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Internationalization of German Machinery Manufacturers – a Cooperative Perspective

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Abstract

Small and medium sized industrial firms are adopting international collaborative agreements with increasing frequency and magnitude. Especially in global distribution, small and medium manufacturers engage in a variety of inter-firm partnerships that oftentimes differ from larger firms' strategies. This paper provides systematic empirical evidence on the incidence and characteristics of international distribution partnerships and alternative governance modes. Drawing from transaction cost theory, hypotheses concerning the influence of firm size on the governance choice of internationalization mode are derived and empirically tested.

A survey of 138 German manufacturers provides the empirical setting. The findings document that close to 90 percent of the manufacturers cooperate with international partners in the field of distribution. By vertical relationships with international partners, the manufacturer's main objective is to gain access to local knowledge and marketing establishment. Taking advantage of rapid entry and risk sharing is also found to be important. While most of the cooperative agreements are based on written contracts, informal distribution agreements are significantly more likely to be used by small enterprises. Study findings also indicate that the use of collaborative internationalization strategies varies widely according to geographical market and manufacturer size. Survey data show a significant correlation between firm size and the governance choice of international distribution.

Keywords

Transaction Cost Theory, Firm Size, Mechanical Engineering, Distribution Channels, Cooperative Systems, Small and Medium Sized Enterprises

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1 Introduction

Cooperation with international partners has become a key strategy of large enterprises over the last two decades. More recently, researchers have recognized that also small and medium sized industrial firms are adopting international collaborative agreements with increasing frequency and magnitude. Especially in the field of global distribution, smaller firms engage in a variety of inter-firm partnerships that oftentimes differ from larger firms' strategies. Despite this, careful analysis of the phenomenon has been hampered by a lack of current and comprehensive empirical data on different internationalization strategies.

Against this background, this paper provides systematic empirical evidence on the incidence and characteristics of international distribution partnerships and alternative governance modes in the context of different firm specifics and host country market factors. Drawing from transaction cost theory, hypotheses concerning the influence of firm size on the governance choice of internationalization mode are derived and empirically tested. The context selected for this study is the German mechanical engineering industry. This industry is characterized by mainly small and medium sized companies, rapidly changing technologies and its globalized nature. International cooperation is very common due to the complexity of the products.

The paper is organized as follows. Section 2 gives a short outline of characteristics and distinctive criteria of international distribution partnerships and thus provides the basis for the empirical analysis. In section 3, a review of literature that applies transaction cost theory to the specific problem of governance choice in international distribution is presented and the results of empirical studies are summarized. Drawing from this theoretical framework, hypotheses concerning the influence of firm size are developed. In section 4, data collection procedures and sample characteristics are described. Section 5 presents the results of analysis, and section 6 concludes the paper with a discussion of the implications of the study.

2 Cooperative strategies in international distribution

International inter-firm distribution partnerships are defined as purposive, intensive strategic relationships between two or more independent firms in the scope of international distribution. The firms join efforts to achieve goals each firm is unable to attain on its own (Mohr and Spekman 1994, Theurl 2001).

International distribution partnerships vary in the *value chain linkage*, i.e. the partners' mutual position in international value creation (Contractor and Lorange 1988, Walley 2007). Horizontal distribution partnerships mark collaborations between firms active in the same stage of the distribution channel, including the cooperation of competitors. By contrast, vertical distribution partnerships consist of partners along the international distribution channel. Diagonal distribution relationships comprise linkages between partners on different value chain stages and of different values chains.

Cross-border distribution partnerships also differ in the *degree of institutionalization*, i.e. in the degree of their formal intensity (Anderson and Gatignon 1986, Theurl 2005). The spectrum ranges from informal agreements to contractual agreements to contractual agreements supplemented by foreign direct investments (FDI) to the foundation of joint ventures, having the highest degree of institutionalization. With increasing degree of institutionalization, the different cooperative forms provide greater control over foreign marketing activities and higher amounts of stability. Simultaneously, flexibility decreases and the partners' property rights become diluted.

Distinctive criterion	**Characteristics**				
Value chain linkage	horizontal	vertical	diagonal		
Institutionalization	informal agreement	contract	contract + FDI	joint venture	
Objectives	cost reduction	market access	ressources	risk reduction	time advantages

Table 1: Typology of international distribution partnerships

Firms establish international distribution partnerships in order to achieve at least five more or less overlapping individual *objectives*. Partnerships my allow a firm to reduce costs due to economies of scale and scope, access new markets, access complementary skills and resources beyond the firm's boundaries, reduce risks, and gain time advantages (Contractor and Lorange 1988, Mohr and Spekman 1994).

Table 1 summarizes the explicated distinctive criteria and corresponding characteristics. This typology serves as basis for the descriptive analysis of international distribution partnerships in the German machinery industry.

3 The impact of size on international distribution strategy: A transaction cost perspective

From a transaction cost perspective on international distribution, partnerships can be interpreted as a governance mode for transactions between the polar alternatives of discrete, arms-length market contracts with a low degree of institutionalization (direct sales from domestic headquarters) and those conducted within a multinational enterprise, having a high degree of institutionalization (local sales office, wholly owned subsidiary) (Endler 2005, Inkpen and Birkenshaw 1994, Williamson 1991).

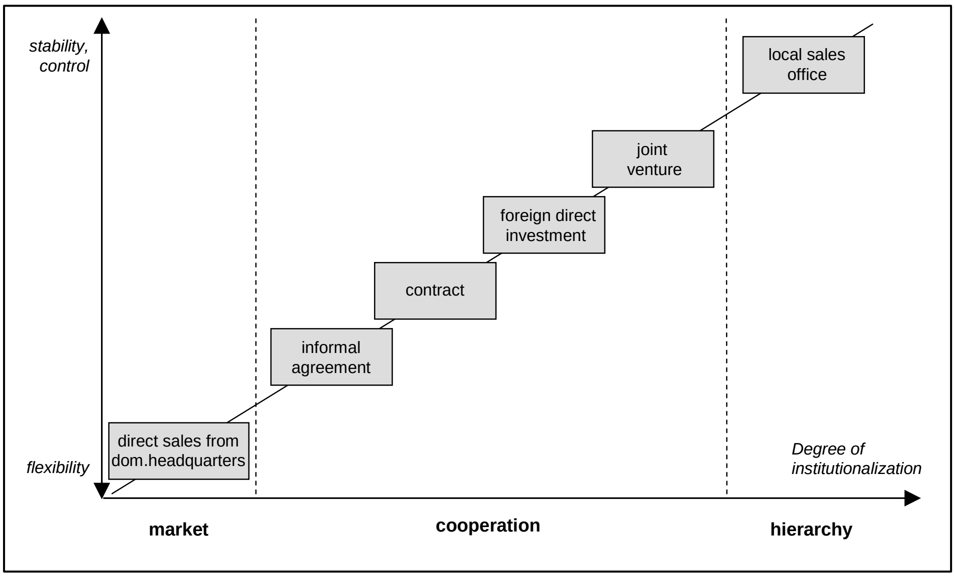

Figure 1: International distribution partnerships between market and hierarchy

As described by Williamson (1991), the governance decision between "market", "cooperation", and "hierarchy" is based on certain dimensions of transactions that give rise to transaction costs, the "costs of running the system". A large and growing body of transaction cost-theoretic empirical research has relied on the role of the dimensions *transaction-specificity* and *uncertainty* to examine the choice of international distribution mode. However, the influence of *firm size* on transaction costs and on choice of governance mode is has mainly been neglected.

Transaction-specific investments involve physical or human assets that are uniquely specialized to the particular relationship and cannot be easily redeployed in other exchange relationships (Williamson 1985, Williamson 1991). In the context of international distribution partnerships, exporting firms may often exchange information on new products with the importer, develop shared operating systems for ordering and inventory control, and train the importer's personnel to sell and service their products (Bello and Lothia 1995, Skarmeas et al. 2008). Because these investments make it costly to switch to a new importer, market forces against opportunism are no longer effective (John and Weitz 1988). The idiosyncratic nature of the investments gives rise to the risk that the trading partner expropriates the value of the associated quasi-rents. The institutional modes of international distribution differ in their ability of safeguarding specific investments and consequently differ in their relative transaction costs. Distribution through hierarchical (market) distribution modes is superior if a high (low) degree of asset specifity is present. Degrees of asset specifity located in between these poles suggest a cooperative mode of distribution as most advantageous (Theurl 2005). *Hence, empirical studies show that the level of specific assets needed to support distribution activities and the degree of institutionalization of international distribution mode are positively related (Bello and Lothia 1995, Brouthers and Brouthers 2003, Hildebrandt and Weiss 1997, John and Weitz 1988).*

The second principal dimension in the comparison of alternative governance modes is *uncertainty*. In the presence of environmental uncertainty, i.e. when numerous and unpredictable contingencies arise, market contracts suffer strain (Williamson 1985). Assuming behavioural uncertainty and asset specifity an adaption problem exists because the counter party may try to interpret unspecified clauses to its own advantage. In international distribution partnerships, environmental uncertainty may exist for many marketing activities, such as sales targets and promotional activities to support the introduction of new products (John and Weitz 1988, Lassar and Kerr 1996). In consequence, renegotiating agreements in light of changed circumstances (concerning local demand, rates of exchange, political instability, etc.) is regarded as one of the principal obstacles in dealing with independent distribution partners (Anderson and Gatignon 1986). Transaction cost analysis posits that an appropriate response to increased environmental uncertainty is to integrate the distribution activities. Because of administrative mechanisms, hierarchical structures permit sequential, adaptive decision-making and quicker resolution of conflicts. *Hence, empirical studies document the positive relationship between uncertainty and the degree of institutionalization of international distribution mode (Bello and Lothia 1995, Gatignon and Anderson 1988, John and Weitz 1988).* The transaction-theoretic impact of other factors, such as *socio-cultural dis-*

*tance (*Gatignon and Anderson 1988, Hennart and Larimo 1998) or *legal restrictiveness* (Gatignon and Anderson 1988), on the choice of international governance mode is also object to empirical research.

In contrast, transaction cost theoretic surveys widely ignore the impact of *firm size*. With regard to differences in financial and managerial resources of exporting firms, different resource requirements have to be taken into account for the international distribution mode choice (Agarwal and Ramaswami 1992, Calof 1993). Hierarchical coordination through acquisition or Greenfield investment generally generates higher transaction costs associated with searching for information, bargaining, monitoring, and contract enforcing and carries higher risks than collaborative strategies (Kogut and Singh 1988). Market-based direct sales from domestic headquarters are the most cost-saving distribution mode.

Small firms, characterized by resource limitations and lower multinational experience, are unlikely to have sufficient resources or skills to enter a large number of foreign markets by hierarchical modes of distribution, even if a high degree of asset specifity is required to support distribution activities. By contrast, large firms' greater capacities and larger numbers of international target markets economize on transaction costs for selecting, establishing and controlling local subsidiaries. Enhanced managerial productivity through economies of scale and learning encourages large firms to self-perform many export functions and to export through local hierarchical distribution modes. Consequently:

> H_1*: Firm size is positively related to the degree of institutionalization of international distribution mode.*

Focussing only on cooperative modes of international distribution, one might accordingly argue that differences between small and large firms also exist in choosing the appropriate collaborative arrangement. Due to economies of scale in managing and controlling numerous international partnerships, large firms have broader and more efficient administrative export routines and therefore mainly use formalized mechanisms to conduct worldwide distribution partnerships (ENSR 2003). In contrast, smaller firms more frequently use informal agreements due to limited administrative capacities.

> H_2: *Informal distribution agreements are used more often by small than by medium and large firms.*

4 Method

Context and data collection

The context selected for this study was the German machinery industry. This industry is characterized by mainly small and medium sized companies. Its globalized nature, its strong reliance on collaboration due to its distinctive technology orientation, and its high economic relevance motivated conducting the empirical study here.[2] Although generalizability of a single industry study is limited to other industries sharing similar structural characteristics, the single study provides a greater degree of control over market and environmental peculiarities and increases the internal validity of the study (Inkpen and Birkenshaw 1994, Mohr and Spekman 1994).

Data collection proceeded in five phases. In the *first phase*, in-depth semi-structured interviews were conducted with five alliance-experienced executives from German machinery manufacturers. The interviews provided insights into industry dynamics and the nature of collaborative agreements. Drawing from interview findings and literature studies, a survey questionnaire was developed in the *second phase*. Existing questions and measures were adapted and new ones were developed. In order to avoid misunderstandings concerning the underlying term "cooperation" a short definition was put in front. In the *third phase*, the survey instrument was pretested with nine industry executives, two experts from industry associations, and four academic experts to identify any problems with question wording and questionnaire layout. Using their feedback, the questionnaire was subsequently modified and finalized through an iterative process. The time required to complete the questionnaire (about 15 minutes) was broadly accepted so that the instrument did not have to be abbreviated. In the *fourth phase*, 4475 manufacturing firms (NACE-Code D-28) were identified from "Hoppenstedts Hochschuldatenbank" and 600 firms were randomly drawn.[3]. For every selected manufacturing firm a key informant was chosen. The key informant in this study is a senior executive, the export-marketing manager or the sales manager, who were deemed to be involved with the firm's strategies of internationalization and collaboration.

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2 German machinery manufacturers generate 75.4% of the revenues abroad (VDMA 2008), the industry with its 975.000 employees is Germany's biggest industrial employer (Statistisches Bundesamt 2008).

3 Thereby companies with less than 50 employees and annual sales less than 12.5 million euro were excluded due to their limited scope of internationalization (Zhang et al. 2003).

In the *fifth phase*, surveys were mailed to the 600 manufacturing firms in a period from November 2008 to February 2009. Various steps were taken in order to maximize the response rate:

- *Pre-Notification*: Several key informants were contacted by phone beforehand.
- *Support*: The German Engineering Federation (VDMA) and the trade journal "profi" supported the survey.
- *Personalization*: The questionnaires were accompanied by a personalized cover letter signed by the Managing Director of the Institute for Cooperative Research.
- *Incentive*: The respondents were promised to receive the research report.
- *Confidentiality:* The informants were assured that their information would be treated confidentially.
- *Reminder:* A reminder was sent and follow-up phone calls were made three weeks later.

Sample

138 completed questionnaires were received, for a response rate of 23.0 percent. Table 2 shows that all 138 respondents held upper-management positions. In order to assess sample representativeness, the distribution of number of employees of the responding firms was tested against the entire population (Statistisches Bundesamt 2009) by a chi-square test. The chi-square test indicates significant differences between the sample and the population in terms of firm size at the 0.01 level (χ^2=52,88; df=2). Table 2 shows that the data undersample small companies while large enterprises were over-represented. When deviating aggregated general results for the industry, sample data therefore will be reweighted by firm size using the population proportions.

Furthermore, survey-based research leaves open the possibility of a nonresponse bias that could lead to a systematic exclusion of (e.g. unsuccessful, discontent) firms from the population, and a common method bias in the form of consistency artefacts. To assess the nonresponse bias, the responses were divided into two groups, based on the time in which they were received (Armstrong and Overton 1977). The two groups of early and late respondents were then compared by their "satisfaction with cooperation". A t-test indicates no significant differences (t=0.04; df=106) at the 0.01 level and suggests that a nonresponse-bias would unlikely pose a problem. If common method bias existed, one general factor will account for most of the covariance in the data (Podsakoff and Organ, 1986). Unrotated factor analysis using the eigenvalue-greater-than-one criterion revealed that the first factor explained only 22.9 percent of the variance in the data. This indicates the absence of a common method bias.

	Sample		**Population**
Firm size (number of employees)	n	percent	percent
Small firm (50-99)	30	21.7	44.8
Medium firm (100-249)	48	34.8	34.9
Large firm (>250)	60	43.5	20.3
Position			
President/Director	32	23.2	
Sales manager	52	37.7	
Export-/Service-manager	40	29.0	
other upper-management position	14	10.1	

Table 2: Sample and population characteristics (N=138)

5 Results

Characteristics[4]

Descriptive analysis shows that 89.9% of the queried firms are engaged in international distribution partnerships (see Figure 2).[5] Concerning the *value chain linkage*, most of the firms (84,8%) work together vertically with international distributors, who offer a low-cost form of market entry and operation, access to local market knowledge, and a quick capability regarding stocking, promoting, and selling the firm's products (Rosson 1987, Wu et al. 2007). In contrast, only 15.2% of the companies cooperate horizontally with other manufacturers. One possible explanation for this might be the inherent tension between firms that undertake competition and cooperation simultaneously ("coopetition") (Walley 2007).

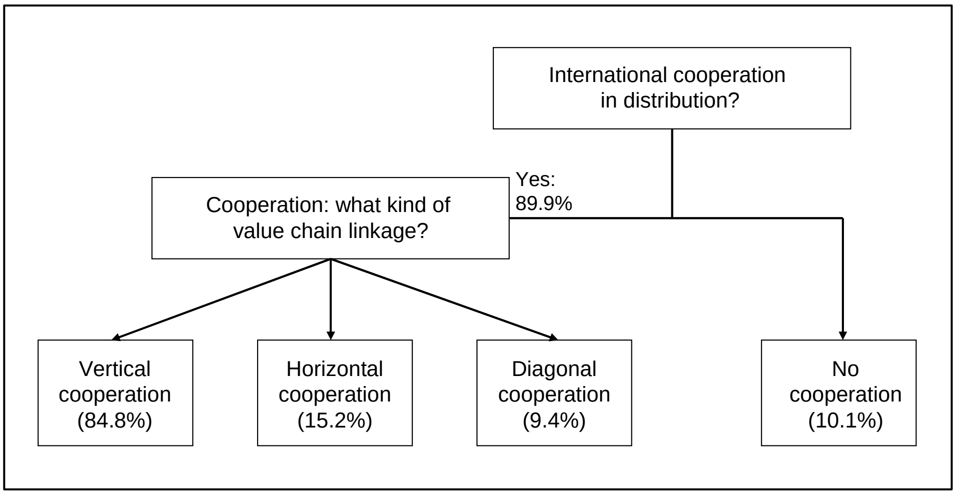

Figure 2: Decision tree of choice between international distribution partners (N=138)

Due to the significant relevance of vertical cooperation, the informants were asked to concentrate on the one vertical distribution partnership with which they were most familiar for the analysis of the following criteria. 108 informants gave detailed information.

In terms of *institutionalization*, survey data revealed that only 6.5% of the vertical distribution partnerships are based on informal agreements. The majority of the firms (76.9%) use contractual distribution agreements in order to

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4 For a detailed report on the manufacturers' cooperative strategies in other fields (r&d, production, etc.) cf. Kolloge 2009.

5 Reweighting the sample data by firm size using population proportions exhibits that 87,1% of the German machinery manufacturers (with more than 50 employees/annual sales higher than 12.5 million euro, cf. section 4) are engaged in international distribution partnerships. 82.8% cooperate vertically with international partners, 13.6% cooperate horizontally, and 9.8% are engaged in diagonal international distribution agreements.

specify the rights and obligations of both parties. 8.7% of the companies supplement the contractual agreement with equity participations in the distributor while only 3.7% established a joint venture.

Concerning the *objectives*, sample data show that firms primarily cooperate with distribution partners in order to pursue market objectives: access to local customers and markets is evaluated as very important (measured on a 5-point Likert scale, average value: 4.71 of 5, see Figure 3). Time advantages (3.48), reduction of risks (3.28), and reduction of costs through economies of scale and scope (3.09) are assessed to be of lower importance. Access to knowledge and technology of the foreign distributor has the lowest relevance (2.59). An examination of standard deviations suggests a high consensus on the central importance of market objectives. The other objectives are not only assessed to be less important, there is also less agreement in their evaluation.[6]

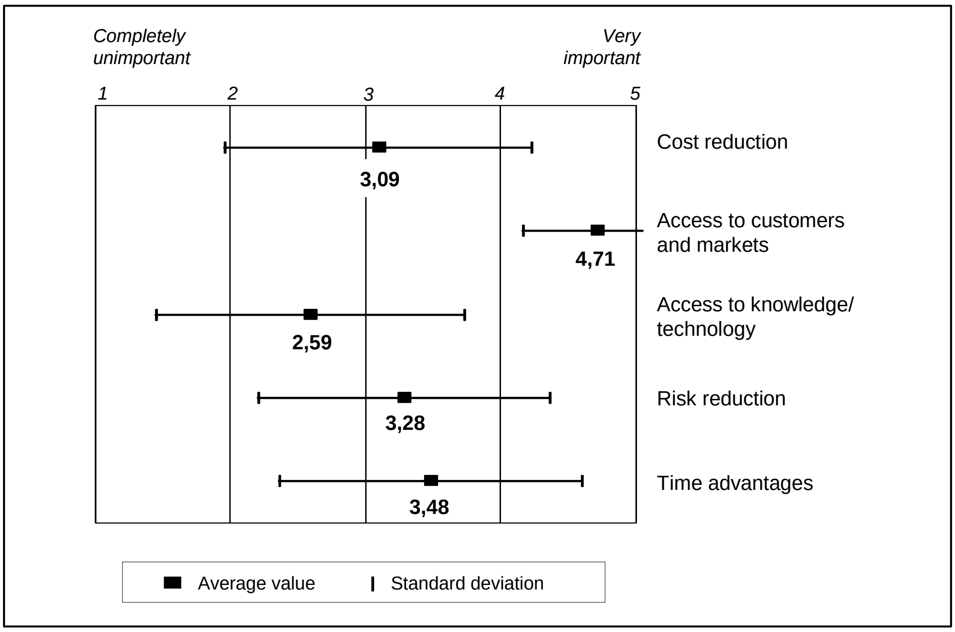

Figure 3: Objectives of international distribution partnerships (N=108)

Cooperation and alternative strategies of international distribution

To assess the relative significance of cooperation in international distribution, the informants were asked to report the distribution mode that their firm uses *predominantly* for the regions North America, Asia, South & Central America, Eastern Europe, and Africa.

Figure 4 illustrates that the use of collaborative forms of distribution varies widely according to geographical market. International cooperation has the

[6] Comparing the average importance values of the five objectives between small and medium/large firms, t-tests indicate no significant differences at the 0.01 level.

smallest relative weight in distribution to North America (30.4% of the firms use partnerships), and the highest relative weight in African distribution (54.8%). With 10.1% of total German machinery exports, North America is traditionally one the most important sales regions for German manufacturers. Survey data show that local sales offices turn out to be dominating distribution strategy for 56.9% of the companies, while less than one-third of the firms choose primarily cooperative modes of export sales.

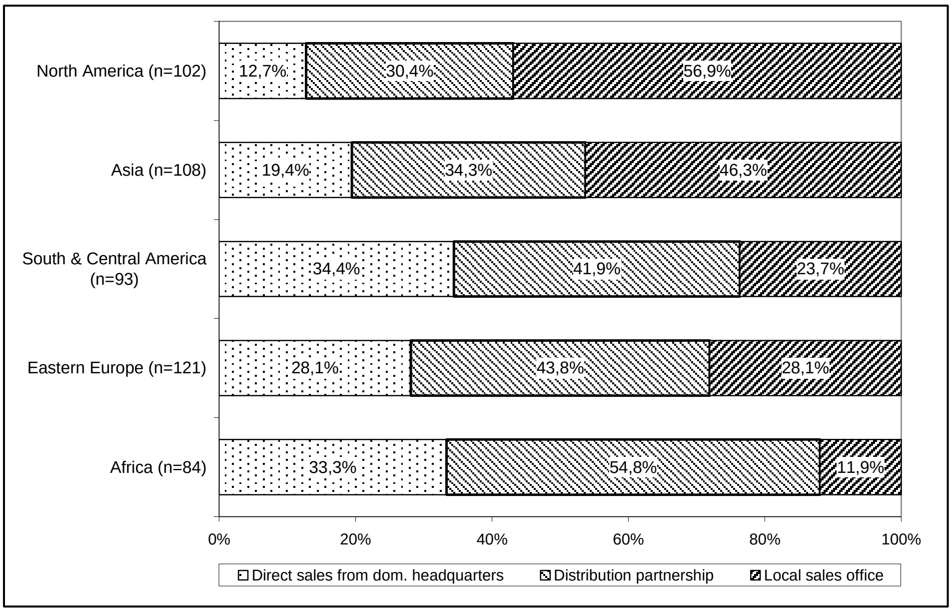

Figure 4: International distribution channels by export destinations (N=129)

In contrast, the African import market accounts for only 2.5% of total German machinery exports. However, the African market is estimated to develop as one of the most important global growth markets (Dilk et al. 2008). Only 11.9% of the exporting firms distribute to Africa through local sales offices. Distribution partnerships play the major role with a share of 54.8%. Cooperative ventures with local distributors allow the access to much-need knowledge of the African markets that are characterized by high cultural and economic complexity. One-third of the exporters predominantly use direct distribution channels from domestic headquarters.

The impact of size on international distribution strategy

In order to analyze the relation between firm size and degree of institutionalization for the considered distribution areas, the degree of institutionalization of distribution mode was coded by an ordinal scale ranged from 1 (direct sales from domestic headquarters) to 2 (international distribution partnership) to 3 (local sales office). Firm size was measured by number of employees, using an ordinal 4-point scale. A partial correlation analysis was performed by Spearman's rho that measures the correlation of ranked-ordered data.

Spearman's rho correlation analysis reveals a positive and significant relationship between firm size and the degree of institutionalization for all considered sales regions, detecting the strongest correlation for the North American market (see Table 3). In accordance with hypothesis one, these results indicate that large firms are more likely than smaller ones to choose a stronger integrated mode of foreign distribution.

	n	Spearman's rho
North America	102	0.416**
Asia	108	0.279**
Eastern Europe	121	0.310**
South & Central America	93	0.314**
Africa	84	0.284**

Table 3: Correlation coefficients between firm size and degree of institutionalization of distribution mode for the considered export destinations (** = significant at 0.01-level)

Concerning the hypothesized relation between firm size and formalization of partnership, table 4 shows striking differences between small and medium/large companies in the formalization of their queried distribution partnerships. More than 1 in 5 small firms chooses informal distribution partnerships. In contrast, 95.2 percent of the larger firms with more than 100 employees safeguard the partnership by formal institutions such as contracts, equity participations or a joint venture.

Firm size (number of employees)	**Institutionalization of distribution partnerships**	
	informal	formal (contract, FDI, joint venture)
Small firms (50-99)	20.8%	79,2%
Medium/large firms (>99)	4.8%	95,2%

Table 4: Institutionalization of distribution partnerships by firm size (N=108)

According to hypothesis two, the chi-square test documents that small firms rely on informal distribution agreements more frequently than larger companies (χ^2=6,31; df=1, p = 0.01).[7]

[7] One-tailed Fisher's exact test also supports the hypotheses at 0.05 level.

6 Discussion and Conclusions

Global competition, world-scale technology, and growing and converging demand have changed the traditional boundaries of the firm. An increasing part of the cross-border value adding processes takes place within cooperative agreements. However, careful analysis of this phenomenon suffered from a lack of current empirical data.

In this matter, this paper presents systematic evidence on international distribution partnerships in the German machinery industry. A survey of 138 manufacturers provides the empirical setting. The findings document that close to 90 percent of the manufacturers cooperate with international partners in the field of distribution. By vertical relationships with international distribution partners, the manufacturers' main objective is to gain access to local knowledge and existing marketing establishment. Taking advantage of rapid entry and risk sharing is also found to be important. While most of the cooperative agreements are based on written contracts, informal distribution agreements are significantly more likely to be used by small enterprises.

The findings also indicate a significant correlation between firm size and the degree of institutionalization of international distribution. Higher export capacities and a greater number of export destinations enable larger firms to economize on transaction costs for searching, establishing and monitoring wholly owned sales subsidiaries. In contrast, small firms, characterized by resource limitations and lower multinational experience, are not able to enter a large number of foreign markets by hierarchical sales subsidiaries.

In consequence, one might argue that small firms partly use cooperative forms of distribution at degrees of transaction dimensions that were supposed to be covered by hierarchies. Therefore, effective cooperative mechanisms must be adopted in order to safeguard the specific investments. But even though they are of immense importance for the cooperation's success, cooperation management techniques are still underdeveloped (Theurl 2005). Consequently, the design of appropriate collaborative management techniques turns out to be essential for the German industry that is characterized by mainly small and medium sized companies and a high export dependence.

Furthermore, descriptive findings indicate that the use of the different distribution modes varies widely according to geographical market. For high sales markets like North America or Asia, firms tend to prefer integrated over cooperative distribution arrangements, whereas collaborative agreements play a crucial role for distribution to the emerging markets. Therefore, future transaction cost analyses should take account of the influence of financial target market factors (e.g. export sales volume, amounts of exports). The value and the frequency of export transactions are presumed to have a substantial influence on transaction costs, too (Williamson 1985). In addition to the exposed role of firm size, future research should take this into account when developing a comprehensive transaction cost theoretic framework for the choice of governance mode of internationalization.

7 References

Agarwal S, Ramaswami S N (1992) Choice of foreign market entry mode: Impact of ownership, location and internationalization factors. J Int Bus Stud 23:1-27

Anderson E, Gatignon H (1986) Modes of foreign entry: A transaction cost analysis and propositions. J Int Bus Stud 17:1-26

Armstrong J S, Overton T S (1977) Estimating Nonresponse Bias in Mail Surveys. J Mark Res 14:396-402

Bello D C, Lohtia R (1995) Export channel design: The use of foreign distributors and agents. J Acad Mark Sci 23:83-93

Brouthers K D, Brouthers L E (2003) Why services and manufacturing entry mode choices differ: The influence of transaction cost factors, risk and trust. J Man Stud 40:1179-1204

Calof J L (1993) The impact of size on internationalization. J Small Bus Man 31:60-69

Contractor F J, Lorange P (1988) Why Should Firms Cooperate? The Strategy and Economics Basis for Cooperative Ventures. In: Contractor F J, Lorange P (ed) Cooperative Strategies in International Business, Lexington, Mass

Dilk C, Gleich R, Kochen J C, Staiger T J (2008) Wachstumspotenziale im Maschinenbau, Frankfurt am Main

Endler D (2005) Zur Umsetzung einer internationalen Absatzstrategie. In: Fröhlich-Glantschnig E (ed) Marketing im Perspektivenwechsel, Berlin

European Network for SME Research (ENSR) (2003) SMEs and co-operation, Observatory of European SMEs, Luxembourg

Gatignon H, Anderson E (1988) The multinational corporation's degree of control over foreign subsidiaries: An empirical test of a transaction cost explanation. J Law Econ Organ 4:305-336

Hennart J-F, Larimo J (1998) The impact of culture of the strategy of multinational enterprises: Does national origin affect ownership decisions? J Int Bus Stud 29:515-538

Hildebrandt L, Weiss C A (1997) Internationale Markteintrittsstrategien und der Transfer von Marketing-Know-how. ZfBf 49:3-25

Inkpen A C, Birkenshaw J (1994) International joint ventures and performance: an interorganizational perspective. Int Bus Rev 3:201-217

John G, Weitz B (1988) Forward integration into distribution: an empirical test of transaction cost analysis. J Law Econ Organ 4:337-355

Kogut B, Singh H (1988) The effect of national culture on the choice of entry mode. J Int Bus Stud 19:411-432

Kolloge K (2009) Kooperation als Schlüssel zur Internationalisierung? Eine empirische Analyse für den deutschen Maschinenbau. In: Beutien V (ed) Aktuelle Forschungsansätze zum Genossenschafts- und Kooperationsmanagement, Marburg

Lassar W M, Kerr J L (1996) Strategy and control in supplier-distributor relationships: An agency perspective. Strat Man J 17:613-632

Mohr J, Spekman R (1994) Characteristics of Partnership Success: Partnership attributes, communication behavior, and conflict resolution techniques. Strat Man J 15:135-152

Podsakoff N P, Organ D W (1986) Self-reports in organizational research: problems and prospects. J Man 12:531-544

Rosson P J (1987) The overseas distributor method: performance and change in a harsh environment. In: Rosson P J (ed.) Managing export entry and expansion – Concepts and practice, New York

Skarmeas D, Katsikeas C S, Spyropoulou S, Salehi-Sangari E (2008) Market and supplier Characteristics driving distributor relationship quality in international marketing channels of industrial products. Ind Mark Man 37:32-36

Statistisches Bundesamt (2008) Produzierendes Gewerbe, Fachserie 4, Reihe 4.3, Wiesbaden

Statistisches Bundesamt (2009) Produzierendes Gewerbe, Fachserie 4, Reihe 4.2.1, Wiesbaden

Theurl T (2001) Die Kooperation von Unternehmen: Facetten der Dynamik. In: Ahlert D (ed) Handbuch Franchising & Cooperation: Das Management kooperativer Unternehmensnetzwerke, Neuwied

Theurl T (2005) From Corporate to Cooperative Governance, in: Theurl T (ed) Economics of Interfirm Networks, Tübingen

Theurl T, Kolloge K (2009), Internationale Unternehmenskooperationen im deutschen Maschinenbau – Eine empirische Analyse, Institute of Cooperative Research, University of Muenster, Working Paper

Verband Deutscher Maschinen- und Anlagenbau (VDMA) (2008), Maschinenbau in Zahl und Bild, Frankfurt am Main

Walley K (2007) Coopetition. An introduction to the subject and an agenda for research. Int Stud Man Organ 37:11-31

Williamson O E (1985) The Economic Institutions of Capitalism, New York

Williamson O E (1991) Comparative economic organization: The analysis of discrete structural alternatives. Admin Sci Quart 36:269-296

Wu F, Sinkovics R R, Cavusgil S T, Roath A S (2007) Overcoming export manufacturer's dilemma in international expansion. J Int Bus Stud 38:283-302

Zhang C, Cavusgil ST, Roath, AS (2003) Manufacturer governance of foreign distributor relationships: do relational norms enhance competitiveness in the export market? J Int Bus Stud 34:550-566