ENTREPRENEURS ENTREPRENEURSHIP

Challenges and Opportunities in the 21st Century

Edited by Alexandra Zbuchea

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SNSPA, Faculty of Management
30A Expozitiei Blvd., Sector 1, 012104, Bucharest, Romania
www.facultateademanagement.ro

This book first published in 2017 by Tritonic Publishing
5 Coacazelor St., Sector 2, 022651, Bucharest, Romania

ISBN (E-book): 978-606-749-241-5

HOW DIGITALIZATION CHANGES THE INTERNATIONALIZATION OF ENTREPRENEURIAL FIRMS: THEORETICAL CONSIDERATIONS AND EMPIRICAL EVIDENCE

Andreas M. WITTKOP[1]
Katrin ZULAUF[2]
Ralf WAGNER[3]

ABSTRACT
The internationalization of firms is predominantly analyzed and explained considering observations from a pre-digital business environment. Thus, the applicability to digital ways of doing business needs to be challenged. Recent literature on the internationalization of digital firms attempts to adapt existing international business literature to the digital market. However, these studies consider internet-based companies predominantly as a homogeneous group. It is a popular opinion, that digital internationalization is faster, cheaper and easier for digital companies.
The purpose of this article is to develop a comprehensive understanding on how internet-based companies internationalize in the digital market, and why their internationalization processes differ from each other. Based on an overview on the specificities of the digital marketplace, their impact on the applicability of traditional international business theory, it is developed a differentiated view on digital internationalization. Subsequently, the theoretical results are compared with primary data derived from six semi-structured interviews with digital companies.
So far, firm internationalization theory focused on variables like the internal capabilities, resource endowments or efficiencies of the value chain. It is shown, that even if these theories still have a high impact on the internationalization strategies of internet-based companies, especially in the extremely dynamic digital market, also further variables need to be considered. Additionally, to the impacts of the value creation and delivery infrastructure (e.g., firm specific capabilities and resources), also the specific way of creating value and the individual customer interface of digital businesses play a key role in digital internationalization.

KEYWORDS
Digitalization; internationalization strategy; business models.

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[1] University of Leon, Campus de Vegazana, S/N, 24071, León, Spain, andreas.wittkop@t-online.de.
[2] University of Kassel, Mönchebergstr. 1, Kassel, Germany, zulauf@wirtschaft.uni-kassel.de.
[3] University of Kassel, Mönchebergstr. 1, Kassel, Germany, rwagner@wirtschaft.uni-kassel.de.

INTRODUCTION

Innovations in modern information- and communication technologies are revolutionizing the business environment. The internet provides challenges and opportunities to new and existing companies, which are conducting business in innovative ways with a growing share of international activities.

The new marketplace on the internet –digital market– differs from the traditional market environment. Firms building up their business in the digital market are internet-based companies (IBCs). Their value creation and delivery are based on the internet, which means that if the servers would stop working, these companies would not be able to create and deliver the value that it is offering to its customers (Brouthers, Geisser & Rothlauf, 2015; Hazarbassanova, 2016).

Two research streams are identified: the traditional international business theory and the more recent international entrepreneurship (IE) approaches. The former ones were developed on the basis of observations, made more than forty years ago in pre-digital markets. At this time, international business was mainly a privilege of big multinational enterprises (MNEs). Notably, studies of MNEs confirmed strong resource endowments and success in the domestic market as a prerequisite for international success (Johanson & Vahlne, 2011). The latter approaches capture the fact that with the introduction of the internet, competing with MNEs, also small- and medium-sized businesses started to engage in international activities–frequently immediately after their foundation. IE approaches focus mainly on internal reasons, capabilities, and networks of a company as reasons for such behavior (Andersson, 2011).

Digitalization is disruptive. This means that the competitive conditions for IBCs are profoundly different from the pre-digital era. This leads to the first research question: (i) How does the digital market differ from the pre-digital market?

The changed conditions impact the characteristics of IBCs towards their pre-digital counterparts. Existing international business literature is based on the observations of an entirely different type of companies (usually pre-digital MNEs) acting under entirely different market conditions. This causes the second research question: (ii) Is pre-digital international business literature also applicable to IBCs and which adaptation may be necessary?

Studies investigating the impact of digitalization on the internationalization process consider digital companies as a homogeneous group (Brouthers *et al.*, 2015; Hennart, 2014). This approach is questionable for simple reasons. Digitalization has an impact on almost any sector of the global economy and changes the business practices profoundly. Research question 3 is, therefore: (iii) how should a theoretical framework for a differentiated analysis of IBCs look like?

The answer to the final research question then clarifies: (iv) in how far do differences among IBC's styles of conducting business, have an impact on their internationalization processes? It will be answered both through theoretical argumentation and through an empirical research.

THEORETICAL BACKGROUND

Digitalization and its impact on IB theory

Digitalization fundamentally changes the business practices, and challenges the competitive advantages of well-established businesses and provides opportunities to new businesses. The 'digital value' delivered to consumers differs from physical goods, in which most of the IB literature is rooted (Afuah, 2003; Autio & Zander, 2016). The most relevant changes are:
(i) changing determinants of competitive advantages. For digital goods, the value chain efficiencies matter less to achieve a competitive advantage than for physical goods, where this factor took a key role (Mahnke & Venzin, 2003). Digital goods can be copied, adapted to the consumer needs easily without high additional costs. Other factors, like the uniqueness of the product, as well as the brand reputation, are much stronger determinants of competitive advantages in the digital markets.
(ii) reduced transaction costs._Processes can be much more standardized and the internal and external communication and coordination is facilitated. Examples are lower costs of customer relationship management because of automated software, facilitated coordination of purchase and delivery logistics because of virtual delivery channels and automated ordering systems, facilitated governance and control mechanisms through digital online accounting (Bunduchi, 2005).
(iii) reduced asset- and location-specificity. Digital businesses can become important players in the market, even if they cannot relate back to big capital supplies, and even if they are not physically present in a sales location (Autio & Zander, 2016).
(iv) outsourcing and offshoring. IBCs can compensate their resource limitations by outsourcing and offshoring parts of their value chain, and can still be very

profitable because they are allowed to scale up rapidly, while not being bound to capacities of physical factories (Lewin & Volberta, 2011).

Considering the conditions in the digital market, it is questionable to which extent traditional and international entrepreneurship theories explain the behavior of digital companies and if they provide a sound basis to derive recommendations.

Characteristics of the digital market promote the internationalization of smaller and younger companies despite their limited budget to internationalize early and on a wide scale. Notably, traditional theories (e.g., internalization theory, the eclectic paradigm, or the internationalization process model), were developed on the basis of observations on large MNEs, often more than 40 years ago. It can be found a trend towards a weakening of the applicability of traditional theories like the internalization theory and an enforcement of the dynamics suggested by international entrepreneurship theories, e.g., knowledge-based view, resource-based view and the network theory. Nevertheless, the traditional theories help to understand the internationalization of IBCs.

The business model

Recent approaches claim the applicability of IB theory by relating to a homogeneous group of IBCs. Notably, this assumption cannot sustain considering the ubiquitous digitization of the global economy (Brouthers *et al.*, 2015). A conceptual tool to differentiate firm internationalization strategies of IBCs from each other is needed. The business model concept describes how companies are doing business and provides a structure for a heterogeneous perspective on IBCs. However, literature still does not agree on a single, clear definition of the function and components of the business model (BM). We follow the definition of Osterwalder and Pigneur (2005): "A business model is a description of the value that a company offers to one or several segments of customers and the architecture of the firm and its network of partners for creating, marketing and delivering this value to generate profitable and sustainable revenue streams."

As a conceptual tool, the business model allows a more structured decision-making in the digital business environment. It can be considered as an additional theoretical layer in between the aggregated information of strategy, which is too unspecific and the detailed information of the business processes, which is too complex to categorize IBCs in a purposeful manner.

Scholars identify up to twenty-four different items, belonging to up to eight different general components of a business model. Approaches are different in their purpose to either provide a model for the digital market or one with general applicability (Richardson, 2008).

The Business Model Components		
Value Proposition	**Value Creation and Delivery Infrastructure**	**Value Capture / Financial Aspects**
Product Value Proposition	Capabilities and Resources	Revenue Model
Customer Infrastructure	Supplier and Distributors	Economic Model
Value Creation Logic	Partner Network and Alliances	

Figure 1. The business model components

In this work, eight items organized into three essential categories are considered (see Figure 1): the value proposition, the value creation and delivery infrastructure, the value capture / financial aspects.

(i) The value proposition describes the value of the product or service offered. It explores, which customer need is satisfied and why customers are willing to spend money for the product or service. Therefore, it clarifies the overall approach to the competitive advantage (Richardson, 2008).
To distinguish IBCs in a differentiated analysis, the following items may be applied to build a segmentation on content, commerce, context, and connection. A differentiation of the digital customer interface component of the BM can be the approach of dividing the customers into digital tribes. Following this, companies are differentiated considering the target customer groups, which are not segmented using demographic data, but the interests, size, loyalty and wealth of the segment.
The value creation logic is a way to categorize value propositions and is therefore determined as the result of product value and the customer interface. The three general types of companies according to the value creation logic are long-linked, mediating and value shop (Stabell & Fjeldstad, 1998).

The value creation logic results from the product value and the customer interface. It does not have to be adapted to the digital market environment, as it only divides the IBCs into three categories. It appears to be useful for developing a structured understanding in how IBC's internationalization strategies can be distinguished from each other.

(ii) The value creation and delivery infrastructure explain the architecture of processes, which allow a business to generate a better value more efficiently than the competitors do. In addition to the internal sources of a competitive advantage, the resources and capabilities, it contains the structure of the external links of a company like suppliers, distributors, collaborates (Richardson, 2008). This component does not have to be adapted to the digital market. The key capabilities and resources are the main factors to describe the value creation architecture, and the external links may increase in importance, as outsourcing and offshoring are more frequently used.

(iii) The value capture component of the BM is essential because a sound value proposition, a highly efficient value creation and delivery infrastructure are not sufficient for maintaining a profitable business in a sustainable way. Challenging for companies in the digital markets are consumers who often expect the non-specific offerings to be offered free. Magazines, music and social networks are expected to be financed in other ways than by a direct payment. The value capture component of the business model clarifies the revenue model and the financial structure of the business in the economic model (Osterwalder *et al.*, 2005).

The impact of the business model components on IBC internationalization

Based on the theoretical basis provided before, it is possible to develop a comprehensive understanding on how digital companies are internationalizing, and why their internationalization processes differ.

Hennart (2014) questions the assumptions of traditional IB theories, suggesting that the internationalization process of young and fast internationalizing new ventures (INV) is rather due to their value proposition than to their internal resources, knowledge capabilities, personal experiences or external networks. His idea is that INVs do not have to adapt their method of customer acquisition as they are often targeting internationally similar niche markets. The lowered need for adaptations eliminates the process of incremental knowledge acquisition, which was, for example, the basis for the assumptions of the internationalization process model suggested by Johanson and Vahlne (1977, 1990). This is why INVs may even internationalize without planning it proactively. Hennart (2014) calls these companies ‘accidental internationalists’.

The second approach is the ‘lean internationalization’ approach of Autio and Zander (2016). It shows how young digital companies follow the “doing rather than planning” approach. Digital companies are often not conducting market researches before they start their international expansion. The costs and the risk of a failure decreased due to digitalization so that the advantage of ‘trying’ the market entry is considered as superior compared to a long and costly, incremental market entry (Autio & Zander, 2016).

THE IMPACT OF THE INDIVIDUAL BM COMPONENTS

Based on the identified factors that differentiate IBCs from each other, it is now investigated on the impact of each BM component on the internationalization strategies.

The impact of the value proposition

Out of the three dimensions of the value proposition introduced above, the value creation logic (Stabell & Fjeldstad, 1998) is considered to be the most appropriate tool to develop a structured understanding. It allows differentiating IBCs in into three categories, and still, includes the product value proposition and the customer interface into the segmentation. A differentiation based on the product value or the customer interface results in too many sub-categories, which hinder to develop a ‘structured’ understanding, compared to the individual theories. Hazarbassanova (2016) conducted a case study on the impact of the value creation logic on the internationalization of firms.

Impact of the value chain logic

Companies of the value chain logic category, strive for an optimization of their production processes and a decrease of costs through scale economies. This usually results in a high level of standardization of their processes (Stabell & Fjeldstad, 1998). A pre-digital example for a value chain logic is traditional manufacturing firms, which transfer inputs to outputs. Their competitive advantage is due to optimizing and standardized value chains and scale efficiencies. The customers are not involved in the production process and the communication with the customer is rather indirect. The internationalization is incremental and tends to internalize operations if TAC can be saved. Because of the high similarity to traditional manufacturing firms, Hazarbassanova (2016) interferes also a similar internationalization behavior to those big multinational manufacturing firms, on which the ‘traditional’ international business theory is based on.

Impact of the mediating network logic

Companies with a mediating network logic are often ‘co-creating’ value together with their users. Additionally, to the value offered through the infrastructure of the internet platform, also the network of interconnected users itself represents a value (Stabell & Fjeldstad, 1998). A dynamic affecting strongly on the internationalization of mediating network firms is the liability of outsidership (Brouthers *et al.*, 2015). It is necessary that a network reaches a critical number of users so that the growth of the network starts to be self-sustaining. For networks without any international context, it can be hard to internationalize, because the part of the competitive advantage deriving from the number of customers is not transferable and will start from zero again for every market entry. The pool of users may then be seen as a resource and the resource-based view may be applied – a company will internationalize as much as it is able to transfer its competitive advantage to the new markets.

Impact of the value shop logic

Companies belonging to the value shop logic are generating value through the development of customized solutions for individual problems of directly contacted customers. Examples of this type of value creation logic are consulting firms (Stabell & Fjeldstad, 1998). It is hard to standardize the underlying processes because they can seldom be formalized and codified. The competitive advantage of value shop firms is generated either through specific knowledge intensive processes or through a high reputation (Mahnke & Venzin, 2003). Offerings need to be adapted to local markets and usually cannot be outsourced as the competitive advantage based on tacit, internal knowledge that is hardly transferable to external third parties and contains a high leakage-risk (Hazarbassanova, 2016).

The impact of the value creation and delivery infrastructure

Value creation and delivery infrastructure are the architecture of processes, which together create the competitive advantage. The value proposition and the process infrastructure are usually strongly related. However, companies do not always exist as theory would suggest and the impact of the two components should be analyzed separately. Value creation and delivery infrastructure are subject to many of the traditional international business theories and international entrepreneurship approaches.

The impact of the resources and capabilities of a company are described by the resource-based view and the knowledge-based view (Knight & Cavusgil, 2004), as well as the dynamic capabilities approach (Teece, 2007). The network-based view (Afuah, 2003) relates to the partners and supplier item.

Impact of the value capture

Financial aspects and value capture impact only indirectly on the internationalization of IBCs. The endowment of capital resources is certainly a key factor (e.g., for the decision for or against external funding). However, the endowment of financial resources is already accounted in the item of 'capabilities and resources' of the process architecture.

It becomes obvious, that the individual business model components critically influence the firm. The new approaches pointing out the importance of the value proposition contribute to the understanding of the digital internationalization. The existing theories mainly focus on the items of the process architecture, internal capabilities, and resources, as well as external network links.

The theories combined above are now organized in the structure of the business model concept. Through the structure of the business model concept, the information was brought to a comprehensible level, which can be applied to further research to create or adapt business models based on internationalization purposes.

EMPIRICAL EVIDENCE

Primary data was collected in six semi-structured interviews with IBCs. The sample consists of two firms per value creation logic. We did a qualitative content analysis applying the Mayring method. First, the business model was determined and then the corresponding internationalization process (motivation, market selection, market entry, speed) was analyzed.

Figure 2 summarizes the case-specific analysis. In green, it is the market behavior of the value chain firms, in blue the behavior of the mediating network firms, and in orange, those of the value shop firms. Especially the market selection and the speed show dependencies to the type of value creation logic.

Value Creation Logic	Internet-based Company	Customer Interface	Local Partnerships	Foreign markets	Motivation	Market Selection	Market Entry	Speed
Value chain	**aviclaim.nl**	B2C	Yes	1 (but plans for whole EU)	Economic	**Psychic distance – process model**	Offshoring of location-specific activities (legal + sales)	**After being stable in home market**
	aangetekendmailing.nl	B2C	No	4 (but plans for whole EU)	Economic	**Psychic distance – process model**	Offshoring of location-specific activities (sales)	**After being stable in home market**
Mediating network	**supahands.com**	C2B	No	5 **(but only first 2 successful)**	Economic, growing network	User-following	Only online	**Immediately, but then no more**
	vitabook.de	B2C, B2B	-	0	-	-	-	**never**
Value shop	**basebuilder.com**	B2B	No	>5	Economic, Opportunity seeking	**Global, Client-following**	No local partners	**immediately**
	startupmasters.eu	B2B	Yes	>5	Economic, Opportunity seeking	**Global, Client-following**	Offshoring of location-specific activities	**immediately**

Figure 2. Summary of the case-specific analyses

'Value chain' firms seem to show an importance towards an internationalization process to countries of which they have knowledge on. Aviclaim chose to take the first step to Germany. The entrepreneurs preferred the neighbor country so that they can better get in contact with the local partners to which they outsourced the location-specific activities. Digitization, therefore, did not totally diminish the importance of physical distance. In addition, the CEO of Aangetekendmailing.nl had high knowledge of the market potential in Germany.

Both companies just internationalized after their business processes worked in the domestic market. This explains the speed of the internationalization, but dependent on the moment in which the companies considered their processes as stable.

Notably, 'mediating network' firms also followed strategies that were in line with the theoretical assumption, that network companies will not internationalize fast. Both of the companies do not have an actively ongoing internationalization process.

Vitabook did not start any internationalization at all. Supahands.com is slowly proceeding, even if there are big plans. The case-specific analysis showed that network firms at hand have difficulties to internationalize respectively to keep on proceeding with their internationalization once they established their user base in the target markets.

The network firms show a particular way to internationalize and the biggest issue is the liability of outsidership. A network cannot provide any value to the customers if it has not reached a critical mass of users so that the network growth becomes self-sustaining (Brouthers *et al*., 2015).

Both 'value shop' firms internationalized immediately after their foundation, and they are both active in more than five foreign markets. They both are not actively pursuing to target one specific market, but rather follow their clients and the next best economic opportunity.

Basebuilder.com tried to target specific markets and to offshore the sales department in order to have a better local sales relationship with potential clients. However, this did not work out and the respondent from basebuilder.com explained these phenomena with the fact that third-party salespeople are not able to convey the potentials of the customized consultancy based on the online IT-software of the company to potential customers. This is in line with the theoretical argumentation, that tacit knowledge is hardly transferable to third parties.

CONCLUSION

The contribution of this study is fourfold. (1) The conditions in the digital market environment change the strategical approaches of the firms. (2) These new approaches are also reflected in a changed approach to internationalization, which especially requires an adaptation of MNE-based theories like the Uppsala approach or the internalization strategy. (3) The business model can help to provide a structure to the big number of variables in the IB theory. (4) A differentiated analysis of IBC internationalization shows that IBCs need to be considered as a heterogeneous group. It has been connected the most relevant contributions to the three research fields of digitalization, internationalization and business model research.

Certain components of the business model of IBCs affect the heterogeneous internationalization patterns of IBCs. The relation of value proposition towards internationalization strategies has a strong evidence but is not explained by the traditional or international entrepreneurship theory.

The individual internationalization behaviors are determined by both the value proposition, and the value creation and delivery infrastructure component.

This article structures a complex and dynamic strategical topic, with substantial relevance for theory and practice. Connecting the research fields of digitalization, international strategy and business models integrates their separated innovative insights into a common understanding of differentiated digital internationalization.

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