Journal of Purchasing and Supply Management xxx (xxxx) xxx–xxx

Contents lists available at ScienceDirect

Journal of Purchasing and Supply Management

journal homepage: www.elsevier.com/locate/pursup

The influence of reputation on supplier selection: An empirical study of the European automotive industry

Alessandro Manello[a,*], Giuseppe Calabrese[b]

[a] CNR-IRCrES & University of Turin, via Real Collegio, 30, 10024 Moncalieri, Italy
[b] CNR-IRCrES, via Real Collegio, 30, 10024 Moncalieri, Italy

ARTICLE INFO

Keywords:
Supplier selection
Corporate reputation
Tier 1 suppliers
Automotive

ABSTRACT

Using an original database, integrated with information by the web, we propose an ex-post analysis on the main factors influencing the selection process of tier 1 suppliers in the automotive industry. There is plenty of literature on how buyers should select their suppliers, but the literature on how they really do so is scarce. We contribute analysing an original database collecting purchasing contracts information within the automotive components market in Europe. We investigate, through different econometric approaches the influence of traditional supplier selection criteria in combination with different reputation factors. Our findings suggest that reputation plays a crucial role more than classical criteria; in particular, suppliers, which serve a diversified customer portfolio or with strong exposure to premium brand customers have better chances to gain additional orders and broaden their customer base even more. The latter means that OEMs have to increase their reputation in order to be more attractive for suppliers.

1. Introduction

Supplier selection and supply chain restructuring are two related phenomenon (Schniederjans et al., 2015) that strongly influence the automotive industry (Choi and Hong, 2002). In the automotive sector, with its traditionally flat hierarchy, price was the main selection criterion (Fujimoto, 2001) but, gradually, other supplier selection criteria such as quality and technical capabilities (Birchall et al., 2001; Calabrese, 2001) have been considered more consistently (Choi and Hartley, 1996). Consequently, a real hierarchy among direct and indirect suppliers has been defined (Balcet and Consoni, 2007; Castelli et al., 2011) with a growing involvement of specialised suppliers to satisfy new requirements (Caputo and Zirpoli, 2001; Sturgeon and Van Biesebroeck, 2011) and with many minor firms relegated to the role of sub-suppliers (Rachid, 2001; Volpato and Stocchetti, 2007).

Two main consequences arise in the car components market: the reduction in the number of suppliers to the point of scarcity (Schiele et al., 2012), and the increasing power the so-called mega-suppliers (Chanaron, 2013; Frigant, 2013), as compared to carmakers. These firms are able to combine technical skills and logistical capabilities, as well as financial strength, good reputation and managerial competences, which are essential aspects for maintaining reliable and long-term relationship with carmakers (Cheraghi et al., 2004; Karlsson and Weimarck, 2001).

There is plenty of normative literature on how buyers should select their suppliers, with a general consensus on a number of factors influencing the individual choice, ranging from price, perceived quality, delivery to other more industry specific criteria, as documented by Lin and Purchase (2006). Reputational issues receive little attention in this body of work, as already highlighted by de Boer et al. (2001). Even in the presence of relevant phenomenon like competition, globalisation and the Internet boom, most recent - and not so recent – supplier rankings (Cheraghi et al., 2004; Karsak and Dursun, 2016) continue to be mainly based on general performance evaluation.

In fact, there is little literature on how buyers actually select their suppliers in practice. This paper is exactly focused on this point and analyses a database of real sourcing decisions in the automotive sector. We contribute to the literature by providing an extensive quantitative analysis of the supplier selection criteria based on contracts for components for all car models assembled in European plants during the period 2002–2014. Moreover, we investigate the effect of reputation in the purchasing decision by including different indicators of corporate reputation, defined as the “perceptual representation of firm's overall appeal to all of its key stakeholders when compared with other leading rivals” (Fombrun, 1996), within our econometric estimates.

We find two intriguing and promising results. First, suppliers that serve a diversified customer portfolio have a better chance to gain additional orders and further broaden their customer base, compared to

* Corresponding author.
E-mail addresses: alessandro.manello@ircres.cnr.it (A. Manello), giuseppe.giulio.calabrese@ircres.cnr.it (G. Calabrese).

https://doi.org/10.1016/j.pursup.2018.03.001
Received 27 September 2016; Received in revised form 9 February 2018; Accepted 6 March 2018

suppliers that serve particular customers. Second, suppliers with strong exposure to premium brand customers gain more orders also from non-premium customers in the subsequent period. For the automotive supply chain, these results connect to the customer attractiveness literature, and to social exchange theory. The former argues that buying firms may want to become a preferred customer of their suppliers; hence also buyers have to build their attractiveness and their reputation in the supply market. The latter states that an actor starts a "business" relationship if the partner is sufficiently attractive, then checks if the relationship matches initial expectations, and then decides to continue or stop a relationship depending on the availability of alternative partners (Hüttinger et al., 2012).

The remainder of the paper is organised as follows. Section 2 reviews the relevant literature on reputation regarding supplier selection and develops our main research hypothesis. In Section 3 we present our empirical strategy and we describe the database through some preliminary descriptive statistics. In Section 4, we present and discuss all results. Conclusions, purchasing implications and limitations are reported in the last section.

2. Literature review, automotive peculiarities and hypotheses

As reported by Lienland et al. (2013), the recent literature on supplier selection remains essentially focused on descriptive/prescriptive research, which includes traditional performance aspects (quality, price, technical capability and delivery) among the most relevant factors in supplier selection (Cheraghi et al., 2004; Kannan and Tan, 2002). On the contrary, other factors like supplier reputation have received less attention (de Boer et al., 2001). Starting from the seminal paper by Dickson (1966), which lists more than 23 factors influencing supplier selection decisions, Weber et al. (1991) propose an overview of said factors, whereas Ho et al. (2010) consider 78 papers and find that they have only 14 purchasing factors in common. Traditional performance-based factors are used in more than 80% of the cases, whereas reputation is included in only 15 of the proposed scales. Cheraghi et al. (2004) point out relevant changes in the ranking of different supplier selection criteria due to stronger competition, globalisation and Internet use. Yet, price, quality and delivery consistently remain the most popular criteria in supplier rankings (Karsak and Dursun, 2016).

Nevertheless, some contributions highlight the growing role played by corporate reputation, especially in B2B markets (Murray and White, 2005; Wiedmann and Buxel, 2005), as a factor which strongly influences the purchasing decision process (Fombrun and Pan, 2006) and the duration of each relationship (Bennett and Gabriel, 2001). Corporate reputation is often described by the management and marketing literature. It is sometimes confused with corporate identity or corporate image. The so-called "Evaluative school" defines reputation similarly to what has been done by the financial community (Chun, 2005), while the "Impressional school" analyses how a company is viewed by the different stakeholders separately (Deephouse, 2000; Weiss et al., 1999). Finally, the "Relational school" links corporate reputation to how customers actually view suppliers (Spears et al., 2006), firstly in terms of internal viewpoint, image and brand, and secondly in relation to the other stakeholders' view. In this sense, evaluating corporate reputation requires several years (Balmer, 2001) and damaged reputation may severely affect financial performance (Gatzert, 2015). Within the relational stream, Fombrun defines 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 stakeholders when compared with other leading rivals" (Fombrun, 1996). The growing importance of reputation, as seen in this definition, is the basis for our first research hypothesis:

H1:. *Corporate reputational factors are relevant in supplier selection compared to the traditional criteria based on performance.*

This hypothesis is also supported by the social exchange theory (SET), and it is frequently used as theoretical background for attractiveness studies (Hüttinger et al., 2012; Mortensen and Arlbjørn, 2012), which analyse the motivations behind social exchanges among individuals (Homans, 1958; Blau, 1964) in terms of resources and benefits (Das and Teng, 2002). The buyer-supplier relationship is seen as referring to long-term cooperation based on trust and information sharing, so that reputation regards not only suppliers but also customers and their attractiveness. In particular, in the automotive industry, suppliers represent on average 80% of the added value of a vehicle (Clepa, 2017), and the strategic role of many components/modules can invert the burden of attractiveness (Schiele et al., 2012). In fact, carmakers are increasingly focused on core activities like brand management, style, engineering, assembling and manufacturing of some key components (Calabrese, 2002; Calabrese and Erbetta, 2005). Following the SET, many scholars stress the attractiveness theory in the buyer-supplier relationship (Cropanzano, and Mitchell, 2005; Dwyer et al., 1987; Halinen, 1997; Harris et al., 2003; Hald et al., 2009; Wilkinson et al., 2005; Ellegaard et al., 2003) and mention many factors modifying the traditional selection perspective focused more on supplier attractiveness than on customer attractiveness. Among these:

- Outsourcing increases the value added coming from suppliers, and customers are less able to influence them; reductions in technological spillovers induce customers to sign exclusivity agreements, so they can profit from suppliers' innovations (Chesbrough, 2006);
- The scarcity of innovative suppliers makes it difficult to find substitute suppliers and relationships become stabilised (Schiele, 2010);
- The adoption of key account management in suppliers obliges customers to be more attractive (Ivens and Pardo, 2007);
- The diffusion of global sourcing reduces customer attractiveness, as suppliers believe that distant relationships entail greater risks and complexity than those established with local customers (Steinle and Schiele, 2008).

These trends are summarised in the cycle of the so-called preferred customership, which is based on three core elements (Schiele et al., 2012; Pulles et al., 2016): customer attractiveness, supplier satisfaction and preferred customership.

Customer attractiveness motivates suppliers and increases collaborative relationships along the supply chain. Moreover, a customer that boosts its attractiveness will have an additional motivational approach to influence supplier actions (Mortensen, 2012; La Rocca et al., 2012) and an additional tool to increase supplier satisfaction. Similarly to customer satisfaction, supplier satisfaction relies on the confirmation/disconfirmation paradigm, i.e. satisfaction is reached (confirmation) if ex-post experience coincides with or exceeds ex-ante expectations (Essig and Amann, 2009). For example, if a customer acts wrongly, an unsatisfied supplier might deliver low-quality outputs and even discontinue the relationship (Essig and Amann, 2009). However, a minimum level of satisfaction may be sufficient to maintain the relationship, and satisfaction can gradually grow during the relationship (Vos et al., 2016). Consequently, suppliers can change the status of a customer from attractive to preferred and devote a greater part of their development efforts to it (Cordòn and Vollman, 2002). On the contrary, they assign the status of regular customer to any firm that fails to provide adequate levels of satisfaction (Schiele et al., 2012). The 'preferred customer' status requires great efforts and costs on the part of both the supplier, in assessing and comparing the performance of each relationship, and the customer, in beating the competition (Schiele et al., 2010). Hence, it usually granted if a significant increase in competitive advantage and business performance is reached. This strategy is worthwhile in very critical supply markets, as in the case of the strategic items described by the Kraljic matrix (1983), whereas customer attractiveness is more suitable for leverage and bottleneck items.

Automotive is the reference industry in this paper, similarly to other

works investigating comparable issues, like Choi and Hartley (1996), Schmitz and Platts (2004) and Lienland et al. (2013). However, this industry is one of the most complicated cases for what concerns developing reliable supplier selection procedures. The outsourcing process causes important transformations (Frigant, 2013; Manello et al., 2016; Schmitt and Van Biesebroeck, 2017): suppliers may be asked to follow carmakers abroad (geographical proximity selection factor); suppliers are involved in engineering tasks (technological selection factor); massive adoption of systems and modules occurs (product development selection factor).

The combination of these circumstances drastically reduces the number of direct suppliers of some car components (Doran, 2004), shifting market competition towards a supplier scarcity situation, as argued by Manello and Calabrese (2017). Moreover, car components greatly differ in terms of technological level and market structure. The number of suppliers varies across different car components and the presence (absence) of dominant players makes the market less (more) competitive. Similarly, wide differences can be observed in technological content: for instance, the development and production of a braking system or engine control system require more competences and knowledge than those needed for a generic sheet metal or plastic component. These considerations lead to our second hypothesis:

H2:. *The relative importance of supplier selection criteria is strongly influenced by specific market features (i.e. competition and technological level).*

This hypothesis is supported by most of the recent literature, which stresses that individual choices are strongly influenced by the specific context of said choices. For example, the contribution by Wetzstein et al. (2016) proposes an extensive and systematic review of the most recent supplier selection literature, identifying different groups of contributions to supplier selection. Moreover, Lienland et al. (2013) explore empirical studies analysing, among others, regional and industrial characteristics as covariates of purchasing decisions, while Lin and Purchase (2006) also include industry-specific conditions like price, quality and delivery. However, interactions among supplier performance measures and the external environment become more complicated as product complexity increases, and numerous factors should be contemplated at the same time. Chan and Chan (2004) highlight that supplier selection is truly crucial in advanced technology industries, while Wang et al. (2004) point out that the most commonly adopted indicators differ across supply chains. In fact, Kuo and Lin (2012) find that the final choices of selection criteria may be very different in different scenarios, making it harder to come to the right decision. Among others, the level of market concentration and the technological regime of the specific product seem to be two promising lines of investigation, still according to Kuo and Lin (2012).

3. Data and empirical strategy

3.1. Database and data collection issues

Our data are drawn from the database “Who supplies whom” (WSW), provided by Global Insight, which collects physical information on car models. We supplemented the above data with additional information from the web. The unit of observation is the specific supply contract for each component (54 in total) and for each car model, without any considerations regarding price or quantity of components delivered. A component can be defined according to its type or function (e.g. glass, security) or module and system (e.g. lighting, suspension or steering system). A list of all components considered is included in the next subsection (Table 1). As for the car model, the WSW database also contains information on the launch year and assembly plant.

It was possible to identify single supply contracts for 316 new car models assembled by 19 carmaker groups through their respective brands in Europe from 2002 to 2014. A total of 53,100 direct supply

Table 1
Components allocation by market competition and technology.

	Low technology	Medium technology	High technology	N. of components
Low Concentration High Competition	Body; Bumpers; Fasteners/Fixings; Hoses/Pipes; Interior	Doors/Tailgate; Engine Components; Exhaust and After Treatment; Seating; Suspension System; Wheels	Braking; Control Units; Electrical and Electronics; Infotainment; Thermal System; Transmission	17
Medium Concentration Medium Competition	Gaskets/Seals; Handles/Latches; Switches; Washer/Wiper Systems	Actuators; Axles; Bearings/Bushes; Chassis/Underbody; Electric Motors; Engine Covers; Engine Cylinders; Fuel System; Roof; Sensors	Engine Control Unit; Lighting; NVH; Safety System/ Driver Assistance; Steering System	19
High Concentration Low Competition	Cables; Mirrors; Starter Motor; Textiles	Alternators; Belts/Tensioners; Bonding/Adhesives; Coatings; Engine pistons; Engine Shafts; Engine turbo/superchargers; Front End/Rear End Module; Glass; Lock System; Security	Airbags; Battery; Tires	18
N. of components	13	27	14	54

contracts were collected, originating from 1094 European and non-European suppliers, with an average of 48.5 contracts for each supplier and 168 components for each car model.

The first empirical evidence emerging from a descriptive analysis of the database is a progressive pyramidal hierarchisation of the automotive industry. In fact, the cleaning procedure pointed out that direct supply relationships can be sporadic or, in other words, some suppliers can be selected only once in a lifetime, without any continuity. Hence, we decided to focus only on "significant direct suppliers", i.e. firms able to supply at least two different automotive groups and at least two different models per automotive group. The result was unexpected: only half of the suppliers included in the WSW, i.e. 495 firms, meet this specification, but they are able to cover 51,823 supply contracts, with an average of 128.6 contracts per supplier. The remaining actors, 599 suppliers, fall into the category of "marginal suppliers", able to cover only 1277 contracts.

The second step aimed to fill informative gaps in our data. Using information from the web, the nationality of each parent company was determined, while for non-EU component suppliers also information on their European manufacturing plants was included. Indirectly, information from the web indicated that the original number of 495 suppliers should be reduced to 403, because 92 firms had been involved in M&A operations. Finally, information on supplier location showed that 96.7% of the suppliers operate through manufacturing plants located in Europe. Such evidence confirms the thesis by Rugman and Collinson (2004): the automotive industry can be pictured as a "regional value chain" rather than as a "global value chain", because proximity to the final market remains a relevant factor in supplier selection.

The final database was divided into two periods to study whether suppliers were selected for new supply contracts in the last three years of the whole period. The 2011 threshold takes into account both the time to market to develop a model—which has generally been reduced to about three years, according to Calabrese (2011) — and a preceding reasonable period to develop corporate reputation (Balmer, 2001). The initial period includes 250 models launched between 2002 and 2011, while the second period includes 66 models. Concerning the 403 tier 1 suppliers, 226 companies won a supply contract in both periods, whereas 177 suppliers were not involved in the models launched in 2012–2014, but they continued to supply the models still in production. All variables used were computed for the first time period (2002–2011), then related to the outcome "*being or not being selected as supplier*" for car models launched in the second three-year period.

3.2. Empirical strategy

Our main empirical analysis was based on a logistic regression on the firm-level capacity to gain new supply contracts during the second observation period. The dichotomic information on the outcome (i.e. supply or not) was translated into a dummy variable taking a value of one if the supplier was selected in the 2012–2014 period, which motivated our methodological choice of using a logit regression model.

To test our H1, we identified eight explanatory variables as proxies for the factors influencing the selection of tier 1 automotive suppliers. Four proxy variables related to reputational factors and estimated (Fombrun et al., 2000) the popularity of companies (number of relationships with carmakers) and the reasons for their being popular (involvement in best-selling models; involvement in premium brands; merger and acquisition processes). Four proxy variables were linked to performance aspects of supplier selection, and precisely: level of competitiveness, technology level, physical proximity and product diversification. All the independent variables were computed based on the empirical evidence for the first period covered by the database.

Formally, the econometric model can be represented as follows:

$$\Pr(SupplierSe\ \ lection|X_1, X_2) = \wedge\ (\beta_0 + X_1'\beta_1 + X_2'\beta_2)$$

Where $\Lambda()$ is the logistic cumulative distribution function, and vector X_1 collects information on reputational factors (i.e. proxy variables indicating different aspects of corporate reputation) computed at the firm level. Vector X_2 collects other variables more strictly linked to traditional selection criteria, computed either at the firm level or with reference to each component submarket. Additional details on each variable are reported in the next section. The parameters collected in β_1 are the main point of interest given our research hypothesis, since they provide information on the sign and statistical significance of reputational factors regarding the probability of being selected as suppliers. The information contained in β_2 allows us to test whether our empirical results are in line with the more traditional selection factors and to shed light on the influence of market characteristics. All parameters β_i(i = 0, 1, 2) were estimated using maximum likelihood, β_0 is a scalar.

To test our H2, we extracted three partial samples from the final database, according to levels of competitiveness and levels of technology. The structure of the empirical analysis remained based on logistic regressions and all the control variables were re-calculated in relation to each subsample. In this case, 6 different logit models were estimated to increase the reliability and robustness of our results. A comparison of coefficients across different subsamples allowed for a deeper investigation of our second hypothesis.

3.3. Four proxy variables for corporate reputation

We created four variables capturing different aspects of corporate reputation.

Customer diversification was computed at the firm level as the number of relationships with carmakers,[1] identified on the basis of OEM groups. In particular, we regarded customer base broadness as a proxy for the level of popularity of each supplier among potential customers. The idea is that the reputation of firms increases with the number of customers that they are able to attract. Moreover, the industrial trend towards modules and systems grants a strong competitive advantage to diversified firms, as transaction costs due to searching for new partners are reduced (Chanaron, 2004; Jürgens, 2004). Suppliers entertaining multiple relationships with carmakers should display a higher likelihood of acquiring new supply contracts.

As in the above case regarding the number of relationships with carmakers, the selection of a supplier might also be influenced by its reputation if it was previously selected to supply *high-volume models* and/or *premium brands*. The database made it possible to identify both best-selling models and premium brands by using information on volume and brands from Automotive News.[2] For the 2002–2011 period, *high-volume models* are defined as models with over 500,000 cars sold since launch; 75 models fall into this category. On average, high-volume models are 30.7% of the total models in the database and cover around 38.0% of the supply contracts, whereas premium models cover 45.3% of the supply contracts. For each supplier, the percentage of contracts for top models or premium models was calculated over the total of own supply contracts. We expected companies more focused on supplying best-selling models or premium brands to show a higher likelihood of acquiring new supply contracts. From a supplier's perspective, not all customers are equal: the reputation of the premium brand customers that they serve does indeed matter.

The process of *mergers and acquisitions (M&A)* of firms with complementary assets and geographies is evident in our database. Looking

[1] We identified carmakers on the basis of groups and platform sharing. For instance, in the case of the PSA group, if a firm supplies both Peugeot and Citroën, this was regarded as only one customer in the firm's portfolio.

[2] The premium brands, as defined by Automotive News, are: Alfa Romeo, Aston Martin, Audi, Bentley, BMW, Bugatti, Cadillac, Ferrari, Jaguar, Jeep, Lamborghini, Land Rover, Maserati, Maybach, McLaren, Mercedes-Benz, Mini, Porsche, Rolls-Royce, Saab, and Volvo.
(www.nxtbook.com/nxtbooks/crain/ane_1665498825FVBCR/index.php.).

Table 2
Descriptive statistics on the main variables.

Variables	Description	Mean	Median	Min	Max
Customer diversification	Number of relationships with carmakers (OEMs)	5.17	4	0	19
High-volume models	Percentage of contracts supplied to top models	0.44	0.39	0	1
Premium brands	Percentage of contracts supplied to premium models	0.43	0.42	0	1
Market concentration	Average Herfindahl-Hirschman index	1183	945	259	5293
Technology	Average Likert scale 1–5	3.48	3.50	2.33	4.71
Close proximity	Percentage of contracts supplied to close carmakers	0.45	0.44	0	1
Product diversification	Number of components produced	3.70	2	1	48
Dummies					
M&As	Buyers involved in M&A processes are coded 1	17%			
Supplier's probability of being selected in the second period		51%			

at the restructuring process of tier 1 automotive suppliers in Europe, we found that 38 companies already present in the database and 26 companies not appearing in the database carried out one or more acquisitions. Buyers involved in mergers and acquisitions, coded 1, should be characterised by increased popularity and, consequently, higher probability of winning new supply contracts.

3.4. Four proxy variables for traditional selection criteria

We created four variables that can be included among the traditional supplier selection criteria. Two of them were computed at the firm (i.e. supplier) level, while the other two were computed at the submarket (i.e. component) level.

Close proximity to the carmakers' production plants has already been shown to facilitate sourcing in the automotive industry (Asanuma, 1989; Schmitt and Van Biesebroeck, 2013) and it is supposed to increase the probability of gaining new supply contracts. Moreover, combining information on the suppliers' nationality (based on their headquarters) and the carmakers' nationality (based on the location of the main production plant) allowed us to verify national reliance in the supply chain, i.e. whether carmakers favour suppliers of their same nationality or at least the ones with headquarters located in close proximity to their production plant. For each supplier, the percentage of contracts supplied to close carmakers was calculated over total own supply contracts. On average, contracts with close carmakers represented 40.8% of total supply contracts.

Automotive suppliers operate in numerous component segments (*product diversification*), more or less strictly related to their core business, in order to reduce risks, favouring scale or scope economies and achieving higher growth rates. For carmakers, *diversified suppliers* imply reductions in supplier numbers and transaction costs of procurement (Shin et al., 2000), at the same time improving integration and information sharing (De Treville et al., 2004). Therefore, the probability of being awarded new supply contracts should be higher for diversified suppliers (Stern and Henderson, 2004).

Before presenting the remaining variables, two premises on the nature of the database are necessary. The WSW database collects information on 54 components which are different in their underlining technical content and market characteristics, which led us to control for those submarket peculiarities in two ways.

Firstly, market structure differs for each component, with potentially strong effects on carmakers' purchasing choices. We computed the Herfindahl-Hirschman (HH) index for each component using share over total number of supply contracts instead of turnover to define market shares. Following the standard thresholds (Whinston, 2007), HH index values below 1000 indicate low market concentration (and thus, high competition), subsectors falling between 1000 and 1800 are characterised by a medium level of competition, whereas an HH index above 1800 means that market concentration is high and competitive pressure is limited. Low competition could be seen as a proxy for supplier scarcity as well.

Secondly, each component is characterised by a different intrinsic level of technological complexity. Each component was evaluated according to a Likert scale, through a questionnaire submitted to three large carmakers and six large automotive suppliers. The average score was used as proxy for the technological complexity of each component. Values smaller than 3 are labelled as "Low technology", while values larger than 4 correspond to "High technology".

Table 1 shows the allocation of each automotive component according to both classifications. Independency between the two distributions was tested using the Chi-squared test (chi-squared value 2.6768, $p = 0.613$).

This framework was used in models (2–7) to create subsamples for which the logit model was estimated separately, in order to examine differences in the reputation effect according to the main features of the component markets.

The influence of *market concentration* and *technology* was investigated also in the baseline model (1), estimated using the full sample. Regarding market structure, Bain (1956) and Tirole (1988) argue that, in sectors characterised by low concentration, price is one of the most important factors evaluated during the purchasing decision process, although its importance is lower than in the past (Cheraghi et al., 2004). Moreover, we expected suppliers more involved in highly concentrated component markets to show a higher probability of gaining new supply contracts due to their greater market power. Concerning *technology*, the fast introduction and development of new technologies has contributed to making the evaluation of suppliers' technical capabilities increasingly important. Antonelli and Calderini (2008) show that quantification of knowledge exerts strong and positive effects on the competitive advantage of firms in terms of product market share.

Table 2 shows standard descriptive statistics for all the variables considered in the analysis, including the dependent variable, i.e. probability of being selected in the second period, while Table 3 reports the correlation matrix for the same variables. Additional descriptive statistics and other details on the demography of firms in terms of components, country and market structure can be found in Manello and Calabrese (2015).

4. Empirical results

Our empirical evidence is based on the estimation of different logit models for the full sample and for different environments, with a comparison of the obtained coefficients. Our baseline model (1) includes all the variables presented in the previous section and uses the whole database, mainly for testing H1. The other six models provide additional robustness in relation to the sign and magnitude of the effects, while also allowing us to test the second hypothesis. These models were estimated on different subsamples, related to different levels of competitiveness and technology content for each specific component. In such cases, the variables Market concentration and Technology were removed. Tables 4, 5 report the actual number of observations and

Table 3
Correlation matrix.

	Customer divers.	High volume	Premium brands	M&A	Market concent.	Techn.	Close proximity	Product divers.
Customer divers.	1							
High volume	−0.1852*	1						
Premium brands	0.0195	−0.2991*	1					
M&A	0.1895*	−0.0369	−0.0048	1	–			
Market concent.	0.0217	0.0094	0.0173	0.0031	1			
Technology	0.012	−0.0205	0.0642*	−0.0053	0.1342*	1		
Close proximity	−0.1798*	0.0915*	−0.0284	−0.0824*	−0.012	−0.0217	1	
Product divers.	0.1532*	−0.0536	−0.0287	0.1668*	−0.0853*	−0.0539	−0.009	1

suppliers selected in the second period.

The baseline model (1) in Table 4 provides some interesting evidence concerning two reputational factors that seem to affect the selection of suppliers deeply, together with two more traditional performance measures. First, as for reputation, customer portfolio diversification, a sign of supplier attractiveness on the market, plays a clearly positive role in boosting the probability of being selected in the second period. This popularity effect seems to confirm that carmakers pay increasing attention to how their peers judge them and, in the case of suppliers, being able to interact with many carmakers is positively related to reputation. In fact, the producers supplying a large number of carmakers are those that display the highest probability of winning new contracts. The positive and significant coefficient in Table 4, robust to all the different specifications, highlights the relevance of this phenomenon, while marginal effects, reported in Table 5, show the magnitude of such influence. Each additional carmaker supplied increases the probability of gaining new contracts in the last three-year period by more than 3.9%.

The second aspect of reputation, i.e. the capacity of supplying components for premium models as well as for high-volume models, yields mixed results. The variable *Premium brands* is always significant except in Model 6 (Medium technology level). If being a supplier for premium brands plays a positive and significant role across all specifications, producing components for high-volume models seem less important for potential future supplies. In fact, firms that supplied components for best-selling cars in the 2002–2011 period do not show (in general, baseline model 1) a higher probability of being awarded new contracts in the second period. Therefore, being able to supply best-selling cars does not seem to be a valuable reputational factor per se, even though its effect may be positive, like in the case of low/high technology content. The last reputational variable, linked to corporate aspects, is the dummy indicating whether the firm was involved in an M&A process; it shows a negative, but poorly significant, influence on the probability of being selected as suppliers. This evidence suggests that changes in ownership structure do not represent an advantage in terms of selection probability. The reason for this might be that an M&A modifies the reputation of the supplier depending on the characteristics of the buyer, such as nationality (more than 40% are non-European and some come from India and China), typology (a few are financial companies) or new entries into the European automotive supply chain (40%). Reputation needs time to be established (Balmer, 2001) and the negative sign of the M&A variable might unexpectedly imply a positive result. Therefore, concerning our first research hypothesis, our findings support the idea that reputational aspects have gained increasing importance compared to standard selection criteria.

As for the other aspects linked to performance, the average technology level of the supplied components is positively related to a higher probability of gaining new contracts, suggesting that working on high

Table 4
Logit models estimates.

Variables	Whole database Model (1)	High competition Model (2)	Medium competition Model (3)	Low competition Model (4)	Low technology Model (5)	Medium technology Model (6)	High technology Model (7)
Customer diversification	0.101***	0.0881***	0.151***	0.185***	0.0879***	0.106***	0.213***
	(0.0209)	(0.0229)	(0.0258)	(0.0310)	(0.0257)	(0.0226)	(0.0283)
High-volume models	0.245	0.260	0.450*	0.131	0.431*	0.169	0.919***
	(0.298)	(0.261)	(0.266)	(0.317)	(0.267)	(0.265)	(0.266)
Premium brands	0.658**	0.794***	0.498*	0.457*	0.889***	0.350	0.934***
	(0.259)	(0.236)	(0.264)	(0.283)	(0.251)	(0.238)	(0.239)
M&A	−0.289	−0.134	−0.0724	−0.165	0.132	−0.268	−0.0878
	(0.193)	(0.199)	(0.198)	(0.267)	(0.213)	(0.204)	(0.221)
Market concentration	0.000203				−0.00496	0.00508	−0.000152
	(0.000130)				(0.000136)	(0.000117)	(0.000166)
Technology	0.322**	0.402***	0.0158	−0.0319			
	(0.164)	(0.149)	(0.178)	(0.235)			
Close proximity	−0.101	0.00596	−0.316	0.106	0.0522	−0.186	0.0106
	(0.204)	(0.197)	(0.207)	(0.265)	(0.208)	(0.203)	(0.217)
Product diversification	0.0237*	0.0543**	−0.00977	−0.0469	0.0628	0.0492*	−0.0645
	(0.0128)	(0.0275)	(0.0393)	(0.0690)	(0.0457)	(0.0295)	(0.0507)
Constant	−2.239***	−2.463***	−1.028	−0.996	−1.228***	−0.713**	−1.488***
	(0.611)	(0.553)	(0.702)	(0.850)	(0.293)	(0.278)	(0.317)
Number of observations	403	365	286	190	303	322	274
-Supplier selected 2012–14	226	186	136	84	145	176	130
Pseudo_R2	0.137	0.134	0.147	0.206	0.100	0.123	0.216
Chi-square	76.40	66.25	58.49	48.74	39.45	55.65	81.98
Log Lik	−238.4	−218.9	−168.7	−103.6	−188.7	−194.6	−148.5

Robust SE in parentheses.
*** $p < 0.01$.
** $p < 0.05$.
* $p < 0.1$.

Table 5
Marginal effects from the logit models, computed at the mean.

Variables	Whole database Model (1)	Low concentration high competition Model (2)	Medium concentration medium competition Model (3)	High concentration Low competition Model (4)	Low technology Model (5)	Medium technology Model (6)	High technology Model (7)
Customer diversification	0.0395***	0.0351***	0.0602***	0.0735***	0.0350***	0.0416***	0.0848***
	(0.00819)	(0.00911)	(0.0103)	(0.0124)	(0.0102)	(0.00888)	(0.0113)
High-volume models	0.0958	0.103	0.180*	0.0521	0.172	0.0666	0.366***
	(0.117)	(0.104)	(0.106)	(0.126)	(0.106)	(0.104)	(0.106)
Premium brands	0.257**	0.316***	0.198*	0.181	0.354***	0.138	0.372***
	(0.101)	(0.0939)	(0.105)	(0.112)	(0.100)	(0.0937)	(0.0949)
M&A	−0.114	−0.0536	−0.0288	−0.0649	0.0526	−0.106	−0.0349
	(0.0764)	(0.0793)	(0.0788)	(0.104)	(0.0850)	(0.0810)	(0.0877)
Market concentration	7.94e-05				−0.00198	0.00200	−0.00607
	(5.06e-05)				(0.000541)	(0.000459)	(0. 000659)
Technology	0.126**	0.160***	0.00631	−0.0127			
	(0.0642)	(0.0593)	(0.0708)	(0.0931)			
Close proximity	−0.0394	0.00238	−0.126	0.0420	0.0208	−0.0733	0.00422
	(0.0799)	(0.0787)	(0.0824)	(0.105)	(0.0830)	(0.0799)	(0.0863)
Product diversification	0.00926*	0.0217**	−0.00389	−0.0186	0.0250	0.0193*	−0.0257
	(0.00500)	(0.0110)	(0.0157)	(0.0274)	(0.0182)	(0.0116)	(0.0202)
Number of observations	403	365	286	190	303	322	274
-Supplier selected 2012–14	226	186	136	84	145	176	130
Pseudo_R2	0.137	0.134	0.147	0.206	0.100	0.123	0.216
Chi-square	76.40	66.25	58.49	48.74	39.45	55.65	81.98
Log Lik	−238.4	−218.9	−168.7	−103.6	−188.7	−194.6	−148.5

Robust SE in parentheses.
*** p < 0.01.
** p < 0.05.
* p < 0.1.

technological components increases the probability of new supplies, with mounting pressure to boost the average technological content of products. Similarly, diversified suppliers display a higher likelihood of being awarded new contracts compared to more specialised firms. Therefore, although a certain level of excellence in core competences is often appreciated, the capacity of supplying complete lines of components represents a clear competitive advantage for securing future contracts. The economic motivation behind this might be found in transaction costs savings: carmakers tend to reduce the number of tier 1 suppliers to simplify the management of the outsourcing process and generalist suppliers tend to be preferred.

The remaining variables included in our econometric analysis have limited influence on the probability of supplying components in the last period. Being of the same nationality as the carmakers or being located near their production plants does not seem to play a crucial role as a selection factor. Tables 4, 5 show that the effect of *close proximity* is negligible, regardless of its negative sign, which could be explained by the positive sign and statistical significance of customer diversification. This means that carmakers have abandoned close and somewhat nationally exclusive buyer-supplier relationships and proximity is more relevant at the regional level (Europe). Similarly, the level of competition, computed as the Herfindahl-Hirschman index, does not seem to influence the probability of winning new contracts in the baseline model. This result could be ascribed to the peculiar procurement practices of the automotive industry, which do not rely heavily on tendering based on price and competition among suppliers but are likely to reflect relationships that go back much further.

The other models (2–7) show greater coherence in signs and significance for what concerns reputational factors, thus confirming the evidence previously gathered, while some limitations are identified for other variables. In particular, product diversification and technology are significant only in high competitive markets, and both their coefficients are inversely related to competitiveness and technological level. This appears to be a managerially relevant result. When they make purchasing decisions, carmakers regard the suppliers' technology and product diversification as relevant factors mainly in contexts where competition is severe. On the contrary, if there is low competitive pressure and some players are dominant, purchasing managers attach less importance to such aspects, whereas reputational factors are still significant. Incidentally, in the case of high technology components, which in the Kraljic matrix can be considered strategic items, all the reputational factors are positive and significant. Such evidence confirms that technology and market characteristics may influence carmakers' purchasing decisions and support our second research hypothesis.

5. Conclusions, consequences and limitations

Despite a vast managerial and descriptive literature on the issue of supplier selection mechanism, mainly focused on the drivers and consequences of individual choices, empirical analyses using real ex-post data are scarce. Furthermore, this is true for studies that include also reputation as one of the most important issue considered. Our contribution adds new empirical evidence by investigating the influence of corporate reputational factors among the most relevant supplier selection criteria.

In doing so, we use an original database merging information from the web with information on actual supplying contracts among carmakers and producer of components for each new car model assembled in Europe during the period 2002–2014. We consider all purchasing decision taken after 2011, and we analyse how they were influenced by the first available period.

Some limitations arise in our empirical strategy, for both industry specificity and for the nature of the data used, where relational capabilities, investment, trust and other important aspects cannot be considered. Nothing can be said about monetary value or real physical quantities involved, i.e. in term of the number of components for each contract, and these are important limitations of this study.

Our findings highlight that classical criteria seem to play a less important role than reputational factors, at least in the sector we analyse. In fact, we have found two new thought-provoking results, which are stable and always significant in all the econometric models we run.

First, suppliers, which serve a diversified customer portfolio have a better chance of gaining additional orders and further broadening their customer base, than suppliers which serve just a few carmakers. This contradicts the idea of stable, close and somewhat exclusive buyer-supplier relationships. On the supplier side, it means that they would profit from broadening their customer base.

Second, suppliers with strong exposure to premium brand customers gain more orders also from non-premium customers in the subsequent period. Hence, from a supplier perspective not all customers are equal: the reputation of the customer they serve matters. From a carmaker perspective, this finding is also very interesting: buyers may want to increase their reputation in order to be more attractive for suppliers. As preferred customers with premium brands, they can ask for price reductions, as their suppliers profit from serving them, or better early access to innovations. This strengthens the case for the competitive repositioning of some carmakers from mass production brands towards premium brands. As in the case of FCA with Maserati and Alfa Romeo, Tata with Jaguar and Land Rover and most carmakers with the electric vehicle to emulate Tesla success. A supplier able to produce superior components may also be able to help less sophisticated customers to develop premium models for them, too.

These two intriguing results open new important stems for managerial implications. Our findings suggest that both suppliers and purchasers may want, in general, to increase the attractiveness of their firm by purposefully working on reputation. On the one hand, the main implication for purchaser is for premium brand firms that may request economic benefits (i.e. cost reductions) because of being a more attractive customer in comparison to standard brands. On the other hand, suppliers would profit from broaden their customer portfolio reaching higher technical and professional standards. This directly counters arguments for exclusive customer-supplier relationships. Moreover, suppliers should actively show to their customers that they are able to serve premium brands and then, again, indirectly promoting their technical or professional capabilities.

Several other managerial implications arise from the other aspects we analyse, some of them expected, others unexpected. Firms able to produce a large number of components as well as firms showing higher technological capabilities maintained a competitive advantage in the last period analysed, but the sign and the significant of the coefficients are not always confirmed in the logit models. On the contrary, we obtain unexpected inconsistent results concerning the role of physical proximity between carmakers and suppliers. The signs are negative, but always not significant.

More robust results arise in the case of our second hypothesis. Market conditions, such as competitiveness and technological specificities referred to each component submarket, affect supplier selection confirming that the external environment influences purchasing choices. For instance, in the case of low concentrated and of high technology markets, reputational factors play the most significant role in supplier selection.

This evidence raises a fundamental question. Should reputational factors have a similar status as traditional supplier selection criteria such as price and quality? In line with customer attractiveness literature and social exchange theory, the actual purchasing practices in the automotive sector analysed here suggest it should. Nevertheless, in certain contexts the importance of traditional criteria rises again; for instance, in the situation of high competition and absence of dominant suppliers, product diversification and technology become highly significant once again. For this reason, the stratification of supply chains, as we did here for automotive (Table 4), into more homogenous subsamples is worthwhile. This approach could also be used in investigating supplier selection in other sectors, to understand the relative importance of specific selection factor in different contexts.

Acknowledgement's

We would like to thank two anonymous referees and the editor for their valuable comments that really help increasing the quality of the paper; of course any remaining errors are solely our responsibility.

References

Antonelli, C., Calderini, M., 2008. The governance of knowledge compositeness and technological performance: the case of the automotive industry in Europe. Econ. Innov. New Technol. 17 (1/2), 23–41.
Asanuma, B., 1989. Manufacturer-supplier relationships in Japan and the concept of relation-specific skill. J. Jpn. Int. Econ. 3 (1), 1–30.
Bain, J.S., 1956. Barriers to New Competition. Harvard University Press, Cambridge.
Balcet, G., Consoni, F., 2007. Global technology and knowledge management: product development in Brazilian car industry. Int. J. Automot. Technol. Manag. 7 (2/3), 135–152.
Balmer, J.M., 2001. Corporate identity, corporate branding and corporate marketing-seeing through the fog. Eur. J. Mark. 35 (3/4), 248–291.
Bennett, R., Gabriel, H., 2001. Reputation, trust and supplier commitment: the case of shipping company/seaport relations. J. Bus. Ind. Mark. 16 (6), 424–438.
Birchall, D., Chanaron, J.J., Tovstiga, G., 2001. Capabilities in strategic knowledge sourcing and assimilation: a new look at innovation in the automotive industry. Int. J. Automot. Technol. Manag. 1 (1), 78–91.
Blau, P.M., 1964. Exchange and Power in Social Life. Transaction Publishers.
Calabrese, G., 2001. Innovation capabilities in small-medium autocomponents: evidence from Italy. Int. J. Automot. Technol. Manag. 1 (4), 471–489.
Calabrese, G., 2002. Small-medium car suppliers and behavioural models in innovation. Technol. Anal. Strateg. Manag. 14 (2), 217–226.
Calabrese, G., 2011. Structure and transformation of the Italian car styling supply chain. Int. J. Veh. Des. 57 (2–3), 212–229.
Calabrese, G., Erbetta, F., 2005. Outsourcing and firm performance: evidence from Italian automotive suppliers. Int. J. Automot. Technol. Manag. 5 (4), 461–479.
Caputo, M., Zirpoli, F., 2001. A new organisation for supplier involvement in vehicle design: the Italian automotive industry case. Int. J. Automot. Technol. Manag. 1 (2–3), 301–320.
Castelli, C., Florio, M., Giunta, A., 2011. How to cope with the global value chain: lesson from Italian automotive suppliers. Int. J. Automot. Technol. Manag. 11 (3), 236–253.
Chan, F.T., Chan, H.K., 2004. Development of the supplier selection model—a case study in the advanced technology industry. Proc. Inst. Mech. Eng. Part B: J. Eng. Manuf. 218 (12), 1807–1824.
Chanaron, J.J., 2004. Relationships between the core and the periphery of the automotive system. Int. J. Automot. Technol. Manag. 4 (2/3), 198–222.
Chanaron, J.J., 2013. The evolution of relationships between car manufacturers and France-based component suppliers in the context of deep crisis and accelerating technical change. Int. J. Automot. Technol. Manag. 13 (4), 320–337.
Cheraghi, S.H., Dadashzadeh, M., Subramanian, M., 2004. Critical success factors for supplier selection: an update. J. Appl. Bus. Res. 20 (2), 91–108.
Chesbrough, H.W., 2006. Open Innovation: The New Imperative for Creating and Profiting from Technology. Harvard Business Press.
Choi, T.Y., Hartley, J.L., 1996. An exploration of supplier selection practices across the supply chain. J. Oper. Manag. 14 (4), 333–343.
Choi, T.Y., Hong, Y., 2002. Unveiling the structure of supply networks: case studies in Honda, Acura and Daimler Chrysler. J. Oper. Manag. 20 (5), 469–493.
Chun, R., 2005. Corporate reputation: meaning and measurement. Int. J. Manag. Rev. 7 (2), 91–109.
Clepa, 2017. ⟨www.clepa.eu/who-and-what-we-represent/sector/a-global-technology-leader/⟩ (18/7/2017).
Cordon, C., Vollmann, T.E., 2002. The Next Game in Purchasing: Be the Most Attractive Customer to Key Suppliers. IMD International.
Cropanzano, R., Mitchell, M.S., 2005. Social exchange theory: an interdisciplinary review. J. Manag. 31 (6), 874–900.
Das, T.K., Teng, B.S., 2002. Alliance constellations: a social exchange perspective. Acad. Manag. Rev. 27 (3), 445–456.
de Boer, L., Labro, E., Morlacchi, P., 2001. A review of methods supporting supplier selection. Eur. J. Purch. Supply Manag. 7 (2), 75–89.
De Treville, S., Shapiro, R.D., Hameri, A.P., 2004. From supply chain to demand chain: the role of lead time reduction in improving demand chain performance. J. Oper. Manag. 21 (6), 613–627.
Deephouse, D.L., 2000. Media reputation as a strategic resource: an integration of mass communication and resource-based theories. J. Manag. 26 (6), 1091–1112.
Dickson, G.W., 1966. An analysis of vendor selection and the buying process. J. Purch. 2 (1), 5–17.
Doran, D., 2004. Rethinking the supply chain: an automotive perspective. Supply Chain Manag.: Int. J. 9 (1), 102–109.
Dwyer, F.R., Schurr, P.H., Oh, S., 1987. Developing buyer-seller relationships. J. Mark. 11–27.
Ellegaard, C., Johansen, J., Drejer, A., 2003. Managing industrial buyer-supplier relations - The case for attractiveness. Integr. Manuf. Syst. 14 (4), 346–356.
Essig, M., Amann, M., 2009. Supplier satisfaction: conceptual basics and explorative findings. J. Purch. Supply Manag. 15 (2), 103–113.
Fombrun, C.J., 1996. Reputation: Realizing Value from the Corporate Image. Harvard Business School Press, Boston.

Fombrun, C.J., Pan, M., 2006. Corporate reputations in China: how do consumers feel about companies? Corp. Reput. Rev. 9 (3), 165–170.
Fombrun, C.J., Gardberg, N.A., Sever, J., 2000. The reputation quotient: a multi-stakeholder measure of corporate reputation. J. Brand Manag. 7 (4), 241–255.
Frigant, V., 2013. Editorial: Putting SMEs back at the heart of automotive supply chain analysis. Int. J. Automot. Technol. Manag. 13 (4), 315–319.
Fujimoto, T., 2001. The Japanese automobile parts supplier system: the triplet of effective inter-firm routines. Int. J. Automot. Technol. Manag. 1 (1), 1–34.
Gatzert, N., 2015. The impact of corporate reputation and reputation damaging events on financial performance: empirical evidence from the literature. Eur. Manag. J. 33 (6), 485–499.
Hald, K.S., Cordòn, C., Vollman, T.E., 2009. Toward an understanding of attraction in buyer-supplier relationships. Ind. Mark. Manag. 38 (8), 960–970.
Halinen, A., 1997. Relationship Marketing in Professional Services: a Study of Agency-customer Dynamics in the Advertising Sector. Routledge.
Harris, L.C., O'Malley, L., Patterson, M., 2003. Professional interaction: exploring the concept of attraction. Mark. Theory 3 (1), 9–36.
Ho, W., Xu, X., Dey, P.K., 2010. Multi-criteria decision making approaches for supplier evaluation and selection: a literature review. Eur. J. Oper. Res. 202 (1), 16–24.
Homans, G.C., 1958. Social behavior as exchange. Am. J. Sociol. 597–606.
Hüttinger, L., Schiele, H., Veldman, J., 2012. The drivers of customer attractiveness, supplier satisfaction and preferred customer status: a literature review. Ind. Mark. Manag. 41 (8), 1194–1205.
Ivens, B.S., Pardo, C., 2007. Are key account relationships different? Empirical results on supplier strategies and customer reactions. Ind. Mark. Manag. 36 (4), 470–482.
Jürgens, U., 2004. Characteristics of the European automotive system: is there a distinctive European approach? Int. J. Automot. Technol. Manag. 4 (2), 112–136.
Kannan, V.R., Tan, K.C., 2002. Supplier selection and assessment: their impact on business performance. J. Supply Chain Manag. 38 (3), 11–21.
Karlsson, C., Weimarck, M., 2001. Do the sourcing strategies of automotive firms really support corporate objectives? Int. J. Automot. Technol. Manag. 1 (1), 35–52.
Karsak, E.E., Dursun, M., 2016. Taxonomy and review of non-deterministic analytical methods for supplier selection. Int. J. Comput. Integr. Manuf. 29 (3), 263–286.
Kuo, R.J., Lin, Y.J., 2012. Supplier selection using analytic network process and data envelopment analysis. Int. J. Prod. Res. 50 (11), 2852–2863.
La Rocca, A., Caruana, A., Snehota, I., 2012. Measuring customer attractiveness. Ind. Mark. Manag. 41 (8), 1241–1248.
Lienland, B., Baumgartner, A., Knubben, E., 2013. The undervaluation of corporate reputation as a supplier selection factor: an analysis of ingredient branding of complex products in the manufacturing industry. J. Purch. Supply Manag. 19 (2), 84–97.
Lin, X., Purchase, S., 2006. Investigating supplier selection using repertory grid technique. Service Operations and Logistics, and Informatics, 2006. SOLI'06. IEEE International Conference on, pp. 432-435.
Manello, A., Calabrese, G.G., 2015. The restructuring of tier 1 automotive suppliers in Europe during the crisis. Int. J. Automot. Technol. Manag. 15 (1), 80–95.
Manello, A., Calabrese, G.G., 2017. Firm's survival, rating and efficiency: new empirical evidence. Ind. Manag. Data Syst. 117 (6), 1185–1200.
Manello, A., Calabrese, G.G., Frigero, P., 2016. Technical efficiency and productivity Growth along the automotive value chain: evidence from Italy. Ind. Corp. Change 25 (2), 245–259.
Mortensen, M.H., Arlbjørn, J.S., 2012. Inter-organisational supplier development: the case of customer attractiveness and strategic fit. Supply Chain Manag.: Int. J. 17 (2), 152–171.
Mortensen, M.H., 2012. Understanding attractiveness in business relationships — A complete literature review. Ind. Mark. Manag. 41 (8), 1206–1218.
Murray, K., White, J., 2005. CEOs' views on reputation management. J. Commun. Manag. 9 (4), 348–358.
Pulles, N.J., Schiele, H., Veldman, J., Hüttinger, L., 2016. The impact of customer attractiveness and supplier satisfaction on becoming a preferred customer. Ind. Mark. Manag. 54, 129–140.
Rachid, A., 2001. Relations between small and large auto parts manufacturers in Brazil. Int. J. Automot. Technol. Manag. 1 (2/3), 335–346.
Rugman, A.M., Collinson, S., 2004. The regional nature of the world's automotive sector. Eur. Manag. J. 22 (5), 471–482.
Schiele, H., 2010. Early supplier integration: the dual role of purchasing in new product development. Rd Manag. 40 (2), 138–153.
Schmitt, A., Van Biesebroeck, J., 2013. Proximity strategies in outsourcing relations: the role of geographical, cultural and relational proximity in the European automotive industry. J. Int. Bus. Stud. 44 (5), 475–503.
Schmitt, A., Van Biesebroeck, J., 2017. In-house production versus specific forms of supplier governance: testing predictions of the global value chains model. Int. J. Automot. Technol. Manag. 17 (1), 26–50.
Schmitz, J., Platts, K.W., 2004. Supplier logistics performance measurement: indication from a study in the automotive industry. Int. J. Prod. Econ. 89 (2), 231–243.
Schniederjans, M.J., Schniederjans, A.M., Schniederjans, D.G., 2015. Outsourcing and Insourcing in an International Context. Routledge.
Shiele, H., Calvi, R., Gibbert, M., 2012. Customer attractiveness, supplier satisfaction and preferred customer status: introduction, definitions and overarching framework. Ind. Mark. Manag. 41, 1178–1185.
Shin, H., Collier, D.A., Wilson, D.D., 2000. Supply management orientation and supplier/buyer performance. J. Oper. Manag. 18 (3), 317–333.
Spears, N., Brown, T.J., Dacin, P.A., 2006. Assessing the corporate brand: the unique corporate association valence (UCAV) approach. J. Brand Manag. 14 (1–2), 5–19.
Steinle, C., Schiele, H., 2008. Limits to global sourcing? Strategic consequences of dependency on international suppliers: cluster theory, resource-based view and case studies. J. Purch. Supply Manag. 14 (1), 3–14.
Stern, I., Henderson, A.D., 2004. Within-business diversification in technology-intensive industries. Strateg. Manag. J. 25 (5), 487–505.
Sturgeon, T.J., Van Biesebroeck, J., 2011. Global value chains in the automotive industry: an enhanced role for developing countries? Int. J. Technol. Learn. Innov. Dev. 4 (1/2/3), 181–205.
Tirole, J., 1988. The Theory of Industrial Organization. MIT University Press.
Volpato, G., Stocchetti, A., 2007. Knowledge management in the automotive supply chain: exploring suppliers point of view. Int. J. Automot. Technol. Manag. 7 (2/3), 184–199.
Vos, F.G., Schiele, H., Hüttinger, L., 2016. Supplier satisfaction: explanation and out-of-sample prediction. J. Bus. Res. 69 (10), 4613–4623.
Wang, G., Huang, S.H., Dismuke, J.P., 2004. Product-driven supply chain selection using integrated multi-criteria decision making methodology. Int. J. Prod. Econ. 91 (1), 1–15.
Weber, C.A., Current, J.R., Benton, W.C., 1991. Vendor selection criteria and methods. Eur. J. Oper. Res. 50 (1), 2–18.
Weiss, A.M., Anderson, E., MacInnis, D.J., 1999. Reputation management as a motivation for sales structure decisions. J. Mark. 63 (4), 74–89.
Wetzstein, A., Hartmann, E., Benton, W.C., Hohenstein, N., 2016. A systematic assessment of supplier selection literature – State-of-the-art and future scope. Int. J. Prod. Econ. 182, 204–323.
Whinston, M.D., 2007. Antitrust policy towards horizontal mergers. In: Armstrong, M., Porter, R. (Eds.), Handbook of Industrial Organization. North-Holland, Amsterdam, pp. 2369–2435.
Wiedmann, K.P., Buxel, H., 2005. Corporate reputation management in Germany: results of an empirical study. Corp. Reput. Rev. 8 (2), 145–163.