Remanufacturing and Marketing Effectiveness of Food and Beverages Firms in Nigeria.

Felix Tonye Barasin
Department of Marketing, Rivers State University
flixtonye@gmail.com
and
Elvis Ihunwo
Department of Marketing, Rivers State University
elvisihunwo@gmail.com

Abstract

The study examined the relationship between remanufacturing and marketing effectiveness of food and beverages firms in Rivers state, Nigeria. An extensive literature review was carried out covering the study variable and measure. The study adopted cross-sectional survey framework. Fourteen (14) food and beverage firms in Nigeria, listed in the Nigerian Stock Exchange Facts Book of 2017/2018 constituted the population of our study. Eighty-Four (84) respondents were drawn from the Fourteen (14) food and beverage firms under review. A self-administered, structured questionnaire was employed to obtain primary data and data was analyzed. The research hypotheses were tested with the Pearson product moment correlation statistical tool to establish the degree of relationship. The reliability of the research instrument was tested using the Cronbach's Alpha which revealed that all the scores of the variables satisfied the standard Cronbach's Alpha threshold of 0.7. With the aid of the statistical package of social sciences software (SPSS) version 20.0, frequencies were computed to establish the sample characteristics. The study found that; remanufacturing is positively and significantly related to marketing effectiveness. Based on the results of the analysis, the paper concludes that remanufacturing has a positive and significant relationship with marketing effectiveness. The paper therefore, recommends that; remanufacturing should be implemented by manufacturers to develop and dramatically improve the firms' marketing effectiveness.

Introduction

Increased globalization has greatly increased competition and this has brought about growing demand flexibility and cost-efficient systems by companies. In Nigeria, there is a growing level of industrialization and consumption, which has resulted in the increasing generation of solid waste. A significant number of solid wastes today come with packaging materials such as plastics bottles, aluminium cans and sachet waters, and when these packaging materials are not handled appropriately after consumption of the products, generate wastes to the environment. Through the management of wastes in reverse logistics and waste exchange, companies can enhance their competitiveness as their environmental efficiency is enhanced (Ashby *et al.* 2012). The remanufacturing industry had its boost since World War II, when manufacturing was performed due to resource (labour, material, etc.) scarcity. Since then remanufacturing has been carried out in various product categories, such as car parts, heavy duty machineries, photo copiers, toner cartridges, military equipment, office furniture, etc. (Sundin, 2004). In UK, the value of remanufacturing is estimated at 2.3 billion GBP in 2009 with 50,000 employees (Chapman et al., 2009). While in the United States, remanufacturing has become a major business, and there are over 70,000 remanufacturing companies, with total sales of 53 billion USD (Lund, 1996). In Nigeria, the changing dynamics of food and beverages and other manufacturing industries market forced players at all levels to remanufacturing. The food and beverages industry operations and functions were remodelled to meet emerging challenges of diversification, slashing operating cost, outsourcing, portfolio

investment, production and manufacturing systems. The change brought about by remanufacturing in food and beverages industry are reflected in product and services to give a new form or structure by introducing product and service scheme such as soft and alcoholic drink (plastic bottle waters, aluminium cans and polyethylene terephthalate (PET) plastic bottles) and sachet waters of different price range. In order to survive and flourish in a global economy business must respond to major trends reshaping markets. Hence, the dynamics of the underlying forces at work require a renewed thrust on remanufacturing in food and beverages industry to contribute to management and diversification of growth horizons by impacting on productivity and profitability (Aremu & Saka, 2006).

This study aims to examine the relationship between remanufacturing and marketing effectiveness of food and beverages firms with respect to beverage containers of soft and alcoholic drink (plastic bottle waters, aluminium cans and polyethylene terephthalate (PET) plastic bottles) in Nigeria.

Literature Review

Theoretical Implication

The resource-based view theory regards the firm as a cognitive system, which is characterized by idiosyncratic and context-dependent competences that are core to strategic purposes. These are conditioned by hierarchical capabilities, or sets of routines, involved in the management of the firm's core business processes that help to create value. An organization may choose to focus on implementing remanufacturing to expose the negative environmental performance of its competitors. In this way, the organization can cut a niche for its products. Developing and implementing remanufacturing can only be achieved through creating environmentally responsible policies and investing in the necessary equipment and training. Creating a competitive advantage through implementing remanufacturing would lead to improved market share and consequently higher profit margins (Fortes, 2009). In conclusion, this theory leverages upon the fact that in order to drive performance, an organization needs to develop a distinct competency that will push their competitiveness. One of the ways of achieving this is through having an integrated remanufacturing.

Concept of Remanufacturing

In remanufacture, a product is collected from the field, assessed and there after either repaired, refurbished or overhauled. This entails replacing the defective parts of the product with refurbished or new parts. Remanufacture takes place when there is no possibility of direct reuse of the product or such a reuse is no longer economical. If managed properly, remanufacture can generate lucrative business opportunities through recapturing otherwise lost value (Toffel, 2004).

The original definition of the remanufacturing concept is due to Robert Lund, professor at Boston University, a luminary in the study of this sector. His contribution paved the way for a systematic study of this recovery option. Remanufacturing refers to an industrial process in which used/worn-out/broken products (henceforth called used-products) are transformed into "new products" (Lund, 1984). Hereafter, these "new products" are referred to as remanufactured products to distinguish them from a completely new product. Generally, any

manufactured products or devices can be remanufactured, provided that these are discarded used-products with lower materials and components reprocessing costs compared to the market value of remanufactured items (Lund, 1984).

Hazen and Hanna (2011) define remanufacturing as the process of repairing, refurbishing or overhauling an item so as to extend its life span or recover the lost value in the item. When a product becomes unusable, the only strategy to restore the usability of the product is through remanufacturing. Remanufacturing is commonly adopted as a sustainable strategy to achieve competitive advantage. If managed strategically, remanufacturing can enhance productivity and improve operational performance of the organization.

Types of Remanufacturer

Remanufacturing could either be carried out by original equipment manufacturer (OEM) remanufacturers, contract remanufacturers or independent remanufacturers. For the OEM remanufacturers, remanufacturing activity is an alternative way to generate extra income (from the production of remanufactured spare-parts and products) and obtain low cost raw materials. Most importantly, by remanufacturing its own products, OEM manufacturers could avoid competition from independent remanufacturers (Gutowski et al., 2011). Some examples of OEM remanufacturers are: Fuji Xerox for parts and sub-assemblies from photocopier (Fuji Xerox Australia, 2007), Hewlett-Packard for inkjet printers (Hewlett-Packard, 2014).

Remanufacturing Process

The process within which the used product is remanufactured is called the remanufacturing process (Östlin, 2008). In general, remanufacturing process consists of four generic-key process, where different activity takes place at each process.

• **Inspection/Grading process** – During this process, used-products are inspected to assess their remanufacturing status, which could either be remanufacturable or scraps. Unlike, manufacturing, remanufacturing requires 100% inspection of used-products (Errington & Childe, 2011).

• **Disassembly/inspection** - Each unit of remanufacturable is disassembled into its corresponding modules, which are further disassembled into their constituent components. Disassembly can be a quite complicated process involving scheduling issues (Kim et al., 2007).

• **Components reprocessing** - This process typically involves cleaning, repairing (e.g. machining worn-out holes) and surface finishing (Sundin & Bras, 2005). The actual number of reprocessing steps and corresponding time depend on the component quality group.

• **Reassembly/testing** - This process typically involves general purpose tools to reassemble the reprocessed components into remanufactured products. Finally, testing ensures that the assembled products, i.e. remanufactured products meet their specified function

Marketing Effectiveness

The purpose of marketing effectiveness is to optimize marketing spending for the short and long term in support of, and in alignment with, the brand strategy by building a market model using valid and objective marketing metrics and analytics (Powell, 2008).

Marketing effectiveness has attracted a great deal of attention in academic and managerial circles (Kotler 1977; Dunn et al., 1994; Ghosh et al., 1994; Appiah-Adu et al., 2001; Vorhies & Morgan 2003; Homburg et al., 2007). According to Connor & Tynan (1999), the majority of studies of marketing effectiveness have relied essentially on the use of one or more of three key approaches developed by Kotler (1977), Hooley & Lynch (1985) & Carson (1990). Marketing effectiveness calls for managers to have sufficient information for the purposes of planning and effective resource allocation to varying markets, products and territories. Marketing effectiveness is also contingent upon the adeptness of managers to deliver profitable strategies from their philosophy, organization and information resources. Ultimately, marketing effectiveness depends on the ability to implement marketing plans successfully at various levels of the organization (Adu et al, 2001).

There are four basic dimensions of marketing effectiveness (Nwokah, 2006; Nwokah & Ahiauzu, 2008):

(1) Corporate - A company's budget, size and ability to make organizational changes determine its bounds which operate within.

(2) Competitive - A company which operates in a certain category is not alone and it is monitored by many other companies.

(3) Customers - Information of customers' behaviour such as making purchasing decisions can help marketers to enhance their marketing effectiveness. Customers who have similar needs act in the same way which causes their segmentation. Customers of each segment make their choices in relation to product values and characteristics in return for the price they paid. Customers also build brand value through information they receive from advertising, word of mouth and any other company promotional actions.

(4) Exogenous factors - Corporate, competitive and customer environmental factors can influence marketing effectiveness. Interest rate, weather, government regulations are examples of external factors that affect marketing effectiveness.

There are five factors driving the level of marketing effectiveness that marketers can achieve (Nwokah, 2006; Nwokah & Ahiauzu, 2008):

(1) Marketing strategy - Marketing strategy is important for achieving organizational goals. It draws insights from market research and focuses on positioning a product mix correctly.

(2) Marketing creative - Creative marketing can improve company's outcomes even without a change in its strategy. Creative directly connected to growth rate. Consequently, the introduction of a new creative can increase it.

(3) Marketing execution - Marketers can improve marketing effectiveness by improving how they go to market. For example, optimization of the way they enter a market can achieve great results without making any changes in the marketing strategy or marketing creation.

(4) Marketing infrastructure - Improving marketing creates a competitive advantage for each company and organization and can lead to significant gains for them.
(5) Exogenous factors - Marketers have to take advantage of the environmental factors which affect marketing effectiveness. Opportunities that have been drawn from monitoring these exogenous factors can help marketers to improve the effectiveness of their marketing activities.
However, Kotler (1977) and Webster (1995) argue that marketing effectiveness has a strong association with many valuable organizational outcomes such as stable long-term growth, enhanced consumer satisfaction, a competitive advantage, and a strong marketing orientation.
According to Kotler (1977), marketing effectiveness of a business concern is determined by the extent to which the business exhibit the five attributes of marketing orientation, Customer Philosophy, Integrated Marketing Organization, Adequate Marketing Information, Strategic Orientation and Operational Efficiency. Appiah-Adu et al. (2001) cited in Nwokah & Ahiauzu (2008) operationalized marketing effectiveness as combination of five components: customer philosophy, integrated marketing organization, adequate marketing information, strategic orientation and operational efficiency.

Conceptual Framework

The conceptual framework for this study illustrates remanufacturing as its independent variable and marketing effectiveness as the dependent variable with strategic orientation, customer philosophy, integrated marketing organization, adequate marketing information and operational efficiency as its measures.

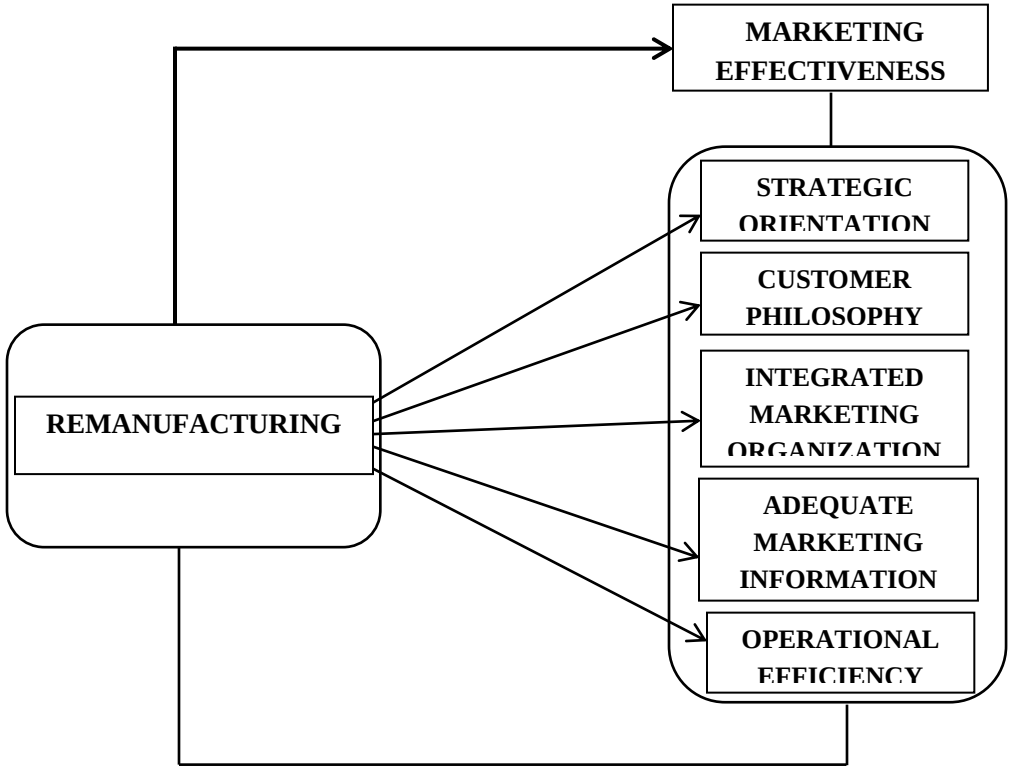

Figure 1: Conceptual Framework of Remanufacturing (a dimension of reverse logistics) and Marketing Effectiveness

Remanufacturing and Marketing Effectiveness

Remanufacturing is focused on individual components and not only saves the material value of the product, but also saves a considerable fraction of the energy used in production of those components. As a result, significant sales benefits are created. Not only the repair of all defective components, but also, an overhaul and upgrade of the entire product assembly are included in remanufacturing. Remanufacturing demonstrates some noted benefits in sustainability pillars. In the economic pillar the process requires a relatively small capital investment because no components are produced and most of the work has already been done by the Original Equipment Manufacturer (OEM) (Barker & King, 2006), cost saving is done by reducing the use of materials and energy (Giutini & Gaudette, 2003). In the environmental pillar the process is less harmful as it decreases pollution and solid wastes through safe disposal of

substances (Zhou, 2014). In terms of the social pillar remanufacturing creates employment for nearly 500,000 people (Steinhilper, 2011), stimulates constant training in different technologies, and it provides high quality products at a lower cost and with warranty.

Remanufacturing shares many features of normal manufacturing, particularly in relation to the aspects of output quality control, materials flow handling, and other principles of lean manufacturing. To derive maximum benefit, remanufacturing depends on the customer recognizing the value of his end-of-life asset, and the manufacturer creating products that have the required durability in critical components. Customer expectations for a new product are met by the remanufactured products where refurbished products do not match the same (Shah et al., 2010). Remanufacturing's business notion is established on the proposition that resources that were utilized in the product manufacturing are reused and therefore it enables remanufacturing an advantageous practice (Östlin et al., 2008). Moreover, it was revealed that the energy consumption to remanufacture a product is less than 50%, while, labour force and raw materials are only 67% and 11.1% - 20 % compared to the production of virgin products (Xu et al., 2005).

According to Steinhilper (2001) study, realizing the same product at about half of the cost of a new one can be considered as remanufacturing. In general, remanufactured products have a price range between 40% and 80% of a new product price with an average of 60%. This complies not only with the cost but it is a win-win situation for both the customer that have an attractively priced product and the remanufacturer that is being able to operate effectively and profitably. Based on the above discussion, determining the relationship between inventory control and customer satisfaction, we therefore hypothesize the following:

Ho_1 There is no significant relationship between remanufacturing and customer philosophy.
Ho_2 There is no significant relationship between remanufacturing and strategic orientation.
Ho_3 There is no significant relationship between remanufacturing and operational efficiency.
Ho_4 There is no significant relationship between remanufacturing and integrated marketing organization
Ho_5 There is no significant relationship between remanufacturing and adequate marketing information

Methodology

This study adopted a cross-sectional survey and a correlation investigation to establish the relationship between remanufacturing and marketing effectiveness of food and beverages firms in Nigeria. The target population for this study was fourteen (14) firms in Nigeria, listed in the Nigerian Stock Exchange Facts Book of 2017/2018, and a sample of eighty-four (84) respondents were drawn from the staff of the selected firms under our study. A structured questionnaire was used to collect primary data; and the questionnaire was designed in Likert scale five-point form- ranging from Strongly Disagree (SD) to Strongly Agree (SA). The testing of hypotheses was done using Pearson product moment correlation with the statistical package for social sciences software SPSS version 20.0; frequencies were computed to show the sample characteristics.

Reliability

The study tested for reliability at the verge of validating the factors in the context proposed. The reliability of the research instrument was tested using the Cronbach's Alpha threshold of 0.7.

Table 1: Result of Reliability Analysis

VARIABLE	CRONBACH'S ALPHA
Remanufacturing	0.831
Customer Philosophy	0.788
Strategic Orientation	0.750
Integrated Marketing Organization	0.810
Adequate Marketing Information	0.826
Operational Efficiency	0.846

Source: SPSS 22 Output (based on 2019 field survey data)

Test of Hypotheses

Ho_1 There is no significant relationship between remanufacturing and customer philosophy

Table 2: Correlation Analysis showing the relationship between Remanufacturing and Customer Philosophy

Correlations

Type	Variables1	Statistics	Remanufacturing	Customer Philosophy
Spearman's rho	Remanufacturing	Correlation Coefficient	1.000	.629**
		Sig. (2-tailed)	.	.000
		N	75	75
	Customer Philosophy	Correlation Coefficient	.629**	1.000
		Sig. (2-tailed)	.000	.
		N	75	75

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS 20.0 Output (based on 2019 field survey data)

The information in table 2 above shows that the estimated correlation coefficient is 0.629**, based on the categorisation above, the value is high indicating that a strong relationship exists between remanufacturing and customer philosophy. The correlation coefficient is positive implying that a positive relationship exists between them, i.e. increase in remanufacturing is associated with increase in customer philosophy. Table 2 also showed that the probability/significant value is 0.000, this value is less than 0.05 level of significance, hence the researcher rejects the null hypothesis and the alternate is accepted which concludes that a significant relationship between remanufacturing and customer philosophy.

Ho_2 There is no significant relationship between remanufacturing and strategic orientation

Table 3: Correlation Analysis showing the relationship between Remanufacturing and Strategic Orientation

Correlations

Type	Variables1	Statistics	Remanufacturing	Strategic Orientation
Spearman's rho	Remanufacturing	Correlation Coefficient	1.000	.614**
		Sig. (2-tailed)	.	.000
		N	75	75
	Strategic Orientation	Correlation Coefficient	.614**	1.000
		Sig. (2-tailed)	.000	.
		N	75	75

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS 20.0 Output (based on 2019 field survey data)

The information in table 3 above shows that the estimated correlation coefficient is 0.614**, based on the categorisation above, the value is high indicating that a strong relationship exists between remanufacturing and strategic orientation. The correlation coefficient is positive implying that a positive relationship exists between them, i.e. increase in remanufacturing is associated with increase in strategic orientation. Table 3 also showed that the probability/significant value is 0.000, this value is less than 0.05 level of significance, hence the researcher rejects the null hypothesis and the alternate is accepted which concludes that a significant relationship between remanufacturing and strategic orientation.

Ho_3 There is no significant relationship between remanufacturing and integrated marketing organization

Table 4: Correlation Analysis showing the relationship between Remanufacturing and Integrated Marketing Organization

Correlations

Type	Variables1	Statistics	Remanufacturing	Integrated Marketing Organization
Spearman's rho	Remanufacturing	Correlation Coefficient	1.000	.707**
		Sig. (2-tailed)	.	.000
		N	75	75
	Integrated Marketing Organization	Correlation Coefficient	.707**	1.000
		Sig. (2-tailed)	.000	.
		N	75	75

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS 20.0 Output (based on 2019 field survey data)

The information in table 4 above shows that the estimated correlation coefficient is 0.707**, based on the categorisation above, the value is high indicating that a strong relationship exists between remanufacturing and integrated marketing organization. The correlation coefficient is positive implying that a positive relationship exists between them, i.e. increase in remanufacturing is associated with increase in integrated marketing organization. Table 4 also showed that the probability/significant value is 0.000, this value is less than 0.05 level of significance, hence the researcher rejects the null hypothesis and the alternate is accepted which concludes that a significant relationship between remanufacturing and integrated marketing organization.

Ho_4 There is no significant relationship between remanufacturing and adequate marketing information

Table 5: Correlation Analysis showing the relationship between Remanufacturing and Adequate Marketing Information

Correlations

Type	Variables1	Statistics	Remanufacturing	Adequate Marketing Information
Spearman's rho	Remanufacturing	Correlation Coefficient	1.000	.760**
		Sig. (2-tailed)	.	.000
		N	75	75
	Adequate Marketing Information	Correlation Coefficient	.760**	1.000
		Sig. (2-tailed)	.000	.
		N	75	75

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS 20.0 Output (based on 2019 field survey data)

The information in table 5 above shows that the estimated correlation coefficient is 0.760**, based on the categorisation above, the value is high indicating that a strong relationship exists between remanufacturing and adequate marketing information. The correlation coefficient is positive implying that a positive relationship exists between them, i.e. increase in remanufacturing is associated with increase in adequate marketing information. Table 5 also showed that the probability/significant value is 0.000, this value is less than 0.05 level of significance, hence the researcher rejects the null hypothesis and the alternate is accepted which concludes that a significant relationship between remanufacturing and adequate marketing information.

Ho_5 There is no significant relationship between remanufacturing and operational efficiency

Table 6: Correlation Analysis showing the relationship between Remanufacturing and Operational Efficiency

Correlations

Type	Variables1	Statistics	Remanufacturing	Operational Efficiency
Spearman's rho	Remanufacturing	Correlation Coefficient	1.000	.532**
		Sig. (2-tailed)	.	.000
		N	75	75
	Operational Efficiency	Correlation Coefficient	.532**	1.000
		Sig. (2-tailed)	.000	.
		N	75	75

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS 20.0 Output (based on 2019 field survey data)

The information in table 6 above shows that the estimated correlation coefficient is 0.532**, based on the categorisation above, the value is moderate indicating that a moderate relationship exists between remanufacturing and operational efficiency. The correlation coefficient is positive implying that a positive relationship exists between them, i.e. increase in remanufacturing is associated with increase in operational efficiency. Table 6 also showed that the probability/significant value is 0.000, this value is less than 0.05 level of significance, hence the researcher rejects the null hypothesis and the alternate is accepted which concludes that a significant relationship between remanufacturing and operational efficiency.

Discussion

This study examined the relationship between remanufacturing and marketing effectiveness of food and beverages firms in Nigeria. It was hypothesized that there is no relationship between remanufacturing and measures of marketing effectiveness which are strategic orientation, customer philosophy, integrated marketing organization, adequate marketing information and operational efficiency.

However, the result from the Pearson product moment correlation analysis shows that a significant relationship exist between them. Based on that, the null hypotheses were rejected and the alternate hypotheses were accepted.

This is in tandem with the views of Sustainable Resource Group (2012) that remanufacturing comes with huge financial and environmental opportunity. It can enhance organization's financial and environmental performance. Gray & Charter (2014) point out that remanufacturing is mainly driven by the market demand, government regulations and international standards that call on manufacturers to guarantee customer product quality. It is considered a proactive production method that an organization can use to recover product value and enhance environmental responsiveness.

Conclusion

The results of the data analysis anchored on review of related literature reveals that remanufacturing has a positive, significant relationship with marketing effectiveness. Therefore, the study concludes that remanufacturing has a substantial, affirmative relationship with marketing effectiveness. Remanufacturing should be implemented by manufacturers to develop and dramatically improve the firms' marketing effectiveness.

References

Adu, K. A., Fyall, A. & Singh, S. (2001). Marketing effectiveness and business performance in the financial services industry, *Journal of Services Marketing*, 15 (1), 18-34.

Appiah-Adu, K., Fyall, A. & Singh, S. (2001). Marketing Effectiveness and Business Performance in the Financial Services Industry, *Journal of Services Marketing*. 15, (1), 18-34.

Aremu, M. & Saka, S. (2006). Business process reengineering and organizational performance, *European Journal of Social Sciences*, 12 (3), 11-20.

Ashby, A., Leat, M & Hudson-Smith, M. (2012). Making connections: A review of supply chain management and sustainability literature. *International Journal of Supply Chain Management*, 17 (5), 497–516.

Barker, S. & King, A. (2006). *The Development of a Remanufacturing Design Platform Model (RDPM)*: Applying design platform principles to extend remanufacturing practice into new industrial sectors in Proceedings of life cycle environmental conference, Leuven, Belgium.

Carson, D. (1990). Some exploratory models for assessing small firms' marketing performance (A qualitative approach), *European Journal of Marketing*, 24, (11), 5-49.

Chapman, A., Barlett, C., McGil, I., Parker D. & Walsh, B. (2009). *Remanufacturing in the UK*: A snapshot of the remanufacturing industry in the UK in 2009. Center for Remanufacturing and Reuse.

Connor, P. & Tynan, C. (1999). In sickness and in health: Exploring and redeveloping a measure of marketing effectiveness, *Journal of Marketing Management*. 15, 733-756.

Dunn, M. G., Norburn, D. & Birley, S. (1994). The impact of organizational values, goals, and climate on marketing effectiveness, *Journal of Business Research*. 30, (2), 131-141.

Errington, M. & Childe, S. J. (2011). A business process model of inspection in remanufacturing, *Journal of Remanufacturing*, 3 (7).

Fuji Xerox, Australia (2007). Information Retrieved 2nd June, 2018 from http://www.fujixerox.com.au/about/eco_manufacturing.jsp

Ghosh, B. C., Schoch, H. P., Taylor, D. B., Kwan, W. W. & Kim, T. S. (1994). Top performing organizations of Australia, New Zealand and Singapore: A comparative study of their marketing effectiveness, *Marketing Intelligence and Planning*. 12, (7), 39-48.

Giutini, R. & Gaudette, K. (2003). Remanufacturing: The next great opportunity for boosting US productivity. *Business Horizons*, 46 (6), 41-48.

Gutowski, T. G., Sahni, S., Boustani, A. & Graves, S. C. (2011). Remanufacturing and energy savings. *Environmental Science & Technology*, 45 (10), 4540-4547.

Hazen, T. B. & Hanna, J. B. (2011). Diffusion of green supply chain management. *The International Journal of Logistics Management*, 373-389.

Hewlett Packard. (2014). Retrieved 2nd June, 2018 from http://www8.hp.com/us/en/hp-information/environment/recycling-reuse.

Homburg, C., Grozdanovic, M. & Klarmann, M. (2007). Responsiveness to customers and competitors: The role of affective and cognitive organizational systems, *Journal of Marketing*. 71, (3), 18-38.

Hooley, G. J. & Lynch, J. E. (1985). Marketing lessons from the UK's high-flying companies, *Journal of Marketing Management*. 11, (1), 65-74.

Kim, N., Im, S. & Slater, S. F. (2013). Impact of knowledge type and strategic orientation on new product creativity and advantage in high-technology firms. *Journal of Product Innovation Management*, 30 (1), 136-153.

Kotler, P. (1977). From sales obsession to marketing effectiveness, *Harvard Business Review*, 55, (11/12), 67-75.

Lund, R. T. (1984). Remanufacturing: The experience of the United States and implications for developing countries. *World Bank Technical Paper*, 31.

Lund, R. T. (1996). *The Remanufacturing Industry*: *Hidden giant*, Boston, Massachusetts: Boston University.

Nwokah, N. G. & Ahiauzu, A. I. (2008). Managerial competencies and marketing effectiveness in corporate organizations in Nigeria, *Journal of Management Development*, 27, (8), 858-878.

Nwokah, N. G. (2006). Marketing effectiveness and business performance, *Nigerian Journal of Business and Society*, 3 (2), 15-26.

Östlin, J. (2008). *On Remanufacturing System, Analysis and Managing Material Flows and Remanufacturing Processes*, Dissertation No. 1192, Linköping, Sweden; Linköping University.

Powell, G. R. (2008). *Marketing Calculator*: measuring and managing return on marketing investment, (1st ed) Singapore, John Wiley & Sons.

Steinhilper, R. (2011). *New Technologies for Remanufacturing of Automotive Systems Communicating via CAN Bus*, *in Globalized Solutions for Sustainability in Manufacturing*, Springer.

Sundin, E. & Bras, B. (2005). Making functional sales environmentally and economically beneficial through product remanufacturing. *Journal of Cleaner Production*, 13 (9), 913-925.

Sustainable Resource Group (2012). *Remanufacturing Towards a Resource Efficient Economy*. Sustainable Resource Group

Toffel, M. W. (2004). Strategic management of product recovery. *California Management Review*, 46 (2), 120-141.

Vorhies, D. W. & Morgan, N. A. (2003). A configuration theory assessment of marketing organization fit with business strategy and its relationship with marketing performance, *Journal of Marketing*. 67, (1), 100-115.

Webster, C. (1995). Marketing culture and marketing effectiveness in service firms, *Journal of Services Marketing*, 9 (2), 6-21

Zhou, Y. (2014). A life-cycle based approach to the remanufacturing printing supplies in Shanghai. *Advanced Materials Research*, 878, 57-65.