

Product returns – interdisciplinary interfaces between knowledge, quality and product innovation management

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Abstract

Purpose: The purpose of this paper is to review existing research on intersections of four disciplines, specifically knowledge, quality and product innovation management related to the consumers' product returns within the reverse logistics (reverse supply chain management) discipline to identify gaps justifying further research activities. The primary aim of this review is to summarize and evaluate existing literature pertaining the above-mentioned areas of interest and to formulate potential research streams dedicated to the intersections that would help to unify management practices.

Design/methodology/approach: Literature review of English-written peer-reviewed journal articles was conducted in two scientific databases: Web of Science and SCOPUS. Multiple keyword combinations were used for search to ensure potential intersections.

Findings: Identified state of the art in the literature shows that the existing intersections do not link all four disciplines and that linkages exist only between two disciplines. It is evident that only very weak interdisciplinarity exists in theory.

Research limitations/implications: A key limitation is that the paper is based primarily on review of articles accessible in two databases. Both research and managerial implications result from the review. The outcomes can assist researchers and managers to better understand the link between the disciplines and individual functions in organizations and to promote the integration of methods, tools and practices that potentially can lead to needed knowledge integration across organizations.

Originality/value: The paper identifies gaps in the literature concerning the needed interdisciplinary linkages between four disciplines as well as key drivers for interdisciplinarity in research in the aforementioned four areas if interest.

Keywords: product returns, knowledge, quality and innovation management, interdisciplinarity interface

Paper type: Literature review

1. Introduction

The volume of reverse flows of products, packaging and waste has been dramatically increasing over the last few decades as a consequence of consumption growth induced by the rise of purchasing power in many countries as well as by other drivers, e.g. intense global competitiveness, growing customer expectations and pressures on profitability (Aquino et al, 2013). Consumers worldwide return goods of value \$642.6 billion annually according to IHL Group research (Berthiaume, 2015).

Product returns or product reverse flows represent a serious problem for many companies; they are not their primary goal as their handling and management is rather costly and demanding (Trebilcock, 2001). However, besides acting as the problem they might be also the "holder" of information, providing feedback or signalling that something is going wrong or away from the goals and aims of the company (Genchev et al., 2010). Such feedback should

be managed consciously and purposely and the best way is to use practice of knowledge management. Knowledge management could help to know the reasons why consumers are not satisfied with products and why product returns emerge as well as how to incorporate such knowledge into product improvements (incremental innovation) or into new product development (radical innovation) (Bhaskaran, 2006).

Knowledge about customers 'needs, wants and expectations serves as the primary input into the "spiral of progress in quality" which Juran and Gryna describes as the „*cross-functional flow involved in the "development" of a new product*" (in Gryna et al, eds, 2007, p. 19.1). Knowledge about experience and evaluation of products should represent a second-tier input in this spiral as a feedback to help to improve product features or to help develop new features or totally new product that would better meet expectations. To sum it up, information why customers (or consumers) let products in reverse flows should be a feedback and an important piece of knowledge for quality management together with product development or innovation management to think about product improvement or new product development to avoid future product returns or to minimise them, at least, through well designed and well managed knowledge in the organization.

Such interconnections sound logical, nevertheless the question is, how this is reflected in theory. Origins of each discipline are rather different in a sense of time of origin, breadth and depth of development, field or background and focus together with its own methods and tools applied in practice and the level of practical application of theories. While quality and innovation management and the same can be written about reverse logistics (or reverse supply chain management) or returns management used to be managed as to less or higher extent functional domain in the organization (Holland et al, 2000; Beer, 2003; Mollenkopf et al, 2007) – even though such approach is far from to be ideal - knowledge management cannot be applied as specific organizational function (Guptara, 1999). But still more authors point to the strong need for multi or cross-functional integration and cooperation as many processes in organizations cannot be managed effectively and efficiently to assure sustainable competitiveness without such mutual effort (Lee and Dale, 1998; Sussan and Johnson, 2003). The same can be concluded about the need to link all the four disciplines discussed in this paper, however to the authors' best knowledge this need is not echoed in academic writing.

The purpose of this paper is thus to provide literature research and specifically to:

- find out if any intersection of given four disciplines exist in the literature
- ascertain if and what linkages exist across these four disciplines
- classify existing knowledge, intersections and linkages
- explore the gaps in current research and suggest a research agenda for future work.

2. Theoretical background

This study tries to find the intersections between Knowledge Management (KM), Quality Management (QM), Product Innovation Management (PIM), and Reverse Logistics (RL) in the context of product returns (PR) within the discipline of reverse logistics (RL) (reverse supply chain management respectively (RSCM)). The following text describes the disciplines' important concepts needed for subsequent discussion of their joint connections to the product returns as well as the concept and understanding of product returns itself.

2.1 Product returns (PR)

PR returned by consumers are defined by Yalabik et al (2005) as the taking-back of sold products from consumers due to their dissatisfaction with the product with the money-back guarantees provided by the manufacturer or the retailer. A similar definition describes consumer returns as the "*products that are purchased by the consumer from the manufacturer or a retailer and then returned for a refund within the time window allowed by the return*

policy” (Pince et al, 2016, p. 476). Time scope but no refunding is content of the definition given by Souza et al (2005, p. 1) where commercial product returns are defined as “*products returned for any reason within 90 days of sale*”.

Several reasons cause that consumers are disposing or returning the products: reverse flows arise due to product failures, product damaged during the delivery, wrong delivery, incomplete shipments, and due to lower than expected product quality, or just when consumer is not satisfied (Lee, 2015); due to shortening product life cycle and product proliferation, consumer fraud supported by the liberal return policies of retailers and impulse buying (Kang and Johnson, 2009); due to increasing product complexity and growing “throwaway society” (Cooper, 2005); due to the fact that product does not meet the expectations (Bernon et al, 2011; Rogers, Lembke and Bernardino, 2013); due to poor information quality about the product and its use (Ferguson et al., 2006) and due to the unavailability of spare parts or repair services (Cooper, 2010). Often new products (as the result of product innovation processes) become returned (Schneider and Hall, 2011).

All the causes are directly linked to QM as well as K a IM and hint at the complexity and ambiguity (multidimensionality) of the quality concept and quality perception in terms of both product and process dimension (Hjorth-Anderson, 1984).

PR present the most typical flow of organisational processes and function which is reverse logistics and reverse supply chain management (Closed loop supply chain management - CLSM - respectively). Rogers and Tibben-Lembke (1998, p. 2) define RL as “*the process of planning, implementing, and controlling the efficient, cost-effective flow of raw materials, in-process inventory, finished goods and related information from the point of consumption to the point of origin for the purpose of recapturing value or proper disposal*”. Prahinski and Kocabasoglu (2006, p. 519) delineate between RL and RSCM. In their view RL management focuses on transportation, warehousing and inventory management activities while RSCM stands for “*the effective and efficient management of the series of activities required to retrieve a product from a customer and either dispose of it or recover value.*” Closed loop supply chain management (Govindan et al, 2015, p. 604) is define as “*is the design, control, and operation of a system to maximize value creation over the entire life cycle of a product with dynamic recovery of value from different types and volumes of returns over time.*” The crucial points from the definitions are that together with product there are also other important types of flows, especially financial one and even more significant is the information flow. The second point is the understanding of an economic substance of reverse logistics. As mentioned above, RL processes are rather costly, require additional resources and need management attention and activities. The task for management is to manage it, if necessary, with the notion of some benefits or value recovery. This is strategic and whole organization task with the involvement of other partners in supply chain together with some involvement of customers (Daugherty et al, 2005; Richey et al, 2005; Álvarez-Gil et al, 2007).

2.2 Knowledge Management (KM)

Darroch and McNaughton (2002, p. 2011) define KM as “*the management function that creates or locates knowledge, manages the flow of knowledge and ensures that knowledge is used effectively and efficiently for the long-term benefit of the organization*”. The Cranfield study (1998) identifies ten KM processes: creating new knowledge, finding knowledge internally, acquiring knowledge externally, having or keeping the knowledge together with protecting the knowledge, processing the knowledge, re-using the knowledge, applying the knowledge to some benefit, updating knowledge, sharing knowledge internally, and sharing knowledge outside the organization. Efficient and effective management of these processes helps organizations to gain and sustain competitive advantage (Schulze and Jobe, 1998). As Smith (2011) states, the major challenge and the most difficult task is to recognize and to

select the right information from numerous sources and transform it into useful knowledge and keep it for the potential future reuse. Reasons to return product can be documented, so they may be of explicit nature, however due to the existing KM system, they also may be only in the heads of customers or some employees who process them within the RL and RSC and so to have implicit nature (Nonaka, 2008). Knowledge about product returns has in the beginning the character of external knowledge that should be joint to existing internal knowledge, so KM benefits innovation processes through the integration of external and internal knowledge to the company (du Plessis, 2007).

2.3 Quality Management (QM)

Flynn et al (1994, p. 341) define QM as “*an integrated approach to achieving and sustaining high quality output, focusing on the maintenance and continuous improvement of processes and defect prevention at all levels and in all functions of the organization, in order to meet or exceed customer expectations*”. From the definition it is evident that one of the main goals of QM is to have satisfied (and loyal) customer and implicitly another goal is to avoid returns. Flynn et al (1994) also stress the role of QM in product design because product failures are most often caused by quality issues not satisfactory incorporated in product design.

QM in companies reflects the level of knowledge, competencies and skills, as well as the values and attitudes of the managers and employees. The concrete approach to QM can vary considerably (Talib et al., 2011). Knowledge, competencies, skills and values and attitudes influence the scope and horizon, i.e. if QM would represent just quality inspection (narrow focus) or quality is understood and managed through the lens of Total Quality Management (TQM). TQM incorporates the philosophy of continuous improvement and the dominant role of customers in managing all organizational processes (Kanyak, 2003). Colurcio (2009) based on the results of multiple case study research confirms that TQM is an effective enabler of knowledge generation or creation and dissemination because it provides policies and tools as for instance involvement of all employees, teamwork, feedback mechanisms, and communication that are inherently useful to create and spread and share the knowledge.

2.3 Product Innovation Management (PIM)

PIM is defined as “*a continuous and cross-functional process involving and integrating a growing number of different competencies inside and outside the organisational boundaries*”...which transforms business opportunities into tangible products and services (Cormican and O’Sullivan, 2004, p. 821). Concept of PIM is broader as new product development as it includes also small product adaptation, changes or improvements.

Honarpour et al (2017) in their recent survey argue that it is especially TQM and KM among all the factors that affect innovation that have attracted a notable consideration in scholarly researches. Both disciplines have been evaluated as being long-lasting practices for attaining competitive advantage and to enable innovation. Results of their study show that KM should have an increased chance of success through a TQM focus if applied and the effective use of knowledge towards innovation.

3. Methodology

This literature review did not follow strictly the protocol for systematic literature review (see Fink, 2014; Tate et al. 2015) however the initial search phase was conducted in a systematic way. For the search we used citation indexing databases Web of Science (WOS) and SCOPUS. Both databases have been chosen for their high level of rigorosity.

We also established several inclusion/exclusion criteria. Only peer-reviewed journal articles and articles in press written in English were included into the search process since

peer-reviewed journal articles are considered to bring validated knowledge and authoritative statements within the fields of interest (Ardito et al, 2015). Content of topics (in Web of Science) and content of article titles, abstracts and keywords in SCOPUS were analysed. We also excluded articles with subject area focused on mathematics, energy and chemical engineering as we want to focus on texts related to management issues of given four disciplines. We excluded articles not dealing with product returns in the context of quality, innovation or knowledge management aspect directly or indirectly as well as articles that were focused on optimisation and modelling.

The search of the papers was structured into several phases. First, attempt to find intersections of all four disciplines lead to the combination of following search paths using the AND operator: “reverse logistics”, “reverse supply chain”, “return management”, “innovation management”, “product innovation management, product return(s)”, “quality management” and “knowledge management”. Another variants included “new product development”, “product development”, “product design”, “product redesign”, “product improvement”, “improvement”, “total quality management”, “TQM”. During the second phase, search for intersection of three disciplines was realized and within the last phase search for the intersection of two disciplines was done where phrases “product return(s)”, “returns” and “returns management” were employed in combination with other phrases and words from the list above. Content analysis of abstracts and texts of the papers has been done during the third and fourth phase.

4.Results

The results of the analysis of the reviewed articles are summarized in the Table 1. For each paper, we identified methodology (qualitative, quantitative, mixed, and theoretical) together with used research methods and strategies. The papers are categorised according to the disciplines (described in the Theoretical background section; the brackets contain disciplines that were not part of the research goal) they cover. Moreover, we described the purpose or goal and contribution and implication of the analysed papers.

Table I Classification of literature interdisciplinarity interface

Paper	Methodology	Discipline	Purpose	Contribution/Implications
Aitken and Harrison (2013)	mixed (existing framework testing, case study, interviews, content analysis of documents)	RL PR KM QM	to examine the changes in governance structures during RL systems development	framework development for governance structure assessment to implement RL with 6 factors (KM and quality assurance)
Bernon and Cullen (2007)	mixed (case study, interviews, survey, focus group, content analysis of documents)	RL QM PR	literature development on reverse logistics and development of a framework for supply chain integration	product QM programmes should be developed on strategic level as quality is one of the main drivers for PR; necessity to work with quality costing to evaluate the trade-offs of quality control costs against the costs of customer returns of non-conforming products
Bernon et al (2011)	Literature review and	PR RL	to present a conceptual framework for	expanded understanding of quality in PR (+ packaging

	repeated interviews with supply chain experts	QM	managing retail RL operations	materials, instruction manuals and consumables and quality of information gained at the point of return. Need of management reporting and accounting (quality costing), organisational integration – functional, supplier and customer integration (training of store personnel to provide support to customers to purchase the correct product and give information relating to proper use, easy to use instructions and customer help lines)
Bernon et al (2013)	case study, in-depth semi structured interview, walk-through observations	PR QM PIM	<i>„to empirically explore supply chain integration (SCI) enabling practices, their benefits and barriers in a retail product returns process context“ (p. 586)</i>	the role of call centre to keep and share good quality of information linked to return process and returned products and of cross-functional integrated team (product development and product engineering); importance of a formal set of routines and processes for a continuous review of call centre data to analyse and identify engineering modifications to products; enterprise resource system to capture data related to product quality issues from customers that enables to share routinely information and data from call centre to product development, product engineering and the quality department.
Dowlatshahi (2005)	grounded theory development, literature review and multiple case study analysis	RL PR QM (PIM) (KM)	to identify the present state of theory in RL by formulating the propositions for strategic factors and sub-factors and to develop a framework for effective design and implementation of remanufacturing/ recycling operations which allows for the determination of the	the effectiveness of a RL system is based on its ability to use the existing manufacturing resources, processes, technologies, and knowledge for remanufacturing purposes. Such system enables product redesign and part standardization issues could be considered for further evaluation and improvements. Quality

			viability of returned products/parts in the RL system	assessment of returned products is one of the strategic factor for remanufacturing/recycling operations.
Fassoula (2005)	conceptual paper and literature review	PR QM	<i>“to clarify how the impact of reverse logistics management on cost of quality can be quantified, measured and systematically monitored by a diagnostic too and to explain the way quality management can incorporate most aspects of reverse logistics to achieve process improvement and an increase in customer satisfaction”</i> (p. 631 – 632)	diagnostic tool development and practical guidelines to employ quality costing into RL processes
Gaur et al (2016)	survey and AHP	PR QM	conceptual framework introducing consumers’ disposition behaviour in CLSC setting	framework with tested components can enhance acquisition of higher quality cores of product returns in CLSC
Gehin et al (2008)	conceptual paper, review	(PR) PIM	to suggest new tool to coordinate supply chain and to develop and design	tool REPRO for product design and redesign utilising end-of life products
Guide and Wassenhove (2001)	literature review and case study	PR QM	to understand relationship between quality of product returns, acquisition management and cost of remanufacturing	framework for profitability of remanufacturing activity analysis, suggestion of nominal quality of PR grading and explanation of the product acquisition management substance
Huang and Yang (2014)	survey		to examine the relationship between RL innovation and environmental and economic performance through the lenses of institutional theory and to find out how institutional pressures moderate these relationships	Several RL innovation criteria were tested to confirm impact of RL innovation on firm’s performance
Kumar (2014)	Case study	RL PR QM	<i>“to develop a knowledge management framework with</i>	stress the importance of formal KM and develop and test KM framework with the involvement of

			<i>Failure Mode Effects and Criticality Analysis (FMECA) decision model</i> ” (p. 5326)	FMECA method of QM
Mollenkopf et al (2007a)	survey	PR (P)IM QM	to explore how firms’ returns management systems affect loyalty intentions and to develop a model	findings can help managers to choose and decide when investing in the returns management system as an element of service quality improvement and a potential means of improved profitability
Mollenkopf et al (2011)	case study	PR OM PIM KM	exploration of the returns management phenomenon across a multi-disciplinary managerial spectrum and investigation of cross-functional integration between marketing -operations with the impact on customer value	evaluation of the importance of supplier know.how (knowledge), product quality and operations management dimensions as returns management customer value driver and confirmation of the importance of marketing-operations cross-functional integration
Mukherjee and Mondal (2009)	case study and Interpretive Structural Model (ISM)	RL PM PIM (KM)	to study the relationships among key issues pertaining to management of remanufacturing process and to extract insights relevant to managerial decision-making	factors related to product design and expertise of employees play very important role and trigger activation of other issues in remanufacturing
Ramani et al (2010)	conceptual paper, literature review	PR RL PIM QM	to provide a map of the primary drivers, ongoing research, and future needs for researchers, educators, and practitioners and to provide foresight into gaps that are emerging in realizing the quest for more sustainable products	review of Quality Function Deployment and checklist utilisation within empirical research for early eco-product design to reduce product returns
Ramirez and Moráles (2011); Ramirez (2012) and Ramirez and Girdauskiene (2013)	survey	RL KM	to analyse the relationship between the creation of RL knowledge and the importance of RL, costs of RL, flexibility and impact on RL performance	Relationship between SECI model of KM and RL and SECI model, flexibility of information distribution and RL and importance of RL knowledge creation for RL performance
Smith (2005)	review and	PR	to provide	description of RL processes

	survey conceptual paper	RL KM (QM)	practitioners of KM with a sense of the importance of RL as an important part of a company policies throughout the product life cycle and explanation of the effects on customer relation management (CRM) and satisfaction (p. 166)	and drivers and CRM as one of driver within a knowledge-based system
Tibben-Lembke (2002)	conceptual paper, literature review	PR IM QM	study on the utilization of product life cycle concept for RL	exploration of individual phases of product life cycle (together with quality issues) and application of knowledge for different RL and operations decision making, e.g. product development, redesign, improvement.
Skinner et al (2008)	in-depth interviews and survey	PR QM (KM)	<i>“examine the impact that different disposition strategies have on strategic performance in the reverse logistics” and “the role of the returns policy in the customer decision-making process as a foundation for determining the appropriate disposition strategy”</i> (p. 518)	return policy and especially in the term of operational service quality is assurance of quality in the eyes of consumers. Operational service quality dimension of performance (parameters of efficiency and timeliness) was tested in model

5. Discussion and limitations

It seems that the intersection of knowledge, quality, product innovation management, and product returns (RL or RSCM aspect) is still yet to be found. Most of the articles we have found focus only on two or three researched areas. As can be seen from the overview, probably the intersection of PM and KM and QM may be described as the most popular one. However, the interface is often rather vague and the interest of the authors is usually concentrated on one domain while the other play role of the context or supporting factors. Except two papers (Ramani et al, 2010 and Kumar, 2014) there is no evidence of the employment of methods and tools from the individual domain in product returns management. Only two papers (Ramirez and Moráles, 2011 and Ramirez and Girdeuskiene, 2013) join specific approach of KM with RL more in depth (SECI model). Although the goal of this paper was to examine the PIM, KM, QM, and product returns perspective together, we did not find any such article.

There are several limitations of the paper. First, only two databases have been investigated and so some other existing papers are omitted. Second, due to the limited extent of conference paper, systematic review could not be presented. However, the core findings would be the same. Third, due to the complexity of the research goal and fragmentation of concepts within all four domains there is possibility that we omitted some papers in the databases that deal with our topic.

6. Conclusion

Even though our review shows very weak evidence of intersection of knowledge, there are several calls for integration and coordination of practices from these areas due to the strong interdisciplinary and cross-functional nature of reverse logistics and interdependency with various functions across internal and external business processes (Dowlatsahi,2000; Jayraman and Luo, 2007; Meade et al, 2007; Mollenkopf et al, 2007b; Li and Olorunniwo, 2008). Integration must be based on knowledge of the importance of mutual linkages and benefits of such intersections.

Future research thus should be devoted to the exploration of specific approaches, methods, tools and techniques within PR and RL/RSCM to avoid, reduce or solve product returns in harmony with the strategic goals of organisations and needs and wants of their stakeholders.

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References

- Aitken, J. and Harrison, A. (2013), “Supply governance structures for reverse logistics systems” *International Journal of Operations & Production Management*, Vol. 33 No. 6, pp.745-764.
- Ardito, L., Messeni Petruzzelli, A. and Albino, V. (2015) “From technological inventions to new products: A systematic review and research agenda of the main enabling factors”, *European Management Review*, Vol. 12 No. 3, pp. 113-147.
- Aquino, M. B. D., Balieiro, T. D. J., Gomes, A. A. and Faria, M. A. D. (2013), “The reverse logistics as an environmental tool integrated to environmental management system for an effective management of solid industrial waste”, *Progress in Industrial Ecology, an International Journal*, Vol. 8 No. 3, pp. 205-220.
- Álvarez-Gil, M. J., Berrone, P., Husillos, F. J. and Lado, N. (2007), “Reverse logistics, stakeholders' influence, organizational slack, and managers' posture”, *Journal of Business Research*, Vol. 60 No. 5, pp. 463-473.
- Bhaskaran, S. (2006), “Incremental innovation and business performance: small and medium-size food enterprises in a concentrated industry environment”, *Journal of Small Business Management*, Vol. 44 No. 1, pp. 64-80.
- Beer, M. (2003), “Why total quality management programs do not persist: the role of management quality and implications for leading a TQM transformation”, *Decision Sciences*, Vol. 34 No. 4, pp. 623-642.
- Bernon, M. and Cullen, J. (2007), “An integrated approach to managing reverse logistics”, *International Journal of Logistics: Research and Applications*, Vol. 10 No. 1, pp. 41-56.

- Bernon, M., Rossi, S. and Cullen, J. (2011), "Retail reverse logistics: a call and grounding framework for research", *International Journal of Physical Distribution & Logistics Management*, Vol. 41 No. 5, pp. 484-510.
- Bernon, M., Upperton, J., Bastl, M. and Cullen, J. (2013), "An exploration of supply chain integration in the retail product returns process", *International Journal of Physical Distribution & Logistics Management*, Vol. 43 No. 7, pp.586-608.
- Colurcio, M. (2009), "TQM: a knowledge enabler?", *The TQM Journal*, Vol. 21 No. 3, pp. 236-248.
- Cormican, K. and O'Sullivan, D. (2004), "Auditing best practice for effective product innovation management", *Technovation*, Vol. 24 No. 10, pp. 819-829.
- The Cranfield/Information Strategy Knowledge Survey: Europe's State of the Art in Knowledge Management, *The Economist Group*, 1998.
- Daugherty, P. J., Richey, R. G., Genchev, S. E. and Chen, H. (2005), "Reverse logistics: superior performance through focused resource commitments to information technology", *Transportation Research Part E: Logistics and Transportation Review*, Vol. 41 No. 2, pp. 77-92.
- Darroch, J. and McNaughton, R. (2002), "Examining the link between knowledge management practices and types of innovation", *Journal of Intellectual Capital*, Vol. 3 No. 3, pp. 210-222.
- Dowlatshahi, S. (2000), "Developing a theory of Reverse Logistics", *Interfaces*, Vol. 30 No 3, pp. 143-155.
- Dowlatshahi, S. (2005), "A strategic framework for the design and implementation of remanufacturing operations in reverse logistics", *International Journal of Production Research*, Vol. 43 No. 16, pp. 3455-3480.
- Du Plessis, M. (2007), "The role of knowledge management in innovation", *Journal of Knowledge Management*, Vol. 11 No. 4, pp. 20-29.
- Fassoula, E. (2005), "Reverse logistics as a means of reducing the cost of quality", *Total Quality Management & Business Excellence*, Vol. 16 No. 5, pp. 631-43.
- Ferguson, M., V. D. R. Guide and Souza, G. (2006), "Supply chain coordination for false failure returns", *Manufacturing Service Operations Management*, Vol. 8 No. 4, pp. 376-393.
- Fink, A. (2014), *Conducting research literature reviews: from the internet to paper*, SAGE, Thousand Oaks, California
- Flynn, B. B., Schroeder, R. G. and Sakakibara, S. (1994), "A framework for quality management research and an associated measurement instrument", *Journal of Operations Management*, Vol. 11 No. 4, pp. 339-366.
- Gaur, J., Subramoniam, R., Govindan, K. and Huisingh, D. (2016), "Closed-loop supply chain management: From conceptual to an action oriented framework on core acquisition", *Journal of Cleaner Production*. (in press)
- Gehin, A., Zwolinski, P. and Brissaud, D. (2008), "A tool to implement sustainable end-of-life strategies in the product development phase", *Journal of Cleaner Production*, Vol. 16 No. 5, pp. 566-576.
- Govindan, K., Soleimani, H. and Kannan, D. (2015), "Reverse logistics and closed-loop supply chain: A comprehensive review to explore the future", *European Journal of Operational Research*, Vol. 240 No. 3, pp. 603-626.
- Gryna, F., Chua, R. C. H. and DeFeo, J. A. (2007), *Juran's quality planning and analysis for enterprise quality*, McGraw-Hill, New York.
- Guide, V. D. R. and Wassenhove, L. N. (2001), "Managing product returns for remanufacturing", *Production and Operations Management*, Vol. 10 No. 2, pp. 142-155.
- Guptara, P. (1999), "Why knowledge management fails", *Knowledge Management Review*, No. 9, pp. 26-29.

- Hazen, T., Huscroft, B., Hall, J. J., Weigel, D. K. F. and Hanna, B. J. (2014), "Reverse logistics information system success and the effect of motivation", *International Journal of Physical Distribution & Logistics Management*, Vol. 44 No. 3, pp. 201-220.
- Hjorth-Anderson, C. (1984), "The concept of quality and the efficiency of markets for consumer products", *Journal of Consumer Research*, No 11, pp. 708–718.
- Holland, S., Gaston, K. and Gomes, J. (2000), "Critical success factors for cross-functional teamwork in new product development", *International Journal of Management Reviews*, Vol. 2 No. 3, pp. 231-259.
- Honarpour, A., Jusoh, A. and Md Nor, K. (2017), „Total quality management, knowledge management, and innovation: an empirical study in R&D units", *Total Quality Management & Business Excellence*, published online.
- Huang, Y. C. and Yang, M. L. (2014), "Reverse logistics innovation, institutional pressures and performance", *Management Research Review*, Vol. 37 No. 7, pp. 615-641.
- Kumar, S. (2014), "A knowledge based reliability engineering approach to manage product safety and recalls", *Expert Systems with Applications*, Vol. 41 No. 11, pp. 5323-5339.
- Lee, D. H. (2015), "An alternative explanation of consumer product returns from the postpurchase dissonance and ecological marketing perspectives", *Psychology & Marketing*, Vol. 32 No.1, pp. 49-64.
- Lee, R. G. and Dale, B. G. (1998), "Business process management: a review and evaluation", *Business Process Management Journal*, Vol. 4 No. 3, pp. 214-225
- Li, X. and Olorunniwo, F. (2008), "An exploration of reverse logistics practices in three companies", *Supply Chain Management: An International Journal*, Vol 13 No. 5, pp. 381-386.
- Linderman, K., Schroeder, R. G., Zaheer, S., Liedtke, C. and Choo, A. S. (2004), "Integrating quality management practices with knowledge creation processes", *Journal of Operations Management*, Vol. 22 No. 6, pp. 589-607.
- Meade, L., Sarkis, J. and Presley, A. (2007), "The theory and practice of reverse logistics", *International Journal of Logistics Systems and Management*, Vol. 3 No. 1, pp. 56-84.
- Mollenkopf, D. A., Rabinovich, E., Laseter, T. M. and Boyer, K. K. (2007a), "Managing internet product returns: a focus on effective service operations", *Decision Sciences*, Vol. 38 No. 2), pp. 215-250.
- Mollenkopf, D., Russo, I. and Frankel, R. (2007b), "The returns management process in supply chain strategy", *International Journal of Physical Distribution & Logistics Management*, Vol. 37 No. 7, pp. 568-592.
- Mollenkopf, D. A., Frankel, R. and Russo, I. (2011), "Creating value through returns management: Exploring the marketing–operations interface", *Journal of Operations Management*, Vol. 29 No. 5, pp. 391-403.
- Mukherjee, K. and Mondal, S. (2009), "Analysis of issues relating to remanufacturing technology—a case of an Indian company", *Technology Analysis & Strategic Management*, Vol. 21 No. 5, pp. 639-652.
- Nonaka, I. (2008), *The knowledge-creating company*, Harvard Business Review Press, Boston, Ma.
- Prahinski, C. and Kocabasoglu, C. (2006), "Empirical research opportunities in reverse supply chains", *Omega*, Vol. 34 No. 6, pp. 519-532.
- Pince, C., Ferguson, M. and Toktay, B. (2016), "Extracting maximum value from consumer returns: Allocating between selling refurbished product and meeting warranty demand", *Manufacturing & Service Operations Management*, Vol 18 No. 4, pp. 475–492.

- Ramani, K., Ramanujan, D., Bernstein, W. Z., Zhao, F., Sutherland, J., Kim, H. Handwerker, C. and Thurston, D. (2010), "Integrated sustainable life cycle design: a review", *Journal of Mechanical Design*, Vol. 132, No. 9, pp. 0910041 – 1 – 091004-15.
- Ramirez, A. M. and Moráles, J. V. G. (2011), "Improving Competitiveness Trough Creation of Knowledge and Reverse Logistics", *Inzinerine Ekonomika-Engineering Economics*, Vol. 22, No. 4, pp. 443-450
- Ramirez, A. M. (2012), "Product return and logistics knowledge: Influence on performance of the firm", *Transportation Research Part E: Logistics and Transportation Review*, Vol. 48 No. 6, pp. 1137-1151.
- Ramirez, A. M. and Girdauskiene, L. (2013), "Creation of knowledge and reverse logistics. empirical analysis from perspective of the resource based view theory", *Inzinerine Ekonomika-Engineering Economics*, Vol. 24, No. 5, pp. 478–487.
- Richey, R. G., Genchev, S.E. and Daugherty, P. J. (2005), "The role of resource commitment and innovation in reverse logistics performance", *International Journal of Physical Distribution & Logistics Management*, Vol. 35 No. 4, pp. 233–258.
- Rogers, D.S. and Tibben-Lembke, R.S. (1998) *Going backwards: Reverse Logistics trends and practices*, Reverse Logistics Executive Council, Pittsburgh, P.A.
- Schneider, J. and Hall, J. (2011), "Why most product launches fail", *Harvard Business Review*, Vol. 89 No. 4, pp. 21-23.
- Schulz, M. and Jobe, L. A. (2001), "Codification and tacitness as knowledge management strategies: an empirical exploration", *The Journal of High Technology Management Research*, Vol. 12 No. 1, pp. 139-165.
- Skinner, L.R., Bryant, P.T. and Richey, R.G. (2008), "Examining the impact of reverse logistics disposition strategies", *International Journal of Physical Distribution & Logistics Management*, Vol. 38 No. 7, pp. 518-39.
- Smith, E. A. (2001), "The role of tacit and explicit knowledge in the workplace", *Journal of Knowledge Management*, Vol. 5 No. 4, pp. 311-321.
- Smith, A. D. (2005), "Reverse logistics programs: gauging their effects on CRM and online behavior", *Vine*, Vol. 35 No. 3, pp. 166-181.
- Sussan, A. P. and Johnson, W. C. (2003), "Strategic capabilities of business process: looking for competitive advantage", *Competitiveness Review: An International Business Journal*, Vol. 13 No. 2, pp. 46-52
- Talib, F., Rahman, Z. and Qureshi, M. N. (2011), "A study of total quality management and supply chain management practices", *International Journal of Productivity and Performance Management*, Vol. 60 No. 3, pp. 268-88.
- Tate, M., Furtmueller, E., Evermann, J. and Bandara, W. (2015) "Introduction to the Special Issue: The Literature Review in Information Systems", *Communications of the Association for Information Systems*, Vol 37 No. 1, pp. 103 – 111.
- Tibben-Lembke, R. S. (2002), "Life after death: reverse logistics and the product life cycle", *International Journal of Physical Distribution & Logistics Management*, Vol. 32 No. 3, pp. 223-244.
- Trebilcock, B. (2001), "Why are returns so tough?", *Modern Materials Handling*, Vol. 56 No. 11, pp. 45-51.
- Yalabik, B, Petruzzi, N and Chhajed, D (2005), „An integrated product returns model with logistics and marketing coordination“, *European Journal of Operational Research*, Vol. 161 No. 1, pp. 162-182

