



Distribution Channel Choice of New Entrepreneurial Ventures

Malte Brettel
Andreas Engelen
Thomas Müller
Oliver Schilke

This study provides a comprehensive analysis of distribution channel choices of new entrepreneurial ventures (NEVs). First, factors that influence NEVs' choice of distribution channels are examined. Second, performance consequences of those choices are investigated. A research model drawing from transaction cost economics as well as customer relationship and strategy literature is developed. Data collected from 330 NEVs are used to test the proposed model. The results show that the identified antecedents explain a large part of the variance in NEVs' channel choice. Moreover, NEVs that accomplish a fit between their distribution channel system and transaction cost-, product-, strategy-, and competition-related variables tend to perform better. Findings are discussed in light of the specific characteristics of NEVs.

The distribution system, as a key revenue-generating part of an organization (Krafft, Albers, & Lal, 2004), is highly relevant to the long-term success of new entrepreneurial ventures (NEVs)¹ (Burgel & Murray, 2000). It has been shown that the inability to bring products² to potential customers effectively is among the most common reasons for NEV failure (Song, Podoyntsyna, van der Bij, & Halman, 2008). An important decision in the domain of distribution is related to channel choice; in a study by Fischer, Dyke, Reuber, and Tang (1990), approximately half of the surveyed managers in NEVs considered the choice of distribution channels to be key to success. What makes this issue even more

Please send correspondence to: Oliver Schilke, tel.: +1-310-825-1313; e-mail: schilke@ucla.edu, to Malte Brettel at brettel@win.rwth-aachen.de, to Andreas Engelen at engelen@win.rwth-aachen.de, and to Thomas Müller at t.mueller@mytheresa.com.

1. We build on four typical firm characteristics of NEVs in order to highlight the features that set them apart. First, NEVs are characterized by their young age (Stinchcombe, 1965). Second, Aldrich and Auster (1986) directed attention to the small size of NEVs, which is related to their relatively low endowment with human and financial resources. Third, the founding individual typically plays a central role within NEVs. Fourth, NEVs often offer innovative products in complex and turbulent markets.

2. The present study considers both manufacturing and service NEVs. If not indicated otherwise, we use the term "products" to refer to both tangible goods and intangible services.

relevant is that the decision for a specific distribution channel is typically long binding, as switching a distribution channel usually leads to considerable costs and may even negatively impact the firm's credibility in the market (Anderson & Coughlan, 1987).

While several existing studies have elaborated on distribution channel decisions of established companies, there is only very limited knowledge on what factors determine the channel choice of NEVs. This is a significant gap in the literature, since there is reason to assume that insights on the distribution decisions of established companies are not readily transferrable to new ones. For example, NEVs usually offer highly innovative products that must be explained to customers (Carland, Hoy, Boulton, & Carland, 1984) and often operate in markets for which some indirect forms of distribution may not yet exist. Further, NEVs typically have not yet gained high prominence in their markets (Stinchcombe, 1965), decreasing the accessibility of channel partners. Also, NEVs frequently have low sales volumes, making them less attractive for indirect distribution channels. However, direct distribution systems are also difficult to establish, as NEVs typically lack the required resources to maintain an in-house sales force that directly distributes to the end customers. Collectively, these challenges suggest that NEVs are likely to adopt approaches to distribution that are unique from those of established firms and, thus, warrant a separate analysis.

This perspective is in line with the discipline of entrepreneurial marketing (Hills & LaForge, 1992), which proffers the notion that NEVs are not well served by the theories and tools of "mainstream" marketing. While publications within the field of entrepreneurial marketing have been increasing during the last two decades, purely conceptual contributions strongly dominate (Hills, Hultman, & Miles, 2008). However, the dearth of empirical work in this research area inhibits theory testing and refinement, and decreases the practical relevance of the field. After reviewing the entrepreneurial marketing literature, we find that the distribution channel decision in particular has been largely neglected—both conceptually and empirically.

Therefore, the present study's first objective is to empirically test a set of antecedents that predict NEVs' distribution channel decisions. These antecedents are based upon transaction cost-, product-, strategy-, and competitor-related considerations. Second, we explore the performance implications of distribution channel choices predicted by the identified antecedents with the performance implications of other distribution channel decisions.

The present research aims at improving our understanding of the configuration of distribution channel systems of NEVs. More specifically, this research contributes to the literature in several ways. First, we make an empirical contribution to the field of entrepreneurial marketing by testing a research model of factors that influence the choice of distribution channels using a large-scale sample of 330 NEVs. Second, we contribute to entrepreneurship theory in being among the first to employ arguments from transaction cost economics (TCE) in the context of NEVs. While TCE has received significant attention from a broad range of audiences, it has primarily been used in research on established firms (Michael, 2007). By applying TCE to a context characterized by novel transactions involving NEVs, we test its applicability in the area of entrepreneurship. Third, we contribute to the general TCE literature by extending our analysis to the performance consequences of governance decisions in response to the recommendation of Geyskens, Steenkamp, and Kumar (2006), who concluded from their meta-analyses that TCE has mainly been applied to determine whether firms follow the TCE's predictions, without considering the performance consequences of these decisions.

This research is organized in four sections: First, we briefly elaborate on the conceptual background with respect to distribution as the object of investigation. Second, we

develop a research model of the antecedents to distribution channel choice and NEV performance. Third, we present research design, methodology, and results of the empirical study. Finally, we discuss the implications of the results.

Conceptual Background on Distribution Channel Choice

The topic of channel choice can be mapped into the domain of channel design research (e.g., Bucklin, 1966), which examines the organization of the distribution channel system and the rationale for having intermediaries such as sales agents, distributors, and retailers. Once a distribution channel is selected, changes take place slowly, in part because of powerful inertia. Managers may perceive changing the distribution channel structure as too costly (Rangan, 1987). Moreover, frequent changes in distribution patterns may even negatively impact the firm's overall reputation in the market (Anderson & Coughlan, 1987).

The channel literature has traditionally distinguished between two categories of channel organizations: direct and indirect channels. In direct channels, the firm does not include an independent reseller in the distribution process but retains ownership of the product until it passes to the end user (John & Weitz, 1988). However, in indirect channels, the firm sells to independent resellers, who resell the product to end users or other resellers.

A review of previous empirical research on distribution channel decisions reveals that TCE explanations have been dominant, with most studies focusing on traditional transaction cost variables, such as asset specificity and uncertainty (Table 1). Only a few studies have extended the set of examined variables beyond transaction cost variables. Further, prior empirical analyses have almost exclusively focused on large manufacturing companies, and no empirical study on distribution channel choice has dealt with the performance consequences of channel decisions.

Research Framework

Given the dearth of prior knowledge on NEVs' distribution choices, we draw from prior research on established companies' drivers of distribution channel choice to explore empirically the relevance of those factors in the context of NEVs. In establishing a testable model, we build primarily on TCE and customer relationship and strategy literature in order to identify a broad set of factors from which to find the most relevant ones for NEVs, based on our data.

Antecedents to Distribution Channel Choice

TCE-Related Factors. TCE has been widely applied in the study of organizational boundary decisions, building on its insight that transactions must be governed and that certain institutional arrangements carry out this governance better than others (Shelanski & Klein, 1995). The key determinant for the optimal governance structure—between hierarchy (within the firm) and market (outside the firm)—is differences in transaction costs (Coase, 1937). Those transaction costs, in turn, are a function of certain dimensions of the transactions, namely, asset specificity, uncertainty, and transaction frequency (Williamson, 1975).

Table 1

Overview of Selected Empirical Studies on Distribution Selection

Author(s) (year)	Theoretical basis	Sample	Antecedents to channel decision	Endogenous variable
Anderson and Schmittlein (1984)	TCE	U.S. electronic components industry	Transaction specificity of assets (+), environmental unpredictability (o), difficulty of evaluating performance (+), territory density (o), company size (+)	Direct and indirect distribution
Anderson (1985)	TCE and agency theory	U.S. electronic components industry	Transaction specificity of assets (+/o), difficulty of evaluating performance (+), environmental unpredictability (o), travel requirements (o), attractiveness of product line (+), company size (o), time horizon (o), importance of non-selling activities (+)	Direct and indirect distribution
John and Weitz (1988)	TCE	Large industrial firms	Transaction specificity of assets (+), environmental uncertainty (+), behavioral uncertainty (+), sales volume (o), territory layout (-)	Direct, hybrid, and indirect distribution
Klein, Frazier, and Roth (1990)	TCE	Canadian export firms	Channel volume (+), asset specificity (+), volatility of transaction environment (+), diversity of environment (-)	Direct and indirect distribution
Majumandar and Ramswamy (1994)	TCE and property rights theory	Manufacturing firms from diverse sectors	Information search of customers (+), technological impact (+), product critically for customers (+), dollar outlay (+), product customization (+), auxiliary services (+)	Direct and indirect distribution
Dutta et al. (1995)	TCE	Large manufacturing firms	Incumbency, ambiguity, premiums, scope economies in selling, unit value of product, account sizes, existing sales force [†]	Dual distribution
Krafft et al. (2004)	TCE and agency theory	Broad selection of German service and manufacturing firms	Replaceability (+), transaction-specific assets (+), product complexity (+), substitution ability of products (o), environmental uncertainty (-), internal uncertainty (+/o), size of sales force (-), time devoted to selling (o), travel requirements (-), availability of precise sales reports (+)	Direct and indirect distribution
Shervani et al. (2007)	TCE	U.S. manufacturers of electronic and telecommunication products	Transaction specificity of assets (+), internal uncertainty (+), external uncertainty (-)	Direct and indirect distribution

[†] The dependent variable in this study is the degree of dual distribution; in this study, the degree of incumbency, the degree of ambiguity, and the existing sales force are positively related to dual distribution, while unit value of product and scope economies in selling are negatively related to dual distribution. Premiums and account size have no significant impact on the dependent variable.
+, positive effect on direct distribution; -, negative effect on direct distribution; o, no significant effect on direct distribution; TCE, transaction cost economics.

The governance decision logic can be applied to the context of distribution channel choice: Hierarchical governance corresponds to direct distribution, while market governance corresponds to indirect distribution. While the original TCE framework poses the governance question as a discrete choice between market and hierarchy, more current proponents of the theory have acknowledged that certain features of internal organization can be achieved without ownership or complete vertical integration (Rindfleisch & Heide, 1997). Thus, a variety of hybrid mechanisms have been identified in the literature (Williamson, 1991)—among them, dual distribution (e.g., Dutta et al., 1995). Even though dual distribution has become common in business practice, the phenomenon remains poorly understood in marketing research (Sa Vinhas & Anderson, 2005). In the present paper, we consider channel choice to be a continuous concept ranging from indirect to direct with intermediate values representing dual forms of distribution.

Exploring the drivers of the degree of direct distribution, we examine the effect of five dimensions derived from TCE: asset specificity, environmental uncertainty (technological uncertainty and volume uncertainty), behavioral uncertainty, and transaction frequency. The *asset specificity* of a transaction refers to the extent to which the resources used in support of the transaction can be redeployed to “alternative uses and by alternative users without sacrifice of productive value” (Williamson, 1991, p. 282). In the distribution context, asset specificity is often a result of investing in human capital; the time and effort employed to acquire the firm-specific knowledge needed for downstream activities is among the most common forms of these investments found in distribution channels (John & Weitz, 1988). In indirect distribution, specific assets make an intermediary difficult to replace. Given the high switching cost, independent intermediaries may behave opportunistically. The ultimate safeguard for specific assets is therefore to internalize the transaction in question. Superior monitoring and surveillance properties of direct distribution channels tend to reduce the threat of opportunistic behavior.

The environmental uncertainty dimension can be divided into technological and volume uncertainty (Walker & Weber, 1984). *Technological uncertainty*, which refers to difficulties in predicting changes in technological requirements, may be caused by unpredictable changes in the standards of components or end products, or by general technological developments. Technological uncertainty is managed most efficiently through market governance (i.e., indirect distribution), which allows firms to retain the flexibility to terminate relationships and switch to partners with more appropriate technological capabilities.

Volume uncertainty refers to uncertainty regarding estimates of future output volumes. In indirect distribution channels, high volume uncertainty implies that incentives for sales efforts need to be continually adjusted. Moreover, conflicts are more likely to occur as implications from changed conditions may be interpreted differently. Direct distribution, however, permits decision making to proceed more smoothly and facilitates faster resolutions of conflicts that arise from differing interpretations of evolving circumstances (John & Weitz, 1988).

The transaction dimension *behavioral uncertainty* refers to difficulties in evaluating certain performance aspects of distribution channels. For example, output-based performance measures may be difficult to interpret because there are no readily observable and readily interpretable performance indicators (Anderson, 1985). According to TCE, the general response to the performance evaluation problem is vertical integration (i.e., direct channel). The greater degree of control available through vertical integration allows for greater evaluation capabilities.

Transaction frequency has a similar effect. Transactions that occur only occasionally need not be attended to continuously and do not merit the bureaucratic cost of establishing

a hierarchy (David & Han, 2004). However, transactions that occur frequently require constant monitoring. In addition, firms can realize economies of scale in handling transactions, which makes a direct distribution system more cost-efficient when transaction frequency is high. Therefore, firms will choose more direct forms of distribution as transaction frequency increases.

Hypothesis 1:

- (i) Asset specificity is positively related to the degree of direct distribution.
- (ii) Technological uncertainty is negatively related to the degree of direct distribution.
- (iii) Volume uncertainty is positively related to the degree of direct distribution.
- (iv) Behavioral uncertainty is positively related to the degree of direct distribution.
- (v) Transaction frequency is positively related to the degree of direct distribution.

While TCE is appealing, its scope is also rather narrow and allows only for deriving a limited set of variables important to channel choice (Frazier, 1999). Consistent with Sanchez-Peinado, Pla-Barber, and Hébert (2007), we argue that additional factors that go beyond those derived from TCE also play a role in the selection of distribution channels. Specifically, we will explore factors related to product-specific, strategic, and competitive variables.

Product-Related Factors. Three important product characteristics have been emphasized as being relevant to distribution systems: product customization, product complexity, and product synergies. *Product customization* denotes that the products of a firm require adjustments to fit the customer's requirements (Rangan, Menezes, & Maier, 1992). A high degree of product customization increases the necessity for the firm's distribution system to be able to identify the customer's specific needs and communicate those requirements to research and development (R&D) and production. In general, it is more likely that the skills required to identify the needs of a customer reside within the company that developed the product, rather than with the distributor (Burgel & Murray, 2000). Furthermore, coordination with the R&D and production departments is likely to be more effective if handled within the firm.

Product complexity can be described by three aspects: the number of components, the extent of the interactions required to couple these components, and the degree of product novelty (Novak & Eppinger, 2001). When products are complex, the distribution channel must have strong technological know-how, which makes direct channels the preferred choice.

The importance of *product synergies* is high if the utility of the product is greater when sold in a bundle with complementary products. By combining the products of several manufacturers, indirect channels can offer more complete solutions for the customer and can generate those synergies (Anderson, 1985). A direct channel is relatively less efficient than an indirect channel when synergies are important because a direct channel carries only the product line from its parent firm (Dutta et al., 1995).

Hypothesis 2:

- (i) Product customization is positively related to the degree of direct distribution.
- (ii) Product complexity is positively related to the degree of direct distribution.
- (iii) Product synergies are negatively related to the degree of direct distribution.

Strategy-Related Factor. Since customer retention has become a major strategic objective for an increasing number of firms (Srivastava, Shervani, & Fahey, 1999), we consider the *importance of customer retention* as a factor influencing the choice of distribution

channels. To achieve high customer retention rates, a firm must employ a variety of activities that aim at fostering loyalty and increasing switching cost (Srivastava et al.). Independent distributors, however, typically have little interest in fostering ties between their customers and a specific supplier, since this would increase their own dependence on the supplier.

Hypothesis 3: The importance of customer retention is positively related to the degree of direct distribution.

Competition-Related Factors. We take three competition-related factors into account: differentiation through the core offering, differentiation through service support, and cost leadership. According to Porter (1985), a firm can choose between the strategies of differentiation and cost leadership. Acknowledging that differentiation is a multidimensional concept (Reimann, Schilke, & Thomas, forthcoming), we follow Ulaga and Eggert (2006) in distinguishing between the dimensions of differentiation through the core offering and differentiation through service support.

Product quality is a major concern for firms that pursue a strategy of *differentiation through the core offering*, and the distribution channel is a key medium through which to confer a high-quality image to the customer (Slater & Olson, 2000). Indirect channels of distribution are generally more effective in assuming this communication function because they typically have a larger customer base so they can serve as a multiplier for the communication to a broad audience (Baligh & Richartz, 1964).

Differentiation through service support pertains to the firm's capacity to offer value-added services (Ulaga & Eggert, 2006). Generally, direct distribution is more advantageous for firms that rely on this strategy since intermediaries would have to be trained extensively to perform these services. Intermediaries, however, often have a short time horizon that keeps them from undertaking any activities without an immediate payoff, so firms will avoid indirect channels when non-selling support activities are required (Anderson, 1985).

The third strategy of *cost leadership* involves generating higher margins relative to competitors through lower relative cost (e.g., Wirtz, Mathieu, & Schilke, 2007). Accordingly, firms pursuing a cost leadership strategy have a strong emphasis on lean cost structures, which are often achieved by concentrating on core competences (Prahalad & Hamel, 1990). Thus, firms that are looking for ways to achieve high cost efficiency are likely to outsource their distribution activities (Rapp, 2009).

Hypothesis 4:

- (i) Differentiation through the core offering is negatively related to the degree of direct distribution.
- (ii) Differentiation through the service support is positively related to the degree of direct distribution.
- (iii) Cost leadership is negatively related to the degree of direct distribution.

Distribution Channel Choice and Performance

In addition to predicting distribution channel choice, TCE is explicitly normative (Williamson, 1975). A fundamental tenet of TCE—the notion of discriminating alignment—is that efficiency will be enhanced when there is a fit between the chosen governance arrangement and the underlying attributes of the transaction. If such a fit is achieved, superior performance is accomplished by minimizing (actual and opportunity)

transaction costs. Silverman, Nickerson, and Freeman (1997) noted that “TCE presumes that firms whose transactions are inappropriately aligned will suffer adverse performance consequences and eventually fail” (p. 36).

While transaction cost-related variables focus on cost minimization, our research model also considers variables that influence the value enhancement potential of distribution channel decisions. This approach is in line with Brouthers (2002), who claimed that firms are supposed to determine the distribution option that leads to the best overall performance, not just the minimum cost position. For example, highly customized products imply the ability to explore specific customer needs in great detail and to communicate those needs to R&D and production. Thus, direct distribution channels are more suitable for addressing and implementing customer needs in a timely fashion, thereby achieving value enhancement for the customer and future revenue flows for the supplier. Hence, we propose a model of distribution channel decisions that balances the forces of cost minimization and value enhancement.

In line with the strategic fit paradigm (Dess, Lumpkin, & Covin, 1997; Miller, 1986), we posit that NEVs can enhance their performance by achieving a fit between their strategic choice regarding their distribution system and the conditions in which they operate (i.e., transaction cost-related, product-related, competition-related, and strategy-related factors). Therefore, a fit between the degree of direct distribution and relevant conditions, as outlined in hypotheses 1–4, is expected to enhance firm performance.

Hypothesis 5: NEVs that make distribution channel decisions that can be predicted by transaction cost-related, product-related, strategy-related, and competition-related considerations (as outlined in hypotheses 1–4) tend to perform better than NEVs that make distribution channel decisions that cannot be predicted by these considerations.

Methodology

Data Collection and Sample

The sampling frame consists of 4,000 German NEVs, which have been identified through a database maintained by the German Chamber of Commerce. Data were collected in May and June 2009 through key informants (the NEVs’ founder or a board member), who were provided with a questionnaire. We included firms that were not older than 12 years (Bantel, 1998). In order to ensure that new ventures were entrepreneurial, we followed Burgel and Murray (2000) and focused on innovative and R&D-intensive industries. Our goal in focusing on these industries was to differentiate NEVs from “regular” small businesses (Carland et al., 1984). As a result of a two-wave mailing approach (Dillman, 1978) via e-mail, 361 responses were returned. After dropping 31 incomplete responses, the sample consisted of 330 NEVs. The sample composition in terms of industry sector and key informants is shown in Table 2.

According to Armstrong and Overton (1977), we assessed a nonresponse bias by comparing early and late respondents. The *t*-test of group means revealed no significant differences, so there is evidence that nonresponse bias is not a problem with the data. If information on two or more constructs have been collected from the same informant, and correlations between these constructs need to be interpreted, common method bias may be a problem (Podsakoff & Organ, 1986). To determine the extent to which common method bias was present in our data, we employed Harman’s one-factor test, in which no single, general factor was extracted. Thus, we conclude that method bias does not seem to be a serious concern for this study.

Table 2

Composition of Sample

Industry	%
Information technology services	29
Engineering	19
Chemicals and energy	7
Biotech	6
Telecommunication	6
Automotive	5
Other (mainly electronics-related industries)	28
Position of respondents	%
Managing director	79
Leading management	19
Other staff	2

Measure Development

Measurement item generation was based on an intense literature review of marketing and management journals. The items were predominantly formulated as Likert-type statements anchored by a 7-point answer scale ranging from 1 (“strongly disagree”) to 7 (“strongly agree”).

The antecedent factor *asset specificity* was measured based on the work of Anderson (1988) and Klein et al. (1990). The 3-item measurement scale of Parmigiani (2007) served as a basis for measuring the factor *technological uncertainty*, while measurement of the factor *volume uncertainty* followed Heide and John (1990) and Walker and Ruekert (1987). Measures for *behavioral uncertainty* were based on the work of John and Weitz (1988). Following Murray, Kotabe, and Wildt (1995), *transaction frequency* was captured as a single-item construct by the frequency of the same or similar transactions relative to competition. For the factor *product customization*, we used an item scale that we adapted from Schneider (2001). We based the items for *product complexity* on Cannon and Homburg (2001), and followed the lead of Dutta et al. (1995) in measuring *product synergies*. The measure for *importance of customer retention* was developed based on Schneider. Measures for the three competitive factors—*differentiation through the core offering*, *differentiation through service support*, and *cost leadership*—were based on the work of Narver and Slater (1990).

With respect to measuring channel choice, we identified two alternatives for capturing the *degree of direct distribution*. First, Shervani et al. (2007) asked for the structure of the distribution channel system and provided an answer scale ranging from 1 (“exclusively direct channels”) to 7 (“exclusively indirect channels”), with intermediate answer choices representing dual distribution systems. Second, an item capturing the percentage of sales through all direct channels is based on John and Weitz (1988). While we primarily built on the second measurement option, we decided to incorporate both measures in our questionnaire in order to assess convergent validity of the measures. After recoding the responses to the first item so that high values represent a high degree of direct

distribution, we found that the two measures are highly correlated ($\rho = .60$; $p < .01$), indicating that the evaluations are robust. In addition, as a supplementary procedure in testing for the validity of the measurement, we ran separate analyses of our research model for each of the two measures (Table 6). The consistency in the sign and significance of the path coefficients further enhanced our confidence in the measure.

Firm *performance* is a complex multidimensional construct. Following Slater and Olson (2000), we focus on market performance and profitability, since these constructs are widely recognized as two of the most important aspects of financial performance. If there is a significant relationship between an independent variable and both performance variables, we interpret this as support for the hypothesis. If there is a significant relationship between an independent variable and only one dependent variable, we infer partial support. Following Homburg and Pflesser (2000), we operationalized market performance as the satisfaction of the respondent with the company's situation relative to major competitors during the last 3 years. Profitability was measured by a single item related to average return on sales during the last 3 years (Homburg & Pflesser). We ensured the validity of the performance information provided by the respondents by triangulating reported data with secondary data (Homburg, Schilke, Reimann, & Klarmann, 2009). Since NEVs are often not obliged to report their financial results in Germany, objective performance information was publicly available for a small subset of 25 NEVs in our sample. Using the AMADEUS database, we obtained data to determine the average return on sales over the last 3 years and correlated this objective information with the corresponding item reported by the managers. Both measures are highly correlated ($\rho = .63$; $p < .01$), suggesting that the managerial performance evaluations are valid.

There is reason to believe that domestic channel decisions and international new market entry decisions differ (Klein et al., 1990). For example, additional factors (such as cultural properties) might be relevant, and there are other distribution options (e.g., local intermediaries) in foreign settings. Therefore, study participants were asked to refer only to domestic channel decisions when answering the survey questions. A list of all items is provided in the Appendix.

Following the recommendations developed by Jarvis, Mackenzie, and Podsakoff (2003), the constructs of asset specificity, volume uncertainty, differentiation through service support, and cost leadership were measured formatively. Reflective specifications were chosen for technological uncertainty, behavioral uncertainty, product customization, product complexity, product synergies, importance of customer retention, differentiation through the core offering, and market performance.

Results

To evaluate our measures and test our hypotheses, we used partial least squares (PLS), which employs a component-based approach for estimation purposes and places minimal restrictions on sample size and residual distributions (Chin, Marcolin, & Newsted, 2003). PLS was chosen to accommodate the relatively large number of constructs. Moreover, PLS has been shown to be well suited to the simultaneous analysis of reflective and formative constructs.

In the case of reflective constructs, we analyzed indicator reliability by looking at the factor loadings. As a general guideline, items with insignificant loadings or loadings of less than .5 should be dropped (Hulland, 1999). We conducted significance tests using the bootstrap routine with 1,000 resamples (e.g., Moreno & Casillas, 2008). Composite reliability (CR) and average variance extracted (AVE) were analyzed to test construct

Table 3

Measurement Information—Reflective Constructs

Construct	Number of items	Range of loadings	Cronbach's alpha	CR	AVE
Technological uncertainty	3	.67–.93	.69	.71	.51
Behavioral uncertainty	4	.79–.98	.95	.97	.89
Product customization	2	.87–.89	.72	.87	.78
Product complexity	3	.81–.98	.71	.88	.69
Product synergies	4	.56–.81	.59	.80	.68
Importance of customer retention	3	.68–.94	.61	.80	.68
Differentiation through core offering	2	.83–.97	.79	.89	.82
Market performance	6	.67–.76	.78	.84	.52

AVE, average variance extracted; CR, composite reliability.

reliability and validity. Bagozzi and Yi (1988) recommended threshold values of .7 for CR and .5 for AVE. Finally, we examined the Cronbach's alpha for each construct. Nunnally (1978) recommended a threshold alpha value of .6 for exploratory research topics. In our analysis, factor loadings, *t*-values, CR, AVE, and Cronbach's alpha are generally indicative of a high level of convergent validity (Table 3). In addition, we assessed discriminant validity using the criterion proposed by Fornell and Larcker (1981). The AVE of each construct exceeds the squared correlation with all other constructs, indicating a satisfactory level of discriminant validity (Table 4).

Since formative measurement models are based on multiple regressions, multicollinearity is an important issue (Diamantopoulos & Winklhofer, 2001). In our data, multicollinearity among the formative indicators did not seem to pose a problem. All variance inflation factors were far below the common cutoff value of 10. Moreover, the condition index did not exceed the threshold of 30 (Table 5).

The fit of a PLS path model can be assessed by looking at the squared multiple correlation (R^2) of the dependent variables and at Stone–Geisser's Q^2 of redundancy (Chin, 1998). In our model relating the antecedent factors to the degree of direct distribution, the R^2 values underline a relatively high explanatory power. For the two alternative measures for directness of distribution, we observe R^2 values of 24.1% and 20.0%, respectively (Table 6). These values are in line with previous research that incorporated a similar number of antecedents to distribution channel choice in the context of established companies (Krafft et al., 2004). The Stone–Geisser criterion, which serves as a measure for the predictive validity of the model, suggests that models with $Q^2 > 0$ have sufficient predictive relevance. This criterion is met by the model proposed here (13.5% and 17.5%, respectively) (Table 6).

Further, the path coefficients indicate that we found overall support for the proposed model. Table 6 presents the estimates obtained from PLS path analysis for the two alternative operationalizations of the dependent variable “degree of direct distribution.” After examining the magnitude and significance of the path coefficients, we find that the impact of 9 out of 12 antecedent factors on distribution channel choice is significant and that 8 out of 12 are in the hypothesized direction. The findings are consistent across both operationalizations of degree of direct distribution. Regarding TCE-related factors,

Table 4

Correlations and Square Roots of AVE on Diagonal

	1	2	3	4	5	6	7	8	9	10	11	12	13
Constructs													
1. Asset specificity	N/A												
2. Technological uncertainty	.02	.71											
3. Volume uncertainty	.40	.04	N/A										
4. Behavioral uncertainty	.25	-.01	-.07	.89									
5. Transaction frequency	.00	-.01	-.05	.00	N/A								
6. Product customization	.05	.12	.04	.06	.02	.88							
7. Product complexity	.03	.05	-.09	.00	.00	-.20	.83						
8. Product synergies	.08	.05	.08	.03	-.01	-.10	-.08	.68					
9. Importance of customer retention	-.09	.13	-.03	-.04	-.08	.02	-.12	-.02	.68				
10. Differentiation through core offering	.03	.29	.03	.02	.00	.19	.01	.02	.26	.82			
11. Differentiation through service support	-.05	.12	-.03	.01	-.08	.02	-.05	-.03	.15	.19	N/A		
12. Cost leadership	.00	.03	.09	.12	-.08	.05	.07	-.01	.05	.10	.05	N/A	
13. Degree of direct distribution	.00	.09	.18	.06	-.08	.29	-.10	-.09	.26	.09	.17	.18	N/A
Descriptive statistics													
Mean	5.1	4.2	4.5	3.7	3.4	5.4	5.0	3.2	5.3	6.0	5.9	3.7	5.1
Standard deviation	1.2	1.3	1.3	.9	1.6	1.3	1.4	1.3	1.2	1.0	.9	1.2	1.6
Minimum	1	1	1	1	1	1	1	1	1	1	1	1	1
Maximum	7	7	7	6.6	7	7	7	7	7	7	7	7	7

AVE, average variance extracted; N/A, not applicable.

Table 5

Measurement Information—Formative Constructs

Construct	Number of items	Range of weights	Range of VIFs	Condition index
Asset specificity	4	-.15 to .99	1.2–1.4	10.9
Volume uncertainty	4	.11 to .81	3.0–4.3	18.6
Differentiation through service support	5	.22 to .83	1.5–2.9	27.8
Cost leadership	3	-.03 to .66	1.3–1.4	8.6

VIF, variance inflation factor.

hypothesis 1(ii), hypothesis 1(iii), and hypothesis 1(iv) are supported, while hypothesis 1(i) and hypothesis 1(v) are rejected. In terms of product-related variables, hypothesis 2(i) and hypothesis 2(iii) receive support, whereas hypothesis 2(ii) does not. Hypothesis 3 is supported (strategy-related variable). Finally, hypothesis 4(i) receives no support, while hypothesis 4(ii) and hypothesis 4(iii) do.

In testing hypothesis 5, we followed the approach suggested by Katsikeas, Samiee, and Theodosiou (2006). Consistent with the study’s theoretical foundation, testing hypothesis 5 required assessing the fit between the distribution channel choice and

Table 6

Results on Distribution Channel Decision

Hypothesis	Relationship	Dependent variable: degree of direct distribution			Result
		7-point Likert scale [†]	Share of sales through direct channels [‡]		
Transaction cost variables					
Hypothesis 1(i)	Asset specificity → degree of direct distribution	-.05	-.09		Rejected
Hypothesis 1(ii)	Technological uncertainty → degree of direct distribution	-.05*	-.07*		Supported
Hypothesis 1(iii)	Volume uncertainty → degree of direct distribution	.14**	.10**		Supported
Hypothesis 1(iv)	Behavioral uncertainty → degree of direct distribution	.07**	.07**		Supported
Hypothesis 1(v)	Transaction frequency → degree of direct distribution	-.09**	-.09**		Rejected
Product-related variables					
Hypothesis 2(i)	Product customization → degree of direct distribution	.24***	.30***		Supported
Hypothesis 2(ii)	Product complexity → degree of direct distribution	-.03	-.04		Rejected
Hypothesis 2(iii)	Product synergies → degree of direct distribution	-.08*	-.15**		Supported
Strategy-related variables					
Hypothesis 3	Importance of customer retention → degree of direct distribution	.21***	.19**		Supported
Competition-related variables					
Hypothesis 4(i)	Differentiation through core offering → degree of direct distribution	-.07	-.08		Rejected
Hypothesis 4(ii)	Differentiation through service support → degree of direct distribution	.10**	.11*		Supported
Hypothesis 4(iii)	Cost leadership → degree of direct distribution	-.13**	-.13**		Supported
Endogenous variables of direct distribution				Q ²	
7-point Likert scale		R ²		13.5%	
Share of sales through direct channels		24.1%		17.5%	
		20.0%			

* $p < .10$; ** $p < .05$; *** $p < .01$.

[†] Based on Shervani et al. (2007).

[‡] Based on John and Weitz (1988).

relevant contextual attributes. Following previous work (Brodbeck, Frese, & Javidan, 2002; Silverman et al., 1997), we operationalized the degree of fit by means of misfit variables.³ For example, hypothesis 1(i) states that the higher the transaction specificity of assets, the higher the degree of direct distribution. If a firm acts in accordance with this proposition, no misfit (i.e., a strong fit) is present. On the contrary, in cases where firms use indirect distribution when asset specificity is high, a high degree of misfit emerges (i.e., a low fit). This logic was applied to each item. For the new misfit scales, a value of 1 represents low misfit (i.e., high fit) and a value of 7 represents high misfit (i.e., low fit). Constructs in this model are marked with the abbreviation “MF,” representing “misfit.”⁴ These misfit measures were then related to performance outcomes. In interpreting the path estimates, a negative path coefficient signifies that a misfit negatively impacts performance. Thus, negative path coefficients are supportive of hypothesis 5.

Results with respect to hypothesis 5 are shown in Table 7. R^2 values of 7.8% and 8.4% for profitability and market performance, respectively, indicate a satisfactory explanatory power of distribution channel choice on performance. The Q^2 amounts to 3.9% and 2.0%, respectively, emphasizing the predictive validity of this model.

Overall, findings with regard to hypothesis 5 are mixed; half of the subhypotheses are at least partially supported. NEVs reported significantly higher performance when the distribution channels used fit the predictions associated with asset specificity, volume uncertainty, transaction frequency, product complexity, product synergies, and customer retention.

While our research model suggests that, depending on the antecedents examined, both direct and indirect distribution are relevant options for NEVs, the question remains as to how far the choice may be limited by the characteristics of NEVs. Extant literature suggests that NEVs face certain liabilities that may limit their scope of action (Aldrich & Auster, 1986). To explore this position, we conducted a *post hoc* analysis estimating the influence of NEVs' age and size on the degree of direct distribution. In case that younger (smaller) NEVs are inclined to show different choice behavior than older (larger) NEVs, there is a strong indication that NEVs in general differ from large, established companies in their scope of action. While no significant relationship emerged between organization size and degree of direct distribution (.02, not significant [n.s.]), age was negatively related to the degree of direct distribution ($-.15$; $p < .01$). These results suggest that the younger (older) the NEV, the more direct (indirect) distribution modes are chosen, which suggests that younger NEVs may be restricted in the use of indirect distribution channels.

3. The challenge for our statistical analysis is to evaluate the performance of one distribution mode compared with another mode for the same set of project attributes (Leiblein, Reuer, & Dalsace, 2002). An estimation problem arises because the choice of governance is likely to be done systematically, not randomly, which suggests that a model of performance, as a function of distribution mode, leads to biased estimates and incorrect conclusions. In order to address this risk, we followed the two-step procedure proposed by Silverman et al. (1997) and Brodbeck et al. (2002). First, we calculated the misfit values that allow measurement of the deviation from predictions. Second, we related these misfit values to performance. This procedure allows us to evaluate the performance of one distribution mode compared with another mode for the same set of project attributes because misfit values enable the comparison of firms acting in line with predictions and those acting contrary to predictions.

4. Misfit values were calculated based on the share of sales generated by direct distribution. We also calculated these misfit values by means of the 7-point Likert scale that we used to capture the degree of direct distribution. Since results were highly consistent, we subsequently focused on the results based on the sales-share measure.

Table 7

Performance Implications of the Distribution Decision

Relationship	Dependent variable: NEV's performance		Result
	Market performance	Profitability	
Transaction cost variables			
MF: asset specificity → performance	-.17**	-.18***	Supported
MF: technological uncertainty → performance	.10**	.10**	Rejected
MF: volume uncertainty → performance	.01	-.07*	Partially supported
MF: behavioral uncertainty → performance	.02	-.07	Rejected
MF: transaction frequency → performance	-.02	-.12**	Partially supported
Product-related variables			
MF: product customization → performance	.04	.04	Rejected
MF: product complexity → performance	-.09**	-.08*	Supported
MF: product synergies → performance	-.09**	-.09*	Supported
Strategy-related variables			
MF: importance of customer retention → performance	-.08**	-.05**	Supported
Competition-related variables			
MF: differentiation through core offering → performance	.08	.00	Rejected
MF: differentiation through service support → performance	.15**	.10**	Rejected
MF: cost leadership → performance	.08*	.08**	Rejected
Endogenous variables of direct distribution			
	R ²		Q ²
Market performance	8.4%		3.9%
Profitability	7.8%		2.0%

* $p < .10$; ** $p < .05$; *** $p < .01$.
MF, misfit.

Discussion

Implications

Prior knowledge concerning NEVs' choice of distribution channels has been largely restricted to the finding that the selection of channels is an important decision and that this decision is a highly difficult one for entrepreneurs in the early phases of their NEVs. However, the specific drivers of NEVs' decisions on how they configure their distribution channel systems have remained unclear. This study is an attempt to close this gap by exploring key antecedent factors of NEVs' distribution channel choices. We also investigated the performance implications of a strategic fit between, on the one hand, distribution channel choice and, on the other hand, transaction cost-related, product-related, strategy-related, and competition-related factors. We interpret our findings in light of the specific characteristics of NEVs, taking into account prior research in entrepreneurial marketing.

Antecedents to NEVs' Distribution Channel Choices. The present study identifies nine factors that influence NEVs' choice of channels. In so doing, this study allows a more detailed understanding on how channel choice decisions are taken in this context. The finding of nine significant drivers suggests that channel decisions in NEVs are not made

in an erratic way, but that there are systematic patterns. The drivers we identified represent a broad set of transaction cost-, product-, strategy-, and competition-related factors, which emphasizes the high complexity of the channel choice decision.

Interpreting the magnitude of the path coefficients in Table 6, we find that, among the *transaction cost variables*, the degree of volume uncertainty is the most salient determinant of the selection of direct distribution channels. This result is not surprising, given that NEVs typically operate in turbulent environments where sales volume forecasts are difficult to derive (Gruber, 2003). In these contexts, indirect distribution partners who are willing to cooperate with NEVs are hard to find, making the indirect channel a difficult option. We also find that firms that operate in environments characterized by high technological uncertainty show a strong preference for indirect forms of distribution since this choice provides them with the flexibility they need when technological changes make one intermediary inferior to another.

A particular surprise is the nonsignificant impact of asset specificity on channel choice, particularly since Williamson (1985) suggested asset specificity to be the most relevant determinant of governance choice. The overview of prior research (Table 1) confirms that asset specificity has consistently been a major driver of direct distribution systems in the context of large, established companies. The nonsignificant relationships in our study may be due to the young age and the founder-centeredness of NEVs: First, young firms have often not yet established standard procedures and organizational routines that would allow them to systematically monitor their sales force, so direct channels may not be an appropriate means for safeguarding against opportunism. Second, the founder typically has high managerial power in NEVs, which is often accompanied by overconfidence of the entrepreneur (Busenitz & Barney, 1997). This overconfidence is likely to lead to underestimating the threat of opportunism (Michael, 2007), which would favor the choice of indirect channels of distribution.

Moreover, transaction frequency works in the opposing direction as proposed and reported in prior studies among established firms (Table 1). Contrary to hypothesis 1(v), our results suggest that the higher the transaction frequency, the more indirect the selected channels. Again, this result may be explained by the idiosyncrasies of NEVs since the products of these firms tend to be particularly innovative and risky, which may deter certain channel partners from working with NEVs. Others may require a “proof of concept,” that is, evidence for an initial customer base and first revenues. Thus, many NEVs with a low transaction frequency may be forced to distribute their products on their own until they have created a critical mass or a sound reputation in the market that makes them an attractive partner for potential distributors.

Turning to the *product-related variables*, NEVs with a strong emphasis on product customization prefer direct channels of distribution in order to manage and control customer relations activities within their own firm boundaries. The particularly strong link may be due to the importance of cooperating with customers in order to adapt novel solutions to their particular needs. Since products offered by NEVs are typically innovative, and since there is probably no history of NEV–customer relationships, customization of products is a particularly difficult, although crucial, task. However, we find that firms that sell products that have strong synergies with complementary products tend to choose indirect channels of distribution. By combining the products of several suppliers, indirect channels are better able to offer comprehensive solutions to customers. This feature is particularly important to NEVs, which typically offer only a limited number of different products (Aldrich & Auster, 1986).

Surprisingly, the degree of complexity exerts no significant influence on the choice of distribution. The rationale behind proposing a link between product complexity and direct

distribution was that complex products need to be explained to the customer in more detail and that the supplier is likely to possess the superior knowledge needed to perform this task. The insignificant result found in our study may be due to the increasing specialization of retailers in recent years (Weitz & Whitfield, 2006). Such specialization enables channel partners to build up the required expert knowledge so they can be an adequate outlet even for very complex products.

With regard to the *strategy-related variable*, there is a strong positive relationship between the importance of customer retention and use of direct channels, indicating that NEVs prefer to manage relationships with their end customers internally when customer retention is an important cornerstone of their strategy. It is interesting to observe that the factors of “importance of customer retention” and of “product customization” have the strongest impact on channel choice among all identified drivers. Both factors share the requirement of strong interactions with the customers. As such, our findings are in line with prior research on NEVs, showing that relationships with early customers are a major success factor (Hills et al., 2008).

Similar reasons can be suggested for results related to the *competition-related variable* “differentiation through service support.” NEVs with a strong differentiation through service support predominantly opt for direct channels. This result is understandable since NEVs do not tend to be attractive partners for established indirect distribution structures if these structures must devote extra resources to service efforts. One may expect that indirect distribution structures are only willing to devote resources to service activities when cooperating with established companies, in order to reduce their risk that service activities do not pay off. NEVs can benefit from this reluctance, however, as service interactions have been shown to be a major source of learning for NEVs (Hills & LaForge, 1992). However, NEVs that pursue a cost leadership strategy are inclined to choose indirect forms of distribution. This finding is in line with the notion that NEVs are typically of small size, which makes the realization of economies of scale in in-house distribution difficult. Contrary to our expectations, differentiation through the core offering turns out not to be a significant driver of distribution channel choice. We argued that indirect distribution channels constitute a key medium for conferring a high-quality image to a wide range of customers, which would make indirect channels the preferred choice for firms that pursue a differentiation strategy through the core offering. However, given the NEVs’ potentially low importance in terms of revenue generation, retailers might not be motivated to proactively perform such a multiplier function. Consequently, product differentiators may be indifferent about whether to distribute indirectly or directly. In line with expectations, NEVs that follow a strong cost leadership orientation tend to use indirect forms of distribution. This finding reflects that managers in NEVs are aware that cost leadership is attainable only when the NEV can concentrate on core competencies.

In summary, this study specifies nine antecedents to the degree of direct distribution. While the findings indicate that NEVs opt for direct distribution in certain circumstances and for indirect distribution and others, the *post hoc* analysis indicates that, *ceteris paribus*, younger NEVs are more inclined to use direct distribution channels. This result can be explained by NEVs’ lack of an established brand and their limited track record.

Performance Implications of NEVs’ Distribution Decisions. Our study is the first to provide empirical support for the performance implications of distribution channel decisions. A considerable share of NEVs’ performance can be explained by the drivers identified in this study. Further, we identify a set of factors with which the distribution channel choice should be aligned in order to improve performance.

The basic tenet of TCE, that firms that align their governance mode with transaction cost factors will economize on (actual and opportunity) transaction costs (which translates into superior performance), is largely confirmed by the empirical analysis. As such, this research addresses the calls for empirical validations of the normative value of TCE (e.g., David & Han, 2004; Geyskens et al., 2006). The finding that TCE's prescriptive power is stronger with regard to profitability than market performance (Table 7) is not surprising, as TCE focuses on minimizing transaction costs (Geyskens et al.). NEVs that choose direct distribution channels in cases where transaction-specific assets, volume uncertainty, and transaction frequency are high achieve significantly higher profitability than do NEVs that show the opposite behavior. Overall, an alignment of distribution channel choice with asset specificity shows the strongest positive impact on performance, emphasizing the major role of this factor in the success of NEVs.

Interesting conclusions can be drawn by interpreting the results of both models (as depicted in Tables 6 and 7) in combination. As noted, high degrees of asset specificity and transaction frequency—contrary to TCE's expectation—do not lead to greater use of direct distribution in NEVs. However, NEVs that *do* act in line with TCE's prescriptions are more successful. Similarly, transaction frequency does not lead to a greater use of direct channels, partly due to the low age and limited attractiveness of the NEV for distribution partners. However, NEVs that manage to distribute directly when transaction frequency is high are more successful, as predicted by TCE. Contrary to TCE's expectations, NEVs that choose indirect (direct) distribution channels when technological uncertainty is high (low) do not perform better. Thus, one may speculate that NEVs that operate in technologically uncertain contexts and that choose indirect distribution channels have little bargaining power with the distribution partner and, as a result, may not be able to negotiate flexible contracts that enable them to switch to other distribution partners if technological circumstances change.

We find that a misfit in two product-related variables translates into inferior market performance and profitability, although, surprisingly, a misfit in product customization has no effect on performance. This finding may result because indirect distribution partners may have more experience in product customization and in customer interactions than NEVs, which may partially outweigh the advantages of direct distribution.

For competition-related variables, NEVs with a misfit in differentiation through service support and cost leadership perform better, contrary to our hypothesis. The findings in terms of differentiation through service support may be explained by the fact that indirect distribution is more efficient for NEVs, possibly because setting up a service support department may be an expensive project for NEVs. Further, our empirical findings show that NEVs that choose direct distribution when pursuing a cost leadership strategy are more successful. This result could be explained as follows: New ventures may not fully realize cost-benefits by outsourcing their distribution function, as distribution partners are able to demand a relatively large share of the margin due to their strong bargaining power relative to the new venture.

Limitations and Avenues for Further Research

The present research should be interpreted in light of its limitations, which also indicate avenues for future research. First, it is reasonable to assume that there are differences between how young manufacturing firms and young service firms engage in marketing-related decisions. Prior research on distribution channels, however, has been largely silent about the specifics of channel selection of each of these types of business. While systematically integrating the type of business (manufacturing/service) is beyond the scope of this

study, future work might investigate the degree to which this variable affects distribution channel decisions of NEVs. In a *post hoc* analysis of our model, in which we linked antecedents to the degree of direct distribution, we found strong commonalities between manufacturing and service NEVs, but we also revealed several differences. For example, the effect of complexity on degree of direct distribution is much stronger for manufacturing NEVs (.23; $p < .01$) than for service NEVs (.05, n.s.). Different results also emerged for the customization variable, which more strongly impacts the degree of direct distribution for service NEVs (.36; $p < .01$) than for manufacturing NEVs (.09; $p < .1$). Future research is needed to investigate these moderating effects in more detail.

Second, the present research was limited to domestic distribution channel decisions only. As indicated by Klein et al. (1990), distribution channel decisions in foreign countries are inherently more complex. For example, past research in the context of joint ventures has shown that there are cultural dependencies within the framework of TCE (Brettel, Engelen, Heinemann, & Vadhanasindhu, 2008; Makino & Neupert, 2000). Thus, there is reason to assume that relationships between transaction cost variables and the degree of direct distribution are subject to national cultural properties (Engelen, Heinemann, & Brettel, 2009).

Third, the question of how NEVs determine the importance of each antecedent compared with other antecedents in making distribution channel choices has not been addressed. If one antecedent suggests direct distribution and another suggests indirect distribution, how does an NEV determine the weights of each antecedent in making the distribution choice? Future research could develop models that incorporate the interaction among different antecedents.

Conclusion

Representing one of the first large-scale survey-based studies in the entrepreneurial marketing field, our research is an initial attempt to identify important factors that influence NEVs' choice of distribution channel and to shed light on the performance implications of channel choice. Based on data from 330 NEVs, we found support for most of our hypotheses, but the data also revealed a number of surprising results that support the notion that existing concepts of channel choice that have been successfully applied to established firms cannot easily be transferred to the context of NEVs.

Appendix

Note: Respondents were instructed that all distribution-related items pertain to their domestic distribution systems (and not to foreign distribution structures).

Asset specificity

A newcomer to our distribution channels has to learn a certain "language" for various things.

It takes a long time for salespeople to learn about our products thoroughly.

A salesperson's inside information on our procedures would be very helpful to our competitors.

To be effective, salespeople have to take a lot of time to get to know the customers.

Technological uncertainty

The processes and skills required to create dies are mature and unlikely to change in the future. (R)

Major innovations are very likely within the next few years.

Major innovations in how dies are produced are very likely within the next few years.

Behavioral uncertainty

We can evaluate these salespeople quite well just on sales and cost measures. (R)

Sales performance is affected by many factors that cannot be influenced by our distribution channels.

It is just not possible to supervise our distribution channels closely.

It is difficult to evaluate how much effort any individual in our distribution channels really puts into his job.

Volume uncertainty

We expect significant fluctuations in the daily/monthly volume requirement.

Our company's sales volume for end product is unpredictable.

Industry sales volumes for end products are unpredictable.

Our output volume estimates are uncertain.

Transaction frequency

Compared with other companies in our industry sector, the frequency of recurring transaction (i.e., the frequency with which the same or similar transactions occur) is very high.

Product complexity

Our products are complicated.

Our products are technical.

Our products are difficult to understand.*

Our products are complex.

**item eliminated*

Product customization

We account for special requests of our end customers in product design and production.

We customize our products according to customer specifications.*

We consider individual requests of our end customers before issuing a quotation.

A product designed for a specific end customer usually cannot be offered to other end customers.*

**item eliminated*

Product synergies

Selling our products is easier when complementary products from other suppliers are offered simultaneously.

Our end customers find a combined offering of our products together with products of other suppliers useful.

Buying our product together with complementary products from other suppliers is beneficial for our end customers.

Importance of customer retention

Our marketing and distribution activities are centered around our end customers.

Tying end customers to our company is of great importance to us.

We frequently have direct contact with our end customers (e.g., at trade fairs).

We use customer loyalty instruments, such as mailings, events, and membership programs.

Potential problems with our distribution partners would not deter us from taking actions to improve customer retention.

Differentiation through the core offering

Compared with our major competitors, we strive to be successful based on continuously improving the performance of our products by increasing their quality and productivity.

Compared with our major competitors, we strive to be successful based on continuously improving the usefulness of our products by increasing their value to the end customer.

Differentiation through service support

Compared with our major competitors, we strive to be successful based on . . .

- . . . a unique service level.
- . . . superior advice to the end customer.
- . . . high expertise of our employees.
- . . . a holistic solution to our end customers.
- . . . process support to our end customers.

Cost leadership

Compared with our major competitors, we strive to be successful based on

- . . . low prices.
- . . . low production cost (including procurement and logistics).
- . . . low wages.

Degree of direct distribution (measurement option I) (R)

From the following options, which describes your (domestic) distribution system most appropriately:

- . . . exclusively direct distribution.
- . . . primarily direct distribution.
- . . . rather direct distribution.
- . . . equally direct and indirect distribution.
- . . . rather indirect distribution.
- . . . primarily indirect distribution.
- . . . exclusively indirect distribution.

Degree of direct distribution (measurement option II)

What percentages of (domestic) sales are made to the following types of customers?

- . . . end users: ×%
- . . . channel members (wholesalers, distributors, retailers): ×%

(Insert 100% in total; the percentage sold to end users constitutes the amount going through a direct channel. Sales to channel partners represent the use of indirect distribution structures.)

Market performance

In the last three 3 years, relative to your competitors, how has your company performed with respect to . . .

- . . . achieving customer satisfaction?
- . . . providing value for customers?
- . . . keeping current customers?
- . . . attracting new customers?
- . . . attaining desired growth?
- . . . securing desired market share?

Profitability

Over the last 3 years, what was the average annual return on sales of your company?

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Wirtz, B.W., Mathieu, A., & Schilke, O. (2007). Strategy in high-velocity environments. *Long Range Planning*, 40(3), 295–313.

Malte Brettel, PhD, is a full professor, RWTH Aachen University, Aachen, Germany.

Andreas Engelen, PhD, is an assistant professor, RWTH Aachen University, Aachen, Germany.

Thomas Müller, PhD, is a managing director, mytheresa.com GmbH, Munich, Germany.

Oliver Schilke, PhD, is a graduate student, University of California, Los Angeles, CA, and a research fellow, RWTH Aachen University, Aachen, Germany.

The authors contributed equally, and their names are listed in alphabetical order.