Part II: Establishment of Online Shops by SME Retailers and Wholesalers – A Rational Decision or Institutional Pressure? (Essay 1)²

1. Introduction

In many different sectors of trade, online selling has steadily gained in importance over recent years, and it is predicted to continue on this growth path (Gartner Industry Research 2012). A growing number of retail and wholesale companies have started to sell goods through online channels (Rask and Kragh 2004; Yang et al. 2007; Zentes and Rittinger 2009; Rittinger and Zentes 2012). For many companies, establishing an online channel poses a major challenge (Schoenbachler and Gordon 2002), especially for SMEs, due to the scarcity of available resources (Rawwas and Iyer 2013; Vaaland and Heide 2007). There is evidence that SME retailers and wholesalers are lagging behind in the adoption of these modern distribution techniques, which may place them at a disadvantage relative to larger competitors (Johnston et al. 2007; OECD 2004; Vaaland and Heide 2007). Hence, industry experts and executives from buying associations, in which SME retailers and wholesalers are often organized as members, intend to encourage the use of state-of-the-art distribution techniques such as online selling (Rawwas and Iyer 2013).

To the best of our knowledge, there is no research on what determines the intention of retail and wholesale companies, particularly SMEs, to start an online channel. Hence, the aim of this study is to examine factors that may influence this intention, namely, perceived usefulness, perceived ease of use and institutional pressure.

A theory widely used to explain the implementation of new technologies is the Technology Acceptance Model (TAM) of Davis (1986). TAM was chosen as a basis for this research because it has already been applied widely and successfully to a diverse set of technologies (Venkatesh et al. 2003). It is assumed to be the most suitable model to explain technology adoption behavior and can be modified to suit a variety of technology or system contexts (Yang et al. 2007). Additionally, TAM has been successfully applied to e-commerce (Gefen et al. 2003b), and it has been used in the perspective of organizations and SMEs, providing technology to their customers (Grandon and Pearson 2004; Riemenschneider and McKinney 2002; Riemenschneider et al. 2003).

However, the intention to use a new technology is not influenced merely by aspects of utility. For instance, Rask and Kragh (2004) argue in their study that companies may

consider participating on e-marketplaces mainly to mimic the behavior of other companies. In a study by Tingling and Parent (2002) decision makers mimicked the choice of other companies in technology selection even though these selections were contrary to extensive product evaluations conducted by the company itself. Mimetic isomorphism may be a response to uncertainty (DiMaggio and Powell 1983), and firms economize on search costs when faced with uncertainty by imitating the actions of other organizations (Haveman 1993). It has been observed in different fields of business administration that companies follow the example of others in their industry in terms of their conduct (Haveman 1993) which is the focus of the management fashion and fad literature (Abrahamson and Fairchild 1999). With regard to e-commerce, anecdotal evidence and conversations of the authors with decisions makers in SMEs demonstrated that imitating the behaviour of other companies may be an important driving force.

Therefore, in this study, it is proposed to investigate influences from the neo-institutionalist perspective using TAM as the basis of the research framework. The objective is to investigate whether the intention of an SME to launch an online shop is affected by influences from the societal environment of an SME, for instance, by the perceived pressure towards this strategy by other organizations and by mimetic behavior. As this point is of high importance but is nearly unexplored in the context of SMEs and online selling, this study aims to fill this literature gap.

The study shows, that not only rational arguments but mimicking the behavior of other firms in their environment indeed affect the intention of an SME to launch an online shop and that seeking legitimacy matters. As implication this study demonstrates that TAM as well as neo-institutionalist aspects are a promising avenue for research and deepening our understanding of a company decision to provide an online shop can be based on these theories. The managerial implications are focused on executives from buying associations who want to encourage their members to establish an online shop. Using the example of peers with online shop has been shown to be a powerful argument. Furthermore, buying associations can influence the perceived usefulness of an online shop, e.g. by conducting market research on their members’ customers.

The paper is organized as follows. First, the theoretical background of the study and the research hypotheses are presented, followed by details regarding the research design, measures, method and an assessment of the measurement model. This information is followed by hypotheses testing with partial least squares (PLS) structural equation modelling using data from a company survey (n = 864) and by the presentation of the results. Finally, the findings are summarized, the limitations of the study discussed and suggestions for further research and managerial implications are provided.
2. Theoretical Background and Hypotheses

The introduction of an online shop includes accepting a new technology and implementing it by offering an additional sales channel to customers.

2.1 TAM and the Intention to launch an Online Shop

Acceptance research focuses on the use of innovations to identify influence factors on their acceptance or refusal. One of the most relevant and influential explanatory approaches is TAM (Baier and Stüber 2010). TAM, which was introduced by Davis (1986), was initially developed in an organizational context to examine the acceptance of information technology systems at workplaces.

The central assumption of TAM is that the actual system use can be directly modelled as a function of the behavioral intention to use, which is determined by the perceived usefulness (PU) and the perceived ease of use (PEOU). Originally, PU was defined as “the degree to which a person believes that using a particular system would enhance his or her job performance” (Davis 1989, p. 320), but PU can also refer “to the performance of any generic task” (Gefen et al. 2003b, p. 54). In this study, the PU of providing an online shop to customers is focussed on. PEOU is an indicator of the effort needed to learn and utilize a new technology (Gefen et al. 2003a). In the case of this study, PEOU refers to the ease of establishing and operating an online shop, including all necessary activities.

The main goal of the original TAM was to provide an explanation of the determinants of computer acceptance. This explanation should be general and capable of explaining behavior across a range of different technologies and populations, as well as theoretically justified (Davis et al. 1989). TAM was extended by Venkatesh and Davis (2000) (TAM2) and Venkatesh and Bala (2008) (TAM3) to present a complete nomological network of determinants.

For many applications, TAM has shown its practical importance as a flexible and expandable modelling instrument, and it is one of the most widely researched predictive models for technology adoption (Baier and Stüber 2010; Gefen and Straub 2000; Lee et al. 2003; Venkatesh and Ramesh 2006). Numerous empirical tests in the last 20 years have shown that TAM is a strong and robust model of technology acceptance behavior for a wide variety of (information) technologies (Gefen et al. 2003b; Kauer et al. 2012; Venkatesh et al. 2003).

TAM is also one of the most widely used models in terms of explaining the acceptance of e-commerce, not only with regard to personal usage but also concerning the provision of a new technology by a company to its customers (Domma et al. 2010; Gefen et al. 2003b; Gefen and Straub 2000; Li and Huang 2009; Moon and Kim 2001). Riemenschneider et al. (2003) base their explanation of the intention of an SME to
provide different information technologies to customers, e.g., a web presence, on TAM. Other authors use TAM and variables based on TAM to explain the introduction of EDI in SMEs (e.g., Grandon and Pearson 2004; Iacovou et al. 1995) or to explain technology selection of decision makers in companies (Tingling and Parent 2002). While TAM is a theory about individual decision processes, these authors argue that SMEs’ decisions about the provision of new technologies to customers are usually taken, or are at least dominated, by individual decision makers (Riemenschneider et al. 2003).

Hence, in this paper the main components of TAM, perceived usefulness (PU) and perceived ease of use (PEOU), are used as a basic structure to explain the intention of an SME to launch an online shop:

Hypothesis 1: The greater the perceived usefulness (PU) of online selling for an SME, the greater the intention (INT) to launch an online shop.

Hypothesis 2a: The greater the perceived ease of use (PEOU) of online selling for an SME, the greater the intention (INT) to launch an online shop.

Hypothesis 2b: The greater the PEOU, the greater the PU of online selling

2.2 Neo-institutionalism, Legitimacy and Mimetic Isomorphism

The neo-institutionalist approach of organizational theory has a sociological foundation and can be traced to the two key articles of Meyer and Rowan (1977) and (DiMaggio and Powell 1983). The main path of argumentation is that established models of organizational theory focus too strongly on efficiency and a rational decision making process while neglecting the influence of social actors in the environment and the social framework of norms, values, and taken-for-granted assumptions about what constitutes appropriate or acceptable economic behavior (Powell and DiMaggio 1991). At the core of the neo-institutional perspective lies the concept of organizational legitimacy, which replaces the pursuit of efficiency (Park et al. 2012). The general assumption is that organizations that adopt institutionalized norms and rules of the environment raise their legitimacy (Meyer and Rowan 1977). There are various views of legitimacy. This paper adopts the popular definition of Suchman (1995, p. 574), who defines legitimacy as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions.” Under uncertainty, firms often opt to adopt well-known practices and structures to gain legitimacy in their institutional environment (Cheng 2010; Kostova and Roth 2002; Zucker 1987). Furthermore, the introduction of new practices is “driven by the necessity to conform, rather than to achieve superior objective performance” (Rocha and Granerud 2011, p. 262). This process, in which institutional pressures lead firms to adopt similar practices to gain
legitimacy, is labelled isomorphism, and three types of isomorphism have been distinguished (Cheng 2010; DiMaggio and Powell 1983; Hewett et al. 2003; Tingling and Parent 2002):

- **Coercive isomorphism** represents formal and informal pressures from other external organizations in environment of the firm.
- **Mimetic isomorphism** is based on the tendency of a firm to copy the actions of other organizations.
- **Normative isomorphism** indicates an alignment of behavior within professions and a homogenization of behavior, e.g., through powerful people within a firm.

In all these cases, the adoption of specific behavior from the organizational environment will raise the legitimacy of the firm and improve access to specific social resources to secure the long-term viability of the firm (Hewett et al. 2003; Zucker 1987). In their study on motives for e-marketplace participation, Rask and Kragh (2004) mention that companies may also consider joining e-marketplaces mainly to mimic the behavior of other companies. Tingling and Parent (2002) demonstrated the strong effect of mimetic isomorphism on the technology selection process in companies which, in their experiment, even lead to the selection of technologies that were rationally considered suboptimal. The intention of a firm to launch an online shop is a decision under uncertainty regarding both technical aspects and financial success. Given this uncertainty, SMEs are likely to imitate practices that are used by other companies in their environment (Brandau et al. 2013).

*Hypothesis 3: The more common an SME perceives online shops to be in its trade sector, the greater its intention to launch an own online shop.*

Within a social network, the institutional perspective emphasizes that external conformity pressures influence a firm’s willingness to adopt organizational innovations (Scott 1995). Through external connections in peer groups, information and social influences such as norms and values can be transferred and can thus affect the behavior of a firm (Geletkanycz and Hambrick 1997; Grewal et al. 2001). In such a situation, SMEs are likely to incorporate socially legitimated practices (Cheng 2010). For SMEs in retailing and wholesaling, an important peer group is the buying association of which the company is a member. Members of such an association who adopt a new practice may do so to fulfil the expectations of others in their environment. Thus, perceived pressure from the peer group enhances the likelihood of adoption of a new technology (Abrahamson and Rosenkopf 1993; Oliver 1991). Thus, the following is posited:

*Hypothesis 4: The greater the perceived pressure from the peer group to implement an online shop, the greater the intention of an SME to launch an online shop.*
2.3 Factors influencing PU and PEOU

In addition to the five hypotheses that have been argued above and that refer to the main research questions of this study, additional hypotheses are being posited. These propositions concern factors that may influence PU and PEOU in the case of SMEs, and they are investigated to derive more concrete managerial implications from the study. In doing so, the authors adopt the possibility of modifying TAM and incorporating additional constructs, similar to many other studies (e.g., Venkatesh and Bala 2008; Venkatesh and Davis 2000). In particular, external variables have frequently been shown to influence PU and PEOU (Legris et al. 2003; Yang et al. 2007). The proposed influence factors are more exploratory in character and have been gathered partially from in-depth interviews that the authors held with executives from different retail and wholesale companies.

The type of product has been found to have an influence on customer preferences for online buying (Grewal et al. 2004). In practice, highly different market shares of online selling can be observed between different product categories (e.g., Deloitte 2012). The reasons can be manifold, including different logistics costs for different product groups. While the PU of an online shop in a product group where online shopping remains rather irrelevant may be low, it is likely to rise with the increasing market relevance of online shopping. Therefore, the following is posited:

*Hypothesis 5: The greater the expected market relevance of online selling in a specific product category, the greater the PU of an online sales channel.*

Customer expectations can result in pressure on retailers to introduce an additional sales channel (Schoenbachler and Gordon 2002). For other technologies, such as EDI, it has been demonstrated by previous research that a major reason for SMEs to provide such technologies to customers is because of the external pressure customers exert (Iacovou et al. 1995). Therefore, it is expected that the perceived pressure by customers influences the PU of an online sales channel:

*Hypothesis 6: The greater the perceived pressure by customers to offer an additional sales channel, the greater the PU.*

Experience and knowledge of, e.g., specific activities, constitutes an important base for making decisions (Acedo and Jones 2007). In this study, PEOU refers to the ease of establishing and operating an online shop. It seems clear that this task becomes easier with increasing knowledge. Greater knowledge has been shown to facilitate the establishment of a new sales technique (Rawwas and Iyer 2013). Therefore, the following is posited:

*Hypothesis 7: The greater the business knowledge about online selling, the greater the PEOU.*
External support can help a company to establish and operate an online shop, which may be of particular relevance for an SME with its limited resources (Vaaland and Heide 2007). Thus, the perceived availability of adequate external support may be an influence factor on the perceived ease of establishing and operating such a shop. Previous studies have demonstrated that external support has a positive influence on PEOU (Igbaria et al. 1997; Lee 2008). It is not merely the quantity of external support but, rather, the perceived quality of the support offered that is supposed to improve the PEOU. Therefore, the following is posited:

**Hypothesis 8: The better the perceived offer of external support to launch an online channel, the greater the PEOU.**

To provide an online shop, technological resources play a major role and were also used in TAM (Mathieson et al. 2001). Resource limitations, which are quite common in the case of SMEs, affect the implementation of e-business strategies (Vaaland and Heide 2007). Hence, we expect that the availability of technical resources within a firm will positively influence the PEOU of online selling.

**Hypothesis 9: The greater the level of technological resources available to an SME, the greater the PEOU of an online sales channel.**

Resources have a critical impact on the success of a firm. The availability of resources is often intertwined with the size of a company, especially for SMEs (Karjalainen and Kemppainen 2008). Because resource limitations that may be rooted in the size of an SME affect company strategy (Vaaland and Heide 2007), we expect company size to influence the level of available (technological) resources.

**Hypothesis 10: The larger the SME, the greater the level of technological resources.**

To visualize our research model, Figure 4 summarizes the hypotheses and the relationships between the analyzed constructs.
Part II: Establishment of Online Shops by SME Retailers and Wholesalers

Figure 4: Proposed research model and hypotheses
Source: Own illustration.

3. Methodology

3.1 Research Design

To test our hypotheses, an online questionnaire was distributed to SME retailers and wholesalers during the fall season of 2012. A total of 5,332 companies, all members of seven German buying associations working in one or several retail and wholesale sectors, were addressed by e-mail (ANWR: shoes, sports equipment, leather goods; Beauty Alliance: perfumery/cosmetics/drugstore; Brillenprofi: ophthalmic optics; E/D/E and Nordwest: industrial safety, construction equipment, fastening systems, fixtures, factory equipment, hand/power/precision tools, building services, metalworking machinery, steel, technical trade; Garant Möbel: furniture and kitchen; Noweda: pharmaceuticals). Of the SMEs contacted, 1,013 participated in this study, yielding a response rate of 19%. Among the respondents, retail companies account for 595 participants, while wholesalers account for 418 participants. After eliminating data
records with missing values on more than 10 % of the variables, the remaining cases of participants (n = 864) were used in the data analysis to test the model. The responding companies employ between one and 500 staff members, with 80 % of the firms having between one and 26 employees. Furthermore, the companies generate sales between EUR 0.1 and 190 million a year, with 80 % of responding companies achieving sales between EUR 0.1 and 7 million a year.³

3.2 Measures and Method

Multiple item scales were used to measure the research constructs. For the proposed model, the basic variables of TAM and their operationalisations were taken from Davis et al. (1989), Venkatesh and Bala (2008) as well as Venkatesh and Davis (2000) and were adapted to the context of online retailing. To measure the constructs “commonness of online shops” (MIM) and “perceived peer pressure” (COER), own operationalisations were developed. This was necessary because no well-established measurement instruments currently exist for mimetic isomorphism and coercive isomorphism (Mizruchi and Fein 1999; Sanders and Tuschke 2007). Detailed information on the measurement can be found in Table 6.

To test for a possible common method bias, Harman’s single factor test was used (Podsakoff and Organ 1986). With respect to the present data, no single factor becomes apparent. Following the suggestion of Podsakoff et al. (2003), the marker variable technique was additionally used. A marker variable was included in the model as a latent variable that directly affects every other variable in the model. Only marginal changes in path coefficients and no changes in significance levels were found. Therefore, both methods indicate that common method bias should not present a major concern for the data set. Partial Least Squares (PLS) path modelling using the program SmartPLS (Ringle et al. 2005) was chosen for the analysis. PLS has become a popular research tool and has been used by researchers from numerous disciplines, including strategic management, management information systems, e-business, marketing and organizational behavior (Hair et al. 2013b). Due to its methodological advantages, PLE-SEM provides researchers with flexibility in modelling relationships, enables a nuanced testing of theoretical concepts (Esposito Vinzi et al. 2010; Hair et al. 2013b; Hair et al. 2013a) and avoids the problem of underidentification that can occur under covariance-based analysis (Bollen 1989). The aim of PLS is the optimization of the explanatory power of the model.

³ To investigate the potential influence of the heterogeneous sample, the authors also ran the analysis after eliminating the 20 companies with the highest sales and the 20 companies with the highest number of employees. No effect on the results was detectable.
<table>
<thead>
<tr>
<th>Construct</th>
<th>Measurement model</th>
<th>Type of Measurement</th>
<th>Item</th>
<th>Measurement</th>
<th>Loading</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected market share</td>
<td>r</td>
<td>FT</td>
<td>MARK 2</td>
<td>Market share of online shops 2016 in the sector in %.</td>
<td>0.635</td>
<td>***</td>
</tr>
<tr>
<td>Customer pressures</td>
<td>r</td>
<td>L</td>
<td>MARK 3</td>
<td>Difference market share of online shops 2016-2011 in %.</td>
<td>0.589</td>
<td>***</td>
</tr>
<tr>
<td>Business knowledge</td>
<td>r</td>
<td>L</td>
<td>PRE 1</td>
<td>Our customers expect us to offer an online shop now or in the near future.</td>
<td>0.924</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PRE 2</td>
<td>Our customers will not approve in the long run, of not having the ability to shop online with us.</td>
<td>0.983</td>
<td>***</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>KNOW 1</td>
<td>Our company has comprehensively dealt with online selling and is deep in the topic.</td>
<td>0.944</td>
<td>***</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>KNOW 2</td>
<td>Our company has profound knowledge concerning possible models of online selling in our field of business.</td>
<td>0.908</td>
<td>***</td>
</tr>
<tr>
<td>External support</td>
<td>r</td>
<td>L</td>
<td>EXT 1</td>
<td>How satisfied is your company with the support offer of the buying association for launching and operating an online shop of their members?</td>
<td>1.000</td>
<td>***</td>
</tr>
<tr>
<td>Technological resources</td>
<td>f</td>
<td>L</td>
<td>RES 1</td>
<td>Our company has a high IT competency.</td>
<td>0.943</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RES 2</td>
<td>Our company has used a merchandise planning and control system for several years to support internal processes.</td>
<td>0.109</td>
<td>***</td>
</tr>
<tr>
<td>Company size</td>
<td>f</td>
<td>FT</td>
<td>COMP 1</td>
<td>Number of employees.</td>
<td>1.000</td>
<td>***</td>
</tr>
<tr>
<td>Perceived usefulness</td>
<td>f</td>
<td>L</td>
<td>PU 1</td>
<td>An online shop is useful to better fulfil the desires of our customers.</td>
<td>0.463</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PU 2</td>
<td>An online shop helps us to retain existing customers.</td>
<td>0.292</td>
<td>***</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>PU 3</td>
<td>An online shop can generate profit in the medium term.</td>
<td>0.424</td>
<td>***</td>
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<tr>
<td>Perceived ease of use</td>
<td>r</td>
<td>L</td>
<td>PEOU 1</td>
<td>Launching and operating an online shop is not a major problem.</td>
<td>0.860</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PEOU 2</td>
<td>Designing and operating an online shop by our perceptions is not difficult.</td>
<td>0.791</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PEOU 3</td>
<td>Current online shop systems make it easy to develop an online shop.</td>
<td>0.901</td>
<td>***</td>
</tr>
<tr>
<td>Commonness of online shops</td>
<td>r</td>
<td>L</td>
<td>MIM 1</td>
<td>In our retail/wholesale sector, it is now common to have an online shop.</td>
<td>0.802</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MIM 2</td>
<td>Many of our competitors already operate online shops.</td>
<td>0.914</td>
<td>***</td>
</tr>
<tr>
<td>Intention</td>
<td>f</td>
<td>L</td>
<td>INT 1</td>
<td>Our company will launch for sure an online shop in the years ahead.</td>
<td>0.816</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>INT 2</td>
<td>Our company will invest substantial amounts of money for launching and operating an online shop in the next years.</td>
<td>0.238</td>
<td>***</td>
</tr>
<tr>
<td>Perceived peer pressure</td>
<td>r</td>
<td>L</td>
<td>COER 1</td>
<td>(inverse) Other members of the buying association criticise it when colleagues operate an online shop.</td>
<td>0.799</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>COER 2</td>
<td>Online selling is widely encouraged by other members of my buying association.</td>
<td>0.835</td>
<td>***</td>
</tr>
</tbody>
</table>

Note: f: formative measurement model; r: reflective measurement model; L: 5-point Likert scale (from 1 = "strongly disagree" to 5 = "strongly agree"); FT: numerical free text field; Significance of t-values (bootstrapping procedure, n = 864; 5,000 samples): ***p < 0.001, **p < 0.01, *p < 0.05.
Therefore, PLS is well suited for fields of research where specific effect relationships within
the structural equation model or corresponding measurement models are not yet well

4. Results and Discussion

4.1 Model Assessment

In contrast to covariance-based methods, PLS, with its distribution-free character,
involve no assumptions about the distribution of measurement variables or the
independence of observations (Henseler et al. 2009; Vilares et al. 2010). Thus, a global
fit criterion to assess the performance of the model is unavailable, and non-parametric
tests have to be used instead (Chin and Newsted 1999; Henseler and Sarstedt 2013).
To overcome this issue, each part of the PLS model needs to be validated separately
(Esposito Vinzi et al. 2010). A catalogue of criteria to assess partial model structures
was provided by (Chin) and ensures that the results of the structural model can be used
to draw reliable and valid conclusions (Lew and Sinkovics 2013).

Both formative and reflective measurement models were used in the research model.
Initially, the reflective measurement models are evaluated with regard to their
reliability and validity. For internal consistency reliability, a value above 0.7 in the early
stages of research and values above 0.8 or 0.9 in advanced stages are regarded as
satisfactory (Bagozzi and Yi 2012; Nunnally and Bernstein 1994). With all values of CR
above 0.7, acceptable internal consistency reliability is obtained. In addition, the
reliability of each indicator in our reflective measurement models was assessed
following the procedure of Hair et al. (2013a). Furthermore, the convergent and
discriminant validity was examined following Fornell and Larcker (1981). Convergent
validity is obtained which was analyzed with the AVE. In the case of discriminant
validity, the shared variance between the latent variable and its indicators should be
larger than the variance shared with other latent variables (Hulland 1999). Such is the
case for all constructs (cf. Table 7).

<table>
<thead>
<tr>
<th></th>
<th>CR</th>
<th>AVE</th>
<th>PRE</th>
<th>MARK</th>
<th>EXT</th>
<th>COER</th>
<th>MIM</th>
<th>PEOU</th>
<th>KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRE</td>
<td>0.899</td>
<td>0.816</td>
<td>1</td>
<td>0.237</td>
<td>0.012</td>
<td>0.168</td>
<td>0.315</td>
<td>0.018</td>
<td>0.094</td>
</tr>
<tr>
<td>MARK</td>
<td>0.753</td>
<td>0.513</td>
<td>0.487</td>
<td>1</td>
<td>0.000</td>
<td>0.076</td>
<td>0.184</td>
<td>0.002</td>
<td>0.026</td>
</tr>
<tr>
<td>EXT</td>
<td>1.000</td>
<td>1.000</td>
<td>0.108</td>
<td>-0.020</td>
<td>1</td>
<td>0.047</td>
<td>0.037</td>
<td>0.024</td>
<td>0.000</td>
</tr>
<tr>
<td>COER</td>
<td>0.801</td>
<td>0.668</td>
<td>0.409</td>
<td>0.275</td>
<td>0.216</td>
<td>1</td>
<td>0.176</td>
<td>0.014</td>
<td>0.014</td>
</tr>
<tr>
<td>MIM</td>
<td>0.849</td>
<td>0.739</td>
<td>0.561</td>
<td>0.429</td>
<td>0.192</td>
<td>0.420</td>
<td>1</td>
<td>0.005</td>
<td>0.043</td>
</tr>
<tr>
<td>PEOU</td>
<td>0.888</td>
<td>0.725</td>
<td>0.134</td>
<td>0.046</td>
<td>0.154</td>
<td>0.117</td>
<td>0.067</td>
<td>1</td>
<td>0.050</td>
</tr>
<tr>
<td>KNOW</td>
<td>0.923</td>
<td>0.858</td>
<td>0.307</td>
<td>0.162</td>
<td>-0.001</td>
<td>0.118</td>
<td>0.208</td>
<td>0.225</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note: Correlation (below diagonal) versus squared correlation (above diagonal).*

**Table 7: Composite Reliability, AVE and correlation matrix with shared variance estimates**

Source: Own illustration.
All formative indicators were checked by calculating the variance inflation factors (VIFs) (Bollen 1989; Diamantopoulos and Winklhofer 2001). In our study, no indicator revealed a multicollinearity problem (VIF < 3 for all indicators). Furthermore, the weights were inspected; except for one item of the technological resources (RES 2), all formative indicators showed significant t-values (t > 3.29), as determined using a bootstrap procedure.

Reliable and valid outer model estimations allow an evaluation of the inner path model. The main focus is on the predictive power in terms of explained variance and the significance of path estimates. In our study, an $R^2$ of 0.528 for INT and of 0.418 for PU were calculated. Thus, the values for both INT and PU are moderate, and the model explains 52.8 % and 41.8 % of their variance, respectively. The $R^2$ values for PEOU (0.124) and RES (0.048) are rather low. Following Falk and Miller (1992), who suggested that the $R^2$ for endogenous variables should be greater than 0.1, the $R^2$ value for PEOU is still considered acceptable.

To determine statistical inference and confidence, a bootstrapping procedure ($n = 864; 5,000$ samples) was used. Almost all path coefficients show a high significance level ($t > 2.58$). The exception is the path from PEOU to INT, which has an insignificant t-value of 0.75. In addition, the effect size was evaluated with Cohen’s $f^2$, which demonstrates the increase in $R^2$ relative to the proportion of the remaining unexpected variance of the endogenous latent variable. For the effect size, Cohen defines $f^2$ values of 0.02, 0.15 and 0.35 as small, medium and large, respectively (Chin; Cohen 1988). The path from PU to INT shows a large effect size (0.54), while that from MIM to INT is small (0.07). No significant effect size was detectable for the path from PEOU to INT. All other paths in the model show small to medium effect sizes (c.f. Figure 5).

The prediction capability of the model was assessed with Stone-Geisser’s $Q^2$ using a blindfolding procedure (for a detailed description of blindfolding, see Tenenhaus et al. 2005). For all latent endogenous variables, the value is greater than zero (PU: 0.291; PEOU: 0.069; INT: 0.422; RES: 0.037), and predictive relevance is given.
4.2 Hypotheses Testing and Results

The results of the hypotheses testing and the estimated path coefficients and t-values are presented in Table 8. The findings for the core hypotheses are described as follows. In hypothesis 1, a positive effect from the perceived usefulness of online selling on the intention of a company to launch an online shop was posited. The findings show a strong impact of PU on INT; PU emerged as the most influential factor in our study. Hence, rational explanatory factors have a strong impact, and the intention to launch an online shop is influenced through aspects of PU; hypothesis 1 was supported by the data. Contrary to hypothesis 2a, the perceived ease of use showed no significant direct effect on the intention in our analysis; thus, hypothesis 2a had to be rejected. This mirrors previous TAM studies, where the direct effect from PEOU to INT was also not supported (Gefen and Straub 2000; Svendsen et al. 2011). However, an effect from PEOU to PU was detectable, which supports hypothesis 2b.

Moreover, a significant positive effect of how common it is to have an online shop in the retail or wholesale sector on the intention of an SME to establish an online shop
was observed. This result shows, as hypothesized, that the intention to start online selling is not only driven by rational arguments of usefulness but also by mimetic isomorphism, i.e., by influences from the environment and from the decisions of other retailers or wholesalers. Hence, hypothesis 3 is supported by the data. Hypothesis 4, which proposes that the perceived pressure from other organizations in the environment of an SME positively affects the intention to launch an online shop, was also supported. Thus, coercive isomorphism also plays a role.

Hypotheses 5-10, which investigate antecedents of perceived usefulness and perceived ease of use within the context of online selling by an SME, were all supported by the data (cf. Table 8).

As a potential alternative explanation of the effect of company size, a direct influence of the company size on the intention to launch an online shop was also tested. However, neither a significant $\beta$ coefficient nor an $f^2$ that would indicate a relevant relationship were detected. Thus, company size mainly influences the intention to launch an online shop via the available technological resources, which influence the perceived ease of use of such a channel.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path of the structural model</th>
<th>$\beta$</th>
<th>t-value</th>
<th>p</th>
<th>$f^2$</th>
<th>H: ✓/ ✗</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>PU → INT</td>
<td>0.582</td>
<td>22.994</td>
<td>***</td>
<td>0.54</td>
<td>✓</td>
</tr>
<tr>
<td>H2a</td>
<td>PEOU → INT</td>
<td>0.012</td>
<td>0.753</td>
<td>0.00</td>
<td>0.00</td>
<td>✗</td>
</tr>
<tr>
<td>H2b</td>
<td>PEOU → PU</td>
<td>0.172</td>
<td>5.969</td>
<td>***</td>
<td>0.03</td>
<td>✓</td>
</tr>
<tr>
<td>H3</td>
<td>MIM → INT</td>
<td>0.202</td>
<td>6.979</td>
<td>***</td>
<td>0.07</td>
<td>✓</td>
</tr>
<tr>
<td>H4</td>
<td>COER → INT</td>
<td>0.078</td>
<td>2.771</td>
<td>**</td>
<td>0.01</td>
<td>✓</td>
</tr>
<tr>
<td>H5</td>
<td>MARK → PU</td>
<td>0.188</td>
<td>6.115</td>
<td>***</td>
<td>0.02</td>
<td>✓</td>
</tr>
<tr>
<td>H6</td>
<td>PRE → PU</td>
<td>0.488</td>
<td>17.205</td>
<td>***</td>
<td>0.29</td>
<td>✓</td>
</tr>
<tr>
<td>H7</td>
<td>KNOW → PEOU</td>
<td>0.157</td>
<td>4.839</td>
<td>***</td>
<td>0.02</td>
<td>✓</td>
</tr>
<tr>
<td>H8</td>
<td>EXT → PEOU</td>
<td>0.158</td>
<td>4.282</td>
<td>***</td>
<td>0.03</td>
<td>✓</td>
</tr>
<tr>
<td>H9</td>
<td>RES → PEOU</td>
<td>0.218</td>
<td>6.654</td>
<td>***</td>
<td>0.08</td>
<td>✓</td>
</tr>
<tr>
<td>H10</td>
<td>COMP → RES</td>
<td>0.219</td>
<td>10.743</td>
<td>***</td>
<td>0.05</td>
<td>✓</td>
</tr>
</tbody>
</table>

Note: Significance of t-values (bootstrapping procedure, n = 864; 5,000 samples): ***p < 0.001, **p < 0.01, *p < 0.05.

Table 8: Tested hypotheses and path coefficients

Source: Own illustration.

5. Conclusion

5.1 Conclusion, Limitations and Research Implications

Even though the main objective of this study was to test the influence of institutional pressure on the intention to establish an online shop and not to provide a complete explanatory model, the proposed model explains 52.8 % of the variance of the dependent variable. The results of this study indicate that PU, as a major aspect of
rationality, has the strongest effect on the intention to establish an online shop. Indeed, PU dominates all other justification paths, which is similar to the findings reported by other studies (e.g., King and He 2006; Lee et al. 2003).

However, as Svendsen et al. (2011) stated, constructs other than PU and PEOU may also affect technology acceptance. In the present data set, beyond rational arguments, the intention to launch an online shop is affected by mimetic isomorphism, i.e., mimicking the behavior of other firms in the environment. Coercive isomorphism, i.e., adapting to perceived pressure from the peer group of an SME, also shows a significant influence on the intention, although not as pronounced. Hence, firms in the sample more intensively followed what a larger group of companies in their environment did rather than responding to perceived pressure from peers. In all, these results support the assumption that the decision of SME retailers and wholesalers to establish an online shop is affected by institutional influences from the environment – seeking legitimacy indeed matters.

The implications for further research are strongly related to the limitations of our study. Given the practical restrictions of the length of our survey, the constructs COER and MIM were measured with only two items each even though the constructs are considered to be complex (Mizruchi and Fein 1999; Sanders and Tuschke 2007). Further research is needed to develop a more detailed operationalization of COER and MIM within the context of SMEs. While this study focuses on the question of whether an SME mimics the behavior of a larger group of companies within the trade sector, other authors note that there might also be a “follow-the-leader” behavior (Haveman 1993), i.e., companies may tend to follow a few successful first-movers. With a modified operationalization of the variables for institutional pressures, this question should be researched as well. This research could identify which groups within the environment of an SME exert a particularly strong influence on the behavioral intentions and which groups or single companies serve as role models for mimetic behavior.

Additionally, the sample consisted only of German companies. Although there is no theoretical reason to assume that the relationships in the model are different in other countries, this issue remains to be empirically investigated.

The study results are limited also by the single respondent approach. However, the authors preferred to maximize the number of participating companies; seeking multiple respondents in each organization most likely would have drastically reduced the number of responding companies. Still, future research could try to approach several respondents in each SME.

Finally, in this paper, a model for SMEs was proposed, and only SMEs were investigated. Collecting data on large retail and wholesale companies would allow for
a comparison of whether the factors influencing the intention to launch an online shop differ between SMEs and large companies.

5.2 Implications for Managers

The most important managerial implications concern external experts and the buying associations in which many of the SME retailers and wholesalers are organized. Currently, executives from buying associations are encouraging their members to open online shops and close the gap to larger competitors because SMEs are considered to lag behind larger companies (Rawwas and Iyer 2013). The present study provides such executives with findings on how to promote the establishment of online shops to their members. Before those are pointed out, it is important to note that in this study, there was no investigation of the performance effect of establishing an online shop. Thus, the underlying assumption of buying groups that it is beneficial to their members to open an online shop, has not been tested.

The intention of an SME to establish online selling is not only affected by aspects of rationality but also by institutional influences. First, SMEs often observe what their competitors and peer companies do and take this into account in their decision-making. The imitation of practices plays an important role. Second, if relevant companies in the environment of an SME exert peer pressure and encourage the launching of an online shop, SME retailers and wholesalers conform to that pressure. However, “voluntary” mimetism seems to have a stronger impact than perceived peer pressure; mimetic isomorphism is stronger than coercive isomorphism. From the viewpoint of a buying association, they can use this result by showcasing best practice examples from within their membership base to stimulate other members to imitate that behavior. In particular, instead of attempting a “top-down” approach with the buying association’s headquarters, the buying association should stimulate discussions among its members and actively highlight the existing online shops.

By investigating aspects determining the perceived usefulness and the perceived ease of use, additional managerial implications can be derived from this study.

The perceived offer of external support has been shown to improve the perceived ease of establishing and operating an online shop. Thus, buying associations can influence the PEOU of their members by providing a broad and good support offer for their members’ online shops, as indicated by the results.

Moreover, for SMEs, the availability of technological resources, particularly for the launch of an online shop, often is a crucial factor (Vaaland and Heide 2007), and this study has demonstrated that the availability of technological resources enhances the perceived ease of use. The smaller the company, the lower these resources, as the study has shown. Thus, buying associations can improve the technological resources in
particular of their smaller members, e.g., by the provision of master data, by developing interfaces to existing information systems of their members or by hosting the online shop.

The perceived usefulness is the major influence factor on the intention to launch an online shop, and perceived customer pressure is the most influential factor on PU. From the perspective of customers of SME wholesale or retail companies, this finding shows that they can exert a strong influence on their suppliers by clearly voicing their preferences for such a channel. If a buying association is convinced that their members’ customers expect an online shop, they can conduct market research among the members’ customers and make use of the results to demonstrate the usefulness of an online shop.

Overall, the findings indicate that the investigated variables are of high relevance in explaining an SME’s intention to start an online shop and can thus be used to actively influence this behavior.
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