



The road to become a preferred customer in the circular supply chain

The impact of buyer's adoption of circular economy principles and corporate prestige on supplier satisfaction with OEMs as key suppliers

a quantitative case study with a metal recycling company

Colophon

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Preface

This thesis is a partial fulfilment of the requirements for the degree of Master of Science in Business Administration, with a specialisation in Purchasing and Supply Management. The basis for this research originally stemmed from my passion for sustainability and innovation, two broad concepts which I investigated deeply during my study abroad year in Singapore. As the world moves further, the awareness of corporate social responsibility is increasing – encouraging organisations to adopt sustainable innovations within their supply chain management. How will the future of supply chains look like? It is my passion to not only find out, but to advise organisations to consider sustainability in buyer-supplier relationships.

In truth, I could not have achieved my current level of success without a strong group of supporters. First of all, my parents, who supported me with understanding and love. Secondly, my fellow students, for providing me with unfailing support and encouragement during my years of studying, researching, and writing this thesis. Thirdly, the University of Twente, for providing extracurricular courses such as the Master Honours program and the Negotiation Project Twente, which challenged me both academically and socially. Fourthly, my supervisors of the University of Twente and Riwald Recycling. I wish to express my deepest gratitude to Professor Holger Schiele and Frederik Vos. Because of them, I have gained valuable content wise purchasing and supply management knowledge and learned more about conducting academic research. Also, I would like to thank both for keeping the standards of our education high, which challenged me throughout the master's program. Finally, I would like to thank Ewald Huzink from Riwald Recycling, for giving me a chance for performing research at Riwald Recycling. Without the support of Ewald Huzink, I would not have had the chance to conduct this study and to gain valuable insights from the circular supply chain management, which I always found an interesting research topic. Thank you all for your unwavering support.

Abstract

Previous decades revealed two fundamental changes occurring in SCM: first, the concentration on core competencies and the outsourcing of the remaining functions steadily reduced the OEMs' depth of production. This trend increased the importance of purchasing. Second, and in parallel, in purchasing the trend prevailed to reduce the number of suppliers and concentrate on a few buyer-supplier relations. Thus, the number of available suppliers sunk, often causing oligopolistic situations, while their importance increased. Additionally, from sustainability perspective, scarcity of raw materials and the increase of CSR and CE practises forced organisations to integrate sustainability, with CSCs as result. Consequently, these (mega)trends challenge purchasing to react with novel approaches. Therefore, by achieving a PCS, a buying firm can benefit from preferential treatment of the supplier. In the process to become a preferred customer, supplier satisfaction plays a crucial role.

Next to the replication of Vos et al. (2016), this research will provide new insights by examining the directly and indirectly influence of corporate prestige – dissected into corporate reputation and corporate status - as well as the buyer's adoption of CE principles on supplier satisfaction in order to obtain the PCS. Quantitative data is collected from 51 OEMs, as key suppliers, of a metal recycling company within the CSC. By using the partial least square–structural equation modeling, with support from SmartPLS, buyer's reputation positively influences PCS, where status shows an insignificant relationship on both constructs. The same applies for the relation between buyer's adoption of CE principles on supplier satisfaction and PCS. In addition, results show the significant effect of buyer's adoption of CE principles on corporate reputation and reputation as underlying factor for the classical antecedents of Vos et al. (2016). This implies that future studies on satisfaction must consider prestige and sustainability as central variables in the 'cycle of preferred customership'.

Keywords: preferred customer status; supplier satisfaction; corporate prestige; status; reputation; sustainability; circular economy principles; and CE

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Index of abbreviations

Abbreviation	Description
AVE	Average Variance Extracted
CE	Circular Economy
CSC	Circular Supply Chain
CSCM	Circular Supply Chain Management
CSR	Corporate Social Responsibility
HOE	Hierarchy of Effects
HTMT	Hetrotrait-Monotrait Ratio of Correlations
NPD	New Product Development
OEM	Original Equipment Manufacturer
PCA	Principal Component Analysis
PCS	Preferred Customer Status
PLS	Partial Least Squares
PLS-MGA	Partial Least Squares – Multigroup-Analysis
PLS-PM	Partial Least Squares – Path Modeling
PLS-SEM	Partial Least Squares - Structural Equation Modeling
PPP	Public-Private Partnership
PSBM	Public Sector Business Model
SCM	Supply Chain Management
SEM	Structural Equation Modeling
SDG	Sustainable Development Goal
SET	Social Exchange Theory
SPSS	Statistical Package for Social Sciences
SRMR	Standardized Root Mean Square Residual
SSCM	Sustainable Supply Chain Management
WBCSD	World Business Council for Sustainable Development

One Man's Trash is Another Man's Treasure: How the Circular Economy contributes to achieving SDGs. (Mattera, Centeno & Portillo, 2018)

1. An introduction to the growing importance of corporate social responsibility and circular supply chain management: the effect of corporate prestige and buyer's adoption of circular economy principles on supplier satisfaction to PCS

1.1. The emerging importance of circular supply chain management as result of corporate social responsibility, circular economy and scarcity

The evolution of the economy, technological (mega)trends, and the socioeconomic demands of communities have influenced and affected the actions of business owners in a significant way¹. These factors have unleashed a high degree of competitiveness and accelerated globalization of (emerging) markets, forcing companies to improve their processes and their products, and to know their consumers in greater depth². To face these changing manifestations of the micro- and macroenvironment, companies are incorporating corporate social responsibility (CSR) into their business models³. Numerous researchers⁴ quoted the definition of CSR by World Business Council for Sustainable Development – WBCSD - which defined CSR as “the continuing commitment by business to behave ethically and contribute to sustainable economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large.” The subject of CSR and its relationship to supply chain management (SCM) has been widely discussed in literature⁵, however, research specialising in purchasing CSR or sustainable purchasing/procurement is a burgeoning topic that needs to be addressed by scholars and practitioners⁶. Nevertheless, in May 2011, the German business consulting group h&z conducted a research ‘Challenges in Procurement 2021’⁷. The overall goal of the h&z research is to discover external trends, due to the fact that procurement links companies and the supply side of the market, that will influence firms’ procurement until 2021. With support of academics from the procurement field, trend researchers and chief procurement officers, h&z hosted three global round table sessions to define megatrends - long-lasting social and/or economic changes that can be caused

¹ See Zahra (2005), p. 22.

² See Hodgson (2016), p. 1-2; Teece (2010), p. 172-174.

³ See Schaltegger & Wagner (2017), p. 3-5.

⁴ See Choi et al. (2019), p. 3; Borza (2011), p. 194; Ismail (2011), p. 372.

⁵ See Tate et al. (2010), p. 26-28; Andersen & Skjoett-Larsen (2009), p. 77-78; Lee & Kim (2009), p. 141.

⁶ See Walker & Jones (2012), p. 202.

⁷ See h&z consulting (2011), p. 3.

by influences i.e. technological breakthroughs, changes in the balance of geopolitical power, demographic influences and environmental changes - and their implications for procurement⁸. The increase of environmental and social responsibility (CSR) is one of the five megatrends that have been determined during the round table sessions. Previous research⁹ by Möller (2012) and Bapeer (2018) revised the study of h&z consulting and both concluded that ‘the increase of environmental and social responsibility (CSR)’ is perceived as the most important megatrend for procurement professionals for future operations.

Recently, some studies combined the concepts of CSR and circular economy (CE). Leandro and Paixao (2018) consider CSR as ‘the corporate management philosophy and set of practices that better frames sustainability, and CE draws from the purest values of CSR and puts them to practice.’¹⁰ As consequence, the concept of CE is spreading significantly, expanding to new challenges such as economic growth and political strategy for the development and implementation of new (sustainable) business models¹¹. More precisely, CE is essentially an environmental change in response to the global need for an ecological economy, which requires human economic activities that are consistent with the three Rs principles - recover, reuse, and recycle¹². The implication of CE is that businesses are forced to shift from their linear (‘take-make-consume-dispose’) to circular (‘closed-loop’) models, based on reused, recycled, or repaired materials and products¹³. Resulting from this transition, the term ‘circular supply chain (CSC)’ has been arisen in studies when linking CE with supply chain management (SCM)¹⁴.

Aside from CSR and CE, a supplementary factor strengthens the emerging importance of CSCs (in purchasing): scarcity of raw materials¹⁵ and suppliers¹⁶. Scarcity of raw materials can be linked with economic and population growth due to

⁸ See h&z consulting (2011), p. 3-4.

⁹ See Bapeer (2018), p. 44; Möller (2012), p. 68-69.

¹⁰ See Leandro & Paixao (2018), p. 23.

¹¹ See Fortunati et al. (2020), p. 2; Geissdoerfer et al. (2018), p. 757-758.

¹² See Ying & Li-Jun (2012), p. 1683.

¹³ See Farooque et al. (2019), p. 4; Mentink (2014), p. 14-15.

¹⁴ See Mishra et al. (2018), p. 512; Angelis et al. (2018), p. 426-427; Nasir et al. (2017), p. 446.

¹⁵ See Mancini et al. (2013), p. 14.

¹⁶ See Hüttinger et al. (2014), p. 697; Steinle & Schiele (2008), p. 3-4.

technological innovations, mass consumption (economy of scale principles) of short-lived-tech-products and the economic development of emerging countries¹⁷. From supplier perspective, a decreasing pool of suppliers leads to scarcity, which makes it difficult to find substitute suppliers, and relationships become stabilise¹⁸. A strategy for firms to deal with scarcity is to implement CE principles in their supply chain,¹⁹ next to becoming a so-called ‘preferred customer’, which is based on three core aspects: customer attractiveness, supplier satisfaction and preferred customership²⁰.

1.2. Buyer’s adoption of circular economy principles, corporate reputation and status on supplier satisfaction and preferred customers status as central focus

Elaborating on the preferred customer status (PCS), which originates from the concept of reverse marketing wherein customers are competing for the best suppliers, buying organisations start to recognize that securing their key supplier’s benevolence is essential for future success²¹. Recent studies further evidenced that affluent buyer-supplier relationship creates a win-win situation with positive impacts on the performance along many dimensions e.g. financial benefits²², innovation²³, flexibility²⁴, customer satisfaction²⁵, environment²⁶, knowledge transfer²⁷, service, and inventory²⁸. Based on Schiele et al. (2012b), obtaining PCS is dependent on two important constructs – customer attractiveness and supplier satisfaction – which needs to be classified as antecedents for PCS²⁹. As follow-up research, Hüttinger et al. (2014) examined the associated antecedents for PCS, customer attractiveness and supplier satisfaction. Elaborating on the study of Hüttinger et al. (2014), Vos et al. (2016) replicated and extended the research model by adding profitability as an antecedent and tested the model both on direct and indirect materials³⁰. The revised

¹⁷ See Mancini et al. (2013), p. 14; Köhler (2012), p. 1168.

¹⁸ See Schiele (2010), p. 138-139.

¹⁹ See Gaustad et al. (2018), p. 1.

²⁰ See Pulles et al. (2016), p. 129-130; Schiele et al. (2012b), p. 1179-1180; Hüttinger et al. (2012), p. 1203.

²¹ See Schiele et al. (2012c), p. 134; Anderson & Narus (1990), p. 43.

²² See Sáenz et al. (2018), p. 238; Kumar & Rahman (2016), p. 836.

²³ See Jajja et al. (2019), p. 331; Schiele (2012a), p. 44.

²⁴ See Sáenz et al. (2018), p. 238.

²⁵ See Sáenz et al. (2018), p. 238.

²⁶ See Kumar & Rahman (2016), p. 836.

²⁷ See Hald et al. (2009), p. 960.

²⁸ See Falasca & Kros (2018), p. 41.

²⁹ See Schiele et al. (2012b), p. 1179.

³⁰ See Vos et al. (2016), p. 4613.

model can be classified as a ‘state-of-the-art’ analysis, which could be the base for future research on supplier satisfaction. By obtaining the PCS, the exclusivity and sustainability of the buyer-supplier relationship can be established³¹.

The underlying assumption is that suppliers produce a ranking of their customers, at least differentiating between preferred and standard customers. Rankings are comparative ordering systems, which can either be conceived as a proxy for status (relative standing of an organisation) or as measure for firm reputation³². If suppliers classify their customers in such a ranking, the question arises which criteria they apply, either consciously (as part of their customer segmentation tools) or intuitively? Previous research has produced a variety of criteria which seem to discriminate, in particular factors evolving around future business and growth expectations, current profitability, relational behaviour and operative excellence of the customer³³. However, the corporate reputation and status of the buying firm as well as the emerging role of buyer’s adoption of CE principles, the extension of the traditional CSR philosophy, are generating considerable interest in terms of supplier satisfaction and preferred customership.

Reputation and status recently gained attention in the field of green procurement and CSR. Reputation represents the aggregated perceptions about the organisation of all its stakeholders (competitors, customers, and/or suppliers) based on its past performance³⁴. This evaluation is based on the stakeholder’s direct experiences with the organisation, any other form of communication and symbolism that provides information about the organisation’s actions and/or a comparison with the actions of other leading competitors³⁵. Status, on its turn, originated in the sociology and is associated with terms such as respected, admired, regarded and prestige. Piazza & Castellucci (2014) defined status as ‘‘the perception of an entity being highly ranked and admired by others’’, and Huang & Washington (2015) defined status as ‘‘a subjective judgement of social rank based on a hierarchy of values.’’³⁶

³¹ See Schomann et al. (2018), p. 231.

³² See Rindova et al. (2018), p. 2175-2176.

³³ See Pulles et al. (2019); Vos et al. (2016), p. 4613.

³⁴ See Quintana-Garcia et al. (2020).

³⁵ See Gotsi & Wilson (2001), p. 24-25.

³⁶ See Huang & Washington (2015), p. 1754; Piazza & Castellucci (2014), p. 289-290.

Current literature about PCS does not include the corporate prestige concepts - 'corporate reputation' and 'corporate 'status' of the buying firm – in one research within a CSC as well as the influence of buyer's adoption of CE principles on corporate reputation and supplier satisfaction. This will be the central hypothesis of this research. Validating this claim leads to the following two research questions:

RQ1: Does the buyer's corporate prestige influence the supplier to award preferred customer status to a buying firm?

RQ2: Does the buyer's adoption of circular economy principles influence the corporate reputation and supplier satisfaction of the buying firm?

According to Jensen & Roy (2008), the concept 'corporate prestige' is a composition of reputation, which is based on the past performance of an actor, and status, which is based on the ranked social position of an actor³⁷. Schiele et al. (2020b) found that buying firms which are highly regarded by their supplier may get interactional benefits as compared to their less prestigious competitors. To cover the full extent of corporate prestige, multiple sub-questions are constructed:

SQ1: Does the buyer's corporate reputation influence the supplier to award preferred customer status to a buying firm?

SQ2: Does the buyer's corporate status influence the supplier to award preferred customer status to a buying firm?

Analysis regarding the buyer's corporate prestige plus the adoption of CE principles, and its implications for supplier behaviour is performed on an empirical sample based on the buyer's supplier base, with OEMs as key suppliers. Riwald Recycling, a metal recycling company within the CSC, is classified as case company. Based on Vos et al. (2016)³⁸, a conceptual framework has been constructed to test, by using the partial least square–structural equation modeling (PLS-SEM), with support from SmartPLS 3.0, the influence of buyer's corporate prestige and the buyer's adoption of CE principles on supplier satisfaction in order to obtain the PCS.

³⁷ See Schiele et al. (2020b), p. 4; Jensen & Roy (2008), p. 496-497.

³⁸ See Vos et al. (2016), p. 4615.

Hereafter, the paper extensively establishes the theoretical basis – involving CSCM and CE in procurement (2), cycle of preferred customership (3), and the concepts of corporate prestige (4) - for analysis, then explains the hypotheses (5), to afterwards present the empirical content when applying the conceptual framework, with the use of PLS-SEM analysis (6). Eventually, conclusions (7), discussions (8) are taken as well as implications, limitations and recommendations (9).

2. Circular economy integration in purchasing and supply chain management: enablers and barriers highlighted, improved brand reputation as result

2.1. Evolution from linear supply chain management to circular supply chain management: extension of the traditional view of supply chain management

In the recent years, great strides have been made in supply chain to reduce material and resource intensity of production, products and wastage through resource efficiency³⁹, and green supply chain initiatives⁴⁰. The task of remaining competitive while creating social and environmental value through supply chain re-design can be defined as an ongoing challenge⁴¹. The requirement to cover a constantly growing globalized demand in a sustainable way, reinforces the need to incorporate an adequate and efficient management of supply chain operations⁴². This implies the involvement and coordination of various supply chain actors e.g. manufacturers, distributions, suppliers and retailers⁴³. The aforementioned challenge plus the megatrend ‘increase of environmental and social responsibility (CSR)’ forced organisations to integrate CSR in practises, as well as the circular economy (CE), a philosophy that has been increasingly recognized as a better alternative to the dominant linear model⁴⁴, which force businesses to shift from linear (‘take-make-consume-dispose’) to circular (‘closed-loop’) models, based on the three Rs⁴⁵.

Many papers consider Pearce and Turner as pioneers who first coined the term CE in the early 1990s⁴⁶. In their seminal work⁴⁷, Pearce and Turner considered that ‘scientists tend to define pollution differently from economists’. In this assertion, the need to reconcile economy and environment has been manifested. It presupposes the transition from a linear and open economy to a circular and closed model – ‘an industrial system that is restorative or regenerative by intention and design’⁴⁸. The

³⁹ See Daaboul et al. (2016), p. 1063-1064; Genovese et al. (2015), p. 1199.

⁴⁰ See Pan et al. (2015), p. 409-410.

⁴¹ See Mishra et al. (2018), p. 509-510.

⁴² See González-Sánchez et al. (2020), p. 1.

⁴³ See González-Sánchez et al. (2020), p. 2.

⁴⁴ See Ghisellini et al. (2016), p. 12-13.

⁴⁵ See Farooque et al. (2019), p. 4; Mentink (2014), p. 14-15.

⁴⁶ See Akinade & Oyedele (2019), p. 864-865; Merli et al. (2018), p. 704; Ghisellini et al. (2016), p. 13.

⁴⁷ See Pearce & Turner (1990), p. 67.

⁴⁸ See González-Sánchez et al. (2020), p. 1.

starting point is that economic growth is directly related to flows of materials and energy. The classical linear economy is based on the manufacture of short-lived products, planned obsolescence, economies of scale, and the consequent growing consumer demand for new products, while CE is based on the consideration of the negative externalities that the consumption of resources originates⁴⁹. Therefore, CE is focused on how to avoid, minimize, restore, and/or compensate stakeholders⁵⁰.

This ‘holistic shift’ from traditional supply chain to sustainable supply chain has been practiced in different industries for many years, and the first companies which integrated CSR and CE policies in their development strategy were (and still are) multinationals⁵¹. The integration of CE into supply chain management (SCM) has been termed as circular supply chain management (CSCM) – ‘the coordinated forward and reverse supply chains via purposeful business ecosystem integration for value creation from products/services, by-products and useful waste flows through prolonged life cycles that improve the economic, social and environmental sustainability of organisations’⁵² – with its purpose to create circular supply chains (CSCs)⁵³, as illustrated in Figure 1.

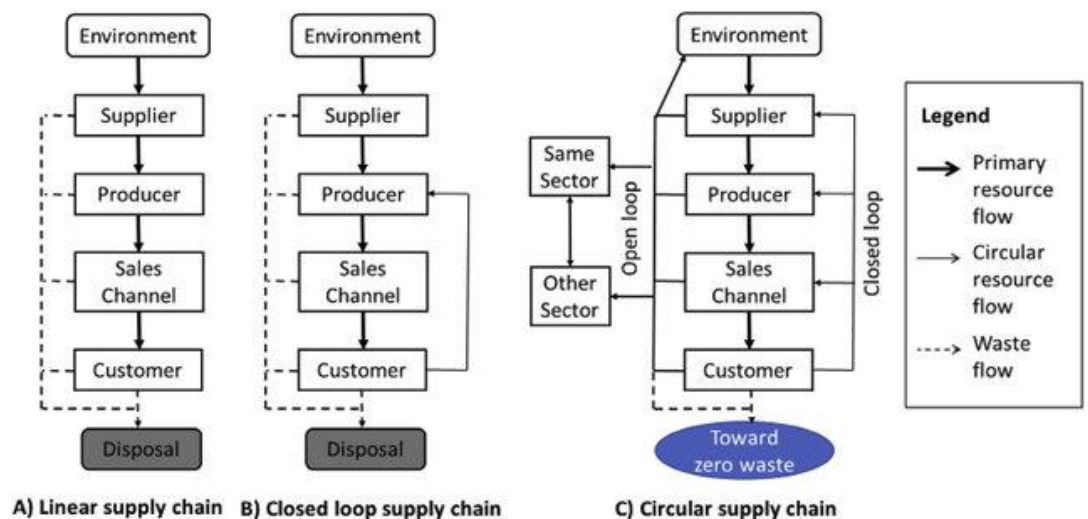


Fig. 1: Linear, closed loop and circular supply chains. Source: Farooque et al. (2019), p. 10.

⁴⁹ See Beu et al. (2018), p. 2; Mancini et al. (2013), p. 14; Köhler (2012), p. 1168.

⁵⁰ See Avdiushchenko (2018), p. 8; Kirzherr et al. (2017), p. 224.

⁵¹ See Fortunati et al. (2020), p. 5; Masoumi et al. (2019), p. 1

⁵² See Batista et al. (2018), p. 446.

⁵³ See Farooque et al. (2019), p. 10.

Ideally, a CSC will generate zero waste since it is designed to systematically restore and regenerate resources in its embedded industrial and natural ecosystem. CSCs have two types of resource flows - primary and circular resource flows - as illustrated in Figure 1c. Primary resource flows are identified with the forward flow of goods in the linear and closed-loop supply chains. Circular resource flows represent the ‘re-type flows of goods/materials/energy which are based on the 10R framework – extension of three Rs – including: 1) refuse; 2) rethink; 3) reduce; 4) reuse; 5) repair; 6) refurbish; 7) remanufacture; 8) repurpose; 9) recycle; and 10) recover⁵⁴.

In literature, various terms have been used when discussing the paradigms of CE - reverse supply chain, closed-loop chain, green supply chain and sustainable supply chain⁵⁵. It is essential to consider the main characteristics of these different types of supply chains, although they cannot be considered as CSCs, they have similarities and contributed to the constitution of CSCs. This study focused on CSCs, described as “the integration of circular thinking into the supply chain and its surrounding in industrial and natural ecosystems”⁵⁶, since the case is primarily focused on R₉ – recycle from the 10R framework – and sees this as its core business. The specific definitions of the supply chains associated with CSR and CE are shown in Table 1.

Table 1: Summary of the supply chain definitions. Source: own elaboration based on other studies.

Authors	Type of supply chain	Definition
Farooque et al. (2019); Geissdoerfer et al. (2018)	Circular supply chain	The integration of circular thinking into the supply chain and its surrounding in industrial and natural ecosystems.
Oliveira et al. (2019)	Reverse supply chain	The role of logistics in product returns, source reduction, recycling, materials substitution, reuse of materials, waste disposal and refurbishing, repair, and remanufacturing.
Yang et al. (2018); Mishra et al. (2018)	Closed-loop supply chain	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.
Yang et al. (2018); Chu et al. (2017)	Green supply chain	A set of practices that combines environmental issues with SCM in order to guarantee environmental compliance and promote the environmental capability.
Prosman & Sacchi (2018)	Sustainable supply chain	A leap towards a more environmentally friendly economy that includes forward supply chains and reverse activities.

⁵⁴ See Farooque et al. (2019), p. 24; Kirchherr et al. (2017), p. 224.

⁵⁵ See González-Sánchez et al. (2020), p. 6.

⁵⁶ See Farooque et al. (2019), p. 10; Geissdoerfer et al. (2018), p. 757-758.

2.2. Integration of circular economy in purchasing: the various concepts of circular procurement highlighted in the public and private procurement sector

In recent years, purchasing and supply management has gained considerable importance with firms⁵⁷. Purchasing and supply management can be classified as the starting point of (C)SCM, followed by production, logistics and consumption⁵⁸. According to Schiele (2019), ‘purchasing is the strategic and operative process of supplying an organisation with materials and services from sources external to that organisation.’⁵⁹ In this day and age, the importance of purchasing is the result of various drivers which influenced the industry and supply chain structures e.g. globalization, reduction of transportation costs, availability of information and communication technologies and competition - concentration on core competences and reduction of depth of value added⁶⁰. These drivers reduce the depth of production of original equipment manufactures (OEMs) and ensures new commercial and contractual relationships along the supply chain, e.g. Tier 1 (systems and/or modules), Tier 2 (assemblies and/or components) and Tier 3 (raw materials) suppliers⁶¹. Figure 2 illustrates this trend in the automotive industry. This same trend ensures that suppliers gain significant more bargaining power, and the decreasing pool of quality suppliers reinforces this trend resulting that supplier satisfaction is a necessary condition for gaining and maintaining access to capable suppliers and their resources in this new competitive environment⁶².

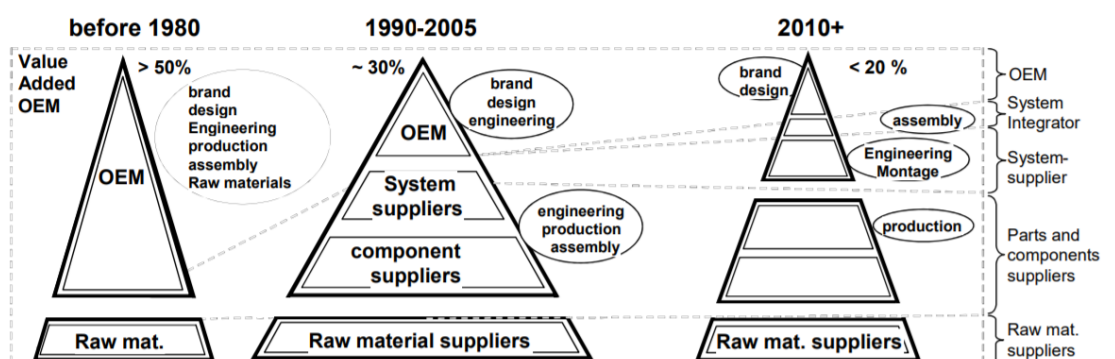


Fig. 2: Distribution of the value-added process in (the automotive) SCM. Source: Mohr (2010), p. 10.

⁵⁷ See Schiele (2019), p. 46.

⁵⁸ See Farooque et al. (2019), p. 24-32.

⁵⁹ See Schiele (2019), p. 48.

⁶⁰ See Mohr (2010), p. 7-12.

⁶¹ See Mohr (2010), p. 9-12.

⁶² See Schiele (2019), p. 68; Vos et al. (2016), p. 4613; Hüttinger et al. (2014), p. 711; Mohr (2010), p. 12.

The foundation of CE in procurement, also called ‘circular procurement’ – ‘the process in which a product, a service or a project is purchased according to the principles of CE, considering that in this process the technical aspects of the product are as circular as possible, taking maintenance and return policies at the end of the use period into account, as well as including financial incentives to guarantee circular use’⁶³ - lies on the concepts of sustainable procurement, including CSR practises⁶⁴. Conventionally, the size and complexity of the public sector and its bureaucratic rules and procedures hinder the innovation process⁶⁵. Due to these rules and procedures, the pace and scale of change might become too low, causing public servants to become ‘innovation fatigued’⁶⁶. However, reviewing CE implementations in procurement, the public sector should be considered as a role-model, where CE initiatives are developed quicker than the industry, resulting in relevant insights for industry rollout⁶⁷. More specifically, the public sector stimulates fast-track adoption of circular business opportunities by adjusting the regulatory approach: 1) organising re-markets and fighting leakage; 2) rethinking incentives; 3) igniting innovation and entrepreneurship; and 4) providing an international set of environmental rules⁶⁸.

Therefore, it is not surprising that, even due to the newness of CE, recent studies related to circular procurement has been conducted in public procurement⁶⁹. Based on CE principles, a public procurement framework which include technical and non-technical product/service specifications has been proposed by Witjes & Lozano (2016). This framework provides guidelines for reducing raw material utilisation and improving resource efficiency through recovery and lower waste generation⁷⁰. The European Commission, on its turn, provided three circular procurement models⁷¹: 1) the ‘system level’ model, which concerns the contractual methods that the purchasing organisation can use to ensure circularity e.g. supplier take-back systems or product service systems; 2) the ‘supplier level’ model which describes how suppliers can

⁶³ See van Oppen et al. (2018), p. 20; Jones et al. (2017), p. 1-4; European Commission (2017), p. 6.

⁶⁴ See Pollice & Batocchio (2018), p. 7; European Commission (2017), p. 4-5.

⁶⁵ See Cunningham & Karakasidou (2009), p. 3.

⁶⁶ See Cunningham & Karakasidou (2009), p. 3-4.

⁶⁷ See Pollice & Batocchio (2018), p. 8.

⁶⁸ See Ellen MacArthur Foundation (2013), p. 80-81.

⁶⁹ See Farooque et al. (2019), p. 27; Pollice & Batocchio (2018), p. 7-10.

⁷⁰ See Witjes & Lozano (2016), p. 37.

⁷¹ See European Commission (2017), p. 5; Jones et al. (2017), p. 7-8.

build circularity into their own systems and processes, in order to ensure the products and services they offer meet circular procurement criteria; and 3) the ‘product level’ model, which focused solely on the products that suppliers to public authorities may themselves procure further down the supply chain. In addition, a collaboration between the (public) entities PIANOo, Nevi, MVO Nederland, Kirkman Company and Circle Economy has been resulted in the so-called ‘Dutch Green Deal on Circular Procurement’ – an initiative to encourage purchasing goods which are more circular in production⁷². As consequence, a roadmap has been developed, with the objective to integrate circularity in the procurement and tendering process. Following the steps in this roadmap, public entities can take decisions on a strategic and practical level⁷³.

From private procurement perspective, CE in SCM has been viewed as potentially viable for managing supply disruptions of strategic items - high profit impact and high supply risk⁷⁴. The increasing importance in multitier supply networks (including Tier 1, 2 or 3 suppliers), led OEMs realize that a more comprehensive disruption management strategy is necessary to build a robust enterprise⁷⁵ reinforced this line of reasoning. Therefore, Sprecher et al. (2017) introduced resilience metrics for quantifying the resilience of critical material supply chains to disruptions based on CE principles⁷⁶. In addition, van Oppen et al. (2018), developed a ‘circular procurement’ guidance which stimulates buyers and policy advisers to start and implement a circular procurement process⁷⁷. The guidance covers eight steps, for a successful implementation, which is based on real-life public and private cases from multinationals, since they were (and still are) the first companies that integrated CSR and CE policies in their development strategy⁷⁸. Popa and Popa (2016), on its turn, addressed the issue of ‘green industrial acquisitions’ with the focus on improving resource efficiency. Not only environmental (dis)advantages of industrial product acquisitions should be considered, also possibilities for complete reuse of materials leading to the extension of the industrial product life⁷⁹.

⁷² See Pollice & Batocchio (2018), p. 8-9; European Commission (2017), p. 17; Jones et al. (2017), p. 1-2.

⁷³ See MVO (2020); Circular Europe Network (2020); European Commission (2017), p. 17.

⁷⁴ See Farooque et al. (2019), p. 27; Kraljic (1983), p. 111-112.

⁷⁵ See Ang et al. (2017), p. 2397-2398.

⁷⁶ See Farooque et al. (2019), p. 27; Sprecher et al. (2017), p. 3860-3862.

⁷⁷ See van Oppen et al. (2018), p. 8.

⁷⁸ See Fortunati et al. (2020), p. 5; Masoumi et al. (2019), p. 1; van Oppen et al. (2018), p. 8.

⁷⁹ See Farooque et al. (2019), p. 27; Popa & Popa (2016), p. 2-4.

Conversely, Gaustad et al. (2018) indicated that many firms are not able to monitor the increasing CE complexities in supply management. The suggestion is made that circularity strategies e.g. recycling, dematerialization, diversification and lean principles will have a significant potential to reduce the vulnerabilities in material supply⁸⁰. Leading to, again, the crucial role of the public procurement sector to drive the CE transition from macro to microeconomy⁸¹. Consequently, innovative circular procurement models e.g. ‘public-private partnerships’ (PPPs)⁸² and ‘public-sector business models’ (PSBMs)⁸³ have emerged as well as ‘ReSOLVE’ and ‘ProBiz4CE’ frameworks⁸⁴. The underlying reason for using these concepts rather than using a conventional public procurement is that, by using these circular models and frameworks, an optimal risk sharing with the private partner will be established resulting in a better ‘value for money’ for the public sector and the end users⁸⁵. However, the success in increasing the overall resilience ultimately depends on the private sector’s ability to adopt these (new) business models⁸⁶.

2.3. Enablers and barriers of circular economy in purchasing and supply chain management: identified through the existing body of literature

While government incentives or mandatory regulations can enable some degree of transition towards the CE, the speed of a more comprehensive shift will depend on whether decision-makers in firms believe that competitiveness will be improved⁸⁷. From microeconomy perspective, firms are influenced by both internal and external actors to adopt CE in supply chain initiatives. In literature, influencing factors are defined synonymously as pressures, triggers, enablers, and drivers, as well as inhibitors, barriers and obstacles⁸⁸. Various enablers and barriers of CE in purchasing and (C)SCM have been identified, and can be classified into internal and external dimensions. This study is focusing on enablers and barriers of CE in CSCs, however, diverse supply chains types (Table 1) shared similarities with CSCs and overlap exist.

⁸⁰ See Farooque et al. (2019), p. 27; Gaustad et al. (2018), p. 24; Ellen MacArthur Foundation (2013), p. 14.

⁸¹ See Klein et al. (2020), p. 6; Pollice & Batocchio (2018), p. 8.

⁸² See Klein et al. (2020), p. 15; Bao (2019), p. 12.

⁸³ See Klein et al. (2020), p. 14; Lewandowski (2017), p. 47.

⁸⁴ See Klein et al. (2020), p. 12; Witjes & Lozano (2016), p. 42; Ellen MacArthur Foundation (2015), p. 21.

⁸⁵ See Bao (2019), p. 12.

⁸⁶ See Bao (2019), p. 13; Ellen MacArthur Foundation (2013), p. 2.

⁸⁷ See Scheepens et al. (2016), p. 257-258.

⁸⁸ See Saeed & Kersten (2019), p. 3; Govindan & Hasanagic (2018), p. 287.

According to Masi et al. (2017), the following internal enablers for integrating CE in purchasing and (C)SCM were identified: 1) resource efficiency gains increase competitiveness⁸⁹; 2) new value streams through utilisation of by-products and waste⁹⁰; 3) improved brand reputation with consumers;⁹¹ and 4) increased business resiliency resulting in risk reduction⁹². Continuing, a case study by de Mattos & de Albuquerque (2018) reveals that ‘company culture’, ‘networking’ and ‘team commitment’ should be classified as additional internal enablers for integrating CE in a firm’s supply (chain) strategy⁹³. In addition, potential for job creation in the supply chain⁹⁴ and potential for new business development, innovation and synergy opportunities⁹⁵ should be considered as well. In opposition to internal enablers, the following external enablers for integrating CE in purchasing and (C)SCM presence: 1) resource scarcity (including volatile prices of primary sources) along with multi-disciplinarily in the supply chain, resulting an increase in availability of resources and capabilities⁹⁶; 2) legislation approaches e.g. supportive funds, subsidy policies and taxation⁹⁷ all in order to realise the ‘Sustainable Development Goals (SDGs), especially SDG 12⁹⁸ – sustainable consumption and production; and 3) consumer behaviour, with focus on the growing environmental awareness⁹⁹ and service orientation e.g. product-as-a-service and/or mobility-as-a-service¹⁰⁰. De Mattos & de Albuquerque (2018) identified that ‘geographical proximity’ represents an enabling factor which has the potential to promote industrial symbiotic practices with collaboration and synergy¹⁰¹. Industrial symbiosis practices often occur at the process and manufacturing level and benefit from firms located within a certain geographic area, classified as clusters. Since CE requires collaboration actors, the success of industrial symbiosis is based on companies’ collaborative behaviour¹⁰².

⁸⁹ See Masi et al. (2017), p. 9; Ferreira et al. (2015), p. 516-517; Ma et al. (2014), p. 505-506.

⁹⁰ See Masi et al. (2017), p. 9; Scheepens et al. (2016), p. 262-264; Tukker (2015), p. 84.

⁹¹ See Masi et al. (2017), p. 9; Scheepens et al. (2016), p. 262-264; Tukker (2015), p. 84.

⁹² See Masi et al. (2017), p. 9; Zeng et al. (2017), p. 55.

⁹³ See de Mattos & de Albuquerque (2018), p. 7.

⁹⁴ See Govindan & Hasanagic (2018), p. 289; Ilić & Nikolić (2016), p. 194.

⁹⁵ See Tura et al. (2019), p. 92; Fraunhofer IML (2018), p. 13.

⁹⁶ See Tura et al. (2019), p. 92; Fraunhofer IML (2018), p. 13; Mancini et al. (2013), p. 14.

⁹⁷ See Tura et al. (2019), p. 92; Fraunhofer IML (2018), p. 13; de Mattos & de Albuquerque (2018), p. 7. Govindan & Hasanagic (2018), p. 288; Ilić & Nikolić (2016), p. 194; Witjes & Lozano (2016), p. 40-44.

⁹⁸ See Fraunhofer IML (2018), p. 13; Mattera et al. (2018), p. 32-33.

⁹⁹ See Tura et al. (2019), p. 92; Fraunhofer IML (2018), p. 13; Govindan & Hasanagic (2018), p. 288.

¹⁰⁰ See Tura et al. (2019), p. 92; Fraunhofer IML (2018), p. 13.

¹⁰¹ See de Mattos & de Albuquerque (2018), p. 7; Chertow (2000), p. 314.

¹⁰² See de Mattos & de Albuquerque (2018), p. 7; Ayres (1998), p. 195.

Internal barriers, on its turn, are strongly associated with economic issues such as: 1) high purchasing cost of environmentally friendly materials¹⁰³; 2) higher production cost in combination with a lack of financial capability and support¹⁰⁴; and 3) major upfront investment costs in SCM for implementing CE along with weak economic incentives resulting difficulties for enterprises to implement CE completely in SCM¹⁰⁵. From technology perspective, multiple internal barriers exist as well: 1) data exchange beyond CSCs is not yet possible due to data security and sovereignty¹⁰⁶; 2) accurate information regarding (material) tracking towards recycling is not available resulting in difficulties for enterprises to manage the product lifecycle quality¹⁰⁷; and 3) in the new product development (NPD) process numerous design challenges to reuse and recovery products exist as well as challenges to secure the return of raw materials to the biosphere. Due to the producers' lack of knowledge of their products' material composition, especially components and modules which are externally purchased from Tier 1 and/or 2 suppliers, effectively design for recycling has been prevented¹⁰⁸.

Oppositely, external barriers for integrating CE in purchasing and (C)SCM exist as well. Current business models require, for the transition to new (service-oriented) business models, a radical change of mindset. Due to a lack of collaboration, network support and resources, a strong industrial focus on linear models still exists¹⁰⁹. In the context of cooperation, lock-in effects (buyer's dependence on the supplier) exist, leading to complexity in establishing value chain networks, which leads, on its turn, to major efforts to integrate all actors along all levels of the value chain¹¹⁰. Continuing, from market perspective there is a lack of market mechanisms for recovery due to the low demand for secondary raw materials given that primary materials are cheaper than secondary materials¹¹¹.

¹⁰³ See Govindan & Hasanagic (2018), p. 296.

¹⁰⁴ See Tura et al. (2019), p. 92; Govindan & Hasanagic (2018), p. 296-297; Ilić & Nikolić (2016), p. 195.

¹⁰⁵ See Tura et al. (2019), p. 92; Govindan & Hasanagic (2018), p. 296-297.

¹⁰⁶ See Tura et al. (2019), p. 92; Fraunhofer IML (2018), p. 12.

¹⁰⁷ See Tura et al. (2019), p. 92; Fraunhofer IML (2018), p. 12; Govindan & Hasanagic (2018), p. 296.

¹⁰⁸ See Fraunhofer IML (2018), p. 12; Govindan & Hasanagic (2018), p. 297.

¹⁰⁹ See Tura et al. (2019), p. 92; Fraunhofer IML (2018), p. 12; Govindan & Hasanagic (2018), p. 298.

¹¹⁰ See Tura et al. (2019), p. 92; Fraunhofer IML (2018), p. 12; Govindan & Hasanagic (2018), p. 297.

¹¹¹ See Tura et al. (2019), p. 92; Fraunhofer IML (2018), p. 12.

Although recent literature identified supplementary enablers and barriers of the CE, the aforementioned enablers and barriers are most associated when examining CE in purchasing and (C)SCM¹¹². However, it is important to note that the existence and strength of these enablers and barriers significantly vary by geographic and industrial contexts¹¹³. Aside from this, certain enablers and barriers are based on the same effect mechanisms and can be seen either as enabler or barrier, e.g. consumer behaviour, company culture, legislation approaches and government support¹¹⁴. Furthermore, literature indicates significantly more external enablers than internal enablers, and reviewing the barriers, the matter of fact is reversed. Leading to, again, the essential role of the public sector where CE initiatives originate quicker than the industry¹¹⁵. The aforesaid enablers and barriers are shown in Table 2 and 3, respectively.

¹¹² See Tura et al. (2019), p. 92; Fraunhofer IML (2018), p. 12-13; Govindan & Hasanagic (2018), p. 288-299; de Mattos & de Albuquerque (2018), p. 7; Ilić & Nikolić (2016), p. 194-197.

¹¹³ See Tura et al. (2019), p. 97; Farooque et al. (2019), p. 22; Govindan & Hasanagic (2018), p. 307.

¹¹⁴ See Tura et al. (2019), p. 92; Fraunhofer IML (2018), p. 12-13; Govindan & Hasanagic (2018), p. 288-299; de Mattos & de Albuquerque (2018), p. 7; Ilić & Nikolić (2016), p. 194-197.

¹¹⁵ See Klein et al. (2020), p. 6; Pollice & Batocchio (2018), p. 8.

Table 2: Summary of the internal enablers (IEs) and external enablers (EEs) of CE in purchasing and (C)SCM. Source: own elaboration based on other studies.

Authors	Internal/external enabler	Description
Masi et al. (2017); Ferreira et al. (2015); Ma et al. (2014)	Resource efficiency gains increase competitiveness (IE)	In light of rising resource and energy prices, efficiency gains translate into long-term financial savings.
Masi et al. (2017); Scheepens et al. (2016); Tukker (2015)	New value streams through utilisation of by-products and waste (IE)	New value stream gives a firm a new source of revenue and minimizes waste treatment and disposal related costs.
Masi et al. (2017); Scheepens et al. (2016); Tukker (2015)	Improved brand reputation with consumers (IE)	Improve brand reputation could result in the ability to monetize 'green' products.
Masi et al. (2017); Zeng et al. (2017)	Increased business resiliency, resulting in risk reduction (IE)	By avoiding dependence on price-volatile resources, firms can reduce their business risk on the supply side.
De Mattos & de Albuquerque (2018)	Company culture (IE)	A business with a company culture minded towards CE will develop circular designs and operations.
De Mattos & de Albuquerque (2018)	Team commitment (IE)	The commitment of staff is important aspects in facilitating the transition to a CE model.
De Mattos & de Albuquerque (2018)	Networking (IE)	The network is mentioned as a facilitator of small to medium-size enterprises (SMEs). Joining a group of SMEs with similar sustainability, new supply chain partnerships will emerge.
Govindan & Hasanagic (2018); Ilić & Nikolić (2016)	Potential for job creation in the supply chain (IE)	CE will contribute to higher local employment, especially in entry-level and semi-skilled jobs.
Tura et al. (2019); Fraunhofer IML (2018)	Potential for new business development, innovation and synergy opportunities (IE)	New production technologies, digitization, Industry 4.0, Internet of Things (IoT) and disruptive technological innovations drive the transition to the CE.
Tura et al. (2019); Fraunhofer IML (2018); Mancini et al. (2013)	Resource scarcity along with multi-disciplinarily (EE)	Volatile prices of primary resources along with import duties and market foreclosure drive circularity.
Tura et al. (2019); Fraunhofer IML (2018); de Mattos & de Albuquerque (2018); Govindan & Hasanagic (2018), Ilić & Nikolić (2016); Witjes & Lozano (2016)	Legislation approaches (EE)	Approaches for legislation on CE e.g. supportive funds, subsidy policies and taxation to realise the SDGs, especially SDG 12: sustainable production and consumption.
Tura et al. (2019); Fraunhofer IML (2018); Govindan & Hasanagic (2018)	Consumer behaviour (EE)	With focus on the growing environmental awareness, increasing quality standards and service orientation.
De Mattos & de Albuquerque (2018)	Geographical proximity (EE)	The potential to promote industrial symbiotic practices with collaboration, collaborative behaviour with the common purpose of mutual economic and environmental sustainability and synergy.

Table 3: Summary of the internal barriers (IBs) and external barriers (EBs) of CE in purchasing and (C)SCM. Source: own elaboration based on other studies.

Authors	Internal/external barrier	Description
Govindan & Hasanagic (2018)	High purchasing cost of environmentally friendly materials (IB)	High purchasing cost of environmentally friendly materials and packaging by the supplier. Typically, virgin products are cheaper than recycled ones, so consumers are often more focused on price rather than on the product's entire lifecycle.
Tura et al. (2019); Govindan & Hasanagic (2018); Ilić & Nikolić (2016)	Higher production cost in and lack of financial capability and support (IB)	High short-term costs and low short-term economic benefits are problems for the enterprises, resulting that production costs are getting higher in CE.
Tura et al. (2019); Govindan & Hasanagic (2018)	Major upfront investment costs and weak economic incentives (IB)	Major upfront investment costs in SCM for implementing CE along with weak economic incentives resulting difficulties for enterprises to implement CE completely in SCM.
Tura et al. (2019); Fraunhofer IML (2018)	Data security and sovereignty (IB)	Data exchange beyond CSCs is not yet possible due to data security and sovereignty.
Tura et al. (2019); Fraunhofer IML (2018); Govindan & Hasanagic (2018)	Unavailability of tracking material information towards recycling (IB)	Accurate information regarding (material) tracking towards recycling is not available resulting in difficulties for enterprises to manage the product lifecycle quality.
Fraunhofer IML (2018); Govindan & Hasanagic (2018)	Design challenges in the new product development (NPD) process (IB)	In the NPD process numerous design challenges to reuse and recovery products exist due to the producers' lack of knowledge of their products' material composition, especially components and modules which are purchased from Tier 1 and/or 2 suppliers.
Tura et al. (2019); Fraunhofer IML (2018); Govindan & Hasanagic (2018)	Business models (EB)	For the transition to new (service-oriented) business models, a radical change of mindset is required. Due to a lack of collaboration, network support and resources, a strong industrial focus on linear models still exist.
Tura et al. (2019); Fraunhofer IML (2018); Govindan & Hasanagic (2018)	Lock-in effects (EB)	In corporation, lock-in effects (buyer's dependence on the supplier) exist, leading to complexity in establishing value chain networks, which leads, on its turn, to major efforts to integrate all actors along all levels of the value chain.
Tura et al. (2019); Fraunhofer IML (2018)	Lack of market mechanisms for recovery (EB)	From market perspective there is a lack of market mechanisms for recovery due to the low demand for secondary raw materials given that primary materials are cheaper than secondary materials.

2.4. Improved corporate reputation and image resulting from the integration of circular economy in purchasing and supply chain management

Globalization not only increases organisational pressure to implement sustainability practices across their supply chain network, it also provides opportunities to learn from global competitors regarding sustainability actions, since international trade have the potential to persuade organisations to adopt sustainability practices within their CSC¹¹⁶. Therefore, from market (risk) management perspective, reputation was identified as primary reason for adopting sustainability practices. Reputation, as a market leader in undertaking sustainability initiatives, leads an organisation to serve as role-model for other competitors¹¹⁷. Managing sustainability-related issues is important for organisations that receive value from their brand recognition and reputation¹¹⁸. This adoption, on its turn, is positively correlated with higher customer satisfaction¹¹⁹. Successively, purchasing decisions are increasingly influenced by environmental considerations and reputational risk concerns¹²⁰.

Previous research has found that integrating CE in the firm's purchasing and (C)SCM has a positive impact on the firm's brand reputation¹²¹. From the organisational perspective, by following CE principles firms may be able to achieve brand benefits, protect and strengthen their image¹²² and enable certain degree of differentiation¹²³. The importance of brand reputation as result of integrating CE in purchasing and (C)SCM was highlighted by the Ellen MacArthur Foundation (2013). Many OEMs seen refurbishing, repairing, and remanufacturing as a strategic priority to serve customers in their aftersales markets with the aim of customer retention and brand protection. More specifically, refurbishing, repairing, and remanufacturing various kinds of end-of-life products is not only an economically viable business opportunity, it also provides an excellent means of building relationships with new customer segments¹²⁴. Additionally, research by Lahti et al. (2018) shows that it is for global

¹¹⁶ See Saeed & Kersten (2019), p. 19; Xu et al. (2013), p. 28-30; Hsu et al. (2012), p. 657.

¹¹⁷ See Saeed & Kersten (2019), p. 19.

¹¹⁸ See Saeed & Kersten (2019), p. 13; Mzembe et al. (2016), p. 166-167.

¹¹⁹ See Saeed & Kersten (2019), p. 19; Hsu et al. (2012), p. 658.

¹²⁰ See Tognetti et al. (2015), p. 385; Schoenherr et al. (2012), p. 10.

¹²¹ See Masi et al. (2017), p. 9; Scheepens et al. (2016), p. 262-264; Tukker (2015), p. 84.

¹²² See Tura et al. (2019), p. 91; Geng et al. (2012) p. 218-219.

¹²³ See Tura et al. (2019), p. 91; Linder & Williander (2017), p. 184.

¹²⁴ See Ellen MacArthur Foundation (2013), p. 72.

companies crucial to have a reputation of being CSR and supporting ‘good’ causes — something that is perceived as increasingly important among stakeholders. By adopting circular business models, firms can utilise sustainability-oriented actions as measures towards achieving an improved reputation and increased revenues¹²⁵.

The Italian inter-university centre of research - CRIET (2018) - conducted research into the relationship between the adoption of CE principles in relation with corporate reputation¹²⁶. A questionnaire among 719 European companies from France (19%), Germany (14%), Italy (25%), Spain (27%) and the United Kingdom (15%) has been conducted to identify the causal relationship between awareness and perception of reputation, represented in Table 4. The increasing adoption of CE principles has a positive impact on corporate reputation, therefore the adoption of CE principles is positively correlated to corporate reputation¹²⁷. Taking firm size into consideration, the aforementioned causality applies for multinationals as well as SMEs¹²⁸.

Table 4: Impact of CE on brand image and reputation. Source: CRIET (2018), p. 14.

Type of respondents	Closed	Open	Mature
Level of awareness on CE	Below average	Average	Above average
CE impact on brand image	37%	63%	87%
CE impact on reputation	40%	62%	87%

When linking sustainability to corporation reputation, a number of studies have been conducted within the field of CSR, the originator of CE. From mediating perspective, empirical research by Saeidi et al. (2014) indicates the mediating role of reputation in the relationship between CSR and firm financial performance. The positive effect of CSR on firm performance is due to the positive effect that CSR has on reputation - through enhancing reputation CSR indirectly promotes competitive advantage as well as firm performance¹²⁹. Additionally, research by Chang & Yeh (2017) indicates the indirect effect of CSR on customer loyalty through corporate image and customer satisfaction respectively as mediators. By using structural

¹²⁵ See Lathi et al. (2018), p. 7.

¹²⁶ See CRIET (2018), p. 15.

¹²⁷ See CRIET (2018), p. 18-19.

¹²⁸ See CRIET (2018), p. 19.

¹²⁹ See Saeidi et al. (2014), p. 245-247.

equation modeling (SEM), the mediators' significance played by corporate image in enhancing the effect of CSR on customer satisfaction, consequently leading to customer loyalty, has been highlighted¹³⁰. Their research is in line with previous research by Sindhu & Arif (2017), who identified, by using SEM, the significant relationship between organisational commitment toward CSR and corporate reputation, where reputation acts as mediator between CSR and loyalty¹³¹.

From direct relationship perspective, research by Park (2019) proposes two factors - customer attitude and satisfaction - as moderators between corporate reputation and CSR. Using SEM, the study finds that an increase in economic and environmental responsibility results in improved customer attitude and satisfaction, and these mediating factors are significantly important for the determination of corporate reputation¹³². This view is supported by Bernal-Conesa et al. (2016) who argues, by using SEM, the positive, direct and statistically significant relationship between the integration of CSR and corporate reputation. The integration of CSR not only results in an ethical positioning of organisations, but also in generating high strategic intangible value, in the form of external reputation¹³³. A comparative study by Tran & Nguyen (2020) found that CSR has a positive impact on perceived reputation. By using the partial least square–structural equation modeling (PLS-SEM), with support from SmartPLS 3.0, CSR can be a beneficial business strategy for building perceived reputation as well as improving customer satisfaction¹³⁴. Their result is in accordance with Gallardo-Vázquez et al. (2019), who examined whether corporate managers' positive predisposition toward CSR initiatives explains their companies' reputation. Based on their SEM, they conclude that CSR facilitates increased innovation and enhanced reputation¹³⁵.

¹³⁰ See Chang & Yeh (2017), p. 38-39.

¹³¹ See Sindhu & Arif (2017), p. 6-8.

¹³² See Park (2019), p. 215-217.

¹³³ See Bernal-Conesa et al. (2016), p. 121-122.

¹³⁴ See Tran & Nguyen (2020), p. 11-13.

¹³⁵ See Gallardo-Vázquez et al. (2019), p. 14-18.

3. The cycle of the preferred customership: definition of the key concepts

3.1 Social exchange theory perspective as departure point for assessing buyer-supplier relationships towards supplier satisfaction and preferred customership

Previous decades revealed two fundamental changes occurring in SCM: first, the concentration on core competencies and the outsourcing of the remaining functions steadily reduced the OEMs' depth of production. This trend increased the importance of purchasing¹³⁶. Second, and in parallel, in purchasing the trend prevailed to reduce the number of suppliers and concentrate on a few buyer-supplier relations. Thus, the number of available suppliers sunk, often causing oligopolistic situations, while their importance increased¹³⁷. Consequently, these trends challenge purchasing to react with novel approaches. The strategy to become customer of the few remaining world class suppliers is becoming a so-called preferred customer, which is based on three aspects: customer attractiveness, supplier satisfaction and preferred customership¹³⁸.

Based on the social exchange theory (SET), which is frequently used as a theoretical harbour for attractiveness studies, the related concepts of customer attractiveness, supplier satisfaction and PCS can be linked to each other in a logical way in the so-called 'cycle of preferred customership' - illustrated in Figure 3 - that classified customer attractiveness as first step (1), supplier satisfaction as second step (2) in order to reach preferential resource allocation through PCS (3)¹³⁹. The philosophy of the SET is the relational interdependence that develops overtime through the interactions of the resource exchange partners, with the norm that SET is based on reciprocity - the two-sided rewarding process that involves voluntary exchanges which are chosen on the assumption of rationality¹⁴⁰. The core philosophy of the SET can be linked into the cycle of preferred customership. First, expectations (1) relate to the initiation of an exchange relationship whereas the comparison level (2) is used

¹³⁶ See Schiele (2019), p. 68-69; Mohr (2010), p. 9-12.

¹³⁷ See Schiele (2019), p. 68-69; Hüttinger et al. (2014), p. 697; Schiele (2010), p. 138-139; Steinle & Schiele (2008), p. 3-4.

¹³⁸ See Pulles et al. (2016), p. 129-130; Schiele et al. (2012b), p. 1179-1180; Hüttinger et al. (2012), p. 1203.

¹³⁹ See Schiele et al. (2012b), p. 1179-1180; Hüttinger et al. (2012), p. 1203.

¹⁴⁰ See Schiele (2019), p. 63-72; Schiele et al. (2012b), p. 1180; Cropanzano & Mitchell (2005), p. 874; Emerson (1976), p. 336.

to measure the outcome of exchange, producing satisfaction with the relationship after the minimum criteria have been attained.¹⁴¹ The comparison level of alternatives (3) refers to the assumption, first stated by Thibaut & Kelley (1959)¹⁴², that actors will use not only absolute but also relative criteria to evaluate the outcome of an exchange relationship, and decides whether the relationship should be continued as a regular customer, rewarded with the PCS or should be discontinued, obtaining the exit customer status¹⁴³.

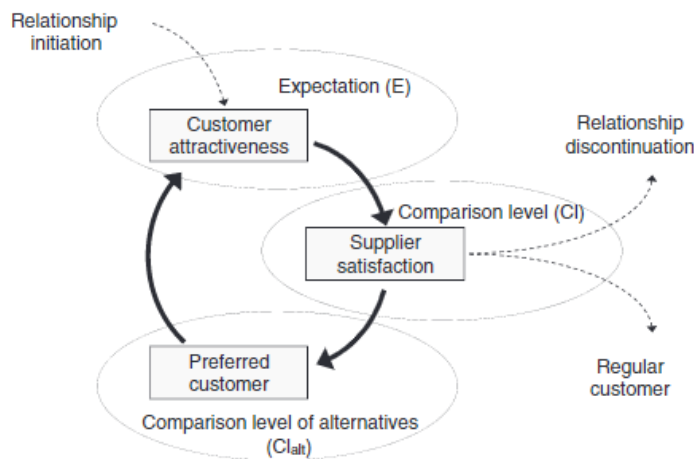


Fig. 3: The cycle of preferred customership. Source: Schiele et al. (2012b), p. 1180.

On the basis of the assumption that buyer–supplier relationships are social exchange processes, it can be argued that customer attractiveness is based on the expectations that a supplier has, in terms of social and economic outcomes, towards the buyer at the moment of initiating or intensifying a business relationship. Hence, the cycle of preferred customership is an on-going process, where the PCS has a significant influence on customer attractiveness¹⁴⁴. Therefore, reflecting on the position of oligopolistic suppliers, buyers need to strengthen their attractiveness rather than waiting for suppliers to queue to offer their services. The early adopters of this strategy becoming more attractive as customers than their competitors since they could operate as a ‘game changer’ and strategically ‘outperform’ their competitors¹⁴⁵.

¹⁴¹ See Schiele et al. (2012c), p. 138.

¹⁴² See Thibaut & Kelley (1959), p. 31.

¹⁴³ See Reichenbach et al. (2017), p. 354-358; Schiele et al. (2012c), p. 139; See Schiele et al. (2012b), p. 1180.

¹⁴⁴ See Schiele (2019), p. 63-64; Pulles et al. (2016), p. 131-133; Schiele et al. (2012c), p. 141.

¹⁴⁵ See Schiele (2019), p. 71; Schomann et al. (2018), p. 231; Pulles et al. (2016), p. 135-136.

3.2. Circular relationship between supplier satisfaction, customer attractiveness and preferred customer status: evidence from empirical research

In light of the accelerated globalization and its associated challenges, as well as the previously mentioned fundamental changes occurring in SCM, caused a switch towards the so-called ‘reverse marketing’ – a competitive environment on the basis of competition for suppliers¹⁴⁶. This concept is linked to the philosophy of the SET and explained through the cycle of preferred customership, which is, on its turn, based customer attractiveness, supplier satisfaction and preferred customership¹⁴⁷. By including strategic supply risk, this model was extended by Reichenbach et al. (2017)¹⁴⁸, as illustrated in Figure 4.

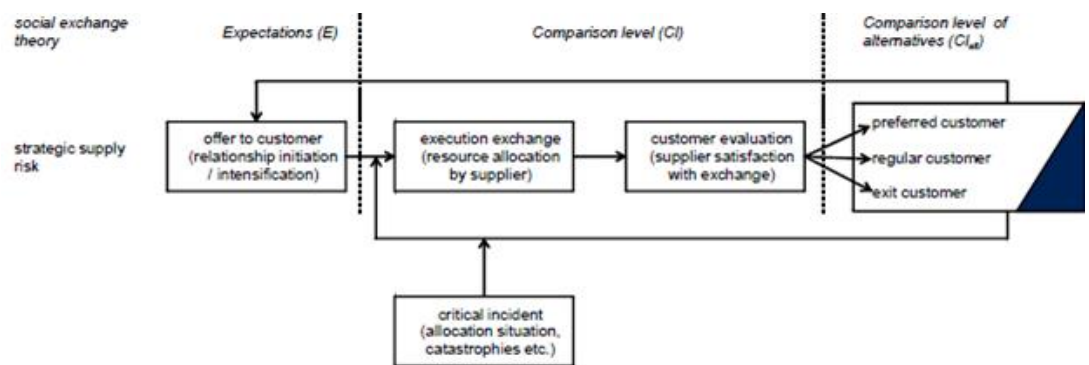


Fig. 4: The SET combined with SCM. Source: Reichenbach et al. (2017), p. 363.

An effective strategic supply risk management system is essential, since not all customers obtaining the same level of strategic importance to a supplier, leading that some customers are treated preferentially. ‘Strategic supply risk’ describes the risk for buyers of not being a preferred customer. Based on Reichenbach et al. (2017), strategic supply risk is likely to be present when among others the buyer accounts for a minor portion of the supplier’s turnover. Aligning strategies can potentially be a useful tactic for supply risk reduction as well as finding alternative sources of supply supports the mitigation of a buyer’s strategic supply risk¹⁴⁹. However, increasing customer attractiveness should be considered as priority for strategic supply risk reduction, parallel with obtaining preferential resource allocation¹⁵⁰.

¹⁴⁶ See Schiele et al. (2012b), p. 1177; Nyaga et al. (2010), p. 101; Anderson & Narus (1990), p. 43.

¹⁴⁷ See Pulles et al. (2016), p. 129-130; Schiele et al. (2012b), p. 1179-1180; Hüttinger et al. (2012), p. 1203.

¹⁴⁸ See Reichenbach et al. (2017), p. 363.

¹⁴⁹ See Reichenbach et al. (2017), p. 350; Pulles et al. (2016), p. 136-137.

¹⁵⁰ See Reichenbach et al. (2017), p. 354-357; Pulles et al. (2016), p. 131-132; Schiele et al. (2012b), p. 1181; Hüttinger et al. (2012), p. 1203.

Elaborating on the significant concepts of PCS - supplier satisfaction and customer attractiveness - supplier satisfaction can be defined as “a condition that is achieved if the quality of outcomes from a buyer-supplier relationship meets or exceeds the supplier's expectations”¹⁵¹ and customer attractiveness can be explained as “a customer is perceived as attractive by a supplier if the supplier in question has a positive expectation towards the relationship with this customer. The conditions for this perception of the supplier include an awareness of the existence of the customer and knowledge of the customer's needs.”¹⁵² Based on the framework of Schiele et al. (2012b), scholars investigated the exact relations between the three levels. Pulles et al. (2016) addressed that customer attractiveness as one of the main preconditions of obtaining preferential resource allocation, as illustrated in Figure 5¹⁵³.

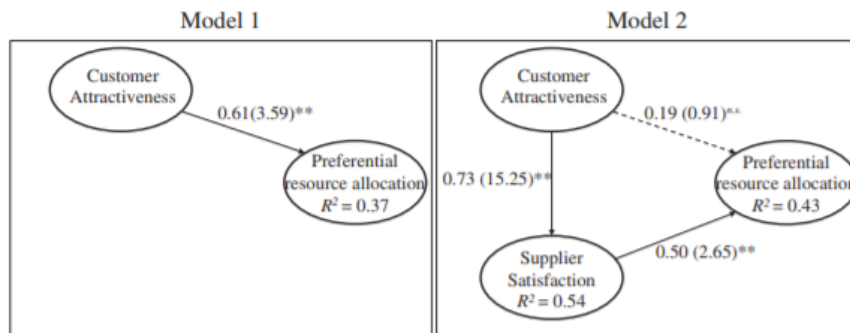


Fig. 5: Circular relationship including test statistics. Source: Pulles et al. (2017), p. 136-137.

The PLS-SEM analysis shows that customer attractiveness and supplier satisfaction positively affect preferential resource allocation. In Model 1, the direct effect of customer attractiveness has been tested. In Model 2, the direct and mediating effect of supplier satisfaction has been tested. The insignificant direct relationship between customer attractiveness and preferential resource allocation when supplier satisfaction was included showed that the impact of customer attractiveness on preferential resource allocation is affected by supplier satisfaction. These findings support the notion that customer attractiveness and supplier satisfaction are different concepts that influence the behaviour of suppliers in different ways¹⁵⁴.

¹⁵¹ See Pulles et al. (2016), p. 131; Schiele et al. (2012b), p. 1181.

¹⁵² See Pulles et al. (2016), p. 131; Schiele et al. (2012b), p. 1180.

¹⁵³ See Pulles et al. (2016), p. 131-132.

¹⁵⁴ See Pulles et al. (2016), p. 136-138.

3.3. Preferred customer status depends on customer attractiveness and supplier satisfaction: antecedents of the circular cycle highlighted

With respect to empirical evidence, case studies by Williamson (1991) and Moody (1992) were presented in the field of supplier selectiveness in business-to-business markets¹⁵⁵. Moody (1992) identified ten antecedents of buyers that were used to describe ‘the best customer’ by suppliers, which are: 1) early supplier involvement; 2) mutual trust; 3) quality initiatives; 4) involvement in NPD; 5) commitment to partnership; 6) crisis management/response; 7) schedule sharing; 8) communication and feedback; 9) profitability; and 10) response to cost reduction ideas¹⁵⁶. From these antecedents, seven out of ten are based on communication and/or other forms of interaction¹⁵⁷. Further elaboration by Schiele et al. (2012b) indicates that obtaining PCS is dependent on two important constructs – customer attractiveness and supplier satisfaction – which needs to be classified as antecedents for PCS¹⁵⁸. Consequently, Hüttinger et al. (2012) provided an overview of antecedents of PCS, which can be categorised into: 1) strategic compatibility; 2) relational quality; 3) economic value; and 4) instruments of interaction¹⁵⁹. As follow-up research, Hüttinger et al. (2014) further examined these antecedents, and based on their mixed-method approach – qualitative and PLS-SEM analyses – antecedents for PCS, customer attractiveness and supplier satisfaction has been identified, as illustrated in Table 5¹⁶⁰.

Table 5: Antecedents of the circular cycle. Source: Hüttinger et al. (2014), p. 711.

Customer attractiveness	Supplier satisfaction	Preferred customer status
Growth opportunity*	Growth opportunity*	Growth opportunity*
Innovation potential	Innovation potential	Innovation potential
Operative excellence*	Operative excellence	Operative excellence
Reliability	Reliability*	Reliability*
Support of suppliers	Support of suppliers	Support of suppliers
Supplier involvement	Supplier involvement	Supplier involvement
Contact accessibility	Contact accessibility	Contact accessibility
Relational behaviour*	Relational behaviour*	Relational behaviour

Notes: *=Statistically significant path

¹⁵⁵ See Schiele et al. (2012b), p. 1180; Moody (1992), p. 52; Williamson (1991), p. 75-76.

¹⁵⁶ See Moody (1992), p. 52.

¹⁵⁷ See Hüttinger et al. (2012), p. 1202.

¹⁵⁸ See Schiele et al. (2012b), p. 1179.

¹⁵⁹ See Hüttinger et al. (2012), p. 1199-1202.

¹⁶⁰ See Hüttinger et al. (2014), p. 711.

Elaborating on the study of Hüttinger et al. (2014), Vos et al. (2016) replicated and extended the research model by adding profitability as an antecedent and tested the model both on direct and indirect materials¹⁶¹. By using the partial least square-path modeling (PLS-PM), the study finds that operative excellence has only a significant effect on supplier satisfaction when the procurement is indirect, while the effect of relational behaviour is only significant when the purchasing is direct of nature¹⁶². In addition, theoretical reasoning indicates that certain antecedents might precede and influence others, thereby a revised model has been proposed with a clearer distinction among economic, relational and operative factors. The revised model can be classified as a ‘state-of-the-art’ analysis, which could be the base for future research on supplier satisfaction. The revised model, as illustrated in Figure 6¹⁶³, proposed that involvement, support and reliability have an impact on relational behaviour, while innovation potential influences growth opportunity and contact accessibility affects operative excellence. Relational behaviour, operative excellence, profitability and growth opportunity, all categorised as relational aspects, will influence supplier satisfaction. Supplier satisfaction, on its turn, is positively correlated with the PCS, which shows the supplier’s intention. Conclusively, the PCS has a positive impact on preferential treatment, the ‘actual’ behaviour of the supplier¹⁶⁴. This paper was chapter two of the dissertation of Vos (2017), which was defended in 2017¹⁶⁵.

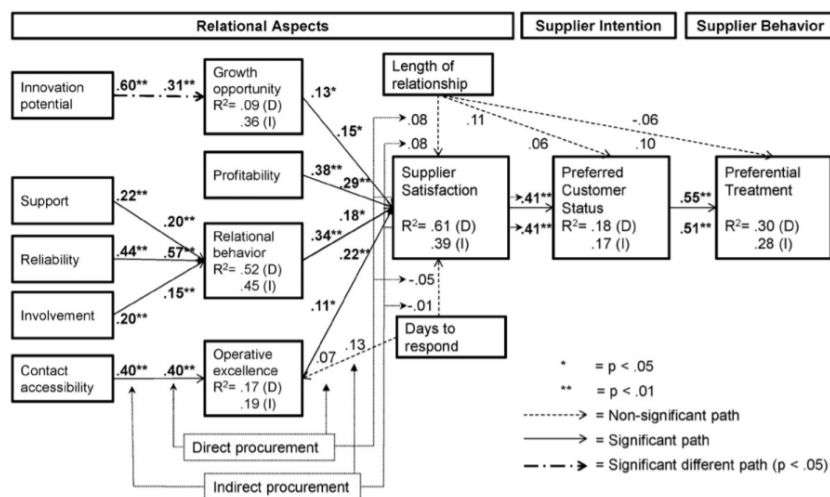


Fig. 6: Results of PLS-PM of the revised model. Source: Vos et al. (2016), p. 4620.

¹⁶¹ See Vos et al. (2016), p. 4613.

¹⁶² See Vos et al. (2016), p. 4619-421.

¹⁶³ See Vos et al. (2016), p. 4620.

¹⁶⁴ See Vos et al. (2016), p. 4619-422.

¹⁶⁵ See Vos (2017) p. 28-54.

4. Examining the link of corporate prestige on the relationship between the antecedents of supplier satisfaction and supplier satisfaction with an eye toward preferred customership: prestige as additional dimension of the revised model

4.1. Historical replications and extensions of Vos et al. (2016): state-of-the-art analysis extended with new satisfaction measures

Previous research emphasized the importance of preferred customership in buyer-supplier relationships¹⁶⁶, where Schiele et al. (2012b) indicates that obtaining the PCS is dependent on two important constructs – customer attractiveness and supplier satisfaction – which needs to be classified as antecedents for PCS¹⁶⁷. Supplier satisfaction is a necessary element of PCS, given that by meeting or exceeding the expectations of the supplier, competitive advantages can be generated e.g. financial benefits¹⁶⁸, innovation¹⁶⁹, flexibility¹⁷⁰, customer satisfaction¹⁷¹, environment¹⁷², knowledge transfer¹⁷³, service¹⁷⁴, and inventory¹⁷⁵. Customer attractiveness, on its turn, can be classified as source of initial allocation of resources and reciprocity¹⁷⁶, which can be linked to the four-step model of Nollet et al. (2012), with ‘initial attraction’ as first step¹⁷⁷. The ideology of Nollet et al. (2012) is based upon the SET and proposed that attractiveness (1) precedes supplier satisfaction (2). This is in line with Pulles et al. (2016), who identified the insignificant direct relationship between customer attractiveness and preferential resource allocation, when supplier satisfaction was included showed that the impact of customer attractiveness on preferential resource allocation is affected by supplier satisfaction¹⁷⁸. Furthermore, increasing customer attractiveness should be considered as priority for strategic

¹⁶⁶ See Vos et al. (2016), p. 4613; Hüttinger et al. (2014), p. 697; Schiele et al. (2012b), p. 1179-1180; Hüttinger et al. (2012), p. 1203; Schiele et al. (2012c), p. 134.

¹⁶⁷ See Schiele et al. (2012b), p. 1179.

¹⁶⁸ See Sáenz et al. (2018), p. 238; Kumar & Rahman (2016), p. 836.

¹⁶⁹ See Jajja et al. (2019), p. 331; Schiele (2012a), p. 44.

¹⁷⁰ See Sáenz et al. (2018), p. 238.

¹⁷¹ See Sáenz et al. (2018), p. 238.

¹⁷² See Kumar & Rahman (2016), p. 836.

¹⁷³ See Hald et al. (2009), p. 960.

¹⁷⁴ See Falasca & Kros (2018), p. 41.

¹⁷⁵ See Falasca & Kros (2018), p. 41.

¹⁷⁶ See Schiele (2019), p. 63-72; Schiele et al. (2012b), p. 1180.

¹⁷⁷ See Nollet et al. (2012), p. 1188-1190.

¹⁷⁸ See Pulles et al. (2016), p. 136-138.

supply risk reduction, parallel with obtaining preferential resource allocation¹⁷⁹. The (extended) model of antecedents for supplier satisfaction, customer attractiveness and PCS have been tested in multiple industries e.g. chemical and automotive industry, with multiple supplier types e.g. Tier 1, 2 and/or 3 as well as within multiple geographical areas¹⁸⁰. These findings highlight the importance of research in the field of supplier satisfaction, however opportunities exist for more detailed research in this area. Therefore, Vos et al. (2016) urge scholars to further improve the explanatory as well as the predictive performance of satisfaction measures. A mixture of replication, explanatory modeling and prediction orientated out-of-sample analyses allows a systematic comparison of multiple contexts, resulting in novel research insights¹⁸¹.

Therefore, scholars added diverse variables as well as antecedents to the model of Vos et al. (2016), which are tested in the private sector. A series of recent studies has indicated that ‘buyer power’, consisting of the ‘usage of coercive power’ and the ‘usage of reward power’ influences supplier satisfaction directly and/or indirectly, with ‘conflict in relationship’, ‘conflict resolution’ and ‘status’ as mediators on supplier satisfaction¹⁸². Henn (2018) investigated the impact of ‘corporate culture’ – consisting of clan, market, adhocracy and hierarchy culture - on the relationship between antecedents of supplier satisfaction and supplier satisfaction¹⁸³, while Kok (2020) examined the moderating effect of Hofstede’s cultural dimensions between social capital – consisting of structural, relational and cognitive capital – and supplier satisfaction¹⁸⁴. Bartelink (2019) added information sharing - with trust, commitment, shared norms and reciprocity as antecedents - as variable which influence customer attractiveness and supplier satisfaction¹⁸⁵, whereas Wantia (2016) examined a similar research with ‘intelligence’ as explanatory variable¹⁸⁶. Considering the relational behaviour, ‘realized growth’, ‘information sharing’ and ‘financial terms’ has been included as antecedents of supplier satisfaction¹⁸⁷, while Mastebroek (2018) tested

¹⁷⁹ See Reichenbach et al. (2017), p. 354-357; Schiele et al. (2012b), p. 1181; Hüttinger et al. (2012), p. 1203.

¹⁸⁰ See Vos et al. (2016), p. 4619-422; Hüttinger et al. (2014), p. 711.

¹⁸¹ See Vos et al. (2016), p. 4621-422.

¹⁸² See Schiele et al. (2020a), p. 15-19; van der Lelij (2016), p. 36-43.

¹⁸³ See Henn (2018), p. 33-36.

¹⁸⁴ See Kok (2020), p. 27-33.

¹⁸⁵ See Bartelink (2019), p. 37-41.

¹⁸⁶ See Wantia (2016), p. 21-25.

¹⁸⁷ See Sahbaz (2019), p. 36-42.

the effect of ‘supplier expectations’, ‘size asymmetry’ and ‘likeability’ on supplier satisfaction¹⁸⁸. From operational excellence perspective, ‘contact accessibility’, ‘demand forecasting’, ‘payment’ and ‘ordering process’ has been investigated as operational antecedents of supplier satisfaction¹⁸⁹ along with ‘billing/delivery’ and ‘order’, with external uncertainty – consisting of competition, technological, and demand uncertainty – as moderator between supplier satisfaction and PCS¹⁹⁰. Jansen (2018) investigated the ‘supplier importance’ (based on Kraljic) on the operative excellence antecedents in relation to supplier satisfaction together with the ‘buyer’s importance’ on PCS¹⁹¹. In addition, the effect of ‘brand related’ factors – consisting of brand equity, awareness and image – has been tested on the suppliers’ growth opportunity and supplier satisfaction¹⁹² as well as the influence of ‘proximity’¹⁹³ on PCS. Finally, van der Veen (2018) examined the effect of ‘trusting intention and belief’ as well as ‘affective and instrumental commitment’ on supplier satisfaction¹⁹⁴.

4.2. Introduction to corporate prestige: state-of-the-art analysis extended with buyer’s corporate reputation and status as new antecedents

Despite the above-mentioned extensions of Vos et al. (2016), including a variety of antecedents and variables along with new insights towards preferred customership, corporate prestige concepts – consisting of ‘corporate reputation’ and ‘corporate status’ - as well as the ‘adoption of the CE principles’ has not been (extensively) studied. From sustainability perspective, Garip (2019) investigated the moderating effect of ‘moral sustainability motive’ between ‘sustainable buyer’ and ‘sustainable supply chain collaboration’ with the benefits from PCS – consisting of ‘benevolent pricing’, ‘physical resource allocation’ as well as ‘innovation resource allocation’¹⁹⁵. From corporate prestige perspective, - the extent to which a firm is being regarded by other firms, admired, perceived as being with high status, being considered as prestigious, or not - Van der Lelij (2016) examined the moderating effect of ‘status’

¹⁸⁸ See Mastebroek (2018), p. 28-34.

¹⁸⁹ See Ilkay (2019), p. 28-32.

¹⁹⁰ See Goossen (2019), p. 22-28.

¹⁹¹ See Jansen (2018), 35-39.

¹⁹² See Sbai (2019), p. 37-42.

¹⁹³ See Praas (2016), p. 32-39.

¹⁹⁴ See van der Veen (2018), p. 27-31.

¹⁹⁵ See Garip (2019), p. 30-35.

on ‘power’ – consisting of ‘coercive and reward power’ – and PCS¹⁹⁶. This study hypothesised that having a high status as a buyer increases the chance of receiving a PCS on the grounds that a high-status actor can get greater effort from lower-status actors. However, results indicate an insignificant moderating effect of ‘status’ on the relationship between the ‘usage of coercive power’ and supplier satisfaction¹⁹⁷. More recent evidence highlights the significant effect of ‘buyer’s status’ on supplier satisfaction¹⁹⁸. As seen in Schiele et al. (2020a), SEM is used to analyse survey data of the suppliers of three buying organisations from several industries e.g. finance, automotive and education. The influence of the buyer’s status on reducing relational conflict and improving supplier satisfaction is strong and highly significant, which is also partially moderated by conflict, as illustrated in Figure 7¹⁹⁹.

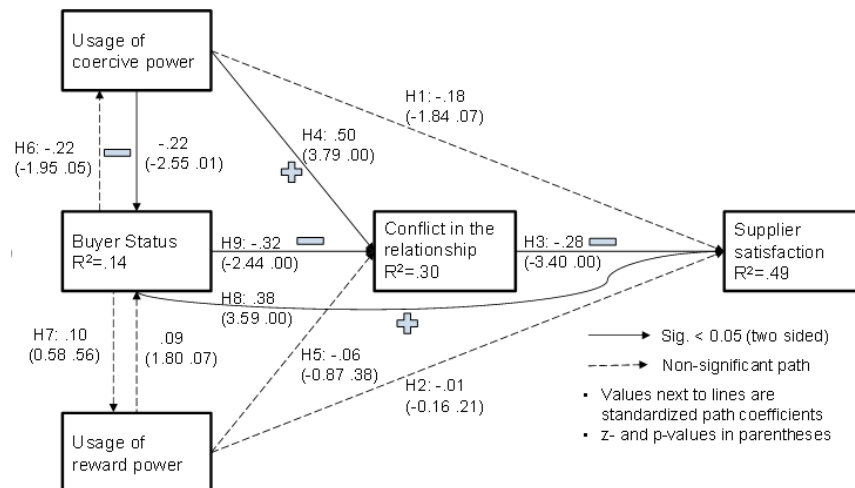


Fig. 7: Results of SEM of the research model. Source: Schiele et al. (2020a), p. 32.

Further recent study on prestige found that buying firms which are highly regarded by their supplier may get interactional benefits as compared to their less prestigious competitors. Using the partial least square–based multigroup analysis (PLS-MGA), the relationship of perceived customer prestige on PCS has been explored, in association with corporate and national culture orientations²⁰⁰. Results show that a buyer’s reputation is beneficial for achieving PCS with suppliers, particularly strong

¹⁹⁶ See van der Lelij (2016), p. 36-43.

¹⁹⁷ See van der Lelij (2016), p. 61-65.

¹⁹⁸ See Schiele et al. (2020a), p. 31-37.

¹⁹⁹ See Schiele et al. (2020a), p. 31-37.

²⁰⁰ See Schiele et al. (2020b), p. 1-3.

in high power distance countries²⁰¹ and more particularly, from the perspective of the antecedents to supplier satisfaction as identified by Vos et al. (2016), ‘buyer prestige’ must be taken into account as antecedent to supplier satisfaction next to the ‘classical’ antecedents²⁰². The firm’s financial position, which reflects the expectation for future growth along with the firm’s innovation image, which directly influences supplier satisfaction, are the two main grounds for linking corporate prestige to PCS²⁰³. The addition and explanatory power of status and corporate prestige contributes to PCS literature, however, future research should further develop and confirm these initial findings by including customer prestige as central variable for analysis and dissecting its ‘viewpoint’ into two components - reputation and status²⁰⁴. Therefore, this research will provide new insights by examining the directly and indirectly influence of corporate reputation (4.3) and corporate status (4.4) as well as the buyer’s adoption of CE principles (2) on supplier satisfaction in order to obtain the PCS.

4.3. Comprehensive understanding of corporate reputation and its attributes: the aggregated perceptions about the organisation of all its stakeholders

In today's dynamic and competitive commercial environment, companies are seeking to find ways of differentiating their offerings and creating desired relationships with groups that give credibility to the company. Hence, reputation is one of the most important intangible assets driving company performance and should be viewed as a crucial tool where companies create and/or sustain competitive advantage²⁰⁵. Seeing corporate prestige as composite of reputation and status, it is worth exploring the roots of these concepts²⁰⁶. Elaborating on corporate reputation, the concept itself represents the aggregated perceptions about the organisation of all stakeholders (e.g. competitors, customers and suppliers) based on its past performance²⁰⁷. Fombrun (1996) defined corporate reputation as ‘‘a perceptual representation of a company’s past actions and future prospects that describes the firm’s overall appeal to all of its key constituents when compared with other leading rivals’’²⁰⁸. This evaluation is

²⁰¹ See Schiele et al. (2020b), p. 15-16.

²⁰² See Schiele et al. (2020b), p. 15-16.

²⁰³ See Schiele et al. (2020b), p. 15-16.

²⁰⁴ See Schiele et al. (2020b), p. 16.

²⁰⁵ See Ali et al. (2016), p. 1105; Jung & Seock (2016), p. 1-2; Gotsi & Wilson (2001), p. 24-25.

²⁰⁶ See Schiele et al. (2020b), p. 4; Jensen & Roy (2008), p. 496-497.

²⁰⁷ See Quintana-Garcia et al. (2020); Carmeli et al. (2016), p. 97.

²⁰⁸ See Fombrun (1996), p. 72.

based on the stakeholder's (in)direct experiences with the company, any other form of communication and symbolism that provides information about the firm's actions and/or a comparison with the actions of other leading rivals²⁰⁹. Complementarily, reputation is established by individuals' relative perspective, therefore, reputation is closely linked to the consumers' subjective evaluation about the company²¹⁰. Related concepts of reputation can be linked to each other in a logical way, in the so-called 'hierarchy of effects' (HOE) model²¹¹. Corporate reputation and its outcomes are assessed by consumers' perceptions or impressions of the company such as: 1) brand awareness; 2) perceptions of quality; 3) attitudes toward the brand; and 4) purchase intentions²¹². Based on this model, consumers first attain awareness and knowledge about a product and/or a brand (cognitive stage), subsequently develops positive or negative feelings or attitudes towards the product (affective stage), and finally acts by buying or rejecting the product or the brand (conative stage)²¹³.

Furthermore, the challenge in managing corporate reputation is how the term is used synonymously with terms such as corporate image, corporate branding and corporate identity²¹⁴. Since all terms are based on stakeholders' perceptions and attitudes, and often used interchangeably, confusion has been arisen²¹⁵. Chun (2005) differentiates corporate reputation from corporate image by introducing the concept of corporate identity. "Identity is the way the organisation views itself, image becomes the way it is viewed by others and reputation, as the umbrella term, encompassing these two concepts"²¹⁶. Ljubojevic & Ljubojevic (2008) emphasized that image tends to be superficial, flexible and constantly changing, while reputation is rigid and does not constantly change, since image building simply demands a formal communication system such as having a name, 'eye-catching' logo, 'good' corporate advertising and public relations, while reputation building goes beyond by including an extraordinary identity caused by excellent and consistent, if not continually, rising performance

²⁰⁹ See Schiele et al. (2020b), p. 5; Gotsi & Wilson (2001), p. 24-25.

²¹⁰ See Jung & Seock (2016), p. 1-2.

²¹¹ See Jung & Seock (2016), p. 3-4; Barry & Howard (1990), p. 123-126.

²¹² See Jung & Seock (2016), p. 3-4.

²¹³ See Jung & Seock (2016), p. 3-4; Vakratsas & Ambler (1999), p. 26; Barry & Howard (1990), p. 123-126.

²¹⁴ See Chun (2005), p. 92-95; Fombrun (1996), p. 72-76

²¹⁵ See Chun (2005), p. 94-97.

²¹⁶ See Chun (2005), p. 95.

over many years²¹⁷. Therefore, having a ‘good’ image does not immediately translate to a positive corporate reputation, since it is not only emphasising an organisation’s visibility, but also its trustworthy, responsibility, credibility and reliability²¹⁸.

Managing corporate reputation is crucial for organisations since many benefits result from a favourable reputation²¹⁹. From financial performance perspective, previous research stated that ‘good’ reputation has a significant effect on a company’s ability to reduce costs, set higher prices, and increase profits²²⁰. Researchers also noted that ‘good’ corporate reputation enhance consumers’ purchase intention, attitude towards the company and its products, and brand loyalty²²¹, which provides a route to higher customer loyalty and trust²²². Moreover, firms with higher reputations are linked with greater satisfaction of key stakeholders e.g. customers²²³, employees²²⁴, investors²²⁵ and even suppliers, with customer prestige as explanatory variable²²⁶. However, these conclusions have been questioned in a number of papers in the corporation reputation literature²²⁷ and taken suppliers into consideration, further research on reputation and supplier satisfaction is needed to confirm this novel finding²²⁸.

Furthermore, Hüttinger et al. (2014) and Vos et al. (2016) identified the antecedents for supplier satisfaction, and before testing their model, it is worth to explain the antecedents of corporate reputation. Recent study by Ali et al. (2015) identified seven antecedents of corporate reputation: 1) corporate financial performance; 2) corporate social performance; 3) media visibility; 4) firm size; 5) firm risk; 6) firm age; and 7) long-term institutional ownership. Significant and positive correlations have been found in size, visibility, age and financial and social performance²²⁹. Elaborating on visibility, Foroudi et al. (2014) identified that the company's logo, recognizability, familiarity and attitude toward advertisements enhance corporate reputation, with

²¹⁷ See Ljubojevic & Ljubojevic (2008), p. 223-224.

²¹⁸ See Ljubojevic & Ljubojevic (2008), p. 223-224.

²¹⁹ See Deephouse et al. (2016), p. 463-464.

²²⁰ See Jung & Seock (2016), p. 1-2; Deephouse et al. (2016), p. 463-464; Rindova et al. (2005), p. 1033.

²²¹ See Jung & Seock (2016), p. 1-2; Vakratsas & Ambler (1999), p. 26.

²²² See Ali et al. (2016), p. 1105; Bartikowski et al. (2011), p. 966-967.

²²³ See Walsh & Beatty (2007), p. 127-128.

²²⁴ See Chun & Davies (2010), p. 721-722.

²²⁵ See Helm (2007), p. 22-24.

²²⁶ See Schiele et al. (2020b), p. 13-15.

²²⁷ See Ali et al. (2016), p. 1114-1115; Chun (2005), p. 105-108.

²²⁸ See Schiele et al. (2020b), p. 13-15.

²²⁹ See Ali et al. (2016), p. 1110-1112.

corporate image as moderator²³⁰. Previous research found that integrating CE²³¹ and CSR²³² in the firm's strategy and (C)SCM has a positive direct²³³, and indirect²³⁴ impact on the firm's brand and corporate reputation, as described in 2.4. Reputation, as a market leader in undertaking sustainability initiatives, leads an organisation to serve as role-model for other competitors, and this adoption, on its turn, is positively correlated with higher customer satisfaction²³⁵. In addition, a novel framework for reputation has been proposed by Money et al. (2017). As can be seen in Figure 8, the framework can be explored from an organisation-oriented perspective as well as from a stakeholder-oriented perspective. The framework itself, including its antecedents and consequences of corporate reputation, is based on an extensive literature review, that suggests that functional, relational, motivational and third-party influence drives influence corporate reputation²³⁶.

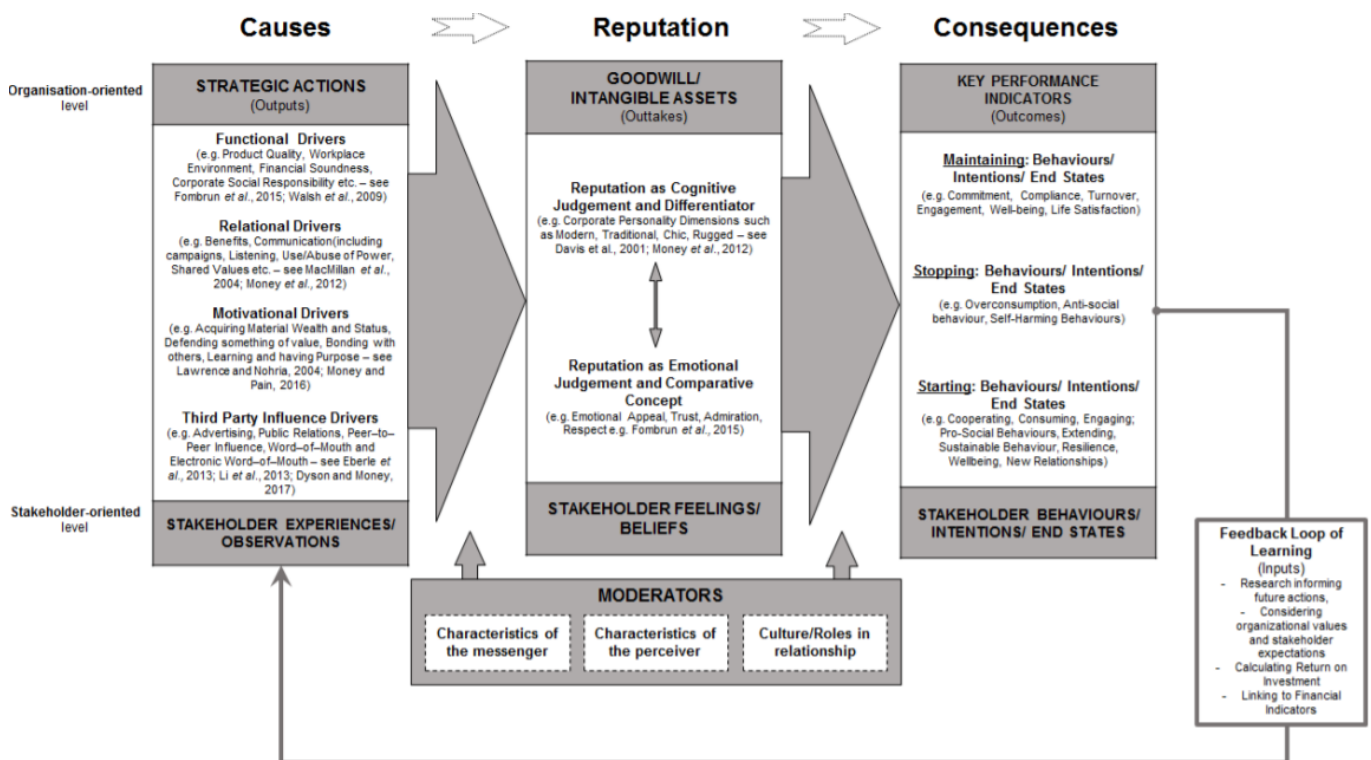


Fig. 8: Novel reputation framework. Source: Money et al. (2017), p. 64.

²³⁰ See Foroudi et al. (2015), p. 2273-2275.

²³¹ See Tura et al. (2019), p. 91; CRIET (2018), p. 18-19; Lathi et al. (2018), p. 7; Linder & Williander (2017), p. 184; Masi et al. (2017), p. 9; Scheepens et al. (2016), p. 262-264; Tukker (2015), p. 84.

²³² See Tran & Nguyen (2020), p. 11-13; Gallardo-Vázquez et al. (2019), p. 14-18; Park (2019), p. 215-217; Chang & Yeh (2017), p. 38-39; Sindhu & Arif (2017), p. 6-8; Bernal-Conesa et al. (2016), p. 121-122; Saeidi et al. (2014), p. 245-247.

²³³ See Tran & Nguyen (2020), p. 11-13; Gallardo-Vázquez et al. (2019), p. 14-18; Park (2019), p. 215-217; Bernal-Conesa et al. (2016), p. 121-122.

²³⁴ See Chang & Yeh (2017), p. 38-39; Sindhu & Arif (2017), p. 6-8; Saeidi et al. (2014), p. 245-247.

²³⁵ See Saeed & Kersten (2019), p. 19; Hsu et al. (2012), p. 658.

²³⁶ See Money et al. (2017), p. 18-25.

In the view of measuring corporate reputation, many papers consider Fombrun et al. (2000) as pioneers who first coined the concept 'Reputation Quotient Scale'²³⁷, with the 'RepTrak™ Pulse' as an updated/modified version²³⁸, where both tools reflect the aggregate performance. Also, the 'Customer based Corporate Reputation Scale' by Walsh & Beatty (2007) should be classified as recent measure of corporate reputation²³⁹. Based upon a dual methodology, dimensions of customer-based reputation have been identified as well as the scales to measure these dimensions. Following a comprehensive validation procedure across three service firm types, support has been found for a five-dimensional scale with the following dimensions: 1) customer orientation; 2) reliable and financially strong company; 3) product and service quality; 4) good employer; and 5) social and environmental responsibility²⁴⁰. Their research is in line with previous research by Helm (2005), who identified that reputation has a number of performance sources, which can be conceptualized to a 'more' formative construct, consisting of indicators such as: 1) quality of products; 2) commitment to protecting the environment; 3) credibility of advertising claims; 4) value for money of products; 5) financial performance; 6) customer orientation; 7) qualification of management; 8) corporate success; 9) treatment of employees; and 10) commitment to charitable and social issues²⁴¹. In addition to these measurement tools, there have been other, widely used, rankings of corporate reputation. The US-based Fortune's 'List of Most Admired Companies' is a well-regarded ranking which measures the reputational asset of organisations, based on: 1) quality of management; 2) innovativeness; 3) ability to attract and retain talented people; 4) effectiveness in doing business globally; 5) financial soundness; 6) quality of products or services; 7) social responsibility to the community and the environment; 8) wise use of corporate assets; and 9) long-term investment value²⁴². Following a similar methodology, the UK-based publisher 'Management Today' also undertakes reputational rankings for companies located in the UK. As a result, several studies have used such reputational rankings as a measure of reputation while examining the association of corporate

²³⁷ See Money et al. (2017), p. 18-19; Jung & Seock (2016), p. 1-2; Ali et al. (2016), p. 1106; Lienland et al. (2013), p. 87; Fombrun et al. (2000), p. 241-242.

²³⁸ See Money et al. (2017), p. 18-19; Ali et al. (2016), p. 1107; Fombrun et al. (2015), p. 3-6.

²³⁹ See Ali et al. (2016), p. 1107; Walsh & Beatty (2007), p. 127-129.

²⁴⁰ See Walsh & Beatty (2007), p. 127-134.

²⁴¹ See Schiele et al. (2020b), p. 5; Helm (2005), p. 97-99.

²⁴² See Money et al. (2017), p. 18-19; Ali et al. (2016), p. 1107; Deephouse et al. (2016), p. 464; Rindova et al. (2005), p. 1037-1038; Hutton et al. (2001), p. 249-253.

reputation with its different antecedents and consequences²⁴³. However, according to Money et al. (2017), it is suggested to determine specific KPIs that can be measured simply, in terms of stakeholder behaviour, intention or end-states, which can be traced back to strategic action and stakeholder experiences. Hence, their framework, illustrated in Figure 8, integrates different perspectives, which can be utilised to research and manage issues that could be perceived as paradoxes, such as: short vs long-term interests, internal vs external change processes, company-oriented vs stakeholder-oriented approaches and organisation vs societal benefits²⁴⁴.

From procurement perspective, suppliers need to understand what motivates their customers to collaborate in long-term buyer-supplier relationships in order to gain a competitive advantage²⁴⁵. It was observed that reputation among various capabilities in various dimensions such as ‘the optimum value for money’, ‘the holistic problem-solving capability of the suppliers and their high degree of performance’ as well as ‘the good assistance in economically hard times in the past, which has led to a feeling of gratefulness’ are all of great importance to manufactures for building and sustaining relationships²⁴⁶. Likewise, suppliers invest in building and nurturing high-quality relationships with more planned organisation of relational capital, paying particular attention to the dimensions of marketing capability, open innovation with business and scientific partners, technological reputation and green reputation in order to obtain some benefits²⁴⁷. Therefore, the firm’s reputation, with diversified customer portfolio or with strong exposure to premium brand customers, plays a crucial role in attracting suppliers in comparison to classical criteria, since suppliers have better chances to gain additional orders and broaden their customer base even more²⁴⁸. Consequently, summarising in the words of Carmeli et al. (2006), it can be expected that ‘perceived external prestige among competitors, customers and suppliers is positively related to cognitive organisational identification’²⁴⁹.

²⁴³ See Ali et al. (2016), p. 1107; Brammer et al. (2009), p. 17-18; Fombrun & Shanley (1990), p. 233-234.

²⁴⁴ See Money et al. (2017), p. 28.

²⁴⁵ See Schiele et al. (2020b), p. 5; Lienland et al. (2013), p. 84-85.

²⁴⁶ See Schiele et al. (2020b), p. 5; Zunk (2015), p. 7-9.

²⁴⁷ See Schiele et al. (2020b), p. 5; Agostini et al. (2017), p. 1144-1146; Deephouse et al. (2016), p. 463-464.

²⁴⁸ See Schiele et al. (2020b), p. 5; Manello & Calabrese (2019), p. 73-76.

²⁴⁹ See Schiele et al. (2020b), p. 6; Carmeli et al. (2006), p. 95.

4.4. Comprehensive understanding of corporate status: a judgement of rank made about entities

Status, on its turn, originated in the sociology and is associated with terms such as ‘respected’, ‘admired’, ‘regarded’ and ‘prestige’. While the concept of ‘status’ is appealing in its simplicity, its precise definition and its usage in empirical research have been the subject of much controversy. Scholars have expressed this notion using terms such as ‘estate’, ‘order’, ‘rank’ (socially connoted), or ‘class’ (economically connoted)²⁵⁰. Due to a lack of an agreement on a precise definition, scholars have not been able to reconcile the distinction between ‘status as a subjective evaluation’ and ‘status as an objective, structural reality’²⁵¹. A commonly used definition of status in sociology was given by Goldhamer & Shils (1939), who observed that ‘men evaluate the objects, acts, and human attributes with which they come into contact. These evaluations may become systematized into a hierarchy of values. The individual makes judgements of others and ranks them on the basis of his hierarchy of values and his knowledge concerning what characteristics these other persons possess. Such a judgement of rank made about either the total person or relatively stable segments of the person constitutes the social status of that person.’²⁵² This definition provides an impression of the most important parts of social status - it is a subjective assessment of social rank of an entity based on a hierarchy of values²⁵³.

From organisational and managerial perspective, the concept of status was only introduced in the early 1990s and aroused interest from economic sociologists and organisational theorists²⁵⁴. Started with the focus on status of individuals, the status of employees is studied most. In addition, the idea that organisations itself have status also gets increasingly attention in the literature. In the introduction of “Status in Management and Organizations”, Pearce (2011) pointed to a potential common ground by arguing that status would be grounded in social consensus, must be noticed by individuals, while it could be accessed via structural characteristics²⁵⁵. Besides, status becoming increasingly relevant in the field of operations research and from

²⁵⁰ See Piazza & Castellucci (2014), p. 288.

²⁵¹ See Piazza & Castellucci (2014), p. 288.

²⁵² See Schiele et al. (2020a), p. 12; Goldhamer & Shils (1939), p. 179.

²⁵³ See Schiele et al. (2020b), p. 5; Schiele et al. (2020a), p. 12; Piazza & Castellucci (2014), p. 290.

²⁵⁴ See Schiele et al. (2020b), p. 5; Huang & Washington (2015), p. 1752.

²⁵⁵ See Schiele et al. (2020b), p. 5; Pearce (2011), p. 333-344.

downstream/marketing perspective Podolny (1993) states: “I define a producer’s status in the market as the perceived quality of that producer’s products about the perceived quality of that producer’s competitors’ products.”²⁵⁶ Hence, this economic view of status was in the beginning very popular, but some researchers missed the sociological roots of the concept by excluding any mention of rank order and/or hierarchy from the ‘original’ definition²⁵⁷. Therefore, other scholars expressed status as a ‘socially constructed, intersubjective agreed and accepted ordering or ranking of individuals, groups, organisations, or activities in a social system’²⁵⁸ or ‘the prestige accorded to firms because of the hierarchical positions they occupy in a social structure.’²⁵⁹ So, referring to Podolny’s (1993) early definition of status, this definition is now widely seen as unnecessarily limited in explanatory power, as the majority of scholars acknowledged that status is more than only a ‘signal of quality’ and they argue that both the ‘sociological and economic view’ of the concept should be included in the definition²⁶⁰. Therefore, the aforementioned definition of Pearce (2000), which includes both quality and social order, is most ‘inclusive’. This study uses the original view of Goldhamer & Shils (1939) and sees status as a subjective ranking based on characterises and achievements based on the assessor’s perspective.

Further in-depth elaboration by Piazza & Castellucci (2014) indicates that status is not just a signifier of quality but can fulfil multiple roles. Three roles of status have been classified - status as a signal to other market participants, status as an intangible asset, and status as a mobile resource²⁶¹. First of all, status as a signal to other market participants is studied in research pertaining to organisation and management. This view of status stems from the need to compensate for, avoid, or deal with uncertainty. From organisational perspective, numerous uncertainties in an exchange relationship exist since firms do not have all accurate and relevant information. This uncertainty derived from several sources, e.g. collecting information is simply too costly or high variance of the quality. Therefore, “the greater market participants’ uncertainty about the underlying quality of a producer and the producer’s product, the more that

²⁵⁶ See Schiele et al. (2020a), p. 12; Podolny (1993), p. 830.

²⁵⁷ See Piazza & Castellucci (2014), p. 280.

²⁵⁸ See Washington & Zajac (2005), p. 284.

²⁵⁹ See Jensen & Roy (2008), p. 496.

²⁶⁰ See Schiele et al. (2020a), p. 12-13; Piazza & Castellucci (2014), p. 292.

²⁶¹ See Schiele et al. (2020a), p. 12-13; Piazza & Castellucci (2014), p. 302-304.

market participants will rely on the producer's status to make inferences about that quality."²⁶² Despite this role of status is similar to reputation as well as the concept of status has been developed in the field management and organisation, this view of status remained popular among scholars due to its intuitiveness combined with the broad cross-disciplinary attraction of it²⁶³. To provide an example of this signalling effect, Pollock et al. (2010) assessed the value of the high-status affiliates for young and unproven firms. Consequently, they found a positive linear relationship between the number of prestigious executives and outside directors affiliated with the newly launched IPO and the valuation of the IPO. This clarifies that new firms, which do not have a 'clearly' defined position in the status hierarchy, can overcome uncertainty by exploiting affiliations with high-status companies to signal quality²⁶⁴. In addition, Malter (2014) explored antecedents and consequences of status for French wineries. By including quality and reputation as control variables, the study showed the signalling role of status to other market participants with regard to the expected quality, indicating that the signalling role of status exists²⁶⁵. As specified by Piazza & Castellucci (2014), this research is crucial for future research to the signalling effect of status since these are distinguished from quality and reputation signals²⁶⁶.

Second, the role of status as an intangible asset is popular in the literature pertaining to organisational behaviour. From this perspective, obtaining a 'high' status ensures several positional advantages and often strains from individual characteristics and abilities²⁶⁷. In the field of corporate alliances, Chung et al. (2000) explored factors that drive alliance formation, including status similarity. This study was performed in the field of investment banking firms in the US. Results suggest that investment banks of similar status are more likely to become alliance partners²⁶⁸. In addition, Shipilov & Li (2008) analysed structural holes in the network of investment banks in the UK. Based on their analysis, they found that status accumulation, the ability of firms to raise their status as a group by establishing cooperative relationships, has a

²⁶² See Piazza & Castellucci (2014), p. 302; Podolny (2005), p. 18.

²⁶³ See Piazza & Castellucci (2014), p. 302.

²⁶⁴ See Schiele et al. (2020a), p. 13; Piazza & Castellucci (2014), p. 302; Pollock et al. (2010), p. 6-7.

²⁶⁵ See Schiele et al. (2020a), p. 13; Piazza & Castellucci (2014), p. 302; Malter (2014), p. 271-273.

²⁶⁶ See Piazza & Castellucci (2014), p. 303.

²⁶⁷ See Schiele et al. (2020a), p. 13; Piazza & Castellucci (2014), p. 302.

²⁶⁸ See Piazza & Castellucci (2014), p. 305; Chung et al. (2000), p. 1.

positive effect on revenue generation²⁶⁹. As follow-up research, Shipilov et al. (2011) further studied the influence of status in selecting organisational partners. The influence of the firm's brokerage position in combination with aspiration-performance gaps on an organisation's propensity to initiate relationships with partners of different statuses has been examined. They found that firms in brokerage positions are more likely to initiate business relationships with others of a status different from non-brokers²⁷⁰.

Finally, status as a mobile resource refers to the mechanism wherein status can be transferred from one holder to another through the establishment of a relationship between the two. This implies the social nature of the construct and makes a clear distinction between status and the economic concept of reputation²⁷¹. As an example, Podolny & Phillips (1996) studied the growth and decline of status of investment banks in the 1980s and 1990s. Their research revealed that past performance has a positive effect on the company's future status as well as its ability to acquire higher-status affiliates. Since the relationship with a high-status actor increases the status of a low-status actor, the high-status actor also wants to get something in return for causing the promotion of the latter in terms of status²⁷². Additionally, Bothner et al. (2010) tested the dynamic view of status in their research assessing status evolution. Their results support the notion that the status of an entity will increase over time when it is connected with multiple high-status entities in a network. This network allows status transfer, but ensures that the low-status actor does not rely on one high-status actor, leading to a 'more convenient' transfer process, because even though one high-status actor underachieves, the low-status actor still has support from other high-status actors²⁷³. On the basis of this idea, Piazza & Castellucci (2014) explored the reasons why high-status companies engage in a relationship with low-status firms in the field of Formula 1 racing. They discovered that high-status firms could extract greater effort from low-status firms. This effect will be greater when the differences in each party's status are also bigger²⁷⁴.

²⁶⁹ See Schiele et al. (2020a), p. 13; Piazza & Castellucci (2014), p. 305; Shipilov & Li (2008), p. 73.

²⁷⁰ See Schiele et al. (2020a), p. 13-14; Piazza & Castellucci (2014), p. 305; Shipilov et al. (2011), p. 1418.

²⁷¹ See Schiele et al. (2020a), p. 14; Piazza & Castellucci (2014), p. 304.

²⁷² See Schiele et al. (2020a), p. 14; Piazza & Castellucci (2014), p. 304; Podolny & Phillips (1996), p. 453.

²⁷³ See Schiele et al. (2020a), p. 14; Piazza & Castellucci (2014), p. 304; Bothner et al. (2010), p. 943-946.

²⁷⁴ See Schiele et al. (2020a), p. 14; Piazza & Castellucci (2014), p. 304.

Overall, there is the basic hypothesis relevant in this context underlying the prestige literature: prestige increases the attractiveness as partner²⁷⁵. Hence, if a buying firm wants to achieve preferred customer status with its suppliers, assessing, managing and ultimately increasing its prestige may be a clue²⁷⁶. Besides, from purchasing and supply management perspective, it can be stated that status has a signalling effect, it is an intangible asset, and status of an actor changes with time, such as by transferring the status of one entity to another²⁷⁷. It is assumed that the signalling effect of status has little to no direct effect for a buyer in a buyer-supplier relationship since the supplier sells the products to the buyer. However, indirect effect is possible if the supplier is associated with the outcome of the buyer. Furthermore, an actor can benefit from a relationship with a high-status actor as it causes an increase in its status and accordingly, the high-status actor will want something in return for such upgradation²⁷⁸. It can be assumed that this inter-organisational observation will also be seen in the case of buyer-supplier relationships²⁷⁹. A customer buying from a high prestige supplier has been found to be able to profit from its image²⁸⁰. So, a customer with high status can, on the other hand, expect benefits in return from the supplier²⁸¹. From this perspective, having a ‘higher’ status ensures some benefits²⁸².

Drawing up from recent research, Schiele et al. (2020a) confirms these assumptions and highlights the strong and highly significant effect of ‘buyer’s status’ on supplier satisfaction²⁸³. As a result of scarcity of research models for measuring supplier satisfaction and PCS with status as well as reputation as central variables²⁸⁴, this research will provide new insights by examining the directly and indirectly influence of corporate reputation (as a performance-based construct) and corporate status (a hierarchical outcome) as well as the buyer’s adoption of CE principles on supplier satisfaction in order to obtain the PCS, and will complement previous studies²⁸⁵.

²⁷⁵ See Schiele et al. (2020b), p. 5; Devers et al. (2009), p. 154-155.

²⁷⁶ See Schiele et al. (2020b), p. 5.

²⁷⁷ See Schiele et al. (2020a), p. 14.

²⁷⁸ See Piazza & Castellucci (2014), p. 303.

²⁷⁹ See Schiele et al. (2020b), p. 5; Schiele et al. (2020a), p. 15.

²⁸⁰ See Lienland et al. (2013), p. 85-86.

²⁸¹ See Schiele et al. (2020b), p. 5.

²⁸² See Piazza & Castellucci (2014), p. 303.

²⁸³ See Schiele et al. (2020a), p. 31-37.

²⁸⁴ See Schiele et al. (2020b), p. 16; Schiele et al. (2020a), p. 2-6.

²⁸⁵ See Schiele et al. (2020b), p. 1-18; Schiele et al. (2020a), p. 1-43.

5. Hypotheses and conceptual model: corporate reputation, status and buyer's adoption of CE principles as antecedents of supplier satisfaction and preferred customer status

5.1. Replication and extension of the state-of-the-art-analysis of Vos et al. (2016)

The positive relationship between supplier satisfaction and PCS is an often-described phenomenon in literature, where many authors examined its antecedents, resulting that supplier satisfaction is seen as necessary condition for suppliers to award PCS²⁸⁶. In line with the SET, based on reciprocity, is that if one is giving or receiving a favour in all forms, one is expected to get or receive a favour in return. A rational assumption is that a satisfied supplier can assign a firm the PCS and finally grants this firm with a preferential treatment. This line of reasoning is empirically supported by Vos et al. (2016), who found a significantly positive impact of supplier satisfaction on PCS. In the extended model, four first-tier antecedents have a significant positive effect on supplier satisfaction, which are: 1) growth opportunity; 2) profitability; 3) relational behaviour; and 4) operative excellence²⁸⁷. Furthermore, previous research revealed that support, involvement and contact accessibility have the potential to influence supplier satisfaction²⁸⁸. For this reason, it is hypothesised that the four first-tier antecedents plus support, involvement and contact accessibility will have a positive impact on supplier satisfaction as well as supplier satisfaction on PCS.

- H1a: Profitability has a positive impact on supplier satisfaction.
- H1b: Growth opportunity has a positive impact on supplier satisfaction.
- H1c: Relational behaviour has a positive impact on supplier satisfaction.
- H1d: Operative excellence has a positive impact on supplier satisfaction.
- H1e: Support has a positive impact on supplier satisfaction.
- H1f: Involvement has a positive impact on supplier satisfaction.
- H1g: Contact accessibility has a positive impact on supplier satisfaction.
- H1h: Supplier satisfaction has a positive impact on PCS.

²⁸⁶ See Vos et al. (2016), p. 4613-4614; Hüttinger et al. (2014), p. 697-713.

²⁸⁷ See Vos et al. (2016), p. 4619-4620.

²⁸⁸ See Vos et al. (2016), p. 4619-4620; Hüttinger et al. (2014), p. 697-713.

5.2. Corporate prestige: the versatility of reputation in the supply market

According to Jensen & Roy (2008), the concept ‘corporate prestige’ is a composition of reputation, which is based on the past performance of an actor, and status, which is based on the ranked social position of an actor²⁸⁹. Schiele et al. (2020b) found that buying firms which are highly regarded by their supplier may get interactional benefits as compared to their less prestigious competitors. By using the PLS-MGA, the relationship of perceived customer prestige on PCS has been explored, in association with corporate and national culture orientations²⁹⁰. Results show that a buyer’s reputation is beneficial for achieving PCS with suppliers, particularly strong in high power distance countries²⁹¹ and more particularly, from the perspective of the antecedents to supplier satisfaction as identified by Vos et al. (2016), ‘buyer prestige’ must be taken into account as antecedent to supplier satisfaction next to the ‘classical’ antecedents²⁹². First, researchers noted that ‘good’ corporate reputation enhance consumers’ purchase intention, attitude towards the company and its products, and brand loyalty²⁹³, which provides a route to higher customer loyalty and trust²⁹⁴. Besides, firms with higher reputations are linked with greater satisfaction of key stakeholders e.g. customers²⁹⁵, employees²⁹⁶, investors²⁹⁷ and even suppliers²⁹⁸. Therefore, the firm’s reputation, with diversified customer portfolio or with strong exposure to premium brand customers, plays a crucial role in attracting suppliers in comparison to classical criteria, since suppliers have better chances to gain additional orders and broaden their customer base even more²⁹⁹. In line with Schiele et al. (2020b), it is expected that corporate reputation influence supplier satisfaction and PCS both positively.

H2a: Buyer’s reputation has a positive impact on supplier satisfaction.

H2b: Buyer’s reputation has a positive impact on preferred customer status.

²⁸⁹ See Schiele et al. (2020b), p. 4; Jensen & Roy (2008), p. 496-497.

²⁹⁰ See Schiele et al. (2020b), p. 1-3.

²⁹¹ See Schiele et al. (2020b), p. 15-16.

²⁹² See Schiele et al. (2020b), p. 15-16.

²⁹³ See Jung & Seock (2016), p. 1-2; Vakratsas & Ambler (1999), p. 26.

²⁹⁴ See Ali et al. (2016), p. 1105; Bartikowski et al. (2011), p. 966-967.

²⁹⁵ See Walsh & Beatty (2007), p. 127-128.

²⁹⁶ See Chun & Davies (2010), p. 721-722.

²⁹⁷ See Helm (2007), p. 22-24.

²⁹⁸ See Schiele et al. (2020b), p. 13-15.

²⁹⁹ See Schiele et al. (2020b), p. 5; Manello & Calabrese (2019), p. 73-76.

Second, it was observed that reputation among various capabilities in various dimensions such as ‘the optimum value for money’, ‘the holistic problem-solving capability of the suppliers and their high degree of performance’ as well as ‘the good assistance in economically hard times in the past, which has led to a feeling of gratefulness’ are all of great importance to manufactures for building and sustaining relationships³⁰⁰. Likewise, suppliers invest in building and nurturing high-quality relationships with more planned organisation of relational capital, paying particular attention to the dimensions of marketing capability, open innovation with business and scientific partners, technological reputation and green reputation in order to obtain some benefits³⁰¹. Therefore, the firm’s reputation, with diversified customer portfolio or with strong exposure to premium brand customers, plays a crucial role in attracting suppliers, since suppliers have better chances to gain additional orders and broaden their customer base even more³⁰². From the versatile perspective of corporate reputation, it is expected that buyer’s reputation influences all the classical antecedents of Vos et al. (20216) positively.

H2c: Buyer’s reputation has a positive impact on profitability.

H2d: Buyer’s reputation has a positive impact on growth opportunity.

H2e: Buyer’s reputation has a positive impact on relational behaviour.

H2f: Buyer’s reputation has a positive impact on operative excellence.

H2g: Buyer’s reputation has a positive impact on support.

H2h: Buyer’s reputation has a positive impact on involvement.

H2i: Buyer’s reputation has a positive impact on contact accessibility.

5.3. Corporate prestige: the triple function of buyer’s status in supply market

From the viewpoint of status, as beforementioned, status increases the buyer’s value which can be brought to the relationship, potentially making the relationship more important for the supplier. The ‘triple function’ of status is the fundamental part of the foundation for hypotheses as well as the studies from Schiele et al. (2020a) and Van der Lelij (2016). First, in relation the notion of status being a transferable asset, it can be expected that being in a relationship with a high-status firm could have a

³⁰⁰ See Schiele et al. (2020b), p. 5; Zunk (2015), p. 7-9.

³⁰¹ See Schiele et al. (2020b), p. 5; Agostini et al. (2017), p. 1144-1146; Deephouse et al. (2016), p. 463-464.

³⁰² See Schiele et al. (2020b), p. 5; Manello & Calabrese (2019), p. 73-76.

positive impact on the status of the supplier over time. An actor can benefit from a relationship with a high-status actor as it causes an increase in its status and as a result, the high-status actor will want something in return for such upgradation³⁰³. It can be assumed that this inter-organisational observation will also be seen in the case of buyer-supplier relationships³⁰⁴. A customer buying from a high prestige supplier has been found to be able to profit from its image³⁰⁵. So, a customer with high status can, on the other hand, expect benefits in return from the supplier, where the supplier could provide the buyer a PCS. From this perspective, having a 'higher' status ensures some benefits³⁰⁶, thus, it can be expected that suppliers award the PCS in exchange for an increase of its social status.

H3a: Buyer's status has a positive impact on PCS.

Second, there exist the basic hypothesis in prestige literature: prestige increases the attractiveness as partner. If a buyer wants to achieve the PCS with its suppliers, assessing, managing and ultimately increasing its prestige may be a clue, therefore increasing supplier satisfaction will be necessary³⁰⁷. Since status plays a crucial role in the formation of cooperative relationships, relationship development is necessary in the process of becoming a preferred customer³⁰⁸. The ideology of Nollet et al. (2012) is based upon the SET and proposed that attractiveness (1) precedes supplier satisfaction (2). This is in line with Pulles et al. (2016), who identified the insignificant direct relationship between customer attractiveness and preferential resource allocation, when supplier satisfaction was included showed that the impact of customer attractiveness on preferential resource allocation is affected by supplier satisfaction³⁰⁹. Thus, it can be expected that suppliers are more satisfied when having a relationship with a high-status buyer.

H3b: Buyer's status has a positive impact on supplier satisfaction.

³⁰³ See Piazza & Castellucci (2014), p. 303.

³⁰⁴ See Schiele et al. (2020b), p. 5; Schiele et al. (2020a), p. 15.

³⁰⁵ See Lienland et al. (2013), p. 85-86.

³⁰⁶ See Schiele et al. (2020b), p. 5; Piazza & Castellucci (2014), p. 303; Washington & Zajac (2005), p. 284.

³⁰⁷ See Schiele et al. (2020b), p. 5; Schiele (2019), p. 68-69; Hüttinger et al. (2014), p. 697; Schiele et al. (2012b), p. 1179-1180; Devers et al. (2009), p. 154-155.

³⁰⁸ See Nollet et al. (2012), p. 1188-1190.

³⁰⁹ See Pulles et al. (2016), p. 136-138.

5.4. Buyer's adoption of CE principles based on the megatrend 'sustainability'

The increase of CSR is perceived as the most important megatrend for procurement professionals for future operations, as stated in h&z consulting, Möller (2012) and Bapeer (2018). From procurement view, "considering CSR, due to legal and consumer pressure, as a selection criterium for selection the right suppliers" must be seen as an implication³¹⁰. This is crucial, since the underlying assumption is that suppliers produce a ranking of their customers, at least differentiating between preferred and standard customers. Rankings are comparative ordering systems, which can either be conceived as a proxy for status (relative standing of an organisation) or as measure for firm reputation³¹¹. Prior research has produced a variety of criteria, hence, buyer's corporate reputation and status are missing in this list of criteria as well as the adoption of CE principles, the extended view of CSR. Elaborating on sustainability, Garip (2019) investigated the moderating effect of 'moral sustainability motive' between 'sustainable buyer' and 'sustainable supply chain collaboration' with the benefits from PCS – consisting of 'benevolent pricing', 'physical resource allocation' as well as 'innovation resource allocation'. The results indicate an insignificant effect of 'sustainability image' on benefits from the PCS³¹². However, since reputation is more than image due to the inclusion of corporate identity³¹³ and that reputation, as a market leader in undertaking sustainability initiatives, leads an organisation to serve as role-model for other competitors, and this adoption, on its turn, is positively correlated with higher customer satisfaction³¹⁴. It can be assumed that this also includes for supplier satisfaction if the buyer has a green/sustainable reputation, since CSR is perceived as the most important megatrend for procurement professionals for future operations, and that adoption of CE principals, the extension of CSR philosophy, will act as a major criterion for suppliers to increase their satisfaction and to assign the buying firm the PCS.

H4a: Buyer's adoption of CE principles has a positive impact on supplier satisfaction.

H4b: Buyer's adoption of CE principles has a positive impact on PCS.

³¹⁰ See Bapeer (2018), p. 52; Möller (2012), p. 57-59; h&z consulting (2011), p. 4-5.

³¹¹ See Schiele et al. (2020b), p. 1-2; Rindova et al. (2018), p. 2175-2176.

³¹² See Garip (2019), p. 48-49.

³¹³ See Chun (2005), p. 95.

³¹⁴ See Saeed & Kersten (2019), p. 19; Hsu et al. (2012), p. 658.

Elaborating on green/sustainable reputation, previous research found that integrating CE³¹⁵ and CSR³¹⁶ in the firm's strategy and (C)SCM has a (strong) positive direct³¹⁷, and indirect³¹⁸ impact on the firm's brand and corporate reputation. As previously mentioned, reputation as a market leader in undertaking sustainability initiatives, leads an organisation to serve as role-model for other competitors, and this adoption, on its turn, is positively correlated with higher customer satisfaction³¹⁹. Successively, purchasing decisions are increasingly influenced by environmental considerations and reputational risk concerns³²⁰. Elaborating on this second point, the decision-making process can be also explained from market risk management perspective. An effective strategic supply risk management system is essential, since not all customers obtaining the same level of strategic importance to a supplier, leading that some customers are treated preferentially. 'Strategic supply risk' describes the risk for buyers of not being a preferred customer. Based on Reichenbach et al. (2017), strategic supply risk is likely to be present when among others the buyer accounts for a minor portion of the supplier's turnover. Aligning strategies can potentially be a useful tactic for supply risk reduction as well as finding alternative sources of supply supports the mitigation of a buyer's strategic supply risk³²¹. However, increasing customer attractiveness should be considered as priority for strategic supply risk reduction, parallel with obtaining preferential resource allocation³²². Thus, it can be expected that when the buying firm adopts CE principles, the buyer's attractiveness will increase positively. Validating this claim leads to the following hypothesis:

H4c: Buyer's adoption of CE principles has a positive impact on buyer's reputation.

³¹⁵ See Tura et al. (2019), p. 91; CRIET (2018), p. 18-19; Lathi et al. (2018), p. 7; Linder & Willander (2017), p. 184; Masi et al. (2017), p. 9; Scheepens et al. (2016), p. 262-264; Tukker (2015), p. 84.

³¹⁶ See Tran & Nguyen (2020), p. 11-13; Gallardo-Vázquez et al. (2019), p. 14-18; Park (2019), p. 215-217; Chang & Yeh (2017), p. 38-39; Sindhu & Arif (2017), p. 6-8; Bernal-Conesa et al. (2016), p. 121-122; Saeidi et al. (2014), p. 245-247.

³¹⁷ See Tran & Nguyen (2020), p. 11-13; Gallardo-Vázquez et al. (2019), p. 14-18; Park (2019), p. 215-217; Bernal-Conesa et al. (2016), p. 121-122.

³¹⁸ See Chang & Yeh (2017), p. 38-39; Sindhu & Arif (2017), p. 6-8; Saeidi et al. (2014), p. 245-247.

³¹⁹ See Saeed & Kersten (2019), p. 19; Hsu et al. (2012), p. 658.

³²⁰ See Tognetti et al. (2015), p. 385; Schoenherr et al. (2012), p. 10.

³²¹ See Reichenbach et al. (2017), p. 350; Pulles et al. (2016), p. 136-137.

³²² See Reichenbach et al. (2017), p. 354-357; Pulles et al. (2016), p. 131-132; Schiele et al. (2012b), p. 1181; Hüttinger et al. (2012), p. 1203.

5.5. Conceptual framework: research model and hypotheses

Based on the previously established hypotheses, the following conceptual research framework, illustrated in Figure 9, has been originated. Since current literature about PCS does not include the corporate prestige concepts - ‘corporate reputation’ and ‘corporate ‘status’ of the buying firm – in one research within a CSC as well as, from sustainability perspective, the influence of the buyer’s adoption of CE principles on corporate reputation and supplier satisfaction, this model will answer the research questions: ‘‘does the buyer’s corporate prestige influence the supplier to award preferred customer status to a buying firm?’’ (RQ1) and ‘‘does the buyer’s adoption of circular economy principles influence the corporate reputation and supplier satisfaction of the buying firm?’’ (RQ2) as well as its sub-questions SQ1 and SQ2.

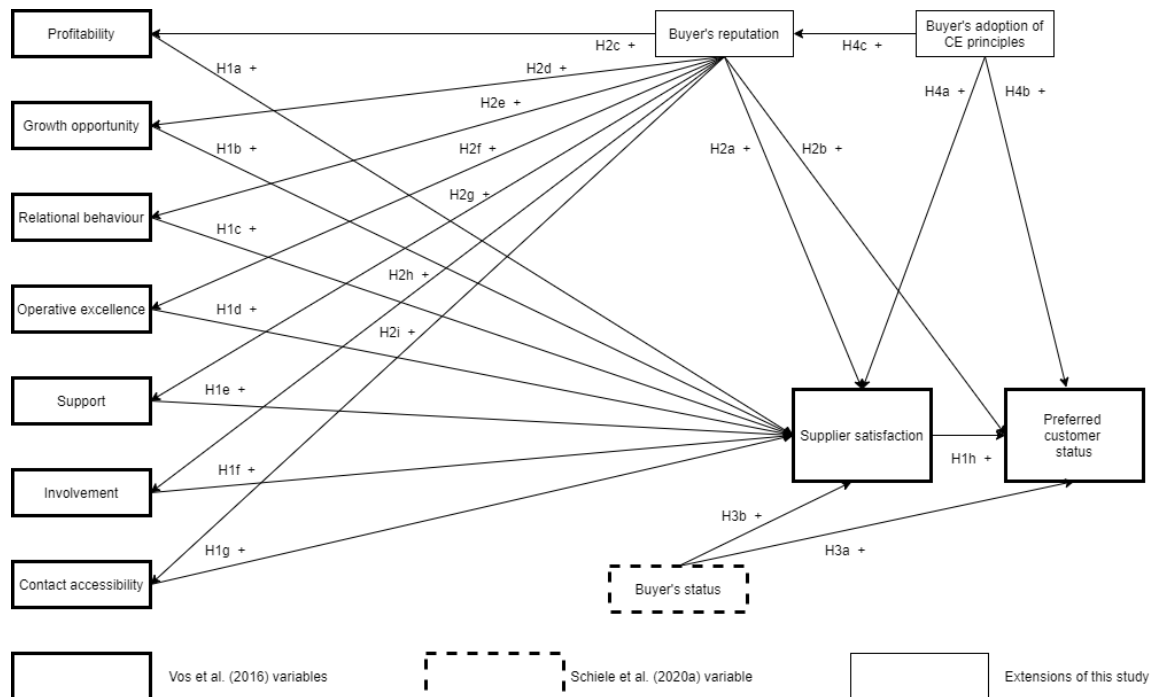


Fig. 9: Conceptual research framework based on Vos et al. (2016) and Schiele et al. (2020a). Source: own elaboration.

6. Research methodology: quantitative research for testing hypotheses

6.1. Survey design and methodology: combination of prior and new studies

In order to measure the independent and dependent latent variables, this research uses multi-item scales in the form of a questionnaire to examine the hypotheses. The questionnaire that is developed for this study consist of two parts, which takes circa 20 minutes to finalize. The first part of the questionnaire is examining supplier satisfaction and PCS. The questionnaire of Hüttinger et al. (2014) and Vos et al. (2016) are the basis of this replication part, and the items measuring support, contact accessibility, involvement, profitability, growth opportunity, relational behaviour, operative excellence, supplier satisfaction and PCS³²³. New antecedents of corporate prestige and sustainability, introduced in the literature review, are examined in the second part of the questionnaire. The researchers independently created a large pool of items for each of the constructs based on the literature review and quantitative data is mainly retrieved from papers applying SEM. Care was taken to tap the domain of each construct as closely as possible, so multi-item scales from multiple studies is used. Grapentine (2001) argued for the importance of multi-item scales for measuring complex constructs, such as the new antecedents³²⁴. The measures of the new antecedents of corporate prestige originates from Schwaiger (2004), Pearce (2011) and Torelli et al. (2014) with the focus on buyer's status³²⁵, and from the perspective of buyer's reputation, measures from Fombrun et al. (2000), Schwaiger (2004), Chun (2005) and Helm (2007) are used, which are also applied in the study of Foroudi et al. (2014)³²⁶. In order to analyse the buyer's adoption of CE principles, measures from Fonseca et al. (2018), Nunez-Cacho et al. (2018), Ceptureanu et al. (2018) are used³²⁷. Overall, these items derived from the aforementioned studies and will be used in order to further our knowledge of corporate status and reputation as well as the influence of the buyer's adoption of CE on supplier satisfaction in order to obtain the PCS.

³²³ See Vos et al. (2016), p. 4620; Hüttinger et al. (2014), p. 721.

³²⁴ See Grapentine (2001), p. 155.

³²⁵ See Torelli et al. (2014), p. 40; Pearce (2011), p. 340; Schwaiger (2004), p. 60-61.

³²⁶ See Foroudi et al. (2014), p. 10; Schwaiger (2004), p. 60-61; Chun (2005), p. 102; Helm, (2007), p. 32-33.

³²⁷ See Fonseca et al. (2018), p. 14; Nunez-Cacho (2018), p. 10-12; Ceptureanu (2018), p. 316-317.

The dependent and independent variables which are used in the questionnaire are scored on 5-point Likert scale ranging from ‘strongly disagree’ to ‘strongly agree’. It is clearly indicated that the buying firm cannot trace-back the answers of the respondents, leading that suppliers cannot use this questionnaire to make a positive impression on the buyer. So, this may decrease the potential for response bias. Hence, the data will be kept anonymous for the case companies due to confidentiality reason. Furthermore, in the ending the questionnaire consists of control questions e.g. length of the relationship, the influence of the customer, annual turnover with the customer, type firm, the respondent’s position and the influence of environmental certifications.

6.2. Insights into an innovative company within a circular supply chain with metal recycling as core business: original equipment manufactures as suppliers

In this research, Riwald Recycling is the case company. Their strategy originated from the three Rs principles – recover, reuse, and recycle valuable ferrous (e.g. steel, carbon and cast iron) and non-ferrous (e.g. aluminium, copper and zinc) metals – with the purpose of being a role-model within the CSC by integrating the philosophy of CE. Due to their efficient operations and in-house processing, Riwald has a prominent place in the recycling sector, both in terms of competitiveness and capacity. The case company is constantly investing in the (green) future, including the use of a high-tech granulator in combination with waste separation installations and by working with electric cranes, which are environmentally friendly, fuel-saving and noise-reducing. This makes Riwald, located in Almelo (the Netherlands), one of the most innovative recycling companies in Europe³²⁸.

Prior studies on supplier satisfaction and PCS mostly focussed on the industrial firms³²⁹. The unique aspect Riwald’s CSCM is that the suppliers can be classified as OEMs, that make use of their Tier 1, 2 or 3 suppliers product creation. These products are designed to meet the needs of the consuming society, and with the economic and population growth the demand increased significantly³³⁰. Additionally, OEMs create waste, since not every resource of their Tier 1, 2 or 3 suppliers is used efficiently.

³²⁸ See Riwald Recycling (2020), retrieved from: <https://riwald.nl/>

³²⁹ See Vos et al. (2016), p. 4616; Pulles et al. (2016), p. 133; Hüttinger et al. (2014), p. 706.

³³⁰ See Mancini et al. (2013), p. 14; Köhler (2012), p. 1168.

Since OEMs cannot reuse the waste directly in their production process, they will sell their waste to specialised waste treatment/recycling companies such as Riwald Recycling. Within this buyer-supplier relationship, Riwald can be classified as buyer, and the OEMs as suppliers. After the recycling process, Riwald sells the raw materials (back) to (mostly) Tier 1 & Tier 2 suppliers, which are located (mostly) in the Asian and European market, with Turkey and Germany as main purchasers³³¹.

6.3. Sample characteristics and data collection: OEMs as key suppliers

In collaboration with Riwald's SCM department, it became clear that their supply base consists of circa 1.350 suppliers, a combination of OEMs, scrap dealers and traders. For this research, OEMs has been selected as key suppliers since OEMs make use of their Tier 1, 2 or 3 suppliers for product creation. Due to the increase of CSR as well as the adoption of CE principals, the extended version of the CSR philosophy, it is assumed that procurement managers from OEMs consider CSR and CE in their daily chores as selection criterium for selecting Tier 1, 2 or 3 suppliers rather than scrap dealers and traders³³². The assumption is based on interest - scrap dealers and traders are mainly price oriented while OEMs are, next to price, also oriented in sustainability – and business type – OEMs are organisations while dealers and traders are mainly individuals. Only suppliers who can be classified as OEMs with more than three contact moments per year will be considered as suppliers. As result, the questionnaire has been sent to 254 suppliers, which are located mainly in the Netherlands, followed by Germany. Therefore, the questionnaire is trilingual.

Subsequently, a template e-mail is developed with a link to Qualtrics. For increasing the response rate, every correspondence is personalized with a personal greeting, and based on Flynn (2018), it appears that respondents prefer to submit questionnaires early in the morning, so the mails were distributed in the early mornings. Also, the invitation was sent via my work mail in order to increase the response rate³³³. During the questionnaire, which was open for three weeks, 78 responses were collected. For the first week, the response rate was already 9,4% (N=24). Two reminders have been

³³¹ See van Driel (2019), p. 12-13.

³³² See Bapeer (2018), p. 52; Möller (2012), p. 57-59; h&z consulting (2011), p. 4-5.

³³³ See Fynn (2018), p. 49; Muñoz-Leiva et al. (2010), p. 1049.

sent to the correspondents. After one week the first reminder (N=24) has been sent via mail, and for the second reminder (N=51) the key suppliers have been called. Thanks to both actions, the number of responses has been boosted to 78 responses. This confirms that issuing reminders is one of the most effective manners to increase the response rate for an online questionnaire³³⁴. Afterward, 24 questionnaires have been taken out due to missing values and insufficient knowledge, leading to 51 responses for the final data set. This constitutes a response rate of 20,1% with N=51. Annexure A provides an overview of the several characteristics of the respondents.

6.4. Statistical data analysis: partial least squares analysis with SmartPLS 3.0

The partial least squares (PLS) analysis recently gained popularity in empirical purchasing studies, particularly on empirical research on supplier satisfaction³³⁵. PLS is often compared with the covariance-based SEM (CBSEM), whereby the structural equation method (SEM) used to estimate parameters. According to Barroso et al. (2010), the main objective of PLS is to increase the maximal explained variance (R^2) of the dependent latent variable constructs³³⁶. With PLS path modelling it is possible to test models consisting out of cause-effect relationships with latent variables, in which a variable can be both dependent and independent. More specifically, this method applies ordinary least squares to minimize residual variances of dependent variable, whereby the explained variance is maximized³³⁷. As a result, this aspect enables the prediction element of PLS, so this method is preferred when the focus is on prediction and theory development³³⁸. In addition, PLS works efficiently with a small sample size, only ten times the largest number of formative indicators is needed to measure one construct, and scores high on statistical power(s) compared with other covariance methods³³⁹. Overall, the PLS analysis is regularly preferred in social and behavioural sciences to reproduce the theoretical and empirical conditions due to its milder rules than the CB-SEM³⁴⁰

³³⁴ See Muñoz-Leiva et al. (2010), p. 1049.

³³⁵ See Schiele et al. (2020b), p. 12; Vos et al. (2016), p. 4616; Hüttinger et al. (2014), p. 706.

³³⁶ See Barroso et al. (2010), p. 430.

³³⁷ See Hair et al. (2012), p. 421.

³³⁸ See Hair et al. (2011), p. 148.

³³⁹ See Hair et al. (2012), p. 420; Hair et al. (2011), p. 148-150.

³⁴⁰ See Barroso et al. (2010), p. 430.

In accordance with this research, the purpose is to increase the overall explanatory variance of corporate reputation, status and the buyer's adoption of CE principles, with a sample size of $N=51$, and for testing the hypotheses, this study uses PLS and for the application SmartPLS 3.0 software. An analysis in SmartPLS 3.0 was further utilised to estimate the hypothesised paths and to identify a structural model with relationships between the constructs. In order to analyse valid results, it is suggested to use 5000 bootstrap samples, regardless of the confidence interval is developed³⁴¹. Furthermore, IBM SPSS 26 is used to calculate descriptive statistics and tests for data and sample characteristics.

6.5. Quality assessment of research data: reliability, validity and model fit

As a first step of data structure quality assessment, a principal component analysis (PCA) is performed to examine if the used items to measure a construct actually measure the same. This method calculates factor loadings, and retains the unique variance of the items on their intended components³⁴². The default options for Varimax rotations are applied during the PCA. Based on Tabashnick & Fidell (2007), the individual loadings must be greater than 0.55³⁴³. Based on a fixed number of factors to extract (12), the first factor analysis was executed. An individual loading less than 0.50 means that this item does not measure the same as the other indicators. Therefore, of the indicators with an individual loading less than 0.50, the lowest individual loading is removed. Thereafter, the PCA analysis is executed repeatedly until all factor loadings scored above 0.50. The outcome of the analysis can be seen in Annexure C. After removing 21 indicators, each individual loading of the remaining 49 indicators scores higher than 0.50. S_OperativeExc_40_1, S_Profitability_90_6, S_RelBehavior_80_5, BS3 and BR10 do not meet the threshold and need to be excluded. When excluding these three indicators, items from operative excellence and relational behaviour, buyer's reputation and profitability ends up below 0.5, leading to higher number of removals. Overall, the relatively high number of removals can be explained by the fact that: 1) the items of the new antecedents are correlated with the antecedents of Vos et al. (2016), resulting that

³⁴¹ See Henseler et al. (2016), p. 11.

³⁴² See Petter et al. (2007), p. 614.

³⁴³ See Tabashnick & Fidell (2007), p. 496-498.

clear factors are unable to construct without removing some of these items; and 2) due to the already existing high number of items. Next, as illustrated in Annexure D, all communalities score above 0.6 and on average the communalities score 0.859. When communalities are high, a factor analysis ensures to recover factors accurately, even with a relatively small N ³⁴⁴. The statistical analysis was performed using SPSS version 26³⁴⁵.

The reliability and validity of indicators and latent variables are evaluated with SmartPLS 3.0 by calculating the model with a 5000-sample bootstrap. Hereby, the outer loadings of each individual indicator imply the reliability of the indicator. Each indicator must have a minimum loading of 0.7 to be accepted, since this means that ‘there is no more shared variance between the construct and its measure that error variance’³⁴⁶. As illustrated in Table 6, all individual outer loadings, except BR10 and BACEP5, score above 0.7 and can therefore be seen as reliable. To evaluate the internal consistency reliability of the construct measures, composite reliability and using Cronbach’s α has been analysed. Compared with Cronbach’s α , composite reliability provides a more appropriate measure, since it does not assume that indicator loadings are equal, and it is avoiding the underestimation associated with Cronbach’s α ³⁴⁷. According to Bagozzi & Yi (1988), values for composite reliability should be at least 0.7 and all values for Cronbach’s α should be above 0.7, taking reliability into consideration³⁴⁸. As can be seen in Table 6, composite reliability for all constructs is in line with the threshold as well as the Cronbach’s α . Additionally, in order to ensure that the construct measures what they intended to measure, the validity of the constructs will be assessed. To evaluate the validity of constructs, two types of validity will be examined: convergent validity with the average variance extracted (AVE) and discriminant validity with the hetrotrait-monotrait ratio (HTMT)³⁴⁹.

³⁴⁴ See MacCallum et al. (2001), p. 634.

³⁴⁵ See IBM Corporation (2019).

³⁴⁶ See Sarstedt et al. (2011), p. 145.

³⁴⁷ See Hair et al. (2014), p. 111.

³⁴⁸ See Bagozzi & Yi (1988), p. 82.

³⁴⁹ See Henseler et al. (2014), p. 115.

An acceptable AVE should be higher than 0.5, which is given in the Table 6, and to test discriminant validity with the HTMT, the value should be below the suggested threshold of Henseler et al. (2014) of 0.85³⁵⁰. Annexure E shows that only preferred customer status-operative excellence, with a maximum HTMT value of 0.911, is above the threshold, which is expectable since the measurement are similar, considering the PCA analysis. Overall, these requirements are met and therefore validity is given according to the HTMT method. So, both convergent and discriminant validity are established. As final step of quality assessment, model fit needs to be examined. A cut-off value of 0.1 of the standardised root mean square residual (SRMR) is considered as adequate to assess model fit³⁵¹. Since the SRMR value of this research is 0.086, model fit is established.

Table 6: Reliability and validity measures. Source: own elaboration

	Indicator	Outer loading	Composite reliability	Cronbach's α	AVE
1	Supplier satisfaction	S_Satisfaction_100_1	0.912	0.937	0.749
		S_Satisfaction_100_2	0.900		
		S_Satisfaction_100_3	0.840		
		S_Satisfaction_100_5	0.822		
		S_Satisfaction_100_6	0.848		
2	Preferred customer status	PC_PC_110_1	0.865	0.932	0.774
		PC_PC_110_2	0.890		
		PC_PC_110_3	0.877		
		PC_PC_110_4	0.886		
3	Profitability	S_Profitability_90_2	0.811	0.943	0.807
		S_Profitability_90_3	0.959		
		S_Profitability_90_4	0.954		
		S_Profitability_90_6	0.862		
4	Growth opportunity	S_Growth_20_1	0.916	0.961	0.862
		S_Growth_20_2	0.904		
		S_Growth_20_3	0.966		
		S_Growth_20_4	0.925		

³⁵⁰ See Henseler et al. (2014), p. 123.

³⁵¹ See Henseler et al. (2014), p. 194-195.

5 Relational behaviour	S_RelBehavior_80_1	0.838	0.903	0.857	0.700
	S_RelBehavior_80_2	0.888			
	S_RelBehavior_80_4	0.837			
	S_RelBehavior_80_5	0.779			
6 Operative excellence	S_OperativeExc_4 0_1	0.885	0.903	0.840	0.757
	S_OperativeExc_4 0_2	0.920			
	S_OperativeExc_4 0_5	0.800			
7 Support	S_Support_60_2	0.982	0.982	0.963	0.964
	S_Support_60_3	0.982			
8 Involvement	S_Involvement_70_2	0.933	0.956	0.931	0.879
	S_Involvement_70_3	0.949			
	S_Involvement_70_4	0.931			
9 Contact accessibility	S_Available_10_1	0.942	0.886	0.814	0.723
	S_Available_10_2	0.847			
	S_Available_10_3	0.751			
10 Buyer's status	BS1	0.810	0.902	0.853	0.698
	BS2	0.935			
	BS3	0.861			
	BS5	0.722			
11 Buyer's reputation	BR2	0.776	0.933	0.917	0.635
	BR3	0.806			
	BR4	0.846			
	BR5	0.825			
	BR7	0.816			
	BR10	0.631			
	BR11	0.780			
BR12	0.873				
12 Buyer's adoption of CE principles	BACEP3	0.747	0.874	0.824	0.582
	BACEP4	0.796			
	BACEP5	0.683			
	BACEP6	0.808			
	BACEP7	0.773			

7. Results: testing hypotheses with the collected data from the surveys

7.1. Hypotheses acceptance and rejections: evaluation of Vos et al. (2016) and the conceptual model by testing hypothesis with SmartPLS 3.0

To test the conceptual model of this research, the model was calculated by SmartPLS 3.0 using bootstrapping with 5000 subsamples. Whereas each hypothesis implies either a positive or negative relation between constructs, the test is one-tailed with a significance level of 0.05³⁵². The analysis of the model is largely based on three measures: R² values of the endogenous variables, the amount of variance explained by other latent variables, and the significance levels of the path coefficients³⁵³. R² defines the amount of variance of a latent variable explained by other latent variables, where the coefficient of determination R² determines the model's predictive power. As a common rule in marketing research studies, values of 0.75, 0.5 and 0.25 respectively are regarded as substantial, moderate and weak³⁵⁴. In this model, buyer's reputation, supplier satisfaction, PCS, profitability, growth opportunity, relational behaviour, operative excellence, support, involvement and contact accessibility are the endogenous variables. Their respective R² values are: 0.417 for buyer's reputation, 0.658 for supplier satisfaction, 0.487 for PCS, 0.300 for profitability, 0.249 for growth opportunity, 0.473 for relational behaviour, 0.412 for operative excellence, 0.369 for support, 0.366 for involvement and 0.282 for contact accessibility. This indicates that the R² value of supplier satisfaction is almost substantial, the R² values of buyer's reputation, PCS, relational behaviour and operative excellence are moderate and the R² values of contact accessibility, support, involvement, profitability and growth opportunity are weak.

Subsequently, path coefficients are examined on their value and level of significance. SmartPLS provides a standardized coefficient beta and the t-value of each analysed path. If the t-value < 1.69, the effect is not found to be significant, so there is no empirical support for the hypothesis and the outcome cannot be generalised from the

³⁵² See Kock (2015), p. 7.

³⁵³ See Hair et al. (2014), p. 113.

³⁵⁴ See Sarstedt et al. (2011), p. 145.

sample to the population. If the paths are significant, $t\text{-value} > 1.69$, they support the prior hypothesis³⁵⁵. In addition, Cohen's effect size f^2 is examined as well, which checks whether R^2 changes when a variable is removed from the model. A large change means a large effect and results in a high effect size f^2 ³⁵⁶. Effect sizes of 0.02, 0.15 and 0.35 can be viewed as small, medium and large effects. The path coefficients and their significance levels are illustrated in Table 7 and Figure 10. The results show that three out of the seven classical antecedents significantly influence supplier satisfaction: profitability (H1_a: $\beta = 0.372$ $t = 2.323$; $f^2 = 0.134$); operative excellence (H1_d: $\beta = 0.531$; $t = 2.905$; $f^2 = 0.316$); and involvement (H1_f: $\beta = -0.318$; $t = 1.841$; $f^2 = 0.132$). Growth opportunity (H1_b: $\beta = 0.642$; $t = 0.900$; $f^2 = 0.027$); relational behaviour (H1_c: $\beta = -0.089$; $t = 0.477$; $f^2 = 0.005$); Support (H1_e: $\beta = -0.043$; $t = 0.186$; $f^2 = 0.001$); and contact accessibility (H1_g: $\beta = 0.080$; $t = 0.600$; $f^2 = 0.009$) do not significantly influence supplier satisfaction. Furthermore, the analysis of the model reveals a highly significant impact from supplier satisfaction on PCS (H1_h: $\beta = 0.389$; $t = 2.706$; $f^2 = 0.176$). Therefore, the results of Vos et al. (2016) can only partly be supported by this research, taken the full model of Vos et al. (2016) and its outcomes, illustrated in Figure 6, into consideration.

Table 7: Effect statistics of partly replication (H_{1a-1h}) of Vos et al. (2016) and extension (H_{2a-3b}) of the research model including β , t -values and f^2 . Source: own elaboration.

Hypothesis	Path	B	T	f^2
H1a	P → SS*	0.372	2.323	0.134
H1b	GO → SS	0.642	0.900	0.027
H1c	RB → SS	-0.089	0.477	0.005
H1d	OE → SS**	0.531	2.905	0.316
H1e	S → SS	-0.043	0.186	0.001
H1f	I → SS*	-0.318	1.841	0.132
H1g	CA → SS	0.080	0.600	0.009
H1h	SS → PCS**	0.389	2.706	0.176
H2a	BR → SS	0.154	0.713	0.020
H2b	BR → PCS*	0.341	2.070	0.090
H2c	BR → P**	0.548	4.926	0.428

³⁵⁵ See Wong (2013), p. 25; See Sarstedt et al. (2011), p. 147.

³⁵⁶ See Hair et al. (2014), p. 184.

H2d	BR → GO**	0.499	4.293	0.331
H2e	BR → RB**	0.688	9.081	0.899
H2f	BR → OE**	0.642	6.799	0.700
H2g	BR → S**	0.607	6.457	0.585
H2h	BR → I**	0.605	5.665	0.578
H2i	BR → CA**	0.531	5.084	0.392
H3a	BS → PCS	0.150	0.979	0.019
H3b	BS → SS	0.249	1.423	0.068
H4a	BACEP → SS	0.009	0.060	0.000
H4b	BACEP → PCS	-0.118	0.842	0.015
H4c	BACEP → BR**	0.646	8.272	0.715

Notes: β =standardised coefficient beta; t =t-statistic; f^2 =effect size of variance explained by predictor; *= $p < 0.05$ (one sided) ** $p < 0.01$ (one sided); GO=growth opportunity; P=profitability; RB=relational behaviour; OE=operative excellence; S=support; I=involvement; CA=contact accessibility; BR=buyer's reputation; BS=buyer's status; BACEP=buyer's adoption of CE principles; SS=supplier satisfaction; and PCS=preferred customer status.

Hypothesis H2a – H2i tested the influence of buyer's reputation on the classical antecedents of Vos et al. (2016), supplier satisfaction and the PCS. In-depth analysis indicates that these hypotheses are to a large extent supported. The relationship between buyer's reputation and supplier satisfaction (H2a: $\beta = 0.154$; $t = 0.713$; $f^2 = 0.020$) is insignificant, however, the relationship between buyer's reputation and PCS (H2b: $\beta = 0.341$; $t = 2.070$; $f^2 = 0.090$) is significant. Considering the relationships with the classical antecedents, the results show that buyer's reputation significantly influence all the seven classical antecedents: profitability (H2c: $\beta = 0.548$; $t = 4.926$; $f^2 = 0.428$); growth opportunity (H2d: $\beta = 0.499$; $t = 4.293$; $f^2 = 0.331$); relational behaviour (H2e: $\beta = 0.688$; $t = 9.081$; $f^2 = 0.899$); operative excellence (H2f: $\beta = 0.642$; $t = 6.799$; $f^2 = 0.700$); support (H2g: $\beta = 0.607$; $t = 6.457$; $f^2 = 0.585$); involvement (H2h: $\beta = 0.605$; $t = 5.665$; $f^2 = 0.578$); and contact accessibility (H2i: $\beta = 0.531$; $t = 5.084$; $f^2 = 0.392$). From buyer's status perspective, the relationship between buyer's status and PCS (H3a: $\beta = 0.150$; $t = 0.979$; $f^2 = 0.019$) is insignificant and the same phenomenon can be seen in the relationship between buyer's status and supplier satisfaction (H3b: $\beta = 0.249$; $t = 1.423$; $f^2 = 0.068$).

From sustainability perspective, hypothesis H3a - H3c tested the influence of buyer's adoption of CE principles on supplier satisfaction, PCS buyer's reputation. The relationships between buyer's adoption of CE principles and supplier satisfaction (H4_a: $\beta = 0.009$; $t = 0.060$; $f^2 = 0.000$) is insignificant and the same effect also applies in the relationship between buyer's adoption of CE principles PCS (H4_b: $\beta = -0.118$; $t = 0.842$; $f^2 = 0.015$). The relationship between buyer's adoption of CE principles and buyer's reputation (H4_c: $\beta = 0.646$; $t = 8.272$; $f^2 = 0.715$) meets the threshold of $t\text{-value} > 1.69$, and therefore this hypothesis is supported in this research. The SmartPLS model of this research is visible in Annexure F.

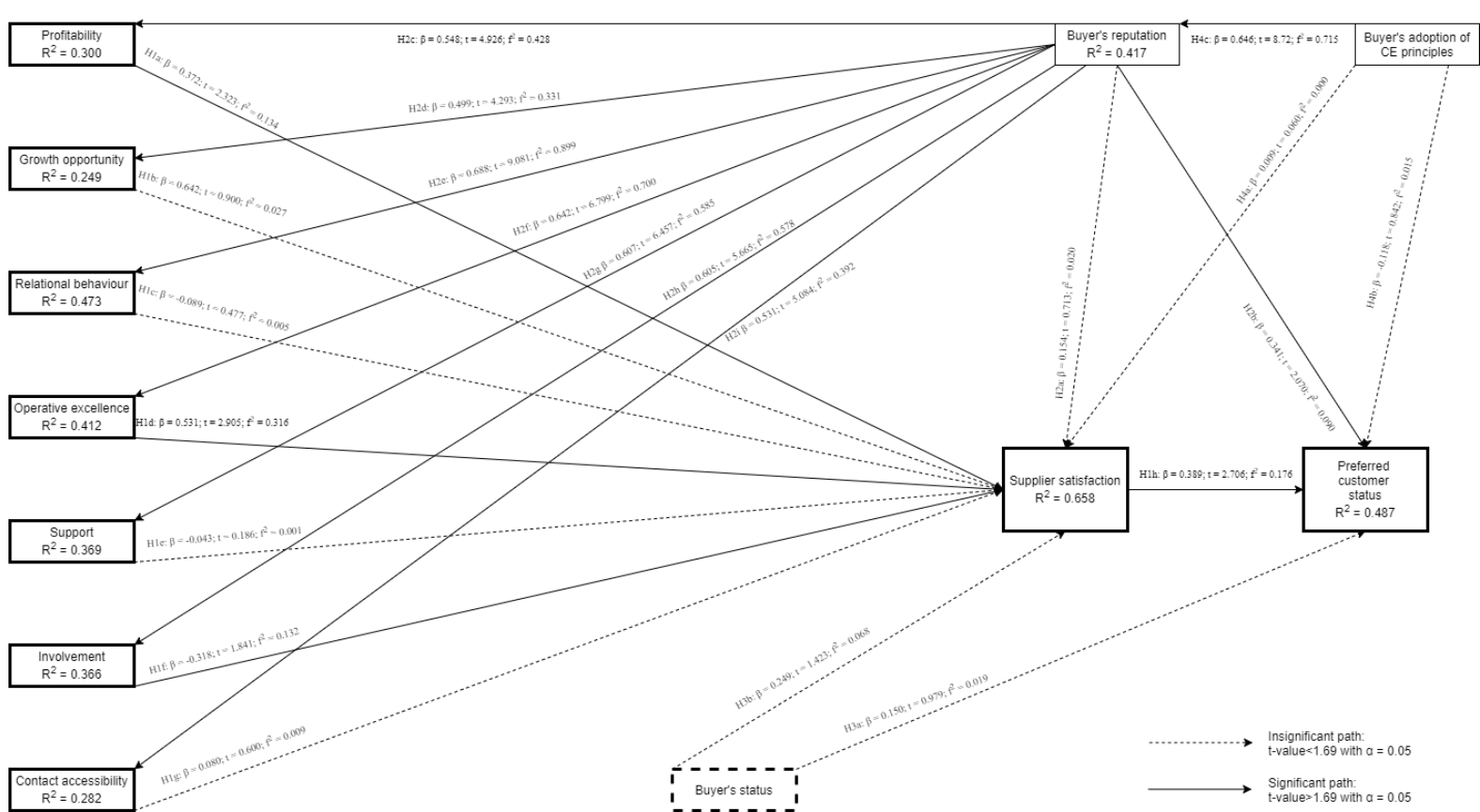


Fig. 10: Results of the partial least squares-sequential equation modeling. Source: own elaboration.

8. Discussion of the results: the influence of the antecedents of Vos et al. (2016), buyer's corporate reputation, status and the adoption of circular economy principles on supplier satisfaction and preferred customer status

8.1. The influence of the antecedents of Vos et al. (2016) on supplier satisfaction

The objectives of this research were in threefold: 1) replication of the research model of Vos et al. (2016) in a new industry, namely the CSC with a specialised waste treatment/recycling company as buyer and OEMs as key suppliers; 2) to further extend the research of Vos et al. (2016) by including a variety of corporate prestige antecedents - consisting of 'corporate reputation' and 'corporate 'status' - along with new insights towards supplier satisfaction and preferred customership; as well as 3) the buyer's adoption of CE principles on reputation, PCS and supplier satisfaction. The results of the replication of the model of Vos et al. (2016) show that three out of the seven antecedents significantly influence supplier satisfaction: profitability, operative excellence and involvement. Furthermore, the analysis of the model reveals a highly significant impact from supplier satisfaction on PCS. A possible explanation for these results may be derived from the fact that the data is collected in a different environment. Whereas the studies of Hüttinger et al. (2014) and Vos et al. (2016) have been tested in the chemical and automotive industry, with multiple supplier types e.g. Tier 1, 2 and/or 3 as well as within multiple geographical areas³⁵⁷, this research is tested in the CSC industry with a metal recycling company as case company and its OEMs as key suppliers. Taking into consideration that recent studies evidenced that affluent buyer-supplier relationship creates a win-win situation with positive impacts on the performance along many dimensions e.g. financial benefits³⁵⁸, knowledge transfer³⁵⁹, service³⁶⁰, innovation³⁶¹, flexibility³⁶², customer satisfaction³⁶³, environment³⁶⁴ and inventory³⁶⁵, as well as that by attaining the PCS, the exclusivity and sustainability of the buyer-supplier relationship can be

³⁵⁷ See Vos et al. (2016), p. 4619-422; Hüttinger et al. (2014), p. 711.

³⁵⁸ See Sáenz et al. (2018), p. 238; Kumar & Rahman (2016), p. 836.

³⁵⁹ See Hald et al. (2009), p. 960.

³⁶⁰ See Falasca & Kros (2018), p. 41.

³⁶¹ See Jajja et al. (2019), p. 331; Schiele (2012a), p. 44.

³⁶² See Sáenz et al. (2018), p. 238.

³⁶³ See Sáenz et al. (2018), p. 238.

³⁶⁴ See Kumar & Rahman (2016), p. 836.

³⁶⁵ See Falasca & Kros (2018), p. 41.

established³⁶⁶, this industry has its own strengths and weaknesses. In the first place, the buyer-supplier relationship occurs in the end of the traditional linear SCM and/or in the begin of the CSCM. From procurement perspective, the buyer recovers, reuses, and recycles valuable ferrous and the OEM supplier supplies its ‘metal waste’, explaining the insignificant effect of growth opportunity. As a result, there is a difference in ‘perceived value’ when comparing the customer and supplier in the view of value offerings. In the view of the Kraljic Matrix (1983)³⁶⁷, the scrap metals can be viewed as ‘non-critical and leverage items’ from supplier perspective, and ‘strategic and bottleneck items’ from buyer perspective. This difference explains the insignificant effect of relational behaviour, support and contact accessibility. The difference can be explained by the fact that CE in SCM has been viewed as potentially viable for managing supply disruptions of strategic items - high profit impact and high supply risk - and the buying firm adopts these CE principles in order to minimizing the supply risk³⁶⁸.

Additionally, due to the buyer’s efficient operations and in-house processing, explaining the significant effect of operative excellence, in combination with the low product complexity, the buying firm is rather a service-based company than a product-based company in terms of innovation. Therefore, from the perspective of Handfield et al. (1999)³⁶⁹, suppliers are not integrated in the different five phases of the NPD process. The value creation process, compared with the automotive industry, is not based on increasing the product complexity, conversely, it based on segregating waste and recovery of materials, with pure raw materials as end product. However, involvement and profitability show significance on supplier satisfaction. Overall, the combination of industry type (recycling industry in the CSC), service type (recycling of ferrous) and the type of suppliers (OEMs) ensures that operative excellence, profitability and involvement are linked to supplier satisfaction, while growth opportunity, relational behaviour, support and contact accessibility are not linked to supplier satisfaction, mainly due to difference in ‘perceived value’ when comparing the customer and supplier in the view of value offerings.

³⁶⁶ See Schomann et al. (2018), p. 231.

³⁶⁷ See Kraljic (1983), p. 111-112.

³⁶⁸ See Farooque et al. (2019), p. 27; Kraljic (1983), p. 111-112.

³⁶⁹ See Handfield et al. (1999), p. 61-62.

8.2. The influence of buyer's corporate reputation and status on supplier satisfaction and obtaining the preferred customership

The second aim of this research was next to replicating the study of Vos et al. (2016), adding new (un)explored factors influencing supplier satisfaction. Based on Schiele et al. (2012b), Pulles et al. (2016) addressed that customer attractiveness is one of the main preconditions of obtaining PCS and preferential resource allocation³⁷⁰. As a consequence, Schiele et al. (2020b) assumed that a buying firm which has a good reputation in the market, or which is highly regarded by the suppliers and has lots of prestige, may find it easier to become a preferred customer of these suppliers³⁷¹. Their study on prestige found that buying firms which are highly regarded by their supplier may get interactional benefits as compared to their less prestigious competitors, and that 'buyer prestige' must be considered as antecedent to supplier satisfaction next to the 'classical' antecedents³⁷². Additionally, the desire exist that future research should further develop and confirm these initial findings by including customer prestige as central variable for analysis and dissecting its 'viewpoint' into two components - reputation and status³⁷³. Therefore, this research provided new insights by examining the (in)directly influence of corporate reputation and corporate status on supplier satisfaction and PCS as well as the effect of buyer's reputation on the classical antecedents of Vos et al. (2016).

In consideration of the existing overlap between these constructs, this study considers corporate reputation as a performance-based construct and status as a hierarchical outcome with the objective to complement previous studies³⁷⁴. Literature review shows that reputation is a broad concept based on KPIs with the 'Reputation Quotient Scale' and 'RepTrak™ Pulse' as the most advanced tools to measure the aggregate performance³⁷⁵. Both tools as well as previous research on measuring reputation are based on the items of Fombrun et al. (2000), Schwaiger (2004), Chun (2005) and Helm (2007), which are used in the study of Foroudi et al. (2014)³⁷⁶. These items are

³⁷⁰ See Pulles et al. (2016), p. 131-132.

³⁷¹ See Schiele et al. (2020b), p. 2.

³⁷² See Schiele et al. (2020b), p. 15-16.

³⁷³ See Schiele et al. (2020b), p. 16.

³⁷⁴ See Schiele et al. (2020b), p. 1-18; Schiele et al. (2020a), p. 1-43.

³⁷⁵ See Money et al. (2017), p. 18-19; Ali et al. (2016), p. 1106-1107; Jung & Seock (2016), p. 1-2; Fombrun et al. (2015), p. 3-6; Lienland et al. (2013), p. 87; Fombrun et al. (2000), p. 241-242.

³⁷⁶ See Foroudi et al. (2014), p. 10; Schwaiger (2004), p. 60-61; Chun (2005), p. 102; Helm, (2007), p. 32-33.

sharing ‘common goals’ in view of measuring reputation. Therefore, in this research appropriate items from the aforementioned studies are used, leading to a novel tool consisting of mixed items for measuring the construct buyer’s corporate reputation. The results show that buyer’s corporate reputation insignificantly influences supplier satisfaction. However, in-depth analysis shows that buyer’s reputation significantly influences PCS. This indicates that when the buyer has a high reputation, it would be easier to receive the PCS.

From status perspective, the variable ‘status’ shows its complexity in the view of quantitative analysis, primarily due to the absence of quantitative items. Van der Lelij (2016), Schiele et al. (2020a) and Schiele et al. (2020b) made use of Torelli (2014)³⁷⁷ and the questions were adjusted to reflect on organisational status. Due to its imperfect measures, items from Schwaiger (2004) and Pearce (2011)³⁷⁸ were also applied – both measuring the subjective assessment of social rank of an entity based on a hierarchy of values – resulting in a more ‘comprehensive construct’ with mixed items for measuring buyer’s corporate status. The results highlight the insignificant effect of ‘buyer’s status’ on supplier satisfaction. Furthermore, it is found that having a high status has an insignificant effect on becoming a preferred customer, which is not in line with previous research. This indicates that when the buyer has a low status, it would not directly be more difficult to receive the PCS, even knowing that a high-status actor can get greater effort from lower-status actors. In this way, RQ1 as well its sub questions SQ1 and SQ2 have been answered - buyer’s corporate prestige significantly influences supplier satisfaction as well as the supplier to award the PCS to the buying firm, where status has an insignificant effect on supplier satisfaction and PCS, and reputation a significant effect on PCS.

Furthermore, elaborating on reputation, it was also observed that reputation among various capabilities in various dimensions such as ‘the optimum value for money’, ‘the holistic problem-solving capability of the suppliers and their high degree of performance’ as well as ‘the good assistance in economically hard times in the past, which has led to a feeling of gratefulness’ are all of great importance to manufactures

³⁷⁷ See Schiele et al. (2020a), p. 15-19; van der Lelij (2016), p. 36-43; Torelli et al. (2014), p. 40.

³⁷⁸ See Torelli et al. (2014), p. 40; Pearce (2011), p. 340; Schwaiger (2004), p. 60-61.

for building and sustaining relationships³⁷⁹. Likewise, suppliers invest in building and nurturing high-quality relationships with more planned organisation of relational capital, paying particular attention to the dimensions of marketing capability, open innovation with business and scientific partners, technological reputation and green reputation in order to obtain some benefits³⁸⁰. From the versatile perspective of corporate reputation, the influences of reputation have been tested on the classical antecedents of Vos et al. (2016). The results show that buyer's reputation significantly influence all the seven classical antecedents, and shows that reputation is an underlying factor in this analysis.

8.3. The influence of buyer's adoption of circular economy principles on supplier satisfaction, preferred customer status and corporate reputation

The third aim of this research was, from sustainability perspective, to explore buyer's adoption of CE principles and its dual function: influence on supplier satisfaction and PCs as well as on buyer's reputation. The increase of CSR is perceived as a crucial megatrend for procurement professionals for future operations, as stated in h&z consulting, Möller (2012) and Bapeer (2018)³⁸¹. From procurement view, "considering CSR, due to legal and consumer pressure, as a selection criterium for selection the right suppliers" must be seen as an implication³⁸². Likewise, corporate reputation, as a market leader in undertaking sustainability initiatives, leads an organisation to serve as role-model for other competitors, and this adoption, on its turn, is positively correlated with higher customer satisfaction³⁸³. It was assumed that this also includes for supplier satisfaction if the buyer has a green/sustainable reputation, since CSR is perceived as the most important megatrend for procurement professionals for future operations, and that adoption of CE principals, the extension of CSR philosophy, will act as a major 'supplier criteria' for increasing satisfaction and to assign the buyer the PCS. The results show that buyer's adoption of CE principles insignificantly influence supplier satisfaction, and the same phenomenon can be seen in the relationship between buyer's adoption of CE principles and PCS.

³⁷⁹ See Schiele et al. (2020b), p. 5; Zunk (2015), p. 7-9.

³⁸⁰ See Schiele et al. (2020b), p. 5; Agostini et al. (2017), p. 1144-1146; Deephouse et al. (2016), p. 463-464.

³⁸¹ See Bapeer (2018), p. 44; Möller (2012), p. 68-69; h&z consulting (2011), p. 4-5.

³⁸² See Bapeer (2018), p. 52; Möller (2012), p. 57-59; h&z consulting (2011), p. 4-5.

³⁸³ See Saeed & Kersten (2019), p. 19; Hsu et al. (2012), p. 658.

This is in contrast with Hsu et al. (2012) and Saeed & Kersten (2019), who found that adoption of sustainability initiatives influences satisfaction³⁸⁴. Perhaps, it can be concluded that in this research the combination of industry type (CSC in stead of the linear supply chain), product/service type (recovering, reusing, and recycling of ferrous) and the type of suppliers (OEMs) ensures that buyer's adoption of CE principles is not linked with supplier satisfaction and PCS, which is unexpected since the strategy of the case company originated from the three Rs principles with the purpose of being a role-model within the CSC by integrating the philosophy of CE.

Elaborating on the correlation between buyer's adoption of CE principles and buyer's reputation, the results show the significant effect of buyer's adoption of CE principles on corporate reputation, which is in line with prior studies in context of integrating CE³⁸⁵ and CSR³⁸⁶ in the firm's strategy and (C)SCM, which has a positive direct³⁸⁷, and indirect³⁸⁸ impact on the firm's corporate reputation. As previously mentioned, reputation as a market leader in undertaking sustainability initiatives, leads an organisation to serve as role-model for other competitors. In this way, RQ2 has been answered – buyer's adoption of circular economy principles influences the buyer's corporate reputation, however, this is not applicable for supplier satisfaction and PCS.

³⁸⁴ See Saeed & Kersten (2019), p. 19; Hsu et al. (2012), p. 658.

³⁸⁵ See Tura et al. (2019), p. 91; CRIET (2018), p. 18-19; Lathi et al. (2018), p. 7; Linder & Williander (2017), p. 184; Masi et al. (2017), p. 9; Scheepens et al. (2016), p. 262-264; Tukker (2015), p. 84.

³⁸⁶ See Tran & Nguyen (2020), p. 11-13; Gallardo-Vázquez et al. (2019), p. 14-18; Park (2019), p. 215-217; Chang & Yeh (2017), p. 38-39; Sindhu & Arif (2017), p. 6-8; Bernal-Conesa et al. (2016), p. 121-122; Saeidi et al. (2014), p. 245-247.

³⁸⁷ See Tran & Nguyen (2020), p. 11-13; Gallardo-Vázquez et al. (2019), p. 14-18; Park (2019), p. 215-217; Bernal-Conesa et al. (2016), p. 121-122.

³⁸⁸ See Chang & Yeh (2017), p. 38-39; Sindhu & Arif (2017), p. 6-8; Saeidi et al. (2014), p. 245-247.

9. Implications, limitations and recommendations for future research regarding supplier satisfaction and preferred customership

9.1. Theoretical and managerial implications: including corporate prestige and sustainability as satisfaction measures in the sphere of preferred customership

This paper underlined the importance of corporate prestige and sustainability as new antecedents to PCS. Three theory contributions as well as managerial implications can be derived, First, concerning the relevance of corporate prestige – a composition of corporate status and corporate reputation – as variables of interest in analysing buyer-supplier relations. As far as I aware, this is the first time that both constructs of prestige have been deeply analysed with corporate status as a hierarchical outcome and corporate reputation as a performance-based construct, the first having its origins in sociology, the second in economics³⁸⁹. Second, buyer's status and reputation as new antecedents explaining supplier satisfaction to preferred customership, wherein buyer's reputation influence PCS and the classical antecedents of Vos et al. (2016) positively. Thirdly, from sustainability perspective, introducing buyer's adoption of CE principles as significant variable of enhancing the corporate reputation of the buying firm. Due to legal and consumer pressure, sustainability needs to be seen as selection criterium for selecting the right suppliers³⁹⁰. Even though the fact that the dual functionality of buyer's adoption of CE principles is not fully applicable in this study, sustainability calls for consideration in SCM. In general, purchasing would benefit from integrating corporate status, reputation and sustainability as theoretical elements in the field of reverse marketing, with a systematic (green) reputation management system as output³⁹¹. These contributions lead to important managerial implications, with two main propositions as result: 1) building up a cross-functional reputation management since reputation is based on influenceable and communicable performance; and 2) extend the research model of Vos et al. (2016) by including corporate reputation, status and sustainability as supplier satisfaction measures and to assess this model regularly with new/various industries³⁹².

³⁸⁹ See Sorenson (2014), p. 64-66; Jensen & Roy (2008), p. 496-497.

³⁹⁰ See Bapeer (2018), p. 52; Möller (2012), p. 57-59; h&z consulting (2011), p. 4-5.

³⁹¹ See Schiele et al. (2020b), p. 17.

³⁹² See Schiele et al. (2020b), p. 17; Vos et al. (2016), p. 4619-421; h&z consulting (2011), p. 4-5.

9.2. Industry type, sample size as well as the complexity of the concept corporate prestige as main research limitations in order to ensure generalizability

Despite the above-mentioned theoretical and managerial contributions, it is crucial to highlight limitations of this study with respect to generalizability. The limitations of this study are mainly related to the research design and methodology, which are, on its turn, related to the interpretation of the research findings. First, the buying firm provided a list of 254 OEM suppliers, leading to a sample size of N=51. This small number of respondents makes the conclusions drawn from this research less reliable, in particular with a complicated model with multiple relationships. The low N is mainly due to: 1) timing of data collection, where Covid-19 (less trade and sourcing for new suppliers), closing of the book year and the upcoming Christmas break ensure pressure on the suppliers; 2) duration of the survey. Because of data collection on twelve supplier satisfaction constructs (including Vos et al. 2016), the duration of the survey was 20 minutes; 3) the type of buyer-supplier relationship. The buyer-supplier relationship occurs in the end of the traditional linear SCM and/or in the begin of the CSCM, and as a result, there is a difference in ‘perceived value’ when comparing the customer and supplier in the view of value offerings; 4) type of suppliers. For this research, OEMs has been selected as key suppliers since OEMs make use of their Tier 1, 2 or 3 suppliers for product creation, and along with the ‘low-intensive’ buyer-supplier relationship (taking the value offerings into consideration) it became clear that not every supplier has taken the questionnaire seriously and/or did not recognize the ‘existing’ buyer-supplier relationship; and 5) industry type. The case company is a metal recycling company established in the CSC in stead of the linear supply chain, where suppliers are not involved in high-tech engineering, system integration or NPD process in comparison with chemical and automotive industry, with multiple supplier types e.g. Tier 1, 2 and/or 3³⁹³.

Elaborating on the buyer’s status, as a hierarchical outcome, and buyer’s reputation, as a performance-based construct, overlap exist between these constructs. In order to complement previous studies³⁹⁴, buyer’s status shows its complexity in the view of quantitative analysis, primarily due to the absence of quantitative items. Van der Lelij

³⁹³ See Vos et al. (2016), p. 4619-422; Hüttinger et al. (2014), p. 711.

³⁹⁴ See Schiele et al. (2020b), p. 1-18; Schiele et al. (2020a), p. 1-43.

(2016), Schiele et al. (2020a) and Schiele et al. (2020b) made use of Torelli (2014)³⁹⁵ and the questions were adjusted to reflect on organisational status. Due to its imperfect measures, items from Schwaiger (2004) and Pearce (2011)³⁹⁶ were also applied – both measuring the subjective assessment of social rank of an entity based on a hierarchy of values – resulting in a more ‘comprehensive construct’ with mixed items for measuring buyer’s corporate status. However, improvement opportunities exist since ‘status literature’ is primarily classified as qualitative literature and therefrom quantitative items can be formed. In contrast, buyer’s reputation is a wide-ranging concept, and in this research, measures are based on the items of Fombrun et al. (2000), Schwaiger (2004), Chun (2005) and Helm (2007), which are used in the study of Foroudi et al. (2014)³⁹⁷. Nevertheless, numerous, dimensions, indicators, antecedents and rankings exist (4.2), and it is worth to consider that only a selection of these items is made for this buying firm. Finally, from sustainability perspective, only items for buyer’s adoption of circular economy principles has been used, which are based on the 10R framework - the extended version of the three Rs³⁹⁸. In the field of sustainability, this topic has been chosen considering the CSC and CE philosophy of the buyer, however, multiple sustainability items exist in both qualitative and quantitative literature, as shown in Garip (2019)³⁹⁹, and therefore diverse antecedents concerning sustainability must be tested in Vos et al. (2016) to explore these effects.

9.3. The influence of corporate prestige and sustainability as satisfaction measures asks for further research in the sphere of preferred customership

In summary, this paper provided new insights in buyer-supplier relationships by examining the directly and indirectly influence of corporate prestige, with corporate reputation and status, and sustainability with adoption of the CE principles as main antecedents on supplier satisfaction in order to obtain the PCS. Future investigations are necessary to validate the kinds of conclusions that can be drawn from this study. The results are encouraging and should be validated by a larger and a diverse sample, with Tier 1, 2 and/or 3 instead of only OEMs. Furthermore, it is highly recommended

³⁹⁵ See Schiele et al. (2020a), p. 15-19; van der Lelij (2016), p. 36-43; Torelli et al. (2014), p. 40.

³⁹⁶ See Torelli et al. (2014), p. 40; Pearce (2011), p. 340; Schwaiger (2004), p. 60-61.

³⁹⁷ See Foroudi et al. (2014), p. 10; Schwaiger (2004), p. 60-61; Chun (2005), p. 102; Helm, (2007), p. 32-33.

³⁹⁸ See Farooque et al. (2019), p. 24; Kirchherr et al. (2017), p. 224.

³⁹⁹ See Garip (2019), p. 1-30.

to the test the framework with different case companies from various industries, considering that Schiele et al. (2020a) have been tested in the finance, education and automotive industry, and that Schiele et al. (2020b) have been tested in the services, healthcare, agro-business, automotive, pharma, machine/metal manufacturing and oil & gas industry⁴⁰⁰. Consequently, a comparative study on the impact of corporate reputation and status on supplier satisfaction and PCS will be useful to know the better predictor between two (i.e. reputation and status) to the importance of customer status. Besides, future studies could fruitfully explore new measurement items for status, due to a lack of appropriate literature, and reputation, due to its numerous dimensions, and eventually to include corporate ‘identity’, ‘branding’ and ‘image’ as new antecedents with regards to corporate prestige literature. Furthermore, it is strongly advised to explore direct and/or indirect/moderating relationships between reputation and the remaining antecedents of Vos et al. (2016).

Additionally, from sustainability perspective, it is strongly advised to develop new sustainable antecedents⁴⁰¹ e.g. environmental responsibility, social responsibility and economic responsibility and to integrate these measures in the codebook of Vos et al. (2016) as well as to test it on supplier satisfaction and PCS. Previous literature on purchasing indicated the role of CSR as megatrend⁴⁰² and CE as instigator for circular procurement (models)⁴⁰³, the Dutch Green Deal on Circular Procurement⁴⁰⁴, resilience metrics⁴⁰⁵, circular procurement guidance⁴⁰⁶, green industrial acquisitions⁴⁰⁷, public-private partnerships (PPPs)⁴⁰⁸, public-sector business models (PSBMs)⁴⁰⁹ as well as the ReSOLVE and ProBiz4CE frameworks⁴¹⁰. Due to the ‘green’ pressure from the European Commission, with its ‘Green Deal’, SDGs, and the increasing consumer pressure, it is worth to explore ‘sustainability’ in ‘purchasing’ and this research will serve as a base for future studies on both concepts.

⁴⁰⁰ See Schiele et al. (2020b), p. 11; Schiele et al. (2020a), p. 23.

⁴⁰¹ See Tran & Nguyen (2020), p. 11-13; Gallardo-Vázquez et al. (2019), p. 14-18; Park (2019), p. 215-217; Bernal-Conesa et al. (2016), p. 121-122.

⁴⁰² See Bapeer (2018), p. 44; Möller (2012), p. 68-69; h&z consulting (2011), p. 4-5.

⁴⁰³ See van Oppen et al. (2018), p. 20; Jones et al. (2017), p. 1-8; European Commission (2017), p. 6;

⁴⁰⁴ See MVO (2020); Circular Europe Network (2020); European Commission (2017), p. 17.

⁴⁰⁵ See Farooque et al. (2019), p. 27; Sprecher et al. (2017), p. 3860-3862.

⁴⁰⁶ See Fortunati et al. (2020), p. 5; Masoumi et al. (2019), p. 1; van Oppen et al. (2018), p. 8.

⁴⁰⁷ See Farooque et al. (2019), p. 27; Popa & Popa (2016), p. 2-4.

⁴⁰⁸ See Klein et al. (2020), p. 15; Bao (2019), p. 12.

⁴⁰⁹ See Klein et al. (2020), p. 14; Lewandowski (2017), p. 47.

⁴¹⁰ See Klein et al. (2020), p. 12; Witjes & Lozano (2016), p. 42; Ellen MacArthur Foundation (2015), p. 21.

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Appendix

Annexure A

Length of relationship		Number of employees		Percentage turnover with Riwald Recycling as share of the total % turnover	
<5 years	18 (35.3%)	<50 employees	29 (56.7%)	<5%	22 (43.2%)
5-10 years	12 (23.5%)	51-250 employees	10 (19.7%)	5-10%	5 (9.8%)
11-20 years	6 (11.7%)	251-500 employees	3 (5.9%)	11-40%	5 (9.8%)
>20 years	8 (15.8%)	>500 employees	3 (5.9%)	>40%	1 (1.9%)
Not specified	7 (13.7%)	Not specified	6 (11.8%)	Not specified	18 (35.3%)
N = 51 (100%)		N = 51 (100%)		N = 51 (100%)	

Country of respondents		Most common e-classification	
The Netherlands	37 (72.5%)	Home economics and technology	15 (29.41%)
Germany	8 (15.8%)	Machine device	11 (21.57%)
Other	1 (1.9%)	Public safety and military technology	9 (17.7%)
Not specified	5 (9.8%)	Other	16 (31.5%)
N = 51 (100%)		N = 51 (100%)	

Annexure B

Supplier Satisfaction (SS). Source: Schiele et al. (2020a); Vos et al. (2016).

S_Satisfaction_100_1	Vos et al. (2016)	Our firm is very satisfied with the overall relationship with Riwald Recycling.
S_Satisfaction_100_2	Vos et al. (2016)	On the whole, our firm is completely happy with Riwald Recycling.
S_Satisfaction_100_3	Vos et al. (2016)	Generally, our firm is very pleased to have Riwald Recycling as our business partner.
S_Satisfaction_100_4	Vos et al. (2016)	If we had to do it all over again, we would still choose Riwald Recycling.
S_Satisfaction_100_5	Vos et al. (2016)	Our firm does not regret the decision to do business with Riwald Recycling.
S_Satisfaction_100_6	Vos et al. (2016)	Our firm is satisfied with the value we obtain from the relationship with Riwald Recycling.

Preferred Customer Status (PCS). Source: Vos et al. (2016); Pulles et al. (2016).

	<i>Compared to other customers in our firm's customer base...</i>	
PC_PC_110_1	Vos et al. (2016)	... Riwald Recycling is our preferred customer.
PC_PC_110_2	Vos et al. (2016)	... we care more for Riwald Recycling.
PC_PC_110_3	Vos et al. (2016)	... Riwald Recycling receives preferential treatment.
PC_PC_110_4	Vos et al. (2016)	... we go out on a limb for Riwald Recycling.
PC_PC_110_5	Vos et al. (2016)	... our firm's employees prefer collaborating with Riwald Recycling to collaborating with other customers.

Operative Excellence (OE). Source: Vos et al. (2016); Hüttinger et al. (2014).

	<i>Riwald Recycling...</i>	
S_OperativeExc_40_1	Vos et al. (2016)	... has always exact and in time forecasts about future demand.
S_OperativeExc_40_2	Vos et al. (2016)	... provides us with forecasts our firm can rely and plan on.
S_OperativeExc_40_3	Vos et al. (2016)	... has for our firm simple and transparent internal processes.
S_OperativeExc_40_4	Vos et al. (2016)	... supports short decision-making processes.
S_OperativeExc_40_5	Vos et al. (2016)	... stands open for process optimizations.
S_OperativeExc_40_6	Vos et al. (2016)	... has an optimal payment habit.

Growth Opportunity (GO). Source: Vos et al. (2016); Hüttinger et al. (2014).

	<i>The relationship with Riwald Recycling ...</i>	
S_Growth_20_1	Vos et al. (2016)	... provides us with a dominant market position in our sales area.
S_Growth_20_2	Vos et al. (2016)	... is very important for us with respect to growth rates.
S_Growth_20_3	Vos et al. (2016)	... enables us to attract other customers.
S_Growth_20_4	Vos et al. (2016)	... enables us to exploit new market opportunities.

Profitability (P). Source: Vos et al. (2016); Hüttinger et al. (2014).

	<i>The relationship with Riwald Recycling ...</i>	
S_Profitability_90_2	Vos et al. (2016)	... provides us with large sales volumes.

S_Profitability_90_3	Vos et al. (2016)	... helps us to achieve good profits.
S_Profitability_90_4	Vos et al. (2016)	... allows us to gain high margins.
S_Profitability_90_5	Vos et al. (2016)	... has a positive influence on the profitability of our firm.
S_Profitability_90_6	Vos et al. (2016)	... enables us to raise our profitability together.
Relational Behaviour (RB). Source: Vos et al. (2016); Hüttinger et al. (2014).		
S_RelBehavior_80_1	Vos et al. (2016)	Problems that arise in the course of the relationship are treated by Riwald Recycling as joint rather than individual responsibilities.
S_RelBehavior_80_2	Vos et al. (2016)	Riwald Recycling is committed to improvements that may benefit our relationship as a whole and not only themselves.
S_RelBehavior_80_3	Vos et al. (2016)	We each benefit and earn in proportion to the efforts we put in.
S_RelBehavior_80_4	Vos et al. (2016)	Our firm usually gets at least a fair share of the rewards and cost savings from our relationship with Riwald Recycling.
S_RelBehavior_80_5	Vos et al. (2016)	Riwald Recycling would willingly make adjustments to help us out if special problems/needs arise.
S_RelBehavior_80_6	Vos et al. (2016)	Riwald Recycling is flexible when dealing with our firm.
S_RelBehavior_80_7	Vos et al. (2016)	The collaboration with Riwald's operational/specialist department is very good.
Support (S). Source: Vos et al. (2016); Hüttinger et al. (2014).		
<i>Riwald Recycling ...</i>		
S_Support_60_1	Vos et al. (2016)	... collaborates with us to improve our manufacturing processes or services.
S_Support_60_2	Vos et al. (2016)	... gives us (technological) advice (e.g. on materials, software, way of working).
S_Support_60_3	Vos et al. (2016)	... gives us quality related advice (e.g. on the use of inspection equipment, quality assurance procedures, service evaluation).
Involvement (I). Source: Vos et al. (2016); Hüttinger et al. (2014).		
S_Involvement_70_2	Vos et al. (2016)	We are early involved in the new product/service development process of Riwald Recycling.
S_Involvement_70_3	Vos et al. (2016)	We are very active in the new product development process of Riwald Recycling.
S_Involvement_70_4	Vos et al. (2016)	Communication with our firm about quality considerations and design changes is very close.
Contact Accessibility (CA). Source: Vos et al. (2016); Hüttinger et al. (2014).		
<i>There is a contact person within Riwald Recycling who...</i>		
S_Available_10_1	Vos et al. (2016)	...coordinates the relevant relationship activities within and outside of Riwald Recycling.
S_Available_10_2	Vos et al. (2016)	...is, for the employees of our company, the one to contact in regard to partner-specific questions.

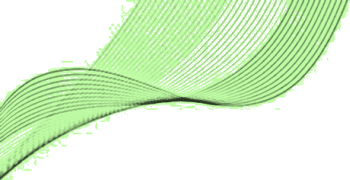
S_Available_10_3	Vos et al. (2016)	...informs employees within Riwald Recycling firm about the needs of our company.
Buyer's Status (BS). Source: Schiele et al. (2020a); Torelli et al (2014); Pearce (2011); Schwaiger (2004)		
<i>According to us ...</i>		
BS1	Torelli et al. (2014)	... Riwald Recycling has a high-status.
BS2	Torelli et al. (2014)	... Riwald Recycling is admired by others.
BS3	Pearce (2011)	... Riwald Recycling scores high on our social rank.
BS4	Torelli et al. (2014)	... Riwald Recycling is highly regarded by others.
BS5	Pearce (2011)	... Riwald Recycling is perceived as the most attractive buyer in our industry compared with our peers.
BS6	Schwaiger (2004)	... Riwald Recycling is recognized world-wide as far as I know.
Buyer's Reputation (BR). Source: Foroudi (2014); Helm (2007); Chun (2005); Schwaiger (2004); Fombrun et al. (2000).		
BR1	Chun (2005) Schwaiger (2004); Fombrun et al. (2000)	Riwald Recycling has always acted in a trust-worthy manner
BR2	Schwaiger (2004)	Riwald Recycling has always seen as a reliable partner for our customers
BR3	Helm 2007); Fombrun et al. (2000)	Riwald Recycling has always an excellent leadership
BR4	Chun (2005) Schwaiger (2004); Fombrun et al. (2000)	Riwald Recycling has always an excellent management.
BR5	Helm 2007); Chun (2005); Schwaiger (2004)	Riwald Recycling has always offered high quality products/services.
BR6	Helm 2007); Schwaiger (2004)	Riwald Recycling has always offered products and services that are good value for money.
BR7	Schwaiger (2004)	Riwald Recycling has always attention for customer concerns.
BR8	Schwaiger (2004)	Riwald Recycling has always acting as an innovator in stead of an imitator with respect to recycling.
BR9	Schwaiger (2004)	Riwald Recycling has always a smaller risk compared to its competitors.
BR10	Schwaiger (2004)	Riwald Recycling has a clear vision about the future of the company.
BR11	Schwaiger (2004)	Riwald Recycling is always seen as an economically stable company.
BR12	Schwaiger (2004)	Riwald Recycling has always been behaving in a socially conscious way.
BR13	Helm 2007); Chun (2005); Schwaiger (2004)	Riwald Recycling has always been concerned about the preservation of the environment.

Buyer's adoption of CE principles (BACEP). Source: Fonseca et al. (2018); Nunez-Cacho et al. (2018); Ceptureanu et al. (2018)		
<i>According to us ...</i>		
BACEP1	Fonseca et al. (2018); Ceptureanu et al. (2018)	... Riwald Recycling adopts the lifecycle management approach.
BACEP2	Fonseca et al. (2018); Nunez-Cacho et al. (2018)	... Riwald Recycling recycles waste (residues) and raw materials.
BACEP3	Fonseca et al. (2018); Nunez-Cacho et al. (2018)	... Riwald Recycling retrieves (recover), improve, or renew used materials, products, or parts (residues).
BACEP4	Nunez-Cacho et al. (2018)	... Riwald Recycling improves the recycling rate of solid waste.
BACEP5	Fonseca et al. (2018)	... Riwald Recycling segregates and value our waste (residues).
BACEP6	Nunez-Cacho et al. (2018)	... Riwald Recycling uses efficient technologies for the recovery of materials.
BACEP7	Fonseca et al. (2018)	... Riwald Recycling adopts the best technologies and practices to reduce the environmental impacts of our processes and products.
BACEP8	Fonseca et al. (2018)	... Riwald Recycling cooperates with its suppliers to establish closed loops that maximize the utilisation of resources and minimize waste and environmental impacts.
BACEP9	Nunez-Cacho et al. (2018)	... Riwald Recycling employs measures to prevent, recycle and eliminate waste.
Control Variables (CV). Source: Vos et al. (2016); Tognetti et al. (2015).		
ORG_CountryOfOrigin_255	Vos et al. (2016)	Where is your company located?
ORG_Size_240_3	Vos et al. (2016)	Number of Employees
LNGTH_Relationship_236_1	Vos et al. (2016)	How long has your company been a customer of Riwald Recycling?
LNGTH_SupplierOfB_236_2	Vos et al. (2016)	How long have you already been working as an employee of your firm?
ORG_Turnover_240_1	Vos et al. (2016)	Annual turnover (in €).
ORG_DepTurnover_240_2	Vos et al. (2016)	Annual turnover with this supplier as % of total annual turnover in this product segment?
CERTF_Relationship_236_6	Tognetti et al. (2015)	Does obtaining environmental certifications increases the buyer's attractiveness?

Annexure C

Rotated Component Matrix												
	1	2	3	4	5	6	7	8	9	10	11	12
S_Satisfaction_100_1	,155	,184	,141	,118	,192	,818	-,068	,198	,173	-,112	-,012	-,010
S_Satisfaction_100_2	,225	,200	,078	,096	,018	,866	,110	,001	,010	,164	-,010	-,049
S_Satisfaction_100_3	,161	,107	,171	,601	,206	,504	-,175	,197	,119	,005	,031	,211
S_Satisfaction_100_5	,037	,244	,669	-,042	,060	,513	-,041	-,096	,009	-,063	,085	,094
S_Satisfaction_100_6	,108	,304	,311	,193	,067	,508	-,003	,005	,301	,521	-,051	-,012
PC_PC_110_1	,344	,713	,255	,236	-,067	,129	-,062	,130	,228	,048	-,092	-,097
PC_PC_110_2	,225	,831	,183	,074	,045	,230	,106	,157	,061	,074	,069	,128
PC_PC_110_3	,363	,677	-,029	-,029	,099	,257	,138	-,203	,300	,020	,158	,101
PC_PC_110_4	,391	,693	,213	,002	,202	,042	,199	-,122	,155	,086	,162	-,054
S_OperativeExc_40_1	,139	,466	,243	,273	,191	,343	,301	,231	-,072	-,285	-,124	,250
S_OperativeExc_40_2	,223	,548	,345	,093	,302	,368	,132	,105	,132	-,031	-,176	,087
S_OperativeExc_40_5	,250	,596	,033	,119	,375	,208	,270	,086	-,136	-,096	-,023	-,275
S_Growth_20_1	,731	,285	,059	-,066	,115	,238	,025	,032	,352	-,283	-,034	,152
S_Growth_20_2	,868	,289	,195	-,113	,007	,052	,019	-,061	-,055	,111	,151	,019
S_Growth_20_3	,839	,185	,204	,071	,087	,042	,253	-,037	,063	-,163	-,126	,069
S_Growth_20_4	,790	,233	,047	,082	,199	,071	,233	,166	,145	-,080	-,258	,042
S_Profitability_90_2	,818	,185	,092	-,099	,051	,164	,166	-,001	,065	,122	,149	-,091
S_Profitability_90_3	,602	,199	,160	-,002	,341	,145	,190	,177	,234	,180	,440	-,014
S_Profitability_90_4	,685	,134	,132	-,071	,372	,296	,214	,188	-,019	,190	,252	-,065

S_Profitability_90_6	,434	,017	,050	,213	,655	,166	,162	,088	,164	,338	,047	,005
S_RelBehavior_80_1	,037	,005	,197	,060	,654	,384	,264	,175	,245	-,297	,171	-,028
S_RelBehavior_80_2	,007	,257	,472	,090	,512	,054	,185	,510	,070	-,186	-,025	-,130
S_RelBehavior_80_4	,247	,334	,222	-,081	,732	,103	,195	,001	,140	,100	-,088	,058
S_RelBehavior_80_5	-,067	,287	,154	,331	,474	-,023	,137	,416	,163	,024	-,037	,384
S_Support_60_2	,251	,052	,031	,283	,577	,001	,286	,405	,393	-,071	,057	,072
S_Support_60_3	,375	,002	,063	,325	,535	,031	,218	,318	,417	-,129	-,005	,129
S_Involvement_70_2	,230	,183	,151	,039	,146	,054	,812	,181	,245	,021	,106	-,001
S_Involvement_70_3	,387	,167	,138	,056	,319	-,024	,753	,158	,038	-,031	-,032	-,056
S_Involvement_70_4	,310	,067	,239	,230	,208	,046	,756	,161	,037	,010	-,044	,092
S_Availability_10_1	,008	,147	,265	,095	,135	,226	,252	,766	,061	,032	,212	,037
S_Availability_10_2	,056	-,131	,119	,141	,112	,126	,051	,895	,155	-,014	-,023	-,027
S_Availability_10_3	,090	,280	-,137	,250	,084	-,263	,372	,571	,144	,156	-,251	,236
BS1	,226	,104	,019	,135	,109	,444	,273	,055	,684	,107	,051	-,050
BS2	,070	,205	,246	,194	,249	,194	,267	,200	,648	,012	,008	,221
BS3	-,052	,271	,414	,224	,272	,274	,325	,210	,407	-,050	-,066	,169
BS5	,223	,201	,218	,330	,264	-,150	-,218	,197	,637	,078	-,022	-,066
BR2	-,052	,060	,588	,290	,376	,192	,244	,295	,076	,278	,002	,020
BR3	,342	,334	,638	,168	-,071	-,072	,148	,269	,065	,016	,003	-,298
BR4	,458	,285	,708	,152	,025	,014	,241	,025	,134	,036	-,074	-,149
BR5	,057	,148	,507	,440	,282	,071	,192	,214	,500	,019	,043	-,057
BR7	,132	,171	,587	,133	,293	,382	,293	,188	,204	-,103	,182	,038
BR10	,356	,483	,460	,215	-,033	-,151	-,040	,102	-,021	-,140	,522	,079
BR11	,311	-,007	,714	,185	,131	,103	,084	,150	,143	,113	,075	,296
BR12	,251	,409	,502	,169	,306	,171	,167	,207	,146	-,067	,209	-,109
BACEP3	-,177	,110	,091	,798	,044	-,007	,273	,069	,100	-,010	,100	-,024
BACEP4	-,023	,164	,157	,832	-,104	,190	,080	,071	,083	-,104	,021	-,085
BACEP5	-,088	-,079	,019	,797	,227	,060	-,037	,076	,116	,256	-,163	,113
BACEP6	,421	,054	,411	,502	,111	,074	-,026	,181	,282	,000	,277	-,130

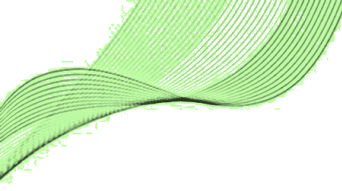


BACEP7	,207	,134	,194	,519	,105	-,063	,188	,387	,164	-,154	,112	,392
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Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a.
Rotation converged in 16 iterations.

Annexure D

Communalities		
	Initial	Extraction
S_Satisfaction_100_1	1,000	,883
S_Satisfaction_100_2	1,000	,898
S_Satisfaction_100_3	1,000	,854
S_Satisfaction_100_5	1,000	,808
S_Satisfaction_100_6	1,000	,865
PC_PC_110_1	1,000	,863
PC_PC_110_2	1,000	,901
PC_PC_110_3	1,000	,854
PC_PC_110_4	1,000	,836
S_OperativeExc_40_1	1,000	,833
S_OperativeExc_40_2	1,000	,789
S_OperativeExc_40_5	1,000	,801
S_Growth_20_1	1,000	,923
S_Growth_20_2	1,000	,934
S_Growth_20_3	1,000	,911
S_Growth_20_4	1,000	,909
S_Profitability_90_2	1,000	,828
S_Profitability_90_3	1,000	,914
S_Profitability_90_4	1,000	,920
S_Profitability_90_6	1,000	,871
S_RelBehavior_80_1	1,000	,897
S_RelBehavior_80_2	1,000	,865
S_RelBehavior_80_4	1,000	,853
S_RelBehavior_80_5	1,000	,813
S_Support_60_2	1,000	,893
S_Support_60_3	1,000	,894
S_Involvement_70_2	1,000	,899
S_Involvement_70_3	1,000	,902
S_Involvement_70_4	1,000	,865
S_Available_10_1	1,000	,872
S_Available_10_2	1,000	,911
S_Available_10_3	1,000	,872
BS1	1,000	,851
BS2	1,000	,825
BS3	1,000	,798
BS5	1,000	,841
BR2	1,000	,844
BR3	1,000	,861
BR4	1,000	,921



BR5	1,000	,826
BR7	1,000	,849
BR10	1,000	,857
BR11	1,000	,825
BR12	1,000	,780
BACEP3	1,000	,791
BACEP4	1,000	,828
BACEP5	1,000	,831
BACEP6	1,000	,825
BACEP7	1,000	,785

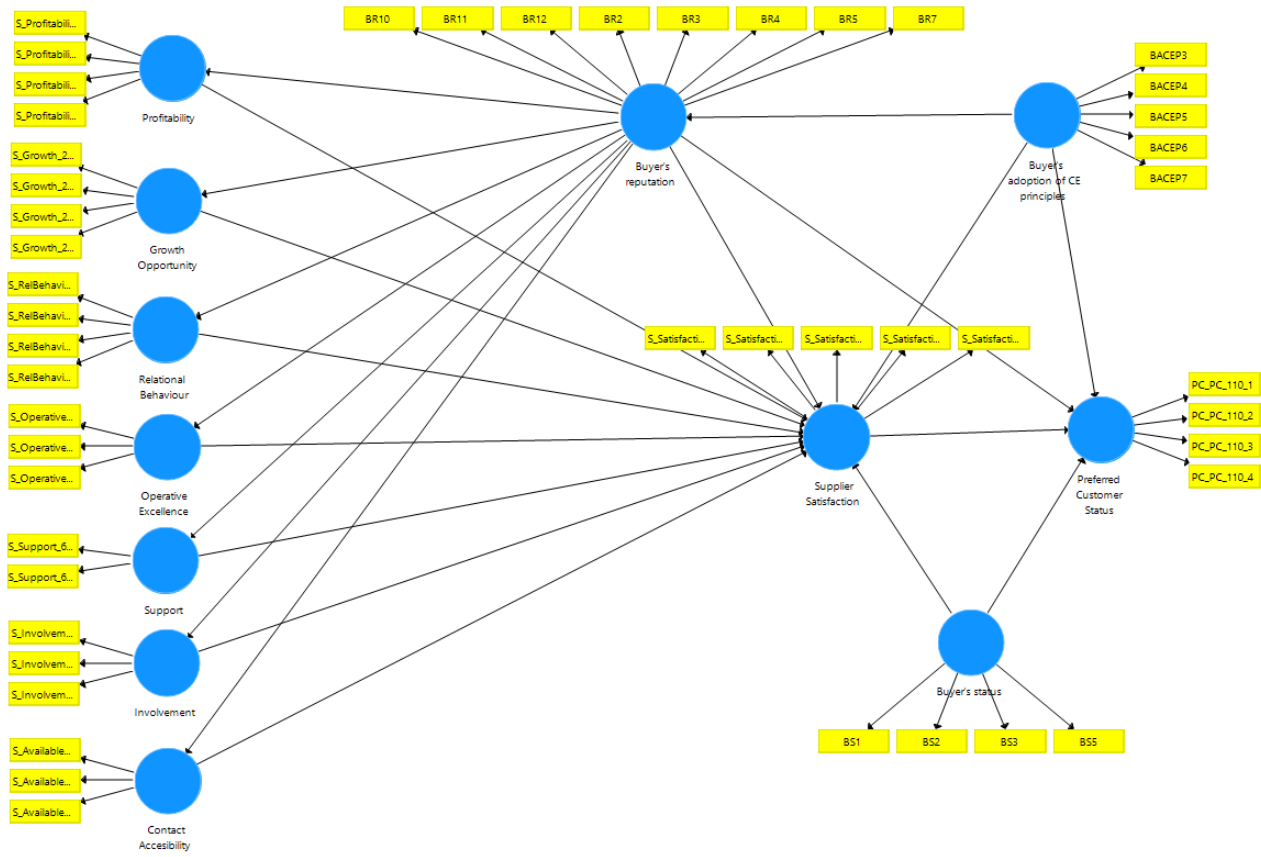
Extraction Method: Principal Component Analysis.
Average: 0.859.

Annexure E

	Buyer's ado...	Buyer's repu...	Buyer's status	Contact acc...	Growth opp...	Involvement	Operative E...	Preferred C...	Profitability	Relational ...	Supplier Sa...	Support
Buyer's ado...												
Buyer's repu...	0.698											
Buyer's status	0.694	0.768										
Contact acc...	0.560	0.564	0.660									
Growth opp...	0.281	0.541	0.450	0.280								
Involvement	0.458	0.646	0.580	0.564	0.556							
Operative E...	0.487	0.717	0.640	0.529	0.732	0.664						
Preferred C...	0.373	0.651	0.618	0.350	0.755	0.476	0.911					
Profitability	0.326	0.591	0.525	0.371	0.829	0.559	0.704	0.720				
Relational B...	0.524	0.757	0.772	0.737	0.397	0.614	0.786	0.556	0.614			
Supplier Sat...	0.466	0.629	0.646	0.426	0.497	0.340	0.794	0.685	0.643	0.635		
Support	0.630	0.632	0.775	0.705	0.517	0.699	0.590	0.403	0.565	0.779	0.457	

HTMT scores for the relationship between the constructs on both axes.

Annexure F



Annexure G

Search	Initial hits	Years	Hits in only relevant subject areas	Articles in journals	Usable and assessed papers	Search key
Circular supply chain management	463	2014-2021	198	146	14	TITLE-ABS-KEY (circular AND supply AND chain AND management) AND (LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014)) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON")) AND (LIMIT-TO (DOCTYPE , "ar"))
Circular supply chain	909	2014-2021	354	271	12	TITLE-ABS-KEY (circular AND supply AND chain) AND (LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014)) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON")) AND (LIMIT-TO (DOCTYPE , "ar"))
Circular economy principles	1.060	2014-2021	194	132	8	TITLE-ABS-KEY (circular AND economy AND principles) AND (LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014)) AND (LIMIT-TO (SUBJAREA , "BUSI")) AND (LIMIT-TO (DOCTYPE , "ar"))
Supplier satisfaction	4.045	2012-2021	450	359	22	TITLE-ABS-KEY (supplier AND satisfaction) AND (LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012)) AND (LIMIT-TO (SUBJAREA , "BUSI")) AND (LIMIT-TO (DOCTYPE , "ar"))
Preferred customer	2.314	2012-2021	380	321	12	TITLE-ABS-KEY (preferred AND customer) AND (LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012)) AND (LIMIT-TO (SUBJAREA , "BUSI")) AND (LIMIT-TO (DOCTYPE , "ar"))
Corporate prestige	259	2012-2020	68	57	8	TITLE-ABS-KEY (corporate AND prestige) AND (LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012)) AND (LIMIT-TO (SUBJAREA , "BUSI")) AND (LIMIT-TO (DOCTYPE , "ar"))
Corporate reputation	4.402	2012-2021	2.238	1.789	21	TITLE-ABS-KEY (corporate AND reputation) AND (LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012)) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "SOCI")) AND (LIMIT-TO (DOCTYPE , "ar"))
Corporate status	3.867	2012-2021	1.420	1.077	12	TITLE-ABS-KEY (corporate AND status) AND (LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012)) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "SOCI")) AND (LIMIT-TO (DOCTYPE , "ar"))

