SEING IS BELIEVING?

SIGNALLING SUPPLIER'S VALUE POTENTIAL

Work-in Progress - General Track

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Abstract

In this study we are interested in framing the uses of signals by business suppliers, and in assessing how signals of supplier's value potential influence supplier selection.

Recent research suggests that suppliers increasingly move their communication content from the products they sell to the strategic assets they own. This shift in communication poses however a theoretical issue: as strategic assets derive their value from the asymmetric information position which favours the supplier owning them with respect to the industry and the market – what is better known as the causal ambiguity rationale – why the supplier should disclose them, exposing himself to the risk of imitation and of being spoiled from his strategic assets value?

We draw upon signalling theory in information economics to argue that suppliers endowed with better strategic assets may be willing to signal their competitive advantage to the market to deal with adverse selection issues and leverage upon their future value potential. Grounding on prior research on the unobservable quality of products, we develop hypotheses to frame the effect of the use of signals in the business-to-business setting of trade fairs.

The data of this study include two industries - glass manufacturing and equipment for oenology, beverage production, bottling and packaging – and have been collected through multiple sources (company documents, online documents, structured observation, surveys).

Evidence from our data suggests that (i) signalling strategies before and during trade fairs vary in their impact on supplier selection basing upon the content of the signal; (ii) business suppliers group themselves according to different signals-pooling strategies, which are not equally effective with respect to supplier selection.

Our findings contribute to extend the domain of signalling strategies on the unobservable quality of products to unobservable supplier value, and point to the effect of signals on supplier selection.

Keywords: *Signalling, supplier selection, supplier's value, disclosure, trade shows*

INTRODUCTION

Supplier selection is a critical issue for organizational buyers (Masella and Rangone 2000; Mummalaneni et al. 1996; Swift 1995; Verma and Pullman 1998; Wu et al. 2010). The intrinsically continuative and relational nature of inter-organizational exchanges, the existence of relationship-specific investments, and the opportunism that the counterpart may reveal after a relationship is in place, make organizational buyers involved into supplier assessment before purchases, and sensitive to information that the vendor may possess and that could influence the buyer's decision of which vendor should be patronized.

Accordingly, prior research posited that the scope of information seeking for organizational buyers is extended beyond the actual core product that a seller may offer in the marketplace, and rather embraces the broader construct of supplier value (Ulaga and Eggert 2005).

Two directions are covered by organizational buyers in this respect. On the one hand, along with the core product, buyers may screen the relationship dimension of value: this latter incorporates attributes of the supplier such as the delivery ability, the personal interaction effectiveness, as well as supply-chain management process efficiency (Ulaga 2003). On the other hand, along with the current offering, organizational buyers may be interested in anticipating the payoff of the relationship in the long term, what was referred to as the supplier's value potential in the future. Supplier's value potential is relevant in those contexts featured by high relational complexity, and includes dimensions such as radical innovations, network enacting functions, and more generally those sources of value which are grounded on the supplier's core capabilities (Moeller and Toerroenen 2003). This latter avenue seems of particular interest, as it shift the emphasis directly on the supplier selection antecedents that are most critical for the long-term pay-off of the relationships, and may counterbalance the risks that the organizational buyer undertakes whenever supplier selection has lock-in costs.

There is however little empirical development on the effects of the expected future value of a supplier on supplier selection. Notwithstanding sound theoretical conceptualizations, the mechanisms through which sellers leverage on their value potential to convey credible and usable information to the market remains largely unexplored. So far, prior research has mostly focused on the disclosure of proprietary information about the supplier's strategic assets, as a mean to reveal the value potential in the future (Zerbini et al. 2007). However, this perspective does not explain why a seller should reveal strategic information about a key source of competitive advantage, thereby exposing itself to the risks of imitation, and spoiling its endowment from the value for the customer. Indeed, strategic assets derive their value from the tacit knowledge they embed, i.e. from the information asymmetry conditions which sees the competence owner in advantage in front of the industry (Kogut and Zander 1992). It is precisely the causal ambiguity of the mechanisms through which strategic assets are created and used that breeds their value for the customer and prevent from imitation by competitors (Barney 1986; Winter 1987). Hence, why suppliers should tell the market about their endowment value potential, while avoiding to be spoiled of their value because of imitation by competitors? In other words, how can suppliers deal with the intrinsic duality related to disclosure?

In this study, we propose to broaden the current research focus on the strategies that a supplier may implement to disclose its value potential to the prospective buyer, to embrace the larger notion of market signals that information economics already adopted in the market of labor (Spence 1973) and that marketing scholars developed with respect to the unobservable quality of products (Kirmani and Rao 2000).

BACKGROUND

Signals are 'actions that parties take to reveal their true type (e.g. skill level)', whenever they stand from an advantageous position of information asymmetry vis-à-vis their counterpart (Kirmani and Rao 2000): 66). The rationale of signalling is that the ownership of an unobservable advantage, in absence of actions to reveal it, may expose the owner to a condition of adverse selection. For instance a prospective buyer assessing two alternative suppliers A and B where supplier A's value is greater than supplier B's value, in absence of perfect information, may end up by choosing B for the mere fact that he/she does not possess full information to learn about A's superiority. Kirmani and Rao (2000) maintain that, to solve this problem, firm A may do better to issue a signal that identify with reliability its type.

Signalling theory has been shown to hold in a variety of business contexts, including the signalling of competitive postures and moves to competitors (Prabhu and Stewart 2001) and shareholders (Lee and Chen 2009; Sorescu et al. 2007) as well as the signalling of product value to customers (Basuroy et al. 2006; Hellofs and Jacobson 1999; Rao and Monroe 1989; Stiving 2000). Although several types of signals exist, to the larger extent they could be grouped within two broad conceptual categories. On the one hand there are signals that lock its sender into a non-reversible behaviour; on the other hand there are signals that act as sunk costs. Both reflect actions that reduce the payoff for the sender, and therefore work as revealing behaviours that are expected to be adopted by senders holding a position of advantage with respect to their rivals. Examples of signals of the first type are new product announcements to competitors and customers before the launch (Robertson et al. 1995), while examples of signals of the second type are advertising (Nelson 1974) or R&D spending (DeKinder and Kohli 2008).

There is no general consensus about how signalling theory fits with the management of information asymmetries in the vendor selection process. On the one hand, there are hints from prior research suggesting that revealing supplier's strategic assets may be interpreted as a form of signalling (Moeller and Toerroenen 2003; Zerbini et al. 2007). On the other hand, scholars already suggested that whenever it is 'difficult for buyer to evaluate a supplier's true level of performance or if the signals sent by the supplier are not easily interpreted, it will be inefficient to implement a qualification program based on general ability' (Stump and Heide 1996: 434).

Our study tries to advance how signals may be framed, and what are their effects, in the management of information asymmetries about the supplier's value potential in the future, to the end of supplier selection.

HYPOTHESES DEVELOPMENT

Information seeking within industrial markets takes different forms than in consumer markets. To the largest extent, information seeking and information disclosure are concentrated in time and space, within tangible settings where vendors and buyers meet and interact in person. Prior research largely confirms this pattern, and focuses on exhibitions as temporary marketplaces to share information, set industry trends, and exchange goods (e.g., Borghini et al. 2006; Gopalakrishna and Lilien 1995; Rinallo and Golfetto 2006).

We propose that information asymmetries about supplier's value potential could be effectively signalled within personal interaction contexts of exhibitions, but also focus on the duality of these environments in generating a signalling supplier's exposure to the risk of privation of its position of advantage. More specifically, we contend that the payoff of the signal depends upon the ways or contents used to reveal the supplier type. Our focus is on the disclosure of strategic assets as a form of signalling. Both disclosure (e.g. DeKinder and Kohli 2008) and strategic assets such as skills (Kirmani and Rao 2000) have been formerly considered as signals, although no specific empirical development exists about them to the best of our knowledge. In contrast to prior research on competence-based marketing (Golfetto and Gibbert 2006; Matthyssens et al. 2009; Moeller 2006; Zerbini et al. 2007), we argue that the disclosure of strategic assets in real-interaction environments damage the ability of the supplier to be selected by the buyer because the buyer anticipates that these competencies will be spoiled of their distinctive value because of imitation by rivals, and therefore will not be able to deliver in the future superior value for the customer. Rather, the prospective buyer would prefer the seller to maintain his strategic assets and skills tacit, so to increase the likelihood to receive from them value in the future. Accordingly, we posit that:

H1a: *The disclosure of strategic assets in a real-interaction environment, operated by a supplier, negatively affects supplier selection performance*

On the contrary, when the suppliers signal their value potential through current product offering, we expect a positive effect on its effectiveness in reducing the information asymmetry effect on adverse selection. The main rationale behind our claim is that by disclosing its product offering to the market and the competition, the signalling supplier exposes himself to a delayed reduction of his payoff, where the duration of the 'insulation' effect depends upon the expected duration of the imitation cycle by the competition. As such, the buyer will expect that the supplier willing to expose its current offering to imitation has already planned an innovation cycle allowing him to advance the efficiency frontier beyond the actual value for the customer, and will infer a higher suppliers' value potential in the future, vis-à-vis the suppliers that do not signal. Accordingly, we posit that:

H2a: *The disclosure of marketed products in a real-interaction environment, operated by a supplier, positively affects supplier selection performance*

Although acknowledging the relevance of real-context interaction, however, in this study we also recognize that prior research has not paid much attention to virtual-based interaction as a context for information seeking. Yet, some scholars already suggested that virtual environments may constitute as well a secondary but relevant source of information (Deeter-Schmelz and Kennedy 2002; Pavlou 2002; Wilson and Abel 2002). Accordingly, we propose that disclosure of strategic assets and marketed product may apply as well to virtual environment, as we posit hereby:

H1b: *The disclosure of strategic assets in a virtual-interaction environment, operated by a supplier, negatively affects supplier selection performance*

H2b: *The disclosure of marketed products in a virtual-interaction environment, operated by a supplier, positively affects supplier selection performance*

A second direction we take into our study is to look at the combination of multiple signals into what has been formerly conceptualized as a portfolio of signals (Ambarish et al. 1987; Littler). Portfolios of signals have been generally defined as a combination of signals of the same type. Prior research on financial markets suggests that firms combine signals of similar types in order to increase their effectiveness in sending information to their target (Gelb 2000). Grounding on these studies, we propose that suppliers in business markets cluster around homogeneous type of signals, thereby polarizing either around the disclosure of strategic assets or around the disclosure of current products. However, in line with our reasoning on the diverse effects of different signals, we also suggest that suppliers that focus on the disclosure of current products outperform those that focus on the disclosure of strategic assets, which in turn outperform those who send inconsistent, weak signals. Accordingly, we posit:

H3a: *Business suppliers in an industry cluster around groups of signalling and non-signalling suppliers*

H3b: *Signalling business suppliers cluster around groups of (a) strategic asset-related signals and (b) current product-related signals*

H3c: *Signalling business suppliers clustering around the group of current product-related signals outperform those clustering around the group of strategic asset-related signals*

RESEARCH DESIGN

From the empirical point of view, the present study is at the initial stage of an ongoing project and aims at exploring the first preliminary outputs which are assisting us in the development of the current and future phases of the research. While the methodological section provides detailed information about the research design of the whole project developed so far, the discussion of findings is still explorative as we are still immersed in data collection and analysis.

Sampling procedure

The whole project involves three different manufacturing industries including: i) machineries and equipment for the processing of glass; ii) wine and bottling equipment; iii) textiles and fashion accessories. More in detail, the firms selected for the study participated to the most important international trade shows in their industry during the period 2009-2010: i) Vitrum 2009 (biennial); ii) Simei 2009 (biennial), iii) MilanoUnica 2010 (six-monthly) (see Appendix 1 for details on these events).

As noted above, the focus on trade shows as the pivotal event around which designing the data collection is supported by previous research on communication and information search within industrial markets which shows the relevance of trade shows over other means (e.g., Deeter-Schmelz and Kennedy, 2002; Gopalakrisna et al. 1995; Borghini et al. 2006).

Data collection: tools and measures

The study adopts a compound research methodology, both qualitative and quantitative (desk analysis, observation, survey), and, extending the idea of portfolio of signals, encompasses multiple sources of signalling, i.e. company websites, catalogues, booth design. More specifically, a team of 6 trained research assistants and two authors developed a three-step data collection process (Gopalakrisna et al. 1995) (Table 1).

Table 1 – Data collection process: types of analysis and tools

Stage of analysis	Types of analysis	Tools
1. Pre-show	• Desk analysis on industry characteristics, related trade shows, company profiles • Content analysis of company websites	• Structured observation grids
2. At show	• Structured observation of booth design • Survey on aims for exhibiting, strategic orientation	• Structured observation grids • Questionnaire
3. Post-show	• Survey on trade show performance (from 30 to 60 days after the shows) • Content analysis of catalogues and other materials delivered by suppliers during trade shows	• Questionnaire • Structured observation grids

Firstly, a preliminary desk analysis has been developed in order to identify a group of industries that would permit a cross-sectional comparison in terms of technological innovation and industry dynamics. The three sectors have thus been selected accordingly as they have a different rate of innovation that increases when moving from the glass processing to the wine and bottle equipments and finally to the fabrics and fashion accessories. The analysis of the most important trade shows of each industry allowed the subsequent identification of the companies that could be part of the sample.

During the pre-show stage, the content analysis of the company websites represented the first source of data on signalling. By using structured observation grids, researchers have analyzed the signalling in terms of product quality, product innovation, supplier's competencies and capabilities such as production capabilities, R&D, networking.

The second stage developed during the trade shows involved structured observations of booth design and interviews with exhibitors. A questionnaire was used in order to collect direct information on both industry characteristics, and company communication strategies (e.g., aims for exhibiting, levels of investments, orientation towards disclosure). Selected control variables completed this section of the investigation. General Directors, Marketing Managers or Communication Managers were the typical interviewees as they represented the entitled informants for the purpose of this section of the study. The observation of the booth design included several variables related to the content of communication in the booth (e.g., products, after-sale services, competencies, partners), use of space for different purposes (i.e., product exhibition, negotiation, socialization), forms of product exhibition (e.g., use of visual devices, demos), promotion activities (e.g., brochures, catalogues, gadgets), and personnel. Each observation has always been developed separately by two researchers and member checked for validity and reliability. Overall, this compound methodology was designed in order to build a comprehensive dataset including multiple forms of data on signalling that can be triangulated.

The final stage involved two additional means of data collection. First, a content analysis of materials such as catalogues and leaflets delivered by exhibitors during the trade shows was developed. The aim was to understand the extent to which suppliers are disposed to use a tool of product disclosure that will be no more under their direct control. Second, data on trade show performance were gathered in a post-show survey. Interviewees who took part to the previous stage at the shows were contacted from 30 to 60 days after the trade shows. Each industry required in fact a specific period of time which has to pass before it is possible to measure in a significant way trade show performances. Informants received by e-mail a cover letter reminding the purpose of the research and their previous cooperation, and a questionnaire including questions on the trade show performances, and additional information about the company. Subsequently, a reminder was sent about three/four weeks after the first contact. Table 2 summarizes the key elements of the survey instrument and the structure of the observation grids providing information about the number of items included, the scales and measures applied and their sources.

Sample characteristics

Data collection is still ongoing. At present, 502 observation grids and at-show questionnaires were filled in: 181 belong to the glass processing industry, 231 to the wine and bottling equipment manufacturing, 90 to the textiles and fashion accessories sector. These results have to be interpreted as good results for their descriptive value as the three samples represent respectively the 45, 39, 20% of the total numbers of manufacturers exhibiting at each trade show. As far as the post-show survey is concerned, at the present date 77 questionnaires have been returned: 39 belong to the glass processing industry, 38 to the wine and bottling equipment manufacturing. Data from the third trade shows are still to be collected due to the minimum length of time that has to pass before asking for feedbacks on trade show performance.

For this reason, also data analysis is still in its early stages of development. In the present version of the working paper it is possible to ground the argumentation only on some preliminary results based on the first two industries. For the time of the conference, the process should be complete and allow the authors to develop a comprehensive and solid argumentation. In the following paragraphs, a first analysis of signalling strategies during trade shows is proposed by the means of a regression analysis on the relationship between signalling strategies and trade show performance for both industries and a cluster analysis of the exhibition strategies for the glass processing industry.

Table 2 – Summary of the survey instruments and the observation grid

	Variables	# of items	Scales & measurements	Sources
Website observation grid	Product & innovation disclosure	10	Quantitative Judges' evaluation	Authors' elaboration
	Networking disclosure	2	Quantitative Judges' evaluation	Authors' elaboration
At show questionnaire	Product portfolio and recent product innovations	2	Likert Scale (1-7)	Authors' elaboration
	Exhibiting strategies – exhibited product/innovation	2	Likert Scale (1-7); Percentage	Authors' elaboration
	Communication investments & tools	4	Dummy variable; multiple choice	Lee & kim, 2008
	Aims for exhibiting	6	Likert Scale (1-7);	Adaptation from Hansen 2004
	Perceived imitation risk & in-contect protection level Disclosure orientation at trade show General disclosure orientation	7 2 1	Likert Scales (1-7) and open questions	Authors' elaboration
	Competition	1	Open question	Authors' elaboration
At show observation grid	Booth size	2	Quantitative	Authors' elaboration
	Booth layout/use of space (product display/negotiation/socialization)	4	Quantitative	Authors' elaboration
	Content of in-booth communication (products/innovations/competencies/net-working, etc.)	9	Likert Scale (1-7)	Authors' elaboration
	Product and innovation disclosure	9	Sum of dummy variables	Authors' elaboration
	Booth personnel (number, function, training)	15	Quantitative; open questions; sum of dummy variables	Authors' elaboration
	Promotion tools (gadgets, catalogs, etc.)	7	Sum of dummy variables	Authors' elaboration
	Elements of booth ambience	25	Sum of dummy variables	Authors' elaboration
	Overall distinctiveness	1	Liker Scale (1-3)	Authors' elaboration
Post-show questionnaire	Company demographics (# of employees, turnover, R&D investments, depreciation charge for plants, # of partnerships, marketing expenses, # of employees in post-sales services)	8	Quantitative	Authors' elaboration
	Characteristics of the industry	6	Likert Scale (1-7)	Gatignon and Xuereb, 1997 Oslon, Slater and Hult, 2005
	Company strategic orientations	5	Likert Scale (1-7)	Adaptation from Deshpandé, Grinstein and Ofek, 2008
	Trade show performance	19	Likert Scales (1-7)	Adaptation from Hansen 2004
		8	Quantitative variables	Adaptation from Gopalakrishna and Lilien, 1995

FINDINGS

Regression analysis

In this study, regression analysis was utilized to assess the effect of multiple signals on the trade show performance. The dependent variable is the 'Overall performance', which is a subjective measure based on the final evaluation (Likert scale 1-7) made by interviewees on the trade show performance. Independent variables are multiple forms of signals used in different media. More specifically, we tested the impact that orientation in communicating innovation at trade shows, booth size, disclosure of know-how on websites, product disclosure both at trade shows and on websites have on the overall perceived trade show performance. In addition, in order to control for the effect of investments, marketing expenses and R&D expenses have been used as control variables. Table 3 provides the estimation results of the predictor model.

Table 3 – Summary of regression analysis

Dependent variable: Overall TS performance		
Independent & control variables	**Coefficient ß**	**P**
Disclosure of know-how on company website	-.228	.050
Product disclosure on company website	.014	.905
Orientation in communicating innovation at trade shows	-.209	.080
Product disclosure at trade shows	.234	.044
Booth size	.316	.011
Marketing expenses	-.036	.777
R&D expenses	-.143	.257

$R^2 = .221$

Data support hypotheses 1b and 2a. We observe that at least in virtual interaction environments such as company websites the disclosure of strategic assets (i.e., know-how) has a negative impact on trade show performance. Moreover product disclosure in real-interaction environments such as trade shows seems to be an effective strategy especially when coupled with higher investments on booth size as they result in more space devoted to product display.

Further analysis on a richer and comprehensive dataset will permit cross-sectional comparisons and even explain additional relationships which cannot be explored now. The identification of moderating variables could complete the model and increase the estimation. Overall, this will extend our knowledge about the different impacts that technological innovation cycles and other variables may operate on the effectiveness of signaling strategies.

Cluster analysis

Using the observed variables of firms exhibiting strategies collected during Vitrum 2009, a hierarchical cluster analysis of the survey data - run with the software SPSS - generated three clusters of firms. Differences between the clusters in terms of different contents of signalling, levels of disclosure in the booth, booth layout, personnel and use of promotional tools, are measured by the F-statistic, with good levels of statistical significance. Relevant differences were found among the firms on the exhibiting strategies as shown in Table 4.

The three clusters of firms differ mostly for the combination of signalling and disclosure strategies that they adopt. The greatest distances between final cluster centres are usually evident for cluster 2 (Poor signals & disclosure).

Firms in cluster 1 (Product signal & disclosure oriented) (n=108) are firms oriented towards product quality signalling. They account for almost 60% of the sample and testify a common and general orientation in the use of trade shows. The focus of their communication strategies and the use of available cues at the trade show are addressed mainly to the disclosure of their product range with a special focus on innovations. They thus allocate space and many other resources accordingly. The layout of the booth for instance is designed in order to give abundant space to the exhibition of products and sometimes even the outcomes of their own products (e.g., final products that customers can produce with the exhibitor's machinery). Salespeople and technicians are involved in product demos showing machineries working when possible. Catalogues are delivered to visitors. Data show that these firms attend the trade show regularly with the main objectives of selling products and motivate salespeople.

Table 4 – Cluster analysis by exhibiting strategies at Vitrum 2009

Items (frequencies)		Sample (n= 181)	**Cluster 1**	**Cluster 2**	**Cluster 3**	**F**	**P**
			Product signal & disclosure oriented (n=108)	Poor signals & disclosure (n=47)	Multi-signal & disclosure oriented (n=26)		
Post-sale service disclosure		14%	11%	11%	31%	3.762	.025
Product disclosure		93%	96%	83%	100%	1.722	.182
Manufacturing process disclosure		20%	19%	17%	27%	7.103	.001
Live product demos		8%	7%	4%	15%	1.472	.232
Factory images		5%	2%	6%	15%	4.326	.015
Images of products		48%	29%	94%	46%	39.179	.000
Exhibition of products		65%	76%	40%	65%	9.943	.000
Exhibition of product outcomes		8%	11%	0%	12%	2.916	.057
Weight of innovation on exhibited products	0%	34%	19%	72%	27%	20.078	.000
	1-25%	20%	24%	11%	23%		
	26-50%	17%	19%	13%	15%		
	51-75%	3%	3%	0%	8%		
	76-100%	26%	35%	4%	27%		
Presence of core products		55%	67%	22%	70%	17.812	.000
Delivery of product samples		57%	53%	51%	85%	4.955	.008
Delivery of gadgets		9%	6%	6%	27%	5.739	.004
Delivery of catalogues		48%	54%	43%	31%	2.552	.081
Presence of post-sale people in the booth		49%	42%	55%	69%	3.757	.025
Presence of partner representatives in the booth		17%	15%	28%	8%	2.900	.058
Open space offices		33%	18%	32%	100%	48.990	.000
Reserved offices for negotiation		15%	2%	0%	100%	984.121	.000
Overall negotiation area	0%	3%	4%	2%	4%	24.950	.000
	1-25%	30%	42%	9%	19%		
	26-50%	29%	32%	15%	38%		
	51-75%	9%	8%	11%	8%		
	76-100%	29%	14%	64%	31%		
Overall product exhibition area	0%	18%	8%	47%	4%	29.770	.000
	1-25%	15%	9%	19%	31%		
	26-50%	26%	23%	23%	42%		
	51-75%	15%	21%	4%	8%		
	76-100%	27%	38%	6%	15%		
Overall socialization area	0%	82%	83%	91%	58%	6.131	.003
	1-25%	15%	15%	6%	35%		
	26-50%	2%	2%	0%	4%		
	51-75%	1%	0%	2%	4%		
	76-100%	0%	0%	0%	0%		

Cluster 2 (Poor signals & disclosure) (n=47) can be described as one of very low orientation towards signalling. Firms belonging to this group declare to participate to the trade show in order to establish relationships with customers or reinforce company image. However they seem less effective compared to their competitors in the exploitation of the real potential of the investment. These firms in fact do not show their products physically and tend to propose only visual images of their own offering and no demos. Even if some of them deliver catalogues and samples of products to visitors the most popular type of signal used by them is the disclosure of a strategic asset. Their behaviour shows in fact an orientation towards the disclosure of existing partnerships and, in some way, the exploitation of the value creation potential of other companies, i.e., their partners.

Finally, frms in cluster 3 (Multi-signal & disclosure oriented) (n=26) can be characterized as firms who apply the whole portfolio of signals available during trade shows and are willing to disclose multiple dimensions of their offering. Compared to cluster 1, firms belonging to this group are not just focused on the signalling of product quality and innovation disclosure. Indeed, they signal their competencies and strategic assets in multiple ways relying on the presence of different functions at the booth and communicating their post-sales services. Most remarkably, these firms design the product display in an experiential way (Rinallo, Borghini and Golfetto, 2010) thus allowing the visitors to anticipate a multi-dimensional suppliers' value creation potential.

Overall, these data support hypotheses 3a and 3b as they show how actually business suppliers cluster around groups of signalling and non-signalling suppliers and that signalling can be modulated around different contents.

As far performance is concerned, as noted above, for this sample at the moment we have collected only 39 questionnaires measuring performance. This small section of the dataset does not allow us to propose any definitive argumentation. The first evidence however suggests the need for additional investigation on hypotheses 3c as the results are partially in contrast with the ones provided by the regression analysis on two trade shows. The comparison of means on performance measures shows in fact that cluster 3 - which combines product signalling with strategic asset signalling - is the one outperforming. A comparison of means by Ward's method shows how firms of clusters 3 have always the highest performances measured by both the Hansen's scale (2004) – which is based on subjective evaluations of exhibitors – ($p<.01$) and by the two indexes of attraction efficiency and contact efficiency – which are objective measures – proposed by Gopalakrishna and Lilien (1995) ($p<.01$ and $<.05$). Cluster 1 usually follows cluster 3. Cluster 2, the one showing the lowest efforts of signalling, underperforms with the majority of measures. Here, we see how the communication of a strategic asset whose disclosure is not supported by product-related signals does not reinforce trade show performance.

DISCUSSION AND CONCLUSION

In this paper we took an information economics view (Spence 1973) on the communication process that relates to the supplier's value potential (Moeller and Toerroenen 2003), and related it to the supplier performance in obtaining patronage by the potential buyer, thereby addressing the issue of vendor selection (Masella and Rangone 2000). By relying on multiple research methods to gather data about online communication via websites and offline communication via trade fairs, we showed how different strategies of reduction of the information asymmetry position that a supplier may affect its performance in gathering patronage by the prospective buyer. Taken together, our findings contribute to extend prior research on the unobservable quality of an offering from the current quality of products (Kirmani and Rao 2000) to the expected future quality of suppliers: on the one hand, we show the different impact of alternative strategies of signalling supplier's value potential; on the other hand, we show a recurrence in pooling-signals strategies which fits with the conceptual categories identified for single-source signals tested in their effect on vendor selection performance. However, our findings report mixed evidence about which ways or contents best suit a value potential signalling choice. More specifically, findings from the regression analysis, which includes follow-up interviews from the two industries (n=77), show that the disclosure of strategic assets negatively affects the supplier's performance, while disclosure on current products positively influences it. These findings suggest a different rationale of showing unobservable quality for products (Kirmani and Rao 2000), but also seem to contrast with a competence-marketing view on business markets (Zerbini et al. 2007). At same, findings from the cluster analysis driven on the glass manufacturing industry (n=181) suggest that pooling-signals strategies are consistent with the former two choices of medium to signal, but the allocation of performance data into the clusters does not allow confirming the findings from the regression. Here, the preliminary empirical evidence suggests a more complex picture where a sophisticated use of different media and contents of signals in line with the competence-based view marketing (Golfetto and Gibbert 2006; Matthyssens et al. 2009; Moeller 2006; Zerbini et al. 2007) pays more.

Our data are limited by the ongoing nature of the research, and therefore the contributions of this study must be considered as potential, and subjected to further validation, which will be accomplished by end August 2010. Notwithstanding these apparent limitations, we believe that at the present stage of research development, the presence of contrasting results is intriguing and anticipates room for a stimulating scholarly discussion in linking the established body of research on supplier’s value, the emerging body of research on competence-based marketing, and the extant theories on information economics into a so far neglected but potentially relevant view on the problem of supplier selection.

REFERENCES

Ambarish, Ramasastry, Kose John, and Joseph Williams (1987), "Efficient Signalling with Dividends and Investments," *Journal of Finance*, 42 (2), 321-43.

Barney, Jay B. (1986), "Strategic Factor Markets: Expectations, Luck, And Business Strategy," *Management Science*, 32 (10), 1231-41.

Basuroy, Suman, Kalpesh Kaushik Desai, and Debabrata Talukdar (2006), "An Empirical Investigation of Signaling in the Motion Picture Industry," *Journal of Marketing Research*, 43 (2), 287-95.

Borghini, Stefania, Francesca Golfetto, and Diego Rinallo (2006), "Ongoing search among industrial buyers," *Journal of Business Research*, 59 (10/11), 1151-59.

Deeter-Schmelz, Dawn R. and Karen Norman Kennedy (2002), "An exploratory study of the Internet as an industrial communication tool Examining buyers' perceptions," *Industrial Marketing Management,* 31 (2), 145-54.

DeKinder, Jade S. and Ajay K. Kohli (2008), "Flow Signals: How Patterns over Time Affect the Acceptance of Start-Up Firms," *Journal of Marketing*, 72 (5), 84-97.

Deshpandé, Rohit, Grinstein Amir and Elie Ofek, (2008), "Strategic orientations in a competitive context: focus versus differentiation", Working paper

Gatignon, Hubert and Jean-Marc Xuereb, (1997), "Strategic orientation of the firm and new product performance", *Journal of Marketing Research*, 34 (February), 77-90.

Gelb, David S. (2000), "Corporate signaling with Dividends, Stock Repurchases, and Accounting Disclosures: An Empirical Study," *Journal of Accounting, Auditing & Finance*, 15 (2), 99-120.

Golfetto, Francesca and Michael Gibbert (2006), "Marketing competencies and the sources of customer value in business markets," *Industrial Marketing Management*, 35 (8), 904-12.

Gopalakrishna, Srinath and Gary L. Lilien (1995), "A Three-Stage Model Of Industrial Trade Show Performance," *Marketing Science*, 14 (1), 22.

Gopalakrishna, Srinath, Gary L. Lilien, Jerome D. Williams, and Ian K. Sequeira (1995), "Do trade shows pay off?," *Journal of Marketing*, 59 (3), 75.

Hellofs, Linda L. and Robert Jacobson (1999), "Market Share and Customers' Perceptions of Quality: When Can Firms Grow Their Way to Higher Versus Lower Quality?," *Journal of Marketing*, 63 (1), 16-25.

Kirmani, Amna and Akshay R. Rao (2000), "No Pain, No Gain: A Critical Review of the Literature on Signaling Unobservable Product Quality," *Journal of Marketing*, 64 (2), 66-79.

Kogut, Bruce and Udo Zander (1992), "Knowledge Of The Firm, Combinative Capabilities, And The Replication Of Technology," *Organization Science*, 3 (3), 383-97.

Lee, Ruby P. and Qimei Chen (2009), "The Immediate Impact of New Product Introductions on Stock Price: The Role of Firm Resources and Size," *Journal of Product Innovation Management*, 26 (1), 97-107.

Littler, Craig R., "A Signalling Theory of Strategy," in Academy of Management Proceedings: Academy of Management.

Masella, C. and A. Rangone (2000), "A contingent approach to the design of vendor selection systems for different types of co-operative customer/supplier relationships," *International Journal of Operations & Production Management,* 20 (1), 70-84.

Matthyssens, Paul, Koen Vandenbempt, and Sara Weyns (2009), "Transitioning and co-evolving to upgrade value offerings: A competence-based marketing view," *Industrial Marketing Management*, 38 (5), 504-12.

Moeller, K. E. Kristian and Pekka Toerroenen (2003), "Business suppliers' value creation potential A capability-based analysis," *Industrial Marketing Management*, 32 (2), 109-18.

Moeller, Kristian (2006), "Role of competences in creating customer value: A value-creation logic approach," *Industrial Marketing Management*, 35 (8), 913-24.

Mummalaneni, V., K. M. Dubas, and C. N. Chao (1996), "Chinese purchasing managers' preferences and trade offs in supplier selection and performance evaluation," *Industrial Marketing Management*, 25 (2), 115-24.

Nelson, Phillip (1974), "Advertising as Information," *Journal of Political Economy*, 82 (4), 729.

Olson, Eric M., Stanley F. Slater, and G. Tomas M. Hult (2005), "The Performance Implications of Fit among Business Strategy, Marketing Organization Structure, and Strategic Behavior," *Journal of Marketing*, 69 (July), 49-65.

Pavlou, P. A. (2002), "Institution-based trust in interorganizational exchange relationships: the role of online B2B marketplaces on trust formation," *Journal of Strategic Information Systems*, 11 (3-4), 215-43.

Prabhu, Jaideep and David W. Stewart (2001), "Signaling Strategies in Competitive Interaction: Building Reputations and Hiding the Truth," *Journal of Marketing Research*, 38 (1), 62-72.

Rao, Akshay R. and Kent B. Monroe (1989), "The Effect of Price, Brand Name, and Store Name on Buyers' Perceptions of Product Quality : An Integrative Review," *Journal of Marketing Research*, 26 (3), 351-57.

Rinallo Diego, Borghini Stefania, and Francesca Golfetto (2010), “Exploring Visitor Experiences at Trade Shows”, *Journal of Business and Industrial Marketing*, 25, 4.

Rinallo, Diego and Francesca Golfetto (2006), "Representing markets: The shaping of fashion trends by French and Italian fabric companies," *Industrial Marketing Management*, 35 (7), 856-69.

Robertson, Thomas S., Jehoshua Eliashberg, and Talia Rymon (1995), "New product announcement signals and incumbent reactions," *Journal of Marketing*, 59 (3), 1.

Sorescu, Alina, Venkatesh Shankar, and Tarun Kushwaha (2007), "New Product Preannouncements and Shareholder Value: Don't Make Promises You Can't Keep," *Journal of Marketing Research*, 44 (3), 468-89.

Spence, Michael (1973), "Job Market Signaling," *Quarterly Journal of Economics*, 87 (3), 355-74.

Stiving, Mark (2000), "Price-Endings When Prices Signal Quality," *Management Science*, 46 (12), 1615.

Stump, Rodney L. and Jan B. Heide (1996), "Controlling Supplier Opportunism in Industrial Relationships," *Journal of Marketing Research*, 33 (4), 431-41.

Swift, C. O. (1995), "Preferences for Single Sourcing and Supplier Selection Criteria," *Journal of Business Research*, 32 (2), 105-11.

Ulaga, Wolfgang and Andreas Eggert (2005), "Relationship Value in Business Markets: The Construct Its Dimensions," *Journal of Business-to-Business Marketing*, 12 (1), 73-99.

Verma, R. and M. E. Pullman (1998), "An analysis of the supplier selection process," *Omega-International Journal of Management Science*, 26 (6), 739-50.

Wilson, Susan G. and Ivan Abel (2002), "So you want to get involved in E-commerce," *Industrial Marketing Management*, 31 (2), 85-94.

Winter, Sidney G. (1987), "Knowledge and competence as strategic assets," in The Competitive Challenge: Strategies for Industrial Innovation and Renewal, David J. Teece, ed. Cambridge, MA: Ballinger.

Wu, Desheng Dash, Yidong Zhang, Dexiang Wu, and David L. Olson (2010), "Fuzzy multi-objective programming for supplier selection and risk modeling: A possibility approach," *European Journal of Operational Research*, 200 (3), 774-87.

Zerbini, Fabrizio, Francesca Golfetto, and Michael Gibbert (2007), "Marketing of competence: Exploring the resource-based content of value-for-customers through a case study analysis," *Industrial Marketing Management*, 36 (6), 784-98.

APPENDIX 1

Summary of main facts of the three trade shows

Event	Time, frequency and location	Industry	Exhibitors	Visitors
Vitrum 2009	28-31 October 2009 biennial Milan (I)	Machinery, equipment and systems for the processing of flat, and hollow glass; glass and finished products for the industry	479 exhibitors 54,5% from Italy 45,5% from 26 foreign countries (85% manufacturers)	16,922 visitors 49,50% from 101 foreign countries
Simei 2009	24-28 November 2009 biennal Milan (I)	All kind of machinery and equipment for oenology and for beverage production, bottling and packaging (e.g., wine, beer, mineral water, carbonated drinks, juices, spirits, brandies, alcohol, vinegar, cooking oil)	705 exhibitors from 25 countries	51,545 visitors 18,57% from 100 foreign countries
MilanoUnica S/S 2011	16-18 February 2010 Six-monthly Milan (I)	Textiles and avant-garde materials Traditional and novelty shirting fabrics	441 exhibitors 81% from Italy	12,500 companies from different countries (official data on the total number of visitors not available yet)

Source: Final reports from Trade Show Organizers