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This research examines the impact of the acquisition–retention resource allocation at the individual salesperson level – that is, the proportion of their time dedicated to acquisition versus retention activities – on their sales performance. We extend prior research that investigates the acquisition–retention trade-off below (i.e., customer value approach) or above (i.e., firm portfolio approach) the salesperson's perspective by also incorporating many 'within-firm' factors that are critical to capturing the contingent nature of the allocation decision. The results suggest that firms can double their sales gains by implementing a trade-off strategy that customizes the acquisition allocation at the salesperson level. Using matched triadic data gathered from 227 salespersons, 106 supervisors and the seller's database, the authors find an inverted U-shaped linkage between the proportion of time allocated to acquisition activities and sales performance. Moderation analyses show that salespeople's optimal acquisition allocation depends on their knowledge breadth and job commitment, their supervisor's experience and job commitment and the quantity and quality of the prospects in their relationship portfolio.

Keywords: customer acquisition; customer retention; relationship marketing; sales management; contingency theory; portfolio management

Firms face an austere competitive marketplace where growing market share, sales and profitability are a constant challenge. Overcoming these challenges requires marketing organizations to successfully divide or allocate finite sales resources between the acquisition of new prospects and the retention of current clients (Schweidel, Fader, and Bradlow 2008; Reinartz, Thomas, and Kumar 2005). This is accomplished by creating an interactive and ongoing dialogue with the company's prospect and buyer base (Blattberg and Deighton 1996) as part of their ongoing customer relationship management (CRM). The literature on CRM highlights the benefits of developing separate selling strategies aimed at acquiring new prospects as opposed to retaining existing customers, because the underlying sales activities are inherently different (Gupta and Zeithaml 2006; Jap and Ganesan 2000; Johnson and Selnes 2004).

For sales managers, this distinction between acquisition- and retention-focused sales activities necessitates making trade-offs when dividing their marketing budget and scarce resources between acquisition and retention efforts (Berger and Bechwati 2001; Blattberg and Deighton 1996). Likewise, salespeople must also continuously balance their time allocations between acquisition and retention efforts when planning and executing their daily schedules (Miller 2006). However, salespeople's acquisition–retention trade-off, and its financial implications, has received relatively little academic attention. This is surprising considering the pivotal role of salespeople in shaping prospects' and customers' experiences, which subsequently contributes to the firm's ultimate performance (Cross et al. 2001; Jones et al. 2005). Reinforcing the importance of the sales function to firm performance, Albers, Mantrala, and Sridhar's (2010) recent meta-analysis suggests that the return on investments in salespeople is generally much larger than advertising. Thus, understanding the impact of salespeople's acquisition–retention trade-off on sales performance is critical for firms to succeed in today's competitive environment and is the primary objective of the current research.

Extant research has investigated acquisition–retention trade-offs from two main perspectives: the *customer value approach* and the *portfolio value approach*. The customer value approach analyzes an individual customer, or a cohort of customers, overtime to determine how firms can effectively allocate resources across acquisition and retention stages to maximize each customer's lifetime value (CLV) (Berger and Bechwati 2001; Blattberg and Deighton 1996; Reinartz, Thomas, and Kumar 2005; Strahle, Spiro, and Acito 1996). This prior research demonstrates the large pay-off in accounting for interdependencies between acquisition and retention engagement strategies, as well as the degree to which effective sales

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strategies are sensitive to exchange-level factors (e.g., the number and type of customers and competitors).

More recently, researchers have argued that organizations need to embrace a portfolio value approach to acquisition–retention choices. That is, managers need to account for the firm's unique portfolio, or composition of current customers and prospects, as part of their decision to allocate scarce sales resources to acquisition versus retention activities. Otherwise, strategies that focus solely on maximizing each customer's value (without regard to other customers serviced by the company) may fail to fully leverage the value and diversity of the firm's overall portfolio leading 'to the wrong marketing actions' (Drèze and Bonfrer 2009, p. 290). For example, Johnson and Selnes (2004, 2005) demonstrate that sales strategies aimed at populating a portfolio with only the highest value customers can actually undermine the overall portfolio value by limiting its potential size, reducing scale economies, increasing risk and failing to sustain an evolving customer base overtime. The portfolio approach shows that effective allocation decisions must account for the diversity of portfolio characteristics to maximize firm performance. However, current applications of the portfolio value approach to acquisition–retention trade-offs yield only guidance at the firm level (Gupta, Lehmann, and Stuart 2004; Voss and Voss 2008), which often fails to account for underlying exchange-level contingencies, including characteristics of the salesperson, supervisor and the customer base.

In response, we examine the effect of salespeople's *acquisition allocation* – the proportion of their time dedicated to acquisition activities rather than retention activities – on sales performance, using matched triadic data for a financial services firm (seller) and its business customers and prospects. Specifically, we combine nested survey data from 227 salespeople and their 106 supervisors with multiple sources of secondary data provided by the seller (e.g., sales dollars, number of training courses completed, etc.) and estimate our model using hierarchical linear modelling (HLM). Overall, this paper contributes to the marketing literature in multiple ways.

First, to the best of our knowledge, this is the only paper that develops and empirically tests a model of the effect of acquisition allocation on performance, at the level of an individual salesperson. This is important because our results provide multiple insights for improving the return on investment from the $8 billion annually spent on salespeople in the USA, which is approximately three times the amount spent on advertising (Zoltners, Sinha, and Lorimer 2008). We find support for the premise that the effect of salespeople's acquisition allocation on performance is significant and follows an inverted U-shape that reflects diminishing returns from shifting too much attention to either acquisition or retention activities. We find that the salespeople in our sample are over-allocating their time to acquisition efforts.

Second, the nested nature of our data and optimization analyses enable us to compare the relative impact of three different acquisition–retention allocation policies on sales performance: a firm-level acquisition allocation strategy, which sets a uniform acquisition allocation (at the firm-level optimum) across all salespeople in the firm; a supervisor-level acquisition allocation strategy which sets a uniform acquisition allocation for salespeople at their respective supervisor's optimum; and, finally, a salesperson-level allocation strategy which sets the acquisition allocation according to each salesperson's individual optimum. Our results suggest that developing guidance focused on making the most effective acquisition–retention trade-offs at the salesperson level results in approximately twice the gain in sales compared to using a firm-level acquisition allocation strategy, which is common industry practice (Miller 2006; Rust, Lemon, and Zeithaml 2004).

Third, our salesperson level of analysis allows us to investigate underlying factors that influence the effectiveness of acquisition allocation. This moderation analysis of the acquisition–retention trade-off accounts for perspectives unaddressed in previous research. Our conceptual model includes supervisor (upward), salesperson (inward) and portfolio (downward) moderating factors (see Figure 1). To identify and organize these moderating variables, we apply the ability–persistence–opportunity theoretical framework based on the theory of planned behaviour and, accordingly, we test moderating variables that should leverage the effectiveness of salespeople's acquisition efforts (Ajzen 2002; Fu et al. 2010; Palmatier 2008). Driving the performance improvements from salesperson-level optimization, we find that many of these factors leverage the impact of salespeople's acquisition efforts on performance. More specifically, in our sample, the inverted U-shaped relationship between sales and acquisition allocation is positively moderated by the salespeople's knowledge breadth and job commitment, their supervisor's experience and job commitment, and the quantity and quality of the prospects in their portfolio.

The evolution of acquisition–retention trade-off research

This section provides an in-depth review of previous research relevant to the acquisition–retention trade-off and then previews how examining the trade-off at the salesperson level builds off the strengths of the previous research approaches. Analysis of the extant literature focused on acquisition–retention trade-off decisions reveals two major approaches: the customer value approach and the portfolio value approach. The customer value approach focuses on understanding how marketing efforts made during acquisition and retention affect a CLV. Subsequently, researchers

have advanced a portfolio value approach, which aims to maximize the value of a collection or cohort of customers, as opposed to the value of individual customers. Table 1 summarizes the key work from each approach, highlighting contributions and limitations relevant to acquisition–retention trade-offs. Blending these two approaches, the salesperson centric approach offered in this study draws on an acquisition ability–persistence–opportunity theoretical framework to incorporate internal- and exchange-level factors (emphasized in the customer value approach) as moderators of the focal link between salespeople's acquisition allocation on their overall sales performance (emphasized in the portfolio value approach).

The customer value approach

Early acquisition–retention research developed models to help managers set acquisition and retention budgets that maximized a cohort of prospects' long-term value (Berger and Bechwati 2001; Blattberg and Deighton 1996). These early models were purposely simplistic to facilitate managerial adoption. Later, advanced models provided more accurate assessments of customers' value by accounting for customer heterogeneity and temporal interdependencies between a prospect's acquisition and subsequent retention (Schweidel, Fader, and Bradlow 2008; Thomas 2001). Further enhancements came from analytical models, which considered how competitive forces could reduce desirable customers' value (Musalem and Joshi 2009). Consumer experiments revealed how existing customers' jealous reaction to aggressive acquisition campaigns reduces their loyalty to the company (Feinberg, Krishna, and Zhang 2002). Reinartz, Thomas, and Kumar (2005) incorporate many of these factors into a model that estimates customer value and determines the appropriate engagement strategy, during acquisition and retention, to maximize the CLV of an average customer. Building on this, leading sales organizations incorporated CLV-based estimates and strategies into their CRM systems to assist salespeople with targeting high potential prospects and customers across their pipeline (Shoemaker 2001; Zoltners, Sinha, and Lorimer 2008).

The main strength of this approach is that it provides fine-grained estimates of customers' value by accounting for relationship dynamics, customer heterogeneity and competition. However, the weakness of the customer value approach is that by focusing on the value of individual customers, it ignores implications regarding a firm's overall portfolio, comprised of a collection of relationships with both prospects and existing customers. Thus, the same strategies that maximize a particular customer's (or even a cohort of customers') long-term worth may well limit the value of the company's total portfolio. Drèze and Bonfrer (2009) compare strategies that maximize customer value versus portfolio value and conclude that implementing strategies to maximize the former often results in worse overall performance.

The portfolio value approach

Johnson and Selnes (2004, 2005), proponents of a portfolio approach, argue that strategies aiming to populate the portfolio with only the highest worth relationships may actually limit value by restricting customer base size, failing to sustain the evolving portfolio overtime, and increasing exposure to risk. Homburg, Steiner, and Totzek (2009) empirically demonstrate the value of dynamic portfolio management. By tracking and predicting switching behaviour among customer segments in a firm's portfolio, they find that customers in any segment can be valuable but require different selling strategies. For example, firms should customize their response by targeting 'offensive' efforts towards bottom-tier customers, aiming 'defensive' efforts towards retaining mid-tier customers and recognizing that ceiling effects limit growth of top-tier clients.

Homburg, Steiner, and Totzek (2009, p. 70) lament that though 'highly relevant for marketing practice, few studies provide conceptual and empirical insight into customer portfolio management' and fewer include prospects as a part of the client mix, a necessity for applying portfolio analysis to acquisition–retention trade-off decisions. The few extant studies consistent with the portfolio approach, and material to acquisition–retention decisions, examine the differential effects of proxies for acquisition and retention efforts on customer composition and firm value (Grewal, Chandrashekaran, and Citrin 2010; Gupta, Lehmann, and Stuart 2004). Other scholars evaluate the appropriateness of a firm's general strategic orientation towards acquisition or retention given its innovation goals (Arnold, Fang, and Palmatier 2011) and competitive environment (Voss and Voss 2008).

The high-level guidance resulting from these studies represents both a strength and a weakness of current applications of the portfolio value approach to acquisition–retention allocation decisions. Traditionally, firm-level executives make resource allocation decisions, and any insights that supplement their intuition can yield substantial value (Rust, Lemon, and Zeithaml 2004). While the firm is the appropriate level of analysis when studying trade-offs of marketing resources that operate at that level (e.g., strategic orientation of the company); other resources (e.g., a salesperson's time allocation) that vary within the firm must be evaluated at lower levels of analysis to understand their effects on performance.

Next step: a salesperson centric approach

A review of the literature confirms that acquisition and retention activities are unique, but interrelated tasks.

Table 1. Evolution of research on acquisition–retention trade-offs.

References	Nature of study	Key findings and Contribution	Limitations
Customer value approach			
Blattberg and Deighton (1996)	Conceptual with decision models	• Introduces a profit-based tool for setting acquisition and retention budgets. • Model accounts for diminishing returns of acquisition and retention expenditures.	• Independently maximizing the return on acquisition and retention does not translate to an optimal budget.
Berger and Bechwati (2001)	Conceptual with decision models and simulations	• Explicitly accounts for trade-off as allocating funds for acquisition reduces retention funds, which ensures that optimizing acquisition does not undermine potential retention profits.	• Based on sequential trade-off (how much to spend now on acquisition vs. later on retention) for a cohort of prospects; not a simultaneous trade-off (potential vs. existing customers). Splits a given budget optimally but does not help determine an optimal budget.
Thomas (2001), Schweidel, Fader, and Bradlow (2008)	Statistical model development with empirical application	• Acquisition and retention are not independent; retention is influenced by promotional expenditures aimed at acquisition, and although prospects' acquisition likelihood decreases overtime, customers that take longer to acquire last longer. Models account for customer heterogeneity.	• Estimates the value of each customer relationship more accurately but does not calculate the appropriate balance between acquisition and retention efforts.
Reinartz, Thomas, and Kumar (2005)	Statistical model development with empirical application	• Accounts for diminishing returns, heterogeneity, temporal dependence, and competitor strength to estimate customers' value as a function of specific investments in their acquisition and retention, which improves customer prioritization and engagement strategies.In their sample, spending four times on a customer's retention vs acquisition maximizes the average CLV.	• Maximizing CLV does not extrapolate to an optimal overall budget (i.e., a few high CLV customers may be less valuable than many low CLV customers). Based on sequential trade-off for a cohort of prospects, not simultaneous trade-off. Ignores costs of failed acquisitions in budgeting recommendations.
Musalem and Joshi (2009)	Analytical modeling game theory	• Competitive pressure to acquire and steal customers with the greatest potential value erodes the profitability of those customers. Firms should try to steal competitors' moderately valuable customers and retain their own moderately responsive customers.	• Extrapolating results to a large customer base relies on validity of the assumptions that firms have unbounded resources and that customers' experience and utility are unaffected by each other.
Portfolio value approach			
Johnson and Selnes (2004, (2005)	Conceptual with statistical model, simulations, and case studies	• Allocations between 'offensive' versus 'defensive' marketing depends on the existing and desired portfolio composition. Focusing on serving valuable customers can backfire: not enough new customers to sustain the company overtime, loss of economies of scale, and risk exposure. The long-term value of distant verse close relationships depends on industry (e.g. economies of scale), customer, and firm characteristics (e.g. acquisition ability).	• Relies on exemplar cases and a simulation analysis instead of an empirical analysis. Customer portfolio analysis focuses on different relationships with existing customers but ignores relationships with prospects (prospect portfolio).
Gupta, Lehmann, and Stuart (2004)	Statistical model with empirical applications	• Customer equity can be evaluated using firm-level estimates (overall portfolio). In their sample, a 1% increase in retention rate corresponds to a 5% increase in firm value, but a 1% reduction of acquisition costs improves firm value by .1%.	• All marketing costs were attributed to acquired customers; none were attributed to existing customers or those not acquired, thus inflating the cost of acquisition. Did not consider moderating conditions.

Table 1. (*Continued*)

References	Nature of study	Key findings and Contribution	Limitations
Voss and Voss (2008)	Empirical analysis of conceptual model and hypotheses	• In competitive markets, a retention orientation targeting relational/contractual buyers can hurt profitability; an acquisition orientation targeting transactional buyers is preferable. Appropriate acquisition–retention trade-offs are contingent on market factors.	• Does not allow for with-in firm heterogeneity to be evaluated and incorporated into decisions. A number of other contingencies may exist as well, which were not considered.
Homburg, Steiner, and Totzek (2009)	Methodology development with empirical application	• Empirically explores portfolio dynamics affecting long-term value, validating the need to understand each relationship in a portfolio context. Offensive strategies are best targeted towards bottom-tier customers, defensive strategies are best for middle-tier customers, ceiling effects limit top-tier customers' growth potential.	• Does not consider the portfolio of prospects and how different prospects should be targeted or valued. Does not directly address acquisition–retention trade-off.
Dreze and Bonfrer (2009)	Statistical model development and simulation	• Setting acquisition and retention budgets to maximize CLV leads to the wrong marketing actions and is suboptimal in terms of firm profitability by ignoring the value of the entire relationship portfolio (prospects and customers).	• No data or empirical analysis. The simulations and comparisons were based on specific definitions and assumptions that may not hold in all situations.
Grewal, Chandrashekaran, and Citrin (2010)	Empirical analysis of statistical model and hypotheses	• Retention efforts (service quality) decreases customer portfolio heterogeneity and increases firm value; acquisition efforts (advertising) increases customer portfolio heterogeneity, which can hurt firm value, but reduces variability of firm value.	• Relies on proxies for acquisition and retention effort (advertising and service quality), and an indirect estimation of customer base heterogeneity derived from the residual of satisfaction. Does not directly address acquisition–retention allocation decision.
Arnold, Fang, and Palmatier (2011)	Empirical analysis of conceptual model and hypotheses	• An acquisition orientation better supports radical innovation performance, a retention orientation better supports incremental innovation performance, and a dual focus is inferior for innovation performance.	• Explores a firm-level trade-off, but trade-off decisions may be better managed closer to the market to adjust for with-in firm heterogeneity and local market nuances.

Note: CLV stands for customer lifetime value.

Optimizing the allocation of scarce resources between these two types of engagements can provide a significant increase in sales; however, the appropriate strategy to manage the trade-off between these two activities is highly contingent on factors at multiple levels of analysis. By studying the effect of allocation strategies on sales performance at the individual salesperson level, the current research generally adopts the portfolio value approach but on a 'disaggregated' basis that better accounts for internal and exchange-level factors.

The salesperson's perspective to the acquisition–retention trade-off

Salespeople are a 'natural' unit of analysis for managing the trade-offs between acquisition and retention activities. Personal involvement in executing acquisition and retention strategies enables salespeople to 'pick up subtle environmental and customer cues', which are difficult to detect at higher levels of aggregation (Ahearne et al. 2010, p. 768). Moreover, salespeople are inherently motivated to understand how to better allocate their time because they execute their assignments autonomously and are compensated based on performance. Their position adjacent to the customer is well-suited to monitor and adapt to changing portfolio characteristics (e.g., quantity and quality of prospects), which is crucial for balancing acquisition and retention decisions overtime (Johnson and Selnes 2004, 2005). Overall, salespeople can blend firm strategy with personal insights to respond to unique customer and competitive conditions by reallocating resources between

acquisition and retention and, thereby, increase sales (Musalem and Joshi 2009; Schweidel, Fader, and Bradlow 2008).

Allocations based on first-hand knowledge of prospects and customers in specific territories should be more effective than decisions made by high-level sales managers based on average customer characteristics (Rust, Lemon, and Zeithaml 2004, p. 109). In summary, studying how to best allocate resources to extract value from a salesperson's 'own' portfolio, rather than the firm's portfolio, avoids potential aggregation bias (Mantrala 2002), allows within-firm contingency factors to be evaluated and better positions supervisors and salespeople to incorporate exchange-level dynamics into their allocation decisions (Ahearne et al. 2010).

Adapting acquisition allocation to enhance performance

By adopting the salesperson perspective, we can consider contingencies of the acquisition–retention trade-off that were previously unexamined. Contingency theory has long been applied to intrapersonal performance as scholars recognize that the effectiveness of a particular strategy depends on a host of factors (Kohli 1989a; Weitz 1981). Research building on the theory of planned behaviour shows that an actor's behavioural success is contingent on his or her objective ability, intentional persistence to carry out a task and opportunity to perform the behaviour (Ajzen 2002). As noted, we use this ability–persistence–opportunity framework to identify and organize factors that may moderate the effect of acquisition allocation on performance. Each salesperson's optimal acquisition allocation depends on his/her individual acquisition abilities, persistence in pursuing prospects and the quality and quantity of the acquisition opportunities (Fu et al. 2010; Palmatier 2008).

Investigating moderators from an acquisition versus retention perspective may be especially informative because acquiring prospects is often more difficult than interacting with existing customers who have relatively well-defined, easily communicated and commonly understood needs (Blattberg and Deighton 1996). Finding and building relationships with prospects is an 'ill-structured problem' characterized by greater uncertainty, which is more difficult to solve using scripted behaviours (Weitz 1981, p. 93). Thus, a salesperson's optimal acquisition allocation may be highly sensitive to relevant ability–persistence–opportunity moderating factors.

Conceptual model and hypotheses

The effect of salespeople's acquisition allocation on performance

Most firms recognize that to achieve financial goals, existing customer relationships must be maintained because they grow faster and are less costly to serve than newly acquired customers (Reinartz and Kumar 2000). However, some customer defections are inevitable, and a small but consistent level of defection or client churn compounds into a significant loss in sales overtime (Mallin and Mayo 2006). Thus, a strategy focusing solely on retention will be suboptimal and must be complemented by some level of acquisition efforts (Johnson and Selnes 2004). Customer acquisition helps salespeople reach sales targets and diversify their portfolio, since the negative impact of churn can cause a 15% to 20% loss in the client base (Jolson and Wotruba 1992) and a corresponding erosion in company performance (Kumar and Petersen 2005). However, if salespeople aggressively increase their acquisition efforts, the subsequent lack of attention on existing customers can also negatively affect overall performance because of the high cost of acquisition relative to retention, and the aforementioned loss of existing customers due to lack of attention (Feinberg, Krishna, and Zhang 2002; Zeithaml, Berry, and Parasuraman 1996). Therefore, salespeople should develop and maintain a portfolio populated with both prospects and existing customers. We capture the salesperson's trade-off between acquisition and retention efforts using *acquisition allocation*, or the percentage of time that a salesperson directs to acquisition-related activities, recognizing that an increase in focus on acquisition necessitates a corresponding reduction in retention.

Diminishing returns exacerbate the harm of an overemphasis on either acquisition or retention (Blattberg and Deighton 1996; Reinartz, Thomas, and Kumar 2005) and arise when salespeople spend too much time with a portfolio of prospects (or, similarly, current customers). All prospects have a maximum likelihood to be acquired and a certain fixed potential for growth when the account is attained or 'won'. As they approach these maximum levels, increasing effort fails to continuously deliver the same pay-off (Thomas, Reinartz, and Kumar 2004). Across a portfolio of clients and prospects, salespeople tend to prioritize opportunities by their potential return (Ahearne et al. 2010; Weitz, Sujan, and Sujan 1986). If salespeople continually focus on acquisition, whether because of personal factors or governance demands, each subsequent prospect targeted will be of lower value. Considering the risks of mismanaging a portfolio comprised of both prospects and current clients and the diminishing returns from overemphasizing either acquisition or retention, we expect salespeople's sales performance to be highest at moderate levels of acquisition allocation. Thus:

> H_1: The linkage between salespeople's acquisition allocation and sales performance is concave (an inverted U-shape); performance is greatest at moderate levels of acquisition allocation and declines as the acquisition allocation either increases or decreases.

Moderating the effect of salespeople's acquisition allocation on performance

To identify moderating factors related to the effect of salespeople's acquisition allocation on performance, we apply the previously mentioned ability–persistence–opportunity framework to salespeople (inward), their supervisors (upward) and their portfolio (downward). Using a 360-degree perspective is consistent with previous researchers applying contingency theory to explain sales performance and examines three general sources of heterogeneity: (1) salesperson characteristics, (2) supervisor characteristics and (3) task/customer characteristics (Ahearne et al. 2010; Kohli 1989b; Rapp et al. 2006). While the ability–persistence–opportunity theoretical framework organizes potential moderating factors, we do not directly observe or test these theoretical leverages. Rather they guide our consideration of easily observable factors that extant research has previously linked to salesperson performance. To moderate the linkage between acquisition allocation and sales performance, factors should leverage the effectiveness of a given investment in acquisition to a greater degree than it would the same effort in retention. Acquisition will be more sensitive to moderation because it is the more difficult task, but moderating factors may also improve retention efforts to a lesser degree (Blattberg and Deighton 1996; Weitz 1981). Table 2 provides a summary of the perspectives analyzed, the associated variables under consideration, and the theoretical leverage under which each variable is categorized.

Acquisition ability

Salespeople's acquisition ability refers to the knowledge and skills that allow them to convert prospects into new customers. These include the expertise needed to accurately qualify prospects, target the best opportunities, gather and integrate the most relevant market information, develop a value proposition, manage the members of the internal team, and deliver and adapt the value proposition to satisfy prospects' needs (Moncrief and Marshall 2005; Weitz, Sujan, and Sujan 1986).

Salespeople's acquisition ability should be related to their experience, training, and knowledge breadth because these factors increase their aptitude for qualifying prospects, preparing presentations, and discovering superior-fitting solutions through adaptive selling (Ahearne et al. 2010; Franke and Park 2006). We follow Palmatier, Gopalakrishna, and Houston (2006, p. 480) in using 'experience as a general proxy for ability because experienced salespeople are more proficient in uncovering and closing sales opportunities and adapt more easily to different situations'. These proficiencies should also improve with training and greater knowledge breadth (Weitz, Sujan, and Sujan 1986). Training can compensate for areas in which salespeople lack experience, expertise, and confidence. With greater knowledge breadth – extensive awareness and understanding of a diverse array of products and matching solutions – salespeople are better suited to analyze each prospect's unique situation and deliver a customized solution (Homburg, Müller, and Klarmann 2011). Thus, the effect of salespeople's acquisition allocation on their sales performance should be greater as their acquisition ability increases because they

Table 2. Supervisor, salesperson, and portfolio variables for leveraging acquisition effort.

Perspectives	Variables tested	Representative research	Theoretical driver for leveraging acquisition effort[a]
Upward: supervisor	Supervisor experience	Franke and Park (2006), Rapp et al. (2006)	Acquisition ability
	Supervisor job commitment	Kohli, Shervani, and Challagalla (1998)	Acquisition persistence
Inward: salesperson	Salesperson experience	Palmatier, Gopalakrishna, and Houston (2006)	Acquisition ability
	Training	Weitz, Sujan, and Sujan (1986)	Acquisition ability
	Knowledge breadth	Homburg, Müller, and Klarmann 2011	Acquisition ability
	Salesperson job commitment	Jaramillo, Mulki, and Marshall 2005	Acquisition persistence
Downward: portfolio	Prospect quantity	Zoltners, Sinha, and Lorimer (2008)	Acquisition opportunity
	Prospect quality	Homburg, Müller, and Klarmann (2011), Szymanski (1988)	Acquisition opportunity

[a]We use the acquisition ability–persistence–opportunity framework, based on the theory of planned behaviour (Ajzen 2002; for sales applications see Fu et al. 2010 and Palmatier 2008), to identify and organize potential moderating variables.

will be more effective in their efforts to acquire new accounts compared to their less-experienced, less well-trained and less knowledgeable counterparts.

In addition, taking an upward perspective suggests that the supervisors' guidance and wisdom can enhance or diminish salespeople's performance in general (Deeter-Schmelz, Goegel, and Kennedy 2008) and acquisition ability more specifically (Challagalla and Shervani 1996; Franke and Park 2006). Supervisors with more experience will have more refined knowledge structures, which can be beneficial in directing salespeople's prospect prioritization, preparation and adaptive selling (Kohli, Shervani, and Challagalla 1998; Palmatier, Gopalakrishna, and Houston 2006). Experienced supervisors draw from proof in practice to build confidence that perseverance and experimentation in acquisition attempts will pay off in the long run despite short-term risks and a few early failures. These experienced managers are more willing to teach and mentor their salespeople's explorative and adaptive acquisition efforts, which makes them more effective at increasing sales through acquisition efforts (Franke and Park 2006; Rapp et al. 2006).

In summary, a salespeople's experience, training and knowledge breadth, as well as their supervisor's experience, are expected to positively moderate the focal relationship between acquisition allocation and sales performance. Given the quadratic nature of the proposed association between the focal constructs (i.e., an inverted U-shaped relationship), a positive moderation should shift or rotate the curve higher in general and also shift the peak of the curve higher (i.e., to the right towards greater acquisition allocation). For instance, the proposed moderation from knowledge breadth suggests that as knowledge breadth increases, the anticipated curvilinear relationship between salespeople's acquisition allocation and their sales performance will shift or rotate, such that the higher the acquisition allocation, the greater the relative gain in sales performance. Therefore, the moderator will shift the peak of the curve both higher and to the right (i.e., the optimal sales performance occurs at a higher acquisition allocation with greater knowledge breadth); although the original curve and moderated curve will not necessarily be congruent.

> H_2: The linkage between salespeople's acquisition allocation and sales performance is positively moderated by acquisition ability as reflected by their (a) experience, (b) training, (c) knowledge breadth, and (d) supervisors' experience.

Acquisition persistence

Acquisition persistence refers to salespeople's intensity and continuity of effort in converting a prospect to a customer; and it is particularly important for overcoming the additional challenges and complexities of customer acquisition (Szymanski 1988). Salespeople who are less likely to leave the organization or turnover are thought to be more committed to their job (Rutherford, Park, and Han 2011) and, hence, are more likely to demonstrate persistence in the sometimes-slow process of converting prospects to customers. Instead of just 'going through the motions' during the acquisition process, or giving up quickly on difficult-to-convert prospects and moving on to another prospect, committed employees should work harder and smarter to convert a prospect (Franke and Park 2006; Jaramillo, Mulki, and Marshall 2005; Leong, Randall, and Cote 1994). Prospects that require the greatest effort to attain may end up being the most valuable (Musalem and Joshi 2009; Schweidel, Fader, and Bradlow 2008). Customer contacts with the greatest decision-making authority are often the most difficult to reach and build a relationship with; thus, time spent on acquisition should yield greater pay-offs when salespeople cultivate relationships at a targeted potential client instead of bouncing from prospect to prospect at the first sign of adversity (Palmatier 2008). Hence, more committed salespeople should be more effective at winning over prospects for a given amount of time spent on acquisition compared to their less-committed counterparts because they are more likely to persist in conversion efforts with high-return customers even in the face of adversity and long conversion windows.

From an upward perspective, we expect supervisors to influence their salespeople's perseverance by shaping goal orientations through their guidance, direction and feedback (rewards and punishments) when setting expectations and clarifying roles (Kohli, Shervani, and Challagalla 1998). Thus, more committed supervisors should increase their support of salespeople's efforts at targeting more challenging but potentially more rewarding prospects. Supervisors who anticipate remaining in their position for a long time are more willing to help salespeople in their explorative acquisition efforts, which should increase acquisition effectiveness (Anderson and Oliver 1987; Johnson and Selnes 2004; Kohli, Shervani, and Challagalla 1998). Alternatively, supervisors not committed to their role are less concerned if salespeople are 'wasting' their time when prospecting for new customers. With supervisor support and encouragement, salespeople should be more willing to stick with complex prospects and avoid price competitions that are more likely with popular, easy-to-serve prospects that do not value extra efforts (Homburg, Müller, and Klarmann 2011; Verbeke et al. 2008). In summary, a salespeople's job commitment, and their supervisor's job commitment, are anticipated to positively moderate the relationship between acquisition allocation and sales performance. As previously noted, moderation of the U-shaped relationship between the focal constructs, suggests that sales performance will be relatively higher in general (i.e. the curve shifts higher), and also as acquisition allocation increases

(i.e. the peak of the curve rotates to the right towards higher acquisition allocation). Thus, as either of these two constructs increases, salespeople become relatively more effective at acquisition compared to retention.

> H_3: The linkage between salespeople's acquisition allocation and sales performance is positively moderated by their acquisition persistence as reflected by their (a) job commitment and (b) supervisors' job commitment.

Acquisition opportunity

Acquisition opportunity refers to the sales potential from salespeople's prospects in their portfolio. Salespeople's acquisition ability and acquisition persistence increase the likelihood of prospects reaching their purchasing potential (Palmatier, Gopalakrishna, and Houston 2006; Szymanski 1988; Weitz, Sujan, and Sujan 1986). Salespeople with a larger prospect pool should have more high potential prospects to target and, hence, should generate more sales and/or 'prospect wins' from a given level of acquisition effort (Zoltners, Sinha, and Lorimer 2008).

In addition to the quantity of prospects, salespeople should be more effective if they have higher quality prospects (Homburg, Müller, and Klarmann 2011; Szymanski 1988). Salespeople who rely heavily on 'cold' leads to identify prospects will likely find these potential customers to be less receptive and responsive to acquisition efforts. Alternatively, salespeople who have a higher quality prospect pool will generate more sales for a given amount of acquisition effort. Thus, the linkage between acquisition allocation and sales performance is thought to be positively moderated by both prospect quantity and prospect quality. As either of these two constructs increases, the proposed inverted U-shaped correspondence between acquisition allocation and sales performance will be relatively higher, and we would also expect to see the optimal acquisition allocation shift to a higher level. Consistent with the proposed hypotheses for job commitment, as prospect quality and/or prospect quantity increase, salespeople become relatively more effective at acquisition compared to retention.

> H_4: The linkage between salespeople's acquisition allocation and sales performance is positively moderated by their acquisition opportunity as reflected by their (a) prospect quantity and (b) prospect quality.

Research methodology

Research setting and data collection procedure

The setting for the study is a financial services holding company headquartered in the USA, which manages more than $100 billion in assets and offers a variety of services to business customers. Salespeople operate as the primary boundary spanners between the focal firm and these business customers and prospects and are responsible for maintaining current client relationships and acquiring new customers from the prospect pool. The day-to-day activities of the salespeople include opportunity identification and qualification, value proposition development, presentation of sales proposals, handling of service issues and relationship maintenance. The structure is hierarchical such that multiple salespeople report to the same supervisor or sales manager.

We sent emails to all salespeople and their supervisors with links to an online survey. Confidentiality was promised to all respondents, and the focal firm was not involved in the data collection or analysis. We obtained matched data from 106 supervisors and their 227 salespeople, for a response rate of 54% and 51%, respectively. No incentive was used as part of the survey collection process, although senior management at the focal company did stress to the salespeople the importance of completing the questionnaire in a timely manner. The focal firm also provided secondary information (e.g., sales dollars, training courses completed), which we merged with the survey data. Average annual sales per salesperson are $2.25 million, and they have been in their current role for an average of 3.4 years. Average supervisor tenure in their current assignment is 3.2 years.

We assessed possible nonresponse bias in two ways. First, we conducted tests comparing early and late respondents in terms of key study variables. The results indicate that early respondents do not differ from late respondents ($p > .05$). Second, we compared the final sample with respondents excluded from the sample because of missing data. These results are insignificant ($p > .05$). The results of these tests and the high response rates suggest that nonresponse bias is not a concern.

Measurement

To avoid potential issues with common method variance, the independent and dependent variables are derived from different sources. The dependent variable is an objective measure of salespeople's *sales performance* ($ millions) and is provided by the accounting department at the focal firm. We examine the impact of multiple independent variables, at both the level of the salesperson and supervisor, on sales performance. The primary explanatory variable is *acquisition allocation* (%), which represents the share of time allocated to acquiring new customers, and is self-reported by the salesperson. In addition, other independent variables include moderators and control variables which are either objective measures sourced from the firm's accounting or human resources database or numerical estimates (e.g.,%, number) reported by the salespeople or supervisor; except for team support, which uses a seven-point Likert scale. Thus, the majority of variables focus on 'concrete' measures of the underlying construct, as Bergkvist and Rossiter (2007) recommend. The use of a limited number of items for each

construct is common in research conducted in close collaboration with outside companies (Steenkamp and Geyskens 2006) and reflects the notion that multiple item scales (compared to single-item constructs) do not necessarily incorporate more information (Drolet and Morrison 2001; Pollack and Alexandrov 2013) or increase predictive validity (Fombelle et al. 2012).

More specifically, the indicators for these moderator variables are as follows: salespeople reported their *experience* as the number of 'years you have been in your current role'; *job commitment* as 100% less the '% likelihood of leaving [company] within next five years'; *prospect quantity* as the 'total number of prospects you have in your portfolio'; *prospect quality* as 100% less the '% of your prospects that comes from the following prospect resources: *Dun & Bradstreet* reports, periodicals, cold calls or industry trade group' (i.e., 100% – proportion of cold leads); *training* is the number of training courses completed by each salesperson; and *knowledge breadth* is the number of unique products (services) each salesperson has identified and entered into the firm's internal referral system. These latter two constructs use objective measures provided by the human resources department at the focal firm.

Salespeople also reported three control variables, including total *work effort* using the item, 'On average, how many hours do you work per week (hours)'; *team support* as the level of agreement with the statement, 'I get the support I require from my team' (1 = 'strongly disagree' and 7 = 'strongly agree'); and *customer pool size* as 'the number of existing customers you have in your portfolio'. Finally, *supervisors experience* and *supervisor job commitment* are also included using items that mirror the salesperson's measures.

The independent variables are centred using the grand mean at the firm level because of the structure and nature of the data. Although supervisors manage, on average, 2.1 salespeople; many supervisors oversee only a single direct report. In these situations, the centred data are the same (i.e., zero) for all cases where a supervisor manages only a single salesperson (even though the scores at the salesperson level will naturally vary). Furthermore, while HLM helps account for unobserved factors related to the territory managed by each supervisor, salesperson factors such as their overall experience are thought to have similar implications across all salespeople in the focal company. Thus, we employed grand mean centering at the firm level (rather than the supervisor level) to aid in the interpretation of the results (Hox 2010). We report all variables' descriptive statistics and correlations in Table 3.

Analysis and model development

As noted in Figure 1, the current analysis investigates the impact of acquisition allocation on sales performance.

Table 3. Descriptive statistics and correlations.

Variables	Mean	SD	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Sales performance (millions of dollars)	2.3	1.4	0.00	9.40	1.00												
2. Acquisition allocation (% of time)	.54	.15	0.04	0.87	−.18	1.00											
3. Salesperson experience (years)	3.4	2.6	0.00	18.00	.24	−.03	1.00										
4. Training (No. of courses)	1.8	2.0	0.00	5.00	.24	−.11	.47	1.00									
5. Knowledge breadth (No. of different products)	3.3	3.1	0.00	16.00	.28	−.04	.05	.14	1.00								
6. Supervisor experience (years)	3.2	2.9	0.00	15.00	.20	−.04	.03	.01	.12	1.00							
7. Salesperson job commitment (1 – % likelihood to leave)	.62	.27	0.00	1.00	.01	.25	−.07	−.13	−.04	−.04	1.00						
8. Supervisor job commitment (1 – % likelihood to leave)	.64	.24	0.00	1.00	−.12	−.03	−.06	.05	−.06	−.21	−.03	1.00					
9. Prospect quantity (No. of prospects)	50.8	92.7	1.00	1,000	−.15	.16	−.13	−.05	−.06	.07	.11	.03	1.00				
10. Prospect quality (1 – % leads from 'cold' sources)	.72	.20	0.15	1.00	.15	−.14	−.04	−.02	−.01	.04	−.10	.04	−.20	1.00			
11. Total effort (No. of work hours per week)	54.9	5.5	11.00	75.00	−.04	.01	−.14	−.07	−.01	−.01	−.02	−.10	.06	−.01	1.00		
12. Team support (Likert rating 1–7 scale)	2.8	1.7	1.00	7.00	.11	−.16	−.07	−.02	.04	.00	−.19	.04	−.14	.07	.08	1.00	
13. Customer pool size (No. of customers)	51.3	62.9	1.00	700.00	.05	.00	.11	−.02	−.10	.07	.09	.00	.01	.04	−.04	.03	1.00

Note: All correlations >.13 are statistically significant at $p < .05$. Measurement units are listed in parentheses.

Table 4. Results: effect of salesperson's acquisition allocation on sales performance.

Variables	Hypotheses	Sales (Millions $) Model 1	Model 2	Model 3
Intercept		2.443***	1.945**	1.715**
Main effects of acquisition allocation				
Acquisition allocation		5.389**	5.391**	7.396***
Acquisition allocation^2	H_1	−6.570***	−6.403***	−8.187***
Main effects of the moderators				
Salesperson experience			.061*	.101***
Training			.114**	.095**
Knowledge breadth			.088***	.083***
Supervisor experience			.096***	.109***
Salesperson job commitment			.557*	.487**
Supervisor job commitment			−.437	−.421
Prospect quantity			−.002*	−.003
Prospect quality			.778*	.747*
Moderating effects				
Acquisition allocation × salesperson experience				.422
Acquisition allocation^2 × salesperson experience	H_{2a}			−1.292
Acquisition allocation × training				−3.717**
Acquisition allocation^2 × training	H_{2b}			3.808**
Acquisition allocation × knowledge breadth				1.488**
Acquisition allocation^2 × knowledge breadth	H_{2c}			−1.369**
Acquisition allocation × supervisor experience				2.142**
Acquisition allocation^2 × supervisor experience	H_{2d}			−2.263**
Acquisition allocation × salesperson job commitment				14.118*
Acquisition allocation^2 × salesperson job commitment	H_{3a}			−12.839
Acquisition allocation × supervisor job commitment				19.593**
Acquisition allocation^2 × supervisor job commitment	H_{3b}			−19.864**
Acquisition allocation × prospect quantity				.086**
Acquisition allocation^2 × prospect quantity	H_{4a}			−.075**
Acquisition allocation × prospect quality				27.336**
Acquisition allocation^2 × prospect quality	H_{4b}			−28.222**
Control variables				
Work effort		−.008	.001	.003
Team support		.086	.091*	.115**
Customer pool size		.001	.001	.000
Fit statistics				
2 log likelihood		763.8	713.1	686.4
Chi square test of nested models				
Model 3 versus model 1 (df = 24)		$\chi^2(24) = 50.7$***		
Model 3 versus model 2 (df = 16)			$\chi^2(16) = 26.7$**	

Note: Unstandardized coefficients reported using mean-centred variables and one-tailed tests for hypothesized effects.
*$p < .10$, **$p < .05$, ***$p < .01$.

That is, how do decisions related to the proportion of time that a salesperson allocates to acquisition oriented activities affect his/her selling performance? Conceptually, we identify and organize eight potential moderators of this focal relationship using an ability–persistence–opportunity framework (Ajzen 2002). These moderators include separate constructs for salesperson experience, training, knowledge breadth and supervisor experience (as examples for ability); salesperson job commitment and supervisor job commitment (as examples of persistence); and prospect quantity and prospect quality (as examples of opportunity). Finally, work effort, team support and customer pool size are included as control variables.

We confront two main challenges in terms of completing the current analysis. First, the focal firm has a multilevel reporting structure in that a single supervisor may manage multiple salespeople: we observe an average of 2.1 salespeople reporting to each supervisor (SD = 1.2; range = 1–6). In complex selling situations such as those

encountered at financial service firms, both the overall firm-level context and the supervisors are thought to exert an impact on the selling process and decisions made by the individual salespeople. Hence, because of the hierarchical nature of the matched data, the current analysis reflects the decision-making judgments of the salesperson as well as his/her supervisor, which may result in common influences shared among groups of salespeople reporting to the same manager. In addition, some of moderators reside at the supervisor level (i.e. supervisor experience and job commitment), as opposed to the salesperson level. To avoid potential issues or biased parameter estimates that could arise from either intra-cluster correlation (i.e., the influence of a single supervisor on multiple salespeople) or disaggregating supervisor-level information corresponding to the moderators, we test our conceptual model with HLM (Raudenbush and Bryk 2002). Our estimation method, full maximum likelihood estimation, allows for easy comparison of nested models. As previously noted, variables are grand mean centred, and all variance inflation factors are less than 4.0, which suggest that multicollinearity is not a major issue.

In H_1, we postulate a nonlinear effect of acquisition allocation on sales performance. To test for this curvilinear effect, we include acquisition allocation in the model as both a linear and a quadratic term (Model 1). In Model 2, we include the direct main effect of each of the hypothesized moderating factors. In Model 3, used for hypothesis testing, we add the hypothesized interactions of each moderating factor with acquisition allocation (both the linear and the quadratic terms). We report the results for all three models in Table 4 and detail the specification of the multilevel models in the Appendix 1.

Results

The effect of salespeople's acquisition allocation on performance

Salespeople's acquisition allocation is significantly linked to their sales performance; both the linear ($B = 7.396$, $p < .01$) and the quadratic ($B = -8.187$, $p < .01$) terms are significant (Model 3, Table 3). Because the coefficient for the quadratic term is significant and negative, H_1 is supported (inverted U-shape), and there is an optimum level of acquisition allocation. To summarize and clarify this relationship, we plot acquisition allocation and sales in Figure 2.

We estimated the optimum acquisition allocation by taking the first derivative of Model 3, setting it to zero, and directly solving for acquisition allocation, which results in Equation 1.

$$\text{Optimum acquisition allocation} = [7.396 + .422\ (\text{SP experience}) - 3.717\ (\text{Training}) + 1.488\ (\text{Knowledge breadth}) + 2.142\ (\text{Supervisor experience}) + 14.118\ (\text{SP job commitment}) + 19.593\ (\text{Supervisor job commitment}) + .086\ (\text{Prospect quantity}) + 27.336\ (\text{Prospect quality})] / [-2(-8.187 - 1.292\ (\text{SP experience}) + 3.808\ (\text{Training}) - 1.369\ (\text{Knowledge breadth}) - 2.263\ (\text{Supervisor experience}) - 12.839\ (\text{SP job commitment}) - 19.864\ (\text{Supervisor job commitment}) - .075\ (\text{Prospect quantity}) - 28.222\ (\text{Prospect quality})], \quad (1)$$

where SP is the salesperson. For this sample, if the firm directed that all salespeople have the same acquisition allocation and held all other variables at their sample means (0 for mean-centred data), the maximum sales performance would correspond to an acquisition allocation of 45.2%. However, the significant interactions suggest that this optimum acquisition allocation varies across salespeople because this focal linkage is contingent on several moderating factors.

Moderation of the effect of salespeople's acquisition allocation on performance

Given that a total of eight moderators are included in the current analysis, we describe their impact by grouping these interactions according to the ability–persistence–opportunity framework (Ajzen 2002) previously discussed. The labels 'Acquisition Ability', 'Acquisition Persistence' and 'Acquisition Opportunity' are only used to theoretically organize the observed moderators.

Acquisition ability

First, we evaluate the moderating effect of the four acquisition ability factors (H_2) on the linkage between acquisition allocation and sales performance. Salespeople's experience failed to significantly moderate the effect of acquisition allocation on sales [$B_{linear} = .422$, not significant (ns); $B_{quadratic} = -1.292$, ns); thus, we reject H_{2a}. The interaction of training with acquisition allocation is significant, but not in the hypothesized direction ($B_{linear} = -3.717$, $p < .05$; $B_{quadratic} = 3.808$, $p < .05$); thus, we reject H_{2b}. However, both knowledge breadth ($B_{linear} = 1.488$, $p < .05$; $B_{quadratic} = -1.369$, $p < .05$) and supervisor experience ($B_{linear} = 2.142$, $p < .05$; $B_{quadratic} = -2.263$, $p < .05$) positively moderate the effect of acquisition allocation on sales, in support of H_{2c} and H_{2d}. As an illustration, this is depicted in Figure 3 for knowledge breadth. The figure displays the expected inverted U-shaped relationship between sales and acquisition allocation for high and low levels of the moderating construct. The positive moderation is manifest in the positive upward shift or rotation of the non-congruent curves as knowledge breadth increases. Thus, sales are typically greater at higher scores on this moderating construct, across commonly observed ranges for acquisition allocation.

Because interpreting moderations or interactions in models with both linear and quadratic terms is complex,

we conduct an additional analysis to evaluate the direction of the 'shift' in the peak (or optimum) of the inverted U-shaped curve to aid in interpretation. This is a parsimonious and managerially useful way to capture the aggregate effect of each moderator on the focal linkage because it provides managers guidance on how to vary their acquisition allocation to optimize sales performance under different contingences. Specifically, we solve Equation 1 for the optimal acquisition allocation for high and low (+/– 1 standard deviation) levels of each significant moderating variable with all other variables at their respective sample means. For example, we find that salespeople's optimal acquisition allocation (with regard to sales performance) increases as their knowledge breadth increases (low knowledge breadth = 35% acquisition allocation, high knowledge breadth = 48% acquisition allocation; see Figure 3), and as their supervisors' experience increases (low = 36% and high = 46%). These results are consistent with our hypothesized positive moderation; as each moderator increases, salespeople generate higher sales at higher levels of acquisition allocation; and the optimal acquisition level is also higher. That is, as a salesperson's knowledge breadth increases, she/he should allocate more time towards acquisition activities. Alternatively, for training, which was significant but not in the hypothesized direction, we find that salespeople's optimal acquisition allocation *decreases* as their training level increases (low = 47%, high = 27%). This counterintuitive finding suggests that training pays off more for retention than acquisition activities; that is, increases in training seem to reduce salespeople's optimal level of acquisition allocation in this sample.

Acquisition persistence

Second, we evaluate the moderating effect of the two acquisition persistence factors (H_3) on the linkage between acquisition allocation and sales performance. The interaction of salespeople's job commitment with acquisition allocation was only marginally significant (B_{linear} = 14.118, $p < .10$; $B_{quadratic}$ = –12.839, ns); thus, H_{3a} is marginally supported. However, supervisors' job commitment interacts significantly with acquisition allocation (B_{linear} = 19.593, $p < .05$; $B_{quadratic}$ = –19.864, $p < .05$), in support of H_{3b}. Evaluation of optimal acquisition allocations (Equation 1) reveals that salespeople's optimal acquisition allocation increases as their job commitment (low job commitment = 38% acquisition allocation, high job commitment = 48% acquisition allocation) and the supervisor's job commitment (low = 39%, high = 47%) increase.

Acquisition opportunity

Finally, we evaluate the moderating effect of the two acquisition opportunity factors (H_4) on the linkage between acquisition allocation and sales performance. Both prospect quantity (B_{linear} = .086, $p < .05$; $B_{quadratic}$ = –.075, $p < .05$) and prospect quality (B_{linear} = 27.336, $p < .05$; $B_{quadratic}$ = –28.222, $p < .05$) positively moderate the effect of acquisition allocation on sales, in support of H_{4a} and H_{4b}. Evaluation of optimal acquisition allocations reveals that salespeople's optimal acquisition allocation increases as prospect quantity (low = 35%, high = 49%) and quantity (low = 38%, high = 46%) increase. Thus, relationships managers should shift from retention to acquisition activities as their prospect quantity and quality increase to improve sales.

Effect of optimizing acquisition allocation on performance at different levels of analysis

Consistent with our premise that acquisition–retention trade-offs should be analyzed and implemented at the salesperson's level of analysis, we compare the impact of three different acquisition allocation strategies on performance. Specifically, we compare the firm's existing acquisition allocation strategy (base case) with a (1) *firm-level strategy*, in which the firm sets a uniform acquisition allocation across all salespeople; (2) *supervisor-level strategy*, in which each supervisor sets a single acquisition allocation across all of his/her salespeople; and (3) *salesperson-level strategy*, in which the acquisition allocation varies for each salesperson. Both our sample (salespeople nested within supervisors) and the 'multilevel' perspective of our moderating factors (salesperson-inward, supervisor-upward and portfolio-downward) enhance the relevance to this type of investigation.

In Table 5, we report the effects of these different acquisition allocation strategies on sales performance. If the firm uniformly reduces the salesperson's acquisition allocation from 54.0% (sample average) to the firm-level optimum of 45.2%, the average salesperson's sales increase by $239k (10.6% increase) over the base case. If each supervisor sets their reporting salespeople's acquisition allocation to his or her specific supervisor-level optimum (45.1% average, range limited to 25–75%), the average salesperson's sales increase by $409k (18.2% increase) over the base case. Last, if each salesperson applies an acquisition allocation to reflect his or her own optimum (45.4% average, range limited to 25–75%), the average salesperson's sales increase by $541k (24.0% increase) over the base case. Thus, in this sample, the results suggest that acquisition–retention trade-offs are most effectively managed at the individual salesperson level, which results in approximately twice the sales gain compared to setting firm-level acquisition targets.

Model stability assessments

To provide additional support for our findings, we conducted two types of stability assessments. First, we

Table 5. Effects of optimizing salesperson's acquisition allocation at different levels on sales performance.

Allocation strategy	Level of optimization	Salesperson's acquisition allocation	Average sales performance (000's $)	Performance gains over base case	
				000's $	%
Base case: existing acquisition allocation	None	Average: 54.0% Range: 4–87%	$2,252	–	–
Firm sets a uniform acquisition allocation for all salespeople	Firm level	All salespeople: 45.2%	$2,491	$239	10.6%
Supervisors set a uniform acquisition allocation for all of their salespeople	Supervisor level	Average: 45.1% Range: 25–75%	$2,661	$409	18.2%
Salespeople have unique acquisition allocations	Salespeople level	Average: 45.4% Range: 25–75%	$2,793	$541	24.0%

Note: We restricted optimal acquisition allocations to the range of 25–75% because more than 90% of the sample data occurred within this range.

assessed whether the functional specification of the model has an effect on the significance of reported model coefficients. To this end, we estimated a series of models where each of the hypothesized moderators was dropped out of the model 1 at a time, and we assessed the effect on the rest of the parameters. Even after removing a moderator, more than 3/4 of the coefficients are identical both in sign and in significance level, indicating that the models are substantively equivalent. Hence, this outcome provides support that the functional specification of the model is suitably robust.

Second, we conducted a test of the empirical stability of our estimates following the procedure outlined by Echambadi et al. (2006). To this end, we created a series of data-sets where, sequentially, 5%, 10%, 15% and 20% of the observations were dropped at random (using simple random sampling). After the revised data-set was created, we estimated the comprehensive model (model #3 in Table 3) using maximum likelihood. We repeated this procedure 1,000 times for each level of data removal (i.e. 5%, 10%, 15% and 20%). Table A1 reports the number of times that each of the parameters in the model is consistent with the results in our original data-set. The results are not surprising as the amount of data removed grows, the percentage of times that the same conclusion is attained logically diminishes monotonically, as power decreases. Still, in the vast majority of cases, the rate of success is over 75% for each of the parameters in the model showing excellent sample stability.

Discussion

Building a relationship portfolio by acquiring new prospects and retaining existing customers represents two key goals for most firms (Moncrief, Marshall, and Lassk 2006). Early research investigated acquisition and retention as separate strategies. More recently, the interdependencies and trade-offs between acquisition and retention have been examined at both the firm and the customer levels of analysis. However, the trade-off between acquisition and retention efforts has yet to be investigated from the perspective of the individual salesperson actually interfacing with the firm's prospects and customers, despite the key role of salespeople in implementing both engagements. Thus, the primary objective of this research was to examine the effect of salespeople's acquisition–retention trade-off on performance; that is, to assess the relationship between sales and acquisition allocation at the salesperson level of analysis.

Using matched triadic data from 227 salespeople, their supervisors and firm database archives, this study investigates the optimal acquisition allocation, which maximizes sales performance; and determines how salespeople should shift their specific allocation depending on unique individual, supervisor and portfolio moderating factors. Hence, we argue that there is no single appropriate, or 'best', acquisition allocation for all salespeople in a company. This outcome is in stark contrast to extant research providing uniform firm-level guidance. Indeed, consultants often promote instituting 'a predefined, regular amount of time' that salespeople must dedicate to acquisition activities (Miller 2006, p. 11). However, based on our analyses, this approach would likely prevent firms from achieving their full sales potential. Instead, we recommend that the amount of time and effort applied to acquisition- versus retention-oriented activities be customized to the distinctive characteristics of the individual salesperson, his/her manager and prospect portfolio.

For example, a salespeople's product knowledge breadth seems to be positively related to prospect acquisition success (Deeter-Schmelz, Goegel, and Kennedy 2008) in that sales performance increases with knowledge breadth, for any given level of acquisition allocation (see Figure 3). Firms can leverage this understanding by reallocating training budgets to increase knowledge

breadth for some salespeople and/ or reducing acquisition allocation targets for other salespeople who exhibit a deficit in their breadth of knowledge. As previously noted, a closer inspection of this interaction also reveals that the optimum acquisition level shifts higher (i.e., to the right, see Figure 3) for increased levels of knowledge breadth. For example, in the current sample, salespeople with less knowledge breadth (below the median) could increase their sales by an average of 13% simply by reallocating 19% of their time currently focused on acquisition to retention activities. Given the observation that a moderating construct – such as knowledge breadth – can shift the inverted U-shaped link (between sales and acquisition allocation) higher or lower, as well optimal acquisition allocation; this research offers several important implications for both researchers and sales managers.

Research implications

As hypothesized, we find support for an inverted U-shaped linkage between salespeople's acquisition allocation and their sales performance, reflecting a diminishing return from shifting too much attention to either acquisition or retention activities. This finding differs from extant research employing a portfolio value approach (offering firm-level strategies), which suggests aggressively pursuing either acquisition or retention strategies, depending on objectives and context (Arnold, Fang, and Palmatier 2011; Voss and Voss 2008). Our results indicate that firm-level portfolio models may provide suboptimal performance guidance when extended to the salespeople in the firm.

Our findings are consistent with research employing a customer value approach (offering a customer-level strategy), which finds an inverted U-shaped relationship for the effects of sequentially investing across acquisition and retention stages with a specific customer (Reinartz, Thomas, and Kumar 2005). Optimization recommendations from the customer value approach provide valuable guidance for interactions with a 'single prospect' overtime, but the results cannot be extended to managing trade-offs across different customers and prospects in a firm's or salespeople's relationship portfolio (Drèze and Bonfrer 2009). For example, consider the following hypothetical scenario: To maximize CLV, a firm spends $10 per prospect, which yields successful acquisitions in four of every ten prospects pursued. However, the firm could acquire an additional customer by spending $15 per prospect. The additional acquisition expenditure ($50 total) decreases the average CLV by $5 per customer but provides a net gain to the company if the additional prospect's expected value exceeds $50.

Our internal analysis links together and complements many of the advantages revealed from the previous analysis conducted below (i.e., customer approach) or above (i.e., firm portfolio approach) the individual salesperson's perspective; thus emphasizing that important marketing problems remain fertile grounds for research until analyzed from several levels of analysis and perspectives. For example, a salesperson's perspective results in an expanded set of moderating factors, not evaluated in extant portfolio and customer-level analysis, to address the contingent nature of the linkage between acquisition allocation and performance. This internal view recognizes the key role of implementers in executing acquisition and retention strategies and the inherent danger in enforcing uniform firm-level guidance to all salespeople without accounting for these internal or individual differences.

We identify and organize a broad set of potential moderators using an ability–persistence–opportunity framework (Ajzen 2002). Our findings that both supervisor and salesperson characteristics moderate the optimal acquisition allocation should encourage further research to consider within-firm or internal factors, in addition to the more commonly studied external factors (i.e., customer, prospect, competitive; Homburg, Müller, and Klarmann 2011). For instance, research could further extend the ability–persistence–opportunity framework to consider recruiting and technology utilization for ability; compensation scheme and culture for persistence; and competitive intensity and territory alignment of sales force size and structure for opportunity (Zoltners, Sinha, and Lorimer 2008). Although the efficacy of retention efforts should be relatively more stable than acquisition efforts, the ability–persistence–opportunity conceptual framework could be directly tested with a survey measuring the theoretical constructs adapted for acquisition and retention. In such a setup, testing the framework would require acquisition- and retention-specific indicators of ability, persistence and opportunity to directly drive sales performance instead of moderating the effect of the trade-off on sales performance.

Managerial implications

As an important managerial implication of this study, we show that the extant acquisition–retention trade-off guidance, which recommends a firm wide 'one-size-fits-all' acquisition allocation, results in suboptimal company performance. For example, in our sample the firm would achieve about twice the gain in sales by optimizing the acquisition allocation at the individual salesperson level than by setting firm wide acquisition targets, which is typical industry practice.

In addition, by inappropriately extending firm-level optima to salespeople, firms also undermine their overall performance by adopting guidelines that may cause salespeople to misallocate their time according to acquisition–retention rules of thumb. For example, consultants encourage firms to require salespeople to dedicate 'a predefined,

regular amount of time' for acquisition activities (Miller 2006, p. 11), which is an approach designed to combat salespeople's preference 'to discuss future business (with existing clients) than to venture out into a new territory to face the possibility of rejection after rejection' (p. 13). In a recent survey, 73% of sales and marketing managers indicated that 'customer acquisition and lead generation (are) their primary goal' (GlobalSpec 2009, p. 3).

However, the global guidance that 'more acquisition focus is better' can cause firms to institute targets that are acquisition biased, which is the case for the firm in our sample. On average, salespeople spent 54% of their time on acquisition activities, in which the firm-level optimum is 45% or a 9% acquisition bias, which represents a loss of $239k in sales per salesperson. In our sample, 67% of the salespeople are misallocating their time by more than 10%, with 49% overallocating their time and 18% under allocating their time to acquisition. However, if each salesperson was able and allowed to apply an acquisition allocation to reflect his/her own optimum (45.4% average, range limited to 25–75%) based on his/her unique skills and experiences, sales would increase by an average of $541k (24.0% increase) over the base case (see Table 5). Thus, in this sample, the results suggest that acquisition–retention trade-offs are most effectively managed at the individual salesperson level, which results in approximately twice the sales gain compared to setting firm-level acquisition targets. There are many reasons why firms and their salespeople may misallocate their resources between acquisition and retention. Some may lack the skills and knowledge necessary to balance their time appropriately; these skills are likely tacit and difficult to acquire. Supervisors and/or senior executives may be mistakenly pressuring salespeople to spend too much time on either acquisition or retention.

In summary, our findings show that the proportion of time allocated to acquisition should *increase* when salespeople have (1) greater knowledge breadth, (2) more experienced supervisors, (3) more committed supervisors, (4) a larger number of prospects to target and (5) higher quality prospects. Additionally, and contrary to our expectations, the salespeople who received more training would increase their sales performance by reducing their acquisition allocation. Additional research is needed to better understand this unanticipated finding. Possibly different types of training are more effective at leveraging retention versus acquisition efforts. Training focused on product breadth should be especially valuable to make salespeople's acquisition efforts more effective. This research provides salespeople guidance to help them adapt their acquisition allocation depending on their circumstances, which is consistent with Ahearne et al.'s (2010, p. 773) conclusion, after examining salespeople's allocation effort across a product portfolio, that allocation decisions are best made by employees closest to the problem because 'behavioral prescriptions will systematically misdirect sales personnel'.

Another implication for practice is related to how a firm should invest in and deploy salespeople. In particular, salespeople and their customer dealings and associations represent a valuable asset for selling firms and, thus, companies invest heavily to retain and enhance these assets (Palmatier, Scheer, and Steenkamp 2007; Zoltners, Sinha, and Lorimer 2008). In particular, three of the contingency factors identified in this research represent areas in which firms commonly invest: training, knowledge breadth (i.e., providing tools and team member support of diverse products) and lead generation quality (i.e., sponsoring conferences, attending trade shows, buying and qualifying leads). Selling firms have many options for deciding how to invest in their salespeople. One common option is to make an investment at the firm level in which all salespeople receive an equal share of the firm's investment pie. A second option is to target their investment to salespeople that 'need' it the most (i.e., provide training first to those who have been trained the least). A third option, available after completing an acquisition–retention trade-off analysis at the individual salesperson level (as we outline herein), is to optimize investments according to who will likely benefit the most. For our sample, we estimate the corresponding gain in sales performance from targeting training and investments on the basis of salespeople's existing acquisition allocation versus a uniform 10% overall increase in training, knowledge breadth, and lead quality across all salespeople. Sales performance increases from 31% to 81% for the same level of overall investment when using a targeted versus uniform investment approach. In addition, if a company has a territory in which it wants to develop new relationships, it should assign salespeople with greater knowledge breadth to prospect the territory and employ supervisors with greater experience and commitment to manage the territory.

Limitations and further research

Although the current analysis provides substantive insights, we recognize that there are some limitations to this research. First, the sample is a single firm in the financial services industry and the matched data are for a single point in time. A longitudinal study could help establish causality among the relationships and increase understanding of the long-term impact of acquisition allocation strategies. For example, some researchers suggest that the benefits of acquisition activities take a long time to materialize (Zeithaml, Berry, and Parasuraman 1996) and that loading a relationship portfolio with mature customers may have long-term negative consequences (Johnson and Selnes 2004). Second, since the selling emphasis and process may be different for financial

services compared to other B2B companies, further research should expand the sample across firms and industries to ensure generalizability. Third, this study accounts for two levels at the focal firm: the salesperson and his/her immediate supervisor. Although a higher level (i.e., a third level) could be included in future research, it is our judgement that this would not materially impact our findings because managers in the focal company are already fairly senior (and are often Vice Presidents) and oversee sales of almost $5 million (across their salespeople). Fourth, although single-item constructs are suggested for 'concrete' dimensions (Bergkvist and Rossiter 2007) and marketers have made use of single-item constructs in their recent scholarship (Kim and Wansink 2012; Orth and Malkewitz 2012), additional research using multiple items would provide additional confidence in our findings.

Finally, research should integrate the impact of cross-customer effects into models of acquisition allocation. For example, the 'betrayal effect', in which existing customers perceive an injustice when the seller provides better treatment (attention) to others, may add to the decline in performance on the far side of the inverted U-shape of acquisition allocation (Feinberg, Krishna, and Zhang 2002). Conversely, a healthy acquisition allocation can provide positive cross-customer effects while avoiding the negative effects by bolstering salespeople's innovative thinking and learning, which also provide value to existing customers (Arnold, Fang, and Palmatier 2011). Focusing time on providing quality service to existing customers may help the salesperson acquire new customers by increasing the existing customers' propensity to provide positive word of mouth (Zeithaml, Berry, and Parasuraman 1996). Retaining quality customers also provides a signal of quality and authenticity, which can help bolster a salesperson in the acquisition process. With additional data, researchers could isolate and identify the role of multiple mechanisms that may help explain the inverted U-shaped linkage between acquisition allocation and performance.

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Appendix 1. HLM and multilevel model estimation

The model is specified at two levels: Level 1 reflects individual-level data corresponding to salespeople, and Level 2 contains group information related to supervisors (Raudenbush and Bryk 2002; Snijders and Bosker 1999). The Level 1 model for salespeople describes sales performance as a function of (1) acquisition allocation (both the linear and the quadratic term), (2) moderators for salespeople and portfolio characteristics and (3) the control variables (Equation A1). The Level 2 models reflect the impact of supervisor characteristics on the intercept (β_{0j}) and the coefficients for the linear and quadratic terms for acquisition allocation (β_{1j}, β_{2j}) in Equations (A2)–(A5).

Level 1:

$$\begin{aligned}\mathrm{SALES}_{ij} = {} & \beta_{0j} + \beta_{1j}\mathrm{ACQ}_{ij} + \beta_{2j}\mathrm{ACQ}_{ij}^2 \\ & + \sum_{q=3}^{6} \beta_{qj}\mathrm{SP}_{qij} + \sum_{q=7}^{10} \beta_{qj}\mathrm{SP}_{qij}\mathrm{ACQ}_{ij} \\ & + \sum_{q=11}^{14} \beta_{qj}\mathrm{SP}_{qij}\mathrm{ACQ}_{ij}^2 \\ & + \sum_{q=15}^{16} \beta_{qj}\mathrm{PORT}_{qij} + \sum_{q=17}^{18} \beta_{qj}\mathrm{PORT}_{qij}\mathrm{ACQ}_{ij} \\ & + \sum_{q=19}^{20} \beta_{qj}\mathrm{PORT}_{qij}\mathrm{ACQ}_{ij}^2 + \sum_{q=21}^{23} \beta_{qj}\mathrm{CONT}_{qij} + r_{ij} \qquad (A1)\end{aligned}$$

Level 2:

$$\beta_{0j} = \gamma_{00} + \sum_{q=1}^{2} (\gamma_{0q}\mathrm{SUP}_{qj}) + u_{0j} \qquad (A2)$$

$$\beta_{1j} = \gamma_{10} + \sum_{q=1}^{2} (\gamma_{1q}\mathrm{SUP}_{qj}) \qquad (A3)$$

$$\beta_{2j} = \gamma_{20} + \sum_{q=1}^{2} (\gamma_{2q}\mathrm{SUP}_{qj}) \qquad (A4)$$

$$\sum_{q=3}^{23} \beta_{qj} = \sum_{q=3}^{23} \gamma_{q0} \qquad (A5)$$

where

i,j = Salesperson i reporting to supervisor j;

SALES_{ij} = annual sales, in dollars, for salesperson i, reporting to supervisor j;

ACQ_{ij} = acquisition allocation of salesperson i, reporting to supervisor j;

SP_{qij} = characteristic q of salesperson i, reporting to supervisor j;

q = 1: experience

q = 2: knowledge breadth

q = 3: training

q = 4: job commitment

SUP_{qj} = characteristic q of supervisor j;

q = 1: experience

q = 2: job commitment

$PORT_{qij}$ = portfolio characteristic q of salesperson i, reporting to supervisor j;
- q = 1: prospect quantity
- q = 2: prospect quality

$CONT_{qij}$ = control variable q of salesperson i, reporting to supervisor j;
- q = 1: total effort
- q = 2: team support
- q = 3: customer pool size

r_{ij} = individual-level salesperson error;
u_{0j} = group-level or supervisor random effects;
γ = coefficients to be estimated (i.e., fixed effects); and
β = coefficients in the Level 1 Salesperson model

To estimate the model coefficients, we substitute the Level 2 equations into the Level 1 equation. To allow for comparison of model fit across nested models, we estimate the model and its fixed coefficients (γ) using full maximum likelihood (Raudenbush and Bryk 2002). The individual-level error (r_{ij}) is normally distributed with a mean of zero and a variance of σ^2, and the group-level random effects ($u_{0-q,j}$) are multivariate normal with a mean of zero and a variance of τ_{qq}. To obtain the equation for the final model tested, we substitute Equations (A2)–(A5) into (A1), noting that $\beta_{qj} = \beta_q$ for all $q \neq 0$ and that $\gamma_{01} = \gamma_{02} = 0$.

Multilevel models, such as the one presented in equations A1 through A5 above, are potentially very flexible in their specification. Our model selection approach started by specifying the fixed portion of the equation based on our overall theoretical arguments. Subsequently, we attempted to identify potential random parts by testing whether individual parameters where indeed random (Hox 2010). In doing so, we found that there was no evidence that the slopes of the variables of interest were random, using a likelihood ratio tests (for example, our main variable – acquisition allocation – resulted in a non-significant random slope with the likelihood ratio test of ($\chi^2(1) = 2.36$, $p > .1$). This is not surprising as LaHuis and Ferguson (2009) in their simulation study find that the power for this type of test, with our data structure, ranges between 12% and 31% for small to medium size effects. The same authors find, however, that even though the power to find variance components may be low, there is ample power to identify cross level interactions (as we specify in the fixed part of the model). We also find that the model gets overly complex for our sample size when we try to specify that all slopes of the simple effects are random, and the model fails to converge. Therefore, based on the lack of suitable evidence of random slopes, but a clear improvement in the model when we include a random intercept ($\chi^2(1) = 31.73$, $p < .01$), our final specification only includes a random intercept, as shown in equation A2 (and, as noted, no random effects are included in the specifications for the level 2 slopes shown in Equations A3, A4, and A5).

Table A1. Percentage of times that the parameter is concordant in sign with main data-set and significant

	Proportion of sample removed			
Variables	5%	10%	15%	20%
Intercept	93.6	86.4	78.0	70.3
Main Effects of acquisition allocation				
Acquisition allocation	97.9	93.1	86.1	80.3
Acquisition allocation^2	99.3	98.0	93.9	89.5
Main effects of the moderators				
Salesperson experience	100.0	98.5	94.1	87.9
Training	91.6	82.1	75.7	66.4
Knowledge breadth	100.0	99.8	99.2	98.5
Supervisor experience	99.5	97.1	91.8	88.3
Salesperson job commitment	92.2	81.1	76.1	71.5
Supervisor job commitment	95.6	90.4	85.3	85.3
Prospect quantity	82.9	69.4	61.7	51.9
Prospect quality	96.7	88.0	81.3	76.3
Moderating effects				
Acquisition allocation × salesperson experience	100.0	99.9	99.9	99.5
Acquisition allocation^2 × salesperson experience	100.0	99.0	98.1	96.9
Acquisition allocation × training	95.3	87.4	78.1	71.7
Acquisition allocation^2 × training	97.5	89.4	82.1	74.8
Acquisition allocation × knowledge breadth	92.0	78.9	70.9	63.0
Acquisition allocation^2 × knowledge breadth	89.6	73.6	65.7	57.0
Acquisition allocation × supervisor experience	90.1	81.1	73.7	69.1
Acquisition allocation^2 × supervisor experience	91.2	82.5	75.7	70.7
Acquisition allocation × salesperson job commitment	85.5	84.8	82.8	83.5
Acquisition allocation^2 × salesperson job commitment	94.1	91.7	88.2	89.2
Acquisition allocation × supervisor job commitment	90.2	79.7	73.1	69.3
Acquisition allocation^2 × supervisor job commitment	92.0	83.1	77.1	72.5
Acquisition allocation × prospect quantity	87.9	81.5	72.2	66.0
Acquisition allocation^2 × prospect quantity	94.3	89.7	81.5	73.6
Acquisition allocation × prospect quality	89.8	82.0	74.6	67.4
Acquisition allocation^2 × prospect quality	91.9	84.9	78.0	70.9
Control variables				
Work effort	100.0	99.8	99.9	99.6
Team support	98.6	93.5	85.5	82.5
Customer pool size	100.0	99.9	99.4	98.7
Average agreement	94.3	88.2	82.7	78.1

Note: Table reports percentage of times that a given parameter was significant using the same criteria as per the original model with the complete data-set. The values are based on 1,000 subsamples obtained using simple random sampling on the original data. All correlations >.13 are statistically significant at $p < .05$. Measurement units are listed in parentheses.