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Consumer perceptions on responsibility of wood product suppliers in Finland

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Abstract

Today's consumers often perceive an additional benefit associated with responsible business practices and sustainability of purchased products. Regarding wood products, environmental quality has in the earlier studies been found to be a part of the total product quality. However, there is still lack of knowledge on the consumers' attitudes towards socially and environmentally responsible supplier characteristics. Therefore we address in this paper what kind of perceptions do consumers hold for their wood product suppliers particularly with regard to environmental and social responsibility. Our data is collected during 2004-2007 as exit data from home retail centers selling building materials and our respondents (n=227) were Finnish adult consumers. Perceived supplier characteristics associated were found to be linked with both domestic origin of wood and domestic company ownership. Based on this there seems to be some scope for developing wood products marketing based on these issues.

Keywords: wood products, consumers, producers, environmental and social responsibility

1 Introduction

1.1 Consumer markets of wood products

In the Finnish housing sector, residential construction is shifting towards renovation and maintenance construction, and from building of multi-story flats towards building individual and detached homes. In this context, private consumers have an increasing influence on the selection of products and materials used in housing. Regarding wood products, their environmental quality is a part of total products quality, which has not yet been utilized to its full potential (see e.g. Toivonen 2011, 2007). However, previous research on marketing and markets of specifically Finnish wood industry has traditionally concentrated on organisational customers in developing its products and marketing strategies (see Toivonen et al. 2005, Kärnä et al. 2003). Despite that over 40% of the production of the Finnish sawmilling industry is consumed domestically, there is lack of research-based knowledge focusing on consumers' quality related needs with regard to wood product utilization in the domestic markets (as an exception, see Toivonen 2012).

At a general level, anecdotal evidence suggests that consumers are giving increasing consideration to the ethical components of products and business processes. For example, according to a large multi-country survey by McKinsey (Bonini and Oppenheim 2008), 87 % of surveyed consumers are concerned about the environmental and social impacts of the products they buy, 33% of consumers say they are willing to pay a premium for green products,

and another 54 % care about the environment, and want to help tackle climate change. But when it comes to actually making purchasing decisions, words and deeds often diverge.

Nevertheless, a growing body of literature indicates that many of the today's consumers perceive an additional benefit associated with social and environmental responsibility (corporate social responsibility, CSR) of purchased. Auger et al. (2003) states that "...consumers increasingly care about the ethical components of products and business processes and these concerns have financial implications for the businesses involved". Commonly introduced benefits of improved environmental/ethical product quality for the producers include higher customer loyalty, lower price sensitivity, insurance against negative events, and sometimes even accrue positive price premiums (Green and Peloza 2011, Abrantes Ferreira et al. 2011). It has been proposed as well that firms selling primary or intermediate goods are less environmentally sensitive due to weak pressure from final consumers and lack of high-quality environmental management systems than those that sell final goods (Khanna and Anton 2002).

The aim of this paper is to contribute to research by addressing which supplier characteristics/attributes do consumers perceive important in the Finnish wood product market, and particularly, to which supplier characteristics is sustainability connected with?

1.2 Previous research

In the United States (the US), a set of studies on wood products have considered the effect of tangible and intangible product attributes on consumer preferences (e.g. Vlosky et al. 1999, Aguilar and Vlosky 2007, Anderson and Hansen 2004, Bigsby and Ozanne 2002, Hansen and Bush 1996, O'Brien and Teisl 2004). Based on the early findings in Vlosky et al. (1999), among the 803 US homeowners surveyed, the respondents were categorized by cluster analysis into 5 segments based on their views on forest certification. The most environmentally favourable group ("True Blue Greens") was found to be the largest group with a 40 % share. Summarizing them, traditional socioeconomic and demographic features utilized as the basis for market segmentation have had limited power in predicting and defining groups of "green" consumers. Thus, wood industry should find alternative ways to identify consumer segments that are sensitive to sustainability issues.

In Europe, previous literature on wood products consumer perspectives related research (reviewed in Rametsteiner et al. 2007) indicated only few existing studies in the group of studies included. Mainly the body of studies was dominated by more practically oriented omnibus surveys and consultancy reports.

Hansmann et al. (2006) found in case of Switzerland consumer sustainability orientation favoring ecological and social aspects as compared to economic aspects and to positively correlate with the intention of buying eco-labeled wood products. Based on this, the authors assess that it should be possible to promote sustainable forestry and to enhance the demand for correspondingly certified products through marketing and other strategies. Furthermore, applying UK survey data of do-it-yourself (DIY) companies, Toivonen (2007) concluded that it is important endowing wooden products with environmental information when the aim is to attract the customers with interest in the environmental quality of wooden products.

Järvinen et al. (2001) underlined in their study on German wood products markets, that the companies trading wood products considered it important to provide more information on the multiple quality-dimensions of wood products to consumers. The findings of the study underlined in particular, that issues related to safety and health impacts are important and deserve more attention in product development and marketing.

1.3 Theoretical background

In this section we overview recent literature regarding corporate responsibility in the context of consumer markets and marketing. As studies of consumers' attitudes toward certified forest products relate to the wider issue of how consumers respond to eco-labeled products and social and environmental responsibility of suppliers in general, we discuss issues related to ethical or green consumerism from the product and supplier perspective and then evaluate the state of the art of the respective research in wood product markets context.

Sustainability of business operations, as well as specific processes and products, is generally defined to consist of three dimensions; economic, environmental and social sustainability (Brundtland commission etc.). General rise of business ethics and corporate responsibility have brought environmental and social impacts from business activities under general scrutiny along with economic performance, requiring integration of social and environmental performance of products and services more closely into corporate strategic decision-making. Mohr and Webb (2001, p. 47) define a socially responsible consumer through their "purchase, use, and disposition of products on a desire to minimize or eliminate any harmful effects and maximize the long-run beneficial impact on society", and thus avoiding buying products from companies that harm society.

Maignan and Ferrell (2004) have analysed corporate responsibility in the marketing context by advocating for importance of wider stakeholder orientation instead of narrow customer/consumer value creation. Consequently, "stakeholders show concern not only for issues that affect their own welfare (e.g. consumers calling for improved product safety), but also for issues that do not affect them directly (e.g. consumers condemning for child labour)". (p. 7). Concerning consumers in Nordic countries, Leire and Thidell (2005) conclude that these tend to be generally aware of the fact that products may be associated with complex environmental problems since they have been exposed to eco-labels long before the concept of sustainable development became common knowledge.

Madrigal and Boush (2008) have connected product social responsibility as a distinct brand personality dimension, so that consumers may be motivated to buy from a socially responsible brand, because it allows them to also express their own personal values. In this context, willingness to reward a brand for its environmentally responsible efforts may be viewed as a reciprocating tactics. For companies reaping competitive benefits, integration of CSR to core business strategy would be important.

According to Green and Peloza (2011), CSR can provide three forms of value to consumer: functional, emotional and social. Each of these may enhance or diminish not only the overall value proposition for consumers, but also value created by in one CSR domain can either diminish or be disconnected from other product attributes. From managerial perspective, this would help firms to understand how CSR activities can impact their customers' overall perceptions of value from the firm.

According to Bonini and Oppenheim (2008) to increase the sales of environmentally sound products, companies must remove five barriers—namely, (1) lack of consumer awareness, (2) negative perceptions on environmentally friendly products, (3) distrust, (4) high prices, and (5) low availability. In other words, producers must by education increase consumers' awareness of green products, improve the quality of eco-products, strengthen consumer trust by honest communication, try to lower the prices of green products, and increase availability of these

products. These same tactics should be applicable and should be pursued in case of wood products as well.

The green consumer purchasing model and the impact of buying process has been investigated in the UK data on self-declared green consumers (Young et al. 2010). The model consists of five elements: general green values and knowledge, green criteria for purchase, barriers and facilitators for product purchase, the actual purchase and feedback. Knowing this process facilitates identification of key factors helping green consumers to product purchase: strong green values, previous purchase experience, ample time for decision making, good knowledge of relevant environmental issues, good availability of range of green products and sufficient income level for green purchasing.

Elements related to environmental impacts of wooden products in housing, social acceptability of products and aesthetic characteristics of wood can be associated with a distinct consumer lifestyle, consisting of complex interplay between consumer background, values, attitudes, needs and behaviour. While environmental issues are increasingly relevant for the selection of wood products and other building materials, they can be assumed to clearly contribute to the perceived total product quality by consumers (Toivonen 2007). It is not only a question of the concrete product, and its quality, but of an entity that consists of the physical products, all the service included and even the immaterial issues related to the supplier, such as supplier reliability and overall responsibility including respect for environment (see e.g. Toivonen 2011). Well-known models of particularly supplier and service –related dimensions of perceived product quality have been presented by Parasuraman et al. (1994), Zeithaml (e.g. 2000), and Grönroos (e.g. 1998). The findings of these seminal studies are underlying also in many wood industry related research (e.g. Hansen and Bush 1996, 1999). Toivonen (2012) observed that for Finnish consumers of wooden products, the perceived quality of product tangibles (appearance, use properties and technical quality) provides more value than that of product intangibles including the quality of environmental and social product characteristics. In addition, perceived product quality and perceived value are logically linked: the more important the quality dimension is, the more value the product provides from the consumer standpoint.

2 Data and methods

The survey data consists of 227 responses from Finnish consumers of 18-75 years of age. The responses were collected during 2004-2007 from four different home retail centres selling building materials (65 respondents from Helsinki metropolitan region, 27 from South-West Finland and 136 from East Finland).

The exit technique applied in this study has become increasingly common in the forest products consumer research (Anderson et al. 2005), and it has advantages compared to mail surveys: The data may be better representative to consumers buying wood products and shopping in home centres than a data representing more perfectly all Finnish consumers but collected using a mail survey. Targeting the consumers visiting home centres and the home construction fairs should also improve the validity of the data. The general disadvantage of the exit technique is that the sample is not necessarily representative to the desired total population (e.g. Anderson et al. 2005), as in our case. Therefore it is not possible to explicitly define the non-response rate or to generalize the results to any larger population.

The variables representing perceived importance of environmental friendliness and other supplier characteristics were measured using a five-point scale (for example, 5=“very

important”, 3=“not important or unimportant”, 1=“not important at all”) in order to capture differences in consumers’ perceptions. The statistical analysis of the data includes descriptive methods (frequencies, means), cross-tabulation, exploratory factor analysis (e.g. Hair et al. 2009), and binary logistic regression. Consumers’ self declared willingness to pay was coded based on the question “*How large a price premium would you pay for environmentally high-quality products in comparison to other, otherwise similar quality products*” as being either equal to zero (group 1) or being a positive price premium above similar normal product (group 2).

3 Results

A preliminary analysis of our data reveals that our sample of Finnish consumers of wood products consists of a majority of male respondents (62 %), average age is 44 years, 23 % reside in rural area, they are from non-single households (81%) and have at least one child (67%). From socio-economic background, they are dominantly home-owners (76 %), and with 42% their annual gross income is below 32,000€, which was about the average at the time of the data gathering. About one third of respondents also own forestland (30%) or summer cottage (34 %).

We analysed the consumer perceptions on issues related to the supplier of wood products “*How important are following aspects when deciding where to buy wood products?*” A maximum likelihood factor analysis with varimax rotation was conducted on the 17 items (Table 1). The KMO=0,85 and Bartlett’s test (χ^2 (df. 136)=1366,94 $p<0,001$) indicated that prerequisites for analysis were in order. Four dimensions were extracted based on Kaiser’s criterion. The first factor (consisting of 6 items) is named as “F1 Ease of contacting the supplier and product availability”, second (consisting of 3 items) can be named as “F2 Domestic origin and respect for environment”, the third (consisting of 2 items) refers to “F3 Service and expertise of personnel”. The fourth (consisting of 6 items) is named as “F4 Image and reputation of the supplier”.

The results provide a clear dimensional structure of supplier related quality aspects important to the consumers in our data set. It is notable that high technical quality of the traded products is very important, on average, for the respondents, but it does not load highly on any of the factors, nor does it form a factor of its own. This is probably due to low variation in perceptions of the importance of this quality issue since almost all respondents consider this either important or very important.

Table 1. Factor analysis of supplier characteristics.

	Mean (std.)	F1	F2	F3	F4
Long opening hours, also in the evenings and weekends	3,54 (1,11)	0,66			
Convenient location of the seller	3,87 (0,87)	0,62			
Ease of contact to the seller	3,96 (0,85)	0,62		0,37	
Fast delivery	4,09 (0,79)	0,47			0,28
Wide variety of products	4,14 (0,76)	0,40		0,21	0,30
Possibility to obtain information/order products via internet	3,20 (1,22)	0,39			
Domestic origin of products	3,84 (0,98)		0,99		
Domestic origin of supplier store	3,64 (1,03)		0,71		0,31
Environmental aspects taken care when considering business	3,46 (0,99)		0,42	0,31	0,27
Expertise of sales personnel	4,37 (0,68)	0,25		0,75	0,33
Service willingness and friendliness of sales people	4,27 (0,81)	0,35	0,20	0,66	
Product related guarantee and service	4,00 (0,91)		0,26	0,35	0,52
Reliability and reputation of the supplier	3,80 (0,82)	0,48	0,21		0,50
Image of store	3,53 (0,87)	0,34	0,38		0,47
Product tailoring possibilities	4,02 (0,74)	0,28		0,40	0,43
Flexible terms of payment	3,09 (1,18)				0,37
High technical product quality	4,50 (0,61)				0,33
<i>Factor eigenvalue</i>		2,46	2,06	1,74	1,69
<i>Total variance explained (%)</i>		(14,47)	(26,60)	(36,84)	(46,77)
<i>Cronbach's α</i>		0,73	0,79	0,77	0,70

*Factor loading cut-off point was 0,20

4 Discussion

The objective of this study was to bring added information on which supplier related quality attributes Finnish consumers' perceive reflecting environmental and social responsibility in case of wood products. Our Finnish consumer data indicates that supplier characteristics associated with environmental responsibility are linked with both domestic origin of wood and domestic company ownership.

The resulting dimensions of consumers' perceptions of wood product supplier characteristics, including environmental and social responsibility, are fairly well in congruence with earlier research on wood product retailing companies from the UK (Toivonen 2007, Järvinen et al. 2001), and from Germany (Järvinen et al. 2001, 2002, Toivonen et al. 2005). The observation indicates existence of a stable and thus general structure of producer characteristics, services and CSR issues, and confirming this finding with particularly consumer data from UK and Germany is one interesting avenue for further research.

From managerial perspective our results suggest that it is potentially beneficial to create a company image that underlines being environmentally and socially responsible, including providing health-safe and domestic products. Wood products industry might consider using a reference to domestic origin as a cue about wider environmental and social responsibility. Overall, revealing effective cue/indicator attributes about social and environmental responsibility inherent to wood products would be an interesting avenue for further research. A number of limitations are connected especially with the data employed in this study. This is due to the exit technique used in data collection, which does not allow reaching representative sample of consumers but the respondents are picked up among consumers visiting building material retail shops. In addition, the data was collected during several years. Nevertheless, the respondents are expected to be well-familiar with wood products and considered seriously the issues of interest of this study. Therefore the results of the study provide interesting and useful indications of consumers' perceptions even though these need to be treated as indicative only.

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