

CUSTOMER INVOLVEMENT FROM AN ORGANIZATIONAL LEARNING PERSPECTIVE

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ABSTRACT:

Despite the notion that customer involvement during innovation activities creates learning opportunities for development teams, there is limited empirical evidence regarding the extent to which such learning occurs and regarding its potential value in terms of improved performance. Against this backdrop, the objective of this paper is to understand the antecedents and consequences of effective team learning in new service development (NSD) projects with customer involvement. In particular, this paper examines the direct and indirect relationships between learning orientation, information processing behaviors (recording, filling and reviewing), team learning and new service performance. The model proposed is tested on a sample of 102 NSD projects. Preliminary analyses using structural equation analysis point out that managers seeking to maximize the learning potential of involving customers not only need to develop efficient market information-processing activities but also they need to foster an organizational environment that breeds the desire to use this structure.

KEYWORDS:

Customer involvement, learning orientation, information processing behaviors, team learning, new service performance.

1. Introduction

During the last years there has been an increasing interest in, and pressure for involving customers in innovation activities (Gruner and Homburg, 2000). For new service development (NSD), in particular, customer involvement has become a mainstay of competitive advantage (Alam, 2006; Carbonell et al., 2009). Learning is often a major objective of customer involvement in service innovation (Matthing et al., 2004). The involvement of customers provides a deeper understanding of consumers' latent needs and increases the likelihood that the new service ideas will meet those needs (Alam and Perry, 2002).

Despite the notion that customer involvement during innovation activities creates learning opportunities for NSD teams, there is limited empirical evidence regarding the extent to which such learning occurs and regarding its potential value in terms of improved NSD performance. Moreover, a question remains about the conditions that support effective learning in customer involvement projects. Against this backdrop, the objective of this paper is to understand the antecedents and consequences of effective team learning in customer involvement projects. In particular, the paper examines the direct and indirect relationships between learning orientation, information processing behaviors, team learning and new service performance.

From a theoretical perspective, this study makes two important contributions. First, no study that we know of has approached the subject of customer involvement from the angle of organizational learning. This study provides an alternative view of customer involvement as a learning environment. Second, to the best of our knowledge, this is the first attempt to empirically test a learning framework that interrelates organizational learning values, information-processing behaviors, and NSD performance outcomes. Previous studies examining these relationships have done so in a piecemeal fashion. From a managerial perspective, findings of this study can provide managers with applicable guidance on how to facilitate learning (and new service performance) in NSD projects with customer involvement.

2. Theoretical framework

Figure 1 illustrates our conceptual model which is based on Sinkula et al.'s (1997) framework of market-based organizational learning. In this study, learning orientation is defined as a set of values that influence the propensity of the firm to create and use knowledge (Sinkula et al., 1997). Three information-processing practices are considered: recording, filing and reviewing of the information. Team learning is defined as implementation or usage of information/knowledge gathered through customer involvement in NSD. The definition of learning as knowledge implementation has been used widely in NPD (e.g., Moorman, 1995; Lynn et al., 2000). For example, Sarin and McDermott (2003) pointed out that team learning involves making use of information which leads to the detection and correction of errors and improves the likelihood of effective new product development. New service performance is a multidimensional construct that reflect both operational effectiveness and market place competitiveness (Menor et al., 2002; Tatikonda and Montoya-Weiss, 2001). Operational outcomes measures –service newness and speed to market– focus on project work execution and typically assess the development effort from an internal perspective. Market outcomes measures –competitive advantage and market performance– reflect the market success of the NSD effort and assess the development effort from an external perspective. Our work avoids placing the individual components of new service performance into a higher order construct, since this approach can mask the interrelationships among the individual dimensions.

3. Hypotheses development

3.1. Direct effect of learning orientation on information processing behaviors, team learning and new service performance

This study focuses on one of the components of learning orientation, mainly commitment to learning or the degree to which the organization values and promotes a learning culture (Sinkula et al., 1997). Under the assumption that values drive behavior, we expect a positive relationship between commitment to learning and information processing behaviors. In addition, learning

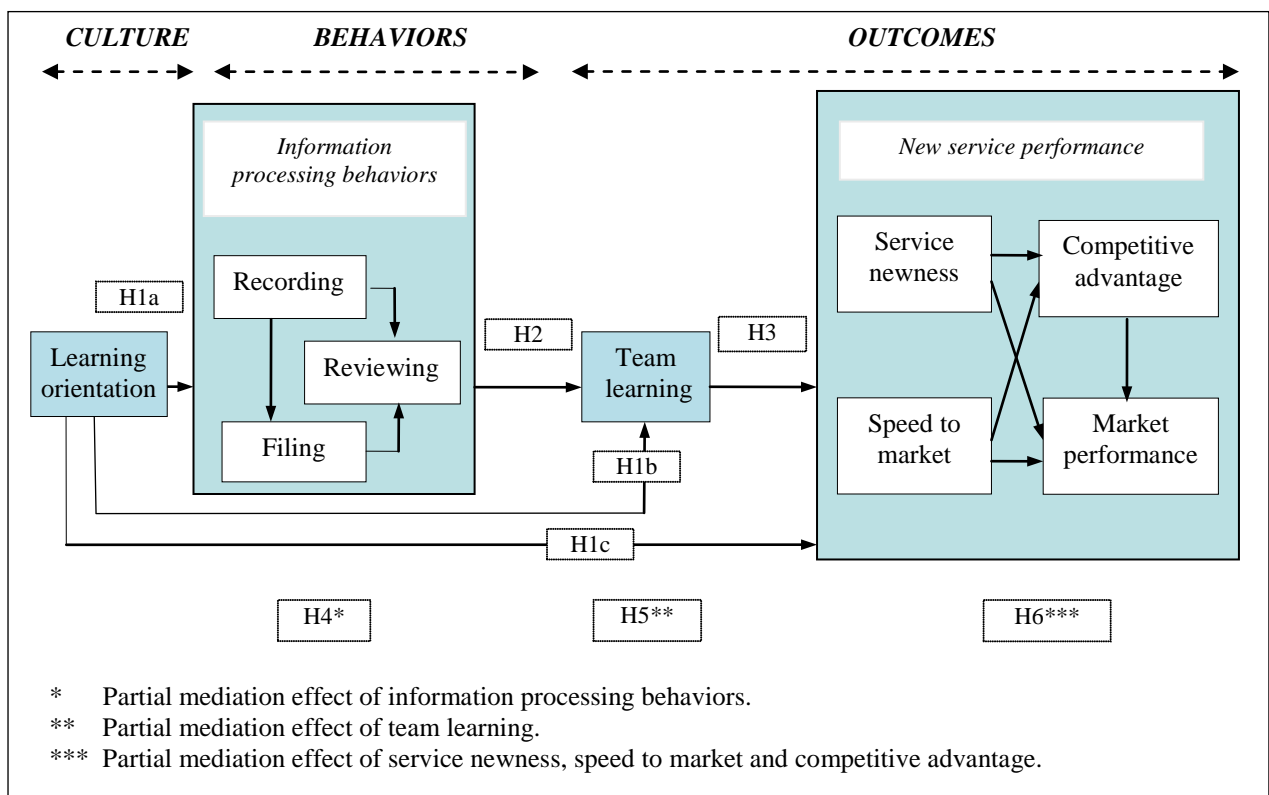
orientation is expected to have a direct impact on team learning. As noted by Norman (1985), if an organization places high value on learning, clearly learning is likely to occur. Thus, we propose:

H1a-b Learning orientation is positively related to (a) information processing behaviors – recording, filing and reviewing, and (b) team learning.

A learning orientation can have a positive impact on new product performance through means other than information processing behaviors and team learning. For instance, organizations committed to learning continually improve their business processes and generate new ideas. If organizational members have an enhanced learning orientation, they are not only more likely to gather and disseminate customer information, but also more likely to question long-held assumptions about their mission, customers, capabilities, and strategies (Slater and Narver, 1994) and to pursue exploratory learning and discover unarticulated needs (Kyriakopoulos and Moorman, 2004). Learning orientation helps to inspire employees to put in their maximum effort, develop an environment that encourages creativity and innovativeness. It is thus reasonable to expect that a firm which has been more learning-oriented will be able to create more customer value and achieve superior performance as compared with a firm which has been less learning oriented. Thus,

H1c. Learning orientation is positively related to and new service performance.

Figure 1. Theoretical framework



3.2. Direct effect of information processing behaviors on team learning and new service performance

Information processing is a necessary condition for team learning; essentially it is the process by which information is transformed into knowledge (Day, 1994; Huber, 1991; Sinkula, 1994). Thus, it has been argued that recording and creating a good filing system that ensure that useful lessons can be readily retrieved when needed can have an important impact on learning (Argyris

and Schon, 1978; Fiol and Lyles, 1985) and success (Takeuchi and Nonaka, 1986; Mills and Friesen 1992). This is especially important in cross-functional settings such as service/product innovation where the reviewers of the information for a particular NSD project may not be the originators of the records (Day, 1994; Leonard-Barton, 1992, Lynn *et al.*, 1997). Therefore,

H2. Information processing behaviors –recording, filing and reviewing– are positively related to team learning.

Recording, filing and reviewing are distinct but clearly interrelated behaviors. Common sense indicates that information recording is a pre-requisite to information filing and both of them are necessary for information reviewing. As Moorman and Miner (1997) argued, a system of information recording and filing is needed to ensure that useful lessons are captured, conserved, and can be readily retrieved when needed. Therefore, although not explicitly hypothesized, the model includes the causal relationships among these three constructs.

3.3. Direct effect of team learning on new service performance

Studies in the context of NPD indicate that team learning can have a positive influence on new product success (Moorman, 1995; Lynn *et al.*, 2000). Teams that learn rapidly and thoroughly should be able to innovate faster and better. As Meyer and Purser (1993) assert, “increasing the rate of organizational learning is at the heart of a fast cycle-time strategy. Moorman (1995) and Lynn *et al.* (2000) studies report a positive association between the use of information and knowledge to solve market- and technical-related problems during the NPD process and the marketplace success of new products. Thus:

H3. Team learning is positively related to new service performance.

3.4. Indirect effects

The relationships proposed in Figure 1 implied the existence of partial mediation effects of information processing behaviors, team learning, service newness, competitive advantage and speed to market. Such indirect effect can be formulated as follow:

H4. Information processing behaviors partially mediate the relationships between learning orientation and team learning, and between learning orientation and new service performance.

H5. Team learning partially mediates the relationship between information processing behaviors and new service performance.

H6. Service newness, competitive advantage and speed to market partially mediate the relationships between learning orientation and market performance, information processing behaviors and market performance, and team learning and market performance.

4. Methodology

4.1. Sample and data collection

A total of 807 service firms were drawn from the Dun & Bradstreet (2004) directory of Spanish service firms. Only firms with 75 or more employees were chosen on the basis that large firms are more likely to have established new product development procedures as opposed to smaller firms with more idiosyncratic practices (Alam, 2002). Firms were randomly selected by a sampling procedure that stratified by eight industry groups. A total of 102 complete questionnaires were returned which indicates a response rate of 12.6%. To test for nonresponse bias, early with late respondents were compared as suggested by Armstrong and Overton (1977). No significant differences were found in the main constructs examined in this study at $p < 0.10$.

The unit of analysis was the new service project in whose development potential customers had participated. The survey instrument included a question on the extent of customer's involvement in the NSD project selected to answer the survey. For each stage, we asked about the extent of customer involvement using the following two items: (1) the frequency of meetings with

customers was high, and (2) there was extensive consultation with customers (Gruner and Homburg, 2000). The average of customer involvement on a five-point Likert-type scale, determined by calculating the mean of these two items across the four NSD stages, was 2.97.

4.2. Measures

Organization learning was measured using Sinkula et al.'s (1997) scale. Recording, filing and reviewing information were measured with multi items scales borrowed from Lynn et al. (1999, 2000). Team learning was measured using a six-item scale adapted from Akgün et al. (2006). Three items from Avlonitis et al. (2001)'s service innovativeness scale were used to measure services newness. Speed to market was measured with four items borrowed from Kessler and Bierly (2002). Competitive advantage and market performance were operationalized with three and four items, respectively, adapted from de Brentani (1989). Measures and descriptives of all variables are shown in Table 1.

Table 1. Construct definition and measures

Construct name (Alpha's, CR, AVE)	Construct measurement ¹	Mean (S.D.)
Learning orientation (n.a.)	Managers agree that our organization's ability to learn is the key to our competitive advantage.	4.33 (0.79)
	The basic values of this organization include learning as key to improvement.	4.30 (0.67)
	The sense around her is that employee learning is an investment, not an expense.	4.22 (0.84)
	Learning is seen as a key to guarantee organizational survival.	4.06 (0.85)
Information recording (n.a.)	Reactions to early concepts were recorded	3.55 (0.99)
	Beta testing of prototypes were proficiently recorded	3.44 (1.19)
	Market reactions to launched products were proficiently recorded	3.34 (1.12)
	Technical quality prototype results were proficiently recorded	3.74 (1.17)
	Overall, most information relating to this project was recorded	3.76 (0.94)
Information filing (n.a.)	It was easy to obtain the customer input within the time	3.36 (0.97)
	A central file was kept showing changes to prototypes and comments from customers	3.10 (1.20)
Information reviewing (n.a.)	Team shared customer information with others in the team.	3.81 (1.02)
	Team meetings were conducted that includes all departments.	4.23 (0.88)
	Team reviewed, at least monthly, action items from team-staff meetings	3.75 (1.19)
	Team systematically reviewed customers reaction on product concepts	3.38 (1.05)
Team learning (n.a.)	Team used customer feedback to identify opportunities for new services.	3.81 (1.02)
	Team used customer feedback to finetune project's objectives	3.78 (1.09)
	Customer feedback was used to finetune features and benefits	3.74 (1.10)
	Customer feedback was used to develop the service delivery blueprint	3.49 (1.12)
	Team used customer feedback to finetune the service delivery process	3.52 (1.10)
	Lessons learned at the prelaunch stage were incorporate into the launch	3.86 (1.06)
Speed to market ($\alpha=.81$, CR=.82, AVE=.54)	The new service was developed and launched faster than similar competitive services.	3.38 (0.89)
	The new service was completed in less time than what was considered normal for our industry.	3.35 (0.96)
	The new service was launched ahead of the original schedule.	2.79 (0.86)
	The new service met schedule/time objectives from concept definition to launch.	3.35 (1.13)
Service newness ($\alpha=.80$, CR=.82, AVE=.60)	The new service was highly innovative; nothing likes it on the market.	3.43 (1.18)
	The new service exploited a technology that was totally new to the firm.	3.21 (1.24)
	The new service was supported by innovative technology.	3.28 (1.21)
Competitive advantage ($\alpha=.77$, CR=.79, AVE=.57)	Service experience was superior to competitors' offerings.	3.56 (0.96)
	Customer solution was superior to competitors.	3.73 (1.02)
	Give us an important competitive advantage.	3.65 (0.97)
Market performance ($\alpha=.88$, CR=.80, AVE=.68)	The new service exceeded market share objectives.	3.10 (0.82)
	The new service exceeded sales growth objectives.	3.12 (0.89)
	The new service exceeded sales objectives.	3.12 (0.90)
	The new service exceeded return of investment objectives.	3.00 (0.84)

¹ Five-point Likert-type scale (1= strongly disagree to 5 = strongly agree).

n.a.: no applicable (formative scales).

Two types of measures were used in this study: formative and reflective multi-item measures. Organization learning, recording, filing, reviewing, and team learning were specified as formative constructs and speed to market, service newness, competitive advantage and market success were specified as reflective constructs. We examined the psychometrics properties of the reflective scales using widely accepted procedures. Tests' results suggest that the reflective scales possess sufficient unidimensionality, reliability and validity. We employed two procedures to empirically examine the possibility of common method bias: the confirmatory factor-analytic approach to Harman one-factor test and the Lindell and Whitney's (2001) technique. Results from these tests suggest that common method bias was not a serious threat.

4.3. Preliminary results

Preliminary analyses using structural equation analysis indicate that learning orientation is a driving force of team information-processing behaviors and that team information-processing behaviors have an important influence on team learning and the success of new service projects. Regarding managerial implications, results from this study point out that there is a significant learning payoff from involving customers in NSD. However, without active management of the learning process many of these opportunities can remain unexploited. Our findings suggest that managers seeking to maximize the learning potential of involving customers in NSD (and thus new service performance) not only need to develop efficient market information-processing activities but also they need to foster an organizational environment that breeds the desire to use this structure (Slater and Narver, 1995).

Acknowledgments

The authors gratefully acknowledge the financial support from Spanish Ministry of Education and Science (ECO2010-21546) and from Castilla-Leon's Council of Education (VA030A11-1).

References

- AKGÜN A., LYNN G.S. AND YILMAZ C. (2006). Learning process in new product development teams and effects on product success: A socio-cognitive perspective, *Industrial Marketing Management* 35(2), February, 210-224.
- ALAM, I. (2002). An exploratory investigation of user involvement in new service development. *Journal of Academy of Marketing Science* 30(3): 250-261.
- ALAM, I. (2006). Removing the fuzziness from the fuzzy-end of service innovations through customer interactions, *Industrial Marketing Management*, Vol. 35 No. 4, 468-480.
- ALAM, I. AND PERRY, C. (2002). A customer-oriented new service development process. *Journal of Services Marketing*, 16(6), 515-534.
- ARGYRIS, C. AND SCHON, D.A. (1978). *Organizational learning: a theory of action perspective*. Reading (MA) Addison-Wesley.
- ARMSTRONG, J.S. AND OVERTON, T.S. (1977). Estimating Nonresponse Bias in Mail Surveys. *Journal of Marketing Research* 14(3): 396-402.
- AVLONITIS, G., PAPASTATHOPOULOU, P. AND GOUNARIS, S. (2001). An Empirically-based typology of product innovativeness for new financial services: Success and failure scenarios. *Journal of Product Innovation Management* 18(5): 324-342.
- CARBONELL, P., RODRÍGUEZ-ESCUADERO A.I., AND PUJARI D. (2009). Customer involvement in new service development, An examination of antecedents and outcomes. *Journal of Product Innovation Management*, Vol. 26 No. 5, 536-550.
- DAY G.S. (1994). The capabilities of market-driven organizations. *Journal of Marketing*, 58, October, 37-52.
- DE BRENTANI, U. (1989). Success and Failure in New Industrial Service. *Journal of Product Innovation Management* 6(4): 239-259.
- FIOL, C.M. AND LYLES, A. (1985). Organizational learning. *Academy of Management Review*, 10, October, 803-813.
- GRUNER, K.E. AND HOMBURG C. (2000). Does customer interaction enhance new product success?, *Journal of Business Research*, Vol. 49, 1-14.
- HUBER, G.P. (1991). Organizational learning: the contributing processes and the literatures. *Organization Science*, 2, February, 88-115.
- KESSLER, E. AND BIERLY, P. (2002). Is faster really better? An Empirical test of the implications of innovation speed.

- IEEE Transactions on Engineering Management*, 49(1), 2-12.
- KYRIAKOPOULOS, K., & MOORMAN, C. (2004). Tradeoffs in marketing exploitation and exploration strategies: The overlooked role of market orientation. *International Journal of Research in Marketing*, 21, 219-240.
- LEONARD-BARTON, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal*, vol. 13, 111-125, summer.
- LINDELL, M. K., AND WHITNEY, D. J. (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*, 86(1), 114-121.
- LYNN, G.S., REILLY R.R. AND AKGÜN A.E. (2000). Knowledge management in new product teams: practices and outcomes, *IEEE Transactions on Engineering Management*, Vol. 47, No. 2, 221-231.
- LYNN, G.S., SIMPSON, J. AND SOUDER W. (1997). Effects of organizational learning and information processing on new product success. *Marketing Letters*, vol. 8, January, 33-39.
- LYNN, G.S., SKOV, R.B. AND ABEL, K.D. (1999). Practices that support team learning and their impact on speed to market and new product success. *Journal of Product Innovation Management*, vo. 16, nº 5, 439-454.
- MATTHING, J., KRISTENSSON, P., GUSTAFSSON, A., AND PARASURAMAN, A. (2006). Developing successful technology-based services, the issue of identifying and involving innovative users, *Journal of Service Marketing*, Vol. 20 No. 5, 288-297
- MENOR, L.J., TATIKONDA, M.V., SAMPSON, S.E. (2002). New service development: Areas for exploitation and exploration. *Journal of Operations Management* 20: 135-157.
- MEYER, C. AND PURSUER, R.E. (1993). Six steps to become a fast-cycle-time competitor. *Research Technology Management*, 41-48.
- MILLS, D.Q. AND FRIESEN, B. (1992). The learning organization. *European Management Journal*, vol. 10, 146-156, June.
- MOORMAN, C. AND MINER, A.S. (1997). Organizational improvisation and organizational memory. *Academy of Management Review*, 23 (4), 698-723.
- MOORMAN, C. (1995). Organizational market information processes: Cultural antecedents and new product outcomes, *Journal of Marketing Research*, 32, August, 318-335.
- NORMAN, R. (1985). Developing capabilities for organization learning. In *Organizational strategy and change*, ed. Johannes M. Pennings San Francisco.
- SARIN, S. AND MCDERMOTT, C. (2003). The effect of team leader characteristic on learning, knowledge application, and performance of cross-functional new product development teams. *Decision Science*, vol. 34, nº 4, 707-739.
- SINKULA J.M. (1994). Market information processing and organizational learning, *Journal of Marketing*, 58, January, 35-45.
- SINKULA, J.M., BAKER, W.E. AND NOORDEWIER, T.A. (1997). Framework for market-based organization learning: linking values, knowledge, and behavior. *Journal of Academy of Marketing Science*, 25 (4), 305-318
- SLATER, S.F. AND J.C. NARVER (1994). Market oriented isn't enough: Build a learning organization. *Report number 94-103, Marketing Science Institute*, Cambridge, MA.
- SLATER, S.F. AND J.C. NARVER (1995). Market orientation and the learning organization. *Journal of Marketing*, vol. 59, nº 3, 63-74.
- TAKEUCHI, H. AND NONAKA, I. (1986). The new product development game. *Harvard Business Review*, 137-146. January-February.
- TATIKONDA, M.V. AND MONTOYA-WEISS, M. (2001). Integrating operations and marketing perspectives of product innovations: The influence of organizations process factor and capabilities on development performance. *Management Science* 47(1): 151-172