ORIGINAL PAPER

A SYSTEMATIC REVIEW OF THE USE OF ORGANISATIONAL AND MANAGEMENT THEORIES IN REVERSE LOGISTICS STUDIES

Wenjuan Zhao[1], Lokhman Hakim Bin Osman[2]

1) School of Management, Universiti Kebangsaan Malaysia, Selangor, **Malaysia**
2) School of Management, Faculty of Economy and Management, Selangor, **Malaysia**

ABSTRACT. Background: Reverse logistics studies have received increasing attention in academic, organisational, and management research. Researchers have contributed to this field by borrowing theories from sustainable business research. However, there is a lack of literature reviewing the development and contribution of reverse logistics studies in organisational and management theories. By identifying the most frequently used management theories, this paper fills the gap and describes the theoretical contribution of reverse logistics papers to organisational and management theories.

Methods: Using the vote-counting technique, this article reviews 122 papers published between 2005 and 2021 to assess how organisational and management theories developed in the studies of reverse logistics.

Results: The analysis indicates that, while some, such as triple bottom line and critical success factors, have been frequently employed, the relation between reverse logistics and sustainability and other organisational theories remain undeveloped. It also discovered that the research topics only focused on product and material recycling, but few on product return and exchange logistics.

Conclusions: First, there is a huge gap in organisational and management theories and reverse logistics studies**.** It is suggested that scholars involved in reverse logistics studies can explore more connections between reverse logistics strategies and management theories in future research. Second, more theories should be used in addition to triple bottom line and critical success factors in reverse logistics research**.** Furthermore, although some incorporated other factors into the management theories and developed a framework after examining their interrelationship, little contribution has been made to the theories themselves. Additionally, more discussion of reverse logistics in the field can focus on product return and exchange logistics.

Keywords: reverse logistics, organisational and management theories, systematic literature review, sustainability, theories development

INTRODUCTION

The surge of electronic and electrical products and environmental concerns fuels the studies on Reverse Logistics (RL). In recent years, academia and business have highlighted the importance of RL for SCM because of environmental and social responsibilities and the economic benefits of used products. Therefore, RL is often connected to sustainability, remanufacturing, or strategy.

Although previous reviews discussed environmental issues and circular economy [Islam et al., 2021] or Green Supply Chain Management (GSCM) and management theories [Liu et al., 2018], there is still a lack of research on the use of organisational and management theories in RL studies. Therefore, this article aims to address the gap by identifying the main management theories adopted in RL and sustainability studies and analysing the contribution of these studies to theories by meeting the following objectives: (1) provide a review and synthesise the literature focused on RL; (2) summarise previous research over the past years and identify the limitations of these studies in terms of theories and methodologies; and (3) propose solutions to the research limitations and suggestions for future research. These goals are crucial for improving RL research.

This paper is organised as follows. The next section presents the scope and research methods. Section three demonstrates the results, including all management theories employed and highlighting the nine frequently used. Section 4 summarises the descriptive evaluations of the reviewed studies. The final section discusses the results and future research directions.

SCOPE AND RESEARCH METHOD OF THE LITERATURE REVIEW

This paper systematically reviews management and organisational articles concerning RL and sustainability published between 2005 and 2021. All papers were selected in the Web of Science. Three criteria applied for the selection are as follows: (1) the articles must relate to the keywords, RL, and sustainability, based on organisational and management theories. Keywords plus were not considered; (2) the research considers academic journal articles, including peer reviewed articles and early online publications to ensure objectivity; (3) the review only includes articles in English (see Figure 1).

The study first focuses on the articles discussing 'RL' and 'sustainability' associated with the term 'theory' in titles, abstracts and author keywords. This phase led to 41 papers referring to 21 theories, reflecting that some theories were used in more than one article. Subsequent searches concentrate on the specific theories identified in the initial research by combining 'RL' and 'sustainable' with the specific name of a theory (eg TBL and CSF) in the search algorithm. This round of search returned 81 papers and 29 additional theories. These theories were then included in further theory-specific searches. Finally, there were 132 papers adopting 50 theories.

The next step is to select the theories of related papers that could be classified as organisational and management theories. Since the classification of management theories remains undefined. The author adopted the classifications provided by Daddi et al. [2018], which identified 72 organisational and management theories. Theories identified by the former bibliographic research, but not included in the classifications mentioned above, were excluded from the analysis, as they were not pertinent to management theories. As a result, 29 of 50 theories were eligible for analysis (see Table 1). Therefore, the number of articles dropped from 132 to 122 articles associated with the 29 selected organisational and management theories. This paper only considers the nine organisational and management theories that are most frequently used in reverse logistics studies (see Table 2). However, according to the reference numbers, the manuscript selected only the most representative articles (61 papers in total) under the nine theories most applied nine theories (see Table 3).

RESULTS

The selected theories highlight a prevailing understanding of RL as a strategy in management and organisational studies at the microlevel rather than a societal, ethical, or macrolevel.

The descriptive summary of 61 contributions is listed in Table 4. This review analyses the literature in three dimensions: (1) annual contributions; (2) theoretical distribution; (3) and research characteristics: country/region, research methods, classification of studies, variables applied to RL, research field and industrial sector, and case study and sampling situation.

Annual Contributions

The studies on RL and sustainability increased slightly from 2005 to 2013, but were still quite inadequate, with only nine papers in total (see Figure 2). In this period, research was mainly on the RL system, Reverse Supply Chain (RSC), sustainability, Closed-Loop Supply Chain (CLSC), Green Supply Chain (GSC) and innovation issues. Few explored RL management issues [e.g., Presley et al., 2007; Hsu et al 2013]. With the surge of e-businesses and environmental awareness in logistics, the studies witnessed a noticeable increase from 2013 to 2018, reaching 38 papers, 18 papers of which published in 2018. The diversity and depth of discussion showed in the selection of the themes, ranging from remanufacturing, recycling, and CLSC to the RL implementation and operation process. Most of the research discussed the issue in emerging market such as India, Malaysia, and China throughout the

period. This was attributed to the rapid development of e-commerce.

Theoretical Distribution

The initial paper that applied management theories to RL was in 2005, employing Institutional Theory (IIT) to develop a RL monitoring system to control the reverse flow of materials through marketing channels [Richey et al., 2005]. However, TBL is the most applied theory, with 18 papers, followed by Resource-based Theory (RBT) and Critical Success Factors Theory (CSF), with 11 and 8 articles, respectively. The top three theories were used annually between 2014 and 2021 and accounted for 64.1% of all RL research. In particular, studies that used RBT contributed eight articles over the last three years, accounting for 13.1% of the gross amount. This demonstrated that RBT might become the new cutting-edge organisational and management theory in RL research.

Research Characteristics

Targeting Country/Region Analysis

The analysis finds that RL studies receive more interest in developing countries and were centralised in specific countries or regions. Among the 61 reviewed articles, 23 focused on Indian RL issues, followed by Europe (7), China (3), Chinese Taiwan (5), Malaysia (3), Bangladesh (2) and South Africa (2). RL enjoys a high prevalence in India, and scholars wrote articles evenly and annually from 2015-2021, and the trend in Europe was from 2015-2018. In comparison, RL research publications in Taiwan started from 2014 to 2016 and Malaysia from 2013 to 2019. The contributions of Brazil, China, South Africa, and Bangladesh RL contributions began between 2019 and 2020. Therefore, it could be summarised that RL issues have drawn more academic attention in most BRICS countries.

Research Methods

The review found that case study, theory analysis, questionnaire, literature review, and interview were the primary research methods. Most of the papers (26) employed case studies,

accounted for 42.6%, and specifically, nine applied TBL, five in CSF; DCT, IIT and FST contributed three papers, respectively. The following was the theory analysis of 16 papers in total, TBL contributed seven papers, both GE and CSF counted three papers. Then was the questionnaire (ten articles), six of which were conducted by RBT; the interview contributed seven articles. Most case studies examined theories with practice but were limited to automobiles and electrical and electronic equipment. This indicates that the study of RL issues still needs more practical experience and industrial cases in other sectors to apply the organisational and management theories. Moreover, with the development of global business and manufacturing industries, such as automobiles, electrical and electronic products, pharmaceuticals, and e-business, and the need for sustainable development, the practice and research of RL have become more critical than ever. The cooperation between academia and industries has become a proper and efficient approach to simultaneously promoting the research and sustainable development of these industries.

Most of the papers combine modelling analysis with case studies (26) or theoretical analysis (16). It has also been found that there were hardly commonly applied research methods in each theory. The explanation for this can be that the RL study is still in the initial stage and scholars need to explore various solutions using different approaches. Specifically, under TBL, CFS and DCT, there are in total eight articles used in Decision-Making Trial and Evaluation Laboratory (DEMATEL) [e.g., Mathivathanan et al., 2018]. Nine were built on GT and IIT [e.g., Dubey et al., 2017]. Another six contributions adopted Fuzzy related methods, four of which were based on FST [e.g., Cui et al., 2021]. In addition, four papers focused on Partial Least Square (PLS), focusing on TBL, RBT, DCT, and ST [e.g., Kumar and Rahman, 2016]. Four research applied Multiple-Criteria Decision-Making (MCDM), among which two were based on CSF [e.g., Kannan, 2018; Gardas et al., 2018].

Classification of the Studies

The selected theories included common theoretical approaches to the corporative

relationship between individuals, organisations and stakeholders, and industry/system-level studies (see Table 5), such as TBL [Kumar and Rahman, 2016]; CSF [Luthra et al., 2018], Stakeholder Theory (ST) [Brockhaus et al., 2016], GT [Yan et al., 2018], and the Planned Behaviour Theory (PBT) [Brockhaus et al., 2016]. Other influential approaches to decision-making and behaviour studies, corporate governance, and strategic management were included, such as the RBT [Bag and Gupta, 2020]. Second, mathematical approaches to industry/systems include Fuzzy Set Theory (FST) [Cui et al., 2021] and IIT [Li et al., 2019]. Such research provides decision-making and behavioural, environmental, strategic management, and corporate governance suggestions on crucial organisational, industrial, and business issues, such as prioritising the 3PRLPs [Pourjavad and Mayorga, 2018], CLSC network [Darbari et al., 2019], the unexpected situations under embedded environmental consciousness [Nishant et al., 2016], the implementation of GSCM strategies [Liu et al., 2020], and RL monitoring system for controlling reverse flows of materials through marketing channels [Richey et al., 2005]. Finally, psychological theory and its extension in RL drivers and marketing theory (IIT) in strategic resources [Hsu et al., 2013].

Table 5 concludes the theories selected according to the field of study and the unit of analysis adopted in these articles. The number within brackets indicates the articles within the specific field of study, focusing on the specific unit of analysis. The table shows that scholars adopt some theories with a specific unit of analysis and in a specific field of study. In contrast, TBL, RBT, CSF, DCT, IIT, ST, and PBT demonstrate the capacity to be adapted to different fields and units.

Variables Applied to RL

Most of the articles that used TBL applied economic, environmental and social factors as the research variables. Among these, Govindan et al., [2015] and Lu et al., [2016] only adopted environmental factors, Bradley et al., [2018] and Waqas et al., [2021] used economic and environmental factors, while Schenkel et al., [2015] applied environmental and social factors.

These indicate that environmental issues are the focus of RL research with TBL.

There are 11 papers employed RBT all the papers are empirical studies, using strategies as the shared variables. Huang and Yang [2014], Morgan et al., [2018], Paras et al., [2019], Shaharudin et al., [2019], Bag and Gupta [2020], and Nag et al., [2021] also added resources as other factors.

Research Field and Industrial Sector

Most of the reviewed research consisted of multiple fields or topics, and some papers focused on more than one aspect [e.g., Ashby, 2018; Waqas et al., 2021]. Among these, 23 articles studied manufacturing topics [e.g., Huang and Yang,2014; Agrawal et al., 2016a; Yan et al., 2018]. 20 articles discussed management issues [e.g., Shaharudin et al., 2015; Mangla et al., 2018; Liu et al., 2020], both sustainable related issues and topics of the automobile industry contributed 19 papers [e.g., Kumar and Rahman, 2016; Biswas et al., 2018]. 16 articles focused on GSC [e.g., Hsu et al., 2013; Jayaram Avittathur, 2015], and 13 papers conducted CLSC research [e.g., Schenkel et al., 2015; Darbari et al., 2019]. Meanwhile, electronic-related topics contributed 11 papers, while both environmental and circular supply chain topics recorded six papers [e.g., Bag et al., 2020; Cui et al., 2021].

Case Study and Sampling Situation

According to Table 4, 26 articles were case studies, 12 of which explained the firm size. Nine cases were conducted at large companies, two discussed small, medium, and large companies, while only one considered medium companies.

Among the 26 case studies, all the papers collected primary data. For studies that used primary data by questionnaire, the sample size (excluding the interview) ranged from 12 to 2000 with an average of 644, the average response number was 203, and the average response rate was 38.9%.

REVERSE LOGISTICS STUDIES WITH ORGANISATIONAL AND MANAGEMENT APPROACHES: THE TOP THREE USED THEORIES

1. THE TRIPLE BOTTOM LINE THEORY (TBL)

The TBL consists of three parts: social, environmental, or ecological, and financial and evaluates performance from a broader perspective to create more business value [Slaper and Hall, 2011]. It has been applied in several studies to explore the approach to sustainable development and the measurement of social and ecological categories in addition to the financial performance of enterprises.

TBL has been frequently applied to the studies of RL in the electronic industry. Agrawal et al. [2016a; 2016b], Kumar and Rahman [2016] and Flygansvaer et al., [2018] researched the RL of the electronic industry based on TBL. The studies found that outsourcing decisions shape the performance of the reverse supply chain (RSC), and product returns are positively related to RL operational performance and critical to an organisation's sustainability. Managers who seek to enhance TBL performance should foster an ecologically orientated culture.

Other scholars utilise TBL to study the RL operation model. Bradley et al. [2018] demonstrated the demand for a total life cycle cost model that serves as the primary engineering economic model based on TBL and found that sustainability is a three-legged stool with the economic leg as the centre. Meanwhile, Darbari et al. [2019] and Mota et al., [2018] proposed that sustainable RSC can be achieved by TBL. Developing a Sustainable Reverse Logistics (SRL) model to adopt RL practices in existing supply chains has emerged as an essential incentive for manufacturers to gain financial and competitive advantage. Devika et al. [2014] researched the multi-objective, multi-echelon RL network design. The findings indicated that network centres that require lower opening costs create more opening and operating job opportunities.

Generally, TBL is the most applied theory in RL research. It is frequently discussed and associated with the electronic industry, developing the operation model, partner selection, and CLSC network configuration. It has also been found that, among the three variables, researchers are more concerned about environmental issues.

2. RESOURCE-BASED THEORY (RBT)

RBT, also called Natural RBT (NRBT), is a managerial approach that determines the strategic resources that a firm can exploit to achieve a sustainable competitive advantage. Such an advantage is based on the idiosyncratic and heterogeneous bundles of resources, assets tangible and intangible, and processes that a firm can control [Barney et al., 2001].

RBT has been used to study RL in the clothing industry. Ashby [2018] investigated a CLSC through an in-depth case study of a UK-based clothing firm and showed that strategic resources, shared vision, and principles are essential between the focal firm and its Reverse Value Chain (RVC). Paras et al., [2019] further evaluated the RVC in the industry and indicated that low operating cost, skilled human resources, business knowledge and location are internal success factors.

Some scholars applied RBT to study the impact of human resources or drivers on RL. Bag and Gupta [2020] found that green human capital positively influences RL adoption and remanufacturing operations, while top management commitment and sustainability culture moderate on path availability, green human capital, and RL. Nag et al. [2021] utilised RBT to identify and evaluate drivers and sub-drivers. They proposed that the firm focus on circular value marketing, circular services, circular product design, and reverse flow.

RBT also focuses on the study of SRL. Morgan [2018] examined a structure-conduct-perform linking resource commitment to future sustainable SCM, RL and operation, and they believe that resource commitments could be employed to develop a SRL capability and reduce the relating environmental impact. Nishant et al. [2016] integrated NRBT and materiality and revealed that Indian firms were

concerned with RL, product recycling and improving supplier environmental performance.

In general, RBT has been used to RL in issues including the manufacturing industry, clothing, SRL, and the impact of human resources or drivers on RL, which is a major application of RBT to the study of RL. For all the variables of RBT, the researchers mainly focused on the strategies.

3. CRITICAL SUCCESS FACTORS (CSF)

CSF or critical success activity is required to ensure the success of a company or an organisation's success. The theory was initially employed in the areas of data analysis and business analysis and analysed the central success factors in a company [Rockart, 1979].

CSF has been frequently applied to the RL industry and activities and has been considered as a systematic approach to improve environmental impacts and ensure sustainability in business. Sachin et al., [2015] discovered that industries were enthusiastic about adopting RL activities, although facing several difficulties, such as insufficient knowledge and resources regarding RL implementation. Therefore, they suggested that companies concentrate on the effectiveness and efficiency of RL adaptation.

Other scholars adopt the theory to analyse RL in terms of sustainability or the environment. Based on the Indian automobile industry, Luthra et al. [2017] provided a scientific model that offers comprehensive information on supplier selection for sustainability via using an integrated AHP-VIKOR approach. The study concluded that the environmental dimension achieves the maximum priority weight and that environmental costs received the highest rank. Gardas et al. [2018] and Kannan [2018] also discussed the same issues in the automobile industry. Silva and Fontana [2020] proposed a CSF survey procedure in reverse flow inventory management. Their findings provided a methodology to survey some CSF situations, which made the cyclic analysis and a comprehension of multiple perspectives critical in group decision-making environments.

The CSF is used mainly in the management or decisions of the RL, primarily focusing on the automobile industry. The findings revealed that technology involvement and green practice factors are the most important among CSFs, implying that sustainable management requires the most responsiveness. The researchers put management as the most critical variable.

REVERSE LOGISTICS STUDIES WITH ORGANISATIONAL AND MANAGEMENT APPROACHES: THE LESS FREQUENTLY USED THEORIES

4. INSTITUTIONAL THEORY (IIT)

IIT answers the central question of why all organisations in a field tend to look and act the same. IIT and its evolution as the new institutionalism theory have been widely debated in environmental management studies.

The theory has been frequently investigated for the drivers or motivations for firms or individuals to participate in the RL or GSC. Hsu et al. [2013] also developed four constructs under ITT that motivate firms to adopt and implement GSC. Similarly, Li et al. [2019] examined how the interaction of external and internal pressures influenced the top management championship of green practices in China. The results concluded that the top management championship significantly impacted the adoption of green practices.

Other scholars emphasise developing a framework or system to address the current issues on product return and exchange logistics. Shaharudin et al. [2015] uncovered that Malaysia's five electrical companies had adopted a single return management programme to handle different product returns based on IIT to achieve sustainability. Richey et al. [2005] developed an RL monitoring system to control the reverse flows through marketing channels in emerging economies. Their research also developed and scaled a partner control model for managers and academics.

IIT is used most to explore the drivers or motivations for firms or individuals to participate in the RL or GSC. The theory also discussed or

developed the RL system or other current issues relating to RL. The most concerning variable of IIT applied to RL is organisational behaviour.

5. STAKEHOLDER THEORY (ST)

ST is one of the most popular management theories and has also been widely debated. The theory concentrates on dealing with the role of stakeholders in company strategies. Based on the theory, stakeholders' involvement in corporate decisions is not only an ethical approach but also a strategic variable to gain competitive advantages [Plaza-Ubeda et al., 2010]. Scholars have frequently applied ST to several works in different fields, and it has been frequently applied combining with other theories.

Schenkel et al. [2015] researched integral value creation in CLSCs by distinguishing between multiple types of business value, strategic success factors, and multiple groups of stakeholders that influence and are influenced by CLSC activities with ST. They found that CLSC activities create opportunities and reduce risks for the focal company and its primary and secondary stakeholders.

Wijewickrama et al. [2021] studied the increasing detrimental effects on sustainability and the RL Supply Chain (RLSC) employing 21 semi-structured interviews representing five external stakeholder categories. They explained that regulatory uncertainties are the root causes that influence quality assurance in the RLSC.

ST is comprehensively applied to the creation of integral value in CLSC and increasing detrimental effects on sustainability and RLSC. It has also been found that the internal and external stakeholders are the key variables.

6. DYNAMIC CAPABILITIES THEORY (DCT)

There are many definitions of the theory, Teece et al., [1997] defined DCT as "the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments." To date, studies on DCT have multiplied over the past two decades, leading to an intensively studied and complex management theory.

There are three case studies related to RL to DCT. Munny et al. [2019], Bag et al., [2020], and Bhatia [2021] discussed the relationship between technological capabilities/innovation and environmental strategies and found that workplace health and safety practises are the most critical impactors for the social sustainability of a footwear manufacturing company's Supply Chain (SC).

The case study is the most frequently used method of DCT in RL research. The relationship between organisational behaviour and sustainability or social responsibility has been mostly discussed. Additionally, the strategy was the most crucial variable in all the selected papers.

7. FUZZY-SET THEORY (FST)

FST is a decision-making approach in managerial perspectives in firms that depends on several criteria, such as qualitative perceptions provided by humans, data shortage, and uncertainty in judgements. The computed results can be misleading if fuzziness during recording uncertain situations is inappropriately handled [Zadeh, 1996].

Some scholars apply FST to study the RL of the electronic industry. Darbari et al. [2019] designed a CLSC network for an Indian laptop manufacturer with fuzzy goals of TBL impact. The results showed the importance of employing the CLSC model as a decision approach.

FST is also conducted for the research of SCM. Stekelorum et al. [2021] examined how different combinations of internal and external GSCM influence the operational and financial performance. The results showed that a combination of green supply and eco-design packaging enhances the performance of small TPLs.

However, other researchers use FST to evaluate prioritising or environmental issues. Cui et al., [2021] investigated the reduction of resource waste and improved resource utilisation efficiency. The results showed that technological innovation encourages consumers to return used products and buy remanufactured products.

The fuzzy performance importance index is the most applied variable for all six papers, and this theory is used in implementing GSCM strategies and the finding the best solution. Furthermore, FST also discussed the evaluation of prioritising environmental issues.

8. GAME THEORY (GT)

GT examines the decisions of individual players to win a game against one or more competitors. Players are abstract, intelligent, individual agents who act in pursuit of their own limited goals in an abstract setting [Miles, 2012]. The theory has been involved in management, business, economies, political science, and international environmental agreements.

GT has been frequently applied to the modelling analysis of RL. Yan et al. [2018] used GT to investigate the expenses and gains of two potential sustainability options (I: owning the reverse channel and collecting cores directly; II: outsourcing operations to third-party remanufacturers). They found that compared to Model I, OEM conducting take-back operations can achieve better results for TBL situations.

The application of GT also focuses on remanufacturing technology. Shekarian et al. [2021] investigated the effects of carbon emission and remanufacturing simultaneously in a dual channel in both forward and RL and found that consumers are generally more sensitive to the price and gained profits rather than the carbon footprint when purchasing remanufactured products due to their doubts on the quality and technology level of these products.

GT has been frequently used in the modelling analysis of RL, such as integrating CLSC network design to find a better solution. Furthermore, remanufacturing technology is another focus of the GT's application to RL studies to provide possible development strategies. Therefore, the researchers considered strategy as the most crucial variable.

9. THEORY OF PLANNED BEHAVIOUR (TPB)

Identifying the cognitive drivers of RL has aroused general interest in management and consumer research. The original TPB framework consists of three elements: behavioural intention, subjective norms, and Perceived Behavioural Control (PBC). TPB is frequently adopted to investigate the cognitive processes of several RL behaviours [Tikir and Lehmann, 2011].

TPB has been applied to sustainable/RSC and logistics over the past seven years. Brockhaus et al. [2016] conducted an inductive empirical study of 28 European and US companies and then developed a framework for benchmarking product sustainability efforts. The article explored the dynamics of the supply chain related to RL's sustainable product programmes and empirically developed a framework to align efforts throughout the supply chain to bring sustainable products to market. Dixit and Badgaiyan [2016] discussed the acquisition from consumers by determining the psychological contributors to the intention on e-waste return. The findings indicate that the intention is a mediating variable in predicting return behaviour. Furthermore, perceived behavioural control, subjective norms, moral norms, and willingness to sacrifice were the antecedents to the return intention.

There are only two papers applying TPB to the study of RL. Researchers discussed benchmarking product sustainability and e-waste acquisition from consumers. Behavioural control is the variable covered in both papers.

DISCUSSION AND FUTURE DIRECTIONS

The review process confirms that RL studies lack a clear theoretical contribution to the development of organisational and management theories, since only a few organisational and management theories were mentioned in RL papers. In general, TBL (18 papers), RBT (11 papers), and CSF (8 papers) are the most commonly used management theories in the existing literature.

Quantitative studies are the most commonly adopted approach for the top five theories. Table 6 indicates that some scholars limit their topics to a specific area. 12 contributions developed a new hybrid approach to evaluate and select partners based on TBL

with quantitative studies [e.g., Presley et al., 2007; Devika et al., 2014]. Furthermore, some articles employed two theories simultaneously, such as the use of FST and ST in the article by Darbari et al., [2019]. For the case of CSF, four quantitative articles and one qualitative article [Silva and Fontana, 2020] collected the primary data for analysis. On the contrary, Mangla et al., [2018], Gardas et al., [2018], and Thakur and Mangla [2019] adopted secondary data. The similarity in data collection was found in all seven contributions based on quantitative and qualitative contributions for GT. The articles adopting RBT include quantitative articles [e.g., Huang and Yang, 2014; Morgan et al., 2018], a qualitative article [Paras et al., 2019], and a conceptual article [Li et al., 2019], and these articles collected primary data. Nag et al. [2021] adopted the secondary data and applied ST. For FST, Stekelorum et al. [2021] adopted the primary data, and the other papers adopted the secondary data.

The less used theories highlight a different distribution from the top three theories used among the three categories of research methods. According to the year of publication, quite surprisingly, most papers published in recent years used similar theories adopted in the earlier research. The contributions to the less used theories mainly focused on qualitative and conceptual research, while the top three used theories were quantitative studies. This indicates that the less-used theories can be the new research directions for the RL studies. From the analysis of the authors, in contrast to the three used theories, few significant contributions have been made to a specific theory in the less used theories. In terms of data collection method, for IIT, most papers adopted primary data [Shaharudin et al., 2015; Dubey et al., 2017], and similarly in TPB, two papers both adopted the primary data [Brockhaus et al., 2016; Dixit and Badgaiyan, 2016]. It shows a deficiency of ST-incorporating research, with two quantitative [Kumar & Rahman, 2016; Nag et al., 2021] and two conceptual papers [Brockhaus et al., 2016; Kannan, 2018]. Furthermore, there is a lack of qualitative studies.

By systematically reviewing the literature, the total number of research on the topic incorporating management theories remains extremely insufficient. Moreover, few extended the theories. Most existing studies focused on SCM (e.g., GSCM, operation management). To RL, the existing research limited their focus on remanufacturing or recycling the disposal product, whereas few noticed the return and exchange logistics. Since the sector is gaining a greater importance, future research should pay closer attention to this research field via incorporating management theories, which, in turn, would benefit the development of the original theory.

Third, although some incorporated other factors into the management theories and developed a framework after examining their interrelationship, little contribution has been made to the theories themselves. Researchers can be more courageous in their approach by updating and broadening the theories explored. It also discovered that current research topics focus on product and material recycling, but few on product return and exchange logistics and consumers' purchase intentions on remanufactured products, where lies the direction of future research.

However, it is beyond the capabilities of this review to cover all the aspects and issues of this field due to the knowledge and resources constraints. Furthermore, the papers selected for this review were all from the WOS database, which could be another limitation. Furthermore, no similar review on the use of management theories has been published in the literature, making it difficult for this manuscript to compare the findings.

This paper aims to investigate the gap regarding the use and contribution of RL studies to organisational and to management theories and offer some insights into the RL study. The identified gaps and the corresponding future research directions are presented as follows. First, it confirms the concerns raised by the literature, although the number of RL and sustainability studies based on management theories has been increasing over the past decade. However, if comparing the number of organisational and management theories identified with the number of theories used in at least one paper, there is still a considerable gap. It is suggested that scholars involved in RL studies explore more connections between RL

strategies and management theories in future research. Second, among the few management theories employed, TBL and CSF appeared to be more attractive for researchers in RL, and with respect to published articles, most of the articles were empirical studies conducted in the emerging market. Future studies could explore the reasons for this phenomenon.

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Wenjuan Zhao   ORCID ID: https://orcid.org/0000-0001-7642-8503
School of Management,
Universiti Kebangsaan Malaysia, Selangor, **Malaysia**
e-mail: P117552@siswa.ukm.edu.my

Lokhman Hakim Bin Osman   ORCID ID: https://orcid.org/0000-0001-6630-5067
Faculty of Economy and Management,
School of Management, Selangor, **Malaysia**
e-mail: lokhman@ukm.edu.my
Corresponding Author