Value creation based on it marketing: an exploratory study for developing strategic partnerships in the Greek wood and furniture sectors

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Abstract: The present research reflects opinions concerning consumers' views to the development of IT supported business strategic partnerships in the Greek wood and furniture sectors. In the partnerships considered, participating enterprises aim to develop cross-firm cooperation related to procurement of materials and intermediate products, as well as outsourcing of manufacturing tasks. Research results have shown that the potentiality of developing IT-supported buyer-supplier partnerships could constitute an innovative proposition which is quite applicable to the consumers of wood and furniture products, particularly when considering real time purchases. The results obtained from a pilot implementation indicate that Greek wood and furniture enterprises have not yet managed to sufficiently develop trustworthy relationships among them. Furthermore, it is indicated that the endorsement of IT in business marketing strategies could act as a catalyst for developing trust relationships among stakeholders and provide them with the capability to develop an easy to use, cost effective marketing tool, focusing on individual consumer needs.

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1 Introduction

Traditionally, competition of enterprises was relatively static, with basic production factors being responsible for the success or failure of a firm. This status has radically changed nowadays and modern competition is unpredictable and extremely dynamic. Furthermore industrial and entrepreneurial competitive advantages are changing rapidly because of the development of new innovative technology, shortness of product life cycle and the introduction of new global competitors in the furniture sector, such as China, Russia and India. It constitutes a reality that Greek furniture enterprises face an unprecedented uncertainty and significant problems during the last period, not only as a result of the Greek and European economic downturn and recession, but also because of specific problems and stiffness of the furniture sector in Greece (Papadopoulos et al., 2012, 2009). Thus, strategic differentiation through the adoption of new business models based on innovation and extroversion is more than ever of great importance for the Greek wood and furniture enterprises. In that way they will be able to become more competitive and secure their viability by building new capabilities for value creation.

The present study deals with the implementation of industrial research, aiming for the introduction of the related technology and experimental development of an original, intelligent agent-based, information technology (hereinafter IT) system for supporting 'smart' networking of manufacturing and trading furniture and wooden products enterprises. Thus, the study of the basic attributes, functions and constituent services that

the developing business dynamic network could integrate in order to provide direct, high standard, overall customer service is of great importance. The resulting service is on the one hand tailored to individual customer needs and preferences, and on the other focuses on a quick selling procedure for the network partners taking into accounts their business rules and goals. The participating enterprises aim for cross-firm cooperation related to the procurement of materials and intermediate products and task outsourcing, based on the adoption of new marketing methods empowered by IT technologies. In addition, such cooperation, as the one developed in the pilot implementation, is the first strategic buyer-supplier partnership to take place in the Greek wood and furniture sectors. The use of the developed IT system is expected to lead to a reduction of procurement and offering service costs, facilitation of task outsourcing for the cooperating firms and integration of product and service gamut, resulting in customer satisfaction and firm competitiveness based on the creation of new dynamic value delivery capabilities for firms.

1.1   Goal and scope definition

The present research aims to constitute a useful guide for furniture enterprises, since it is based on a pilot implementation of a buyer-supplier strategic partnership model, which is supported by IT infrastructure, and is introduced for the first time in Greece. The present market study reflects opinions concerning consumer correspondence to the development of such partnerships using sophisticated technology, which enables enterprise collaboration in real time according to customer preferences and needs for furniture products, while at the same time satisfying the firms' needs in materials and taking into account its business rules and goals. The expected outcome of the work described in this paper aims to surface the opinions of the target group and potential stakeholders with respect to design, development and operation of a dynamic buyer-supplier partnership, with the aim to identify the necessary features of marketing strategies that the participant firms will have to develop to gain a competitive advantage through differentiation and value creation.

2   Literature review

2.1   Strategic differentiation and value creation

During the last few years there is a significant amount of research highlighting the contribution of entrepreneurial strategy to business performance (Demeter, 2003). This tendency includes research that brings forward the relation between business performance, manufacturing, and other technology used (Beaumont and Schroeder, 1997; Das and Narasimhan, 2001), as well as quality management techniques (in relation to business personnel and to enterprise products/elements) (Dow et al., 1999) and the sum of the entrepreneurial strategy (Robb and Xie, 2005; Li, 2000). According to Teece et al. (1997) strategic differentiation of a business lies on adopting dynamic capabilities which ultimately contribute to a sustainable competitive advantage and superior performance. Therefore, dynamic capabilities deliver superior customer value in a more cost-effective way which is difficult to be matched by rival firms and facilitate adaptation to changes in the business environment providing the competitive advantage to a firm (Boynton and Victor, 1991; Day and Wensley, 1988; Day, 1994). On the contrary, marketing research

and its applications highlights the central role of the products and services value for the consumer or the overall consumer assessment of product usability or value in purchasing decisions (Gao et al., 2012; Woodruff, 1997; Anderson, 1995). The capability of providing products with high added value for the consumers is considered as a fundamental aspect for enhancing competitiveness (Lindgreen and Fynstra, 2005; Sweeney and Soutar, 2001). Furthermore, modern consumers are more than ever oriented towards the direction of product value, and an optimised quality/price ratio. Finally, they tend to be better informed and demanding (Peter and Olson, 2002; Blackwell et al., 2001).

Under this context, enterprises are almost obligated to adjust their products, processes and the way they approach their customers, following a model through which they could provide the highest possible value focused on knowledge, innovation, strategic differentiation and the understanding of consumer needs. Consumer behaviour could constitute a tool for creating and developing successful marketing strategies with multiple benefits for the enterprises (Schiffman and Kanuk, 2000; Assael, 1998). For instance, better understanding of customer needs presupposes a plainly more rational use of business sources. Value creation for both enterprises and consumers constitutes the core of every successful business model (Zott and Amit, 2010; Morris et al., 2005; Melville et al., 2004; Chesbrough and Rosenbloom, 2002). Furthermore, it can constitute one of the most fundamental aspects of success of a product, service or technology in the market. In traditional business models the proposed value towards consumers is mainly based on concepts such as quality, design, functionality, low price and cost. Furthermore, traditional business models aim at bringing forth ways for selling products/services to consumers (Osterwalder et al., 2010). New business models presuppose the creation of new values and consumer awareness such as introducing new tacit and explicit values (Tukker, 2004), stressing relevant customer needs, offering competitive advantages to enterprises, and creating new opportunities in the market based on inspirational innovations.

2.2   IT in marketing and value creation

It is commonly admitted that we are living the 'revolution' of IT and its applications to a huge number of social, educational, business, research and industrial activities. Marketing practice continually adapts to the increased demand for service and, as a result, the topics that are considered as important for study in academia are changing over the years (Rust and Espinoza, 2006). Applications of IT and marketing, commonly referred to as e-marketing, encompass a broad set of interaction technologies that are frequently used in business-to-business (B2B) and business-to-consumer (B2C) markets (Trainor et al., 2011), giving the opportunity to support stakeholders in real time interactions. Regarding business marketing, there is an open challenge concerning getting more from marketing resources while simultaneously meeting greater expectations for establishing durable relationships with customers (Trainor et al., 2011). Recent studies suggest that organisations can improve customer acquisition and retention by integrating IT into their marketing practices to foster rich interactions with their customers (Brodie et al., 2007; Coviello et al., 2001).

Focusing on the role of IT in contemporary marketing, we can argue that we have entered a new era and that mainstream marketing concentrates on the way that technology changes the implementation of strategies and tactics in practice and increases

the enterprise ability to gather information about customers, allowing interactive communication and supporting the development of relationships (Rust and Espinoza, 2006). Modern firms need to generate market intelligence about current and future customer needs and integrate it into their business model to ensure timely response to market change while achieving customer value creation and performance improvement. Today, in many industries IT enables businesses to differentiate themselves from their competitors (Hamidi and Safabakhsh, 2011). Managing marketing information by means of IT has become one of the most vital elements of effective marketing, improving internal efficiencies of the firm. Information systems allow dynamic marketing communication between personnel in corporate planning, accounting, advertising and sales promotion, product management, channels of distribution and direct sales (Hamidi and Safabakhsh, 2011).

Making our approach more focused towards a strategic customer-supplier relationship, we emphasise that the role and position of IT within such a strategic relationship. According to Makkonen and Mervi (2014), IT is located in the structural layer of the relationship between strategic buyers and suppliers, forming a strong element around which management activities are implemented. IT such as collaborative portals, platforms, and supply chain management systems provides opportunities for enhanced collaboration (Sambamurthy et al., 2003; Schubert and Legner, 2011), and IT has been characterised, as 'the nerve system for supply chain management' (Gunasakaran and Ngai, 2004). Trust, habit, cost saving, ease of use, performance and expended effort, motivation and social factors are the key determinants of purchasing on line through these networks (Escobar-Rodríguez and Carvajal-Trujillo, 2014).

2.3   The need for strategic differentiation in the Greek wood and furniture sectors

Greek furniture production and trading are facing a continuous recession due to the economic crisis, resulting in a significant number of enterprises enduring at stagnation stage for a long period or even have had to stop their operation (Papadopoulos et al., 2012, 2009). Further to these negative indexes for the furniture sector, a number of inhibitory factors contribute towards this situation such as, high labour costs, the lack of raw materials and of specialised personnel, the small size of the Greek enterprises, the irrational organisation of firms, the lack of new production technologies and the deficient infrastructures in the sector (Papadopoulos, 2006).

Nevertheless, according to a recent study in Greece (Trigkas et al., 2012) the majority of the innovating wood and furniture enterprises are adopting existing production and distribution processes moving towards marginal improvements. Thus, we could argue that there is a growing need for development of innovative promotion and distribution methods for the Greek wood and furniture industries. On the contrary, according to the same research, it is revealed that Greek wood and furniture enterprises have not yet been able to develop mutual trust-based relations in order to effectively move towards the exchange of knowhow and best practices. As a consequence, the improvement of cooperation between the sector's enterprises is deemed of high importance since the enhancement of cross firm bounds and of cooperative activities, along with constant investments in modern technology and the exchange of best entrepreneurial practices, could enhance the sector's competitiveness (Trigkas et al., 2012), without this strategic choice to be in confrontation with the independent entrepreneurial activity of firms.

Papadopoulos et al. (2012) have also revealed through their study that the larger Greek furniture enterprises prefer to invest in processes that reduce the production costs in order to confront the existing competition. On the contrary, SMEs select strategic differentiation and apply specific initiatives regarding their business model, since they could not become competitive with respect to production cost. Finally, despite the economic crisis and the dramatic consequences in family income in Greece, a recent study (Papadopoulos et al., 2014) has shown that Greek consumers are willing to pay extra for the added value that a furniture product may offer, based on technological and ecological innovations, in order to satisfy their specific needs. The same study concludes that "Greek furniture enterprises will have to focus to differentiation from the competition, innovating through the production and promotion of furniture products of high added value, a fact that could ensure a significant fraction of the internal market and boost extroversion".

3 Research methodology

The present study uses evidence from a sample of Greek firms belonging to the furniture industry. The primary data collection followed the methodology of gathering, processing and editing according to the basic principles of marketing research (Gordon and Langmaid, 1988; Tull and Hawkins, 1990; Doyle, 1998; Aaker et al., 2004; Siomkos and Mavros, 2008). The method allows for a relatively big potential measurement error (Zafeiropoulos, 2013). Therefore, for a max error of estimate 10% at a significance level of 95%, which is rather acceptable for this kind of study due to the limited sources devoted, the sample covered a n = 1/e2 of the questionnaires i.e., 100 (Zafeiropoulos, 2013) presenting a response rate of approximately 85%.

Questionnaires were specially constructed for the purpose of the study with short and precise questions. The questionnaire included 13 questions on issues such as cooperation and trust magnitude of consumers towards wood and furniture enterprises, their general attitude regarding the development and implementation of such a business network, product's characteristics, services, benefits and services, as structural elements of the network's operation according to their needs and preferences in real time. Finally, the last group of questions had to do with the participants' profile in order to detect the specific characteristics of the potential users of 'smart networks' in wood and furniture products.

The questionnaire was designed to be placed on a currently similar ongoing project website. It was developed using LimeSurvey®, an open source survey application (LimeSurvey Project Team and Schmitz, 2012). In order to increase the response rate of consumers, e-mails were sent to a random sample of consumers stating the aim of this study, providing a hyperlink to the survey form. Before conducting the main survey, a pre-test and a pilot test were carried out to estimate the content validity of the questionnaire. The pre-test involved diligent discussions with representatives of the wood and furniture partner enterprises and selected scientific experts from the field, as well as an extended literature review. The pilot questionnaire was addressed to five representative consumers to reduce questions' possible ambiguity. The feedback gathered through the pilot study resulted in a much improved questionnaire (Dillman, 2000).

The online research took place between January 2013 and February 2014, using a random sampling of 250 consumers from all over Greece. The online survey yielded 66 usable responses corresponding to a 26.4% of the selected sample. Data were edited

and processed using SPSSWIN17.0 and all the related tests of *frequencies*, *descriptives* and *cluster analysis* were made (Howitt and Cramer, 2003; Siomkos and Vasilikopoulou, 2005; Norusis, 2007), in order to identify groups of consumers based on profile specific characteristics and the integration range of the network's attributes – operations.

4   Results and discussion

The results of the study are considered to be of great importance constituting a core element of the entire e-furniture research project, but also specifically aiming to improve consumer service by addressing customer needs and preferences, offering targeted and quick sales for the enterprises, thus resulting in a high added value service and a strong competitive advantage.

The majority of respondents (57.5%) were single between the ages of 21 and 30. 32.5% are privately employed freelancers and students (22.5% and 25% respectively). The average net monthly income for the majority of the respondents is below 1.000€ (45%), followed by a 30% of respondents with an income between 1,000€–2,000€. In terms of education level, 67.5% has higher education, with 25% of respondents having completed post-graduate studies. Regarding type of residence, the majority (47%) live in a single residence under 100 square meters.

A chi-square criterion was used in order to form groups of customers willing to use an IT-based partnership for their purchase, according to demographics. The analysis has shown that there is a statistically significant relation between consumers' attitude regarding real time purchasing of furniture and wooden products from the network and:

a   their education level (Pearson $X^2 = 23.585$, for a significance level > 99.5% approx. sig = 0.005)

b   their age (Pearson $X^2 = 24.210$, for a significance level > 99.5% approx. sig = 0.004).

Furthermore, this attitude is independent in relation to their income and gender. These results verify the theory that only some social factors play a fundamental role in developing IT marketing strategies. Mainly younger consumers of higher education are oriented towards such a perspective (Figure 1), since 71.4% of university graduates have a very positive attitude and 38.9% of postgraduates have a positive towards the development of the partnership with the use of IT.

Regarding the question "what would be the initial impression of consumers in case a firm participated in a cooperative network giving them the opportunity to buy products remotely, automatically and real time", the majority of participants (42.6%) had a positive attitude while 37% would be very positive, as presented in Figure 2. These results are considered to be quite encouraging, since the potentiality of developing the proposed network for the dynamic collaboration of furniture and woodwork manufacturing enterprises, could constitute an innovative proposition which finds resonance to the consumers of wood and furniture products.

Figure 1 Groups of consumers' attitude regarding real time purchasing of furniture and wooden product from the network, according to their education level (see online version for colours)
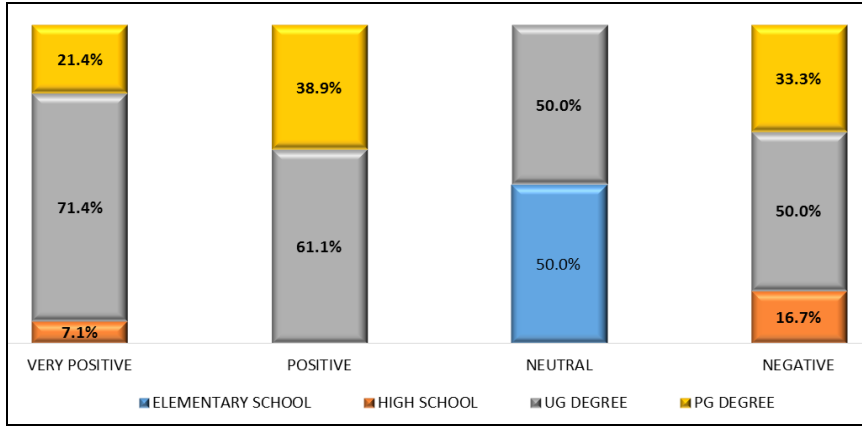

Figure 2 Initial consumers' attitude towards networking enterprises for real time purchases (see online version for colours)
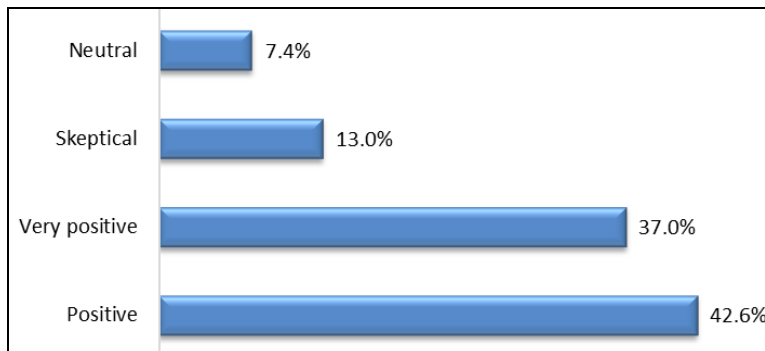

Figure 3 Expected benefits for the consumers by a potential dynamic networking of wood and furniture enterprises (see online version for colours)

Figure 3 shows consumers' expected benefits. 60.5% stated that they could save time, 39.5% would enjoy completed solutions according to their personal needs and preferences, 37.2% better prices, 16.3% better design and guarantees and 11.3% less stress during products' selection and purchase. The specific expected benefits could constitute a fundamental competitive advantage of the partnerships' enterprises. This fact is deemed to be of great importance in the wood and furniture sectors, especially during the present economic downturn in which they are facing a vertical decline to their financial and production figures. Their entrepreneurial activity will be boosted through the introduction of 'smart' affordable ways of presenting, promoting and selling complete solutions. These three competitive advantages constitute the basis of the competition mainly by multinational companies operating in Greece (Spanos et al., 2004; Porter, 1986). Furthermore, these specific results are confirming related research in the field which state that the core elements of developing such partnerships are added value delivery to consumers based on their existing and emerging needs.

Figure 4   Trust towards the firm after a successful purchase (see online version for colours)
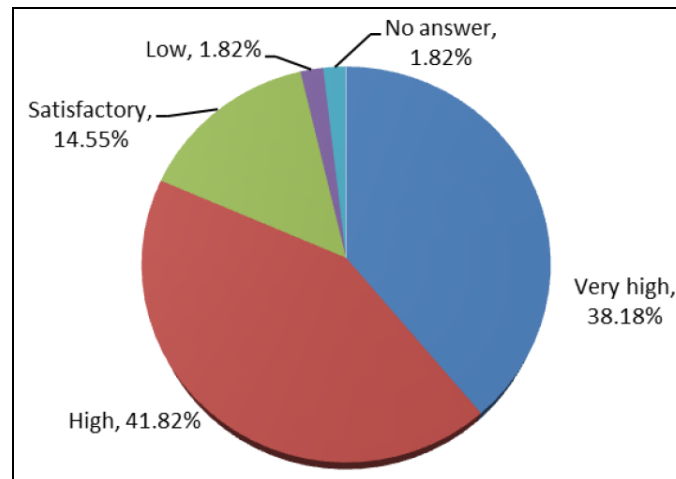
However, 13% of consumers show a hesitant attitude towards the possibility of developing such a network through which to make their purchases. 62% stated they need to make personal contact with several enterprises in order to judge the reliability and trust of such enterprises, and 25% stated that this method of selling will not offer them the best possible quality. The building of trust in a buyer-supplier partnership is of significant importance constituting a core element for the success of such a strategic alliance. 38.2% of Greek consumers stated that they will develop very high trust towards a firm after a successful purchase, and 41.8% stated high trust (Figure 4). Thus, it is of great importance for the participating enterprises in such a partnership to secure mutual trust with prospective consumers, providing them with high quality products and solutions. This effort should be supported by several supplementary strategies such as quality certifications, implementation of quality management systems, feedback processes, and after sales service, in order to eliminate any hesitation which may exist towards this kind of a cooperative business model. The endorsement of IT in firms' marketing strategies

could act as a catalyst for developing such relationships based on trust among the stakeholders, since it could secure transparent and safe transactions and foster rich interactions between buyers and suppliers of wood and furniture products.

Another important factor to be considered is the characteristics to which consumers give special attention to before purchasing furniture products, and which will have to constitute the structural capabilities of the developing partnership (Figure 5). According to the obtained results, the characteristic which appear to be the most important are product quality (31.4%), low prices (31.1%), design (21.1%) and guarantees (14%).

Figure 5 Significance (%) of wood and furniture products purchasing characteristics (see online version for colours)
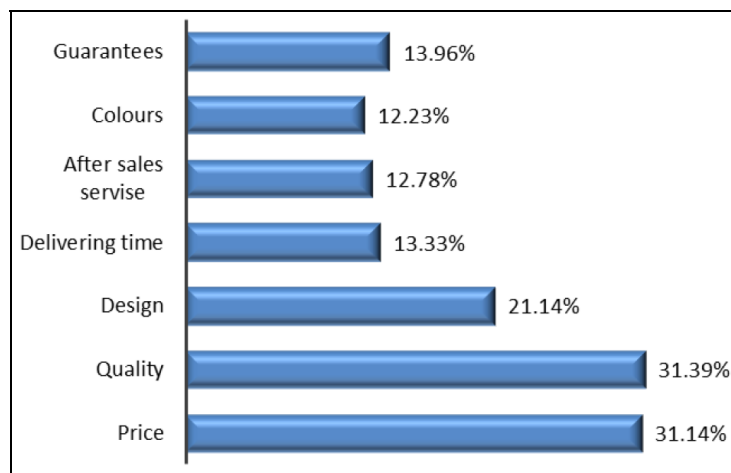

Figure 6 Basic reasons for interrupting cooperation with wood and furniture enterprises (see online version for colours)
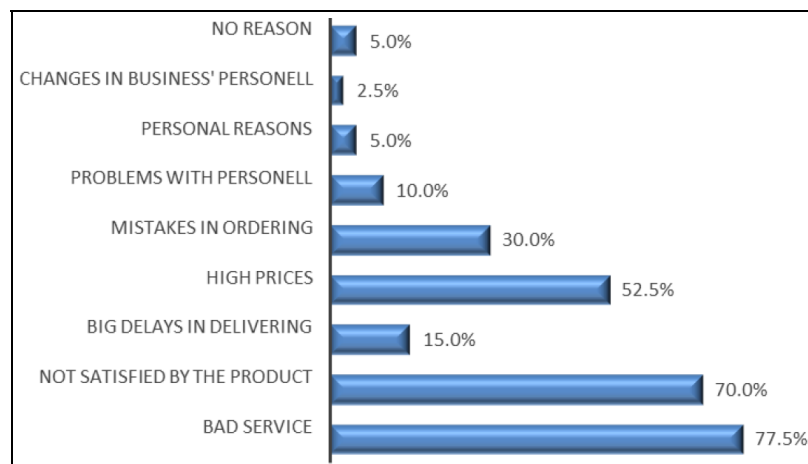
Table 1   Significance of wood and furniture product attributes during the purchasing process

		Brand name	Low price	Payments of no interest	Quality	Guarantees	Prototype and functional design	Colours	After sales service	Existence of a shop near my residence
Brand name	Pearson correl.	1	-	-	-	-	-	-	-	-
	Sig. (two-tailed)		-	-	-	-	-	-	-	-
	N	49								
Price	Pearson correl.	.259	1	-	-	-	-	-	-	-
	Sig. (two-tailed)	.072	-	-	-	-	-	-	-	-
	N	49	52							
Payments of no interest	Pearson correl.	.097	.292	1	-	-	-	-	-	-
	Sig. (two-tailed)	.539	.061		-	-	-	-	-	-
	N	42	42	42						
Quality	Pearson correl.	.161	.037	-.116	1	-	-	-	-	-
	Sig. (two-tailed)	.275	.797	.472		-	-	-	-	-
	N	48	51	41	51					
Guarantees	Pearson correl.	.178	.026	.140	.308*	1	-	-	-	-
	Sig. (two-tailed)	.231	.859	.383	.033		-	-	-	-
	N	47	49	41	48	49				
Prototype and functional design	Pearson correl.	.048	-.131	.126	-.156	.138	1	-	-	-
	Sig. (two-tailed)	.749	.375	.440	.296	.360		-	-	-
	N	46	48	40	47	46	48			
Colours	Pearson correl.	-.236	-.046	.395*	.305*	.437**	.137	1	-	-
	Sig. (two-tailed)	.128	.766	.014	.044	.003	.370		-	-
	N	43	45	38	44	45	45	45		
After sales service	Pearson correl.	.195	-.081	.291	.438**	.505**	.085	.603**	1	-
	Sig. (two-tailed)	.193	.582	.072	.002	.000	.569	.000		-
	N	46	49	39	48	47	47	45	49	
Existence of a shop near my residence	Pearson correl.	.338*	.252	.001	.083	.099	-.096	-.037	-.065	1
	Sig. (two-tailed)	.028	.099	.996	.597	.522	.537	.811	.677	
	N	42	44	38	43	44	44	44	44	44

In addition, furniture products should be focused on attributes such as low price (33.3% of the respondents consider it as quite significant and 27.8% very significant), original and functional design (29.6% and 38.9% respectively), provided guarantees (31.5% and 37% respectively) as well as after sales service (24.1% and 31.4% respectively). The aforementioned attributes will have to be taken into account during the development of the proposed collaboration network, since they may well lead to the desired competitive advantage. Particularly, they can be used as a basis for the development of specialised algorithms that will be able to automatically and dynamically form product combinations (i.e., product bundles) which will be offered to consumers (Karageorgos and Rapti, 2013; Rapti et al., 2014) considering individual preferences and focusing on reflecting the aforementioned benefits.

Correlation analysis using Pearson correlation coefficient (Pcc) regarding the purchase determinant characteristics of products, has shown that at a significance level of 0.01, the factors which have a mutual positive correlation (Table 1), are: α) customer service in relation to quality (Pcc = 0.438), guarantees (Pcc = 0.505) and product colours (Pcc = 0.603) as long as β) guarantees in relation to product colours (Pcc = 0.437). These results will be taken into consideration during the development of the agent-based IT software, in order to effectively address customer needs and firms' orientation with regards to their product characteristics.

Finally, participants stated that among the most important reasons for interrupting cooperation with enterprises include bad service (77.5%), unsatisfied with product (70%), high prices (52.5%) and mistakes in orders (30%), hence again a focus on service, quality, price is of paramount importance (Figure 6).

Overall, Greek consumers believe that the use of IT in purchasing wood and furniture products, will provide them with an easy to use, cost saving and adjusted to their preferences way of buying. These findings constitute a basis for the related firms and industries in developing such capabilities delivering the best possible value to their customers, giving them simultaneously a significant competitive advantage through strategic differentiation.

5 Conclusions – proposals

Modern consumers of wood and furniture products are now more than ever oriented towards the value of products, focusing on the best possible combination of quality and price. Especially during the current economic downturn with limited resources, there is an urgent need for research of wood and furniture products with high added value. The study of basic attributes, functions and services that a developing business dynamic IT partnership could integrate is vital, and the majority of participants having a positive attitude towards such a partnership is even more encouraging.

Results show that customer services should be integrated, ensuring product quality, low prices, design, and offering guarantees. Moreover, products should have an original and functional design, and a reliable sales service. Customer expected benefits of buying online include saving time, enjoying integrated services, better prices, better design, bigger guarantees and less stress during the purchase. These benefits could constitute the fundamental competitive advantage of the network's enterprises, based on value creation. This is of great importance during the current economic downturn for the sectors of wood and furniture which are being faced with a continuously vertical decline in sales and hope

to boost their enterprises through 'smart' entrepreneurial ways for selling products. Furthermore, this effort should be supported by supplementary strategies such as: quality certifications, implementation of quality management systems, feedback processes, after sales service, and so on, for an even more impactful offering.

Value creation for companies and consumers is at the core of this proposed business model based on strategic partnerships between buyers-suppliers and sophisticated IT software. Although technology and networking can play a fundamental role in the success of a product or service in the market, value deliverance according to customers' needs is a key element for ensuring this success. The current study confirms related research suggesting that firms need to generate market intelligence on current and future customer needs and integrate this into their business model. This integration will ensure, a timely response to market change achieving customer value creation and performance improvement, constituting a strategic differential advantage for them. The present study has also shown that the introduction of IT in business marketing practices, development of strategic alliances and value deliverance according to customers' needs, could constitute dynamic capabilities for the sectors' enterprises in order to gain a significant competitive advantage.

However, it seems that wood and furniture enterprises have not yet managed to develop trustworthy relationships between them and fail to see the opportunities they have in developing cooperative activities using technology, hence acquiring a fundamental competitive advantage. In order for this to be achieved, they should focus on specific cooperative activities and exchange entrepreneurial practices, but not letting this interferes with their independent operation. Results indicate that Greek wood and furniture enterprises have indeed developed trust with their customers but should now also focus on building trust at a buyer-supplier level. Using IT could help develop such a partnership since it contributes towards more efficient, effective, transparent and safe transactions at the buyer-supplier level, at both a B2B as well as B2C context.

The research contributes to theory by highlighting the core elements of an IT-based marketing strategy aiming to customers' value deliverance through strategic differentiation, giving the firms the capability in adapting to the rapidly changing business environment. The proposed strategy, as it is tailored for the Greek wood and furniture sectors, should be based on knowledge, innovation, strategic differentiation and value creation for consumers' needs, in a cost effective way, taking into consideration several idiosyncratic elements. In order for this to be achieved strategic partnerships could be developed under the context of several approaches such as use of IT, clustering, networking etc.

Of course, certain limitations do exist since it is a part of an ongoing research project. Thus, findings should be verified in the future when the partnership will reach a mature stage. Furthermore, similar surveys should be made gathering data from other sectors in Greece and internationally, in order to establish theory regarding the role of IT in strategic buyers – suppliers partnerships based on value creation capabilities of the firms.

Acknowledgements

TEI of Thessaly. It has been co-financed by the European Union (European Fund for Regional Development) and Greek national funds through the Operational Program *Competitiveness and Entrepreneurship* of the National Strategic Reference Framework (NSRF) – Research Funding Program: *Supporting of SME's clusters for R&D activities.*

References

Aaker, D., Kumar, V. and Day, G.S. (2004) *Marketing Research*, 8th ed., John Wiley & Sons, Inc, New York.

Anderson, J.C. (1995) 'Relationship in business markets: exchange episodes, value creation, and their empirical assessment', *Journal of the Academy of Marketing Science*, Vol. 23, No. 4, pp.346–350.

Assael, H. (1998) *Consumer Behavior and Marketing Action*, 6th ed., South Western Company, Boston, MASS.

Beaumont, N.B. and Schroeder, R.M. (1997) 'Technology, manufacturing performance and business performance amongst Australian manufacturers', *Technovation*, Vol. 17, No. 6, pp.297–307.

Blackwell, R.D., Miniard, P.W. and Engel, J.F. (2001) *Consumer Behavior*, 9th ed., pp.5–61, Harcourt College Publishers, Florida.

Boynton, A.C. and Victor, B. (1991) 'Beyond flexibility: building and managing the dynamically stable organization', *California Management Review*, Vol. 34, No. 1, pp.53–66.

Brodie, R.J., Winklhofer, H., Coviello, N.E. and Johnston, W.J. (2007) 'Is e-marketing coming of age? An examination of the penetration of e-marketing and firm performance', *Journal of Interactive Marketing*, Vol. 21, No. 1, pp.2–21.

Chesbrough, H. and Rosenbloom, R. (2002) 'The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies', *Industrial and Corporate Change*, Vol. 11, No. 3, pp.529–555.

Coviello, N.E., Milley, R. and Marcolin, B. (2001) 'Understanding IT-enabled interactivity in contemporary marketing', *Journal of Interactive Marketing*, Vol. 15, No. 4, pp.18–33.

Das, A. and Narasimhan, R. (2001) 'Process-technology fit and its implications for manufacturing performance', *Journal of Operations Management*, Vol. 19, No. 5, pp.521–540.

Day, G.S. (1994) 'The capabilities of market-driven organizations', *Journal of Marketing*, Vol. 58, No. 4, pp.37–52.

Day, G.S. and Wensley, R. (1988) 'Assessing advantage: a framework for diagnosing competitive superiority', *Journal of Marketing*, Vol. 52, No. 2, pp.1–20.

Demeter, K. (2003) 'Manufacturing strategy and competitiveness', *International Journal of Production Economics*, Vols. 81–82, No. 1, pp.205–213.

Dillman, D.A. (2000) *Mail and Internet Surveys: The Tailored Design Method*, John Wiley & Sons, New York, NY.

Dow, D., Samson, D. and Ford, S. (1999) 'Exploding the myth: do all quality management practices contribute to superior quality performance?', *Production and Operations Management*, Vol. 8, No. 1, pp.1–27.

Doyle, P. (1998) *Marketing Management and Strategy*, 2nd ed., Chapter 3, Prentice-Hall, Europe.

Escobar-Rodríguez, T. and Carvajal-Trujillo, E. (2014) 'Online purchasing tickets for low cost carriers: an application of the unified theory of acceptance and use of technology (UTAUT) model', *Tourism Management*, Vol. 43, No. 1, pp.70–88.

Gao, T., Leichter, G. and Wei, Y. (2012) 'Countervailing effects of value and risk perceptions in manufacturers' adoption of expensive, discontinuous innovations', *Industrial Marketing Management*, Vol. 41, No. 4, pp.659–668.

Gordon, W. and Langmaid, R. (1988) *Qualitative Market Research: A Practitioner's and Buyer's Guide*, Gower, Aldershot.

Gunasakaran, A. and Ngai, E.W.T. (2004) 'Information systems in supply chain integration and management', *European Journal of Operational Research*, Vol. 159, No. 2, pp.269–295.

Hamidi, A. and Safabakhsh, M. (2011) 'The impact of information technology on E. marketing', *Procedia Computer Science*, Vol. 3, No. 1, pp.365–368.

Howitt, D. and Cramer, D. (2003) *Statistics with SPSS 11 for WINDOWS*, p.291, Kleidarithmos Eds., Athens.

Karageorgos, A. and Rapti, E. (2013) 'Dynamic generation of personalized product bundles in enterprise networks', *On the Move to the Meaningful Internet Systems: OTM 2013 Workshops*, Graz, Austria, pp.207–218.

Li, L. (2000) 'An analysis of sources of competitiveness and performance of Chinese manufacturers', *International Journal of Operations and Production Management*, Vol. 20, No. 3, pp.299–315.

LimeSurvey Project Team and Schmitz, C. (2012) *LimeSurvey: An Open Source survey tool /LimeSurvey Project*, Hamburg, Germany [online] http://www.limesurvey.org (accessed 10 June 2013).

Lindgreen, A. and Fynstra, F. (2005) 'Value in business markets: what do we know? Where are we going?', *Industrial Marketing Management*, Vol. 34, No. 1, pp.732–748.

Makkonen, H. and Mervi, V. (2014) 'The role of information technology in strategic buyer-supplier relationships', *Industrial Marketing Management*, Vol. 43, No. 6, pp.1053–1062.

Melville, N., Wallace, E., Kraemer, K. and Gurbaxani, V. (2004) 'Review: information technology and organizational performance: an integrative model of IT business value', *Journal MIS*, Vol. 28, No. 2, pp.283–322.

Morris, M., Schindehutteb, M. and Allen, J. (2005) 'The entrepreneur's business model: toward a unified perspective', *Journal of Business Research*, Vol. 58, No. 6, pp.726–735.

Norusis, M. (2007) *A Guide of Data Analysis with SPSS 12.0*, Kleidarithmos Eds, Athens.

Osterwalder, A., Pigneur, Y. and Smith, A. (2010) *Business Model Generation* [online] http://www.businessmodelgeneration.com (accessed 15 June 2013).

Papadopoulos, I. (2006) 'Financial analysis of the biggest Greek furniture enterprises', *Geotechnical Scientific Issues*, Vol. 17, No. 1, pp.24–41.

Papadopoulos, I., Eythimoiu, I., Trigkas, M. and Papadopoulou, E. (2012) 'Marketing strategies of furniture enterprises during the economic crisis', *Practical Issues in Management and Economics International Journal*, Vol. 5, No. 1, pp.86–102.

Papadopoulos, I., Karagouni, G. and Trigkas, M. (2009) 'Design of marketing strategies of Greek furniture enterprises', *Practical Issues in Management and Economics International Journal*, Vol.2, No. 2, pp.136–149.

Papadopoulos, I., Trigkas, M., Karagouni, G., Papapdopoulou, E., Tripolitsioti, E., Moraiti, V. and Platogianni, E. (2014) 'Market study of ecological – smart home furniture consumers – GSF in Greece', *Larisa Proceedings of the ARCHIMEDES III Project* [online] http://www.teilar.gr/archimedes3.php (accessed 29 November 2013).

Peter, J.P. and Olson, J.C. (2002) *Consumer Behavior and Marketing Strategy*, 6th International ed., pp.2–17, Irwin/McGraw-Hill, Boston, MA.

Porter, M. (1986) *Competition in Global Industries. A Conceptual Framework*, Harvard Business School Press, Boston.

Rapti, E., Karageorgos, A. and Ntalos, G. (2014) 'Adaptive constrained and rule-based product bundling in enterprise networks', *IEEE International Conference on Enabling Technologies: Infrastructure for Collaborative Enterprises, 12th Adaptive Computing (and Agents) for Enhanced Collaboration*, Parma, Italy, pp.15–20.

Robb , D.J. and Xie, B. (2003) 'A survey of manufacturing strategy and technology in the Chinese Furniture industry', *European Management Journal*, Vol. 21, No. 4, pp.484–496.

Rust, R.T. and Espinoza, F. (2006) 'How technology advances influence business research and marketing strategy', *Journal of Business Research*, Vol. 59, No. 10, pp.1072–1078.

Sambamurthy, V., Bharadwaj, A. and Grover, V. (2003) 'Shaping agility through digital options: reconceptualizing the role of information technology in contemporary firms', *MIS Quarterly*, Vol. 27, No. 2, pp.237–263.

Schiffman, L.G. and Kanuk, L.L. (2000) *Consumer Behavior*, 7th International ed., Chapter 9, pp.228–255, Prentice Hall Internationa, Inc, Upper Saddle River, NJ.

Schubert, P. and Legner, C. (2011) 'B2B integration in global supply chains: an identification of technical integration scenarios', *Journal of Strategic Information Systems*, Vol. 20, No. 3, pp.250–267.

Siomkos, G. and Mavros, D. (2008) *Market Research*, Stamoulis, Athens.

Siomkos, G.I. and Vasilikopoulou, A.I. (2005) *Implementation of Analysis Methods in the Market Research*, Chapter 7, Stamoulis Publications, Athens.

Spanos, Y., Zaralis, G. and Lioukas, S. (2004) 'Strategy and industry effects on profitability: evidence from Greece', *Strategic Management Journal*, Vol. 25, No. 2, pp.139–165.

Sweeney, J.C. and Soutar, G.N. (2001) 'Consumer perceived value: the development of a multiple item scale', *Journal of Retailing*, Vol. 77, No. 2, pp.203–220.

Teece, D.J., Pisano, G. and Shuen, A. (1997) 'Dynamic capabilities and strategic management', *Strategic Management Journal*, Vol. 18, No. 7, pp.509–533.

Trainor, K.J., Rapp, A., Beitelspacher, L.S. and Schillewaert, N. (2011) 'Integrating information technology and marketing: an examination of the drivers and outcomes of e-marketing capability', *Industrial Marketing Management*, Vol. 40, No. 1, pp.162–174.

Trigkas, M., Papadopoulos, I. and Karagouni, G. (2012) 'Economic efficiency of wood and furniture innovation system', *European Journal of Innovation Management*, Vol. 15, No. 2, pp.150–176.

Tukker, A. (2004) 'Eight types of product-service systems: eight ways to sustainability?', *Business Strategy and the Environment*, Vol. 13, No. 4, pp.246–260.

Tull, D.S. and Hawkins, D.I. (1990) *Marketing Research, Measurement, and Method*, Macmillan, New York, NY.

Woodruff, R.B. (1997) 'Customer value: the next source of competitive advantage', *Journal of the Academy of Marketing Science*, Vol. 25, No. 2, pp.139–153.

Zafeiropoulos, K. (2013) *Introduction in Statistics and Probabilities*, p.336, KRITIKI publ., Athens, ISBN 978-960-218-879-8.

Zott, C. and Amit, R. (2010) 'Business model design: an activity system perspective', *Long Range Planning*, Vol. 43, Nos. 2–3, pp.216–226.