Cooperative internationalization of SMEs: Self-commitment as a success factor for International Entrepreneurship

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Summary Self-commitment is the willingness of individuals to commit to cooperation with a partner without the safety net of controls or sanction mechanisms. This article shows the unique performance contribution of self-commitment in the context of cooperative internationalization of SMEs in several ways: First, we use a multiparadigmatic approach to cooperation theory to argue why self-commitment as a coordination mechanism is particularly relevant in the context of cooperative internationalization. Second, we develop a new operationalization of self-commitment which takes the context of international cooperations into account. Third, we show empirically that self-commitment is particularly important in international cooperations by applying a PLS analysis to a sample of 146 Austrian, Czech, and Slovenian cooperating SMEs.

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Introduction

Internationalization is an issue that – until recently – was in most cases only relevant for large companies (Wright et al., 2007). A major reason for this was their advantage in resource access. Increased pressure on the home market coming from international competitors is now, however, being felt by small- and medium-sized enterprises (SMEs) as well, moving them to seek opportunities in international markets (Dana et al., 1999; Zahra and George, 2002). Due to the key characteristics of small- and medium-sized enterprises (SMEs), e.g. their liabilities of smallness and/or newness (Westhead et al., 2001), cooperative internationalization,
i.e. cooperation with international partners, is becoming an increasingly attractive option for them (Brouthers, 2002). In light of the relatively lower transaction volume of SME cooperations when compared to large companies, effective and efficient coordination mechanisms in the cooperative internationalization of SMEs are accordingly of particular importance.

The current literature discusses the effectiveness of trust-based behavioral coordination in inter-company cooperative relationships. Several authors show that for international cooperations, self-commitment and trust assist the operation and therefore the performance of the cooperation (Cullen et al., 2000; Lavie, 2006; Carson et al., 2006). Self-commitment is the willingness of individuals to commit to cooperation with a partner without the safety net of controls or sanction mechanisms. In an international cooperation, self-commitment means that the partners work together based upon mutual trust to achieve a common (economic) advantage (Johnson et al., 1996). Trust builds the basis for self-commitment. For understanding its coordination power, two types of trust must be differentiated: instrumental (extrinsically motivated) and maxim-based (intrinsically motivated) trust. Instrumental trust relates to the exogenous behavioral compliance of cooperation partners with the explicit and implicit regulations existing within the cooperation. This kind of trust obtains its behavior-standardizing effect via sanctions and control. The awareness that the cooperation partner would suffer disadvantages in the case of improper behavior motivates the actor to trust him instrumentally. Actors who are instrumentally trusted are accountable to those trusting them. Content-wise, instrumental trust falls under the same category as hierarchical control when it comes to behavioral coordination. In contrast to this, maxim-based trust draws its coordination power from the behavior-standardizing effect of the actors’ self-commitment to a maxim (Kant, 1998). Actors who are trusted based upon a maxim are accountable to themselves; your obligation is to you. In the case of cooperative relationships, self-commitment draws on the maxim of “thou shalt conduct thyself cooperatively”. The emergence of maxim-based trust begins with the actors seeing themselves as self-committed to a cooperative behavior when dealing with each other. This way of looking at things is primarily based on the cooperation partners' reputation, and can allow the actor to give the cooperation partner a kind of “advance” on trust (Pidduck, 2006).

A large number of empirical studies on internationalization focus on large companies, whereas SMEs are only rarely investigated or only as sub-groups thereof, such as “born globals” or high-tech/growth enterprises, although companies in different development phases are also characterized by different management requirements (e.g. Dimitratos and Jones, 2005). The critical role of self-commitment for SMEs that participate in cooperative internationalization has until now hardly been researched. This is surprising, particularly when considering the attractiveness of internationalization for these enterprises, as well as the favorable conditions in SMEs that allow trust to evolve. To investigate the operation and the expected performance contribution of these kinds of cooperations in the internationalization of SMEs, we will compare national with international cooperations among 146 enterprises from Austria and Central and Eastern Europe.

In this context, the following research questions will be investigated:

1. What is the effect of the cooperating parties’ self-commitment on the communication and structure of maxim-based cooperations in SMEs?
2. What impact do self-commitment, maxim-based communication, and maxim-based cooperation structures have on performance in these kinds of cooperations?
3. What differences are found when comparing international with national cooperations?

This study contributes to the theoretical and empirical development of IE and trust research, as well as to an understanding of tools for management and for corporate training and education by

- Complying with calls for continued refining of the empirical instruments of trust research (e.g. Möllering et al., 2004) by conceptualizing and operationalizing the construct self-commitment and by linking it to research on international entrepreneurship.
- Showing that self-commitment on the part of actors in international cooperations by SMEs is no utopia, but instead a widespread phenomenon common to real business life. Thus, findings on this particular coordination mechanism gain practical relevance and, with this, establish it as a credible research topic in the field of economics and business administration, and by
- Showing that abilities relevant for building trust-based relationships must come increasingly to the forefront of corporate training and education so as to strengthen both the economic and internationalization potential of SMEs.

Theoretical basis

Cooperatives allow SMEs to participate in internationalization opportunities that they would otherwise not be able to take on by themselves. Nonetheless, the characteristics of SMEs create particular challenges in the internationalization process (Fernandez and Nieto, 2006). Recently, cooperative arrangements have received increased attention as a means to meet these challenges (Robson et al., 2006). First, liabilities of newness (in the case of young enterprises) can be alleviated through cooperating with a company having a stronger reputation. By joining competencies, cooperative internationalization requires a lower amount of internationalization know-how on the part of the cooperation partners than would be needed, for example, with direct investments. And, should the SME enter the international market together with a partner from the target market, this can also often help to overcome legal hurdles. Second, a new SME can compensate for its liabilities of smallness through the establishment of inter-firm cooperations, i.e. resources can be bundled together to achieve a “critical mass” for internationalization (Welge and Borghoff, 2005). Even when creating a cooperation relationship requires specific investments, these nevertheless tend to be lower than those found in greenfield or brownfield investments, implying a
decreased danger of sunk costs (Girma et al., 2005). Additionally, due to a lack of knowledge about the target market, direct export is less attractive for SMEs aiming at sustainable internationalization (Burgel and Murray, 1998). Due to the attractiveness and practical importance of cooperative internationalization for SMEs, this special form of internationalization will be focused upon in this study.

The duration and complexity of the relationships in cooperative forms of internationalization carry with them the danger of opportunistic behavior for all cooperation partners (Williams, 2007). In cooperative arrangements, short-term gain is sacrificed for the sake of a joint, long-term advantage. The resulting mutual economic dependency amidst simultaneous, reciprocal behavioral uncertainty (double contingency, see Luhmann, 1989) means that cooperations between companies are complex arrangements that are threatened by social dilemmas such as the prisoner’s dilemma (Le and Boyd, 2006). This kind of transaction complexity is indicative of the ambiguity found in these kinds of constellations, where the cooperating partners have certain degrees of freedom to act. The long-term characteristic of the exchange relationship leads to a split between performance given and performance received, i.e., the party that first delivers puts itself in the dangerous position that the other partner will not reciprocate with the expected service. Two factors influence the danger of opportunistic behavior: (1) it is proportional to the opportunities (control loopholes) for unfair conduct (leeway for opportunism), and (2) the uncertainty about the conduct of the cooperation partner is dependent upon the likelihood that the cooperation partner will take advantage of situations to act opportunistically. In an ideal market, there is no such danger, because efforts towards the own short-term gain coordinate the behavior of the market participants. A mechanism based upon short-term gain can, however, not be the dominant coordination mechanism of a cooperation that seeks to make the most out of long-term, cooperative potential at the cost of short-term personal advantage (Eberl, 2004).

Hierarchical control is also not suitable for complex transactions (such as those found in cooperative internationalization) as a means to reduce opportunistic behavior because goals and contributions of the partner cannot be defined ex ante in highly dynamic, complex exchange relationships (Wathne and Heide, 2000). Contingency contracts and ex-post opportunities for control as prerequisites for a behavioral coordination based on credibly communicated threats are not possible for these kinds of exchange relationships (Dwyer et al., 1987). These kinds of contracts would not make sense in the cooperative internationalization of SMEs, as they rob the cooperating parties of the flexibility needed for an effective course of action. Thus, hierarchical controls for conduct appear to be ineffective mechanisms for the coordination of long-term and complex exchange relationships (as in the case of internationalizing SMEs; Ring and van den Ven, 1992). In the context of complex, long-term exchange relationships, market failure as well as organizational failure is to be expected (Eberl, 2004).

For complex and highly specific transactions, there might be alternatives to market and hierarchy as instruments for behavioral coordination. In the past few years, a coordination mechanism based upon a voluntary and initially unwarranted allowance of the actors to participate in risky exchange relationships which seem appropriate for long-term and highly complex exchange relationships has emerged, being called "relational contracting" (Carson et al., 2006), "trust" (Eberl, 2004), or "self-commitment" (Frey and Osterloh, 2002). For this coordination mechanism, which we understand as a third ideal type of coordination mechanism that should be seen as equally important alongside market mechanisms and hierarchical control (Adler, 2001), we will apply the term self-commitment.

International cooperations of SMEs require this kind of behavioral coordination for their long-term and highly complex transactions. The ability of an enterprise to deal with behavioral uncertainty within a cooperation and to resourcefully keep in check the danger of opportunistic behavior on the part of the cooperation partner influences the utility it derives from the cooperation relationship (Jarillo, 1988). The following discussion illustrates how trust-based behavioral arrangements via self-commitment on the part of the cooperation partners can reduce the risk for SMEs to an acceptable level, particularly when it comes to highly complex interorganizational relationships (e.g. cooperative internationalizations) that are characterized by behavioral uncertainty.

Development of hypotheses

The creation of a cooperative relationship, which makes highly complex transactions — such as the cooperative internationalization of SMEs — manageable, is the self-commitment of the cooperating members. Self-commitment is understood here as the fundamental willingness of the individuals to subject themselves to the cooperation partner without the safety net of controls or sanction mechanisms. When interacting with a (potential) cooperation partner, the self-committing partner can develop trust. Trust can be defined as a determination of certain expectations regarding future and therefore contingent behavior of a certain interaction partner (Luhmann, 1989; Ring and Van den Ven, 1992; Adler, 2001). This means that trust is a possible reaction to subjective behavioral uncertainty within a cooperative relationship. The conduct promised is expected; other alternatives for action are ignored.

Compared to the coordination mechanisms that are based on controls and sanctions and that aim at the reduction of the leeway for opportunistic behavior, maxim-based trust draws its coordinative strength from the behavior-standardizing effect of the actors’ self-commitment on a maxim, and thereby reduces the actors’ tendency towards opportunistic behavior. Actors who are trusted based on a maxim are accountable to themselves, i.e. they are self-obligated. In the case of cooperations, the self-commitment is based on refraining from opportunistic behavior.

In order for self-commitment to evolve trust within a cooperation, the cooperation partner must be kept informed about the self-commitment of the partner, as only a credibly communicated own self-commitment can justify and solidify the self-commitment of the cooperation partners (Becaerra and Gupta, 2003). The kind of communication determines to a great extent the reaction of the
recipient to the content conveyed (Maltz, 2000). Within a multi-level model of communication, the self-announcement level in particular (divulging of information about yourself; here it means information on the own self-commitment) and the relationship level (divulging of information on the attitude towards the interaction partner; here it means information that self-commitment is also ascribed to the partner) can be of use.

We identify the open and conscious communication of the aspects of a cooperation that is based on self-commitment as maxim-based communication. For starters, open and conscientious communication on the content of cooperation sets the self-commitment by the cooperation partners into action, as people are open and honest about any chances that arise or may arise for opportunistic behavior (Mohr and Spekman, 1994; Gassenheimer et al., 1996). In addition, during the discussions on the contents of the cooperation relationship, the cooperators experience their partner’s self-commitment, making maxim-based trust possible. From this, we can formulate the following hypothesis:

H1a: Self-commitment on the part of the cooperating partners leads to maxim-based communication within the cooperation.

At the same time, self-commitment on the part of the actors gives structure to the developing relationship by typifying experiences and determining relevancies: The own determination of cooperative behavior influences whether (thematic relevance) and why (motivational relevance) the cooperating partners give attention to certain aspects of the relationship and what meaning they have (interpretive relevance). Experiences typified in this way form the interpretive basis for future situations (Schütz, 1972). The actor’s commitment to cooperative behavior results in actions that reflect this kind of behavior being regarded as more attractive than actions that are not (Schelling, 1960). If the cooperation partner is also self-committed, compatible interpretations result that lead to congruent action (Foss, 1996). This experience justifies and strengthens filtering. In a self-energizing process, a cooperative behavior develops between the self-committed actors through the attribution of meaning (Wright and Manning, 2004). We refer to these action frameworks that derive from autonomy (Bonte and Keilbach, 2005) and equality (Pangarkar, 2003) and that serve the mutual determination of conduct (Littler et al., 1998) as maxim-based cooperation structures, and formulate the hypothesis:

H1b: Self-commitment by the cooperating partners leads to a maxim-based cooperation structure.

As presented, the self-committed actor refrains from that behavior that is detrimental to the cooperation and does not focus on his own short-term interests. The maxim-based communication and cooperation structure that emerge from the mutual self-commitment, and the reduced tendency towards opportunistic behavior enables exchange relations that, once laden with a high degree of uncertainty, can now exist without requiring instruments that guarantee security. This allows a multitude of cooperation projects that promise success. Furthermore, resources and time can be saved, which would otherwise have had to be applied to securing contractual cooperation. In addition to this, SMEs automatically obtain access to the business network of the international cooperation partner which, had the company had to build this network by itself, would have cost the enterprise a proportionally large amount of time and resources.

H2a: Self-commitment of the cooperating partners increases the performance of the cooperating companies.

Communication quality is a relevant factor for performance in company relationships (Mohr et al., 1996). Self-committed cooperation partners communicate in an open and conscientious way. A high degree of communication quality (Mohr and Sohi, 1995) based on the principle of openness and the related free flow of information exchange reduces organization expenses and increases the cooperation’s level of success (Mohr and Spekman, 1994). Within maxim-based communication, the actors are aware that they are part of a cooperation (Anderson and Weitz, 1992), which strengthens the identification with common aims and increases the individual contribution towards reaching the common goal (Prahinski and Fan, 2007). The cooperative relationship itself becomes the object of communication. Points of contention and weaknesses within the cooperation can be directly addressed and solved, which in turn can optimize business processes (Nair, 2006).

H2b: Maxim-based communication within the cooperative relationship increases performance of the participating enterprises.

In cooperations with a maxim-based structure, determining proper conduct of the cooperation partners does not require contracts, or if there are contracts, they lose (parallel to the establishment of the mutual maxim-based trust) their relevance over the course of time (Cullen et al., 2000). The partners act together in defining cooperation strategy. Here, the desired goals and the know-how of both partners flow into the combined effort, which tends to have a positive effect on the success of the participating enterprises (Wahyuni et al., 2007). In addition, contractual arrangements and the control and sanction procedures associated with them would be resource-intensive. It can therefore be assumed that the presence of a maxim-based cooperation structure and the resulting absence of hierarchical control elements positively contribute to the performance of the cooperating companies.

H2c: Maxim-based cooperation structures lead to success for the participating enterprises.

The complexity and uncertainty in cooperations grow with the spatial, linguistic, and cultural distance and the difference between the respective legal realms (Johanson and Vahlne, 1977). This causes increased behavioral uncertainties for SMEs and, subsequently, economic risks when a new market is opened as part of a cooperation with a foreign partner company. The performance effects of the actors’ self-commitment are seen particularly in the
reduction of behavioral uncertainty in long-term and complex relationships (Adler, 2001; Eberl, 2004), which are typical for cooperative internationalization strategies. Consequently, it can be assumed that the performance effect of self-commitment in trans-national cooperation is more pronounced than in cooperation with companies from the same country.

H3: When it comes to the performance of the participating enterprises, the impact of...
H3a: The self-commitment of the cooperating partners,
H3b: Maxim-based cooperation structures, and
H3c: Maxim-based communication

is stronger in international cooperations than in national cooperations.

Methodology

Sample

The analysis is based on a stratified sample of Austrian, Czech, and Slovenian SMEs which were interviewed in 2006. A total of 10,000 companies were surveyed, whose contact information was obtained from national economic databases (Austria: Aurelia; Czech Republic: Albertina; Slovenia: IPIS). For stratification, the countries studied were first divided into regions (NUTS 2), and the amount of surveys mailed was aligned with the amount of SMEs (according to the EU definition) of each region and with the share of the total number of SMEs in the country. That way, an over- or under-representation of SME from peripheral regions was avoided. Because for SMEs a flat, bell-shaped curve of cooperation frequencies can be observed regarding company size (Huber, 2003), a second stratification (1:3:1) for micro-enterprises (up to nine employees), small enterprises (10–49 employees) and medium enterprises (50–249 employees) was conducted to increase the amount of cooperating SMEs in the sample.

The questionnaires were sent to the founders and/or owners of SMEs, as they can be viewed as the suitable contact persons for questions regarding corporate cooperation (Huber and Power, 1985). The return rate was 4.6% (Austria: 6.0%, Slovenia: 5.0%, Czech Republic: 3.5%; total 458 returned questionnaires). Along with the usual restrictions when surveying SMEs (Newby et al., 2003), this apparently low return rate can also be attributed to the extent of cooperation frequency from this kind of company. Assuming that non-cooperating companies systematically refrained from participating in the survey, the relevant return rate (of cooperating SMEs) lies in the realm of 15–20%. Additional analyses found no indication of a non-response bias. The wave analysis, the archival analysis, and the follow-up approach did not identify any systematic distortions. Thus, a representative sample can be assumed (Rogelberg and Stanton, 2007).

Of the 458 enterprises, 303 stated that they cooperate with another company. Out of these, we explicitly selected enterprises that were older than four years, because in younger enterprises (i.e. start-ups), there were a) only very few instances of cooperation and b) performance of these very young enterprises is to a large degree impacted by general liabilities of newness and smallness, so that it would be difficult to tease out the impact of cooperation. Moreover, we selected enterprises between 4 and 12 years of age, since for older/long established enterprises, it would have been difficult to obtain information about their first (international) cooperation. In sum, we ended up with 146 enterprises. From these 146 enterprises, 79 international cooperations and 67 national cooperations were available for the final analysis.

Operationalization

Constructs and variables

Turnover growth was selected as the dependent variable, because it is an important goal for SMEs and one of the most-used indicators for new venture performance. It is also frequently used in entrepreneurship research (Carton and Hofer, 2006) as well as in the literature on internationalization of SMEs (Kalantaridis, 2004). For the control variables, company size (number of employees, metric) was used.

For the independent variables, formative constructs for "self-commitment," "maxim-based cooperation structure," and "maxim-based communication" were created. Formative measurement models can be contrasted with reflective measurement models. In the former, it is assumed that the theoretical concept is a consequence of the variables assigned to it (Jarvis et al., 2003). Variations of individual indicators cause construct variations, but not necessarily variations of other indicators. Intercorrelations between the indicators therefore do not need to exist. Because the construct is "composed" of the indicators, the indicators are not interchangeable. Instead, the selection of indicators influences the content domains of the construct.

In reflective models, it is assumed that the assigned empirical variables result from the theoretical concept, i.e. the indicators are understood as consequences of the construct upon which they are founded. Because construct variations cause changes of the indicator variables, intercorrelations exist between the indicators. Because the indicators are seen as equally valid for the underlying construct, they are interchangeable (Jarvis et al., 2003).

We decided to apply formative indicators, drawing from an analysis using the criteria for the selection of measurement models suggested by Jarvis et al. (2003). In the scale formation process, we followed the steps proposed by Diamantopoulos and Winklhofer (2001): construct operationalization; generation of indicators and pre-test; testing for multi-collinearity; indicator quality testing; and content validity testing.

Scale formation process

The aim of construct operationalization is the content delineation of the construct. A multitude of literature analyses offered a foundation for this. Workshops and seminars at a participating research institution provided further opportunities to determine the construct contents.

The goal of the indicator generation is the selection of indicators that are ultimately used in the measurement
In this step, indicators were formed to reflect the content aspects of the constructs. Because there are only a few possibilities for statistical validation when it comes to formative constructs, an expert validation was first conducted (Anderson and Gerbing, 1991). 16 experts (holding at least a Ph.D.) from the research fields of "cooperation," "entrepreneurship," and "SMEs" were asked to allocate the items to the construct they feel they belong to. Key data of this expert validation are the coefficient of the substantive correlation $psa$ (proportion of substantive agreement), and the coefficient of the substantive validity $csv$ (substantive validity coefficient). These values are stated for each item, and then checked using a binomial test to see whether the empirically established allocation differs from a coincidental one. When the test showed that the experts could not clearly allocate an item to the theoretically correct construct (non-significant results of the binomial test), this item was not considered in the operationalization. On the basis of this examination, a substantive validity of the generated constructs "self-commitment", "maxim-based cooperation structure", and "maxim-based communication" can be assumed. Table 1 gives the detailed information on the items investigated.

The items remaining after the expert validation were allocated to the respective constructs, and then tested for multi-collinearity in order to avoid problems with the parameter estimation in PLS (Diamantopoulos and Winklhofer, 2001). The Variance Inflation Factors (VIFs) resulting from this test were well under the limit of 10.

The measurement model was estimated using the Partial Least Squares method. In assessing the measurement model, the amount and significance of path coefficients were drawn upon. The path coefficient had to be greater than 0.1, which was the case for every indicator (Chin, 1998). An exception was ‘self exposure’, which we decided to keep for reasons of the completeness of the formative construct. Applying the bootstrapping algorithm with 500 iterations, a measure for the significance of the path coefficient can be given. All path coefficients in our measurement model are significant on a level of $p < 0.01$ (see Table 1). In summary, it can be determined that the measurement model meets the quality criteria.

The test for content validity (nomological validity) could here only be conducted within the framework of the theoretically founded correlations of the structural model, as there are still no confirmed theories discussing the connection between aspects of maxim-based cooperation and other constructs (Jarvis et al., 2003).

### Analysis

In this study, along with the direct effects of cooperation characteristics, indirect effects of self-commitment on company success are also assumed (structural model). At

<table>
<thead>
<tr>
<th>Construct</th>
<th>Indicator</th>
<th>Formulation</th>
<th>Path Coefficient</th>
<th>t-value</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-commitment</td>
<td>Reputation</td>
<td>Before the cooperation came into being, I did my homework on my cooperation partner</td>
<td>0.195</td>
<td>2.762**</td>
<td>1.849</td>
</tr>
<tr>
<td></td>
<td>Frustration tolerance</td>
<td>I am convinced that I am able to withstand setbacks</td>
<td>0.214</td>
<td>2.997**</td>
<td>2.056</td>
</tr>
<tr>
<td></td>
<td>Advance on trust</td>
<td>For a successful cooperation, you have to give your cooperation partner an “advance” on trust, even if it means taking a risk</td>
<td>0.269</td>
<td>3.172**</td>
<td>2.571</td>
</tr>
<tr>
<td></td>
<td>Self exposure</td>
<td>The cooperation has a great influence on the success or failure of my company</td>
<td>0.078</td>
<td>1.392n.s.</td>
<td>1.673</td>
</tr>
<tr>
<td></td>
<td>Self restriction</td>
<td>I direct my behavior towards the shared goal of the cooperation</td>
<td>0.434</td>
<td>6.512***</td>
<td>2.582</td>
</tr>
<tr>
<td>Maxim-based cooperation structure</td>
<td>Autonomy</td>
<td>I am legally independent within the cooperation</td>
<td>0.356</td>
<td>5.010***</td>
<td>1.309</td>
</tr>
<tr>
<td></td>
<td>Equality</td>
<td>In decisions regarding the cooperation, the opinions of both partners are equal</td>
<td>0.265</td>
<td>3.252**</td>
<td>1.670</td>
</tr>
<tr>
<td></td>
<td>Mutual determination of behavior</td>
<td>My cooperation partner and I take cooperative action in the areas affected by the cooperation</td>
<td>0.590</td>
<td>8.040***</td>
<td>1.663</td>
</tr>
<tr>
<td>Maxim-based communication</td>
<td>Conscious relationship</td>
<td>My cooperation partner and I talk about the cooperation</td>
<td>0.674</td>
<td>9.930***</td>
<td>1.635</td>
</tr>
<tr>
<td></td>
<td>Honesty</td>
<td>I can get right to the point when I talk to my partner about the cooperation</td>
<td>0.423</td>
<td>5.663***</td>
<td>1.635</td>
</tr>
<tr>
<td>Performance Size</td>
<td>Turnover growth</td>
<td>Number of employees</td>
<td>1.000</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Size</td>
<td>Number of employees</td>
<td>1.000</td>
<td>--</td>
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<td></td>
</tr>
</tbody>
</table>
the same time, constructs are applied, i.e. variables that are not directly measurable, which are operationalized using formative measurement models (measurement model). The relationship between the constructs can be determined using structural equation modeling (SEM). SEM offers CBSEM (Covariance-Based SEM) and PLS (Partial Least Squares). Which method to use should be determined according to the analysis of usage conditions (Chin and Newsted, 1999).

We selected PLS for our investigation, because PLS is able to analyze small samples \((n < 100)\), such as those that have to be dealt with when comparing international and national cooperations (see H6). An additional reason for the selection of PLS was that with this method, when compared to CBSEM, non-normal distributions of the indicator variables can be dealt with, as was the case with our data set. PLS allows purely formative measurement models to be used, which is difficult with CBSEM (Chin, 1998). The underlying structural model is calculated using the statistical software package SmartPLS 2.0 (Ringle et al. 2005).

The central quality factor for the structural model is the coefficient of determination \(R^2\). An \(R^2\) of around 0.67 can be seen as good, around 0.33 as average, and values around 0.19 as weak (Santarelli and Sterlacchini, 1990). In this analysis, 18.0% of the variance of success with national cooperations and 33.9% of the variance of success for international cooperations are found. This means that the coefficients of determination in this study could be considered to be average to weak.

The strength of the relationship between two constructs is expressed using the path coefficients. Paths integrated into the model should have a path coefficient of over 0.1 (absolute value, Chin, 1998). To check whether a path is significant, a bootstrapping with 500 iterations is applied (Efron and Tibishirani, 1993).

In national cooperations, there is a significant relationship between self-commitment and success as well as between self-commitment and maxim-based cooperation structure and/or communication. However, no significant relationship could be seen between cooperation structure and success and/or communication and success. With international cooperations, on the other hand, all relationships are significant at a level of at least 5%, except with the link between communication and performance. Figure 1 shows the path coefficients with the respective significance level.

The effect size \(f^2\) indicates whether an exogenous latent variable makes a large \((f^2 > 0.35)\), medium \((0.15 < f^2 < 0.35)\), or weak \((0.02 < f^2 < 0.15)\) contribution towards explaining the variance of an endogenous variable (Table 2). It is calculated by comparing the coefficient of determination of an endogenous variable, accounting for the exogenous variable \((R^{2}_{\text{incl}})\), and not accounting for this exogenous variable \((R^{2}_{\text{excl}})\). On the basis of the \(f^2\)-value, a weak effect of the relationship between self-commitment and success and a non-existent effect cooperation structure and communication on performance can be assumed in the national model, and an average effect of the relationship between self-commitment and success and a weak effect cooperation structure and communication on performance can be assumed in the international model.

The prognostic relevance of the model is calculated by Stone–Geisser test (Stone–Geisser \(Q^2\)). This value is calculated via a blindfolding algorithm, and shows how well the empirical data could be reconstructed on the basis of the model and the estimated parameters. If \(Q^2\) is positive, a sufficient ability for prognosis can be assumed (Kraft et al., 2005). A measure for the influence of an exogenous latent variable on the prognostic relevance of a latent endogenous variable is the \(q^2\) value. It shows how the Stone–Geisser \(Q^2\) changes when a latent exogenous variable is taken out of the model. The \(Q^2\) value is to be interpreted as analogue to the effect size \(f^2\). In this analysis, the \(q^2\) values are greater than zero in every case (except for structure in the national model), albeit only marginally so in a few instances (Table 2). The estimation relevance of the model can therefore be seen as given. In both the national and international models, a weak prognostic relevance of self-commitment results, with a very weak prognostic relevance of structure and communication. Considering the quality criteria for the structure model as well as the individual quality criteria for

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**Figure 1** Structure models in group comparison, **"**\(p < 0.001\); **"**\(p < 0.01\); **"**\(p < 0.05\); # \(p < 0.10\); n.s. = not significant.
the measurement model, the validity of the entire model can be assumed nevertheless.

In assessing the differences between the path coefficients of the national and the international model, the permutation-based group comparison procedure according to Dibbern and Chin (2005) is applied, which checks whether the difference of the path coefficients significantly differs from zero between the groups. The following results are calculated from 1000 permutations for each relationship of the endogenous with the exogenous variables (see Table 3).

It can be seen that the relationship between structure and performance is significantly stronger in international than in national cooperations ($p < 0.10$).

### Results and conclusion

In this study, we showed that trust-based internationalization is a promising alternative to other forms of internationalization, particularly for SMEs. The analysis shows a positive and significant contribution to performance resulting from self-commitment by the cooperating companies, for both national and international cooperations. Hypothesis H2a can therefore not be repudiated. A group comparison of both sub-samples does not show a significant difference, whereby H3a cannot be adopted. Thus, the performance impact of behavioral coordination based on trust and self-commitment — as presented by, e.g. Cullen et al. (2000), Carson et al. (2006) and Lavie (2006) — is also confirmed within the context of national and international cooperating SMEs. It has been shown that behavioral coordination via mutual trust on the basis of self-commitment by the cooperating parties is not utopic, but instead something that occurs in real life as SMEs cooperate with one another (Fink and Kraus, 2007). The strength and robustness of the performance impact of self-commitment regarding the usage context emphasizes the universal applicability of this coordination mechanism, particularly for SMEs. In the international context, the strength of the performance impact of self-commitment may also depend on the mutual supplementation of resources such as capital, internationalization experience, and (corporate) culture (Cullen et al., 2000).

In light of the empirical findings, it could furthermore be shown that self-commitment of the cooperating enterprises results in maxim-based communication and maxim-based cooperation structures. Hypotheses H1a and H1b are therefore confirmed. These results support the presented arguments on the formation of behavioral coordination that is based upon self-commitment in complex, long-term company cooperations.

Regarding the performance implications of maxim-based communication, no significant correlation to success was found in national cooperations. This relationship was, however, positive and significant in the international sample, albeit only at a level of 10%. This indicates that H2b is not confirmed for national cooperations, but confirmed for international cooperations. The group comparison also shows that this difference is significant, confirming H3b. A possible explanation for the weakness of these relationships could be explained by, among other things, the argument presented by von Ring and van de Ven (1994), which states that maxim-based trust is a stable expectation until it is disappointed by defective behavior (using the chance to behave opportunistically). Minor deviations do not seem to noticeably disappoint or strengthen these expectations. Therefore, no additional, i.e. no self-commitment-based reduction of uncertainty is to be expected through maxim-based communication in the national context, meaning further success contributions are unlikely to be achieved. The non-verbal communication aspects that accompany the honest, conscientious communication within the cooperation seem likely to be more contributive towards success in an international context (e.g. Shah and Swaminathan, 2008).

In terms of the performance impact of maxim-based cooperation structure, no significant correlation with performance was seen in the context of national cooperations.

### Table 2 Effect size ($f^2$) and prognostic relevance ($Q^2$) regarding performance (turnover growth)

<table>
<thead>
<tr>
<th></th>
<th>Strength of effect</th>
<th>Prognostic relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$R^2_{incl}$</td>
<td>$R^2_{excl}$</td>
</tr>
<tr>
<td>National model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-commitment</td>
<td>0.180</td>
<td>0.080</td>
</tr>
<tr>
<td>Maxim-based cooperation structure</td>
<td>0.180</td>
<td>0.179</td>
</tr>
<tr>
<td>Maxim-based communication</td>
<td>0.180</td>
<td>0.179</td>
</tr>
<tr>
<td>International model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-commitment</td>
<td>0.339</td>
<td>0.271</td>
</tr>
<tr>
<td>Maxim-based cooperation structure</td>
<td>0.339</td>
<td>0.295</td>
</tr>
<tr>
<td>Maxim-based communication</td>
<td>0.339</td>
<td>0.324</td>
</tr>
</tbody>
</table>

Table 3 Group Comparison National Cooperations/International Cooperations

<table>
<thead>
<tr>
<th>Path</th>
<th>Difference</th>
<th>p-value (one-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-commitment $\leftrightarrow$ performance</td>
<td>-0.148</td>
<td>0.229</td>
</tr>
<tr>
<td>Cooperation structure $\rightarrow$ performance</td>
<td>0.283</td>
<td>0.071</td>
</tr>
<tr>
<td>Communication $\rightarrow$ performance</td>
<td>0.181</td>
<td>0.181</td>
</tr>
</tbody>
</table>

*p < 0.01; *p < 0.05; n.s. = not significant.
In the context of international cooperation, a positive relationship between the variables could be found. H2c can therefore be seen as confirmed. The group comparison shows that the correlation with performance is significantly stronger in international cooperations than in national cooperations, so that H3c can be confirmed, albeit only at a level of 10%. These results confirm findings from intercultural management (Harvey and Griffith, 2002) that also argue that international cooperations, which tend to be more frequently afflicted by uncertainty, have a greater demand for the establishment of a maxim-based cooperation structure than cooperations within a single country.

Hence, the performance impact of self-commitment in SME cooperations can be regarded as a phenomenon that is valid well beyond a narrow geographical/cultural context. Furthermore, it is shown that, particularly with international cooperations, maxim-based communication and maxim-based structures can have a positive contribution towards success.

Of course, the results presented must be interpreted in the light of the study’s limitations, such as:

1. The use of an anonymous survey, which does not permit the cooperation partner to be identified. This means that the information given about the nature of the cooperation is based upon the evaluation of only one partner, and not on information provided by both. However, had the survey not been done under the condition of anonymity, the return rate would have been far lower. These kinds of difficulties found in a quantitative survey indicate that the findings of the study presented could be solidified by further qualitative analyses.

2. The shared history of the countries studied: although cooperations were deliberately sought between partners coming from varying cultural realms for the international sample (German-speaking Austria on the one hand, Slavic countries on the other), it could, however, be that the common history of Austria with the Czech Republic and Slovenia might result in fewer differences than expected when it comes to behavioral uncertainty of the cooperating partners in international and national cooperations.

3. The limitations of PLS as a method of structural equation modeling: PLS does not allow a test of the global model quality, so that confirmatory analyses are only possible via bootstrapping analyses of local quality measures (e.g. of the relations of the structural model or the measurement model). However, in this analysis, we successfully tested key structural relationships with OLS regression. Hence, we can assume the validity of the PLS model. Second, the lack of formal quality criteria for formative constructs can be regarded as a weakness. In the context of formative measurement models, a fundamental criterion would be the completeness of the indicator space that we tried to assess by the literature-based and expert-based development of the indicators. Despite the potential weaknesses of PLS, we support our decision to use PLS, since it can deal with non-normally distributed indicator variables and with formative measurement models.

From our findings, several implications for practice and research result. The latest IIR research discusses how internationalization is at its most effective via networks and cooperations with international partners (Zahra and George, 2002). The confirmation of this connection can be seen as the first result that self-commitment is a success factor for cooperations and, with this, for cooperative internationalization. In order for a cooperation to emerge, the company, however, first needs to find a same-minded partner who is prepared to enter into a maxim-based cooperation. This is a difficult search, because self-commitment can only be communicated through leaps of faith, and a maxim-based environment of trust can only occur when this self-exposure is not taken advantage of by the other party. With this, the integral partner evaluation gains meaning (Rößl et al., 2008). The problem with this, however, is that self-exposure must be justified ex post. On the one hand, this dilemma is problematic for managers who desire a maxim-based cooperative relationship with another (international) company, as they are forced to take a risk that cannot be justified ex ante. On the other hand, it serves as a safety mechanism, as it makes the instrumentalization of maxim-based trust difficult. Although maxim-based cooperation can increase success, particularly in the internationalization of SMEs, it should not be interpreted as a management tool for short-term interventions. Instead, it is a long-term strategy requiring an appropriate psycho-social predisposition from a company’s management and employees, and needs a corresponding structure and communication while establishing external relationships. Practitioners need to keep in mind that first-time internationalizations of SMEs in particular are always learning processes (Yip et al., 2000).

A further finding from this study is that maxim-based structures represent a success factor in the context of cooperative internationalization. In this context, managers are faced with the question of how these kinds of structures can be developed. An important building block here could be the communication and development of abilities and competencies within the enterprise and providing training that is relevant for expansion and the management of maxim-based company cooperations (e.g. social competency; risk-taking; self awareness; persuasiveness; “seeing the big picture” when it comes to facing challenges; and problem-solving development).

Finally, it could be shown that maxim-based communication is also a success factor in cooperative internationalization. International cooperations require a minimum amount of specific international and intercultural know-how from the participants. This know-how involves, most importantly, sufficient language abilities as well as a basic understanding of the work and production traditions of the cooperating partners, and the values of the participating locations. This helps to dismantle uncertainties and prejudices in international cooperations, leading to greater understanding and a fundamental honesty within the partner culture. A means with which to successively develop intercultural understanding and know-how in cooperations is, e.g. the establishment of employee exchange programs between the international partner companies. These exchange activities promote mutual understanding, and represent a foundation for the building of trust. Here, the lasting proof of trustwor-
thingness and reliability play an especially particular role in the cooperation. To build a stable relationship, these must be voluntarily demonstrated by the partners, and be openly and honestly communicated.

As a consequence for science and research, self-commitment can be regarded as corporate behavior, and therefore be analyzed within the context of entrepreneurship and strategic management research (Covin and Slevin, 1991). The critical role of self-commitment in international cooperations of SMEs can be integrated and argumentatively interwoven into current IE research. A direct tie is found in the discussion on behavioral patterns of the entrepreneur in the internationalization process. Both the "authoritative" model by Oviatt and McDougall (2005) that describes the speed of internationalization and the integrative process-conception by Jones and Coviello (2005) give notion to the fundamental role of the entrepreneur and his conduct when it comes to internationalization. Self-commitment as a course of action becomes an integral element in the description of the mediating and/or moderating impact on the internationalization process (Oviatt and McDougall, 2005), i.e. it becomes one of the most significant behavioral dimensions according to Jones and Coviello (2005).

A further implication for research may lie in the analysis of internationalization processes. As Ratten et al. (2007) observe, the classic "stage models" of IE research (e.g. the Uppsala Model; see Johanson and Wiedersheim-Paul, 1975) no longer contain enough explanatory power, particularly for SMEs - as in a time of increasing global competition, firms can no longer rely on the sequential, gradual, and evolutionary development that is based on their own resources. Co-operative internationalization makes it possible for SMEs to break out of preconceived notions of internationalization and display atypical internationalization development, such as skipping over certain phases (leap frogging) or being internationally active right from the start (born globals). This can allow firms to exploit international market opportunities faster than their competitors (Millington and Bayliss, 1990). The role of a maxim-based trust in the context of born globals and leap frogging could be the focus of future research.

One of the particular strengths of this study is the development of a measurement model for maxim-based cooperation, which takes the particular features of cooperatively internationalizing SMEs into consideration. Even though the expert validation took a significant step forward towards validating the measurement model, the measurement model suggested by us needs to prove its quality in further investigations. For future research, we propose a further validation of our suggested measurement model in other contexts such as the analysis of cooperation relationships with other countries. This kind of research could also address the impact of cultural proximity and/or distance on the performance impact in cooperations coordinated by mutual trust and self-commitment. Here, a delimitation of the effect of success of formal contracts and capital interrelations (which also support coordination) would be interesting.

References


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