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Motivating Salespeople to Sell New Products: The Relative Influence of Attitudes, Subjective Norms, and Self-Efficacy

This research explores the relative influence of salespeople's attitudes toward selling a new product, perceptions of subjective norms, and self-efficacy on the development of selling intentions and, ultimately, the success of a new product launch. The longitudinal study employs a nonlinear growth curve model that leverages survey data from industrial salespeople and objective performance records of their daily sales during the first several months in the market of two new products: a new-to-market product and a line extension. By examining salesperson-level variance on new product performance, the authors suggest that managers should focus on increasing salesperson self-efficacy and positive attitudes toward selling the product to build selling intentions and quickly grow new product performance. They also suggest that sales managers should resist the temptation to rely on normative pressure during a new product introduction. Not only are subjective norms less effective in building selling intentions, but they also diminish the positive impact of attitudes and self-efficacy on salesperson intentions and constrain the positive relationships between intentions and performance and self-efficacy and performance.

Keywords: new product sales, theory of planned behavior, managerial influence, multilevel growth curve modeling

New products are critical to a firm's ongoing sustainability, though they are often costly and fraught with risk. Indeed, new product development has been identified as one of three core business processes and an important driver of shareholder value (Srivastava, Shervani, and Fahey 1999). In addition, product innovation has become increasingly important as a means for competitive advantage, sustainable growth, and financial success in today's ultracompetitive business environment (Pauwels et al. 2004; Sorescu and Spanjol 2008). However, only a small percentage of new product initiatives succeed in the marketplace (Delre et al. 2007), reinforcing the need for additional research into factors that lead to successful commercialization.

In particular, little research has focused on the sales force, one of the most pivotal contributors to the success of a new business-to-business product. Customer-contact

employees (1) serve as important intermediaries between new product innovation and customers (Abramovici and Bancel-Charensol 2004), (2) directly affect customers' product perceptions, and (3) facilitate customer adoption of innovations (Ahearne et al. 2010). To advance the literature on new product development, it is important to further study the critical role of salespeople in a new product launch and to better understand salespeople's intentions and behaviors with respect to selling new products.

Because field salespeople often operate in a relatively autonomous environment without close monitoring of their day-to-day activities, they enjoy a considerable degree of discretion in terms of what they focus on and how they expend energy (Spiro, Rich, and Stanton 2007). This creates obvious challenges for management during a tactical initiative such as a new product introduction. Ultimately, the impact of a salesperson on the performance of a new product rests on his or her decision to put forth the effort necessary to sell the new product.

Thus, managers are faced with the dilemma of where to allocate resources to motivate salespeople to sell the new product. Should they focus on developing and communicating norms and expectations related to the new product launch (perhaps the simplest and most often used solution for managers), on increasing the inherent attractiveness of selling the new product, or on increasing the salesperson's belief in his or her ability to sell the new product? Given these questions, it is critical to understand the perceptions of salespeople regarding a new product launch and how these perceptions affect their behavioral intentions. In doing

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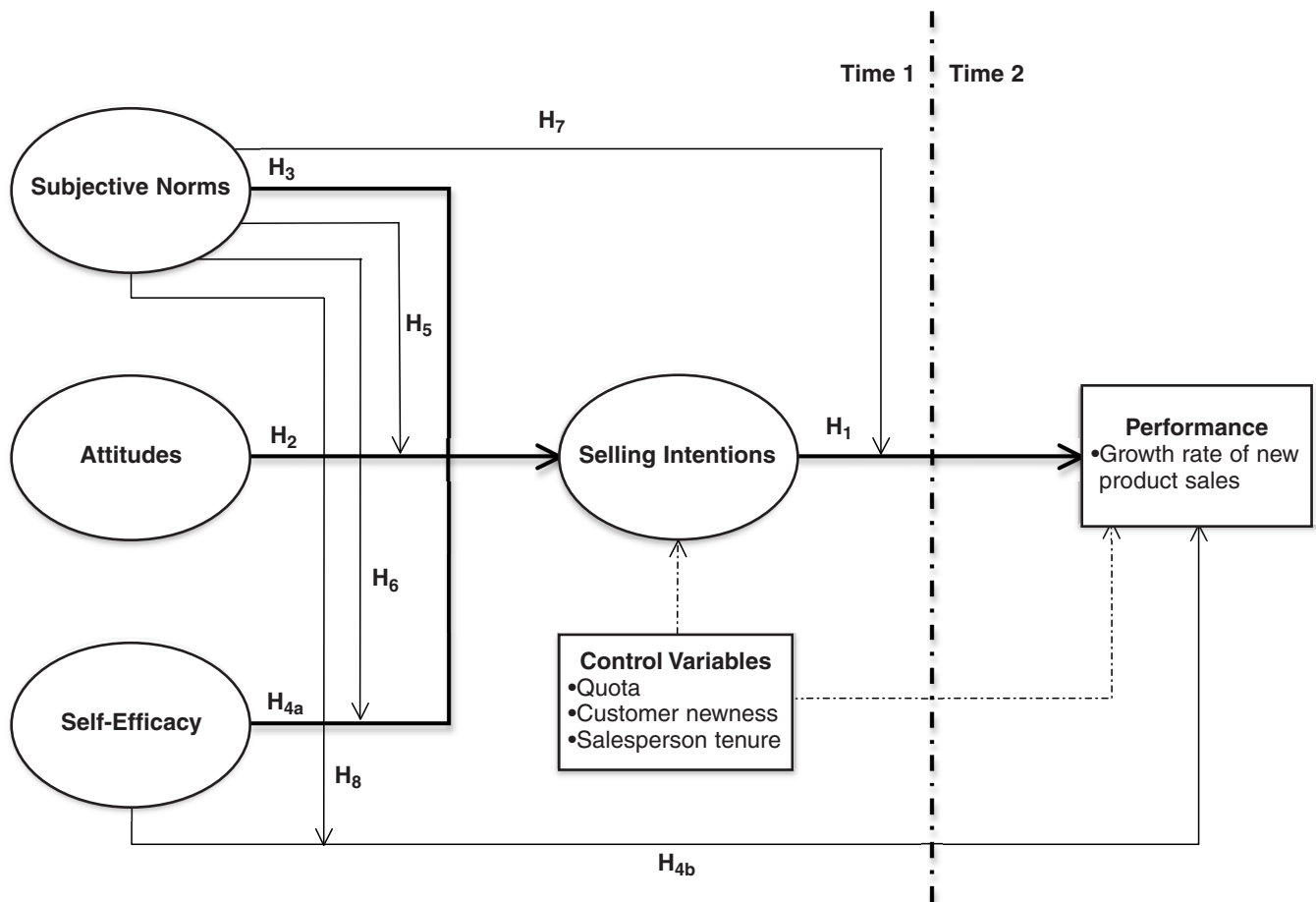
so, we reveal prescriptive insights for managers to maximize salesperson responsiveness and performance on new product initiatives.

The product life cycle indicates that a new product launch is not a static event but rather a dynamic process that unfolds over time. In a successful new product launch, an introductory period of slow expansion typically precedes a "tipping point" that leads to a sustained, rapid-growth phase and builds toward widespread adoption (Agarwal and Bayus 2002). Therefore, it is desirable for sales to grow quickly so the firm can build a competitive advantage, pay off its development and start-up costs, avoid internal pressures to discontinue the new product launch prematurely, and generate cash to fuel further growth (Golder and Tellis 2004; Tellis, Stremersh, and Yin 2003). However, this introductory phase may last a long time and varies across products and markets. We assert that this introductory phase also varies across salespeople and suggest the importance of investigating two elements of the new product life cycle: (1) the slope of each salesperson's sales growth curve (growth rate of sales) and (2) how each salesperson's perceptions and intentions affect new product success.

We anchor our study in the theory of planned behavior (TPB), an effective predictor of both intentions and behaviors (Armitage and Conner 2001), to examine the formation of salespeople's intentions to act—in this case, to sell new products (Ajzen 1991). Consistent with the TPB, we suggest that a salesperson's intentions to put forth effort to sell a new product (and, thus, the ultimate performance of the new product in each salesperson's territory) are affected by his or her (1) attitudes toward selling the product, (2) perceptions of subjective norms surrounding the sale of that product (e.g., management expectations), and (3) beliefs in his or her own ability to sell the product (for a model overview, see Figure 1). Our research goal is to inform managers and scholars about the relative influence of each antecedent on performance and to explore the moderating effects of subjective norms, which have produced confounding effects in previous tests of the theory (Armitage and Connor 2001).

FIGURE 1
The Relative Influence of Attitudes, Subjective Norms, and Self-Efficacy on Selling Intentions and New Product Performance

Notes: The vertical dashed line indicates separation of data collection efforts. Time 1 is survey data collected before product launch (indicated by ovals), and Time 2 is objective performance data collected across the first 12–15 months of sales (indicated by rectangles). "Control Variables" comprise both survey data and company records.

This study makes several contributions to the body of research on new product sales. First, by considering multiple levels of influence on new product selling performance, to our knowledge, we are the first to investigate variance in new product performance based on salesperson-level, psychological factors related to selling a new product. We model a nonlinear growth curve for each salesperson in Level 1 and examine individual, salesperson-level influences in Level 2 of the hierarchical analysis. This accounts for the impact of time on sales growth in Level 1 and explains the impact of psychological factors on salesperson performance in Level 2.

Second, we investigate the appropriateness of the various strategies managers may employ to improve the growth rate of a new product's sales. Our model examines the relative merits of building positive attitudes toward selling the new product, establishing behavioral norms for selling the new product, and building salesperson self-efficacy toward selling the new product. Furthermore, because previous studies have found contradictory results regarding the role of subjective norms in developing intentions (e.g., Hubner and Kaiser 2006; Legris, Ingham, and Collerette 2003), we pay particular attention to the role of subjective norms in establishing salesperson selling intentions and performance. We find evidence of moderating effects that suggest that building high expectations among salespeople to sell a new product can have deleterious effects on both intentions and performance.

Third, we examine the growth rate of new product sales, a critical early signal of new product success. Given firms' need to establish the sales of a new product quickly (Golder and Tellis 2004), the growth rate of a new product's sales provides insight into new product success.

Fourth, we treat the new product launch more realistically and more fully as an unfolding process (rather than a discrete event) and examine the rate at which sales grow over time for each salesperson. Our longitudinal study design enables us to provide further insights into the dynamic nature of the sales force's role in new product launches, including the nonlinear evolution of sales performance, which reflects the increasing interest in nonmonotonic relationships in innovation research (e.g., Voss, Montoya-Weiss, and Voss 2006). Examination of the first several months of each salesperson's daily sales offers a better understanding of how salesperson-level variance affects new product sales over time in this critical early launch phase.

Fifth, we examine data from two types of new products: a new-to-market product and a line extension. By examining the sales force's intentions to sell both products, we add to the generalizability of our findings and are better able to validate the stability of the statistical relationships in our model. In other words, our goal is to explore the psychological constructs at the salesperson level that influence product performance outcomes, not to investigate how salespeople perform differently across different products. Last, the study's unique data sets contain both survey data and objective performance data, which help ensure that the study's results are not capitalizing on common source biases (Podsakoff et al. 2003). Taken together, these contributions will help managers understand how to grow new product sales quickly.

Literature Review: New Product Performance, TPB, and the Sales Force

A large body of research on new product initiatives identifies and explores a wide array of antecedents to new product performance, including product characteristics, marketplace characteristics, firm strategies, internal processes, and commercialization practices (Henard and Szymanski 2001; Montoya-Weiss and Calantone 1994). Among these antecedents, new product commercialization represents the largest investment of time, money, and management resources in the new product development process; however, it is also among the least researched (see Di Benedetto 1999).

Given the information asymmetry between buyers and sellers during a new product launch and the uncertainty of new product success, when salespeople communicate product-related information to customers, it is reasonable that they may significantly influence customer perceptions of a firm's products and, ultimately, their buying behavior. Prior studies have alluded to salespeople's commitment and execution as contributing factors in the success of the products they sell (Anderson and Robertson 1995). Studies on the effects of supervisee trust and managerial control systems on sales effort (Atuahene-Gima and Li 2002), the influence of expected customer demand on salespeople's new brand adoption (Wieseke, Homburg, and Lee 2008), and the contingent impact of sales effort on new product performance (Atuahene-Gima and Micheal 1998; Hultink and Atuahene-Gima 2000) all provide further insights into the connection between the sales force and new product success. However, previous studies have fallen short of connecting salesperson-level, psychological variables with a salesperson's intention to sell a new product.

Sales scholars have long tried to understand salesperson behavior and the factors that lead to more successful sales outcomes. In this study, we employ the TPB (Ajzen 1991) to explain the formation of a salesperson's intention to act and the link between those intentions and the resultant behavior. Armitage and Conner's (2001, p. 489) meta-analysis finds "support for the efficacy of the [TPB] as a predictor of intentions and behaviour." The use of the TPB and its predecessor, the theory of reasoned action (Fishbein and Ajzen 1975), in sales research has helped scholars explain ethical decision making in sales (Kurland 1996), salesperson use of technology (Jones, Sundaram, and Chin 2002), and salesperson customer orientation (Stock and Hoyer 2005). We conceptualize this study in a manner consistent with previous studies (Ajzen 1991; Fishbein and Ajzen 1975), but we adapt the constructs and their measures to the new product sales context. In the following section, we define each construct in the model and build each hypothesis necessary to test the theory.

Hypotheses Development

Intentions and Sales Performance

A central tenet of the TPB is the link between a person's intention to behave in a certain way and his or her actual behavior. According to the theory, the intention to perform a behavior serves as the most immediate predictor of any behavior in question (Ajzen 1991). By capturing the motivational factors that influence behavior, intentions serve as an indicator of how hard people are willing to try and how much effort they are willing to exert over time to perform a specific behavior (Ajzen 1991). To better understand the outcomes of these behaviors in the dynamic environment of new product sales, we measure the slope of each salesperson's sales curve (or sales growth rate). As we stated previously, the early growth of a new product is essential to the success of the product.

Given the scholarly support for the link between effort and performance in sales of both existing products (Brown and Leigh 1996; Zoltners, Sinha, and Zoltners 2001) and new products (Fu, Jones, and Bolander 2008; Hultink and Atuahene-Gima 2000), we attempt to establish the relationship between intentions (the antecedent to effort in the TPB) and the growth rate of new product sales (the consequents of salesperson effort). Scholars and managers have explored this effort–performance link in sales through an input–output framework (Jaramillo and Mulki 2008) and found that higher levels of effort lead to higher performance levels (Brown and Peterson 1994).

In the business-to-business context of this study, in which customers learn about new products primarily from company sales representatives, (i.e., a "push" versus "pull" marketing strategy), we expect the effort–performance relationship to be particularly strong. Facing unfamiliar new products, customers are usually suspicious of claimed benefits, reluctant to change their buying behavior, and dependent on salespeople for product information (Atuahene-Gima 1997). Qualified and committed salespeople provide the information needed to reduce customers' confusion and employ the most appropriate selling tactics to persuade their customers (Elliott and Fu 2008). Thus, a salesperson's greater selling intention is likely to result in both earlier and more effective sales calls, which in turn fosters early adoption (Hultink and Atuahene-Gima 2000). By using objective measures obtained from company records as a surrogate for behavior in our TPB model, we avoid biases common in self-report measures of effort. Therefore, we expect the following:

> H_1: A salesperson's selling intention positively influences the growth rate of new product sales.

The Relative Influence of Attitudes, Subjective Norms, and Self-Efficacy

The TPB proposes that there are three conceptually distinct and independent antecedents to the formation of intentions: attitudes, subjective norms, and perceived behavioral control. First, consistent with research on attitudes, we define a salesperson's attitude toward selling a new product as the degree to which he or she has a favorable or unfavorable predisposition toward selling the focal new product (Ajzen 1991). Here, we are not measuring the salesperson's attitude toward the new product but rather the salesperson's attitude toward *selling* the new product. A person develops positive attitudes when he or she positively evaluates salient attributes related to the subject in question (Ajzen 1991). More specifically, in assessing the salesperson's attitude toward selling the new product, we tap into his or her personal evaluation of the expected enjoyment of the related selling task. Following previous TPB research, we suggest the following:

> H_2: A salesperson's attitude toward selling the new product is positively associated with selling intentions.

Second, we examine subjective norms, a social factor that leads to the formation of intentions. Consistent with Ajzen (1991), subjective norms are perceived organizational, managerial, and social pressures to sell the new product. For salespeople, normative pressure can come from marketing management, product management, sales management, top management, or fellow salespeople. Because of their high visibility, new product initiatives can produce considerable managerial attention during in-market execution, leading to salesperson perceptions of strong managerial expectations (i.e., norms) pertaining to the new product launch. The pressure to comply with these norms comes in the form of salespeople knowing that their opportunities for promotion and career advancement with their current employer are typically contingent on management evaluations, which are shaped by salespeople meeting or exceeding established expectations. Therefore, the more salespeople believe that there will be serious consequences for not selling a new product or salient rewards for doing so, the greater will be their intention to sell the new product. In addition to managerial expectations, the expectations of other salespeople are becoming increasingly relevant, and salespeople may be highly motivated to comply with pressure from peers as well as management. Thus, consistent with the TPB, we suggest the following:

> H_3: A salesperson's perceptions of subjective norms related to selling the new product are positively associated with selling intentions.

Third, we examine the link between perceived behavioral control and performance. Ajzen (1991, p. 188) defines perceived behavioral control as "the perceived ease or difficulty of performing the behavior." Perceived behavioral control is akin to the concept of self-efficacy (Ajzen 1991), a construct commonly used in sales research. Similar to previous examinations of the TPB (e.g., Armitage and Conner 2001) and studies in sales literature (e.g., Brown, Jones, and Leigh 2005), we use self-efficacy as a measure of perceived behavioral control. Recently, scholars have examined the use of self-efficacy as a replacement for perceived behavioral control in the TPB, and their findings indicate that self-efficacy is "consistently the strongest predictor" of intentions when compared with other measures of perceived behavioral control (Celuch, Goodwin, and Taylor 2007, p. 116), a conclusion supported by Armitage and Conner's (2001, p. 487) meta-analysis: "The implication is that self-

efficacy should be the preferred measure of 'perceived control' within the TPB."

We define self-efficacy as salespeople's perceptions of their own ability to sell the new product or their beliefs that they possess the skills and resources necessary to succeed during the new product launch (Brown, Jones, and Leigh 2005). "Individuals who have positive self-efficacy beliefs focus their attention and motivation on the tasks necessary for achieving targeted performance levels and persevere in the face of difficulties" (Brown, Jones, and Leigh 2005, p. 974). Empirical studies have found that people who have greater self-efficacy tend to achieve better performance (see Gist and Mitchell 1992). In addition, researchers have found that self-efficacy affects sales performance both directly and indirectly (Brown, Jones, and Leigh 2005; Jaramillo and Mulki 2008). Therefore, consistent with the TPB and our previous arguments, we posit a positive relationship between self-efficacy and selling intention and between self-efficacy and the growth rate of new product sales.

> H₄: A salesperson's self-efficacy is positively associated with (a) selling intentions and (b) the growth rate of the new product sales.

The Moderating Role of Subjective Norms

The previous discussion seems to imply that fostering more positive attitudes, establishing normative pressure, and increasing self-efficacy across the sales force are all effective ways to build salesperson selling intentions during a new product launch. However, we suggest that the story is more complex. Subjective norms may instead act as a wolf in sheep's clothing. Of the three antecedents to intentions, subjective norms have historically been the most problematic to replicate empirically, leading researchers to conclude that its role in influencing intentions may be context dependent (Hubner and Kaiser 2006; Legris, Ingham, and Collerette 2003). Although we expect that subjective norms surrounding a new product launch will lead to heightened new product selling intentions, we also believe that such normative pressure may result in a few unintended negative consequences.

Attitudes and subjective norms in our context are different in their origin and orientation. Because subjective norms reflect the salesperson's perceived expectations of salient others, in this case management and peers, the accompanying pressure to comply is more extrinsic in nature. Extrinsic motivation is the "motivation to work primarily in response to something apart from the work itself, such as reward or recognition or the dictates of other people" (Amabile et al. 1994, p. 950). In contrast, attitudes, or the expected enjoyment of selling the new product, are more intrinsic in nature, involving "motivation to engage in work primarily for its own sake, because the work itself is interesting, engaging, or in some way satisfying" (Amabile et al. 1994, p. 950). Previous studies have shown that though both types of motivation prompt behavior in isolation, intrinsic motivation can be undermined by extrinsic motivation mechanisms (Deci, Koestner, and Ryan 1999). Essentially, the controlling nature of the external influence thwarts the intrinsic

satisfaction associated with the behavior, leading to a diminished effect of intrinsic motivation. Because of this, we expect that managers' externally generated expectations (e.g., subjective norms) will negatively moderate the positive influence of the internally generated attitudes on the development of selling intentions. In other words, in the presence of strong subjective norms, positive attitudes are less likely to drive selling intentions. Thus:

> H₅: Subjective norms negatively moderate the positive relationship between attitudes and selling intentions.

Furthermore, we assert that as subjective norms increase, they may also weaken the positive impact of self-efficacy on selling intentions. Without subjective norms in a moderating role, we hypothesize increased levels of selling intentions as self-efficacy increases. However, as subjective norms increase, the pressure to appease and comply with others may attenuate the relationship between a salesperson's belief in his or her ability to sell a product successfully and his or her intentions to sell the new product.

Rather than motivating the self-efficacious salesperson, we argue that normative pressure adds counterproductive layers of stress and doubt. Stress functions in a way similar to role stress, such that stress stemming from the expectations of role partners (e.g., sales managers, fellow salespeople) negatively affects the psychological well-being of boundary spanners (Singh, Verbeke, and Rhoads 1996). Similarly, we expect the stress generated by subjective norms to weaken the link between self-efficacy and the development of selling intentions.

Moreover, Benabou and Tirole (2003) suggest that the "looking-glass effect" begins to introduce doubt in an agent's (salesperson's) mind when a principal (manager) builds strong normative pressure related to the completion of a task. These heightened normative levels cause salespeople to question whether their assessment of the selling task is based on good information. In other words, salespeople may begin to "read into" the manager's actions and question whether their belief in their ability to accomplish a task is based on full, accurate information. When salespeople are unsure of the outcomes or are under stress, their belief in their ability to act is less likely to yield selling intentions. Therefore, the felt stress associated with subjective norms weakens the otherwise positive relationship between self-efficacy and selling intentions.

> H₆: Subjective norms negatively moderate the positive relationship between self-efficacy and selling intentions.

In addition to these limiting effects of subjective norms in the creation of selling intentions, we expect other potential downsides from subjective norms. We hypothesize that subjective norms give rise to a compliance effect among salespeople that helps form intentions to act in accordance with expectations. However, we suggest that when intentions are formed, subjective norms are likely to have a dampening effect on the relationship between selling intentions and performance.

The reasons for this are twofold. First, the behavior arising from intentions becomes less intrinsically satisfying, inhibiting the transition from intentions to performance.

Strong normative pressure is likely to engender a "have-to-do" versus a "want-to-do" mentality, in which the salesperson develops behavioral intentions but then follows through with reduced interest and vigor. In support of this, researchers have established that high managerial expectations can overwhelm the compliance effect it creates among sales personnel (e.g., Chowdhury 1993; Fang, Palmatier, and Evans 2004). Second, high expectations arising from normative pressure during a new product launch can induce role stress that diminishes the effect of intentions on performance. For example, prior research has demonstrated that felt stress can adversely affect a salesperson's ability to influence buyers (MacFarland 2003).

Thus, although subjective norms may have the desired effect of influencing salesperson intentions to sell a new product, those intentions may be less likely to translate into actual performance in the presence of strong norms. Subjective norms will attenuate the effect of intentions on performance. Relatedly, Ahearne and colleagues (2010) show that behavior-based controls have a positive influence on salesperson effort while also having a negative effect on the relationship between salesperson effort and customer product perceptions by promoting a tendency to work hard at the expense of working smart. Thus:

> H_7: Subjective norms negatively moderate the relationship between intentions and the growth rate of new product sales.

The relationship between self-efficacy and the growth rate of new product sales is based on the logic that salespeople with higher levels of beliefs in their ability (e.g., confidence) focus on the right tasks and persevere in difficult situations (Brown, Jones, and Leigh 2005). However, we argue that as managers increase normative pressures, the positive relationship between self-efficacy and growth rates diminishes because of the negative effects of misplaced focus and role stress created by higher norms. Again, we suggest that the looking-glass effect decreases the effectiveness of self-efficacy on positive performance outcomes as salespeople begin to read into the manager's actions and get distracted from the task at hand (Benabou and Tirole 2003). Condry and Chambers (1978, p. 66) find that "rewards often distract attention from the process of the task activity to the product of getting a reward." Subjective norms may be viewed as a negative reward in this context, and as more attention is placed on the development of normative expectations, salespeople may focus less on selling the new product and more on the manager's performance expectations. This shift in focus leads to attenuation of the self-efficacy–performance relationship. Thus:

> H_8: Subjective norms negatively moderate the relationship between self-efficacy and the growth rate of new product sales.

Methods

Data Collection

Sales performance is a dynamic construct unfolding over time during a new product launch. However, most studies on the effects of individual salespeople on new product success have employed cross-sectional data and one-time performance measures (Atuahene-Gima and Li 2002; Hultink and Atuahene-Gima 2000; Wieseke, Homburg, and Lee 2008). This is problematic because, as Thoresen and colleagues (2004) argue, oversimplified assumptions about the stability of performance can result in erroneous conclusions and interpretations about the relationships between performance and other important employee-level constructs. To avoid these potentially erroneous conclusions, the current study employs a longitudinal growth curve modeling approach. In doing so, we attempt to establish an understanding of the appropriate strategies managers can employ to improve the new product's growth rate in the first few months of sales.

Challenges related to data collection may have contributed to the dearth of research focusing on the dynamic aspects of performance, such as growth trajectories. One difficulty is obtaining data that meet the requirements for a study of change (Singer and Willett 2003): (1) There are three or more waves of data (i.e., data from at least three particular points in time), (2) the value of the dependent variable changes systematically over time, and (3) there is a sensible metric measuring time. In this study, we collected data that meet these requirements from a global, industrial company that provides tools and related products to business customers in various construction industries. The data captured the first 457 days of longitudinal sales for the first product, a new-to-market product, and 304 days for the second product (a line extension). We surveyed salespeople who were responsible for selling these two products in the month preceding each new product launch. After combining the survey data and company records, we were able to create a person–period data set of 308 salespeople (38.5% response rate) for the new-to-market product and a data set of 226 salespeople (28.3% response rate) for the line extension.

The two new products we examine are similar in several aspects to the other products the focal company sells in terms of target markets, sales cycle, and pricing. During the study, salespeople worked independently in their own territories and represented multiple products. Given the similarities between the two products, it is also worth noting several important differences. The new-to-market product represents a breakthrough in product development that employs new technology and greatly enhances the accuracy and performance of previous tools. It has a longer life span and is sold in a larger variety of construction environments. Both its price and feature set are higher than previous solutions, and therefore a strong focus on the value equation is required to sell this new product. In contrast, the line extension was only slightly modified from the previous year's model. It is sold as a durable good with a relatively short life span. Its uses are limited to interior construction, and because of its cost–benefit ratio, it is sensitive to competitive pressures.

In accordance with the sales company's practices, the new products were demonstrated to the sales force before launch. Technical features, marketing strategies, and supporting resources were also presented to the sales force in a series of prelaunch sales meetings. No product-specific

bonus was directly linked to the sale of either new product; however, the new products became part of the regular portfolio of products and were a part of the standard compensation plan, which included incentives for exceeding quota.

Measurement

Attitude toward selling a new product. Consistent with Fishbein and Ajzen's (1975) expectancy-value model of attitudes, we measure attitude toward selling the new product as a sum of the salesperson's beliefs (based on attributes such as "the product is easy to sell") about selling each product and the importance weight he or she ascribes to each attribute over salient attributes:

$$AT = \sum_{i=1}^{2} b_i e_i,$$

where AT is the overall attitude toward selling the new product, b_i is the strength of the belief about whether the act of selling the new product has attribute i, and e_i is the evaluation of the pros and cons of attribute i. From interviews with both sales and marketing managers from various industries, we modified Ajzen's (1991) original measures to include the following two attributes: "is easy to sell" and "is fun to sell." We recognize the limitations of a scale with only two items, and therefore we expand on this and suggest remedies in the "Limitations and Further Research" section. The Appendix provides a list of all survey items, and Table 1 presents descriptive statistics of each variable for both products.

Subjective norms toward selling a new product. Consistent with Ajzen's (1991) belief-based measures and Armitage and Conner's (2001, p. 485) meta-analysis, we measure subjective norms with a multi-item measure that captures "global perceptions of social pressure … from salient others weighted by the motivation to comply with these groups or individuals." Thus:

$$SN = \sum_{j=1}^{5} NB_j MC_j,$$

where SN are the subjective norms to sell the new product, NB_j is reference group j's normative belief that the salesperson should sell the new product, and MC_j is the motivation to comply with the influence of referent j. In particular, the five reference groups are "my (salesperson's) sales manager," "my (salesperson's) marketing manager," "my (salesperson's) product manager," "my (salesperson's) fellow salespeople," and "top management."

Self-efficacy. Similar to Brown, Jones, and Leigh (2005), we measured self-efficacy with confidence scores. After comparing five different measures of self-efficacy, Lee and Bobko (1994, p. 386) indicate that this type of confidence score is more "consistent with Bandura's (1986) conceptualization of self-efficacy (incorporating both magnitude and strength information)" and is "less cumbersome to operationalize" in practice. Specifically, we asked salespeople to indicate their confidence in their ability to perform "as well as or better than" other salespeople across ten levels of magnitude judgments regarding the proportion of other salespeople in the company whose sales performance on the new product they believed they could exceed (i.e., they could outperform 10% to 99% of the company's sales force in 10% increments). The confidence scores (captured as a 0%–100% level of confidence that they could outperform a given percentage of the total sales force) consist of ratings of how confident the salespeople were for each magnitude judgment. We summed the confidence scores for each salesperson, which constitutes the measure of self-efficacy.

Intention to sell. Before each new product's launch, the company introduced the new product to the sales team in a series of sales meetings. In one of these meetings, we measured each salesperson's intention to sell the new product with three items (for the new-to-market data, α = .945; for the line extension, α = .970). Specifically, we asked the salespeople to indicate how much time, intensity, and overall effort they anticipated putting into selling each new product compared with other salespeople. We adapted the intention-to-sell scale from Brown and Peterson (1994).

TABLE 1
Correlation Matrices and Descriptive Statistics of the Two Product Samples

	SI	AT	SN	SE	QT	TN	CN	CS
Mean (for line extension)	4.53	56.65	159.58	85.05	65.22	9.46	3.48	29.30
Standard deviation	1.47	22.35	55.64	29.23	58.98	8.21	1.08	47.53
Intention (SI)		.45**	.44**	.59**	.34**	.08	−.26**	.31**
Attitude (AT)	.43**		.52**	.20**	.39**	−.028	−.15**	.14**
Subjective norms (SN)	.48**	.35**		.37**	.17**	−.09	−.06	−.03
Self-efficacy (SE)	.44**	.20**	.19**		.11	.23*	−.27	.20*
Quota (QT)	.14*	.08	−.01	.23**		.32**	.03	.40**
Tenure (TN)	−.02	.04	−.11*	.17**	.32**		−.21*	.09
Customer newness (CN)	−.17**	−.10**	−.05	−.33**	−.28**	−.17**		.01
Cumulative sales (CS)	.28**	.16**	−.03	.24**	.43**	.11*	−.28**	
Mean (for new-to-market)	4.88	52.45	170.84	89.26	20.27	9.71	2.31	5.04
Standard deviation	.99	19.43	52.08	22.66	15.98	7.78	1.28	6.69

*p < .05.
**p < .01.
Notes: The new-to-market product sample (N = 308) is below and the line extension sample (N = 226) is above the diagonal.

Performance. Using company records, we measured daily unit sales for each salesperson over the initial launch period. Our data sets capture the first 457 days of sales for the new-to-market product and the first 304 days of sales for the line extension. We used daily sales to establish the growth rate of sales for each salesperson.

To control for market conditions and personal factors that may affect each salesperson's performance, we included quota, customer newness, and salesperson tenure in the model as control variables. We took the quotas from company records and established them for each salesperson according to overall sales levels in the territory (they are not specific new product quotas). Salesperson tenure is years of service with the focal company and is a self-reported measure on the survey. We measured customer newness with a three-item scale that captures the salesperson's perceptions of familiarity with the customer for each new product.

Analyses and Results

As Deadrick, Bennett, and Russell (1997, p. 748) note, "longitudinal data are implicitly multilevel and nested," and treating them as such enables researchers to examine "the existence, nature, and causes of within-person performance changes over time." Because we want to understand a continuous outcome and how it changes over time, we employ a method in which time is a predictor rather than an outcome of the study. This leads us to employ individual growth curve analyses using a SAS Proc Mixed procedure to determine patterns and changes in salespeople's sales performance of a new product and to estimate the effects of multiple salesperson-level predictors (Littell et al. 2006). Specifically, following Singer and Willett's (2003) recommendations, we fit two unconditional, multilevel models: an unconditional means model and an unconditional growth model. Then, we used the results to build the foundation for subsequent analyses. To test and understand the nature of our hypothesized effects, we account for an implicit variable in the growth model—namely, time. Although cumulative sales increase as time goes by, we suggest that the sales–time relationship, modeled in Level 1 of our analysis, is further affected by salesperson-level variables in Level 2.

Unconditional Means Model

Typically, the first step of multilevel analysis is to fit an unconditional means model, or a model without any predictors (Singer and Willett 2003). Specifically, the dependent variable is expressed as a linear combination of a grand mean, a series of deviations from the grand mean, and random error. Though substantively uninteresting, the unconditional means model partitions the new product performance variation and provides a baseline with which more complex models can be compared (Singer 1998). Again, we included three control variables (quota, customer newness, and salesperson tenure) in each subsequent set of growth models, but to simplify model presentation, we do not show these variables. The model takes the following form:

$$(1) \qquad \text{Level 1: } Y_{ij} = \beta_{0j} + e_{ij},$$

$$(1a) \qquad \text{Level 2: } \beta_{0j} = \gamma_{00} + \delta_{0j}.$$

In this model, Y_{ij}, the ith-day cumulated sales of the jth salesperson, is a linear function of a grand mean (γ_{00}), a deviation of the jth salesperson from the grand mean (δ_{0j}), and a random error term associated with the performance of the ith day of the jth salesperson (e_{ij}). The model decomposes the variation of the new product performance into the variation between salesperson means (τ_{00}) and the variation among days within the salespeople (σ^2) (Singer 1998).

Following the methodological literature, we used a maximum likelihood estimation approach (Littell et al. 2006). The model converged after two iterations, the minimum number of iterations required for convergence (Singer 1998). The covariance parameter estimates for the new-to-market product show that the estimated value of τ_{00} is 62.81 ($Z = 12.37$, $p < .001$) and σ^2 is 51.36 ($Z = 265.00$, $p < .001$). As the Z-values indicate, both variance components are significantly different from zero. The estimated intraclass correlation ρ is as follows:

$$\hat{\rho} = \frac{\hat{\tau}_{00}}{\hat{\tau}_{00} + \hat{\sigma}^2} = \frac{62.81}{62.81 + 51.36} = 55.01\%.$$

This outcome supports our assertion that there is substantial variance of sales performance at the salesperson level during a new product launch. We found similar results for the line extension, in which the estimated value of τ_{00} is 922.84 ($Z = 10.62$, $p < .001$) and σ^2 is 397.28 ($Z = 185.04$, $p < .001$). Thus, the estimated intraclass correlation of the line extension is 69.91%. Given these findings, the ordinary least squares assumption that all observations are statistically independent from one another is likely violated (Berry 1993). Such violation may lead to biased estimates and justifies the use of an individual growth curve modeling approach (Bliese 1998).

Unconditional Linear Growth Model

We then introduced the time variable (i.e., days) and fit an unconditional linear growth model. We centered the time variable on the grand mean, and it had a mean of zero; this is a common approach to facilitate the interpretation of the intercept (Singer 1998). The Level 1 equation estimates the individual salesperson's trajectory of sales growth (β_{1j}) in addition to the mean (β_{0j}). The Level 2 equation simultaneously partitions the two estimates into sample averages and error components. The models are as follows:

$$(2) \qquad \text{Level 1: } Y_{ij} = \beta_{0j} + \beta_{1j}\text{MCDays}_{ij} + e_{ij},$$

$$(2a) \qquad \text{Level 2: } \beta_{0j} = \gamma_{00} + \delta_{0j},$$

$$(2b) \qquad \beta_{1j} = \gamma_{10} + \delta_{1j}.$$

The MCDays variable ranges from 1 to 457 for the new-to-market product (1 to 304 for the line extension) and represents the number of days since the launch of each new product. Because we mean-centered the time variable (MCDays), the intercept of the model reflects the cumulative sales of the new product by an average salesperson midway through the number of days for each product. We

could have "centered" days on any point in the data, but in line with Singer and Willett's (2003, p. 52) recommendations, we chose to focus on a centering effect that was easily interpretable and useful for our analytical needs. Because no point in our data is more important than any other in terms of the implications for sales managers (the end of our data set is not the end of sales for the new product), for simplicity we mean-centered our time variable.

Fixed effects. As Table 2 (Model 1a) shows, the intercept (6.558, $p < .001$) is the estimate of the average cumulative unit sales of the new-to-market product, and the slope (.034, $p < .001$) is the estimate of the average slope across salespeople (i.e., the average growth per day). Thus, the average salesperson achieved 6.558 units of sales 229 days after the new-to-market product launch and, on average, increased sales by .034 units per day. Table 2 (Model 1b) presents the results for the line extension. Here, the average salesperson sold 14.660 units 152 days after launch and, on average, increased sales by .109 units per day.

Random effects. We then focused on the random effects by examining the variance–covariance components. Because variance components of both the intercept ($Z = 12.25$, $p < .001$) and the slope ($Z = 261.97$, $p < .001$) are significant for the new-to-market product and the line extension (intercept: $Z = 10.43$, $p < .001$; slope: $Z = 181.73$, $p < .001$), we conclude that variation exists and may potentially be explained by salesperson-level variables (Singer 1998). Using the goodness-of-fit indexes, we compare the fixed-effects model with the random-effects model. The unconditional linear growth model has both fixed and random effects on the intercepts but only fixed effects on the slopes. The difference between the two log-likelihood statistics (i.e., incremental chi-square) suggests model superiority in terms of goodness-of-fit when there is a significantly smaller –2 log-likelihood (Littell et al. 2006). Our results suggest that the random-slope model fits the data better; therefore, we chose random-slope models for subsequent analyses of both products.

Unconditional Nonlinear Growth Model

To examine whether the growth of sales follows the traditional nonlinear relationship suggested by the early stages of the product life cycle (Hauser, Tellis, and Griffin 2006), we added a quadratic term (squared mean-centered days) to the model. Building our model with a strong theoretical background is superior to other possible model structures that may also fit the data but have no theoretical basis (Singer and Willett 2003, p. 240). Using the product life cycle as our theoretical underpinning for model building enables us to make assumptions about the model shape that are theoretically sound for interpreting managerial implications. The results support a nonlinear growth model. First, the linear and quadratic terms are statically significant (see Table 2, Model 2a). Second, the unconditional nonlinear growth model (Table 2, Model 2a) itself is significantly improved compared with the unconditional linear growth model (Table 2, Model 1a) ($\Delta\chi^2 = 753.3$, d.f. $= 1$, $p < .001$). We find a similar pattern of results (Table 2, Model 2b) for the line extension. Therefore, we use the unconditional non-

linear growth model as our basic growth model in subsequent analyses.

A strength of the Proc Mixed procedure is that it enables researchers to compare different structures for the error variance–covariance matrix and identify the best fit. As Littell and colleagues (2006) suggest, the goal is to determine the most appropriate structure based on goodness-of-fit statistics for different error structures and theoretical considerations. Following Singer's (1998) approach, we compared three possible structures: compound symmetry, autoregressive with a lag of 1, and unstructured. We used –2 log-likelihood, Akaike's information criterion (AIC), and Bayesian information criterion (BIC) as the basis for the comparison. The results indicate that the unstructured model had the best fit. Therefore, we employ an unstructured error matrix for all analyses. (Note that using either of the other two error structures would not change our findings because the results were similar, further confirming their stability and robustness.)

Conditional Nonlinear Growth Model

After selecting the unconditional nonlinear growth model with random effects, we added the salesperson-level predictors to investigate whether the new product sales growth varies as a function of these variables. The models are as follows:

(3)　　Level 1: $Y_{ij} = \beta_{0j} + \beta_{1j}\text{MCDays} + \beta_{2j}(\text{MCDays})^2 + e_{ij}$,

(3a)　Level 2: $\beta_{0j} = \gamma_{00} + \gamma_{01}\text{SI} + \gamma_{02}\text{AT} + \gamma_{03}\text{SN} + \gamma_{04}\text{SE}$
$$+ \gamma_{05}\text{SN} \times \text{SI} + \gamma_{06}\text{SN} \times \text{SE} + \delta_{0j},$$

(3b)　　　$\beta_{1j} = \gamma_{10} + \gamma_{11}\text{SI} + \gamma_{12}\text{AT} + \gamma_{13}\text{SN} + \gamma_{14}\text{SE}$
$$+ \gamma_{15}\text{SN} \times \text{SI} + \gamma_{16}\text{SN} \times \text{SE} + \delta_{1j}, \text{ and}$$

(3c)　　　$\beta_{2j} = \gamma_{20} + \gamma_{21}\text{SI} + \gamma_{22}\text{AT} + \gamma_{23}\text{SN} + \gamma_{24}\text{SE}$
$$+ \gamma_{25}\text{SN} \times \text{SI} + \gamma_{26}\text{SN} \times \text{SE} + \delta_{2j}.$$

As in the unconditional models, we included only the linear and quadratic terms of the time variable (i.e., MCDays and [MCDays]²) in the Level 1 equation. However, in the Level 2 equations, we included intention to sell (SI), attitude (AT), subjective norms (SN), and self-efficacy (SE) as the salesperson-level predictors. Previous research has consistently shown the direct effects of attitudes on organizational-level performance (e.g., Meyer et al. 2002; Ostroff 1992), meaning that a salesperson's psychology affects how well he or she performs. Thus, we chose to include AT in the model to account for these effects. In addition, we include SN in the model for methodological reasons because it enables us to test interactions in which SN serve as a moderator on other relationships in the model.

To ensure that the fixed effects can be interpreted properly, we centered intention at its grand mean (Singer 1998). Thus, in this model, γ_{00} represents the average intercept in the individual growth model, and γ_{10} and γ_{20} represent the average slopes of the linear and quadratic terms, respectively. We tested the proposed hypotheses by examining the coefficients in the Level 2 equations that correspond to the salesperson-level variables. The sign and significance of γ_{11} reflect the impact of salespeople's selling intentions on the

TABLE 2
Growth Curve Models for Longitudinal New Product Sales Growth Rates

Predictor	New-to-Market Product			Line Extension Product		
	Model 1a	Model 2a	Model 3a	Model 1b	Model 2b	Model 3b
Intercept	6.5581***	6.1036***	6.2890***	14.6595***	14.0325***	15.4091***
Main Effects						
Mean centered days (MCDays)	.03431***	.03431***	.03712***	.1088***	.08710***	.1031***
(MCDays)^2		.000026***	.000031***		.000081***	.000059***
Intention			1.2561*			1.9139
Attitude			.01333			.05641
Subjective norm			−.01206			−.09342
Self-efficacy			.01049			.07144
Moderating Effects						
Intention × MCDays			.005271***			.03340***
Intention × (MCDays)^2			−.000000251			.000031*
Attitude × MCDays			.000084***			.001038***
Attitude × (MCDays)^2			−.00000000309***			.00003781***
Subjective norm × MCDays			−.00005***			−.00086***
Subjective norm × (MCDays)^2			.0000000001172***			−.000000575***
Self-efficacy × MCDays			.000265***			.000737***
Self-efficacy × (MCDays)^2			.000000237***			−.000000354***
Subjective norm × intention			−.0096			−.01503
Subjective norm × intention × MCDays			−.00008***			−.00002
Subjective norm × intention × (MCDays)^2			−.0000000983***			.000000131***
Subjective norm × self-efficacy			−.00015			−.00357
Subjective norm × self-efficacy × MCDays			−.00000972***			−.00001***
Subjective norm × self-efficacy × (MCDays)^2			.00000000000352***			.00000003163***
Control Variables						
Quota	.004269*	.004269*	.01256***	.1599***	.1599***	.1723***
Customer newness	−1.6265***	−1.6265***	−1.1577***	−.2292	−.2292	.1973
Tenure	.05181	.05181	.05010	.4084	.4084	.3075
−2 log-likelihood	834,977.8	834,224.5	697,864.8	434,484.5	434,322.9	360,822.6
Incremental chi-square		753.3	136,359.7		161.6	73,500.3
Degree of freedom		1	18		1	18
p-value		p < .001	p < .001		p < .001	p < .001
N	308	308	308	226	226	226

*p < .05.
**p < .01.
***p < .001.

growth trajectory of the new product. Although we did not hypothesize the quadratic effects determined by γ_{21}, we report these findings subsequently and use the coefficients to determine the shape of the nonlinear results. Before testing the subsequent hypotheses, we examined the model fit to determine whether the inclusion of these interactions is warranted; we find that the incremental chi-square is statistically significant for both products (new-to-market: $\Delta\chi^2$ = 136,359.7, d.f. = 18, $p < .001$; line extension: $\Delta\chi^2$ = 73,500.3, d.f. = 18, $p < .001$).

A salesperson's selling intention is positively related to the cross-level interaction for the new-to-market product (γ_{11} = .005271, $p < .001$) and the line extension (γ_{11} = .03340, $p < .001$), indicating that salespeople's selling intentions positively affect the growth rate of new product sales for both products, in support of H_1. To further explain the shape of the growth curves, we examined the interaction with the quadratic term $(MCDays)^2$ (new-to-market: γ_{21} = –.000000251, not significant [n.s.]; line extension: γ_{21} = .000031, $p < .001$) and determined that the effect of selling intention on growth rate is linear for the new-to-market product but is nonlinear for the line extension. Thus, greater salesperson selling intentions yield higher levels of new product sales growth (and the rate of growth increases at an increasing rate for the line extension).

Antecedents of Selling Intention

Next, we conduct a regression analysis with selling intention as the dependent variable to investigate the relative effects of attitudes, subjective norms, and self-efficacy on selling intentions. Because these data are not longitudinal, we employ ordinary least squares regression to address the hypotheses with selling intention as the dependent variable. The results in Table 3 show that attitudes (β = .28, $p < .01$), subjective norms (β = .31, $p < .01$), and self-efficacy (β = .30, $p < .01$) are all positively related to the salesperson's selling intention, and the three predictors accounted for a sizable proportion of the variance in selling intention (R^2 = 42.2%). We find similar support for attitudes (β = .20, $p < .01$) and self-efficacy (β = .36, $p < .01$) as antecedents to

selling intentions on the line extension but no relationship between subjective norms and selling intentions (β = .13, n.s.) on the line extension. These results provide support for attitudes and self-efficacy as antecedents to selling intentions (H_2 and H_{4a}) but only partial support for the effectiveness of subjective norms as an antecedent to selling intentions (H_3). Further analyses with subjective norms as the moderator will help clarify their role in the model and condition the results of these main effects.

Interactions on Selling Intentions

We further investigate the role of subjective norms because of the conflicting results reported in prior research, and we hypothesize that they will negatively moderate the positive relationship between attitude and selling intentions. The results in Table 3 support this relationship for the new-to-market product (β = –.09, $p < .05$) but not for the line extension (β = –.02, n.s.). Therefore, we find support for this negative moderation (H_5) only for the new-to-market product. For the negative moderation of subjective norms on the self-efficacy–selling intention relationship, we find no effect on the new-to-market product (β = .05, n.s.), but the effect holds for the line extension (β = –.14, $p < .05$). Again, we find partial support for the role of subjective norms as a moderator (H_6), but this time, the moderating effect is only on the line extension. We explore explanations for these results and the differences that may arise from product type subsequently.

The two moderating effects appear to indicate that the impact of attitude and self-efficacy on intention is contingent on the level of subjective norms. To further analyze and demonstrate the effects, we conducted a simple slope analysis following Aiken and West's (1991) recommendations. Specifically, in the case of the new-to-market product, we added one standard deviation to the mean-centered subjective norms, created a new product term with attitude, and retested the model. Then, we subtracted one standard deviation from the mean-centered subjective norms and repeated the process. For each model, the new intercepts and slopes of attitude represent the effects of

TABLE 3
Regression Results of Main and Interaction Effects on Selling Intention

Predictors	New-to-Market Product		Line Extension	
	Main Effects	Interaction	Main Effects	Interaction
Attitude (AT)	.28**	.29**	.20**	.20**
Subjective norms (SN)	.31**	.29**	.13	.15
Self-efficacy (SE)	.30**	.30**	.36**	.35**
AT × SN		–.09*		–.02
SE × SN		.05		–.14*
Control Variables				
Quota	.11*	.10*	.25*	.27*
Customer newness	–.02	–.02	.03	.04
Tenure	–.11*	–.11*	–.07	–.08
R^2	.422	.431	.413	.431
N	308	308	226	226

*$p < .05$.
**$p < .01$.

attitude on selling intentions under low and high levels of subjective norms. This analysis resulted in a positive effect of attitude on intention when subjective norms were low ($\beta = .37$, $p < .01$) and a smaller positive effect when subjective norms were high ($\beta = .21$, $p < .01$). In the case of the line extension, we repeated the process to examine the effects of self-efficacy on selling intentions under low and high levels of subjective norms. The results indicate a significant, positive effect of self-efficacy on intentions when subjective norms were low ($\beta = .55$, $p < .01$) but no effect when subjective norms were high ($\beta = .10$, n.s.). Figures 2 and 3 present these simple slope effects.

Interactions on Growth Rate

To test subjective norms' negative moderation of the relationship between selling intention and growth rate (H_7), we return to the growth curve model and interpret β_{15} for both products. Models 3a and 3b in Table 2 indicate support for the hypothesis for the new-to-market product ($\beta_{15} = -.00008$, $p < .001$) but not the line extension ($\beta_{15} = -.00002$, n.s.). We investigated the shape of this nonlinear effect by interpreting β_{25} for the new-to-market product and found that as subjective norms increase, the effects of selling intention on growth rate decreases at a decreasing rate for the new-to-market product ($\beta_{25} = -.0000000983$, $p < .001$). Although we found significant results only for the new-to-market product, in partial support of H_7, note that the increase in normative pressure reduces the effectiveness of selling intentions on growth rate, as we expected. For line extensions, subjective norms do not interact with selling intentions. However, for new-to-market products, subjective norms build intentions but inhibit those intentions from materializing into performance. Moreover, other disadvantages to subjective norms are that they diminish the positive impact of attitudes on intentions for new-to-market products and eliminate the positive impact of self-efficacy on intentions for line extensions.

Finally, we examine the role of subjective norms in moderating the relationship between self-efficacy and growth rate (H_8) for both products. Here, we find support for the two interactions (Table 2, Models 3a and 3b): new-to-market product ($\gamma_{16} = -.000000972$, $p < .001$) and line extension ($\gamma_{16} = -.00001$, $p < .001$). These results confirm H_8 for both products. After examining the nonlinear effects, we determined that the negative moderation on both products is decreasing at an increasing rate (new-to-market: $\gamma_{26} = .000000000352$, $p < .001$; line extension: $\gamma_{26} = .00000003163$, $p < .001$).

Discussion, Implications, and Further Research

Discussion of Results

This research examines the relative influence of salespeople's attitudes, perceptions of subjective norms, and self-efficacy on the development of selling intentions and, ultimately, new product performance. It also explores the deleterious moderating effects of subjective norms across the model. The study examines two data sets (one from a

FIGURE 2
Subjective Norms' Moderation of the Attitude–Selling Intention Relationship for the New-to-Market Product
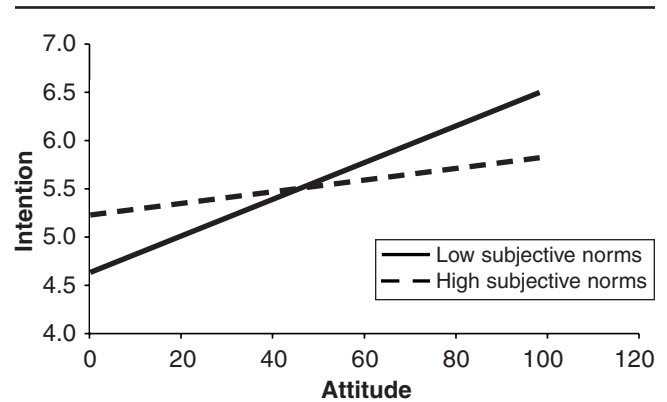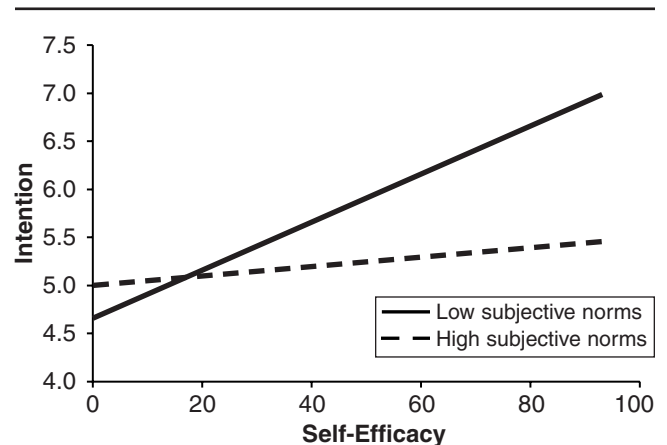

FIGURE 3
Subjective Norms' Moderation of the Self-Efficacy–Selling Intention Relationship for the Line Extension

new-to-market product and one from a line extension) that contain both survey and objective data from industrial salespeople. Fitting a nonlinear, multilevel, growth model to the data sets provides insights into the impact of salesperson-level psychological variables on the early performance of new products following commercialization. To our knowledge, no prior research has identified and explained sources of variance for new product sales based on salespeople's attitudes and intentions.

As expected, we identified a nonlinear curve with an accelerating growth rate over time for both products similar to the introduction and growth stages of the product life cycle. Using a growth curve modeling approach, we demonstrate that salespeople's selling intentions are a significant predictor of new product performance and result in faster growth rates for both new-to-market products and line extensions. Greater salesperson selling intentions yield higher levels of new product sales growth, and more precisely, the rate of growth increases at an increasing rate for line extensions. In other words, the impact of selling inten-

tions on growth rate is linear for new-to-market products but nonlinear and exponentially positive for line extensions.

Consistent with the TPB, we find that salesperson attitudes, subjective norms, and salesperson self-efficacy each contribute to the formation of selling intentions for the new-to-market product; with the exception of subjective norms, these relationships also hold true for the line extension. Normative pressure can encourage salespeople to comply with management and state their intentions to sell a completely new and less familiar product, but it is not an effective motivator for building intentions related to relatively routine sales of line extensions. Also consistent with the theory, we find that self-efficacy has a direct, positive effect on growth rates for both new products.

Because of inconsistent results in prior research, we hypothesized four interactions, with subjective norms acting as a moderating variable, to explore our theory-based assertions that increased subjective norms negatively influence the positive effects of other antecedents on selling intentions and performance. In the first two interactions, we examine the moderating role of subjective norms in the formation of selling intentions. Notably, subjective norms act as a double-edged sword by diminishing the positive impact of attitudes (for the new-to-market product) and self-efficacy (for the line extension) on selling intentions. In the presence of high subjective norms, the motivating influence of a favorable attitude toward selling a new product is diluted for new-to-market products. This is consistent with our hypothesis and the literature on intrinsic and extrinsic motivation. It appears that the intrinsic satisfaction of the selling task is blunted by the felt pressure of managerial expectations associated with the new product launch.

For the more routine sale of a line extension, strong subjective norms reduce the positive impact of self-efficacy on selling intentions. In other words, when a salesperson is confident in performing a relatively straightforward task, subjective norms associated with that task can be counterproductive. Self-efficacy is formed when a salesperson assesses his or her ability to execute a given task. When a manager applies high levels of subjective norms, it may cause the salesperson to question the nature and simplicity of the task. This doubt may yield a weaker link between self-efficacy and the formation of selling intentions akin to the looking-glass effect (Benabou and Tirole 2003). Given these negative moderating consequences and the lack of a direct effect between subjective norms and selling intentions for the line extension, it appears that there are few, if any, reasons for managers to use normative pressure to develop selling intentions.

In the second two interactions, and perhaps the most instructive to managers, subjective norms negatively moderate the positive relationships between selling intentions and performance and between self-efficacy and performance. The results show that salesperson selling intentions are less likely to produce strong growth rates for the new-to-market product under conditions of high subjective norms than under conditions of low subjective norms. By examining the quadratic effects for the new-to-market product, we show that the negative moderating effects of subjective norms on the selling intention–performance relationship

become more negative over time as their use increases. In addition, the negative moderating effects of subjective norms on the self-efficacy–performance relationships occurred for both the new-to-market product and the line extension.

These findings corroborate our arguments that perceived pressure can adversely affect a salesperson's ability to influence buyers and that inflated expectations can overwhelm the weak compliance-based effects of subjective norms, leading to diminished salesperson performance. Compliance represents a relatively low-level, short-lasting form of persuasion as opposed to high-level, persistent forms of persuasion formed through internalization processes that accompany positive attitudes and feelings of self-efficacy (Ajzen 1991). Therefore, subsequent behaviors adopted from each form will differ in terms of the magnitude, endurance, and conditions under which they are likely to occur (Kelman 1958). Specifically, when effort toward selling a new product results from an internalized process, salespeople are more likely to find the task intrinsically rewarding and put their best and most creative efforts into it. In contrast, when effort results from compliance, salespeople will sustain it only for as long as management monitors salesperson behavior, and such monitoring is extremely challenging given field salespeople's relative independence and dispersed locations.

Although we failed to find a significant, negative interaction between subjective norms and selling intentions on performance for the line extension, the story remains the same: Subjective norms are problematic. For line extensions, they fail to generate selling intentions. For new-to-market products, they inhibit selling intentions from materializing into performance. For both products, their presence attenuates the positive relationship between self-efficacy and performance. The results demonstrate that the attitudinal and self-efficacy paths are stronger and more preferable than the normative path when building sales force support for a new product launch.

Managerial Implications

This study suggests that managers should focus on increasing the inherent attractiveness of and the sales force's confidence in selling the new product to increase sales volume quickly. Despite their legitimate power over salespeople, managers should apply normative pressure judiciously because of its severe drawbacks during a new product launch. Managers who use normative pressure may be fooled by signs of compliance in the development of selling intentions, but these same norms will ultimately hurt new product performance. Subjective norms have deleterious effects on the positive impacts of attitudes and self-efficacy on selling intentions, and they inhibit the translation of selling intentions and self-efficacy into new product performance. Although we found some inconsistencies in the role of subjective norms across the two products, the bottom line remains the same—when managers use increased levels of subjective norms, they slow down new product growth rates.

This research suggests that rather than building normative pressure during a new product launch, sales managers

should focus on strengthening a salesperson's selling intentions by creating positive attitudes about the launch and heightened feelings of self-efficacy. To accomplish this, managers should emphasize the innovative and differentiating aspects of the new product in internal communications, regardless of whether the new product is completely new or a line extension. In addition, they should attempt to increase salesperson familiarity with targeted customer segments and appropriate selling techniques through the use of training, selection, or customer relationship management tools. Companies are increasingly recognizing the value of internal marketing throughout their organizations (Sartain 2005). Thus, treating salespeople as the first "customers" and reinforcing positive behaviors in early attempts to sell the new product should result in improved attitudes and self-efficacy and, ultimately, better new product performance.

Limitations and Further Research

The study confirms the usefulness of the TPB in the context of salespeople selling a new product and linking new product selling performance to important salesperson-level psychological variables. However, some caution is required in interpreting the results. First, we conducted the study within the domain of a specific organization and industry. We collected both survey data and objective sales records from one company. Although this provided us with a cleaner environment in which to study the focal effects, by controlling for extraneous effects, replicating this study in different industries and across organizations would be helpful in establishing the generalizability of the findings. The effects of industry-specific factors on the relationship between salespeople's psychological variables and new product selling performance are worthy of further study. Second, despite the strong impact of attitudes on selling intentions, we were limited to a two-item measure for this construct. Future studies should revisit the measure of attitude and employ scales with more items to improve the scale properties.

Third, we discovered slight differences in the effects between a new-to-market product and a line extension. Intuitively, these differences could be attributable to learning effects because new-to-market products require that the sales force learn new value propositions in selling to customers. In this study, we focused on TPB and did not incorporate learning effects. Further research should incorporate learning into the model we tested. Fourth, our data depict the introductory and growth stages of the new product life cycle. Within this period, the sales curve grows rapidly and accelerates. However, from a product life-cycle perspective, the sales curve will eventually slow down, flatten, and, ultimately, decline. Therefore, a longer time frame is needed to assess salespeople's impact on the maturity and even declining stages of new product performance.

In conclusion, this research addresses an important issue facing managers: how to motivate salespeople to sell new products. By examining the relative influence of attitudes, subjective norms, and self-efficacy, we shed light on how and where managers should devote more resources. For scholars interested in new product research, we address an underresearched area worthy of further study: the critical role of salespeople in a new product launch and how sales-people's intentions and behaviors influence new product sales.

Appendix
Measurement Items

Attitude Toward Selling the New Product

Compared to other products that you sell, to what degree does the NEWPROD possess each of the following attributes? (seven-point Likert-type scale; 1 = "far less than other products," and 7 = "far more than other products")

   •Is easy to sell, and
   •Is fun to sell.

In general, how important is it for a new product to have each of the follow attributes? (seven-point Likert-type scale; 1 = "not at all important," and 7 = "extremely important")

   •Is easy to sell, and
   •Is fun to sell.

Subjective Norms Toward Selling the New Product

Please indicate the extent to which you think each of the following considers selling the NEWPROD to be important: (seven-point Likert-type scale; 1 = "not at all important," and 7 = "extremely important")

   •My sales manager,
   •My marketing manager,
   •My product manager,
   •Fellow sales manager, and
   •Top management.

Please indicate the extent to which you are motivated to comply with the wishes of each of the following: (seven-point Likert-type scale; 1 = "not at all important," and 7 = "extremely important")

   •My sales manager,
   •My marketing manager,
   •My product manager,
   •Fellow sales manager, and
   •Top management.

Customer Newness

(Seven-point Likert-type scale; 1 = "strongly disagree," and 7 = "strongly agree")

   •I have not previously provided NEWPROD to this customer segment.
   •This customer segment is new to me.
   •I have substantial knowledge of this customer segment. (reverse scored)

Salespeople's Selling Intention

(Seven-point Likert-type scale; 1 = "far less than other salespeople," and 7 = "far more than other salespeople")

   •Compared to other salespeople, how much time do you anticipate spending on selling the NEWPROD?

- Compared to other salespeople, how intensely do you anticipate working to sell the NEWPROD?

- Compared to other salespeople, how much overall effort do you anticipate putting into selling the NEWPROD?

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