MARKET REPRESENTATIONS IN INDUSTRIAL MARKETING: AN EXPERIMENTAL INVESTIGATION

ABSTRACT

This study tests whether market representations influence marketing strategy. Through experimental design, service-oriented vs. product-oriented marketing strategies were compared according to the treatment of two types of market representations. Market representations that integrate the capabilities of an organization with the market (i.e. performative), and market representations that separate the market from the firm (i.e. ostensive) were presented as treatments. Results indicate that a service strategy is more likely when market representations are performative, and also, that a product strategy is more likely when an ostensive market representation was presented. For marketing theory, the experiment demonstrates that, under certain conditions, the form in which market views are privileged is relevant for business strategy. For industrial marketing, the experiment demonstrates that a service focus strategy is more likely adopted when market representations are destabilizing and dynamic; as opposed to product differentiation strategy which is more likely chosen when market representations are indicative and stable.

Keywords: Market representations, industrial business strategy, experiments in marketing

INTRODUCTION

Market representations are coherent yet simplified views of what a market is and how it works. Market representations are used because markets are no longer limited to a physical place where buyers and sellers meet and trade (i.e. marketplace), instead, markets are heterogeneous associations among humans, materials and signs whose purpose is to provision society (Callon, 1998). Understanding markets requires, then, the simplification of complex social factors into intelligible concepts (Deshpande & Zaltman, 1982).

Contentions that market representations influence marketing strategy have been suggested from case studies (e.g. Rinallo & Golfetto, 2006; Harrison & Kjellberg, 2010), but evidence is hardly available. One reason for lack of quantitative evidence is the difficulty to isolate market representations from field data where managerial experience and background influence strategy (Cable & Judge, 2003; Vanharanta & Easton, 2010; Werder & Holtzhausen, 2009). Arguably, when a business decision is needed, managers often rely on what they know about their markets; untested remains whether representations enable managers to privilege certain strategies. The purpose of this paper is to test whether market representations lead practitioners into alternate marketing strategies.

The knowledge gap is the scant evidence validating, whether or not, market representations can influence how firms conduct businesses. Harrison and Kjellberg (2010) found that market representations construct the form in which firms conceive and interact with markets. For example, consider one firm that segments its customers based on size (large or small) and one that segments its customers based on relationship profitability (high or low); *ceteris paribus*,, different segmentations influence what is perceived about a market and, consequently, the business decisions made (e.g., focusing on large customers versus the most profitable customers). Allegedly, the form in which a market is represented has a constructive dimension in marketing strategy.

We conducted an experiment on 143 graduate students in marketing as proxies for marketing managers to test whether the selection of strategy respond to the manipulation of market representations in an industrial business case. The choosing of service-oriented vs. product-oriented strategies was compared with the treatment of two types of market representations: *ostensive*, which separate the market from the firm, and *performative*, which integrate the capabilities of an organization. Results indicate that a service strategy is more likely when market representations are performative, and also, that a product strategy is more likely when an ostensive market representation was presented.

The paper is organized as follows: First, a theoretical framework anchors the study in managerial representations. The theoretical framework builds the hypotheses through the introduction of both market representations and industrial marketing strategies. Second, the paper discusses the arrangements used in the method, and how the stimulus was designed through an industrial business case. Third, results are presented in the form of various tests demonstrating that even though homogeneous respondents received the same business case, strategies selected differ. Four, the paper discusses the findings in light of literature.

THEORETICAL FRAMEWORK

Understanding the environment requires that managers make assumptions and predictions about significant external elements. Complicated interactions between social, economic, political and technological forces shape the firm's environment, which in turn, oblige speculation and reflection. In order to cope with uncertainty and complexity, managers simplify and isolate relevant issues about their markets when considering strategy (Deshpande & Zaltman, 1982). The complexity of privileging market views is not always acknowledged in literature. For instance, mainstream economists privilege rational-utility, where managers, assumed to share perfect knowledge, act under similar maximizing logic (cf. Ghoshal, 2005). In economics, considerations of individual managers are of little relevance since rationality obliges managers to converge on the optimal decision. On a different research stream, strategy scholars privilege cognitive aspects where managers' rationality is bounded in terms of expertise and perception (Stubbart, 1989); hence, the form in which a manager acts depends on training, cognition, perceptions and even emotions. Strategy scholars studied the form in which perceptions influence managerial action ways to view the world. Strategy is predominately focused on the figure of a manager embedded in an organization.

Contributions from economics and strategy have shaped marketing concepts and theories (Martin & Morich, 2011). Marketing scholars have studied how managers apply personal experience, concepts-in-use, and observations to represent their competitive environment (Day & Nedungadi, 1994; Ottesen & Grønhaug, 2002). In their work, Day and Nedungadi (1994) argued that managers simplify environmental uncertainty to take decisions through a coherent structure of knowledge. They categorized sources from which managers draw information about their environment, including: own experience, firm capabilities, competitors, and customers. Ottesen and Grønhaug (2002) explored how managers frame a competitive environment through interpretations of academic concepts. Market orientation, the construct used by Ottensen and Grønhaug, was used by managers as a cover for perspectives originating from outside the firm. The point is that the form in which the market is represented differs between firms and managers.

Ostensive and performative market representations

Markets are represented according to the views privileged. For instance, a market representation could be assembled privileging the demand side (e.g. customers, consumers), non-exchange actors (e.g. influencers, regulators), structural considerations (e.g. rules, norms, institutions), and even practices (e.g. leisure travel). One dimension is the extent to which a representation describes a static environment, or one that could be changed. The distinction between a market understood as stable and unstable is named here as *ostensive* or *performative*.

The difference between ostensive and performative market representations is the extent to which a representation separates how the market works from the capabilities of the firm. In a linguistic sense, an ostensive definition conveys meanings by exhibiting instances of the term defined, such as: *that is the color red* (Wittgenstein, 1953/2001). Explanations are normally detached in ostensive definitions to such extent that they can be qualified. An ostensive definition provides concise, stable and orderly explanations, and what is described is objectified, which means that remains stable. An ostensive representation treats the market as independent from the firm (e.g. this is how the market works, and cannot be changed). This view is relates to Porter's traditional view of markets – such as the Five Forces Model where companies compete in predefined markets (Porter, 2008).

On the other hand, performative representations focus on actions that can disrupt how a market works. The description of the market is connected to the destabilizing actions of the firm. When performative, a market representation identifies the potential for change, for instance, by seizing resources or exploiting weaknesses. Performative definitions are not indicative, but instead, aim to change what is described (Austin, 1975). The actor and the object of interest are related and influence each other; hence, performative definitions cannot be qualified as true or false. This view falls more in line to capabilities-based approaches where firms take action take action based on what the firm can do. One example is Prahalad & Hamel's example of Honda's entry to the car market through world-class engines (Prahalad & Hamel, 1990).

In summary, market representations are performative when the capabilities of the firm affect the market, and market representations are ostensive when the market is separated from what the firm can do (see Table 1). Diaz Ruiz (forthcoming) theorized that the form in which a market representation is assembles, to a certain extent, privilege certain ways to think about a market. In consequence, the way in which firms understand their markets has been theorized to affect the strategic actions undertaken by firms which ultimately shape the market with their actions (Storbacka and Nenonen 2011).

Table 1: Treatment provided ostensive vs. performative market representations

	Market representations	
	Ostensive	*Performative*
Description	Concise, stable and indicative	Fuzzy, destabilizing, dynamic
Object	Representations pacify the object represented	Representations frame the object represented
Interaction	The market is independent from the firm	Firm and markets are related and influence each other

The form in which a market is represented privileges certain ways to think about markets (Normann 2001). For instance: Yearly category reviews are said to shape arrangements at the point of sale between retailers and producers (Azimont & Araujo, 2007), trade shows inform upcoming trends in the fashion industry (Rinallo & Golfetto, 2006), fishing quotas use theoretical simulations to determine how much fish can be caught (Holm & Nielsen, 2007), and industrial segmentation shapes groups of interest in the mind of managers (Harrison & Kjellberg, 2011). The value of this line of research is that it shows the existence of a constructive dimension of representational practices in managerial decisions. Interestingly, many contributions in marketing regarding market representations are based in industrial settings. Evidence is the coverage through the pages of *Industrial Marketing Management* (e.g. Kjellberg & Helgesson, 2006; Finch & Geiger, 2011; Azimont & Araujo, 2007; 2010).. Perhaps a reason is that industrial markets are harder to categorize into the well-known structures of supply and demand (Håkanson, 1982), and then, industrial marketing scholars developed more appropriate concepts such as relationships, networks and interdependences to explain markets (Ford, 2011). Another reason is that marketing constructs are closer to fast-moving product-based markets with strong dependence on individual choice.

Product and service logics in industrial marketing strategy

In industrial marketing, a dominant strategy discussion is that of service infusion regarding the importance of services for manufacturing firms (Fang, Palmatier, & Steenkamp, 2008; Raddats & Easingwood, 2010). Service infusion is discussed because while scholars consistently report that manufacturing firms integrate services into their offerings, a debate sparks about the strategies behind the integration of services (Gebauer, 2008). Behind service infusion, two distinct strategies can be discerned: product differentiation and service focus (cf. Gebauer, Fleisch, & Friedli, 2005).

When the product differentiation strategy is privileged, industrial services are regarded as add-ons to the product aiming to maintain competitiveness by defending the traditional product business. The strategic aim is to provide a better product offering than that of competitors by means of differentiation (Treacy & Wiersema, 1993). For instance, customer support and basic after-sales services can be offered to provide a better reason to buy the product and to ensure future product sales. In this sense, services can be included as long as objective is to support the sales of a product; ‘a necessary evil’ (Kowalkowski et al., 2012). Product differentiation is thus an inherently goods-centric marketing strategy. As such, it is inherently a part of the general curriculum in marketing education (e.g., Jobber & Fahy, 2012; Kotler, 2009) and despite critique by, among others, Shostack (1977) and Grönroos (2006) maintains a dominant position.

On the other hand, service focus is a different strategic path. A service focus aims to develop a distinct service business, which potentially can be independent from the traditional product business (Raddats & Easingwood, 2010). For that reason, manufacturing firms, which operate under a service focus strategy, can offer services around an originating product (e.g. a mantianance contract that can be sold separately, but still anchored to the product), and product-independent services (e.g. process optimization competence can be formulated based on the capabilities of the firm and sold independently of the product business).

Typically, service focus requires more extensive interaction and collaboration between customer and supplier (Gebauer, Fleisch, & Friedli, 2005), and more emphasis is placed on mutual construction of value-in-use (cf. Aarikka-Stenroos & Jaakkola, 2011; Storbacka, 2011). Such strategy changes the fundamental way in which firms take action. Service focus can be seen, then, as a strategic choice where the infusion of services corresponds to what is valuable for the customer rather than what is necessary to differentiate a product (Kowalkowski et al., 2012). Since a service focus strategy might be in partial conflict with the traditional product business (Gebauer & Friedli, 2007; Mathieu, 2001), the firm needs to have a willingness and ability to cannibalize even its currently effective (product-related) capabilities (Nijssen et al., 2006). The two archetypal strategies are illustrated in Table 2.

Table 2: The dimension of interest between a product and service marketing strategy in industrial settings.

	Marketing strategy	
	Product differentiation	*Service focus*
Aim	Protecting the product business by avoiding commoditization	Co-create value-in-use through resource integration in reciprocal relationships
Justification	A better offering than that of competitors by means of differentiation	An offering which corresponds to what is valuable for a customer
Interaction between services and products	Services are provided purely as add-ons to support the sales of a product	Services originate in product (e.g. a maintenance), and product-independent (e.g. process optimization)

HYPOTHESIS DEVELOPMENT

In order to test whether market representations influence the way in which business operate, two different types of market representations were presented as a treatment: ostensive and performative market representations. The dimension of interest is the selection of marketing strategy. Given a business case in which revenue structures, costs, and capabilities of the organization remain the same, administering as a treatment market representations, the selection of a marketing strategy–either product or service strategy–is the dependent variable. The following hypotheses test whether market representations affect strategic choices.

For the construction of H_1, the following line of thought has been followed. Assuming that ostensive market representations focus on the environment independently of the capabilities of the firm (Diaz Ruiz, forthcoming) the situation of the firm should be understood as a standard marketing situation. Further, given that 1) product augmentation is a conventional marketing strategy often propagated in marketing education at universities and business schools, and 2) theories influence managers' practice and worldviews (Ghoshal, 2005), marketing managers should consider normative marketing techniques in a standard situation, and then, ostensive representations should lead to a product differentiation strategy.

> H_1. Marketing practitioners exposed to an ostensive market representation should choose more often the strategic choice linked to product differentiation (vs. performative treatment).

For the construction of H_2, the following line of thought has been followed. First, performative market representations focus on capabilities of the firm to affect the environment (Diaz Ruiz, forthcoming). Second, service strategy is more recurrent in industrial markets literature, and less common in fast product markets, which suggest a better fit. A performative representation should lead to a service strategy

> H_2. Marketing practitioners exposed to a performative market representation should select more often the strategic choice linked to service focus (vs. ostensive treatment).

Research design

The method in this paper is experimental design. In marketing, an experiment is a quantitative technique where a treatment, the manipulation of independent stimulus, is tested for effects in a dependent variable in order to establish a cause-effect relationship (Sawyer et al., 1979). The exposure of similar groups of people to different treatments should reveal that surfacing effects in a variable of interest could be reasonably attributed to the treatments. Experiments are useful for isolating extraneous variables which are normally difficult to separate in natural settings (Mook, 1983). An experiment is justified because of the interest to isolate market representations from both managerial experience and type of industry. Data from controlled human experiments differs from empirical data from the field because it is idealized. Experiments are used, even though a correlation found in an experiment cannot be easily generalized, because if theory does not predict outcomes in a highly idealized setting, then it will likely *not* have much explanatory power in a natural setting anyways (Croson, 2002).

An instrument was given to 143 marketing students on their last year at a master's level program. The use of students as surrogate managers is common because business students take decisions in a similar way to managers (Remus 1986, Henkens et al., 2009). One advantage of using experiments is the isolation of extraneous variables, an unlikely occurrence in natural scenarios (Mook, 1983). Experiments ought to balance a trade-off in terms of external validity in order to isolate independent and dependent variables. In this experiment it was possible to manipulate a market representation, while at the same time, isolate personal experience and professional training. Intra-group homogeneity was secured in terms of professional training, since all participants were advanced students in marketing. Homogeneity in terms of academic training also provided the secondary advantage of a solid control group, because academic background has been demonstrated to be a significant source of variation when solving business cases.

Stimulus development

The stimulus took the context of a business case (Appendix 1). The stimulus was designed to follow the structure of a business case, a format often used in MBAs, for the following reasons: First, marketing practitioners are familiar with the format since a case is often used in business schools in both graduate and undergraduate levels. Second, the case allows more control of the. Third, the format allows different routes of action. Fourth, the format allows the manipulation as part of the narrative.

The case was attached to a questionnaire. The case introduced a fictitious medium-sized manufacturer of industrial components, which were later used by its industrial customers to manufacture final products. The firm supposedly suffered from diminishing financial returns because of commoditization. In response to diminishing returns, the firm developed an imaginary innovation whose application was not self-evident given the limited capabilities. The selection of the strategy was designed as the dependent variable. The respondent had to decide upon which course of action the company should take given that the innovation could be used to further differentiate the original product (i.e. a product-differentiation strategy), or commercialize it in the form of a service (i.e. a service-focus strategy).

Because no validated scales exist for experiments of this construct, two set of items were used. The first items indicated the likeliness to choose a strategy. The response format ranged from 1 (most unlikely) to 10 (most likely) for each of the options offered. The second set of items ranked the options in the order that they would most likely choose: 1 for the main choice and 2 for the least preferred choice. An open-ended question was presented after the ranking inquiring for the reasons to selecting a strategy to provide explanatory cues (Miles & Huberman, 1994).

Results and analysis

This section indicates the tests used to assess the manipulation of the experiment, and hypotheses. Further, the section introduces some reasons to contextualize the results of the experiment, which were obtained from open-ended questions administered along the experiment. For the assessment, tests used 5% as a significance level.

Manipulation check

Two measures were selected to assess the manipulation check. To assess that the performative representation was indeed more linked to the capabilities of the firm, a measure concerning how actionable was the information contained in the business case was asked. It was expected that a performative representation would provide a more actionable business case. The group who received a performative market representation considered that the information provided in business case was more actionable (M = 6.24), than the group who received an ostensive market representation (M= 4.36). There was a significant effect of the perception of how actionable was the information provided in the business case at the p<.05 level for the three conditions [F(1, 141) = 47, p = <0.01]. The underlying coherence of the case was assessed so that a neither a performative of ostensive market representation modified significantly the underlying structure of the case. In this case a measure regarding the credibility of the test was asked. For the business case to be coherent, no significant differences between groups are expected. The group who received an ostensive market representation (M = 6.4) did not have any significant difference (p > 0.1) with the group who received a performative market representation. (M = 6.6). The fact that there were no differences regarding the credibility of the case was part of the experimental design by selecting a homogeneous group of marketing students as proxies of managers. It can be contended that the manipulation was successful.

Assessing hypotheses

In order to build redundant assessments of H_1 and H_2, two measures were presented in terms of hard and soft choices, yet, results of both tests support hypotheses (Table3). The first measure included a categorical answer forcing the selection of product and service strategies. For the rest of the paper this measure will be labelled 'hard' because the item framed options in mutually-excusive terms. To evaluate the H_1 and H_2 using the hard measure, a Pearson chi-square test was selected. A chi-square test is appropriate to assess the relationship between categorical variables. In this case, a relationship was found between the type of market representation received and strategy selected for the business case [χ^2 (1, N = 143) = 11.9, p <.01]. The test demonstrates for H_1 that product strategy was selected more often when an ostensive market representation was introduced (58%), and also, this test shows that for H_2, a service strategy was a more likely when a performative market representation was offered (70%).

Table 3: Summary of experimental results

	Test	*Results*
Hard choice (Mutually exclusive strategies)	[χ^2 (1, N = 143) = 11.9, p <.01]	*Ostensive*: Product (58%)
		Performative: Service (70%)
Soft choice (Strategies can overlap)	Product [$t(141) = 3.1$, $p < .01$]; Service [$t(141) = 2.7$, $p < .01$]	*Ostensive*: Service (M=5.8); Product (M=7.0)
		Performative: Service (M=7.2); Product (M=6.1)

The second measure requested two items in a scale (10 points) regarding the likelihood of following the product and service strategies. These items will be labelled ‘soft’ because the questions were framed in terms which were not mutually exclusive. This means that, in principle, strategies could be tied, because both options could be perceived as equally feasible. The reason for allowing soft measures was to minimize the risk that a forced answer could artificially suggest strategic courses that were not different enough. To assess the soft measure, a t-test was performed. A t-test is appropriate in this case because the items were presented in the form of intervals. A significant difference supporting H_2 was found in the item evaluating the likelihood of choosing a service strategy [$t(141) = 2.7$, $p < .01$]. The group exposed to a performative representation was *more* likely to follow a service strategy (M = 7.2), than the group exposed to an ostensive market representation (M = 6.1). Furthermore, H_1 is supported because of a significant difference when evaluating the likelihood of following a product strategy as well [$t(141) = 3.1$, $p < .01$]. The group exposed to an ostensive representation was more likely to follow a product strategy (M = 7), than the group exposed to a performative market representation (M = 5.8).

The soft measure provided information regarding the impact of market representations between service or product strategy, when both strategies could be equally feasible options. A MANOVA test was performed as a between-subjects factor to assess the impact of the type of market representations presented and the strategy selected. This analysis resulted in an overall significant difference of the treatments (Wilk's $\lambda = 0.93$, $p < .01$); further, a significant impact on the service strategy (F = 9.6, $p < .01$), and the product strategy (F = 7, $p < .01$) was identified. However, the test did not elaborate on whether respondents selected strongly identified a course of action with a service strategy, a product strategy, or were indifferent to the type of strategy, because it was possible to rate both strategies equally.

After testing that service and product items were not part of same sub-scale ($\alpha < 0.5$), because the items are negatively correlated [$r(141) = -.65$, $p < .01$], a computation was performed. The likelihood to select a product strategy was subtracted from the likelihood to select a service strategy to find respondents who were not particularly keen on selecting one strategy over another. About one third of the respondents (34%) placed less than 2 points difference between the options on the scale, which can be interpreted as that respondents considered both strategies to fit the business case similarly. Differences between groups were found according to the type of market representation received and strategy selected for the business case [χ^2 (1, N = 143) = 9.7, p < .01]. Of note is that differences were significant (p <.01), only when comparing those who leaned strongly with product and service strategy, but not for those who felt neutral about the type of strategy selected. In other words, for a group of respondents, both product differentiation and service focus fit the case. One reason for the similarities of both strategies can be found in the design of the experiment. In the pre-study, five business strategies were offered as choices for the same business case, and the two more appropriate strategies were linked to the product differentiation (M = 6.9), and service focus (M = 7.4). Service and product strategies were clearly more appropriate for the business case than the three discarded strategies (N=25; M_1= 3.8, M_2 = 4.3, M_3 = 3). The pre-study was justified in order to minimize the risk of one strategy being easily selected as the most convenient regardless of the treatment. It could be expected then, that some respondents would choose both strategies in a similar way.

Explanatory cues

Results show that variations on the selection of a marketing strategy can be attributed to the form in which the market is represented. However, the reasons for selecting a marketing strategy were unclear. An open-ended question explored the possible reasons for the selection of strategy. Ryan and Bernard (2002) provide two broad methodological approaches to classify free-flowing text: repetition of words, and context-based codes. In this study, answers were coded using human judgment, a criterion which is common in exploratory analysis in marketing research (Perreault & Leigh, 1989). Responses were coded *ex post fac*to following human judgement to cluster similarities. As suggested by Perreault & Leigh (1989), in order to increase reliability, a second researcher coded the answers independently, and a discussion permitted to condense categories.

The resulting categorization included 17 codes, which were then compared to the strategy selected. Results indicate significant differences for the selection of strategy [χ^2 (22, N = 143) = 93.6, p <.01]. Of course, only certain codes received enough number of responses to qualify for a test, but for those codes with enough repetitions, values were significantly different (p <.05) according to the two-sided test of equality for column proportions. In other words, separate reasons were given to support privileging an industrial marketing strategy (see Table 4).

Table 4: Reasons offered to select a marketing strategy

	Reasons for selecting strategy	
	Product	*Service*
Aim	Secure the main stream of income	Diversify revenue streams to reduce dependency
Competitive advantage	A more convincing offering	More sustainable over time
Justification	Differentiate and achieve better positioning	Expand customer base through relationships

For those who chose a product strategy, the reasons offered were related to the construction of a stronger value proposition (24%), which is important to support the efforts of the sales team. Salespeople could integrate a more convincing offering, which would serve as competitive advantage vis-à-vis competitors (12%). Respondents found that a better positioning (17%) was consistent with a product strategy because it could differentiate the current offering and command a higher price. In addition, respondents argued that a product strategy was necessary to secure the main stream of income for the company (9%). A product strategy, then, was rationalized in terms of strengthening the existing offering, which is of vital importance given the limited number of products and customers in medium-sized firms (Storey & Harlow, 2010).

On the other hand, those who selected a service strategy supported their choice because of the benefits of expanding a customer base (23%), because even other manufacturers in the same industry could be persuaded to become clients. A service strategy was appropriate to diversify revenue streams which could strengthen the firm by reducing dependency on a single product (17%). Further, respondents argued against augmenting the existing product because it could be only a temporary benefit, easier for competitors to imitate; a service strategy could provide a more sustainable advantage over time (17%). Respondents also justified choosing a service strategy through stronger business relationships with existing customers (13%). A service strategy, then, was rationalized in terms of diversifying the current offering, which is of vital importance to reduce the risk associated with a single offering. One reason for selecting a service strategy was because the perception that a service is more difficult to copy than the strengthening of a product (cf. Baines et al., 2009).

DISCUSSION

The familiarity of the colloquial use of markets is deceiving. News broadcasting services report daily on market performance, and public officials consider the effects of policies on markets. However, what we know about markets is based on simplifications of complex interactions where almost everything can be bought or sold. Although there is nothing new about theories simplifying social phenomena (Hunt, 2010), surprisingly for an applied discipline named after that very concept, marketing lacks tools to qualify whether market representations actually fit context and purpose. Managers are at risk from the deceiving familiarity of markets since inappropriate marketing strategy could be selected.

Regardless of whether market representations look like formal reports or drawings in napkins, representations transform the object represented (Brown, 1998). Such disparities between representations and reality are often debated in literature. For instance, when cartographers represent the surface of a three-dimensional body on a plane; the resulting map always includes a distortion of sorts. For cartographers, however, some distortions are acceptable and others are not depending on the purpose of the map. Perhaps what we know about a market is situated somewhere between discovery and interpretation. Discovery means that, through the right techniques, the market can be perceived as it is (cf. Freytag & Clarke, 2001).

Industrial marketing scholars have theorized about a constructive dimension between market representations and the type of strategies that firms conduct (Harrisson & Kjellberg, 2010). This paper demonstrates that, at least in an idealized setting and under controlled conditions, the form in which market representations are formulated influence marketing strategy. One reason is that markets are framed in ways which highlight certain aspects of the market, yet obscure other aspects; hence, in addition to cognitive aspects, attention is needed to the form in which the environment is codified. This paper also contributes to the on-going debate of Market Studies; in order to equip scholars with tools to understand how markets are stabilized Finch and Geiger (2010) discuss what constitutes a market object, and Andersson et al. (2008) discuss routines in order to explain how markets achieve continuity. This paper shows that efforts to frame both routines and objects in markets have a constructive effect on the types of strategies selected.

Another contribution is to service literature. Findings suggest that a service strategy is more likely when market representations are performative, and a product strategy is more likely when market representations are ostensive. The reason can be attributed to the form in which marketing knowledge has been codified and taught. With an ostensive market representation, the business case presented seems like a conventional situation to be solved relying on professional training. In addition, when the market is perceived as static and not possible to shape, there is less room for innovation. An ostensive representation puts bounds around what choices are open to the firm today and what its repertoire might be in the future; the firm can strengthen or change its market position, such as strengthening its product leadership, but it cannot change the market and its boundaries as such (cf. Porter's (1985) outside-in view). Therefore, marketing practitioners rely on normative marketing theory regarding product differentiation.

On the other hand, findings suggest that a decision maker is more likely to take a strategic choice to fit the situation of a firm when the resources and capabilities of the organization are taken into account, using performative market representations. That is, a service strategy is more likely selected. Rather than focusing on positional advantage vis-à-vis competitors, emphasis is placed on long-term advantages and stronger customer relationships. Such approach resonates with a resource-based view of the firm in which the firm can translate unique resources and distinct capabilities into innovative services, thereby expanding to novel market spaces (Ulaga & Reinartz, 2011). Although service strategies have been argued be appropriate for manufacturing firms (e.g. Grönroos and Ravald, 2011), different firms choose very different service infusion strategies, some which resemble a product differentiation strategy and other a service focus strategy (Gebauer, 2008; Raddats & Easingwood, 2010). Our results indicate that a potential factor influencing the firm's espoused service infusion strategy might be the market representations perceived by managers.

Limitations and future research directions

As with any experiment, this study has limitations by design and implementation. A limitation by design is that further research is needed to generalize findings, because of the controlled nature of the experiment. Although an effect was identified, the magnitude of the effect cannot be measured because the point of the experiment is to isolate exogenous variables, such as experience of the manager and industrial setting. Without other variables, the magnitude of the effect cannot be estimated. A limitation by implementation is the use of marketing students as proxies for marketing managers. The use of students was intended to increase construct validity using a homogeneous group where managerial experience could be controlled (Mook, 1983); unclear remains if students in a business school are anything like actual business managers. If that were the case, however, the whole purpose of business schools needs to be questioned.

Future research: test this on managers and investigate how managers' market representations influence their decisions – in the case of service infusion (many firms infuse services but they do it for different reasons and there are also many conflicting views within the same firms, so it would be interesting to investigate the influence of market representations), make or buy decisions, etc.

Conclusion

This study demonstrated that, at least under idealized conditions, variations on the selection of a marketing strategy can be attributed to the form in which the market is represented. In other words, knowledge about markets is formed through representational practices situated somewhere between discovery and interpretation. The relevance for industrial marketing is that the form in which the interaction between the firm and the market is privileged has an effect on industrial marketing strategies. Service strategies are privileged when market representations are dynamic and consider that the firm and market interact; product strategies are privileged when market representations are indicative and consider that the market and the firm are separated. Managers can use this work to revaluate the form in which commercial research is commissioned and deconstructed.

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APPENDIX 1

(performative version. Indication not presented)

Imagine this:

You are the Managing Director of a company called Orlada Inc.; a family-owned company with more than 100 years of operation. Orlanda is a medium industrial manufacturing company producing optical sub-components. These devices are made of an optic lens, and a controlling element, which determines the amount of light which passes through the lens. Alone, optical sub-components cannot be used, and therefore, are sold to larger manufacturers, which assemble all kind of products, such as: microscopes, cameras, or endoscopes. Orlanda's sub-components are of enough quality to fit standards created by the buyers.

The problem is that, even matching quality standards, optical sub-components manufactured by Orlanda are very similar to those produced by a dozen of other producers around the world, and, perhaps because of this, optical sub-components have to be sold cheaper every year. For the fourth year in a row, the company revenues have decreased steadily. With diminishing profitability, the company is in trouble.

Hope emerged when a group of Orlanda's engineers invented, and patented, a new controlling device for the lens. This innovation uses more advanced electronics allowing subcomponents to recognize shapes passing through the lens. However, it is unclear how to use this innovation. Your advisors gathered the following market report:

- Orlanda depends too much on only a few customers, because 5 large manufacturers companies buy 75% of world's production.
- Orlanda needs to find a way around the standards that buyers have created for producers, because optical sub-components are, in practice, all the same.
- Orlanda has the opportunity to reach end-customers and not only sell to intermediaries. The industry now is divided between producers, such as Orlanda, and product manufacturers.
- Orlanda needs new offers to enhance its negotiating position, because, often, steep discounts are enforced by buyers.
- Orlanda can pitch a different offer because management has a solid relationship with competitors and buyers over decades now. They all meet annually at the industry convention.
- Orlanda is constrained by current negotiation practices, because yearly orders are placed for the production that buyers require the following period.
- Orlanda's sales team can initiate new projects, because key negotiations are conducted only by top management.

Using this information, you are asked to decide on the two following actions about what to do with the initiative developed and patented by Orlanda. Both initiatives have been evaluated and will require similar investments, and will yield similar financial returns:

- Offer the innovation as a service. Because of the many possible applications, Orlanda can upgrade, for a fee, any already existing product with the new controlling device. The service offered by Orlanda will allow others to upgrade their own products assembled with the optical sub-components produced by any company. Furthermore, customers can send their existing products to Orlanda, and receive an upgraded version. This service can be treated as a different business unit.
- Differentiate Orlanda's offer. The new innovation will be used only on Orlanda's own existing production in order to differentiate clearly within the industry. Orlanda's sub-components would have a competitive advantage which, arguably, can provide more convincing arguments to close a sale.

(Thanks for the attention, please answer the questions in the following page…)

(ostensive version. Indication not presented)

Imagine this:

You are the Managing Director of a company called Orlada Inc.; a family-owned company with more than 100 years of operation. Orlanda is a medium industrial manufacturing company producing optical sub-components. These devices are made of an optic lens, and a controlling element, which determines the amount of light which passes through the lens. Alone, optical sub-components cannot be used, and therefore, are sold to larger manufacturers, which assemble all kind of products, such as: microscopes, cameras, or endoscopes. Orlanda's sub-components are of enough quality to fit standards created by the buyers.

The problem is that, even matching quality standards, optical sub-components manufactured by Orlanda are very similar to those produced by a dozen of other producers around the world, and, perhaps because of this, optical sub-components have to be sold cheaper every year. For the fourth year in a row, the company revenues have decreased steadily. With diminishing profitability, the company is in trouble.

Hope emerged when a group of Orlanda's engineers invented, and patented, a new controlling device for the lens. This innovation uses more advanced electronics allowing subcomponents to recognize shapes passing through the lens. However, it is unclear how to use this innovation. Your advisors gathered the following market report:

- The industry is clearly divided between producers, such as Orlanda, and product manufacturers.
- The industry is well-established. 5 large manufacturers companies buy 75% of world's production.
- Cost reductions are important for buyers, and often, steep discounts are negotiated
- Innovation in this industry is very rare. This is because buyers have settled standards that producers have to meet.
- The managers of all competitors and buyers know each other for several years; they all meet annually at the industry convention.
- Yearly orders are placed for the production that buyers require during the following period.
- While producer's sales team manages the daily communications, buyers enforce key negotiations only with top management.

Using this information, you are asked to decide on the two following actions about what to do with the initiative developed and patented by Orlanda. Both initiatives have been evaluated and will require similar investments, and will yield similar financial returns:

- Differentiate Orlanda's offer. The new innovation will be used only on Orlanda's own existing production in order to differentiate clearly within the industry. Orlanda's sub-components would have a competitive advantage which, arguably, can provide more convincing arguments to close a sale.
- Offer the innovation as a service. Because of the many possible applications, Orlanda can upgrade, for a fee, any already existing product with the new controlling device. The service offered by Orlanda will allow others to upgrade their own products assembled with the optical sub-components produced by any company. Furthermore, customers can send their existing products to Orlanda, and receive an upgraded version. This service can be treated as a different business unit.

(Thanks for the attention, please answer the questions in the following page…)

Please answer the following...

1. Please think about the 2 courses of action. How likely or unlikely would you choose...?

Use the coating only on Orlanda's own products to provide a differentiation within the industry.

Most unlikely	1	2	3	4	5	6	7	8	9	10	Very Likely

Offer the coating as a service so that anybody owning a product with an optical sub-component could enhance it.

Most unlikely	1	2	3	4	5	6	7	8	9	10	Very Likely

2. If you were to choose only one option, which option would you choose? *(please choose only one option)*

Use the innovation as a new service		Use the innovation for differentiation	

3. ¿Why did you choose this option as the right course for Orlanda? Any other reason?

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4. Do you think that the market report was...?

Informative	1	2	3	4	5	6	7	8	9	10	Actionable
Firm oriented	1	2	3	4	5	6	7	8	9	10	Market oriented
Incredible	1	2	3	4	5	6	7	8	9	10	Credible
Useless	1	2	3	4	5	6	7	8	9	10	Useful
Static	1	2	3	4	5	6	7	8	9	10	Dynamic
General	1	2	3	4	5	6	7	8	9	10	focused
Bad	1	2	3	4	5	6	7	8	9	10	Good

5. About the case in general: Do you find the case

Not credible	1	2	3	4	5	6	7	8	9	10	Credible
Boring	1	2	3	4	5	6	7	8	9	10	Interesting