

***HIGH AND LOW INTERNATIONALIZATION
SECTORS -
DOES THE FOOD INDUSTRY HAVE A
SUPERIOR OR AN INFERIOR PRODUCT
PRESENCE PROFILE IN THE INTERNET?***

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INTRODUCTION

The usage of the internet grows very fast. This growth has led an increasing number of companies to the decision to endeavour with the new medium and develop an internet presence (Berthon *et al.*, 1996). An important question that remains to be answered though, regards the profile and strength of presence of companies in lower internationalization compared to higher internationalization sectors. Internationalization of a sector is defined as the extent of integration of inhabitant firms across borders (Kobrin, 1991: 17). Higher internationalization happens because the benefits of integration exceed the costs of a limited recognition of national, social and political differences (Kobrin, 1991: 17).

The food industry is currently considered as being less internationalized compared to other sectors. A reason for that might be the continuing heterogeneity of consumer eating habits across countries. There might be a convergence of eating habits across countries advancing a notion of globalization (Levitt, 1983), but it is fragmentation rather than homogenisation more appropriately describes reality. Populations even within the relatively homogeneous EU, still have significantly distinct food consumption habits. EC argued that it is a myth to talk of the European consumer as a homogenous entity. Food consumption patterns of say, a Southern Italian would not be comparable with those of a Dane and it is essential that this diversity is kept in mind (EC, 1988: 10). This is echoed in Kobrin's (1991) empirical study's findings. He identified, for instance, that food was at the bottom end of a list of 56 different sectors regarding the degree of sector internationalization. The degree of internationalization for food firms ranged between 0.073-0.090 on Kobrin's internationalization index. In contrast, the highest internationalization sectors (e.g., electronic components, communications equipment or motor vehicles) ranged between 0.385- 0.435 on the same index.

We question whether this apparent lower degree of internationalization of the food sector is also reflected in an inferior internet product presence profile for food firms. The product component of the marketing mix is of fundamental importance in any company's presence in the web. Our overall hypothesis is that food companies possess a product presence profile that is inferior to companies operating in higher internationalization sectors. Food firms may not need to develop a strong internet presence profile since the degree of their internationalization is apparently still low compared to other industrial sectors.

THEORETICAL FRAMEWORK

Information closely related to products

Today, an ever-increasing number of consumers visit the home pages to obtain information about food company products. Information closely related to the product (i.e., the use of the products, usefulness, ingredients) are always essential for a successful product presentation. The greater the amount of information offered in the web site, the more satisfied is expected the visitor to become (Berthon *et al.*, 1996). The need of firms in high-internationalization sectors, to satisfy the inquiries of their international web-site visitors, might force them to host a lot of information in their web pages. As it is expected international visitors may have greater need for such information. We hypothesized:

H1: Companies in higher internationalization sectors provide in their web sites greater amount of information closely related to their products compared to companies in food sectors.

Information loosely related to products

Apart from the information relating to close related to the product information, the rest of it can be categorised as information loosely related to products. For instance, company history, news, information about the producers, or the production processes do play a substantial product promotional role (Eighmey and McCord, 1995). Companies in higher internationalised sectors having realised the great importance of the web as a marketing tool for their products, probably enrich their pages with more of such information compared to companies in food sectors. Hence:

H2: Companies in higher internationalization sectors provide in their web sites greater amount of information loosely related to their products compared to companies in food sectors.

Clarity of product related information

Products launched by firms in higher-internationalized sectors probably target a greater number of potential customers world-wide compared to companies in lower internationalization sectors. These customers may have different culture, varying language skills and familiarity with the products- thus different ability to process information about the product. Such information needs therefore, to be easily processed by the web-surfer. Failure to do so will result in visitor confusion, the formation of a negative opinion about the site, and minimisation of the time the visitors stay on the site (Eighmey and McKord, 1995). It is likely that companies operating in higher internationalization sectors have undergone through the process of improving the clarity of product related information, so their sites' visitors have a higher chance of accurately processing such information. Thus:

H3: Companies in higher internationalization sectors provide in their web sites greater clarity of product related information compared to companies in food sectors.

Updating of information

Companies in higher-internationalized sectors probably cater for products that also face rapid technological and market obsolescence (Chrysochoidis and Wong, 1998). This then means that such companies need to frequently update information in their web site, so this remains useful (Tweddle *et al.*, 1998). Surfers who do not obtain updated information, may soon cease to visit the web site. Moreover, more frequent the updating of the site, better the company presence in the internet (Dholakia and Lopo, 1998). We hypothesize that:

H4: Companies in higher internationalization sectors provide in their web sites more updated information compared to companies in food sectors.

Offer of warranty and refund policy

Offer of warranty is referred as one of the main characteristics of the product (Kotler *et. al.*, 1999). Companies facing global rivalry and substantial competitive intensity, as in higher internationalization sectors, may probably need to provide a substantial mix of additional

elements in order to strengthen their product offerings. One such element is offer of warranty and offer of refund, and it is logical to expect this to be made explicit in the companies' web sites. Hence:

H5: Companies in higher internationalization sectors provide in their web sites a clear and explicitly -stated offer of warranty/ refund policy compared to companies in food sectors.

Variety of payment methods

Payment is also one of the main characteristics of the product according to Kotler *et al.* (1999). It is not the core benefit the buyer receives, but as Kotler *et al.* (1999) and Saren and Tzokas (1998) support, it is impossible to separate the core benefit of the product from its other characteristics. Nowadays, several payment methods are available. The most convenience and common used is transactions through credit cards. One of the limitations is that not all payment methods are equally known and used all over the world. Companies in higher internationalization sectors, implying a high percentage of sales in global markets, may have had to introduce several ways of servicing their customers. Hence:

H6: Companies in higher internationalization sectors provide for the use of variety of payment methods in their web sites compared to companies in food sectors.

Delivery

Kotler *et al.*, (1999) included delivery in the basic characteristics of a product offer. Internet has managed to *'kill the distance'* as Cairncross (1997) commented. World-wide delivery (thus covering most country markets), fast (in an sort period of time from the place of the order) and low cost may be issues of strategic importance for companies active in higher internationalization sectors. Thus:

H7: Companies in higher internationalization sectors provide details in their web sites regarding product delivery compared to companies in food sectors.

After sales support

Another product characteristic is product after sales support, although this varies according to the nature of product (Kotler *et al.*, 1999). Quality after sales support is positive related to the overall quality of the web page (Tweddle *et al.*, 1998). Companies in higher internationalization sectors launch products designated for the global markets. These products try to satisfy customers from different geographical regions, with different expectations and needs. In order to satisfy these needs, it may be necessary to make explicit and supply information about the provision of the after sales support compared to products launched by companies in lower internationalization sectors.

H8: Companies in higher internationalization sectors provide explicit details in their web sites regarding product after sales support compared to companies in food sectors.

Frequently Asked Questions (FAQ)

A FAQ function is answers to questions most frequently asked by the web surfers. A clear and updated FAQ function is a basic component of every good web site (Tweddle *et al.*, 1998). Companies in higher internationalization sectors may use a FAQ function in their web site as a means for greater customer support and user guidance. So we hypothesise:

H9: Companies in higher internationalization sectors provide a FAQ function in their web sites compared to companies in food sectors.

Use of other languages than English

In the electronic world of Internet, English have been constituted as a global language. The highest percentage of web pages is written in English. But not all web users understand English. Lately many companies started translating their pages in other languages too (Ouelette, 1995). The more languages a site is translated to, the higher is the ability of the users from all over the world visit the company site and get the information they need. This may be of substantial importance to firms active in higher internationalization sectors since these firms have an extra motive in translating their pages- they operate in several countries. Thus:

H10: Companies in higher internationalization sectors translate their web pages in more languages compared to companies in food sectors.

A site map

As in the case of the existence of a FAQ function, a site map is also a service provided to the web page user for an easier, faster and more effective use of the site. The bigger the site, the greater the need for a site map, since this decreases the time needed for locating information. Since we consider that firms active in higher internationalizations sectors have a vested interest to attract and retain visitors to their web sites, it is rational to consider that such firms will also provide a site map for easier site navigation. Hence:

H11: Companies in higher internationalization sectors provide a site map more frequently than companies in food sectors.

Speed

The downloading speed of the web page is an important component determining the overall quality of the web page (Tweddle *et al.*, 1998). The speed is closely related to the pictures, fonts, graphics etc. used in the site. It is also related to the quality and the speed of the server that hosts the web page. Failing to provide high speeds will result in a quick exit of the visitor from the site. Companies in higher internationalization sectors may have a vested interested to provide increased speeds of delivery of information from their web sites. Thus:

H12: Companies in higher internationalization sectors offer higher speed in data downloading through their pages than companies in food sectors.

Interaction

Interaction is one of the main benefits of internet. Through the web, the users can visit the company site they want, choose the kind of information they want to know, and in some cases even buy the products they are interested in. Higher levels of interaction mean that the user has more freedom to decide on the kind of service to receive. On the other side, higher levels of interaction mean that the users spend much more time in the site and give information to the company about their identity, personal opinions and their preferences. Companies in higher internationalizations sectors have a vested interested to track customer preferences across a very wide number of target country markets. As a result, such firms may have incorporated greater ability for the customer to interact through their web sites. So we hypothesise:

H13: Companies in higher internationalization sectors offer higher interaction with the visitors of their sites compared to companies in food sectors.

Number of site visitors

Maybe the most accurate way of measuring the strength of presence of a web site is the number of the site's visitors. This is a criterion of web site popularity and effectiveness (Dholakia and Lopo 1998). We expect that firms active in higher internationalization sectors are more likely to attract a greater number of site visitors than firms in lower internationalization sectors. Thus:

H14: Companies in higher internationalization sectors achieve higher number of hits in their sites compared to companies in food sectors.

SAMPLE AND DATA COLLECTION

Sample

Kobrin's (1991) list was employed. The five highest internationalization sectors selected were: motor vehicles (index: .435), communications equipment (index: .404), electronic components (index: .385), computers (index: .384) and photographic equipment (index: .324). The five low internationalization sectors, all of which were in the food industry were: preserved fruits and vegetables (index: .073), dairy products (index: .076), grain mill products (index: .077), beverages (index: .086) and other food products (index: .090). In total, 283 web-sites were evaluated (152 sites of companies operating in higher internationalization sectors and 131 sites of companies operating in the food industry). The yahoo web-search engine (www.yahoo.com) was employed. Yahoo! is considered to be among the best web-search centres. Further details regarding the sample are provided in Table 1.

Table1: High and low internationalization sectors chosen for the study and their degree of internationalization (based upon Kobrin’s (1992) index of sector internationalization)

High internationalization sector		Low internationalization sectors	
Sector name and internationalization index	Sample size	Sector name and internationalization index	Sample size
Motor vehicles (.435)*	n=47	Preserved fruits and vegetables (.073)	n=17
Communications equipment (.404)	n=24	Dairy products (.076)	n=32
Electronic components (.385)	n=23	Grain mill products (.077)	n=30
Computers (index: .384)	n=30	Beverages (.086)	n=20
Photographic equipment (.324)	n=28	Other food products (.090)	n=32
Total number of firm sites	n= 152	<i>Total number of firm sites</i>	n= 131

Note: The highest the index, the greater the degree of sector internationalization (range 0 to 1).

Search method

Yahoo! is a subject-based directory and returned a comprehensive list of sites relevant to each sector searched. In case not specific category information is available, keyword search yields a number of related sites by order of relevance. Such an absence of category based industry information posited a problem for the preserved food and vegetables producers’ sector. We circumvented this problem by adding the keyword “preserved foods & vegetables” in the search box. Then we analysed the results to decide which relevant sites were useful for inclusion in our sample. The finally selected sites were those belonging to producers of preserved foods & vegetables.

The biggest number of sites found related to the motor vehicles industry (47 sites), the smallest number related to the preserved fruits and vegetables industry (17 sites). No drop of sites from the sample was necessary. Of course, the lack of statistical information regarding the number of companies in the investigated sectors that have launched a web site makes difficult to posit the representativeness of the sample. It is also important to note that the speed of development of the web makes any such information rapidly obsolete. This means that the findings of the present study may apply only for a relatively short period of time. The research took place in autumn 1999.

Measurement

The 283 internet sites of sample firms were assessed independently by two researchers making use of a questionnaire developed for this purpose. The similarity of the researchers' answers for the self-assessed indicators was examined. A very strong positive and statistically significant correlation appeared to exist. This led to the use of the means of the scores given by the two researchers for each such indicator in the subsequent analysis. Information on other elements (such as timeliness of information and speed) was collected through the use of software (alexa.com). More details follow here below.

Three indicators were self-assessed by the researchers using a Likert scale (from 1= extremely dissatisfactory to 7= extremely satisfactory). These indicators were: (a) extent of information closely and loosely related to products; clarity of product related information; (c) extent of interaction. The indicators tapping: offer of warranty/refund policy, variety of payment methods, inter-continental delivery, after-sales support, the provision of a FAQ (frequently asked questions) function, the provision of other languages than English, and the provision of a well developed site map were also self-assessed using a dummy variable though (1= no, 7=yes).

The speed of downloading information from the site and the timeliness of information about the product (that is how recently has the information in the product site been updated) was measured through the use of dedicated software (alexa.com). The specific software provides an automatic count of speed on a 1 to 5 scale (1= slower than 14.4 bits/second; 2= between 14.4 and 28.8; 3= between 28.8 and 33.6; 5= over 56.6 bits/second). The same software also analyses the modification dates of pages found during the web crawl and assigns a 'freshness' rate of 1 to 5 to the site (1= more than 12 months old; 2= between 12 and 6 months; 3= between 6 and 3 months; 4= between 3 months and 1 week; 5= less than 1 week).

ANALYSIS AND RESULTS

Data were split in two sub-samples: the first included the sampled companies in the higher internationalisation sectors, the second included the sampled companies in the food industries (low internationalisation sectors). *T*-tests for independent samples were employed. Differences between the two samples were statistically significant regarding all 14 investigated elements. Table 2 shows the results.

**Table 2: Investigated variables: Values for higher and lower internationalisation industries
(*t*-test results)**

Variable	Higher internationalisation industries n= 152		Food industries (lower internationalisation) n=131		T-value(*)
	mean	std.dev.	mean	std. dev	
1. Information closely related to products	5.74	.94	3.67	1.15	16.311
2. Information loosely related to products	5.50	1.01	3.98	1.43	10.139
3. clarity of product related information	5.40	.83	3.87	1.11	12.804
4. updating of information	6.19	.86	4.45	1.56	11.354
5. offer of warranty/refund policy	5.38	1.07	2.76	.83	8.475
6. variety of payment methods	5.68	.82	3.64	.99	6.652
7. product delivery	5.15	.81	3.64	.86	5.426
8. after sales support	5.30	.93	2.82	.63	12.210
9. FAQ	4.61	1.02	3.00	.81	14.594
10. Other languages than English	4.98	1.27	3.24	.65	14.765
11. Existence of a site map	5.41	.72	3.65	.96	17.096
12. Speed of downloading	5.11	.91	3.41	.66	18.021
13. Interaction	4.82	.84	3.41	1.02	12.535
14. No if site visitors	5.13	1.02	2.63	.83	22.648

* All differences statistically significant at $p < .000$.

Table 2 also shows where there is the biggest and smallest difference between companies in high internationalization and food sectors. This issue is discussed in more details here below.

CONCLUSIONS AND IMPLICATIONS

The statistical analysis confirmed all the hypotheses stated earlier. The overall conclusion from the findings of the present study is that the investigated sites of companies in the sampled food sectors do have indeed an inferior product presence in the web compared to firms in higher internationalisation sectors. Although, the rapid speed of change in the internet world, e-commerce and m-business may render this picture obsolete sooner than later, current findings probably mean that food companies lack strong marketing presence in the web because they have not needed to do so up to the present time. They appear to have been exposed relatively less to competitive intensity across borders and global rivalry. This is an important theoretical implication, namely that the degree of sector internationalization is an important determinant of the degree of web presence at this moment.

Of particular importance to the food industry, is where food companies do seem to lag more behind their counterparts active in higher internationalization sectors. It is the number of site visitors that shows the greatest statistically significant difference between the two samples examined. Firms in higher internationalization sectors have by far a greater number of visitors in their sites. Closely following in terms of the extent of the differences between the two samples, is the existence of a site map and the speed of downloading. These are followed by the amount of information either closely or loosely related to company products, the clarity of such information, the use of other than English languages, and the timeliness of information. Firms in the food industry do seem to lag behind their counterparts in higher internationalization sectors across a wide range of elements in the context of web marketing. Food firms have not embraced the medium to its full extent yet.

The difference between firms in the food industry and firms in higher internationalization sectors is much less pronounced however, on issues such as variety of payments methods, product delivery, after sales support and offer of warranty/refund policy. This may hide a variation in the needs to supply such information however- we need to recall that the sample is cross-sectional in essence and we do not have comprehensive information about legal and other requirements for marketing such products across their different target country markets.

LIMITATIONS

One limitation of this study is the nature of measurement and assessment. Since several of the measures were self-assessed, a greater risk of bias exists, despite vigilant efforts for increased methodological robustness. Nonetheless, it may still be difficult at the present time to identify measures to evaluate web sites in an objective way. Second, as also mentioned before, the rapid change of the use of the internet will probably make these results obsolete sooner than later. A third limitation is the use of single item-measures for capturing each investigated element. New research should consider these issues. Research directions might include however, the investigation of other web site elements, including site innovation, consistency of design, use of

colours, fonts, sounds, or promotion of the web site in its own right. A relevant question might also be: are food products more easily amenable to marketing through the web compared to products from other industrial sectors? are all food products equally prone to successful marketing through the web? or how the shopping experience regarding food may influence the use of web in marketing of food products?

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