Recycling in the city: Mobilising resources in initiating a circular economy in the construction sector

ABSTRACT

In this paper, we address how a circular economy can be initiated and designed through the mobilisation of resources between public and private actors. Specifically, we investigate the nature of resource interfaces and circular resource use in a construction setting. The construction sector is known as the "40%" sector: it accounts for 40% of global energy consumption and 25-40% of global carbon emissions. We also know that the industry generates a large amount of waste. The paper centres on an ongoing public-private circular economy initiative in Oslo, regarding the cleaning and recycling of masses from and in construction projects. The initiative is localised with the goal to make Oslo entirely self-sufficient in terms of one key construction waste product; masse. We take a resource lens to analyse the imagined and actual resource interaction between business and non-business actors as a city-based 'ecosystem' is developed. We question (i) what happens to current understandings of resource interfaces when applied to a circular economy model (a shift from linear to butterfly resource combining), and (ii) the roles played by different business and non-business actors in designing and creating resource interfaces.

Keywords: sustainability, circular economy, networks, resources, ecosystems, cities

INTRODUCTION

Sustainability and climate change are framed as 'megatrends' or 'grand challenges' by the EU, against a backdrop of the 2015 Paris Accord and the UN Sustainability Goals. They are (super)wicked meta problems that cannot be solved by individual actors, but require collective action (Antolin-Lopez & Montiel, 2018; Trist, 1983). Within the marketing discipline, there have been various reincarnations of '*green marketing*' (Dangelico & Vocalelli, 2017; Kumar, 2016; Peattie & Crane, 2005; Prothero, 1998), '*environmental marketing*' (Kotler, 2011; Leonidou & Leonidou, 2011), and, most recently, '*sustainable/sustainability marketing*' (Chabowski, Mena, & Gonzalez-Padron, 2011; Gordon, Carrigan, & Hastings, 2011; Lunde, 2018; McDonagh & Prothero, 2014a). This is evidenced by (at least) eight general reviews of 'sustainability/green' marketing in journals such as *European Journal of Marketing* and *Academy of Management Reviews* (Chabowski et al., 2011; Chamorro, Rubio, & Miranda, 2009; Dangelico & Vocalelli, 2017; Kumar, 2016; Leonidou & Leonidou, 2011; Lunde, 2018; McDonagh & Prothero, 2014b; Polonsky, 2011).

The attention given to both sustainability and the circular economy is largely driven by environmental problems (e.g. pollution), nations' inability to meet societal expectations (e.g. unemployment rates), and economic challenges (e.g. supply risk, flawed incentive systems) (Geissdoerfer, Savaget, Bocken, & Hultink, 2017). A frequently used definition of sustainability is found in the Brundtland commission report (Brundtland, 1987: 13). Sustainable development relates to the ability to meet "*the needs of the present without compromising the ability of future generations to meet their own needs*." Furthermore, the authors of the report argued that "*ecology and economy are becoming ever more interwoven locally, regionally, nationally, and globally into a seamless net of causes and effects*." (*ibid, p. 15*).

Compared to sustainability, the 'circular economy' is a recent concept. Much of the work has been driven by the Ellen MacArthur Foundation. It offers a framework for an economy which is restorative and regenerative by design, and which is constituted by a continuous flow of biological and technical materials through a value circle, often referred to as the 'butterfly' (MacArthur, 2013).

Circular economies can be seen as a condition for sustainability, and "*by promoting the adoption of closing-the-loop production patterns within an economic system circular economy aims to increase the efficiency of resource use, with special focus on urban and industrial waste, to achieve a better balance and harmony between economy, environment and society*." (Ghisellini, Cialani, & Ulgiati, 2016: 11). As such, circular economy combines the ideas of closed loops and design-to-redesign thinking; the latter implies a focus on achieving value from redesign rather than simply improving resource utilization (Murray, Skene, & Haynes, 2017).

The purpose of this paper is to investigate how a 'local' circular economy is initiated and designed in the construction sector through the mobilisation of resources between public and private actors. We take a resources lens to analyse an ongoing public-private networked initiative centred on Oslo about recycling of masses from and in construction projects. We question (i) what happens to current understandings of resource interfaces when applied to a circular economy model (a shift from linear to butterfly resource combining), and (ii) the roles played by different business and non-business actors in designing and creating resource interfaces.

THEORETICAL BACKGROUND

For companies, 'sustainable value creation' represents a new, overarching value type, which not only includes potential costs and risks, but also distinct opportunities for value creation and thus differentiation (Geissdoerfer et al., 2017). Realizing such sustainable value creation relies on two key levels: first on the individual enterprise level, of which business model innovation is key; second, and in line with the industrial ecology perspective, on the inter-organisational level, within industrial clusters and supply chains (Murray et al., 2017), or, within IMP, at the net and network levels. These two levels are of course interrelated (Håkansson, Ford, Gadde, Snehota, & Waluszewski, 2009).

Against the backdrop of this recognition of collaborative arrangements as a key means to strategize in today's business context, the concept of ecosystems has recently emerged in the strategy literature (Adner, 2017) and the B2B and business network literatures (Aarikka-Stenroos & Ritala, 2017). While there are several definitions of ecosystems, it is often held that they are multi-actor, involving configurations of business actors, public actors, government agencies, and consumers, as well as technologies, institutions, and resources. Key to the popularity of the concept seems to be that it responds to the critiques of the traditional business network concept, particularly related to who and what constitutes business actors and the processes and phenomena involved (Aarikka-Stenroos & Ritala, 2017). An ecosystem hence implies a configured mix and balance of multiple types of actors and resources, which are vital to understand how the circular economy and circular resource use are enabled.

We combine the above view of circular economy and ecosystems with the 4R model (Hakansson & Waluszewski, 2002) within the resource interaction approach in IMP. Briefly, resource interaction in business networks is "*…the process of combination, re-combination and co-development of resources that happen through the interaction among organizations*" (Baraldi, Gressetvold, & Harrison, 2012: 266). The 4R model is a way to classify and analyse resources and resource interfaces. The Model provides a typology of resources in terms of products, facilities, business units and business relationships. It has been developed in application areas such as innovation, logistics and accounting, and more recently, sustainability. For example, Crespin-Mazet and Dontenwill (2012) showed that companies' sustainability strategies were highly dependent on other actors, both business and non-business actors, which provided the focal company with access to tangible and non-tangible resources.

Current empirical studies in B2B marketing and purchasing/supply literatures highlight the role of the consumer in sustainable consumption (Connolly, Prothero, & Culture, 2003; Kjellberg & Stigzelius, 2014), the valuation of green products (Fuentes, 2014; Reijonen & Tryggestad, 2012), the development of green products in network settings (Hakansson & Waluszewski, 2002), sustainable purchasing and supply /green procurement (Giunipero, Hooker, & Denslow, 2012; Johnsen, Miemczyk, & Howard, 2017; Miemczyk, Johnsen, & Macquet, 2012; Walker, Miemczyk, Johnsen, & Spencer, 2012), network responses to external environmental regulation (Harrison, 1998; Veal & Mouzas, 2012); the nature of interactive corporate sustainability(Vildåsen & Havenvid, 2018); and how 'green markets' can be made governable via regulation (D'Antone & Spencer, 2014; Mattsson, 2016). In the paper proposed here, we take a resources lens to analyse an in-the-making/new circular economy/ecosystem. In adding substance to the ecosystem concept via investigating resource interaction processes, we question (i) what happens to current understandings of resource interfaces when applied to a circular economy model, and (ii) the roles played by different business and non-business actors in designing and creating resource interfaces?

RESEARCH CONTEXT

The construction sector is known as the "40%" sector: it accounts for 40% of the global energy consumption, and generates 25-40% of the world's total carbon emission. We also know that the industry generates a large amount of waste. In the central part of Oslo, much construction activity is currently taking place, and there is little evidence that activity will decline in the nearest future. There is nowhere in Oslo for local/urban mass handling (gravel of different sizes and qualities).

Mass waste comes from different sources, including road construction and new building sites, or from gravel removed from the streets after the winter season. Where mass is taken out, it usually has to be replaced with new mass. New or fresh mass typically comes from quarries. Many actors, including Oslo municipality, industry organizations, and environmental bodies as well as media have raised the question of how to deal with the mass waste, and how transport related to this waste must be reduced. In addition, there is an increasing focus on using recycled materials in construction projects.

Two private organizations, here referred to as Actors Alpha and Beta, and a non-business actor, the Port of Oslo ('the Port'), initiated the inter-organisational arrangement for a new solution for local mass recycling. The goal was therefore to reduce CO2 emissions via increasing the recycling and reuse of mass.

Alpha and Beta shared the challenge of waste handling. Alpha is a business unit responsible for mass handling in the Nordic countries within a large international construction company. The business unit employs 1800 people in Norway, Sweden and Finland. It operates 110 quarries across the three countries, takes out approximately 22 million tons of mass each year, and has a 28% market share.

Beta is a business unit responsible for the environmental business in a large Norwegian construction company. It runs several deposits and a mass recycling facility near Oslo. The Port is a non-business actor. It runs an intermodal port in Oslo, which is able to handle all types of cargo. It is the leading cargo and passenger port in Norway. The goal of the Port is to ensure that users and customers experience an efficient and environmental friendly service. To achieve this, they work closely with customers in developing and facilitating services.

The main purpose of the arrangement was to establish a circular economy solution for mass handling and recycling, which would be used not only by the two construction companies involved, but represent a business opportunity by offering this service to other companies as well. Both of the two construction companies had existing solutions, but the arrangement aimed at developing a more complete, and what was perceived as a better solution for mass handling and recycling in Oslo. To generate a local 'circular economy for mass' requires a number of resources and resource interfaces, including the mass (product), a recycling facility and a terminal (facility), and a number of business units, i.e. the three key actors, and customers of the services, and the relationship between them.

METHODS

We are producing a longitudinal case study since our research question is exploratory and our aim is to develop and not test theory (Eisenhardt & Graebner, 2007). Furthermore, we seek to investigate and unfold the processes of resource interactions in tackling grand challenges, such as waste handling. Case study designs are appropriate for such purposes (Langley, Smallman, Tsoukas, & Van de Ven, 2013). We chose the particular case through purposive sampling, as we looked for a case that allowed us to investigate the subject in depth and over time (Patton, 2015). The case study is an example of an inter-organisational arrangement set up to enable circular economy in relation to waste handling.

The case is ongoing, and based on qualitative data collected through interviews and archival data. Specifically, our data collection started in January 2018. It primarily draws on meetings, document analysis, and interviews. We are following the development of the arrangement and the resource interactions involved. We started with two initial meetings with the main organisations; first one individual meeting with a manager at the Port, and then a joint meeting with representatives from all three organizations. The purpose of these meetings was to get an overview of the case and the key drivers.

Insights from the discussions in these meetings were accompanied by a variety of documents, such as company presentations, memos, applications, and press releases, provided by the participants. We also scanned the news and different industry magazines for information about mass handling ourselves. After these two meetings, we conducted a formal interview with one of the construction companies about their existing solution. A similar formal interview is set up with the other construction company. The consecutive interviews with the main organisations will follow a snowball approach, including interviews with transport companies, which will constitute a central actor in the new circular economy solution. In addition, we will interview other actors, such as representatives from different units in Oslo municipality and from the Federation of Norwegian Construction Industries (BNL), which have put mass waste handling on their agenda.

PROVISIONAL CASE STUDY FINDINGS

The problem

The linear economy for construction mass waste is relatively straightforward. Mass is excavated and collected from a construction or an operations site, and transported by heavy trucks to a deposit landfill. After the construction site is prepared, new mass from a quarry is transported by similar trucks to fill the need of the construction site. In Oslo, a mass-deficiency has been recognised in recent years, meaning that no fresh mass is produced in the city, but has to be procured and transported from surrounding areas and quarries located outside Oslo. The same goes for depots. Approved landfill for waste mass is located outside of the city, which generates transport emissions. A key problem is the lack of ‘matching’ in the timing between a site that is excavated and a site that needs filling. As one representative remarked in a meeting, “*a third project is needed for a smooth process*”.

From a sustainability perspective, this process constitutes the bottom of the waste hierarchy, considered as the least preferable solution for waste handling. There is a waste management regulation that states that all waste mass should be treated before going to landfill, in order to extract as much resources as possible and reduce the use of/need for landfill. Today, this regulation is unfortunately largely violated because there is lack of technology to treat mass.

Alpha and Beta had been facing the combination of new sustainability requirements and a lack of any efficient solution for mass handling for several years. Both organisations had some sort of solutions for mass handling. Alpha was using a hub in the Oslo area located close to a large construction site, where they would sift the gravel and deliver to various depots. Beta used to run depots. The two organisations, being competitors in terms of bidding for projects, had for some years done business within mass handling. For example, Alpha had a contract to deliver sifted gravel from their hub to Beta's deposit.

However, when the contract to deliver this gravel was close to ending, and Alpha had less work generally in the area, the relevant manager sought a new hub closer to a location where Alpha currently had a lot of activity. The manager contacted the Port, asking for space in the port to establish a new hub in terms of a terminal for mass handling and some sorting. Alpha had previously been involved in the redeveloped and decontamination of a closed landfill on an island in the Oslo fjord. The experience from this work inspired the idea of setting up a water-side terminal for handling mass.

Moreover, recently Beta has developed a new mass-recycling technology inspired by a similar initiative in Ireland. It is now operational at a recycling facility within an environmental centre 50 km north of Oslo. The recycling facility is operated by a joint venture established in 2017 based on a 10 million Euros investment between Beta, the environmental centre owners, and a company supplying large construction projects nation-wide with mass. The idea was to offer customers clean mass, as 80% of the mass running through the facility could be cleaned and recycled.

When faced with Alpha's request for a setting up a water-side terminal, a Port manager replied "*we cannot have a hub for every construction company asking, you have to coordinate*." Beta also runs an asphalt plant at the Port. A Beta manager at the new recycling facility told one of his colleagues at Beta's Port-based asphalt plant that we knew the relevant Alpha managers from the previous contract (described above). He suggested that the two companies had a meeting together.

Hence the idea of joining forces begun as representatives from the two companies via personal relationships and earlier business, in addition to suggestions from the Port representative, met and decided to collaborate. The aim was to contribute to reducing CO2 emissions, meeting regulations related to waste handling and the use of recycled materials in addition to requests for environmental product declarations (EPDs). Of course, there was also the possibility to develop new business opportunities by offering a new solution for local recycling and reuse of mass in the Oslo area. The company representatives acknowledged that there were competitors thinking about the same idea, but also that "*they will have to figure it out first*." The new technology was vital, but it was also recognised that the true advantage rested in optimizing the process.

The solution: new resource interfaces

A number of facilities are central in this case. The most important are Alpha's new/planned terminal for mass handling at the Port, Beta's existing mass recycling facility, and transportation. Alpha's terminal is envisioned to serve a number of functions. It will permit mass to be stored and reloaded in the city centre, and give access to sea transport. The terminal is limited in size, referred to as a compact terminal. It will facilitate large-scale volumes to and from the city, with small-scale operation in the city center. It is possible to store a selection of different types of mass. The terminal is planned as temporary, as the area where it is located are planned for city development in about five years. Beta's mass recycling facility is a resource that cleans contaminated masses. The facility is indoors, with a capacity of 300,000 tonnes annually. It is located next to a biogas facility and a landfill.

The transport and trucks are also important facility resources. One dumper truck is able to carry 30 tonnes of mass for each load. The cost and emission from this operation have a significant environmental impact. That is, the emission itself, but also space requirements for parking and loading, rush hour traffic, time spent driving, and risk of accidents. It is not favourable to have these heavy vehicles in the city centre. Alternative emission free transportation exists, including both electric and biogas fuel vehicles. However, there are size and distance limitations with these vehicles. Electric vehicles are smaller, and biogas fuel vehicle have a limited driving distance. In addition, distribution of biogas is not widely available, making this a more limited and closely planned operation.

The 8 landfill facilities located in the Oslo region are also relevant. Waste mass is classified in five categories (class five is the most contaminated). Only one of the eight landfill sites can receive class five masses. Landfill capacity is a limited resource, and it is assumed to be difficult and time consuming (NIMBY problems) to find new sites. One current challenge is therefore that the scarce resources of landfills are filled with all classes of masses, and utilizing capacity uncritically. The economy of landfill is in most cases quite good. The margins pay back a share between 25-60%. The cost of running a landfill is relatively low. The government approvals and limited landfill supply makes this a suppliers market. The quarries are another key facility, which produce fresh mass. Their main challenge is the impact they make into nature.

As for the product resources, the most central one is of course the mass, which is of different size and quality. The smallest particles of it are silt and clay. Sand and stone are different from silt and clay, because they provide drainage and therefore water will run through it. Stone also has different categories, based on size given in mm categories. The mass has an 80% recycling potential. The recycling facility washes the waste mass. The wash-out is termed ‘slam’. When within slam, contaminated mass will sink. The recycling process is adding falling chemicals to increase the weight of the contaminated particles. The fallen slam is pressed through a filter with 350-bar. This separates again the water from the rest of the slam, and produces a filter-cake, which contain all the contamination of the mass. The filter-cake becomes a product, resulting in the contamination sticking to the cake, and it will not wash out with rain.

Leaking qualities are reduced in this form, and the concentration of contamination does not increase after recycling. It is therefore more safely deposited in landfill, and the contamination level is the same (class three in the approval categories). The water of the process becomes clean from filtering, and reenters into the process in a closed loop cycle. The recycling process then sorts clean mass in a few sizes, but not as fine-meshed as when it comes from the quarries.

The terminal will permit mass to be stored and reloaded in the city centre. The washing facility will recycle mass, which will reduce the need for landfill capacity, in addition to providing returns volumes of upgraded mass for reuse. Finally, it influences transportation, moving from heavy trucks with emissions to a more differentiated non-emission vehicle use.

CONCLUDING DISCUSSION

Alpha, Beta and the Port have initiated a new circular economy based on the mobilisation and activation of resources for urban mass handling. Using the relationship resource interface through the Port, they mobilise, activate, and connect their new facilities in a circular economy set up. This in turn, enables the utilisation of the product resource and value of waste mass in a new way. This resembles the circular economy’s focus on connecting continuous flows of biological (the mass product) and technical (the facilities and business units) materials (MacArthur, 2013).

Alpha’s new terminal, when it is built, will permit mass to be stored and reloaded in the city centre. By being located at the interface between sea and land, Alpha will be able to access markets, supplies, and operations by the fjord. The potential is to be able to reduce the (huge) volumes of mass that need to be placed in depots to around 20%. This will significantly reduce the use of, and therefore prolong the life of, a landfill sites. It also reduces the need for fresh mass, which implies quarries that are more lasting and with less intervention in nature.

Beta's facility will also recycle mass, reducing the need for landfill capacity, in addition to providing returns volumes of upgraded mass for reuse. Finally, it influences transportation, moving from heavy trucks with emissions to a more differentiated non-emission vehicle use. In combination, the terminal and recycle facilities will be the basis of a new logic of a circular ecosystem, which allows for 'moving the product up the waste hierarchy', which is a long-term goal of policy making in e.g. EU. It allows for transport restructuring with reduced emissions, and market development both in the city and elsewhere.

This emerging inter-organisational arrangement underpinning a circular economy and circular resource use involves interaction between business and non-business actors, resembling the concept of ecosystems rather than the traditional industrial network (Aarikka-Stenroos & Ritala, 2017). The case demonstrates how changing from a linear to a circular economic model improves the sustainability of mass handling, and how the dynamics of resource interfaces are necessary in taking such a step.

REFERENCES

Aarikka-Stenroos, L., & Ritala, P. 2017. Network management in the era of ecosystems: Systematic review and management framework. ***Industrial Marketing Management***, 67: 23-36.

Adner, R. 2017. Ecosystem as structure: an actionable construct for strategy. ***Journal of Management***, 43(1): 39-58.

Antolin-Lopez, R., & Montiel, I. 2018. ***Entrepreneurial Collective Responses to Sustainability-related Grand Challenges***. Paper presented at the Academy of Management Proceedings.

Baraldi, E., Gressetvold, E., & Harrison, D. 2012. Resource interaction in inter-organizational networks: Foundations, comparison, and a research agenda. ***Journal of Business Research***, 65(2): 266-276.

Brundtland, G. H. 1987. Our common future: report of the world commission on environment and development. . UK.

Chabowski, B. R., Mena, J. A., & Gonzalez-Padron, T. 2011. The structure of sustainability research in marketing, 1958–2008: a basis for future research opportunities. ***Journal of the Academy of Marketing Science***, 39(1): 55-70.

Chamorro, A., Rubio, S., & Miranda, F. 2009. Characteristics of research on green marketing. ***Business Strategy and the Environment***, 18(4): 223-239.

Connolly, J., Prothero, A., & Culture. 2003. Sustainable consumption: consumption, consumers and the commodity discourse. ***Consumption, Markets***, 6(4): 275-291.

Crespin-Mazet, F., & Dontenwill, E. 2012. Sustainable procurement: Building legitimacy in the supply network. ***Journal of Purchasing and Supply Management***, 18(4): 207-217.

D'Antone, S., & Spencer, R. 2014. Concerns and marketization: the case of sustainable palm oil, ***Concerned markets: economic ordering for multiple values***: 72-101. Cheltenham UK: Edward Elgar Publishing.

Dangelico, R. M., & Vocalelli, D. 2017. "Green Marketing": an analysis of definitions, strategy steps, and tools through a systematic review of the literature. ***Journal of Cleaner production***, 165: 1263-1279.

Eisenhardt, K. M., & Graebner, M. E. 2007. Theory building from cases: Opportunities and challenges. ***The Academy of Management Journal***, 50(1): 25-32.

Fuentes, C. 2014. Green materialities: Marketing and the socio-material construction of green products. ***Business Strategy & the Environment***, 23(2): 105-116.

Geissdoerfer, M., Savaget, P., Bocken, N. M., & Hultink, E. J. 2017. The Circular Economy–A new sustainability paradigm? ***Journal of cleaner production***, 143: 757-768.

Ghisellini, P., Cialani, C., & Ulgiati, S. 2016. A review on circular economy: the expected transition to a balanced interplay of environmental and economic systems. ***Journal of Cleaner production***, 114: 11-32.

Giunipero, L. C., Hooker, R. E., & Denslow, D. 2012. Purchasing and supply management sustainability: Drivers and barriers. ***Journal of Purchasing & Supply Management***, 18(4): 258-269.

Gordon, R., Carrigan, M., & Hastings, G. 2011. A framework for sustainable marketing. ***Marketing theory***, 11(2): 143-163.

Hakansson, H., & Waluszewski, A. 2002. ***Managing technological development. IKEA, the environment and technology.*** London: Routledge.

Harrison, D. J. 1998. ***Strategic responses to predicted events: the case of the banning of CFCs***. University of Lancaster.

Håkansson, H., Ford, D., Gadde, L.-E., Snehota, I., & Waluszewski, A. 2009. ***Business in networks***. UK: John Wiley & Sons.

Johnsen, T. E., Miemczyk, J., & Howard, M. 2017. A systematic literature review of sustainable purchasing and supply research: Theoretical perspectives and opportunities for IMP-based research. ***Industrial Marketing Management***, 61: 130-143.

Kjellberg, H., & Stigzelius, I. 2014. Doing green: environmental concerns and the realization of green values in everyday food practices. ***Concerned Markets: Economic Ordering for Multiple Values***: 203-237.

Kotler, P. 2011. Reinventing marketing to manage the environmental imperative. ***Journal of Marketing Management***, 75(4): 132-135.

Kumar, P. 2016. State of green marketing research over 25 years (1990-2014) Literature survey and classification. ***Marketing Intelligence & Planning***, 34(1): 137-158.

Langley, A., Smallman, C., Tsoukas, H., & Van de Ven, A. H. 2013. Process studies of change in organization and management: Unveiling temporality, activity, and flow. ***Academy of Management Journal***, 56(1): 1-13.

Leonidou, C. N., & Leonidou, L. 2011. Research into environmental marketing/management: a bibliographic analysis. ***European Journal of Marketing***, 45(1/2): 68-103.

Lunde, M. B. 2018. Sustainability in marketing: a systematic review unifying 20 years of theoretical and substantive contributions (1997–2016). ***AMS Review***, 8(3-4): 85-110.

MacArthur, E. 2013. Towards the circular economy, economic and business rationale for an accelerated transition. Cowes, UK.

Mattsson, L.-G. 2016. Bridging gaps between policies for sustainable markets and market practices. ***IMP Journal***, 10(2): 339-356.

McDonagh, P., & Prothero, A. 2014a. Introduction to the special issue: Sustainability as megatrend I. ***Journal of Macromarketing***, 34(3): 248-252.

McDonagh, P., & Prothero, A. 2014b. Sustainability marketing research: Past, present and future. ***Journal of Marketing Management***, 30(11-12): 1186-1219.

Miemczyk, J., Johnsen, T. E., & Macquet, M. J. S. C. M. A. I. J. 2012. Sustainable purchasing and supply management: a structured literature review of definitions and measures at the dyad, chain and network levels. ***Supply Chain Management: An International Journal***, 17(5): 478-496.

Murray, A., Skene, K., & Haynes, K. 2017. The circular economy: An interdisciplinary exploration of the concept and application in a global context. ***Journal of Business Ethics***, 140(3): 369-380.

Patton, M. Q. 2015. ***Qualitative research & evaluation methods. fourth ed.*** Thousand Oaks: Sage.

Peattie, K., & Crane, A. 2005. Green marketing: legend, myth, farce or prophesy? ***Qualitative market research: an international journal***, 8(4): 357-370.

Polonsky, M. J. 2011. Transformative green marketing: Impediments and opportunities. ***Journal of Business Research***, 64(12): 1311-1319.

Prothero, A. 1998. Green marketing: The'fad'that won't slip slide away: Taylor & Francis.

Reijonen, S., & Tryggestad, K. J. 2012. The dynamic signification of product qualities: on the possibility of "greening" markets. ***Consumption Markets & Culture***, 15(2): 213-234.

Trist, E. 1983. Referent organizations and the development of inter-organizational domains. ***Human relations***, 36(3): 269-284.

Veal, G., & Mouzas, S. 2012. Market-based responses to climate change: CO2 market design versus operation. ***Organization Studies***, 33(11): 1589-1616.

Vildåsen, S. S., & Havenvid, M. I. 2018. The role of interaction for corporate sustainability. ***IMP Journal***, 12(1): 148-170.

Walker, H., Miemczyk, J., Johnsen, T., & Spencer, R. 2012. Sustainable procurement: Past, present and future. ***Journal of Purchasing & Supply Management***, 18(4): 201-206.