cost manufacturing sectors, with social outcomes as a secondary issue and with lower associated risk (Henisz and Zelner 2010). In contrast, impact investments target social and environmental issues that are largely ignored by existing international development efforts or by other, more profit-driven investment opportunities (Simon and Barmeier 2010); therefore social business models in emerging economies are often targeted and focus specifically on working with sectors that have a significant positive effect on recipients' quality of life or betterment of the community. Figure 15.1 below shows the distribution of social impact investments by sector. Stakeholders play a key role in the type of investment.

Impact investments are made with the expectation of an explicit financial return and are not largely dependent on external subsidies to sustain operations (Simon and Barmeier 2010). Impact investors seek to address problems through market-based, for-profit models that provide both a social and community benefit and the positive financial return necessary to generate a self-sustaining revenue stream and achieve scale (Bugg-Levine and Emerson 2011; Wood et al. 2013).

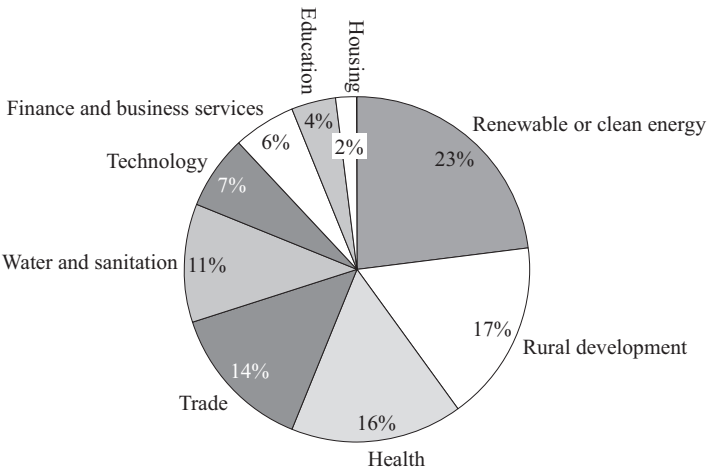

Fig. 15.1 Distribution of social impact investments by sector (Source: Simon and Barmeier 2010, 17)

A hybrid organization is defined as an organization that pursues a dual mission of financial sustainability and social purpose. Because of this hybridity, there are conflicts that arise regarding mission, financial resource acquisition, and human resource mobilization (Gupta et al. 2015). Social entrepreneurs must be able to span the boundaries of the private, public, and nonprofit sectors (Tracey et al. 2011) and face conflicting institutional logic (Pache and Santos 2012).

15.2.4 Social Entrepreneurs in Hybrid Organizations

An organizational form is an "archetypal configuration of structures and practices" that is "regarded as appropriate within an institutional context" (Greenwood and Suddaby 2006, 30). To be categorized as a distinct organizational form, individual organizations manifest those characteristics that are identified with a specific category of organizations (Romanelli 1991). Research has found that internal processes of the organization will mediate the external and internal demands faced by hybrid organizations (Jay 2013). This means that the social entrepreneur must be adept at managing tools, processes, behaviors, and skills to effectively engage stakeholders at multiple levels and meet the multi-perspective demands inherent with the hybrid organization. Hybrid organizational forms are considered structures and practices that allow the coexistence of values and artifacts from two or more conflicting organizational forms (Gupta et al. 2015) and different norms and practices in many different locations (Cooney 2006).

15.3 Research on Social Businesses in Haiti

Based on the background of the sustainable supply chain and entrepreneurship research streams outlined in Sect. 15.2, this research set out to shed light on the two research questions mentioned in the introduction. The following gives an overview of the research design and the data collection and then provides a summary of the main results.

15.3.1 Research Design

The objective of this research project started out as to address the following research questions:

1. How can truly sustainable supply chains be designed?
2. What new practices and processes are needed to design truly sustainable supply chains?

In relation to the individual level, the objective was to use cases to illustrate social identity and capability effects on the level of the individual for successful business model development, with a focus on the physical as well as support chains (information and financial).

This research set out to engage in theory elaboration (Ketokivi and Choi 2014), focusing on the contextualized logic of a general theory, here the theory of the supply chain (Carter et al. 2015) for the question "How can truly sustainable supply chains be designed?" and the resource-based view (RBV) (e.g., Barney 1991; Wernerfelt 1984) for the question "What new practices and processes are needed to design truly sustainable supply chains?" The cases served to elaborate theory and to move it into a different context with structural and boundary implications that vary from the original theory. Based on abductive reasoning, theory elaboration utilizes the interplay between empirical data and theory simultaneously (Dubois and Gibbert 2010). Data is used to illustrate and elaborate (Ketokivi and Choi 2014). For data collection, an interview guide (Appendix A) was developed.

15.3.2 Data Collection

In early 2014, one of the researchers visited various events on social businesses to look for suitable cooperation partners for data collection. One of these events was hosted by Yunus Social Business (YSB) in Frankfurt, Germany. From a SSCM perspective, YSB's way of supporting social businesses to achieve sustainability objectives throughout a wide range of countries reflected the earlier mentioned calls for more research into how sustainable supply chains can be created/designed (Pagell and Shevchenko 2014; Fawcett and Waller 2015). Therefore, YSB was approached right after the event for data collection, and the YSB headquarters in Germany helped to select the appropriate country and the respective social businesses to be analyzed in detail.

Regarding country selection, a sampling criterion was established that the country needed to have social businesses operating for more than 2 years. Additionally, as a second criterion, the specific location had to offer severe resource constraints to observe how supply chains can be designed to overcome those constraints. This led to the selection of catastrophe-ridden Haiti, one of the countries where YSB has its longest presence. Haiti was selected as a research environment due to serious economic, environmental, and social constraints. The people in Haitian communities live in levels of extreme poverty with limited access to goods and services. The 2010 earthquake that hit the country has had lingering environmental, economic, and social impacts. Also, extreme deforestation has resulted in less than 1 % of the natural forests still remaining in Haiti, causing additional TBL challenges. To make matters worse, in 2016, Hurricane Matthew, the most powerful Caribbean storm in at least a decade, devastated Haiti and killed hundreds leaving them in an even more disastrous situation.

As to the selection of specific social businesses for this study, YSB shared their complete portfolio of operating and prospective social businesses in Haiti with the research team. The profiles were screened with regard to their coverage of the three sustainability dimensions and the different business models. Next, the tentative case selection was then reviewed with the Haiti Country Manager at YSB to determine which cases from the Haiti portfolio would satisfy the requirements, i.e., to pursue TBL criteria and already be in the first steps of executing the plan to better understand material, information and financial flows, and stakeholder network connections. Also, YSB noted that it has three different business model types, so cases were selected with this in mind. This resulted in the selection of the three social businesses EPRO, CHIFA, and CLEAPRO (names have been anonymized). The social business EPRO sells cooking (e.g., stoves) and lighting products (e.g., solar lamps). CHIFA is a social business producing chicken meat in order to generate funding for a school. CLEAPRO is a social business offering cleaning products such as detergents, disinfectants, and bleach.

In the course of the analysis of these three social businesses, it became evident that one of them was following a "mixed" model. Therefore, the Haiti country manager helped in selecting a more clear-cut case from their portfolio for additional assessment. This led to further inclusion of COSMO (again, anonymized). COSMO is a social business built around the ingredient castor oil that delivers premium cosmetic products to the US market but in the process creates jobs (particularly for disadvantaged women) and is environmentally friendly. The case companies are briefly characterized in Table 15.1. While EPRO, CHIFA, and CLEAPRO were selected from the start, in the course of the research project, another case – COSMO – was added.

These case studies of social businesses in Haiti were analyzed as exemplars of businesses which have been deliberately set up and incentivized to achieve TBL objectives, in spite of the hardship surrounding the Haitian environment and community. These businesses are not a result of trying to become more sustainable based on a previously established model but were conceived and executed with the primary goal of being TBL sustainable. In line with this, Pagell and Wu (2009, 26) suggested that "…TQM and other continuous improvement focused operational philosophies may be most useful for making an existing supply chain *more* sustainable. However, the same operational philosophy may become a hindrance when the organization needs to radically change what they do to become truly sustainable."

15.3.3 Analysis and Main Results

After receiving the data collection approval by the YSB headquarters, the first step was to contact the Haitian country manager, who provided the researchers with the investor summaries of all social businesses within its portfolio. Based on the earlier mentioned sampling criteria, a first interview with the Haitian country manager was scheduled to review a list of potential cases. In the interview, the results of the

Table 15.1 Brief case overview

Case 1 "Energy Products (EPRO)"	The social business EPRO offers products for cooking and lighting, such as cooking stoves and solar lamps. The cooking stoves are home appliances but also can be used by smaller businesses such as street vendors/small kitchens. Two types of solar lamps are offered and can be used either in homes or for work
	The customer base can quickly see the benefit of their investment. For example, for a street vendor of food, making a switch from coal-based to EPRO's gas-based cooking stoves on average leads to a breakeven (including the payback of the IDE microfinance loan) of 6 months
	Their business case highlights that the poorest households in Port-au-Prince have expenses for coal of about $33 per month, a third of their total budget. From an environmental perspective, deforestation is a severe issue in Haiti, and charcoal is – although illegal – largely coming from the last one-digit percentage of native woods. The solar lamps also help promote the transition to a renewable energy source. On the social dimension, the products leave the customers with better economic prospects (so they can accrue income for other purposes like education). The solar lamps enable people to have light in the evening for work or study. Also, the gas stoves are better than charcoal as it relates to health concerns. An illustrative extract from EPRO's business plan: "The consequences of fuel poverty are dramatic. Harmful emissions of carbon monoxide and micro particles linked to traditional cooking methods cause annual 4 million premature deaths worldwide […]"
Case 2 "Chicken Farm (CHIFA)"	The social business CHIFA produces chicken meat to generate funding for a community school. This is a proven social business model that has been implemented a number of times by YSB. At the time of the interviews, there were several chicken farms as well as a bakery operating in the same fashion
	Despite not being fully organic, CHIFA is not using any chemicals to raise the chicken. At the time of the interviews, CHIFA was building a slaughterhouse to be able to sell the meat directly and until then was still relying on JAMCHI to buy the raised chicken back and slaughter them
	Regarding the economic side, the clear goal is to finance the school with the funds generated (and pay the principal and interests back to YSB, as in all cases). Over the course of 3 years, the model targets coverage of 90–95 % of the school's costs. Regarding the environmental side, the avoidance of chemicals in the chicken meat production and the use of the chicken waste as fertilizer for agriculture are worth noting; further the model leads to a significantly shorter overall supply chain in comparison to the frozen imports, which have to be transported and chilled over long distances, having a significant environmental benefit

(continued)

Table 15.1 (continued)

Case 3 "Cleaning Products (CLEAPRO)"	The social business CLEAPRO sells cleaning products such as detergents, disinfectants, and bleach. Detergents are effective cleansing agents for washing clothes and dishes. Disinfectants are substances applied to nonliving objects in order to destroy microorganisms that are living on these objects. Bleach is a strong and effective disinfectant that can be used to disinfect surfaces, remove stains, whiten clothes, or also purify water for drinking in households. CLEAPRO offers these products with the requirement that customers bring their own packaging, thus eliminating a significant part of the costs (for both the business and customers)
	On the economic side, the company offers products at about 30 % of the usual price, giving families economic access to hygiene products or leaving families with higher disposable income for something else while generating a surplus to compensate for the initial funding including interests. Environmentally, the reuse of packaging by customers leads to fewer plastic bottles being used and, therefore, generating less trash. Socially, the access to hygiene products improves health conditions
Case 4 "Cosmetics Products (COSMO)"	The social business COSMO produces luxury beauty products for the US market, based on a locally harvested ingredient – Haitian black castor oil. There are multiple product lines based on it, such as shampoos and conditioners, body creams, soaps, and candles. Castor meal leftover from oil production can be used as a soil fertilizer or fuel
	The castor oil is sourced from extremely poor, smallholder female farmers working with an agricultural development NGO. The women are otherwise largely denied access to healthcare and water. Through this social business model, they have an opportunity to earn an income and with it improve their access to water and healthcare
	The product is marketed, for example, in spas and health clubs and cosmetics specialty retailers

portfolio analysis conducted by the researchers were discussed (e.g., to ensure that indeed the understanding regarding the coverage of TBL criteria was correct), and three social businesses were selected. Afterward, the country manager established direct contact to each of these three social businesses, and interviews with them were scheduled.

At the same time, the researchers were given the full documentation on the selected businesses including business plans (both text and calculations), profit and loss statements, YSB eligibility and investment criteria, and extended investor summaries (these are standardized documents required by the headquarters in Germany and include objectives, (financial) investment required, context, business model, and social impact). While preparing for the interviews with the entrepreneurs, the two researchers worked through these materials and summarized their current understanding (e.g., regarding the three flows and stakeholder situation). The results were then again critically reviewed in a second interview with the Haitian country manager, who provided additional clarification for all three businesses. With the preparations completed, the researchers proceeded to interview the three businesses.

In order to ensure clarity and accuracy of the information provided, two researchers were present during all the interviews. Additionally, either during or after the interviews, the social businesses also provided some additional materials (e.g., their most up-to-date organizational charts). All of the interviews were transcribed, and field notes were added. While the data collection in the social business interviews followed the interview guide (Appendix A), some questions were open ended. As a means of validation, the interview summaries were sent to the interviewees, and they were contacted for additional information and clarification during the coding process (e.g., some stakeholder names in French had to be clarified).

Additionally, the social business interviewees were also given their respective full within-case assessment to ensure that the analysis of their respective business was accurate. They either confirmed accuracy or gave the researchers instructions on how to correct the results (e.g., when we showed the different flow charts, they would sometimes add another line or box or further specify where cash versus bank accounts are utilized in the financial flow charts).

As mentioned in the data collection section, the analysis of EPRO, CLEAPRO, and CHIFA led to the realization that the case CLEAPRO was a mixed model (see page 11 for more details). After the within-case and cross-case results had been provided, the country manager provided the researchers with the feedback that she thought that YSB would be able to nominate a more clear-cut case for a third model.

Upon reflection of this research's scope and intermediate results, COSMO was offered as a fourth case. As a result, complete information on COSMO was given to the researchers, and the country manager agreed to an additional interview on COSMO. Since a more clear-cut third archetype could be well described from COSMO's materials as well as the interview with interviewee A, it was concluded that further interviews would not be required for COSMO.

Multiple steps were taken to mitigate biases and enhance reliability and validity (Eisenhardt 1989; Jick 1979; Yin 2013) including validating intermediate and final results with the interviewees as well as using multiple sources such as public website information and detailed business data provided by YSB to compare interviewee responses with additional documentation (e.g., on the objectives pursued).

Moving to some of the main results, one of the earlier research models during the research project is depicted in Fig. 15.2. It became clear that there were two different stories that needed to be told. It is worth noting that the left side of that figure is very much within the domain of social entrepreneurship, whereas the right part is already relatively close to the domain of sustainable supply chain management.

As explained earlier, this research elaborates on two different theories. Regarding the left side, as the research progressed, this part was refined to become a RBV model. The right side became the elaboration of the theory of the supply chain. In both cases, the way that the analysis and results have been structured follows Wacker's (1998) four components of a theory. This also corresponds to Whetten's (1989) recommendations to convey a theoretical contribution in terms of the what, how, domain, and why. These two resulting research streams will be discussed next.

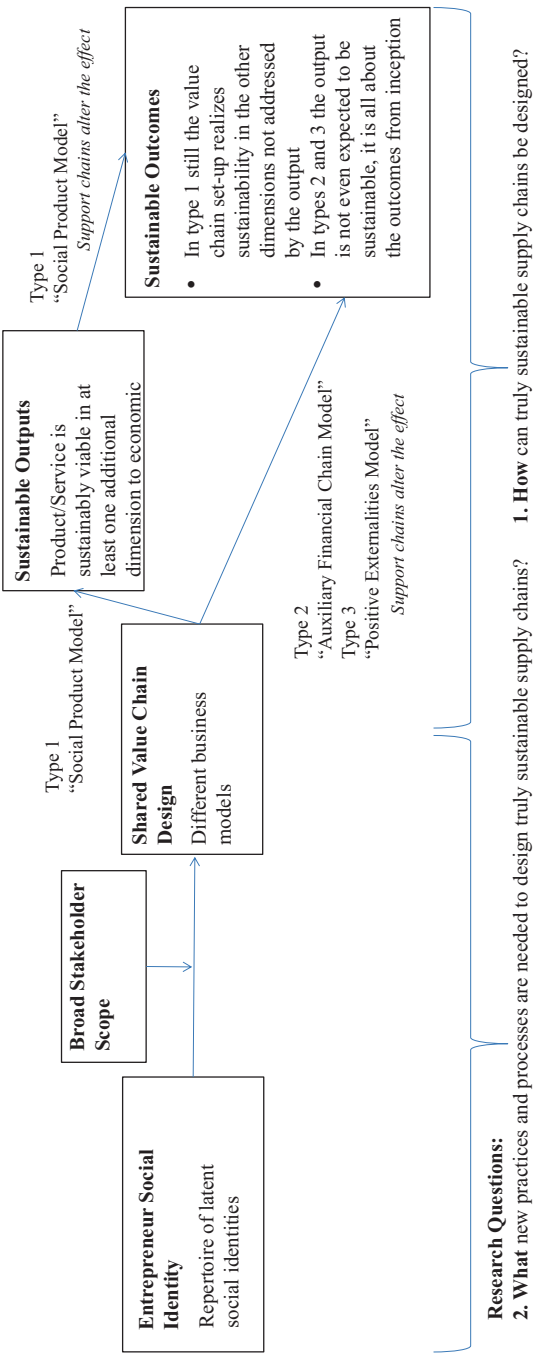

Fig. 15.2 Early conceptual research model

15.3.4 Toward a Theory of Sustainable Supply Chain Design (SSCD)

The purpose of this first research stream (the right side in Fig. 15.2) was to move the theory of supply chain forward into the sustainable supply chain management (SSCM) research agenda by incorporating the physical chain and the information and financial support chain toward a theory of sustainable supply chain design (SSCD). Therefore, it addressed the research question "1. How can truly sustainable chains be designed?" and addressed the sub research questions: *1.1 How are material and support chains of sustainable businesses designed to deliver on TBL objectives?* and *1.2 What are the respective archetypes designed for?*

Recently, Carter et al. (2015) advanced supply chain theory by suggesting a distinction between the physical chain and support chain(s). In their research, the physical supply chain, in which the physical products move from supplier to focal firm to customer, is differentiated from the support supply chain, which relates to the flow of information and finance. The support supply chain is defined as "consisting of nodes through which a product (relative to the focal agents) does not flow, but which support the physical supply chain of that product" (Carter et al. 2015, 91), such as embedded financial institutions. Carter et al. (2015) also proposed that multiple varying configurations of the physical and support supply chain are possible.

What the cases in Haiti underline is that these social businesses seek to achieve both sustainable outputs (particularly via the physical flows) and also sustainable outcomes (particularly via the information and financial flows) via their SSCD. They rather follow an approach in which they formulate TBL sustainable objectives and then think backward which objectives they can directly reach via their product (output; physical flow) and which via the involvement of additional supply chain partners, e.g., such as microcredit institutions to make their products affordable to their customers (outcome; financial flow).

It was also highlighted that there are three main configurations of the physical, information, and financial flows in YSB's portfolio of social business.

1. Social Product Model (e.g., EPRO): For this model, the product/service did not exist before and is now offered by a social business (e.g., case with energy solution). The physical chain directly delivers social products as the main purpose. A supporting financial flow to improve accessibility of the social products has been designed in purposefully.
2. Auxiliary Financial Chain Model (e.g., CHIFA): This model has no operations that service its primary purpose, so there needs to be an auxiliary business that funds the prime activity (e.g., cases of chicken farms for school funding). The physical chain delivers a product, but the financial chains are what fulfill the main purpose of funding education.
3. Positive Externalities Model (e.g., COSMO): Jobs in the value chain are created (e.g., COSMO); the product is not considered a socially focused product/service

per se. The physical chain delivers a product, but the positive externalities of the business to the community are the main purpose.

In this first research stream (Bals and Tate 2015), the elements of theory (Wacker 1998), here the theory of the supply chain in a SSCD context, were methodically addressed. This included:

1. Extending the range of variables by adding outputs versus outcomes and adding information and financial flows to physical flows
2. Extending the domain by including stakeholders with economic, environmental, and/or social stakes
3. Offering propositions on variable relationships and outcome predictions

The latter included linking physical and support flows to deliver TBL outputs and/or outcomes; proposing that support chains might help achieve sustainable outcomes indirectly, even if sustainable outputs are not feasible directly; and proposing the three main configurations.

15.3.5 Toward a Social Resource-Based View (SRBV)

The purpose of the second research stream (the left side in Fig. 15.2) was to revisit both the RBV of the firm and the natural resource-based view (NRBV) of the firm (Hart 1995; Hart and Dowell 2010) to lay the theoretical foundation for exploring how the social dimension might be addressed. Social capabilities were then explored by looking at the social entrepreneurship literature and the cases with the purpose of elaborating RBV and NRBV toward a social resource-based view (SRBV) of the firm. Therefore, it addressed the research question "2. What new practices and processes are needed to design truly sustainable supply chains?"[1] and addressed the sub research questions: *2.1 What capabilities are part of an SRBV?* and *2.2 How can an SRBV be conceptualized?*

There are multiple established theories covering how acquisition and application of resources enable firms to compete: Resource Advantage (Hunt and Morgan 1995), RBV (Barney 1991; Wernerfelt 1984), and Dynamic Capabilities (Eisenhardt and Martin 2000; Teece et al. 1997; Teece 2007). The shared theme across these theories is that an advantage can be gained by firms that develop unique capabilities by bundling resources that are rare, valuable, inimitable/substitution resistant, organizationally specific (Barney 1991), and heterogeneously distributed. In social entrepreneurship and enterprises, managers develop a broad array of capabilities used during concept development, execution, and management of business. Social entrepreneurs must be able to span the boundaries of the private, public, and

[1] At the start of the research project, the intended focus was on practices and processes, but during the refinement of the research approach, the underlying resources and capabilities came into focus. Therefore, the sub questions center on the underlying factors needed to move toward new practices and processes.

nonprofit sectors (Tracey et al. 2011) and face conflicting institutional goals, structures, and processes (Pache and Santos 2012).

In this second research stream (Tate and Bals Forthcoming), the elements of theory (Wacker 1998), here RBV and NRBV, are methodically addressed by extending the range of variables (adding social capabilities), extending the domain (including stakeholders[2] with economic, environmental, and/or social stakes), and offering propositions on variable relationships and outcome predictions (linking social capabilities and shared TBL value creation). Two social capabilities that stand out, in terms of relevance, from the empirical research discussed here are "following a mission-driven approach" and "stakeholder management." Thus, these capabilities are proposed as initial practical starting points for human resource development. If companies target shared TBL value creation, it is recommended that they exhibit the needed social capabilities and other capabilities from all of the three views (RBV, NRBV, SRBV)[3]. It is important to note that this does not imply a separate paradigm that neglects the economic (corresponding to the RBV) or environmental aspects (corresponding to the NRBV). Rather, it was proposed that all three are part of an overall theoretical base for future research. By emphasizing the social capabilities of social entrepreneurs, this research highlights the micro-foundations of Corporate Social Responsibility (CSR), demonstrating the value of individual-level analyses. It offers an SRBV as a theoretical lens to further study these aspects.

15.4 Future Research Directions (FRD)

During the course of the analysis and results discussions, there were a number of topics that could be identified as suggestions for future research. One aspect that kept reoccurring was the aspect of (social) supply chain disruption and how the entrepreneurs where reacting to that. Upon reflection of the research design, this type of research would be more toward the humanitarian supply chain/logistics arena. In the cases studied in this research, the severity of constraints was pronounced, but the data collection was not performed immediate to any particular disruption. Therefore, for future research on how to react to disruptions, what role the social identity of the entrepreneur plays and what resources and capabilities might be mobilized in order to find a way to get toward a resilient and adapted supply chain that is (still) geared toward TBL sustainability would be highly interesting. These thoughts are summarized below in Fig. 15.3 and explained in the following.

[2] Building on stakeholder research (e.g., Clarkson 1995; Freeman 1984)

[3] In line with this research, a study conducted by other researchers in parallel and with an overall business model instead of supply chain focus has also found that certain resources (e.g., "network" and "managerial resources") are employed by social enterprises to achieve competitive advantage (Roy and Karna 2015).

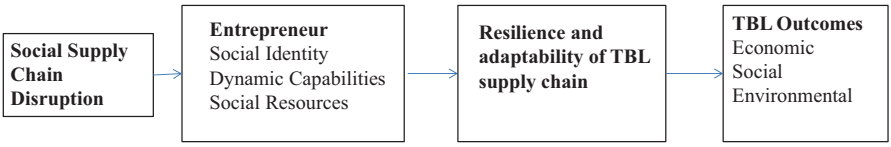

Fig. 15.3 Future research directions

Table 15.2 Missions, interviewees, stakeholders, and models

Case	Mission	Characteristics (identity)	Key stakeholders	Stakeholder-model links
EPRO	It was a personal challenge to start a business that provides energy to the Haitian population – believes this is the single most important problem in Haiti	Agronomist	Agriculture credit	
Energy products		Energy degree	Energy business	Physical chain
			Climate and energy Haiti	
		Economist		
		Microfinance	Microfinance institution	Incorporated financial support chain
CHIFA	Looked at it as a personal responsibility to help the people of Haiti and believes that the most important thing is to empower the people	Haitian	Community	Became financial support chain
Chicken farms			JAMCHI	Physical chain
			YSB	
		International development	Heifer	
			HNGO (Haiti NGO)	
CLEAPRO	Believes that money can be used to deliver products to the people at the right time, the right place, and the right price to promote social good. Financial sustainability is key for success	Product knowledge	Haitian product mfg	Physical chain
Cleaning products			JAMPRO	
		Financial background	YSB	

15.4.1 FRD1: Social Identity in the Light of Supply Chain Disruption

Table 15.2 illustrates the connection between the mission and the characteristics of the interviewees (social identity) on the one side and key stakeholders and chain elements considered on the other. This table emerged during the course of analysis,

but ultimately we did not collect enough data on social identity to drive this idea further. Therefore, it is suggested for further research to shed more light on the connections between individual social identity, which resources and capabilities are mobilized and how the attainment of TBL sustainability objectives is linked to that.

While this is interesting in and of itself, the context of supply chain disruption might help bridge such insights into the research area of humanitarian supply chain/logistics, also driving individual-level insights in that field.

15.4.2 FRD2: Hybrid Business Models and Impact

With regard to the outcome variables, this research proposed that shared TBL value is operationalized in environmental, economic, and social terms for a broad stakeholder base but did not investigate how these relate to each other. For instance, should they be all equally important or should one be prioritized over the others, if so by what measure(s)? Future research could investigate this aspect by considering recent work on the anthropocentric versus ecocentric perspective (Borland et al. 2016) as well as the ecologically dominant logic (Montabon et al. 2016). An additional question for further investigation is whether these outcome variable relationships are consistent across all organizations or may differ between public companies, B-Corps, social businesses, and nonprofits (Tate and Bals Forthcoming).

15.4.3 FRD3: From Sustainable Supply Chain Design (SSCD) to TBL Shared Value Chain Design

In order to realize SSCM, it is proposed that the design stage is central and that embedding all three flows as well as both the supply-side and demand-side considerations would pave the way for shared value chain design (Bals and Tate 2016). The shared value term builds on the work by Porter and Kramer (2006, 2011). While the two terms "supply chain" and "value chain" are often used synonymously, they actually differ in that the supply chain focuses on transferring products or materials to a final point without necessarily adding value in the process, whereas a value chain adds value at multiple points (Gereffi et al. 2005). As a result, in order to get to a very comprehensive understanding of what to design and how, "TBL shared value chain design" is a topic of increasing importance and interest. Looking even further ahead, the challenge of the future will be to identify ways to close the loop for the involved flows and advance the idea of a circular economy further (Bals and Tate 2016).

15.5 Conclusions and Outlook

The overall research project started out with an interest to better understand how social businesses can help sustainable supply chains. As shown in Fig. 15.2, this was captured in the two broad research questions "What new practices and processes are needed to design truly sustainable supply chains?" and "How can truly sustainable supply chains be designed?," which guided the design of the interview guide. As a result, based on the case studies in Haiti, two theories were elaborated: Toward the first of these two questions, focused on the "what practices and processes?," the theory of supply chain (Carter et al. 2015) was elaborated toward a theory of SSCD. Toward the second question of the "how?," this led to a deeper investigation of individual-level resources and capabilities led to the elaboration of the RBV and NRBV toward an SRBV (Tate and Bals Forthcoming).

Based on the experiences with the overall research process as well as when presenting this research at conferences and working toward publication of the results, the following suggestions for future research can be summarized, in addition to the future research directions that were mentioned in the previous section.

First, as a fundamental suggestion based on this research, it can be said that social business and hybrid models offer an interesting **sampling pool** for sustainable supply chains, related practices, and capabilities. Instead of doing less of harm, they offer insights into a laboratory of how to set up your model if you want to achieve TBL sustainability from the start.

Second, the whole area of **trade-offs and tensions** in sustainability (e.g., Battilana et al. 2014; Hockerts 2015; Smith et al. 2013; Stevens et al. 2015) is an interesting area of future research. In the social businesses that were analyzed here, the entrepreneurs were intrinsically motivated and showed related social capabilities (e.g., to pursue a mission-driven approach) to reach TBL sustainability. Even though they are motivated on the individual level, YSB as an intermediary facilitates on an organizational level that each social business fulfills clear criteria from the start and states specific KPIs how it will achieve TBL sustainability. Whether and how that combination of individual-level capabilities with organizational level guidance can be transferred to larger organizations and/or more established organizations warrants further research.

Third, to achieve further insights into social capabilities, it becomes interesting to have a more detailed look at the **social identity of** the entrepreneurs. How are their social capabilities formed? Under which conditions do they form? Can they be trained? The social entrepreneur's role in successfully establishing organizations that are geared toward TBL sustainability highlights that **individual capabilities** could be of much more interest to SSCM research, too. Also, as mentioned earlier, the "mission-driven approach" that we see in the cases actually could be further studied in the context of the "ecologically dominant logic," which Montabon et al. (2016) have recently proposed in JSCM.

Fourth, methodologically, there are a number of suggestions that can be derived for future research: While we had sampled with the intents that were laid out earlier

in the methodology section, during presentations and review processes, a number of questions kept recurring. One of those was whether this research was particularly about a bottom of the pyramid context, about a humanitarian supply chain/logistics context, or about a developing countries context. This leads us to suggest to be even more outspoken and detailed about **sampling** when doing interdisciplinary research than usual.

The specific contexts just mentioned each hold potential for future research in itself. For example, taking humanitarian logistics as the example: Under states of emergency (e.g., due to political disruption or natural catastrophes), which other social capabilities may play a role or might their importance be amplified (e.g., does stakeholder management become the essential social capability when ensuring swift communication flows as quickly as possible becomes a matter of life and death?). With hurricane Matthew hitting Haiti in October 2016, it has once more become a context for such a research setting. Another methodological point is the sampling of respondents versus informants (Van Weele and Van Raaij 2014): Depending on the research question, it really makes a difference whether one gathers information on the organizational versus individual entrepreneur level. For example, in future studies about the social identity linkage, the logical consequence would be to center on social entrepreneurs for data gathering.

Finally, there are also some general lessons learned for future cross-disciplinary projects in that area. In order to position the research clearly, it is even more central than when publishing in one's usual domain to promote **terminological clarity**. For example, the terms supply chain versus value chain versus business model already pose both opportunity and bane. On the one hand, there is a great opportunity to bridge between different literature streams to come to a more holistic overview of what has been done and found in previous research while at the same time facing the danger of comparing pears and apples. In these regards, it is very helpful that work is being published (e.g., for a comparison of sustainable business models versus sustainable supply chain conceptions, see Luedeke-Freund et al. 2016) that helps disentangle such terms, so that the basis for such interdisciplinary projects can be set up clearly right from the start. Another suggestion is the careful delimitation **of units and levels of analysis**, as SSCM research often centers on the organizational level, while social entrepreneurship literature can be about the level of the business (organizational) or entrepreneur (individual).

Acknowledgments As interdisciplinary research poses particular challenges, we would like to explicitly thank a number of people who have been critical to perform this research project and/or significantly helped to take it forward since its inception in 2014: Yunus Social Business, both headquarters in Frankfurt as well as the Haiti subsidiary, for graciously offering their time, social business portfolio, and insights for this research project; Helen Walker, Britta Gammelgaard, Joseph Sarkis, Robert Klassen, and other colleagues for their comments offered during the ERS conference 2015 in Copenhagen, the IPSERA conferences 2015 in Amsterdam and 2016 in Dortmund, as well as the ISVC annual meeting 2015 in Eschborn/Frankfurt; Tobias Hahn and Brent Beal for their detailed comments during the 2015 AOM SIM (Social Issues in Management) paper development workshop in Vancouver; Yvonne Kreis for a very thorough friendly review of the research stream on creating an SRBV; Cory Searcy and the two reviewers at the Journal of

Business Ethics, which have offered one of the most constructive and swiftest review experiences in this whole journey for the SRBV research stream; Rob van Tulder and the other participants at the research seminar presentation of this paper at Erasmus University Rotterdam in September 2015 for their suggestions on the SSCD paper; and, finally, Anne Synnatschke for her diligent editorial support for all the submission preparations.

Interview Guide

Background Questions

1. State your name and describe your position in the business and how long you have been part of this business?
2. What is your professional background prior to establishing this business?
3. Describe the structure of the business (if possible and then provide an organization chart).
4. Approximately how many employees are involved in the business at all locations?

Understanding the Network and Setup of the Business

5. How did this idea to establish the chicken farms in order to finance schools come up? *[This question was always adapted to the specific business, here exemplary for CHIFA.]*
6. Describe in your own words the process steps involved in implementing and maintaining a successful social business model and a little bit of what is involved (and who is involved) in each step. Start from the time that the funding/loan is approved.
7. Discuss the amount of time involved in each step.
8. Discuss the stakeholders that are directly or indirectly involved in the business.

Your Social Business

9. What was your specific motivation for this social business?
10. How did you learn about YSB? How did you get in touch?
11. How has YSB helped you in establishing the business?
12. Who else has helped/played a major part in establishing the business?
13. How do you define "success" in your social business model?
14. Do you consider the success so far sustainable?
15. What do you see as the primary barriers to success?
16. What are the primary facilitators of success?
17. Can you describe the environmental, social, and economic impacts of your social business?
18. Were there differences between the planned and actual outcomes? How were these differences addressed?
19. Are there measures and metrics used to validate your performance and the business model's performance?

Material/Service Flows

20. Discuss the process flows for materials and services – in terms of plan, source, make, and deliver.
21. Is there any type of advertising? What are the main attributes attracting customers?
22. What is the variety of the offering (narrow versus broad)? Are there plans to make any changes to these offerings?

Financial Flows

23. Discuss the flow and frequency of both upstream and downstream financial flows.
24. Are the investments given in a "lump sum" to the entrepreneur? If so, who manages the money?
25. How are payments made to suppliers, employees, and investors?

Information Flows

26. Describe and discuss the flow of information both upstream and downstream.
27. What types of information are shared?
28. How often is that information shared?
29. What means of communication are used?

Wrap-Up

30. From your perspective, is there anything that we should have asked about that we didn't that might be relevant for the research?
31. As additional questions arise, can we follow-up with you?

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