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When to Outsource the Sales Force for New Products

Executives and researchers continue to seek factors that lead to new product success.

While prior research has suggested that outsourcing the selling function can help make the innovation process leaner and limit future liability, outsourcing can also pose risks in terms of safeguarding both customer relationships and confidential innovation capabilities. Moreover, examining the effects of outsourcing has been identified as a key research priority in recent marketing literature. Thus, using privileged access to managers in the biochemical industry, we employed a multi-group analysis of 229 new products to investigate the effect of outsourcing the sales force on new product success. Our empirical results demonstrate that outsourcing the sales force moderates the relationship between new product superiority and customer meaningfulness such that the relationship is stronger when outsourcing is employed; however, outsourcing the sales force moderates the relationship between new product good value and customer meaningfulness such that it is weaker when outsourcing is employed. These findings suggest that outsourcing may serve as a signal of added risk for customers. Thus, the decision to outsource the sales force should be made based upon customer needs and the characteristics of the new product.

KEYWORDS: Outbound open innovation, marketing outsourcing, new product development, personal selling, sales force decisions

1. Introduction

Successful innovation stimulates competitive advantage, increased demand, and profit growth for companies, ultimately impacting firm longevity and improved shareholder value. However, along with the potential for high reward comes high risk, as the costs for new product development can be insurmountable and the success rates disproportionately low (Montoya-Weiss and Calantone 1994). Thus, executives and researchers continue to seek factors that lead to innovation success. With both time and money as critical finite resources, making the new product development process as lean as possible remains essential. Strategic considerations include not only *what* new product to develop but also *who* needs to be part of decision-making, *when* to include certain functions in the process, and *how* to launch and market the product.

Along these lines, personal selling has been advocated as a highly effective yet extremely costly promotional tool for companies. The literature suggests that the sales force plays a significant role in the success of new products as salespeople connect firms with customers. Indeed, salespeople are charged with communicating product-related information to buyers to reduce information asymmetry and influence customer perceptions and adoption rates (Fu et al. 2010). Prior research examining the role of the salesforce in new product development has focused on salesperson motivation (Fu et al. 2010), sales management and control systems (Ahearne et al. 2010), and the sales-R&D interface (Ernst, Hoyer and Rübsaamen 2010). That said, previous studies also bring to light the fact that firms spend on average four times more on personal selling than advertising (Ahearne et al. 2010), which reveals not only the importance but also the expense of this resource in the innovation process.

Hence, according to Rapp (2009), many firms have begun to outsource their sales force, or “at a minimum, have begun to consider renting a sales force rather than owning their own” (p.

411). However, very little empirical evidence exists concerning the consequences of this recent trend (Rapp 2009; Jiang and Qureshi 2006). Indeed, a gap remains in our understanding of the effects of outsourcing selling activities within the context of innovation, when product uncertainty exists and failure rates are high. This gap in knowledge of sales force management is important to address because innovation break-even relies on successful commercialization, with the sales force providing a key role... at a hefty price. Maximizing profitability hinges on making sound decisions with respect to selling. Moreover, a research priority recently identified within the marketing literature involves examining the impact of outsourcing marketing activities on firm performance (Moorman and Day 2016). Specifically, researchers have been encouraged to investigate how “outsourcing as cocreation of value affects the novelty, speed and effectiveness of marketing strategies” (Moorman and Day 2016, p. 8).

This gap in knowledge with regard to outsourcing is especially challenging within the biochemical industry studied. The use of biochemicals as components of a multitude of subsequent products and processes makes for an extremely competitive innovation and supplier landscape. In this industry, engineers develop new chemical solutions that can be used by a multitude of companies, such as those in agriculture, pharmaceuticals, cleaning products, waste treatment and so forth. Biochemical innovations can be products (raw materials for industries), the change in manufacturing processes and quality outputs, or the functional substitute of materials presently used by other suppliers in target industries. Since these are not finished goods sold to the public, many options exist for how to sell these industrial innovations. Likewise, because of the extremely competitive landscape, outsourcing the selling function may seem particularly appealing; however, outsourcing the sales force also poses considerable risk that has not been fully investigated.

To address this gap, we used privileged access to gather data on 229 new product innovations from firms in the biochemical industry. Using partial least squares structural equation modeling, we conducted a multi-group analysis between firms that outsource the sales function and those that did not. In addition to traditional marketing mix and technical mix variables, we assessed the relationship between different characteristics of product innovations and the new product success.

Findings reveal that the decision to outsource the sales function should be based on characteristics of the new product and related customer needs. Firms with products that are truly innovative and unique may wish to safeguard core company secrets and not outsource the sales function. While the path difference between firms that outsourced and did not outsource the selling function did not reach statistical significance, outsourcing offered no improvement either. On the other hand, outsourcing the salesforce strengthened the relationship between new product superiority and customer meaningfulness such that the relationship was stronger. Therefore, firms employing a second-but-better or “me too” strategy may wish to employ outsourcing for the benefits it could provide. Nonetheless, outsourcing the sales force moderated the relationship between product good value and new product success such that the relationship was weaker. Outsourcing may serve as a signal that the product is inferior in these circumstances. Thus, saving money via outsourcing may actually be detrimental to new product success when competing on price. Overall, our findings suggest that managers should at least consider employing internal salespeople with stronger organizational identification who strive to build trust and commitment with customers rather than hiring an external sales force to peddle new products, as outsourcing may incite feelings of risk for customers. In certain circumstances, however, outsourcing may be considered useful.

2. Theoretical Background and Hypotheses Development

2.1 Outbound Open Innovation and Relationship Marketing

Open innovation is being increasingly adopted by companies as a way to leverage the resources of other firms for competitive advantage and increase efficiency within the product development process. Two types of open innovation include *inbound*, referring to leveraging R&D discoveries from external sources for new product development, and *outbound*, referring to relying on external organizations for market launch and commercialization (Chesbrough and Krowther 2006). Since many organizations lack the structure and processes to efficiently launch new products in a timely fashion, they form partnerships that can be mutually beneficial.

Opposing arguments exist for outbound open innovation (or outsourcing the sales force). According to Le Bon and Hughes (2009), three primary rationale for outsourcing the sales force include projected cost savings, the desire to expand services through contracting outside experts, and the decision to keep internal salespeople focused on core profitable products. Additional possible benefits of outsourcing suggested in the literature are achieving economies of scale, increasing flexibility and spreading risk to vendors (Le Bon and Hughes 2009). Likewise, outsourcing has been shown to help firms have leaner operations and limited future liability (Calantone and Stanko 2007). In fact, according transaction cost analysis, contracting outside sales agents offers greater efficiency than vertically integrating an internal sales team generally (Anderson 2008).

On the other hand, firms lose a degree of control over the salesperson, such as monitoring activities and behaviors (Anderson 2008), which may be important within the context of innovation. Furthermore, concerns remain about safeguarding resource and capability advantages from leaking to competitors (Moorman and Day 2016). If a new product is truly unique and

innovative, firms will need to safeguard their core competencies rather than potentially allowing them to be leaked to competitors, permitting market entry. Indeed, the literature suggests that outsourcing poses strategic risks that result from opportunistic behaviors of contracted partners (c.f. Aron, Clemons and Reddi 2005; Le Bon and Hughes 2009).

Most importantly, though, previous studies have not fully considered the customer impact of outsourcing the sales force. Rather than focusing merely on transactions, the sales and marketing literature has emphasized the importance of buyer-seller relationships (e.g. Dwyer, Shurr and Oh 1987; Morgan and Hunt 1994; Palmatier et al. 2006). Relationship marketing theory concerns attracting, developing and retaining customer relationships through cultivating commitment and trust (Morgan and Hunt 1994).

Additionally, salespeople have been shown to be effective in influencing customer opinions about new products as well as increasing customer adoption rates (Ahearne et al. 2010). Marketing literature has shown that customers form interpersonal relationships with salespeople (rather than person-to-firm relationships), and customer loyalty to a salesperson is financially advantageous to the firm employing that salesperson (Iacobucci and Ostrom 1996; Palmatier, Scheer and Steenkamp 2007). Consequently, the decision to outsource the selling function may mean giving up the benefits of salesperson-owned loyalty.

2.2 New Product Characteristics

Since we are focused on customers and new product success, we begin our research model with new product characteristics and the subsequent customer meaningfulness derived from each. Figure 1 graphically depicts our research model.

[Insert Figure 1 about here.]

Prior research in new product development offers a useful checklist of questions for managers to assess the odds of success for a proposed project (Cooper 1994). These items, which included “unique attributes, good value-for-money, and superior in meeting needs,” were deemed key ingredients in new product success (Cooper 1994, p. 64). Moreover, in a meta-analysis on why some new products are more successful than others, Henard and Syzmanski (2001) identified not only firm strategy and firm process characteristics but also *product* characteristics that significantly predict new product performance. These product characteristics capture elements pertaining to the offering, such as price, innovativeness and superiority in meeting customer needs (Henard and Syzmanski 2001). While some research lumps these elements together in studying a ‘new product’ (e.g., Song and Parry 1997; Lee and O’Conner 2003; Molina-Castillo and Munuera-Aleman 2009), we separate each characteristic out as a strategic consideration in developing a new product and achieving competitive advantage. We describe each characteristic and their differences below.

Product Uniqueness. Product uniqueness represents innovativeness, novelty and differentiation. Li and Calantone (1998) identify product uniqueness as an important attribute of differential advantage – the uniqueness classification concerns highly innovative products that “offer unique features to the customer and permit the customer to do a unique task” (p. 17). Likewise, prior literature links product uniqueness to product performance, with differentiated products offering greater potential for customer satisfaction and loyalty (Song and Parry 1997). The measure used by Song and Parry (1997) includes items such as unique features or attributes for consumers, the enablement of the consumer to perform a unique task, higher quality than competing products, and total newness/innovativeness (p. 16). Concerning product uniqueness, we predict,

H1: Product uniqueness is positively associated with customer meaningfulness.

Product Superiority. On the other hand, not all new products are really new. Prior research distinguishes between ‘really new’ versus incrementally-new products (Min, Kalwani and Robinson 2006; Schmidt and Calantone 2002; Urban, Weinberg and Hauser 1996). While some new products can be considered radical innovations, others are more incremental improvements such as line extensions, cost reductions and “me too” products (Schmidt and Calantone 2002). While these innovations may or may not be new to the firm, they are not new to the market. Instead, incremental innovations typically refine and modify existing products to make them better than previous offerings. So, the felt need for these products often exists and the technologies are more established (Min, Kalwani and Robinson 2006). Although not totally new, these innovations are superior at meeting customer needs than what has been available previously. Thus, product superiority can be considered second-but-better, offering superior benefits to customers. Accordingly, we predict,

H2: Product superiority is positively associated with customer meaningfulness.

Product Good Value. Another attribute of successful new products concerns good value for the money or a “positive economic impact on the customer” (Cooper 1994, p. 61). Good value has likewise been called the new product “perceived price-performance congruency” (Henard and Syzmanski 2001, p. 364). Good value for the money implies a customer perception of a rank order system between price and quality received. This perceived value has been shown as an antecedent to willingness-to-buy (Sweeney, Soutar and Johnson 1999). While some customers perceive value when a product is simply low-cost or cheap, many more perceive value when quality and price are balanced (Sweeney and Soutar 2001). Generally, customers that perceive one product to be of better value than another will buy the former. Hence, we predict,

H3: Product good value is positively associated with customer meaningfulness.*2.3 Customer Meaningfulness and New Product Success*

Meaningfulness to target customers remains essential to new product success, which we formally define as the new product achieving its intended outcomes with regard to sales, profitability and managerial success ratings. Prior literature describes customer meaningfulness as “the extent to which new product characteristics are perceived as appropriate and useful to target customers” (Im and Workman 2004, p. 115). For example, product uniqueness and novelty may be characterized as bizarre and atypical rather than advantageous and practical (Amabile 1983). Thus, not only is it important to measure uniqueness but also the importance and impact a customer derives from it. Likewise, while a firm may think its new product is superior to others on the market, the advantages may not be those that consumers appreciate and are willing to pay for (Schmidt and Calantone 2002). Cooper (2019) offered the example of the satellite phone – clearly novel, but not really impactful to the majority of potential users – which was a “dud” when compared to mobile cellphones (p. 37).

According to Ahearne et al. (2010), customer-product perceptions, both in business-to-consumer and business-to-business settings, have been the subject of considerable research. Prior studies confirm that new product dimensions and the customer meaningfulness derived from them are not only conceptually different but also empirically distinct (Im and Workman 2004; Sethi, Smith and Park 2001). Customer meaningfulness reflects customers’ beliefs that the innovations are useful and will have a positive impact. As such, customer meaningfulness derived from the new product characteristics remains essential to the overall success of the innovation as customers are the buyers of the innovations and bring the monetary value in

exchange for the products. Without customers, new products will not achieve intended sales or profits. Thus, we predict:

H4: Customer meaningfulness is positively associated with new product success.

2.4 The Moderating Effects of Outsourcing the Sales Force

Outsourcing the sales force may affect the customer meaningfulness derived from new product characteristics. An in-house sales team is closer to a firm's product designers and therefore would be better equipped to explain the unique new advantages of the product to customers. In addition, Ernst, Hoyer and Rübstaamen (2010) demonstrated that cooperation within the sales-R&D interface even before product commercialization can help leverage the connection between sales employees and customers for key information regarding developing new products. A key benefit of an involved in-house sales team includes an amplified "voice of the customer" being fed into intelligence operations of the new product development team. Part of customers' overall lifetime value is the knowledge value they bring to firms (Kumar et al. 2010), which can be transferred through communications with the inside salesperson. The inside sales force becomes a repository of customer knowledge, which becomes valuable during new product development. Likewise, since internal salespeople span the boundary between the company and customers, they not only provide key knowledge of customers' unique concerns and needs but also communicate back to customers how the new product uniqueness meets those needs, making adoption feel less risky.

Moreover, with greater organizational commitment from being employed by the company itself, the sales team should have greater ownership of the new product. Because of a greater time and knowledge investment and greater potential for input in the creation of the new product, selling the product should become more meaningful (Hackman and Oldham 1976) and

intrinsically rewarding (Ryan and Deci 2000). Stronger motivation leads to greater sales, as demonstrated by Fu et. al (2010). Indeed, a strong and consistent body of literature speaks to organizational and brand identification that impacts salesperson motivation and subsequent performance in selling to customers (Hughes and Ahearne 2010; Wieseke et al. 2012; Hughes 2013; Gammoh, Mallin and Pullins 2014).

A third key benefit of employing an in-house team versus later contracting outside agents includes the acceleration of pre-launch training of the sales force, which advances early adoption, segment penetration, and achievement of a shorter time to break even. For a salesperson to describe the benefits and uses of a radically new product, answer questions about production or distribution, or train customers on how to use it, he or she must be extremely familiar with the facets of the new product. When sales force involvement with the new product begins later in the process (i.e. contracting an outside sales force when the product is ready to launch), training must happen during the critical time of commercialization, which impedes the time available to actually sell the product. On the other hand, if an in-house sales force is aware of and involved with product innovations sooner in the process from being more attached to and in tune with the firm, they should be better equipped to “hit the ground running” in influencing customers’ perceptions regarding the innovation. Thus, we hypothesize,

H5: Outsourcing the sales force moderates the relationship between product uniqueness and customer meaningfulness such that the relationship is weaker when outsourcing is employed.

Alternatively, when considering new product superiority, Ahearne et al. (2010) empirically demonstrated that the more an internal salesperson believes the new product is superior to existing products on the market, the less effort s/he is likely to expend selling the new product. Specifically, “believing that the new product will ‘sell itself,’ such a salesperson is

prone to rely on external sales and marketing support and word-of-mouth generated by the new product and instead attempt to improve her overall sales performance by diverting efforts to other products in the portfolio,” (Ahearne et al. 2010, p. 22).

In addition, prior research suggests market uncertainty is lower for product superiority because these new products provide incremental benefits relative to existing products (Min, Kalwani and Robinson 2006). Since the felt need for the product already exists, market research can provide more accurate sales forecasts for incrementally new products than for really new unique products, giving managers a better gauge for how external partners should perform and affording less chances for opportunism by a contracted agent. Likewise, as customer-perceived superiority increases, perceived risk of switching from the old technology to the new technology is reduced.

Moreover, since customers may already be aware of the current products on the market, less time and influence may be needed to explain the product and its uses (quite different than truly unique products). Convincing a customer to buy the product would entail showing how the product is superior to what is currently being used or had previously been available. With true superiority, customers may simply want the products faster, which outsourcing would enable. Thus, outsourcing the sales force in this circumstance – when products are second-but-better, in essence – may be worthwhile. Thus, we predict,

H6: Outsourcing the sales force moderates the relationship between product superiority and customer meaningfulness such that the relationship is stronger when outsourcing is employed.

Finally, we predict that outsourcing will weaken the relationship between product good value and customer meaningfulness for the following reasons. First, perceived value is not only an antecedent to willingness-to-buy but also an outcome of perceived quality and sacrifice. That

said, perceived price also influences both perceived product quality and perceived sacrifice (Dodds, Monroe and Grewal 1991). While price reflects a financial sacrifice (thus negatively related to value), price also influences perceptions of quality and hence is positively related to value (Dodds, Monroe and Grewal 1991). Consequently, when a new product is priced aggressively, customers may question its true quality and, according to Signaling Theory (Spence 1978; Connelly et al. 2011), look for additional cues to resolve information asymmetry regarding the product's performance. While the advice of an internal salesperson has been regarded as a risk-reduction strategy (see Sweeney, Soutar and Johnson 1999), a contracted salesperson may alternatively signal to the customer that the product is inferior and thus is being peddled by someone not fully employed by the innovating firm.

Likewise, prior research also shows that when customers buy a product, they take a chance the purchase will deliver the expected satisfaction over time (Sweeney, Soutar and Johnson 1999). Risk represents a potential sacrifice in overall value, which is particularly true in new product innovations. A contracted external agent may represent more risk than an in-house agent, who may be more likely to "stand by the product" he or she is selling as a commitment to the firm and the customer relationship. Likewise, since a lower price is associated with perceptions of lower quality, customers may experience feelings of greater risk, negatively influencing the overall 'good value' of the innovation. To combat these feelings of risk, prior trust and commitment established with the focal innovating firm can help negate such perceptions. Research shows that characteristics of the salesperson and the salesperson/buyer relationship (including frequency of contact) influence the buying firm's trust of the salesperson's firm and purchase choice (Doney and Cannon 1997). These salesperson characteristics include both expertise and power, which can be better established by the

innovating firm when the salesperson is an in-house employee than a contracted external agent.

Altogether, we predict,

H7: Outsourcing the sales force moderates the relationship between product good value and customer meaningfulness such that the relationship is weaker when outsourcing is employed.

3. Method

3.1 Sample and data collection

We had privileged access to managers within the biochemical industry who had varying titles including marketing manager or new product manager. We sent a total of 532 questionnaires out and received 233 back. Four surveys were unusable due to being incomplete on key variables, so we removed them from our sample. Thus, our final sample consisted of 229 new product development projects (N=229) within the biochemical industry, which is a response rate of 43%. We also gathered objective data on these new product costs, sales and profits.

3.2 Measures¹

Product Uniqueness. We selected three of the four items from the product innovativeness scale used by Durmuşoğlu and Barczak (2011) to measure product uniqueness. Products were rated on the uniqueness of attributes, uniqueness of tasks and quality on a Likert scale of 0_minimum to 10_maximum. The composite reliability for this item was .914.

Product Superiority. Items for product superiority came from scales used by Song and Parry (1997) and Lee and O'Conner (2003). Managers were asked to rate the new product on being superior in meeting customer needs, offering important benefits, and offering benefits that were easy to communicate. Responses were based on a Likert scale of 0_minimum to 10_maximum. The composite reliability for this item is .870.

¹ A list of measures can be found in Appendix A.

Product Good Value. We selected two items from the price-value scale developed by Sweeney and Soutar (2001) to measure product good value. Participants were asked to rate the new product on price per performance and overall ‘good value’ on a Likert scale with 0 _minimum and 10 _maximum. The composite reliability for this item is .891.

Customer Meaningfulness. Based on the new product meaningfulness scale used by Im and Workman 2004, participants were asked to rate each innovation based on customers’ perceptions of utility of the new product and the overall impact the new product offered in meeting their needs on a Likert scale with 0 _minimum and 10 _maximum. The composite reliability for this item is .836.

New Product Success. New product success was measured by the Z score of new product sales, profit and technical success ratings with 0 _minimum and 10 _maximum. Similar items concerning both relative sales and profit and ratings of meeting intended objectives were employed by Im and Workman (2004).

Outsourcing the Sales Force. Managers were asked if they outsourced the sales force always or never within the context of the product innovation.

Control Variables:

In a study on new product innovations within the chemical industry, Cooper (1994) probed the impact of non-product advantages side-by-side with product advantages; the conclusion was that “elements of non-product advantage yield positive results, but with not nearly the same impact as that obtained via product advantage” (p. 62). Significant non-product advantages from this study included a positive company image or reputation, a well-known brand name, a high level of technical competence, and a superior sales force with quality customer service (Cooper 1994). Thus, we control for the firm’s *marketing mix, technical mix,*

and *salesforce quality* (as both an internal team and an external sales force can offer varying degrees of quality) described in detail below. In subsequent research by the same author, new product success was significantly impacted by the product development process with a dedicated team (Cooper 1996); thus, we control for the effects of a *dedicated team* as well.

Dedicated Team. Managers were asked to what extent they agreed that a team approach and dedicated team were used in the new product development process on a Likert scale of 0_minimum and 10_maximum. The composite reliability for this construct is .825.

Marketing Mix. To control for the overall marketing strength of the firm, marketing mix included name brand advantage, reputation advantage and advertising quality measured on a Likert scale of 0_minimum and 10_maximum. The composite reliability for this construct is .749.

Technical Mix. Technical mix was based on perceptions of R&D fit, technical advantage and product conceptualization on a Likert scale with 0_minimum and 10_maximum. The composite reliability for this construct is .714.

Sales Force Quality. Managers were asked to rate the quality of the sales force, the fit of the sales force with the innovation, and the advantageousness of the sales force on a Likert scale with 0_minimum and 10_maximum. The composite reliability for this item is .833.

3.3 Analysis

We performed a fully latent path analysis in Smart PLS 3.0 to test our hypotheses. Partial least squares structural equation modeling (PLS-SEM) is similar to maximum likelihood-based modeling in that the measurement of the latent constructs from the observation variables are analyzed at the same time as the paths of the structural model. However, the two approaches differ in that PLS-SEM employs ordinary least squares (OLS) regression-based estimation

procedures to estimate the path relationships in the model, with the goal of providing path coefficients that minimize the error terms or residual variance in the endogenous constructs and maximize the explained variance (Hair et al. 2014).

Because PLS-SEM does not attempt to minimize residual item covariance, no summary statistics are given for overall model fit (such as CFI, RMSEA, etc.). Instead, although the measurement and structural parameters are estimated together, the results are interpreted in two stages (Hulland 1999). The first stage is the measurement model, in which we ensure nomological validity of the measures used to operationalize the constructs. Once the measures are deemed to be reliable and valid, the second stage involves assessing the structural model, or the sign and statistical significance of the path coefficients. Finally, to test the moderating difference of outsourcing the sales force, we conducted a multi-group analysis and performed a pairwise comparison of the differences in sign and significance for each of the path coefficients.

4. Results

4.1 Measurement Model

First, as suggested by Hair et al. (2014), we performed tests for individual item reliability as well as convergent and discriminant validity for the measurement model. For individual item reliability, we assessed the loadings of each item on its corresponding constructs. As shown in Table 1, all indicator loadings and composite reliability values are greater than .70 (Bagozzi and Yi 2012) and the t-values likewise show that the loadings are significant ($p < .01$). In addition, to assess convergent validity, the average variances extracted (AVE) for all our focal variables of interest are greater than the recommended threshold of .50 (Bagozzi and Yi 2012), indicating that our measures are reliable and that the latent constructs account for more than 50% of variance in the items.

(Insert Table 1 about here.)

To establish the discriminant validity of our measures, we computed the AVE-SV comparison (Fornell and Larcker 1981) and the Heterotrait-monotrait (HTMT) ratio (Henseler, Ringle and Sarstedt 2015) for each construct. In Table 2, the diagonal values represent the square roots of AVE values, which are greater than all the off-diagonal correlation values, meaning each latent variable shares greater variance with its indicators than with other latent variables (Fornell-Larcker 1981). Altogether, the results show that our measures exhibit reliability and convergent and discriminant validity.

(Insert Table 2 about here.)

4.2 Structural Model

After confirming the results of the measurement model, we examined the structural model for significant variance explained in the endogenous constructs (R^2), predictive relevance (Q^2), and finally the path estimates and their t-values and significance by using a nonparametric bootstrapping procedure (Hair et al. 2014). We first estimated the path coefficients for the overall model in Figure 1 for the entire sample ($n=229$) to test our hypotheses. The results of our analysis are shown in Table 3a, with unstandardized parameters reported. We also conducted the Sobel tests of mediation using an online utility at quantpsy.org (Preacher and Hayes 2008).

PLS-SEM enables the testing of moderating effects in path models using multigroup analysis, which is especially useful for discrete moderator variables such as sales force outsourcing. For easy comparison, the results for the models of the firms that outsourced the sales function and those that did not are presented in Table 3b. Likewise, the parametric and Welch-Satterthwait statistics for the differences between groups and their significance are reported in Table 3b.

(Insert Tables 3a and 3b about here.)

Our results are also shown in Figure 2. Based on prior literature, our first hypothesis predicted that product uniqueness is positively associated with customer meaningfulness. This hypothesis was supported ($b = .365, p < .01$). In the second hypothesis, we predicted that product superiority is positively associated with customer meaningfulness. This hypothesis also was supported ($b = .385, p < .01$). Likewise, the third hypothesis, in which we predicted that product good value is positively associated with customer meaningfulness, was supported ($b = .187, p < .01$). In the fourth hypothesis, we predicted that customer meaningfulness is positively associated with new product success. This hypothesis was supported as well ($b = .214, p < .01$). We also confirmed that customer meaningfulness had a significant mediating effect between product uniqueness and new product success (Sobel test statistic = 2.632, $p < 0.01$), product superiority and new product success (Sobel test statistic = 2.586, $p < 0.01$), and product good value and new product success (Sobel test statistic = 2.145, $p < 0.05$).

(Insert Figure 2 about here.)

Specifically examining the effects of outsourcing the sales force, in the fifth hypothesis, we predicted that outsourcing moderates the relationship between product uniqueness and customer meaningfulness such that the relationship is weaker when outsourcing is employed. This hypothesis remains unsupported as the difference did not reach statistical significance (path difference = .083, *n.s.*). In the sixth hypothesis, we predicted that outsourcing the sales force moderates the relationship between product superiority and customer meaningfulness such that the relationship is stronger when outsourcing is employed. This hypothesis was supported (path difference = .342, $p < .05$). Finally, also receiving support was the seventh hypothesis, in which we predicted that outsourcing the sales force moderates the relationship between product good

value and customer meaningfulness such that the relationship is weaker when outsourcing is employed (path difference = .289, $p < .05$). Table 4 provides a summary of our hypotheses and findings.

(Insert Table 4 about here.)

5. Discussion

In the sales process, salespeople attempt to understand customer challenges and subsequently match specific product benefits to meet those challenges. In the case of new product innovations, a salesperson must convince a buyer to stop buying what is currently working for the company – although there is always room for improvement – and buy something new, which is potentially risky. By emphasizing certain characteristics to improve the customer's outcomes such as good value, uniqueness, or performance superiority, the salesperson makes such characteristics of a new product more salient in the buyer's mind. If the buyer senses the new product features will be useful and impactful, s/he will likely buy.

However, what happens when the salesperson is not employed by the company that is responsible for the innovation but is rather a contracted outside agent? Our findings suggest that outsourcing the salesforce does have an effect on the relationship between the new product characteristics and the meaningfulness customers derive therefrom. Furthermore, this effect is different depending on the specific characteristic of the new product. Overall, our findings suggest the more the perceived distance between the customer and the innovator, the less the mitigation of risk obtained due to actions of the salesperson.

While we predicted that outsourcing the sales force would moderate the relationship between new product uniqueness and customer meaningfulness such that the relationship is weaker, the difference in paths between the two groups did not reach statistical significance.

Thus, outsourcing the sales force did not significantly worsen (nor did it improve) the customer meaningfulness derived from new product uniqueness. However, it is well-known that adopting a truly unique new product is risky and can be a very slow process until a key competitor buys the product and demonstrates its supremacy in some way. An in-house sales force is more likely to be familiar with the buyer and the buyer's unique challenges and how the unique new product meets those challenges and is therefore more likely to be more effective. Likewise, firms will still want to consider safeguarding both salesperson-owned loyalty and core company secrets when radically innovating and competing on new product uniqueness.

So, to answer the question "when to outsource the sales force," our findings suggest that firms employing a second-but-better strategy may find outbound open innovation to be useful. Outsourcing moderated the path between product superiority and customer meaningfulness such that it was stronger when outsourcing was employed. Hence, if firms have a less confidential strategy for new products – like substitution or imitation, i.e. a similar product but better appeal (Frambach, Prabhu and Verhallen 2003) then the sales force implementation is occurring in a situation where the risk has been mitigated by some buyers having moved to the new technology already. Since customers may be aware of previous versions of the product, less convincing would be needed and less risk would be involved with the purchase. With true product superiority, customers may simply want the products faster, which outsourcing would enable. Likewise, inhouse salespeople may feel like the product will "sell itself" and put forth less effort, as shown by Ahearne et al. (2010). Thus, outsourcing the sales force when the firm is competing on new product superiority may be worthwhile.

On the other hand, our findings also revealed that outsourcing the sales force moderated the relationship between product good value and customer meaningfulness such that the

relationship was weaker. Thus, “saving money” via outsourcing may actually be detrimental to customer perceptions within the context of new products competing on price. For products competing on good value, customers may perceive a higher risk involved with the purchase and question the innovating firm’s intentions when contracting outsourced agents. For example, customers may wonder if the firm is trying to disassociate itself from the new product because it is inferior or lower quality. To ease perceived purchase risk associated with lower-priced products, firms should consider employing in-house sales experts who develop a long-term relationship of trust with the buyer. Otherwise, outsourcing weakened the customer meaningfulness derived from new product good value.

5.1 Managerial Implications

Decisions regarding how and when to include the sales force during the new product development process remain critical. Outsourcing the sales force (outbound open innovation) strengthened the relationship between product superiority and customer meaningfulness within our research model. Thus, contracting external agents to push products faster to market in circumstances where the product is second-but-better may be prudent. Doing so may give internal salespeople more time to focus on products that require more customer convincing or may simply provide cost savings for the firm.

While the difference in the relationship between new product uniqueness and customer meaningfulness was not statistically significantly different than zero, managers may want to consider the pros and cons of outsourcing before making decisions to contract outside agents. Prior research on salesperson-owned loyalty, trust and commitment, and long-term purchase intentions that customers experience from their salesperson relationships may be beneficial for firms choosing to radically innovate – particularly since market pioneers have historically had

the highest failure rates (Min, Kalwani and Robinson 2006). A quality in-house salesforce also can help provide customer intelligence into the idea generation stage of the new product development process and make strategic decisions for new product uniqueness throughout each “stage gate” (Tzokas, Hutlink and Hart 2004). While our analyses did not reach statistical significance, managers may still want to exercise caution regarding outbound open innovation when competing on new product uniqueness.

For firms trying to achieve success by offering products with the best overall value, managers often strive to cut costs to improve bottom line performance. However, our analyses reveal that saving money by outsourcing the selling function significantly reduced the customer meaningfulness derived from product good value. Findings suggest that managers should be wary of employing outbound open innovation to try and push cheaper products faster. Instead managers should consider employing an in-house sales team that tries to build trust, commitment and long-term relationships with customers, which may cushion customer perceived risk associated with new product good value.

5.2 Theoretical Contributions

While past literature suggests that outsourcing can provide cost savings, prior research has not really examined the customer impact of outsourcing the sales force. Our analyses reveal that only certain product characteristics became more meaningful to customers when outsourcing was employed. Specifically, outsourcing the sales force improved the relationship between new product superiority and customer meaningfulness.

On the other hand, outsourcing weakened the relationship between product good value and customer meaningfulness. Thus, we bring to light that outsourcing the sales force may signal a form of risk to customers. When new products are superior to others on the market and

customers already have a base of knowledge, the risk may not be as consequential. Therefore, unless the firm is employing a “me too” strategy, managers should consider having internal salespeople sell new products, which should offer better results than contracting an external sales force not only because of salesperson brand identification (Hughes and Ahearne 2010) but also greater customer trust and commitment (Morgan and Hunt 1994).

5.3 Limitations and Future Research

One limitation to this study is the fact that we gathered data from a single industry. Future research may want to obtain evidence from additional industries or even examine outsourcing across industries or countries. A second limitation is that our surveys were cross-sectional in nature. Thus, the next step would be examining the overall impact of outsourcing the sales force on firm financial profitability over time. Conducting a latent variable growth curve model including firm financials over time could show if the effects of outsourcing the sales force within the context of innovation persist over time.

In addition, an interesting future study may examine the financial effects of salespeople who spend time on new product innovations in comparison to those that focused on selling known core products to include the difference as a predictor for firm profitability as a whole. Future research also may want to examine customer satisfaction and churn related to outsourcing the sales force versus maintaining a quality, involved internal sales force. Finally, while this study was conducted within the context of new product innovation, future research may want to investigate sales force outsourcing within additional contexts. Are there additional times and circumstances in which outsourcing the sales force is advantageous to firms? We leave this as a question for future inquiry.

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Figure 1 – Research Model Investigating the Impact of Outsourcing the Sales Force

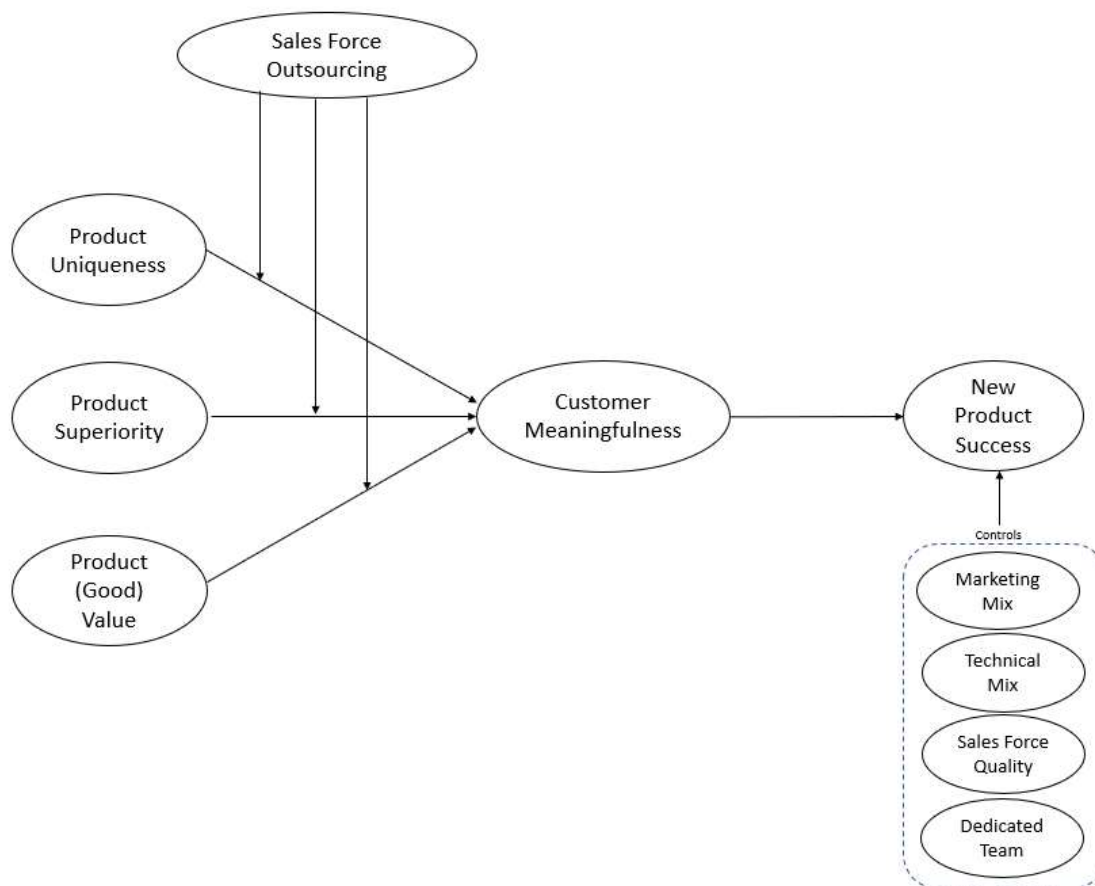
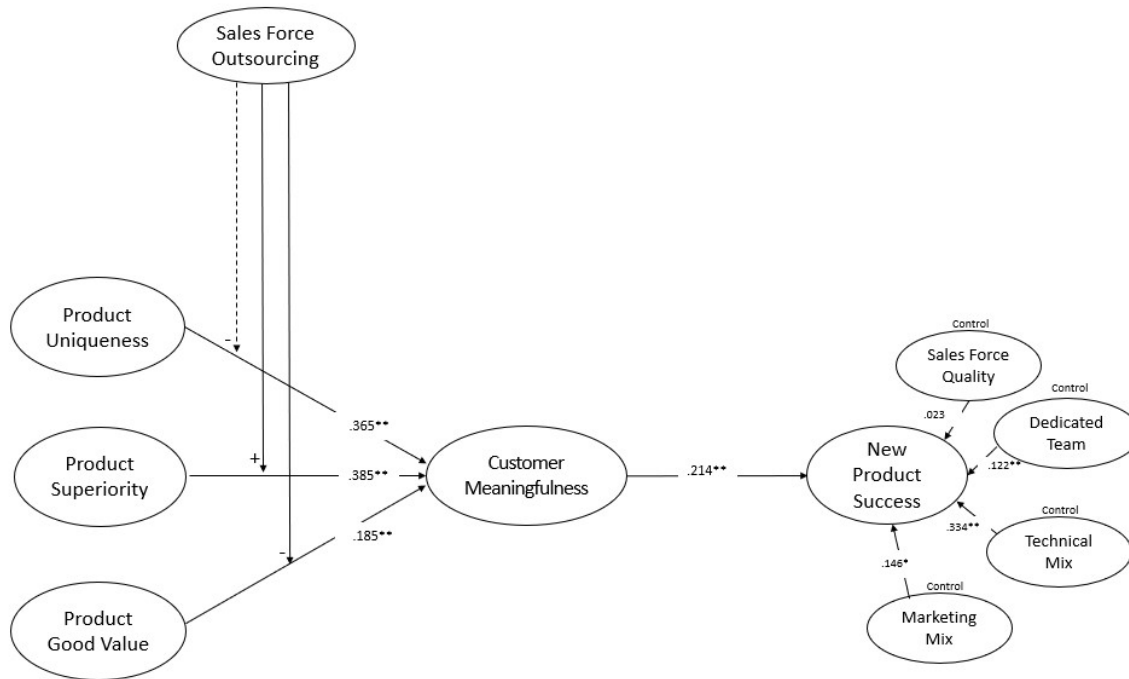


Figure 3 - Structural Model with Path Coefficients



Note: * = $p < .10$, ** = $p < .05$, dashed line is not significant

Table 1 – Indicator and Construct Reliabilities

Construct	Indicator	M	SD	Loading	T	p-value	CR	AVE
Customer Meaningfulness	CustImpct	.803	.035	.804	22.990	.000	.836	.719
	Useful	.888	.014	.890	65.397	.000		
New Product Success	Profit	.743	.033	.743	22.747	.000	.768	.659
	TechSucc	.876	.020	.877	44.721	.000		
	ZNPSales	.797	.058	.810	13.882	.000		
Product Good Value	Goodprice	.878	.020	.878	44.594	.000	.891	.804
	Value	.914	.012	.915	76.781	.000		
Product Superiority	BennCom	.794	.039	.798	20.384	.000	.870	.691
	BennImp	.852	.028	.857	30.467	.000		
	Superior	.835	.027	.837	31.046	.000		
Product Uniqueness	ProdQual	.846	.027	.851	31.069	.000	.914	.780
	UnqAtt	.932	.012	.933	78.086	.000		
	UnqTask	.862	.021	.863	40.255	.000		
<i>Control Variables:</i>								
Dedicated Team	Dedicated Team	.799	.108	.815	7.514	.000	.825	.702
	Team Approach	.857	.074	.861	11.587	.000		
Marketing Mix	AdvQual	.539	.283	.583	2.057	.004	.749	.505
	BrandName	.733	.358	.847	2.366	.018		
	RepAdv	.608	.280	.677	2.418	.016		
Sales Force Quality	SFAdv	.760	.042	.768	18.324	.000	.833	.625
	SFFit	.818	.040	.820	20.591	.000		
	SFQual	.783	.040	.785	19.746	.000		
Tech Mix	ProdCon	.660	.088	.680	7.722	.000	.714	.454
	RDFit	.615	.097	.634	6.559	.000		
	TechAdv	.715	.049	.706	14.406	.000		
Note: CR=composite reliability								

Table 2 – Latent Variable Correlations and AVE-SQ

	Customer Meaningfulness	NP Success	Product Superiority	Product Uniqueness	Product Good Value	Dedicated Team	Marketing Mix	Sales Force Quality	Tech Mix
Customer Meaningfulness	.848								
NP Success	.612	.812							
Product Superiority	.758	.663	.831						
Product Uniqueness	.730	.609	.663	.883					
Product Good Value	.583	.562	.609	.467	.897				
Dedicated Team	.079	.194	.030	.145	.157	.838			
Marketing Mix	.088	.262	.116	.362	.081	-.099	.710		
Sales Force Quality	.207	.349	.357	.180	.336	-.116	.180	.790	
Tech Mix	.370	.613	.490	.540	.284	.133	.257	.389	.674

Note: The diagonal values represent the square roots of the AVE values. The off-diagonal values represent inter-construct correlations.

Table 3a - Structural Model Results

Relationship	H	Overall Model n=229	
		Path	t-value
Product Uniqueness → Customer Meaningfulness	1	.365	7.971**
Product Superiority → Customer Meaningfulness	2	.385	6.913**
Product Good Value → Customer Meaningfulness	3	.187	3.356**
Customer Meaningfulness →New Product Success	4	.214	2.789**
<i>Controls Variables:</i>			
Dedicated Team →New Product Success		.122	2.526**
Marketing Mix →New Product Success		.146	1.896*
Sales Force Quality →New Product Success		.023	.503
Tech Mix →New Product Success		.334	7.161**
		R ²	Q ²
New Product Success		.634**	.380
Customer Meaningfulness		.667**	.452
<i>Notes: Unstandardized coefficients reported for structural paths and total effects; ** = p<.05; * = p<.10</i>			

Table 3b – Multi-Group Differences

Relationship	H	Outsource SF n=69		NOT Outsource SF n=154		Multi-Group Difference	Parametric Test	Welch- Satterthwait Test	Moderation Supported
		Path	t-value	Path	t-value				
Product Uniqueness → Customer Meaningfulness	5	.263	4.055**	.346	5.897**	.083	.397	.947	N
Product Superiority → Customer Meaningfulness	6	.722	7.157**	.380	5.441**	.342	2.758**	2.803**	Y
Product Good Value → Customer Meaningfulness	7	-.075	.789	.215	3.217**	.289	2.460**	2.516**	Y

*Notes: Unstandardized coefficients reported for structural paths and total effects; ** = p<.05*

Table 4 Summary of Hypotheses Testing Results

Hypotheses	Direction of H	Result	Significance	Support for H
H ₁ : Product uniqueness is positively associated with customer meaningfulness.	+	+	Yes	Yes
H ₂ : Product superiority is positively associated with customer meaningfulness.	+	+	Yes	Yes
H ₃ : Product good value is positively associated with customer meaningfulness.	+	+	Yes	Yes
H ₄ : Customer meaningfulness is positively associated with new product success.	+	+	Yes	Yes
H ₅ : Outsourcing the sales force moderates the relationship between product uniqueness and customer meaningfulness such that the relationship is weaker when outsourcing is employed.	-	-	No	No
H ₆ : Outsourcing the sales force moderates the relationship between product superiority and customer meaningfulness such that the relationship is weaker when outsourcing is employed.	+	+	Yes	Yes
H ₇ : Outsourcing the sales force moderates the relationship between good value and customer meaningfulness such that the relationship is weaker when outsourcing is employed.	-	-	Yes	Yes

Appendix A Variable List

Construct Name	Survey Items	Literature Support
Product Superiority	<ul style="list-style-type: none"> • This product was clearly superior to competing products in terms of meeting customers' needs. • This product offered important benefits (improvements) compared to existing products. • As an updated version of an existing product, this product offered benefits that were easy to communicate. 	Song and Parry (1997); Lee and O'Conner (2003)
Product Uniqueness	<ul style="list-style-type: none"> • High quality technical innovations were introduced during the development of this product. • This product offers completely new unique features/attributes. • This new product offers unique new tasks/benefits to customers. 	Durmuşoğlu and Barczak (2011); Song and Parry (1997)
Product Good Value	<ul style="list-style-type: none"> • This product offers good value for the money. • The price to performance of this product is good. 	Sweeney and Soutar (2001)
Customer Meaningfulness	<ul style="list-style-type: none"> • The new product is useful to customers. • The impact of the new product on customers is great. 	Im and Workman (2004)
New Product Success	<ul style="list-style-type: none"> • The total sales of the new product to date in dollars (standardized). • Profitability • Technical success 	Im and Workman (2004)
Outsourcing the Sales Force	Outsource/NOT outsource the salesforce (dichotomous variable)	
<i>Control Variables:</i>		
Dedicated Team	<ul style="list-style-type: none"> • A team approach was used in the development of this new product. • A dedicated cross-functional team helped develop this new product. 	Cooper (1996)
Sales Force Quality	<ul style="list-style-type: none"> • A quality sales force was used to sell this new product. • The sales force had a good fit with the innovation (product knowledge). • Compared to competitors, this new product had a sales force quality advantage. 	Cooper (1994)
Marketing Mix	<ul style="list-style-type: none"> • We have great confidence in this brand name. • This company is known as being fair and honest in its dealings. • The advertising for this product was highly rated in customer tests. 	Cooper (1994)
Technical Mix	<ul style="list-style-type: none"> • Our R&D department has a good track record with this type of product. • This product is technically superior to others. • This product was conceptualized in its final form early on in the process. 	Cooper (1994)