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Language in globalized interactive business: adaptation versus standardization

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Abstract

We investigate language-related choices made in online firms characterized as 'interactive' and having multiple and varying audiences, in both consumer and business marketing environments. Online language choices and their relatedness with firm strategic and tactical behaviour has little received scrutiny. Using survey data, we investigate the role language plays in online firms. We scrutinize whether or not firms significantly adapt to their targeted markets through language and how such adaptive or standardizing behaviour relates with firm internationalization level, and further, if this behaviour relates with how firms interact with their environment. When studying how firms interact with their environment, we use a customer viewpoint – including consumer and business customer - and business network viewpoint. 'Internationalization' we study through expanding into new geographic markets and language areas. Some measured topics are factors in firm online language strategy.

Key words: language, globalization, interactive business, e-business, online marketing, electronic marketing, interactivity, international marketing, standardization, adaptation, strategy

1 Introduction

Contributing to literature on strategies in internationalization and on interactive business, with language as a focal component, we are motivated to explore whether and how firm decisions on online language relate with interactive technology usage in firms, or with internationalizing the firms. IT-enhanced business has become increasingly interactive, and variety in types of interaction (Ahlfors, 2005; 2010), in online business alone, has increased in the latest decade. Being interactive is becoming increasingly important, and creating customer/user satisfaction and value is becoming harder in the online era (McKenna, 1999).

We take an interdisciplinary approach to e-business, international marketing, and IT research, using also corporate-communicational and linguistic research streams in building our framework, and aim to offer researchers and practitioners insights into developing online business and choosing adaptive versus standardized strategies on on-site language. We combine language with online interaction and multicultural business environments, through adaptation and standardization strategy. An evident gap on this exists in literature, despite the fact that most Internet users are non-US and non-English in language.

Adaptation and standardization strategies have received much investigation (Gabrielsson and Gabrielsson, 2004, Shneor, 2012), and yet, academics also view those under-researched and requiring more input (Dimitrova and Rosenbloom, 2010; Kustin, 2004; Theodosiou and Leonidou, 2003). Researchers have addressed the global-access online business/marketing using a cultural (Ahlfors, 2005; Luna et al., 2002; Rowley, 2001, Shneor, 2012) and an access-viewpoint (Berendt and Kralisch, 2009). They have yet little notified accessible online markets to include both international and, various, domestic markets. One approach in the non-numerous, business-related research is taken on language, web-representation and internationalizing firms, in the FRISCO Report by IT-researchers (Falkenberg et al., 2000; Verrijn-Stuart, 2001).

Europe holds about the same numbers of Internet users as Americas do (Internet World Statistics, 2012), and comprises several language-areas. English language seems to prevail as *de facto* on many a corporate website, in line with Levitt in late 1980s that new technology would lead to homogenizing consumer wants and needs (de Mooij, 2003; Vrontis *et al.*, 2009). Enright (1998) acknowledges the age-old barrier to global communications being website language, and still today, this seems to apply. Translation software was meant to “break down Net language barrier” (Enright, 1998) but when translating complex languages, it often comes short. Firms have been reported to also change into using multiple languages online, by academics and practitioners (Ahlfors 2005, Linguistic Systems Inc., 2013; Sargent, 2001).

The Internet, to marketing firms, means communicating to (Poon and Swatman, 1999) and with differing markets (Singh and Matsuo, 2004) with differing characteristics, needs and wants (de Mooij and Hofstede, 2002; 2010; Vrontis *et al.*, 2009). To customers, it means being exposed to and interacting with marketers from and with differing cultural settings and characteristics. Cultural characteristics include language. (Holzmüller and Stöttinger, 2001.)

The relation of firms adapting to markets was found in Ahlfors's (2005; 2010) quantitative study on e-businesses to not significantly relate with success. In a qualitative study, de Mooij (2003) finds standardization of practices at Coca Cola leading to declining profitability. Research so far has yet to reach consensus on the situational and both organization-related (Schilke *et al.*, 2009) and environment-related (Hofer, 2015, Katsiekas *et al.*, 2006) contextual differences that may affect the suitability of either

it related with adaptive versus standardized language strategy? 2) How are firm internationalization level and language strategy related? 3) Does firm depth of interactivity, by type of adopted interaction technology, relate with firm adaptive or standardized language strategy?

First, we introduce the research, presenting the need for it and our research questions. Second, we review existing literature around internationalized interactive business, together with language-concept, moving then to reviewing adaptive versus standardized strategy literature. In the fourth section, we offer a methodological discussion, and in the fifth, present our findings. Lastly, we conclude, discussing objectives achieved and implications from our research.

2 Globalized interactive business and language

Limiting mobile business out of our scope, we focus on online, interactive business. It includes both business-to-consumer and business-to-business marketing. Interactive business, we define here, following Ahlfors (2005; 2010) as a synonym to electronic business yet, further, a complex phenomenon that includes, supports and enables e-commerce and informational and relational exchange, through information and communication technology (Ahlfors, 2005; 2010; Kuivalainen, 2003; Sallinen, 2002).

Interactivity has received various definitions in earlier research. We see interactivity (McMillan, 2002, McMillan and Hwang, 2002) as a key concept that electronically enabled firms and other organizations are facilitated to use in relating with channel members, through mutual value creation, and in various processes. (Ahlfors, 2005; 2010.)

‘Interactive’ refers to communicating between people or organizations, to communicating within organizations, and also to communicating using human interaction models. Applying these models to computer-mediated corporate (McCullough Johnston, 2001) and human-corporate communication, we acknowledge Gurau and colleagues’ (2003) view of interactivity, not merely comprising the common perception of practitioners but also including result-orientation and self-regulation.

2.1 Online business and Internet research approaches to language

In our research context, we take a perspective of interaction in reviewing research on the topic. The above definition of interactive business helps the reader to take into account the definition of interactive business, when reading the study. The concept ‘interaction’ captures here both communicating between entities, and interacting between human and computer/agent, which has much to do with searching (Lazarinis et al., 2009), also to proceeding placing orders and so forth. Technology and the online interface bring, hence, additional features to the activities between online customers and companies, compared to business in the physical realm.

The reader benefits from acknowledging the ‘customer’ comprising the buyer side; [potential] consumer and business buyers, following Grönroos’ (1994) view of ‘interactive marketing’ as referring to ‘relationship marketing’ and covering both types of relationships and markets. We see interactive business as a holistic construct comprising both markets and the technology to enable and enhance business interaction. As said

earlier, we focus on customer markets and business networks in studying firm interaction and communication.

Researchers in information systems, IS, or computer science, CS, (Barthès, 2013; Chavarriga and Machias, 2009; Pohja, 2010; Sargent, 2001) seemingly study language in interactive business more than business researchers do. IS researchers looking at the topic largely take a syntax-view of programming languages addressing topics such as xml-based web user-interface description language (Pohja, 2010), models of semantic web-based user interfaces (Chavarriga and Macías, 2009) in dealing with semantic information (Penev et al., 2010) and in generating web-interfaces automatically.

Barthès (2013) suggests a two-step approach in human-agent communication, for using in complex websites, or, for developing information systems, as examples. The proposed approach includes, among others, extracting from natural-language data the parameters necessary in completing the wanted action. Linguistic cues, as well as ontology and knowledgebase structure, are used in processing the input sentence. Chavarriga and Machias (2009) address models in building semantic Web-based user-interfaces. Pohja (2010) compares web user-interface languages. Sargent (2001) takes the most business-oriented approach in the domain and studies ‘multilingual knowledge management’ in the global, interactive business. Yet, this literature ignores the various internationalization or interactivity levels and depths as factors in deciding on on-site language.

Business management researchers addressing on-site language are few (Ahlfors, 2005; 2010; Enright, 1998; Ihator, 2001; Poon and Swatman, 1999; Sargent, 2001). This is surprising, with firms gaining experience in online business and yet being challenged on choosing markets to target and languages to apply (Berendt and Kralisch, 2009; Sargent, 2001), and with consumers requiring more personalized services (Gurau et al., 2003). Ihator (2001) sees language as critical in customer relationships. E-education institutions as a sector in online business also face challenges with culturally differing e-learners (van de Bunt-Kokhuis and Weir, 2013). Shneor (2012) examines the impact of various socio-cultural factors on website localization, focusing on e-commerce businesses and looking at factors in market-specific website launch.

Researchers in interactive business have addressed language as a communicational tool, but also as a tool for searching and for programming, in creating web user-interfaces appropriate in dealing with semantics. One recent work (Shneor, 2012) examines the role played by various factors in website localization decisions. While a website may be market-specific in various terms beyond language, we focus here particularly on lingual decisions in firms and factors that relate to these.

2.2 International online business research with a language viewpoint

As interactive business offers potential for internationalization, and, further, depicts characteristics of a globalized business context, we review here literature studying corporate international operations, and the role of language in international business and communications research (Selmer, 2006). Topics relevant to this study include language awareness, role, value, and use (Akar, 2002; Clarke, 2000; Crick, 1999; Dhir, 2005; Hünerberg and Geile, 2012). Clarke (2000), Lester (1994) and Selmer (2006) have found language barrier as central.

Hünerberg and Geile (2012) indicate two requirements for language in business, making a meta-analysis on language awareness, and using [also international] business research perspective. The first requirement is “adequacy” as exact and/or appropriate

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formulations that avoid misunderstanding or faulty associations, and achieve intended communicational goals. The second is “efficiency” as necessary and acceptable efforts to reach communicational goals, having particularly cost implications in mind.

Clarke (2000) examines a linkage between foreign language proficiency and successful exporting, with limited background theory; the earlier studies reviewed tend to stress the importance of foreign language skills and good track record in exporting. Respectfully commenting on Clarke’s [ibid.] results, the study seems to leave unsolved whether exporter success actually depends on communicating using foreign languages. In example, the question “To what extent does your company depend for its success on information derived from non-English sources?” seems to reveal something not related with success and the actual use of foreign languages [in communicating with its markets]. The work does, however, show that although businesses point out the importance of skills in foreign languages, their use of those is limited. Also, it shows that, for instance, Irish exporters hold non-English information sources unimportant for their success.

Studies on British companies report similar results, and Management Services (1992) News Desk identifies consequences of such ignorance hitting foreign trade. Fixman (1990) reports a lack of language skills among US-based firms participating global economy. Visser (1995) identifies a few years later, growing awareness on language needs among British firms, as they search for export success.

Looking at the research till now, language appears to be seen as central in international business success; yet, the language barrier seems to prevail, with limited interest by firms in language issues.

2.3 Concluding remarks on interactive and international business research

The reviewed literature shows internationalization as an option in growing online businesses. This growth potential creates a situation in which firms need to decide on markets and on using foreign on-site languages. Earlier studies show that many firms ignore such choices. Interactive business and international marketing studies report language having differing implications - to not have any statistically significant impact on success, based on quantitative research (Ahlfors, 2005; 2010), and based on qualitative, to also have an impact on a single case company's performance (de Moij and Hofstede, 2002).

If online businesses aim to grow, they face strategic decisions dealing with fragmented, yet homogenized online markets. Researchers have ignored, among other topics, if the depth of online business adopted is related with internationalizing the firm. Ignored still is also the topic of addressing more than one international market, and its relatedness with language decisions for such environments. These can be seen as partial strategies of adapting and standardizing international marketing.

3 Adaptation versus standardization strategy

International business/marketing literature presents various strategies in addressing new markets, which is focal in our work on online businesses, and deserves its own chapter in a literature review. The appropriateness of adapting to the market characteristics or standardizing activities depends on many things, not least the product category or business industry, or objectives in internationalizing. A work

by Schmid and Kotulla (2011) introduces reasons for adopting either of the two strategies, and more recently, Shneor (2012) examines marketing strategy and mix from the adaptive versus standardizing strategy viewpoint, addressing various socio-cultural topics..

Standardization is often related with globalized businesses and objectives for global marketing (Douglas and Craig, 1986; Gabrielsson and Gabrielsson, 2004; Kustin, 2004) and with well-known or uniform products or technologies (Schmid and Kotulla, 2011). Standardization approach is proposed by those who view world globalization (Gabrielsson and Gabrielsson, 2004) trends as the driving force behind greater market similarity, more technological uniformity (Theodosiou and Leonidou, 2003), uniform image (Douglas and Craig, 2004), and increased convergence (Theodosiou and Leonidou, 2003) of consumer needs, tastes, and preferences (de Mooij, 2003; Vrontis *et al.*, 2009). International communication channels, emerging global market segments and the appearance of Internet are also seen as facilitators of standardized strategies (Theodosiou and Leonidou, 2003).

Similarly, adaptation approach receives proponents due to variations between countries in several dimensions (*ibid.*), despite the increasing globalization, requiring some adjustment for successful performance (Brei *et al.*, 2011; Gabrielsson and Gabrielsson, 2004; de Mooij, 2003). Also, flexible automation (Douglas and Craig, 2004) and modern IT applications enable non-standardization at remarkable cost savings.

As Gabrielsson and Gabrielsson (2004) point out, whether to standardize or not, seems to be unresolved. We see this a multifaceted and situational question, seemingly also geographical, due to area differences in customer and institutional characteristics (Gabrielsson and Gabrielsson, 2004; Schilke *et al.*, 2009) and cultural characteristics getting a bigger role as national incomes converge (de Mooij, 2003). Accordingly, we see the debate on the topic to both have increased in multiplicity and opened ideas to consider to academics and practitioners. The question potentially requires a specific framework for each decision area, in which case, seemingly the marketing mix components deserve individual or grouped decisions on adaptation versus standardization (Brei *et al.*, 2011).

3.1 Cultural adaptation versus standardization through online language

In reaping benefits of the potential for globalized, standardized, business in the interactive *marketspace* (Berry and Brock, 2004) cultural fragmentation may cause a challenge (de Mooij and Hofstede, 2002). Language is one aspect in this cultural fragmentation (van de Bunt-Kokhuis, 2013), and creates a need for firms to consider whether to adapt or standardize, while differences between cultures prevail in the modern world, in spite of these having been converging and values shared (Ihator, 2004; de Mooij and Hofstede, 2002).

Lack of clear understanding of the target audience and its needs makes information design, its packaging (Berendt and Kralisch, 2009) and diffusion difficult (Ihator, 2001; 2004; Sargent, 2001). As these are strategic information management tools to e-business (Sargent, 2001) as well as marketing management tools, successful implementation of these in content-emphasizing online business seems crucial (Berendt and Kralisch, 2009). Sargent [*ibid*] combines the challenges with globalization initiatives of a company.

Holzmüller and Stöttinger (2001) discuss business activities shifting toward international or global marketing, and the need for cultural sensitivity. Cultural sensitivity

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they see from a wide perspective; they mention language twice in the text. While existing literature refers to the majority of web users being non-English (Berendt and Kralisch, 2009; Lazarinis et al., 2009), yet, English is the language used for the majority of data online.

Berendt and Kralisch (ibid.) point out that more and more users searching the web have other than English as their first language, and that user satisfaction (McKenna, 1999) is influenced both by the cognitive effort of searching and the availability of alternative information in that language - regardless of their foreign-language skills. US-based marketers have been criticized for their negligence of the globalization trend of e-Commerce - the term having been used as synonym for online marketing, although these concepts, by definition, are not such (Ahlfors, 2005; 2010).

Companies do face challenges in the increasing complexity of marketing to foreign markets that are heterogeneous and complex, not only through differing government policies, economic development, or socio-cultural environment (Shneor, 2012), but also consumer behaviour and attitudes (Khairullah and Khairullah, 2013), with more heterogeneous, yet also homogenized consumer segments (Ihator, 2004; de Mooij and Hofstede, 2002; Schmid and Kotulla, 2011).

Ahlfors (2005; 2010) studied company size as a potential factor in firm language decisions, and found size to not have an impact on adapting or standardizing language for various markets online. With the earlier literature taking differing perspectives to interactive, internationalized firms and language, and further, to socio-cultural factors creating pressure for specific strategies in internationalization, or these having impact on firm decisions, research so far does not provide answers to our research questions on adopted online business type, market expansion and language decisions, on the level of internationalizing the business, on interactivity depth, and the relatedness of the latter two with language strategy.

4 Methodology

As part of a wider, exploratory research endeavour on a spectrum of issues in e-business reported elsewhere, this paper reports specifically a quantitative, standardized survey (Järvinen, 2001) for correlational research (Remenyi et al., 2000) on 235 Finnish firms reporting their online-Internet activity.

4.1 Sampling, survey and analysis

We used stratified random sampling (Pahkinen and Lehtonen, 1989) to collect data. Randomness assures a chance for each representative of the studied population to be included (Horvitz and Thompson, 1952), and stratification assures that sample sizes represent the size of the particular segment, here, industry. Stratification, multi-stage, multiphase, cluster, systematic and other sample designs beyond simple or unrestricted random sampling, Horvitz and Thompson (ibid.) found having resulted in increased efficiency in particular circumstances. Using proportional allocation, we were able to achieve accurate representation of each industry and total firm population (Pahkinen and Lehtonen, 1989). This allows for comparisons between groups, where applicable. Stratification however, also may create problems in analysing the achieved data if the strata become small for particular analysis methods. Such effect was not evident in the analysis we present here.

The sampling was designed for 1017 firms which could tolerate loss in the response rate without jeopardizing the value of the sample, and study. With the population, N , of 230 028 firms in Finland at the time of study, the sampling for n of 1017 organizations represents 4,42 per thousand in N . While conducting research on a population of consumers, a sample size of 1000 - 1500 people of a population of 5,2 million is considered statistically adequate, being 0,19 – 0,29 per thousand, a survey conducted among businesses, the 4,42 per thousand sample, with representative strata, we see the sampling to fulfil the requirements for representativeness among Finnish companies. Non-response was expected, as the study was made among organisations, on which, response rates are commonly lower than among consumers. The topic, also therefore the questionnaire, could be perceived as complex, which among other factors may affect responding (Heberlein and Baumgartner, 1978; Remenyi et al., 2000).

Mailed questionnaires we considered most appropriate for gathering data, although electronic surveys have raised their popularity. Positive connotations of opening mail, decreased in volume in the e-economy, at a moment of one's own choice (Larson & Chow 2003), are seen to have a positive effect on perceiving the mail worth responding. Also in mail questionnaires however, especially in organizational context (Heberlein and Baumgartner, 1978), the non-response rate may be high (Larson and Chow, 2003).

A comparison of follow-ups by Larson and Chow (2002) reports a follow-up through original replacement survey to bring the highest response rate for the second round, in a comparison of four techniques; original replacement survey, photocopied replacement survey, postcard, and letter. We used original replacement in the survey.

Responding firms totalled in 271, representing around 27 percent response rate, after a limited follow-up that we measured to have increased the responses by 37 percent-units. The achieved rate is acceptable in studies among businesses, even in consumer studies, below-25-percent rates are common (Claycomb et al., 2000; Larson and Chow, 2003). Claycomb, Porter and Martin (2000) report a study among 20 mail surveys and effects of follow-up mailings in different time intervals. Only one of the 20 surveys exceeded 25 percent (25,5 %). Referring to the above, our achieved, roughly 27 percent, rate can be seen in a positive light, particularly as non-response bias was tested on sample firms.

The achieved sample is a good representation of the population, and hence is likely to cause neither sample selection bias nor non-response bias. Also, the sample we study here ($n = 235$), comprises firms conducting online-Internet activity, which is focal in the light of our research questions; the remaining 36 firms of n of 271 are excluded as irrelevant with no online activity. This further eliminates potential for sample bias. (Whitehead et al., 1993.)

SPSS 20.-based analysis is made on a) differentials between online firms in the depth of Internet-enhancement in e-business, b) level of firm interactivity through differentials in firm interactivity in the electronic marketing channel, e-SCM, c) and through their expansion into geographically new markets and d) expansion to various language areas, adding to these their e) language-strategic decisions, meaning cultural adaptation or standardization.

First, dependencies are examined based on online firms' depth of commitment into Internet-enhanced activity. Correlations are measured between firm online business, in terms of the type of Internet-marketing, and firm on-site language choices, through questions about the mode of using Internet for a company's business and about increasing language options for their Internet-marketing. T-tests are mainly used, with also Pearson Correlation tests.

4.2 Variables and constructs

Mode of Internet-enhanced business differentiates on a 7-point semantic differential scale, between using 1) an own site, with advertising and links to own site on other Internet sites, which is the strongest-commitment level of Internet-marketing here, and, at the opposite end, 7) no own/joint site, advertising on other sites, no e-mail in use. Option 7 indicates the least commitment level for and depth of Internet-enhanced business.

Firm *interactivity* is studied through two approaches; customer-communication channels in firms and level of interaction within the marketing network. First, firm interacting with the customers is studied with scale-questions on offered means for customer-contacting and their relative importance to the firm; 1) web-form, importance on scale 1 ...3, 2) e-mail, with rating as before, 3) telephone; with ratings. In statistical analysis phase, a merged variable was created, to a construct, to measure its correlation with language-strategic decisions.

Next, interactivity is studied through interacting in the marketing channel within firm processes - through electronic Supply-Chain-Management, e-SCM, activity, revealing the role of interactive processes for the firm, in importance. The variables used are 1) e-mail conversation, 2) e-mail price negotiation, 3) e-mail shipping negotiation, 4) teleconferencing-negotiation, 5) electronic procurement, 6) predicting activities based on information by internal IT-processes, 7) predicting activities based on information through network, 8) process optimization; in-house, 9) process optimization; within distribution chain, 10) shared product design/development, 11) electronic invoicing, and 12) electronic payment.

The firms' *expanding into new markets* is also studied from two viewpoints, *international vs. domestic* expansion of target markets, and expansion into *language areas*, to understand better the depth of internationalization. Considering language decisions, this type of internationalization is here seen more important than its mode. Online-internationalization is examined based on a scale-question on differentials, in order to see whether and how this will affect the corporate decision on on-site language options. Differentiation is made through a scale-question about 1) having expanded into international markets, 2) ... in domestic markets, 3) considering expansion, and 4) e-marketing does not change target markets. Expanding into language-areas is measured through a scale-question where respondent firms have expanded to 1) countries of one language area, 2) ... of two language areas, or to 3) ... within several language areas.

This leads, considering the research aim, to investigating firm language strategy, revealing whether cultural adaptation or standardization has been chosen or considered in online firms. The question about firm online *language options* indicates differences between activities taken or planned through e-activity: 1) number of languages has been increased, 2) ... will increase, 3) increase ... is being considered, and 4) no changes in language options are made, and is tested against the above described variables.

4.3 Rationalization

Scale-dimensions of the variables on expanding into new markets and on on-site language options differ from those in the second and third, to keep the respondent alert, and also to check consistency in responding. Interpretation in statistical analysis takes this into account. When using scale-questions such as Likert scale with 5 items or the semantic differential scale of often 7 or 9, the scale characteristics usually bring out an ordinal scale (Osgood, Suci and Tannenbaum, 1957, cited in Järvinen, 2001) or an

interval scale, at least an approximation of it (Järvinen, 2001). Ratio scales with absolute zero-points are a type of interval scale (Järvinen, 2001). The questions about expanding into new markets and on language options can be classified as ratio scales, while those on Internet-intensity and language areas can be classified as ordinal or also as interval, and dependency tests can be made on all.

Under-representativeness is a common problem with surveys, and as randomisation, and assumptions of a normal distribution are ideal, yet they are, according to Järvinen (2001) often difficult to achieve in field research. This under-representativeness is important to consider in the sample in which a minority of Internet-marketers have expanded into international markets, and their responses to the language strategy question with decision on on-site language options needed measuring. We measured correlations between the variables using also a subsample of these particular cases, to see whether the total-sample measures show insignificance due to being compared to all cases. Thus, we could see if this would jeopardize internal validity. The testing brought no or minimal differences in significance or correlation strength; the validity is secured on the matter.

5 Findings

Respondents (235) are a representative sample of Finnish firms in online interactive business and all industries in Finland. Descriptive data shows that majority of subjects are in top-managerial or entrepreneurial position (*mode*), and are very familiar (*mode*) with the firm and its activities. Exploratory analysis on data shows that firms using any type of online-Internet marketing, follow a business pattern adopted for their earlier offline business; the mode for responses concerning expanding geographical markets is point 4, "... does not change our target markets" (*Std. Dev.* = 0,988) and for the question about modifications on language-options, also 4, "language options will be kept as are" (*Std. Dev.* = 1,313).

Online-marketing *per se* seems to not much raise firms' interest in language considerations for the website. Language awareness, or involvement in it, is low, as responses to a question about firm decision on on-site language came from only one in four of all online marketers. Of the respondents, 63 percent report having modified or considering modifying on-site languages; 70 percent of *expanding* online firms; 73 percent of *internationally expanding* firms. This represents 61 percent of *internationally oriented* firms who consider such expansion. Less than one fifth, 16 percent of all responding online marketers consider the language question as being of little importance. Based on descriptive numbers, internationally oriented marketers seem to choose adaptation as their strategic orientation. Correlation measures show us more about how strong and significant such associations are.

In general, testing firm Internet-mode (*Mean* = 2,36, *Std. Dev.* = 0,898, *Std. Error Mean* = 0,127) and language-strategic decisions shows no notable correlation between them ($R = 0,017$, $P = 0,905$). (Appendix, Table 4). The way in which a company conducts its online business, however, does have a significant effect on measures about language areas in online internationalization ($R = 0,501$, $P = 0,001$), so Internet mode affects the rate of internationalization, on scale, into culturally different areas, yet not the on-site languages.

An examination of firm interactivity in the sense how it communicates and makes benefit of interactive information, which is discussed next, shows better than mere Internet adoption mode, the association between Internet-enhanced business commitment and adaptive or standardized on-site language strategy.

5.1 Online firm interactivity and language adaptation versus standardization

No association between language-strategic decisions and firm interactivity exists based on firm-provided contacting channels for customer feedback or questions. The Pearson correlations between means among the three studied customer-contacting channels 1) web-form, 2) e-mail, 3) telephone, by their relative importance (1...3) range from 0,117 via 0,074 to -0,074, as follows: 1) web-form: 0,074 2) e-mail 0,117 and 3) telephone -0,074 for telephone contacting. Significance measures ($P=0,736/0,461/0,696$), respectively, show that the probability for both adaptation and standardization hypothesis is high.

The means for customer interaction are not important factors in deciding on firm online language approach. Interesting, however, is the implication to that the most human interaction and the least human-computer –technology in ranked customer contacts is closer to firm willingness to increase its language options according to the target markets. The merged variable on interactivity towards customers ($Mean = 3,45$; $Std.Dev. = 1,119$), $Std.ErrorMean = 0,163$), based on all communication channels used and their relative importance, shows a weak negative, non-significant correlation ($R = -0,117$, $P = 0,433$) with language decision (Appendix, Table 4).

The next measure, firm interactivity towards its channel members, referring to network ($Mean=3,44$; $Std. Dev. = 1,567$, $Std.ErrorMean = 0,222$), based on the depth of commitment of firm to e-SCM activity shows more about its relationship with on-line language; the IT-based interactivity in strong-commitment types of e-SCM indicates a mild positive association with adaptation strategy with rather acceptable confidence level.

Table 1 somewhere here

Measuring whether the various reasons for e-SCM usage are associated with language decisions brought a result that only predicting activities based on information acquired from the network seem to affect firm interest in offering language options. Firms seem more apt to increase the number of on-site languages ($R=0,703$, $P=0,052$). Interpreted on two-decimal promptness, this can be seen as significant. No other notable correlations were found according to firm objectives for e-SCM.

5.2 Firm market expansion and language decision

Firm adopting e-business is, in general, not inclined to expand the geographical target markets. Cross-tabulation shows that a quarter of online firms (23 %) report having modified their geographical target markets or considering those. Growth strategy within the domestic market is a choice for 10 percent of online-marketing firms, and 9 percent have expanded into international markets, and 4 percent consider growing internationally. Figure 1 depicts how these decisions are related with language strategies.

Figure 1 somewhere here

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Running a T-test on the relationship for these paired variables resulted in a positive Pearson correlation of strength 0,314 ($P=0,034$), which is significant on 0.05-level. A quality-check on geographical expansion and language decisions shows measures of very little bias and acceptable standard error (Table 2).

Table 2 somewhere here

Geographical growth, expanding into more than one language area is reported by 3 percent of online firms, 18 percent of those answering the question. Only two online firms report growth into two language areas; hardly one percent, yet 5 percent of answers. One language area in international growth is relevant for 7 percent of all online marketers, 34 percent of those answering the item question. Their language decisions are not related with expansion (Appendix, Table 4). Symmetric measures on these, on nominal-by-nominal, show bias, yet low standard error (Table 3).

Table 3 somewhere here

6 Conclusions

The globally oriented online marketing incorporates several important issues for management to consider; focal here have been the role of language in firm internationalization in its online business. The research questions here addressed, first, the relationship between firm e-business mode in online business and firm decision on expanding to new markets, and further, in adapting or standardizing their online language. Second, we addressed the relationship between firm internationalization level in online business and the language strategy. Third, we studied firm interactivity in relation with language strategy, through their commitment level to interactive business with customers and the marketing channel network.

The study contributes to e-business research showing that dependencies exist between firm online business and communicational language decisions. Using Internet, *per se*, is however not a factor in firm adaptive or standardized language strategy. Although interactivity, through adopted customer interaction channel, is not important for firms deciding on languages, the commitment level of a firm to deeply interactive business is associated with adaptive strategy. Such deeply interactive business is, for instance, using e-SCM and some of its most developed use patterns, such as planning firm's activities.

We open paths for further understanding the role of language in internationalized online business. Our results reveal the depth of firm internationalization, measured through targeted geographical markets, being statistically significant in on-site language strategy and related with adapting to cultures. Internationalized online firms somewhat adapt to cultural differences, which result differs from earlier research on globalized business.

Managers may benefit from the study showing international expansion to increase the importance of online language strategy. This seems to be in line with growing physical distance and costs of interacting through phone and face-to-face. Companies have started to consider language as a factor in managing customer relationships, and in managing partner relationships and networks. A finding on technology-level in interacting with customers not being a factor in language strategy deserves some

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consideration: this might indicate firms remarkably interacting with their customers via phone, or other human-to-human -emphasizing communication, which reduces the importance of online language decisions.

The results do not offer explicit support to interpreting such, but its effect in non-internationalized e-business should be considered, with the fact that most online firms have stayed in their present markets when adopting online business. Interactivity through e-supply chain management technology - its type - somewhat relates to language decisions in firms. This would indicate that network relationship management among businesses is perceived more important in firms than managing customer relationships, and have a positive, although rather weak impact on deciding on online languages.

Online managers find support for deciding on interactivity and customer/partner requirements, while pursuing to create value. Especially those online companies operating in consumer markets, but also those in business markets with an objective to expand internationally, get backed-up views from this study in creating competitive advantage when they apply this information to their specific situations and strategic goals.

We acknowledge the small number of all studied online firms having internationalized their business through e-accessibility; analyses on focal constructs and variables rely on small sub-samples. This result of low internationalization is in line with earlier literature indicating that a small minority of online firms go international. Increasing the sample size or conducting a multi-country study would improve the generalizability to a wider context. Quality measures taken, analysing variables and constructs, increase the validity of this study. A representative sample of online firms in Finland is helpful in securing valid research.

Future research on a number of topics around this study is needed, to better understand the dynamics in developing online business. Reasons for firms in various countries and cultural settings to adopt online or mobile e-business or to use social media in developing their markets, as well as results of such, are important to understand. We would benefit from knowing more about what motivates and restricts various customers in searching information or in ordering online and also organizations in making decisions developing their interactive business. Knowing more about cultural characteristics affecting differences between countries would help us better understand the dynamics in business and consumer behaviour.

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Table 1 Correlations of two interactivity measures with language strategic decisions

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	interactivity/custr. & on-site language decision	34	,086	,629
Pair 2	type of escm & on-site language decision	50	,278	,051

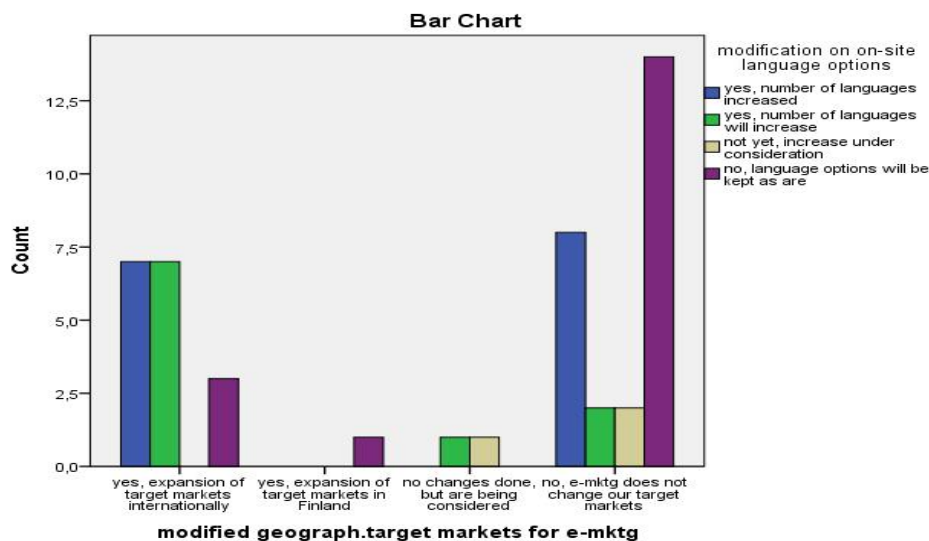


Figure 1 Geographical expansion and language decisions

Table 2 Bootstrap for symmetric measures on geographical expansion and language decisions

Bootstrap for Symmetric Measures				
Value	Bootstrap			
	Bias	Std. Error	95 % Confidence Interval	
			Lower	Upper

Interval by Interval	Pearson's R	,314	,002	,136	,040	,578
Ordinal by Ordinal	Spearman Correlation	,285	,001	,141	,004	,562
N of Valid Cases		46	0	0	46	46

Table 3 Bootstrap for Directional Measures, on expansion into language areas and language decisions

		Value	Bootstrap			
			Bias	Std. Error	95 % Confidence Interval	
					Lower	Upper
Nominal by Nominal	Symmetric	,099	,047	,060	,045	,280
	number of language areas chosen	,122	,061	,077	,056	,356
	on-site language decision	,082	,040	,051	,038	,234

APPENDIX

Table 4 T-tests for paired correlations and paired differences

Paired Samples Correlations		N	Correlation	Sig.				
Pair 1	type of Internet use & on-site language decision	50	,017	,905				
Pair 2	interactivity_customers & on-site language decision	47	-,117	,433				
Pair 3	type of escm & on-site language decision	50	,278	,051				
Pair 4	modified geograph.target markets for e-mktg & on-site language decision	46	,314	,034				
Pair 5	in international expansion, number of language areas chosen & on-site language decision	38	,024	,885				
Paired Samples Test		Paired Differences				t	df	Sig. (2-tailed)
		Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval of the Difference			
					Lower	Upper		

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Pair 1	type of Internet use - on-site language decision	-,140	1,578	,223	-,588	,308	-,627	49	,533
Pair 2	interactivity_custome rs - on-site language decision	,979	1,812	,264	,447	1,511	3,704	46	,001
Pair 3	type of escm - on- site language decision	,940	1,743	,246	,445	1,435	3,814	49	,000
Pair 4	modified geograph.target markets for e-mktg - on-site language decision	,283	1,615	,238	-,197	,762	1,187	45	,241
Pair 5	number of language areas chosen - on-site language decision	-,026	1,585	,257	-,547	,495	-,102	37	,919