

Sustainability-oriented innovations in food supply chain management: an entrepreneurial perspective

*Christine Hattar (Christine.Hattar@northampton.ac.uk)
Faculty of Business and Law, University of Northampton, UK*

*Luciano Batista
Faculty of Business and Law, Aston University, UK*

*Rebecca Fakoussa
Faculty of Business and Law, University of Northampton, UK*

*Hala Mansour
Faculty of Business and Law, University of Northampton, UK*

Abstract

The purpose is to evaluate Sustainability-Oriented Innovation (SOI) in food Supply Chain Management (SCM), specifically, the association between entrepreneurship perspective and SOI. The research involves a systematic literature review and a qualitative case study approach to analyse a yogurt supply chain of large retailers. The research reveals that entrepreneurs have different viewpoints to SOI, including a high-order attribute to achieve innovation and transform business value towards sustainability. The paper points out implementation challenges inherent in the adoption of SOI in food supply chain at actor, dyad and network levels that can more effectively support and improve related managerial initiatives.

Keywords: Entrepreneurs, Sustainability-Oriented Innovation, Food Supply Chain, Retail Management.

Introduction

As organizations move towards increased concern for sustainability and global competitiveness, supply chains come across new challenges, which include increasing demands to reduce costs, improve customer service, reducing harmful environmental influences, to ensure the continuity of supply chains (Barnes and Liao, 2012). The importance of enhancing sustainability in supply chains has escalated significantly over the last decade (Petljak et al., 2018), hence Sustainability-Oriented Innovation (SOI) has gained attention quickly as it can bring transformations to products, processes and behavioral patterns (Mylan et al., 2015). Therefore, there is a need to understand the implementation of entrepreneurship and innovation in supply chains towards enhancing sustainability (Steward et al., 2010; Jay and Gerard, 2015).

In the Jordanian food supply chain, the retail sector is increasing remarkably due to high demand for food supplied by large and well-established retailers (Khraim et al., 2011, MoA, 2018) and the population growing rapidly, especially in urban areas within the country and also having several nationalities who have moved from neighboring

countries (DoS, 2018, MoA, 2018). There is an extensive acknowledgment that entrepreneurship is the engine that drives the economy and society (Carree and Thurik, 2000). Entrepreneurs are a rapidly rising phenomenon in entrepreneurship since it involves the start-up of new enterprises in addition to carrying out new strategic initiatives within existing enterprises. Hence, studying the actors across the supply chain as entrepreneurs is vital for understanding SOI in food SCM. Thus, the empirical context of this research is food supply chain.

In research, there has been little theoretical understanding of how successfully implementing entrepreneurship at actor, dyadic and network levels can enhance SOI in food supply chains. In previous research, there was little evaluated SOI in SCM in perspective of entrepreneurship (e.g. Rueda et al., 2017; Behnam et al., 2018). Thus, the aim is to understand SOI in food SCM in Jordanian food retailers, in terms of entrepreneurship at actor, dyadic and network levels.

Analyzing the literature, the following research questions are addressed:

- 1) What are the contextual dimensions for entrepreneurship in food supply chain?
- 2) How do focal firms as entrepreneurs enhance their food supply chain?
- 3) What contextual dimensions have impact on SOI at actor, dyadic and network level in their food supply chain?

Literature Review

Food SCM: Actor, Dyad and Network Levels

In today's business, SCM includes materials/supply management from the supply of raw materials to the final product, maybe even recycling and re-use (Tan et al. 1998). SCM emphasizes in the ways by which firms make use of their suppliers' processes, technology, and capability to enhance competitive advantage. Therefore, a usual food supply chain tends to involve the following stages: origin of the resource, agricultural production, primary processing, further processing, final manufacturing, wholesale, retail, food service, and domestic consumption. According to Revoredo-Giha et al. (2012), a supply chain is seen as a network of organizations or actors that have economic and social relationships that allow the working of the supply chain to produce goods and services. Hence, the three different levels of the supply chain are actors, dyadic relationships and network, which are important for enterprisers to link innovation orientation and sustainability orientation in a food supply chain (e.g. Gómez-Cedeño et al., 2015).

Focal firm can be defined as the one which is responsible for the direct link with the end-customers; at the same time it has direct and indirect links with different actors across the supply chain such as wholesalers, retailers, packaging providers and distributors (Hugos, 2018). As actors change their roles across the supply chain levels, they have the chance to face opportunities and/or risks (Beske and Seuring, 2014). The major focus of the focal firm is based on how to link the supply and demand, focusing on the product value (Aarikka-Stenroos et al., 2014). In this study, the retailer of dairy supply chain is the entrepreneurial focal actor, and it will start the supply chain directly and indirectly across the food supply chain. Dyadic Relationships have been defined as the interactions of actors amongst each other to create a more collaborative dynamic and facilitate innovation (Wilson, 1995; Michalski et al., 2018). The relationships developed between the focal actor and other actors have become a high priority, as they are either vertical or horizontal relationships (Centobelli et al., 2018). Thus, "*Issues of trust and risk can be significantly more important in supply chain relationships, because supply chain relationships often involve a higher degree of interdependency between companies*" (La Londe, 2002, p. 10). Omta (2002, p. 75) defined a network as "*all of the actors within one industrial sector, or between related industrial sectors, which can (potentially)*

cooperate to add value for the consumer.” “Whoever has the relationship with the end-user has the power in the supply chain” (Lambert, 2008, p. 6). In fact, there is a lack of research on SCM from the perspective of retailers (Petljak et al., 2018). Retailers are acknowledged as an important actor in the supply chain that contributes to change (Lehner, 2015). Addressing retailing’s innovation and sustainability, the “...*food retailing is very important because of time pressure due to perishability, the need of cooling and the related waste management challenge*” (Petljak et al., 2018, p. 2). Several authors (Lambert et al., 1998; Braziotis et al., 2013; Michalski et al., 2018) have suggested fundamental aspects for how and why channels are structured and created. Hence, the supply chain structure is the network of actors that forms relationships between members of the supply chain (Michalski et al., 2018).

Entrepreneurship Perspective

In the literature, the entrepreneurship perspective discuss the procedures of value creation, as well as implementing a tactic to create value, being involved in a procedure of constant innovation and opportunity recognition (Anderson et al., 2006; Kuratko and Morris, 2013). Entrepreneurship is the connection between economic growth and contribution to new knowledge (Nason et al., 2015). Several have argued that an entrepreneur does not fundamentally have to be innovative and several entrepreneurs are innovative at different levels of achievement (e.g. Koellinger, 2008; Nason et al., 2015). It was recognized by several authors (e.g. Sandberg et al., 2013; Nason et al., 2015) that the more an entrepreneur is motivated the more successful they are compared to a less innovative entrepreneur. Hence, this perspective applies key themes such as corporate entrepreneurship (CE), intrapreneurship and entrepreneurial HR to analyze how retailers as entrepreneurs can implement innovation and sustainability along the food supply chain.

When CE initiatives are implemented in large organizations, they are able to select between concentrating on entrepreneurial activity in a specific sector or spreading entrepreneurial activity through the organization (Meyer, 2009). Prior researchers have highlighted the importance of structural contingencies on CE activities and the role of managers (Hornsby et al., 2009; Nason et al., 2015). These CE activities could be used to develop human capital by means of producing novel knowledge or by transferring knowledge from other actors (Hornsby et al., 2009). In fact, there has been little research on the impact of CE on SOI, especially along the supply chain actors (Klewitz and Hansen, 2014). The reviewed empirical studies have examined their associations with no in-depth analysis on the chosen phenomenon nor the empirical context in the present research (e.g. Behnam et al., 2018). Hence, in this research, the concept of CE refers to medium-large organizations where the chain actors can apply innovative activities. The core of intrapreneurship is to transfer innovation into business value (Ping et al., 2010) and contribute to the society (Pinchot, 1985). Therefore, the retailers chosen in the present research are considered CE since they meet the above criteria.

Intrapreneurial research further developed by highlighting entrepreneurship at the actor level; where at the firm level entrepreneurship can be viewed as the firm’s ability to be innovative, compete and take risks (Miller, 1983). There are some differences that have been highlighted between intrapreneurship and entrepreneurship (Baruah and Ward, 2014). First, entrepreneurs own their intellectual rights unlike intrapreneurs. Second, for intrapreneurs their firm takes the risk and responsibility. Third, intrapreneurs use their firms’ resources. Fourth, intrapreneurs depend on their firms’ management policies and structure. Finally, intrapreneurs have more flexibility for management errors. Hence, it was noticed in previous research (e.g. Benitez-Amado et al., 2010; Steward et al., 2010)

that there was a need to investigate in-depth the application of the term intrapreneurship, especially on SOI (e.g. Jay and Gerard, 2015) in the food supply chain.

Entrepreneurial HR are HR managers that embrace entrepreneurial thinking and push themselves to take risks and to be innovative (Medcof and Song, 2013). Most HR managers understand the overall business context; hence, they play a key role in firms such as operationalizing responsibilities, team organization, training, performance indicators, teamwork, and relationships (Lengnick-Hall and Lengnick-Hall, 2013). HR is known to be a major driver of success in the retail industry (Grünhagen et al., 2014). Some characteristics entrepreneurial HR managers have the motivation to be up to date with the latest trends in HR, innovative, with good communication skills and decision making, leader for their employees, and knowledgeable to the whole context of their business (Gómez-Cedeño et al., 2015). *“Human resource is the backbone of every organization; likewise supply chain management is also playing a significant role in the organization performance. Therefore, human resource and SCM has evolved to play an integrated supporting role in the creation of the value chain system of an organization”* (Khan et al., 2013, pg. 179). Therefore integrating HR and SCM allows firms to establish an innovative strategy and hence enhance their performance (Khan et al., 2013; Gómez-Cedeño et al., 2015). Despite this, firms usually implement HR at the actor level. Thus, there is lack at the dyad and network level in order to have a greater involvement of all supply chain actors (Gómez-Cedeño et al., 2015).

Sustainability- Oriented Innovation (SOI)

SOI is defined as *“making intentional changes to an organization's philosophy and values, as well as to its products, processes or practices, to serve the specific purpose of creating and realizing social and environmental value in addition to economic returns”* (Adams et al., 2016 p.181). In food SCM, there is a need to study SOI and how it enhances sustainability when adopted. In order to spread sustainability orientation across the supply chain, enterprises are able to innovate in their management methods such as developing a supply chain specifically for sustainable products (Beske and Seuring, 2014; Akhavan and Beckmann, 2016). Innovation-orientation is concerned with producing an innovative product before the competitors; including adopting new techniques, resources, and skills to provide creativity for firms (Klewitz and Hansen, 2014). A main challenge of incorporating SOI in SCM is in what way to incorporate sustainability strategies and sustainable innovations associated to relationships and chain structures (Neutzling et al., 2018).

Entrepreneurship is positively comprises with entrepreneurial firms and could effectively spread SOI across the chain actors (Klewitz and Hansen, 2014). Due to competition, entrepreneurs should consider being innovative to succeed and achieve high-level sustainability performance (Schaltegger, 2002). Goodman et al. (2017) argue that it is important to focus on collaboration among the different chain actors and their stakeholders in the processes of SOI and that stakeholder contribute to innovation targeted at creating sustainable products.

Research Methodology

Approach and Method

The research approach is a qualitative case study, including interpretivist philosophy as it evaluates socially constructed dynamic reality (Creswell, 2007). This is to understand the phenomenon of SOI from the entrepreneurship perspective through in-depth study (Yin, 2018). After reviewing literature, a multiple case study is applied since rich findings are needed to maximum reliability and theory validity. Triangulation and replication

using propositions are also used to examine the topic (Yin, 2014). Several sources of secondary data were applied such as retailers' websites, sustainability projects, HR job descriptions, and Jordan Department of Statistics and past surveys. For primary data, expert interviews and multiple cases of interviews and observations were conducted. A method of analytic generalization is followed, where a prior developed theory of entrepreneurship perspective is utilized as a template to compare the empirical findings (Bryman and Bell, 2015; Yin, 2018). The empirical context is the Jordanian food supply chain where the unit of analysis is the dairy supply chain of retailers, specifically yogurt products.

Data Collection and Analysis

Firstly, expert interviews were conducted to refine the case protocol of inquiry's questions. Face-to-face semi-structured interviews were applied with four experts, two HR managers from different food retailers in Jordan and two academic researchers. This is based on an expert interview protocol. The experts were selected based on purposive sampling (Patton, 2015) attached with the experts' experience in food SCM, their aptitude to discuss SOI in food SCM and their availability to participate in the empirical inquiries.

Secondly, the multiple cases were two large retailers (R1 and R2). For each case, five semi-structured interviews were conducted, giving a total of 10 interviews. The cases followed a snowball sampling, where the experts recommended several relevant managers from the retailers (Yin, 2014; Patton, 2015). Those managers were supply chain managers, hygiene and safety managers, fresh food managers, product development managers and managers of sustainable sourcing. The multiple case strategy was conducted to understand similarities and differences in the themes (Yin, 2010) between entrepreneurship perspective and SOI in food SCM. This is to explore and explain their links to innovative technologies and in turn to sustainability performance. Each interview of 60 minutes was conducted voluntarily, voice recorded and later transcribed. For each case, three types of observations of 60 minutes were performed (Yin, 2018), where the researcher attended one meeting combined with field tours as a non-participant at both retailers, including the actor level (the retailer), the dyad level (retailers with a direct relationship) and the network level (retailers with an indirect relationship). These actors were chosen to be observed to create multiple sources of evidence to support the interviews' findings (Braziotis et al., 2013; Aarikka-Stenroos et al., 2014). The two yoghurt industries, a yoghurt distributor, a yoghurt packaging company, a government body (two specialists) were chosen since they have had long relationships, share similar concepts of the phenomenon, and they are the key actors with the retailers for joint activities.

Ethical consideration was applied throughout the interviews especially in terms of anonymity of the retailers and respondents. Thematic analysis was followed to group themes and indicate contextual dimensions from the collected data in order to enhance the thoughts and provide meaningful findings (Miles et al., 2014). NVivo was used to organize, store and retrieve the research data (Bazeley and Jackson, 2013).

Findings and Discussion

Several key dimensions emerged during data analysis in association to the key themes of entrepreneurship in relation to achieving SOI in SCM. This is in line with prior research that emphasized the importance of applying entrepreneurship (either the organization, its employees and/or its HR) in organizations to be successful and overcoming any challenges (Baruah and Ward, 2014; Nason et al., 2015). As confirmed by R1, Head of Sustainable Sourcing, "*Our company motivates us to come up with innovative ideas and*

to take risks in order to benefit the company especially in terms of sustainability performance. [...]” This is also supported by the observations conducted at R1. Table 1 represents the key dimensions for the entrepreneurial themes that emerged. These were clustered into three key themes, CE, intrapreneurship and entrepreneurial HR.

Table 1 – Key entrepreneurial themes to manage yogurt supply chain

Themes	Dimensions	Respondents Quotation
Corporate Entrepreneurship	- Support innovation - Support risk-taking	“Our company motivates us to come up with innovative ideas and to take risks in order to benefit the company especially in terms of sustainability performance. [...]” R1, Head of Sustainable Sourcing
	- Resource support -Financial support	“When we as employees develop an innovative idea, we inform our company and they study whether the idea is beneficial, within the financial budget, and the available resources.” R2, Product Development Manager
	-Culture	“One of our main challenges is the cultural differences, between our Jordanian cultures compared to our other branches abroad. [...].” R2, Supply Chain Manager
Intrapreneurship	- Innovation and creativity - Firm takes the risk and responsibility	“Our organization encourages us to be creative and innovative. If we do new ideas so our organization takes the risk whether to implement it or not. For example, a colleague of mine suggested we conduct free workshops for all our employees about the HACCAP certificate and new regulations.” R2, Hygiene and Safety Manager
	- Apply firms’ management policies and structure	“We always receive emails inspiring us to come up with something new for our company, within its management policies and structure, for example, the yogurt display, social events, minimizing our carbon footprint, etc.” R1, Head of Sustainable Sourcing
	- Use of firms’ resources	“In our last meeting with our department manager, he informed us to utilize the companies’ resources such as to attend the sustainable international training related to our rewarded ideas and that it is covered by the companies budget.” R1, Fresh Food Manager
Entrepreneurial HR	-Understand the whole context of their business	“Our HR mangers are really hands on in our organization and understand our entire environment.” R1, Hygiene and Safety Manager
	-Motivate and lead their employees -Driver of success	“Some of the HR mangers here lead and motivate us to do our jobs consistently, to enjoy our work, to be innovative, to maintain our stay green concept and so much more. I really believe some of them are drivers of success for our organization.” R2, Head of Sustainable Sourcing
	-Entrepreneurial thinking -Innovative -Good decision makers	“In one of our meetings a week ago, I realized that one of the reasons our recent sustainability projects was successful was because one of our HR mangers was innovative, thought outside of the box and made a really good decision.” R1, Supply Chain Manager

Contextual dimensions leading to perceive entrepreneurship at actor, dyadic and network level in the supply chain were identified (Table 2). Previous research highlighted the significance of entrepreneurship in an organization, at the actor level, but there was a lack of research at the dyad and network level in order to have a greater involvement of all the

members across the supply chain and enhance SOI in SCM (Gómez-Cedeño et al., 2015). Table 2 demonstrates the level of entrepreneurship at the actor, dyadic and network level, in relation to achieving SOI in SCM. R2, Product Development Manager highlighted, “*We believe as employees that our top management supports us in being innovative, especially when it comes to sustainability, as they allow us to implement new product development and collaborate with the HR.*” Though it was confirmed that at the actor level, entrepreneurship is applied well, at the network level is lower. R1, Supply Chain Manager explained, “*Our company has tried many times to collaborate with the government with several ideas and programs such as hygiene issues, recycling, and certificates; however very rare cases have been applied with very little resources. I believe that if more joint programs are implemented between us this will encourage us to be more innovative and sustainable.*” Therefore, the results revealed enhancing SOI in SCM is achieved when entrepreneurship is successfully implemented at actor, dyadic and network level.

Table 2 – Contextual dimensions leading to perceive entrepreneurship at actor, dyadic and network level

		Retailer 1			Retailer 2		
		Actor Level	Dyadic Level	Network Level	Actor Level	Dyadic Level	Network Level
Corporate Entrepreneurship	Resource support	H	M	L	M	L	L
	Financial support	M	M	L	M	M	L
	Support innovation	H	M	M	H	M	L
	Support risk-taking	M	M	L	H	L	M
	Culture	M	L	M	H	M	M
	<i>Aggregate</i>	M	M	M	H	M	L
Intrapreneurship	Innovation and creativity	H	M	M	M	M	L
	Firm takes the risk and responsibility	H	M	L	M	L	L
	Use of firms’ resources	M	H	L	M	M	L
	Apply firms’ policies and structure	M	M	L	H	M	M
	<i>Aggregate</i>	M	M	L	M	M	L
Entrepreneurial HR	Entrepreneurial thinking	H	M	L	H	M	M
	Innovative	M	M	L	H	M	L
	Driver of success	M	L	M	M	M	L
	Good decision maker	M	M	L	M	L	M
	Motivate and lead their employees	M	L	L	M	L	L
	Understand the whole business	H	M	M	M	M	L
	<i>Aggregate</i>	M	M	L	M	M	L

*H= High, M= Medium, L= Low

Retailers implement innovative technologies at actor, dyad, and network levels to achieve SOI in food supply chain. This study has illustrated that some actors across the supply chain implement more than others depending on their implementation of entrepreneurship and innovation; they integrate more dimensions. R1, Head of Sustainable Sourcing explained, “*We always work to be a part of the whole supply chain as this will bring sustainable benefits for all of us. For example, we are not computer connected via ERP between the Food and Drug Association, hence delaying inspections, trainings, etc. So it would be great if someone came up with an innovative idea to overcome this challenge.*”

In addition R2, Hygiene and Safety Manager highlighted, “Our transportation vehicles between us and the yogurt industries are very innovative. The vehicles are refrigerators and have a cooling tracking device which track the temperature of the refrigerator as the yogurt is being transported. This allows us to make sure that the temperature is in the appropriate range.” R1, Supply Chain Manager explained, “Our retailer and the other actors in our supply chain are concerned with the economic situation in Jordan. We have a variety of prices for yogurt and other products, we try our best to be innovative even with cost.” This is supported by the observations conducted at R1 and R2.

Table 3 – Strength of contextual dimensions for SOI throughout the two cases

		Innovative Technologies					Sustainability Performance
		Product Innovation	Process Innovation	Transportation Technology	Information Technology	Standards & Systems	
Retailer 1	Actor Level	H	M	M	M	H	Environmental + Economic + Social
	Dyadic Level	M	H	M	M	M	Environmental + Social
	Network Level	M	M	L	L	L	Environmental+ Economic
Retailer 2	Actor Level	M	H	M	H	M	Environmental + Economic + Social
	Dyadic Level	H	M	M	H	M	Environmental + Economic
	Network Level	M	L	L	M	L	Environmental + Economic

* H= High, M= Medium, L= Low

Conclusion

Research interest is growing in SOI in food SCM especially in the entrepreneurship perspective (Gómez-Cedeño et al., 2015). This study concluded the importance of implementing entrepreneurship, either CE, intrapreneurship and/or entrepreneurial HR, to initiate creativity, innovation, and risk taking in order to enhance sustainability performance at the actor, dyadic and network level.

Key contributions to knowledge will be a theoretical association to understand SOI in SCM from the perspective of entrepreneurship. Key implications made for retailers are to support their employees to be innovative, to provide appropriate resources for their innovations, push them to take risks that will be covered by the organization and support their HR, as they understand the whole context of their business. From the empirical context view, this research contributes to critically evaluate the food supply chain context in a developing country (Jordan) and in a retailing industry.

References

- Aarikka-Stenroos, L., Sandberg, B. and Lehtimäki, T. (2014), “Networks for the commercialization of innovations: a review of how divergent network actors contribute”, *Industrial Marketing Management*, Vol. 43, pp. 365–381.
- Adams, R., Jeanrenaud, S., Bessant, J., Denyer, D. and Overy, P. (2016), “Sustainability-oriented innovation: a systematic review”, *International Journal of Management Reviews*, Vol. 18, No. 2, pp.180-205.
- Akhavan, R.M. and Beckmann, M. (2016), “A configuration of sustainable sourcing and supply management strategies”, *Journal Purchasing and Supply Management*, Vol. 23, No. 2, pp. 137-151.
- Anderson, R.B., Dana, L.P., and Dana, T.E. (2006), “Indigenous land rights, entrepreneurship, and economic development in Canada: ‘opting-in’ to the global economy”, *Journal of World Business*, Vol. No. 41, pp. 45-55.

- Barnes, J. and Liao, Y. (2012), "The effect of individual, network, and collaborative competencies on the supply chain management system", *International Journal of Production Economics*, Vol. 140, No. 2, pp. 888-899.
- Baruah, B. and Ward, A. (2014), "Metamorphosis of intrapreneurship as an effective organizational strategy", *International Entrepreneurship and Management Journal*, Vol. 11, No. 4, pp. 811-822.
- Bazeley, P. and Jackson, K. (2013), *Qualitative data analysis with NVivo*, Sage Publications Limited.
- Behnam, S., Cagliano, R. and Grijalvo, M. (2018), "How should firms reconcile their open innovation capabilities for incorporating external actors in innovations aimed at sustainable development?", *Journal of Cleaner Production*, Vol. 170, pp.950-965.
- Benitez-Amado, J., Llorens-Montes, F.J. and Perez-Arostegui, M.N. (2010), "Information technology enabled intrapreneurship culture and firm performance", *Industrial Management and Data Systems*, Vol. 110, No. 4, pp. 550-566.
- Beske, P. and Seuring, S. (2014), "Putting sustainability into supply chain management", *Supply Chain Management: An International Journal*, Vol. 19, No. 3, pp. 322-331.
- Braziotis, C., Bourlakis, M., Rogers, H. and Tannock, J. (2013), "Supply chains and supply networks: distinctions and overlaps", *Supply Chain Management: An International Journal*, Vol. 18, No. 6, pp. 644-652.
- Bryman, A. and Bell, E. (2015), *Business Research Methods*, 4th ed. UK: Oxford University Press.
- Carree, M.A. and Thurik A.R. (2000), *The impact of entrepreneurship on economic growth*. In D.B. Audretsch and Acs Z. J. (eds.) *Handbook of Entrepreneurship*, Kluwer Academic Publishers.
- Centobelli, P., Cerchione, R. and Esposito, E. (2018), "Environmental sustainability and energy-efficient supply chain management: A review of research trends and proposed guidelines", *Energies*, Vol. 11, No. 2, pp.275.
- Creswell, J.W. (2007), *Qualitative Inquiry and Research Design: Choosing among Five Traditions*, 2nd ed. Thousand Oaks, Sage.
- DoS (2018), *Department of Statistics*. Available at: <http://www.dos.gov.jo> [Accessed on 30 March 2018].
- Goodman, J., Korsunova, A. and Halme, M. (2017), "Our Collaborative Future: Activities and Roles of Stakeholders in Sustainability-Oriented Innovation", *Business Strategy and the Environment*, Vol. 26, No. 6, pp.731-753.
- Gómez-Cedeño, M., Castán-Farrero, J.M., Guitart-Tarrés, L. and Matute-Vallejo, J. (2015), "Impact of human resources on supply chain management and performance", *Industrial Management and Data Systems*, Vol. 115, No. 1, pp.129-157.
- Grünhagen, M., Wollan, M.L., Dada, O.L. and Watson, A. (2014), "The moderating influence of HR operational autonomy on the entrepreneurial orientation–performance link in franchise systems", *International Entrepreneurship and Management Journal*, Vol. 10, No. 4, pp. 827-844.
- Hornsby, J. S., Kuratko, D. F., Shepherd, D. A., and Bott, J. P. (2009), "Managers' corporate entrepreneurial actions: Examining perception and position", *Journal of Business Venturing*, Vol. 24, pp. 236–247.
- Hugos, M.H. (2018), *Essentials of supply chain management*, John Wiley and Sons.
- Jay, J. and Gerard, M. (2015), "Accelerating the theory and practice of sustainability-oriented innovation" [Online] available: <http://ssrn.com/abstract=2629683> .
- Khan N.R., Taha S., Ghouri A.M., Khan M.R. and Yong Ch.K. (2013), "The impact of HRM practices on supply chain management success in SME", *LogForum LogForum*, Vol. 9, No. 3, pp. 177-189.
- Khraim, H.S., Khraim, A.S., Al-Kaidah, F.M. and Al-Qurashi, D.R. (2011), "Jordanian consumer's evaluation of retail store attributes: The influence of consumer religiosity", *International Journal of Marketing Studies*, Vol. 3, No. 4, p.105-116.
- Klewitz, J. and Hansen, E.G. (2014), "Sustainability-oriented innovation of SMEs: a systematic review", *Journal of Cleaner Production*, Vol. 65, pp. 57-75.
- Koellinger, P. (2008), "Why are some entrepreneurs more innovative than others?", *Small Business Economics*, Vol. 31, No. 1, pp. 21-37.
- Kuratko, D.F. and Morris, M.H. (2013), *Entrepreneurship and leadership*, Cheltenham, UK: Edward Elgar.
- La Londe, B. (2002), "Who can you trust these days?", *Supply Chain Management Review*, Vol.6, No. 3, pp. 9-12.
- Lambert, D.M., Stock, J.R. and Ellram, L.M. (1998), *Fundamentals of Logistics Management*, Boston, Irwin/McGrawHill.
- Lambert, D.M. (2008), *Supply Chain Management: Processes, Partnerships, Performance*, 3rd edition, USA.
- Lehner, M. (2015), "Translating sustainability: the role of the retail store", *International Journal of Retail and Distribution Management*, Vol. 43, No. 4/5, pp. 386-402.

- Lengnick-Hall, C. and Lengnick-Hall, C. (2013), "Strategic human resource management and supply chain orientation", *Human Resource Management Review*, Vol. 23, No. 4, pp. 366-377.
- Medcof, J.W. and Song, L.J (2013), "Exploration, exploitation and human resource management practices in cooperative and entrepreneurial HR configurations", *The International Journal of Human Resource Management*, Vol. 24, No.15, pp. 2911-2926.
- Meyer, G. D. (2009), "Commentary: On the integration of strategic management and entrepreneurship: Views of a contrarian", *Entrepreneurship Theory and Practice*, Vol. 33, No. 1, pp. 341–351.
- Michalski, M., Montes-Botella, J.L. and Narasimhan, R. (2018), "The impact of asymmetry on performance in different collaboration and integration environments in supply chain management," *Supply Chain Management: An International Journal*, Vol. 23, No. 1, pp.33-49.
- Miles, M.B., Huberman, A.M. and Saldaña, J. (2014), *Qualitative data analysis: A methods sourcebook* (3rd ed.). Thousand Oaks, CA: Sage.
- Miller, D. (1983), "The correlates of entrepreneurship in three types of firms", *Management Science*, Vol. 29, pp. 770–791.
- Ministry of Agriculture (MoA) (2018), Annual Statistic Report, (accessed 10 June 2018), available at: <https://jordan.gov.jo/wps/portal/Home/GovernmentEntities/Ministries/Ministry/Ministry%20of%20Agriculture?nameEntity=Ministry%20of%20Agriculture&entityType=ministry>
- Mylan, J., Geels, F.W., Gee, S., McMeekin, A. and Foster, C. (2015), "Eco-innovation and retailers in milk, beef and bread chains: enriching environmental supply chain management with insights from innovation studies", *Journal of Cleaner Production*, Vol. 107, No.16, pp. 20-30.
- Nason, R.S., McKelvie, A. and Lumpkin, G.T. (2015), "The role of organizational size in the heterogeneous nature of corporate entrepreneurship", *Small Business Economics*, Vol. 45, No. 2, pp. 279-304.
- Neutzling, D.M., Land, A., Seuring, S. and do Nascimento, L.F.M. (2018), "Linking sustainability oriented innovation to supply chain relationship integration", *Journal of Cleaner Production*, Vol. 172, pp. 3448-3458.
- Omta, S.W.F. (2002), "Innovation in chains and networks", *Journal on Chain and Network Science*, Vol. 2, No. 2, pp. 73-80.
- Patton, M. Q. (2015), *Qualitative research and evaluation methods: Integrating theory and practice* (4th ed.), Thousand Oaks, CA: Sage.
- Petljak, K., Zulauf, K., Štulec, I., Seuring, S. and Wagner, R. (2018), "Green supply chain management in food retailing: survey-based evidence in Croatia", *Supply Chain Management: An International Journal*, Vol. 23, No. 1, pp.1-15.
- Pinchot, G., III. (1985), *Intrapreneuring: You don't have to leave the corporation to become an entrepreneur*, New York: Harper and Row.
- Ping, W. L., Naiqiu, L., Jie, J., and Zhengzhong, X. (2010), "A review and prospects of research on human resource management of intrapreneurship", *Advanced Management Science (ICAMS), IEEE*, Vol. 3, pp. 456–460.
- Revoredo-Giha, C., Leat, P., Renwick, A, Lamprinopoulou-Kranis, C. (2012), "Innovation and Power in Food Supply Chains: The Case of the Potato Sector in the UK", *Land Economy Research Group*, 142544.
- Rueda, X., Garrett, R.D. and Lambin, E.F. (2017), "Corporate investments in supply chain sustainability: Selecting instruments in the agri-food industry", *Journal of cleaner production*, Vol. 142, pp. 2480-2492.
- Sandberg, B., Hurmerinta, L. and Zettinig, P. (2013), "Highly innovative and extremely entrepreneurial individuals: what are these rare birds made of?", *European Journal of Innovation Management*, Vol. 16, No. 2, pp.227-242.
- Schaltegger, S. (2002), "A Framework for Ecopreneurship", *Greener Management International*, Vol. 38.
- Steward, M.D., Wu, Z. and Hartley, J.L. (2010), "Exploring Supply Managers' Intrapreneurial Ability and Relationship Quality", *Journal of Business-to-Business Marketing*, Vol. 17, No. 2, pp. 127-148.
- Tan, K.C., Kannan, V.R. and Handfield, R.B. (1998), "Supply chain management: supplier performance and firm performance", *International Journal of Purchasing and Materials Management*, Vol. 34, No. 3, pp. 2–9.
- Wilson, D.T. (1995) "An Integrated Model of Buyer-Seller Relationships", *Journal of the Academy of Marketing Science*, Vol. 23, No. 4, pp.335-345.
- Yin, R.K. (2010), *Qualitative Research from Start to Finish*, Guilford Press.
- Yin, R. K. (2014), *Case Study Research Design and Methods*, In Applied Social Research Methods Series 5, fifth edition, Thousand Oaks: Sage Publications.
- Yin, R.K. (2018), *Case Study Research and Applications*, 6th ed. Thousand Oaks, CA: Sage Publishing.