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When Time is Sales: The Impact of Sales Manager Time Allocation Decisions on Sales Team Performance

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Abstract

Sales managers often take on the dual responsibilities of managing a sales team and selling to customers. This practice raises questions about how sales managers' time allocation to managing and selling activities affects sales team performance. Building on qualitative findings, this research first highlights and categorizes activities that are regularly competing for the limited time resources of today's sales managers. Our qualitative results reveal a prevalence of sales managers taking a "hybrid" approach to managing their sales teams by regularly allocating time toward both managing and selling activities. Through a resource allocation lens, we investigate how the time allocation decisions of these hybrid sales managers influence sales team performance. Our findings underscore the importance of effective time management for sales managers across a core set of leader behaviors, including managing people, managing information (planning and analysis), customer interaction, and administrative tasks. Ultimately, boundary conditions suggest counterintuitive implications of team experience on the value derived from various manager activities. Findings suggest that when managing more (less) experienced teams, managers should focus on spending more time on managing people (customer interaction).

Keywords

> Time is the scarcest resource; and unless it is managed, nothing else can be managed.
> —Peter F. Drucker

Sales managers are responsible for a range of activities that are integral to effective organizational functioning (Bommaraju et al. [12]; Deeter-Schmelz, Goebel, and Norman [20]; Mehta, Dubinsky, and Anderson [59]); thus, how they allocate their time across these activities is critical for organizational performance. Yet, in general, 90% of managers do not use their time as effectively as they could (Bruch and Ghoshal [13]), and 48% report that their time allocation decisions do not match strategic priorities (Bevins and De Smet [10]). How sales managers can most productively allocate their time is a question that the marketing discipline has been asking for decades (Berkowitz and Ginter [9]). Despite offering "real promise for management" (Twedt [97], 64), time allocation practices have remained largely unexplored in the field (Menon and Thompson [60]; Nonis, Fenner, and Sager [65]; Farley [24]; Lodish [52]; Mantrala, Sinha, and Zoltners [56]; Rapp, Bachrach, and Rapp [78]).

Effectively allocating time is fundamental to sales team performance, which is critical to the generation of firm revenues (Ahearne et al. [2]) and, ultimately, to organizational survival (Dubinsky [21]). The absence of systematic insight into "best practices" associated with sales managers' time allocation decisions is significant, as time is perhaps the most critical resource available to sales managers in pursuit of enhanced organizational performance outcomes (Bluehorn and Denhardt [11]). Indeed, Table 1 illustrates the dearth of studies examining time as a strategic resource despite growing expectations and activities for managers to balance (Mom, Fourné, and Jansen [62]). With multiple time demands facing managers, the critical question of *how* sales managers can invest time most effectively across activities (Mantrala, Sinha, and Zoltners [56]), rather than the amount of time they

invest in each activity (Mintzberg [61]), has become crucial to developing an enhanced understanding of sales performance optimization (Albers, Krafft, and Mantrala [3]). Thus, we demonstrate the contribution and positioning of this research surrounding the exploration of time allocation decisions across multiple demands unique to the sales manager role (see Table 1). Although the literature has examined how factors such as salesperson assignments (Lodish [53]), territory boundaries (Skiera and Albers [88]), and salesperson time allocations (Parasuraman and Day [70]) optimize sales team performance, little is known about how sales managers allocate their time. "A key decision rule is to allocate most resources to the variable with the highest elasticity" (Shankar [86], 3), or the activity that represents the largest percentage change in performance. But for sales managers balancing selling activities alongside traditionally emphasized role activities like coaching (Nguyen et al. [67]), what variable is this? When tradeoffs must be made, how do managers determine which activities will provide the most value to their teams?

Table 1. Time allocation research.

Study	Sample	Data structure	Context	Method and approach	Moderators	Time allocation	Outcome of interest	Summary of findings
Barling, Cheung, and Kelloway (1996)	Salespeople	Individual	B2C	Self-report (survey) Assessing time planning behaviors	Achievement striving	Toward single role	Individual performance	Conditions of high motivation drive the relationship between time management and performance
Claessens et al. (2004)	R&D engineers	Individual	B2B	Self-report (survey) Assessing time planning behaviors	Perceived control of time	Toward single role	Individual performance	Direct relationship between planning behaviors and self-reported performance
König, Kleinmann, and Höhmann (2013)	Managers	Individual	Unclear	Diary	Quiet hour, conscientiousness	Toward single role	Individual performance	Implementing a quiet hour into managers' daily schedules resulted in higher overall performance.
Macan (1994) [Study 1]	Public service employees	Individual	B2C	Self-report (survey)	Perceived control of time	Toward single role	Individual performance	Time management was not found to significantly increase job performance.
Nonis, Fenner, and Sager (2011)	Salespeople	Individual	B2C	Self-report (survey)	Locus of control; optimism	Toward single role	Individual performance	Time management influenced performance most when a high internal locus of control was present.
Rapp, Bachrach, and Rapp (2013)	Salespeople	Dyadic (supervisor-employee)	B2B	Self-report (survey)	Organizational citizenship behaviors	Toward single role	Individual performance	Time management moderates the relationship between OCBs and performance.
This research	Managers and salespeople	Dyadic (manager-sales team)	B2B	Time mapping (time diary) Assessing time allocation decisions	Team experience	Across multiple roles	Team performance	Team experience impacts the value added by additional time allocated toward managing versus selling activities.

1 *Note.* Given the nature of this research, studies using student samples or studies testing the impacts of time management training interventions were not included.

These tradeoffs are significant, as sales managers cycle between tactical activities (e.g., providing customer-facing support) and strategic activities (e.g., gathering competitive intelligence, developing team members) to enhance team performance. Balancing these selling versus managing activities requires that managers play multiple roles with diverse and competing activities (Carmeli and Halevi [16]). Through selling activities, managers drive immediate, short-term performance (by acting as an additional team member); while managing activities inherently involve time investment in longer-term growth and performance (by coaching and developing team capabilities). While the literature points to increasing expectations being placed on managers (e.g., Gibson and Birkinshaw [29]; Mom, Van Den Bosch, and Volberda [63]), the implications of sales managers making such tradeoffs remains unexplored (see Table 1). Additionally, given that the characteristics of the work context influence the effectiveness of manager activities (Flaherty [26]), the time managers allocate to different activities must account for team characteristics that influence the value added by additional time allocated toward each activity. Depending on the characteristics of the team, greater emphasis on selling activities versus managing activities may be more beneficial to performance (or vice versa). In this way, sales managers must subscribe to a "systems" perspective rather than a best-practice approach to time allocation across activities. That is, while there is no optimal practice for all sales teams, team characteristics may play a guiding role for best practices in balancing time allocation.

Consider, for example, the time allocation decisions of two sales managers, Frank and Sarah.[1] Both believe strongly in the value of coaching and managing their teams and therefore elect to maximize time spent managing, while devoting limited time to direct customer interaction. Contrast this approach with that taken by two other sales managers, Beth and Jeremy who believe that personal face time with customers will best help their teams meet unit sales objectives. Therefore, they both spend considerable time engaging directly with customers and relatively little time managing their salespeople. Facing time constraints, all four sales managers have made time allocation decisions across activities. At the end of the quarter, Frank's and Beth's teams surpass their team sales quotas, while Sarah's and Jeremy's teams underperform. Why? Frank and Sarah allocated time similarly but achieved very different results; the same is true of Beth and Jeremy. However, team-level contingencies (e.g., team experience) affect the value added by different manager activities and thus help explain why similar time allocation decisions lead to differences in sales team performance.

In this example, Frank and Jeremy were managing teams with relatively higher average experience. Frank understood the benefits of an experienced team that was able to capitalize on his management activities (e.g., strategic insights, high-level coaching), while Jeremy spent little time managing his team. With limited interaction, the performance of his employees did not change much, and the time Jeremy spent selling only added incremental value to the sales produced by his experienced team. In the case of Sarah and Beth, both work with less experienced teams. Sarah followed a relatively common approach to managing a newer team, spending her time on managerial support, coaching, and employee interaction. Justifiably, a team with little experience should gain benefits from being managed, but Sarah did not consider the diminishing returns her activities were likely to have. With little experience, the amount of information a team can absorb and put into practice is limited. Additional time, as Beth found, should be allocated to customer interaction so that the manager can add directly to the team's performance. With little average experience, additional sales will likely

provide a significant contribution to unit performance and the team will likely embrace the manager's ability to handle tougher customers or situations that they do not yet have the experience to manage.

These examples are not uncommon. Unfortunately, sales managers often do not optimally align their time allocations with their team's needs. Thus, this research develops and tests a model of sales manager time allocation that considers contingency effects that help direct productive manager time allocation. Our hypotheses and findings suggest that teams with higher levels of experience are better equipped to incorporate new knowledge and higher-level concepts into their current selling activities, resulting in more immediate performance gains. This, in turn, sheds light on which teams benefit from hybrid approaches to sales management and which teams are better served by conventional management approaches. Ultimately, this research makes three key contributions to the sales force productivity literature: (1) leveraging qualitative research, we first conceptualize and highlight the prevalence of hybrid sales managers and the variance in approaches to balancing managing versus selling activities, (2) we show that the effectiveness of time allocation decisions across different teams is nuanced and that sales experience affects the value added to the team by different activities, and (3) we provide insight into the effective use of sales manager time, based on the moderating role of team experience, therefore providing guidelines for effective sales team management. Our findings provide implications for resource allocation research and contextual bounds for allocation across manager activities (O'Reilly and Tushman [69]). By leveraging team experience, hybrid sales managers can more effectively balance time managing versus selling to increase sales team performance.

Conceptual development

Practitioners have long questioned how managers divide their time effectively between "managing versus doing" (Loen [54], 109). These concerns are no less pressing today. As firms strive to extract more productivity from frontline sales managers, managers can no longer focus on working hard (i.e., total hours worked) but must also consider working smart (i.e., making optimal time allocation decisions) (Sujan, Weitz, and Sujan [93]). Faced with selling and managing activities that are distinct and non-substitutable, both effort and strategy will have an impact on sales manager effectiveness (Bandura [6]) in transforming total sales team inputs into optimal performance outputs.

A resource-based perspective

Grounded in classic theory on basic economic problems of choice and scarcity (Robbins [80]), resource allocation theory focuses on the use of limited or scarce resources. Theorists argue that nearly all economic rents can be attributed to the ownership and allocation of scarce resources (Becker [8]). Derivatives of the resource-based view, including the knowledge-based view (Grant [32]), the core competence approach (Lado and Wilson [48]; Prahalad and Hamel [73]), and the dynamic capabilities approach (Teece, Pisano, and Shuen [95]), all have effective resource utilization as a core point of competitive differentiation (Grant [31]). Thus, it is broadly recognized that competitive advantage is, at least in part, derived from optimal resource allocation.

An archetypal "scarce" resource is time. Indeed, the availability of time is considered the "fundamental scarce resource in the economy" (Juster and Stafford [41], 471), making the allocation of time a key determinant in the pursuit of organizational objectives, operational efficiency, and ultimately, the distribution of income (Bluehorn and Denhardt [11]). Although a substantial body of economics

research has focused on the allocation of time (Ghez and Becker [28]; Linder [50]), related theories also have developed in information processing (Norman and Bobrow [66]), cognitive psychology (Kahneman [43]), and organizational strategy (Dutton, Stumpf, and Wagner [22]). The critical linchpin connecting these approaches is the recognition that human behavior (and, ultimately, performance as well) cannot be fully understood without reference to resources (Hockey [35]) and their allocation across competing domains.

Several fundamental principles underlie resource allocation theory, the first being that time is a fixed and, therefore, limited resource (Moore [64]). With a limited amount of time, multiple demands compete for the same time within the pool of resources (Hockey [35]), requiring that choices be made in its allocation across activities. The second principle is opportunity cost, in that investments in one area represent a lost opportunity in another area. The third principle involves the margin, which addresses a shifting resource mix. An increase in work time, for example, forces the question of where additional resources should be spent; with a decrease in work time, the shift in resources comes at the expense of a previously allotted-for area. Each of these fundamental principles further reinforces the need for sales managers to make strategic allocation decisions across activities (Sujan, Weitz, and Sujan [93]).

Although economists tend to approach time allocation rationally (Ghez and Becker [28]), organizational researchers recognize constraints on a manager's capacity to process information (Eisenhardt [23]; Simon [87]). For example, Dutton, Stumpf, and Wagner ([22]) argue that managers incorporate urgency and issue interconnectedness into their time decisions. Others have proposed that managers attend to the best-performing activity (Radner and Rothschild [75]), focus on "putting out fires" (Radner [74]), make use of heuristics such as the last-in-first-out (Seshadri and Zur [85]), or address missed performance targets (March and Simon [57]). In light of the absence of systematic theoretical guidance on optimal time allocation decisions, and in an effort to increase understanding of the complexities sales managers face when determining how to allocate their time, we turn to extant literature and qualitative analysis for further insight.

Qualitative grounding

Given the lack of knowledge on sales manager time allocation decisions, we first conducted a series of qualitative interviews with sales managers (e.g., district managers, region managers, vice presidents) working in organizations varying widely in industry, breadth, scope, and size. Participation was requested via email from 150 managers and interviews were conducted with 57 of those contacted (38% response rate). Respondents were offered a sales best-practices report and aggregated data from the study for their efforts. The objectives of this qualitative phase were to (1) develop an understanding of the activities and responsibilities to which sales managers must allocate their time and, (2) determine how they spend their time across three primary areas (i.e., managing, customer interaction, and administration). Interview participants were contacted by telephone, asked a series of structured interview questions, and informed that any information they provided would be kept confidential. Interviews lasted between 20 and 40 minutes, and detailed notes were taken.

Interviews were transcribed, and two of the authors content-analyzed the transcripts to identify the most prominent challenges sales managers face and to determine how sales managers allocate their time. After detailing the managers' time allocation decisions, we distilled the similarities, differences,

and patterns across lists (Strauss and Corbin [91]). We identified common themes using an iterative process of clustering similar activities. The reduced list contained 40 activities, corresponding to four superordinate categories (managing, customer interaction, administration, and control items). We reviewed the reduced list of activities with senior managers from the focal firm in our empirical study and revised it slightly when we separated management activities into two discrete categories, managing people and managing information. In total, our content analysis revealed three primary behavioral themes (time management concerns, hybrid sales managers, and activity variance).

Time management concerns
The first factor to emerge was the importance of time management for sales managers. In our interviews, the focus on time management stemmed largely from an overabundance (or overload) of tasks for which they were responsible. Of the 57 respondents, 32 (56%) identified time management, prioritization of tasks, time pressures, or similar factors as one of their top two challenges.

Hybrid sales managers
The second theme was the diversity of sales manager responsibilities. Four categories of activity emerged from the interviews: (1) managers who manage exclusively (26% of managers), (2) managers who manage and also sell to/service key accounts to which they are assigned (11%), (3) managers who manage and sell to/service both their own assigned accounts and their sales representatives' assigned accounts (26.5%), and (4) managers who manage and sell to/service their representatives' assigned accounts but do not have their own assigned accounts (37.5%). This pattern implies that sales managers operate on a continuum from selling activities (selling sales managers) to management activities (managing sales managers).

At one end of this continuum, the selling sales manager has the dual responsibility of achieving both a personal sales quota and managing salespeople. At the other end is the managing sales manager, whose focus is on managing a team of sales representatives and maximizing their efforts and output. At the center of the continuum is what we refer to as the "hybrid" sales manager, who both manages a sales team and engages in direct customer interaction. These hybrid managers do not have a personal account base or sales quota of their own; rather, they engage in sales calls to raise sales performance of the team and promote growth through sales team support, ensuring success, and committing themselves to key prospects. Hybrid sales managers do more than go on sales calls with their salespeople to observe or help them close a sale (an example of a "managing" activity); they also augment sales team activity through personal customer contact (an example of a "selling" activity). Because the hybrid sales manager was the largest segment in our qualitative sample, and because their selling is discretionary, we focused on these sales managers.

Activity variance
The third factor to materialize was variation in the ways sales managers choose to allocate their time. Across all respondents, 58.3% of managers' time was allocated to management-related tasks (i.e., managing people and information), 20.8% to selling-related tasks, and 20.9% to administrative tasks. Perhaps more interesting than the variation in activity itself, however, was the range of time spent on each activity. For example, managers reported allocating as little as 10% of their time to managing (high = 100%); as much as 85% of their time selling (low = 0%), and as much as 40% of their time to administrative activities (low = 0%). Given the vast differences in allocation decisions being made by

sales managers, determining implications of allocated time on team performance is crucial for strategic frontline management.

Sales manager activities and relative time allocation

As noted previously, one objective of our qualitative inquiry was to develop an understanding of the activities across which sales managers allocate their time. For reasons of parsimony, it is not possible to include all 170 tasks outlined by Marshall, Moncrief, and Lassk ([58]). Thus, we engaged in a grouping procedure to reduce the number of time categories. By reviewing the list of activities provided in prior research, our qualitative interviews, and insights from senior management, we create four specific managerial categories and one control category of sales manager activities. We use the general sales management framework of managing, selling, and administration (Rich [79]) but (based on our qualitative findings and discussions with managers) break the largest category (managing) into two distinct categories: managing people (e.g., coaching) and planning and analysis (i.e., managing information). This enables us to develop detailed insights into time management issues and the influence of time allocation on performance.

Hypotheses development

Each management activity provides some value to the team and affects team performance. Managing people reduces the probability of subpar sales call execution, inconsistencies, or deviation from expected best practices. Without guidance, teams may fall into poor routines and habits, miss opportunities, or fail to identify areas for improvement. Planning and analysis allows managers to generate timely industry, competitor, and territory intelligence that may provide salespeople with an operational advantage for generating more sales (Collins and Clark [18]). Finally, direct customer interactions can add new accounts, close difficult deals (Tanner and Castleberry [94]), and keep managers in touch with frontline needs and customer demands.

While it may be intuitively appealing to assume these activities each have a positive, linear relationship to performance (Vroom [98]), they are subject to time constraints. The assumption that resources are fixed and, therefore, by definition, limited (Moore [64]) creates scarcity across potentially competing demand vectors (Robert and Hockey [81]), thus requiring managers to make allocation decisions. Improving resource allocation decisions remains a top priority and challenge for most organizations (Shankar [86]). Fixed resources can only be invested in one way at a time, which impoverishes alternative demand vectors. Simply put, time spent on one activity means that less time can be spent on another. Using this logic, we do not assume a linear relationship between time allocation to each activity and sales team performance; rather, we theorize that the relationship between these managerial activities and team performance is non-monotonic. Consistent with the laws of diminishing returns, there comes a point beyond which additional effort would be more profitably spent elsewhere. Thus, it is more appropriate to focus on identifying optimal allocation across different activities (Weeks and Kahle [99]). In such cases, logarithmic assumptions about the estimation of time spent are more reliable than untransformed approaches (Fredrick and Walberg [27]). Therefore, we assume a point of diminishing returns for each activity and explore the implications of additional time allocated to each activity with respect to the tradeoffs inherent in that decision.

Moderating impact of sales team experience

Leadership approaches are dependent on moderating team conditions (Rosing, Frese, and Bausch [83]). This means that similar allocation decisions can lead to different results depending on team characteristics, and thus managers must adapt their approach accordingly. As an easily obtainable proxy for things such as knowledge, skills, and abilities, team experience represents a critical demographic variable (Sturman [92]). Sales experience influences the ability to respond to tactical versus strategic activities and information, as increasing levels of team experience enhance team knowledge and learning capabilities. However, research also highlights negative impacts of experience related to competency traps and rigidity in practice (Finkelstein and Hambrick [25]) and experience-induced complacency and repetition (Jones, Chonko, and Roberts [39]). Such factors influence the value generated by manager activities, making team experience a critical piece of the allocation puzzle. Given both positive and negative implications of experience, this characteristic provides an ideal lens through which to consider the boundary conditions of allocation decisions.

Managing people

With respect to the effectiveness of time spent managing people, two alternative perspectives exist. Prior literature advocates giving experienced teams higher levels of autonomy and focusing management activities on less experienced teams. Hersey and Blanchard ([34], 208) explain that "above average amounts of direction and guidance" can be beneficial to employees who "have not yet developed the necessary skills to perform their job in an effective manner." Yet more recent research considers the viewpoint that *experienced* teams may benefit most from above average amounts of manager interaction (Ahearne, Mathieu, and Rapp [1]). What this research stream has found is that leader interactions may be seen as developmental or empowering depending on the experience level of employees. For example, if experienced salespeople are routinized or stuck in their ways, "empowering" may ultimately result in little benefit because the sales team will likely remain relatively stagnant (Ahearne, Mathieu, and Rapp [1]). This view supports the idea that managing more experienced teams could likely produce higher performance gains. With competing arguments in the literature and inconsistent practices in industry (Bruch and Ghoshal [13]), understanding team experience contingencies around managing people is crucial.

With more experience, teams can respond to more strategic information and development, given their knowledge base from previous sales experience. More complex and strategic training and high-level coaching can be provided by building on a broader existing knowledge base. An experienced team will be more capable of gleaning value from manager interactions, assimilating knowledge and training into their actions, and exploiting lessons learned from manager interactions for realized performance gains. For example, higher-level selling approaches, such as negotiation, or advanced consultative customer management approaches can be understood and also acted on by experienced sales teams, while a less experienced sales team would likely be unable to apply such concepts. The difference lies in the experience necessary to share strategic versus simply tactical knowledge.

While experience can provide knowledge and capability benefits, tenured sales teams often encounter diminished rates of performance. Specifically, experienced salespeople are susceptible to complacency and success traps (Audia, Locke, and Smith [5]) because they tend to rely on strategies that have worked well in the past. Indeed, complacency can result in teams that adhere to existing beliefs too

rigidly (Keller and Weibler [44]) and hamper learning by overemphasizing existing competences that may soon become obsolete (Cao, Gedajlovic, and Zhang [15]). When this occurs, management activities can disrupt these traps and negate diminishing returns of experience (Sturman [92]).

Finally, managers must consider aggregate team performance gains. Recent research suggests that more experienced teams can also accomplish more than their less experienced counterparts in the same amount of time (Rapp, Agnihotri, and Forbes [76]). Incremental increases in the skill set of highly experienced teams due to coaching will likely have a greater impact on performance outcomes than similar increases in the skill set of less experienced teams. Thus:

> H1: As sales managers allocate additional time to managing people relative to other activities, sales teams with higher (vs. lower) levels of experience will have a greater increase in performance.

Planning and analysis
It is also essential to consider the effects of sales team experience on the team's accumulation of relevant knowledge, skills, and abilities. With little experience, teams have relatively ambiguous knowledge and only a vague understanding of the behaviors that lead to success (Ahearne et al. [2]). Experienced salespeople, however, have developed elaborate knowledge about the job and selling environment (Rapp et al. [77]). Relevant knowledge enables a team to integrate and capitalize on strategic information gathered by a manager. Planning and analysis provide benefits to the team through market information, competitive intelligence, forecasting, and territory analysis. However, managers must consider the bounds on actionable information given their teams' capabilities (Kozlowski et al. [47]; Zaccaro, Rittman, and Marks [100]). Teams vary in their ability to create value from the information available to them. A team with less experience is restricted to tactical and explicit knowledge, with limited value generated by large quantities of information. These teams are more likely to fall prey to what is referred to as "paralysis by analysis" (Langley [49], 63) compared to an experienced team that is capable of responding to high-level and strategic insights.

Hybrid managers must consider the tactical versus strategic value of investing in planning and analysis activities and balance the time spent managing information to match the needs of their teams. For example, providing simple, tactical competitive information (e.g., call patterns) can increase current sales of inexperienced teams initially. However, as managers allocate additional time to information-gathering activities, the performance returns of less experienced teams decrease, as they are likely to be paralyzed by high-level, strategic information that they are less capable of using. For these teams, planning and analysis activities will likely be beneficial only in small amounts. By contrast, managers who go beyond simple, tactical information may find that the high-level, strategic information gathered is beneficial when teams possess the experience necessary to process, manage, and implement more complex information with ease. Importantly, the effectiveness of planning and analysis activities in increasing team performance is likely to be a function of the readiness of the team to respond to them (Goodson, McGee, and Cashman [30]; Hersey and Blanchard [33]; Thompson and Vecchio [96]). Thus:

H2: As sales managers allocate additional time to planning and analysis relative to other activities, sales teams with higher (vs. lower) levels of experience will have a greater increase in performance.

Customer interaction

Finally, hybrid managers should focus time and effort on selling activities that can provide the added support and human capital necessary for new teams to meet their performance goals. Unlike experienced teams, less experienced teams are not negatively affected by a lack of manager interaction (Kohli [45]), so managers can invest more time in customer interactions without damaging morale or performance. Furthermore, less experienced teams actually benefit from additional investments in field experience that produce significantly greater learning advantages early in their career (Sturman [92]).

In customer interaction activities, managers act as "pinch hitters" for their sales teams, helping inexperienced teams benefit from tactical sales support to overcome functional deficits. With less experience, the team is less prepared to engage in complex customer interactions, manage large buying centers, negotiate with high value prospects, or put out some of the "fires" that may erupt in the sales role. Less experienced teams are therefore more likely to benefit from support in functional tasks, such as customer interactions, and will be better positioned to benefit more from their manager engaging in tactical prospecting and lead generation.

By contrast, an experienced team possesses greater breadth and depth of capabilities and familiarity to manage challenges that may arise in the sales process. Therefore, manager–customer interactions will have less utility to highly experienced teams capable of managing customers effectively. Tactical manager activities (e.g., taking over customers, accounts, or leads) can negatively affect morale in experienced teams (Kohli [45]) and disrupt established relationships and operations. These teams are capable of recognizing high value prospects, identifying latent customer needs, and capitalizing on available information, suggesting that they will derive little benefit from managers who engage in customer interactions. Indeed, with experienced teams, sales managers who over-invest in customer interaction may overshadow and even undermine the salesperson–customer relationship that the firm relies on to continually produce sales. Thus:

H3: As sales managers allocate additional time to customer interactions relative to other activities, sales teams with lower (vs. higher) levels of experience will have a greater increase in performance.

Methodology

Main model

The goal of this study is to empirically determine the impact of sales manager time allocation decisions on sales team performance. To do so, we need a methodology that can isolate the impact of different time allocation decisions across teams with varying levels of experience. We begin with the following general model of sales performance:

$$\ln Perf_{it} = \alpha_0 + \alpha_1 \ln\left(Perf_{i,t-1}\right) + X_{it}\beta + u_{it}, (1)$$

where ln(*Perf$_{it}$*) is the log of sales team performance of sales team i at time *t*[2]; ln(*Perf$_{i,t-1}$*) is the log of sales team performance of sales team i at time t – 1; *X$_{it}$* is a set of independent variables, including sales manager time allocations and sales team characteristics; *β* is a vector of coefficients; and *u$_{it}$* is an idiosyncratic random error. Here, we assume that the intercept and the log of sales team's past performance, ln(*Perf$_{i,t-1}$*), capture a baseline of current sales team performance. We assume that the additional time allocation and sales team characteristic variables (e.g., sales team experience) will help explain the additional variance in sales team performance above (or below) the baseline of expected sales performance.

Next, we provide further details on how sales manager time allocations and other sales team characteristics affect sales team performance. In particular, we decompose the set of X variables in Equation (1) to include all the time allocation variables, sales team characteristic variables, and interaction effects. Thus, we rewrite Equation (1) as

$$ln(Perf_{it}) = \alpha_0 + \alpha_1 ln(Perf_{i,t-1}) + \beta_1 ln(MP_{it}) + \beta_2 ln(PA_{it}) + \beta_3 ln(CI_{it}) + \beta_4 ln(AD_{it}) + \beta_5 Exp_{it} + \beta_6 TotalTime_{it} + \beta_7 Span_{it} + \beta_8 Max_{it} + \beta_9 ln(MP_{it}) x Exp_{it} + \beta_{10} ln(PA_{it}) x Exp_{it} + \beta_{11} ln(CI_{it}) x Exp_{it} + u_{it},(2)$$

where ln(*MP$_{it}$*) is the log of the proportion of time the sales manager of sales team i spent managing people at time t, ln(*PA$_{it}$*) is the log of the proportion of time the sales manager of sales team i spent on planning and analysis at time t, ln(*CI$_{it}$*) is the log of the proportion of time the sales manager of sales team i spent on customer interaction at time t, ln(*AD$_{it}$*) is the log of the proportion of time the sales manager of sales team i spent on administrative tasks at time t, *Exp$_{it}$* is the experience of the salespeople on sales team i at time t, TotalTime$_{it}$ is the average work week (in hours) of sales manager i at time t, *Span$_{it}$* is the span of control of the sales manager on sales team i at time t, *Max$_{it}$* is the maximum level of experience of a salesperson on sales team i at time t, and ln(*MP$_{it}$*) × *Exp$_{it}$*, ln(*PA$_{it}$*) × *Exp$_{it}$*, and ln(*CI$_{it}$*) × *Exp$_{it}$* are the interaction effects of the three key sales manager time allocation variables on sales team experience.[3]

To test our hypotheses empirically, we need to recover the parameters from Equation (2). However, we do not directly estimate this equation. It is important to note a potential endogeneity problem inherent in time allocation decisions. Management competencies may differ among sales managers and, as such, influence decisions about which time allocation behaviors will be most valuable in maximizing team performance. We attempt to alleviate the potential endogeneity problem through a model with instrumental variables using a control function approach (Petrin and Train [72]).

We treat three of the time allocation behaviors and the three interactions between the time allocation variables and sales team experience as endogenous variables. We do this because sales managers had the ability to make their own decisions about how to strategically set time allocations to maximize sales team performance. As such, these specific allocations may be strategically determined by sales managers as a function of their perceived underlying skills at managing people, planning and analysis, or customer interaction. We treat administrative tasks and all other job activities (e.g., downtime) as exogenous because they are often out of the manager's control. In general, these time allocations reflect the administrative burden and the travel requirements of the manager's region. Although some variation in these allocations exists across managers, the variation is often a result of powers beyond

their control and is unlikely to change period-to-period for each sales manager. We provide details of the instrumental variables in Web Appendix A and the instrumental variable regressions in Web Appendix B. Following the control function approach, we can then use the computed error terms from the instrumental variable regressions to estimate the following equation for the main model:

$$\ln(Perf_{it}) = \alpha_0 + \alpha_1 \ln(Perf_{i,t-1}) + \beta_1 \ln(MP_{it}) + \beta_2 \ln(PA_{it}) + \beta_3 \ln(CI_{it}) + \beta_4 \ln(AD_{it}) + \beta_5 Exp_{it} + \beta_6 TotalTime_{it} + \beta_7 Span_{it} + \beta_8 Max_{it} + \beta_9 \ln(MP_{it})xExp_{it} + \beta_{10} \ln(PA_{it})xExp_{it} + \beta_{11} \ln(CI_{it})xExp_{it} + \beta_{12} \hat{\varepsilon}_{it}^{MP} + \beta_{13} \hat{\varepsilon}_{it}^{PA} + \beta_{14} \hat{\varepsilon}_{it}^{CI} + \beta_{15} \hat{\varepsilon}_{it}^{MPxExp} + \beta_{16} \hat{\varepsilon}_{it}^{PAxExp} + \beta_{17} \hat{\varepsilon}_{it}^{CIxExp} + u_{it}, (3)$$

where $\hat{\varepsilon}_{it}^{MP}$, $\hat{\varepsilon}_{it}^{PA}$, $\hat{\varepsilon}_{it}^{CI}$, $\hat{\varepsilon}_{it}^{MPxExp}$, $\hat{\varepsilon}_{it}^{PAxExp}$, and $\hat{\varepsilon}_{it}^{CIxExp}$ are the computed error terms from the instrumental variable regressions for the six endogenous main and interaction effects.

Estimation

We estimate the models in two stages using the control function approach (Petrin and Train [72]). We begin by estimating the instrumental variable regressions (see Web Appendix B). We then compute the six error terms to be used in Equation (3). Here, we do not estimate the full model in Equation (3) using an ordinary least squares (OLS) regression. We assume that the time allocation variables are non-i.i.d. because, without changing the overall time worked by a given sales manager, increases in one time allocation variable lead to a decrease in at least one other time allocation variable. Thus, to account for the non-i.i.d. nature of the time allocation variables, we use residual bootstrap estimates (Liu and Singh [51]), following four steps:

1. Estimate the traditional OLS regression model for Equation (3) and obtain the parameter estimates. We retain the predicted value for $\ln(P\hat{e}rf_{it})$ and the residual term ($\hat{u}_{it}$).

2. For each pair (X_{it} (all independent variables), $\ln(Perf_{it})$), add a randomly resampled residual ($\hat{u}_{jt}$) to the response variable $\ln(Perf_{it})$ to obtain $\ln(Perf_{jt}^*) = \ln(P\hat{e}rf_{it}^*) + \hat{u}_{jt}$.

3. Refit the original regression model using $\ln(Perf_{jt}^*)$ in place of $\ln(Perf_{it})$.

4. Repeat steps 2 and 3, in this case 1,000 times.

We use the standard deviations across all parameter vectors generated from the residual bootstrapping algorithm as the unbiased standard errors, which we then use to compute *t*-values for the parameters to determine the statistical significance of the parameter estimates.

Data

Data for our empirical study came from a sample of sales managers and representatives from the sales force of a large U.S.-based industrial services firm. The focal firm partners with hospitality operators to provide customized product, system, training, and service solutions employed in critical operation areas (e.g., guest satisfaction, operational efficiency, safety). The use of a single company frame controls for extraneous factors (e.g., training, compensation structure, product portfolios) that vary across firms.

In the focal firm, salespeople are organized into regionally based sales teams. We collected data on all 159 regional sales managers. Manager responsibilities include selecting, training, developing, and coaching salespeople. They have profit and loss responsibilities and are charged with overseeing

budgets, quotas, and area business processes to maximize productivity and achieve multiple sales performance metrics (e.g., sales volume, customer acquisition, customer retention). Manager compensation is a salary (85%) and bonus (15%) structure, with the bonus being a function of the team's performance (no sales manager commissions). The firm adheres to a promote-from-within-the-region approach to staffing sales management positions. Rather than assigning sales managers to teams/regions on the basis of strategic need or matching individual/team/region characteristics, the firm typically fills open sales manager positions by promoting the top-performing salesperson from that territory into the manager position.

Sales managers are empowered to make time allocation decisions. With the exception of certain administrative duties, no company mandates dictate which activities managers should engage in or how much time they should allocate to various activities. A sales manager's only objective is maximization of sales team performance. Sales teams comprise salespeople who sell to and service customers inside the team's region. Their compensation follows a salary and commission structure, with commission a function of the individual's sales performance.

The data include information collected about the characteristics, behaviors, and performance of both sales representatives on each sales team and their respective sales managers. This information includes performance data for two quarters (t = 1 and 2) for both the salespeople and sales managers. We then gather cross-sectional time allocation and salesperson experience data from quarter 2. In total, we have information on 899 sales representatives who report to 159 sales managers, or approximately 5.7 sales reps per manager (min: 1; max: 13).

Sales performance

The dependent variable in Equation (3) is the log of the sales manager's team performance, $\ln(Perf_{it})$. In this case, the sales team performance of a given period is measured as the %-to-quota of the entire sales team under the sales manager. Notably, hybrid managers by definition don't have their own goals or manage customer accounts personally. Therefore, performance outcomes are attributed to sales team members, even when managers contribute to the selling effort. While the team's sales manager sets the quota for each salesperson on the team (after the team quota has been set), upper management sets the sales team's quota. Furthermore, the performance of the sales manager is assessed by the firm as a function of the sales team's %-to-quota. Thus, it is in the sales manager's interest to maximize the sales team's %-to-quota measure by optimally allocating time to different activities.

Time allocation behaviors

We used a time-mapping procedure to collect data on sales managers' time allocation behaviors. While the literature offers a multitude of approaches for gathering and analyzing questions on time use, we chose a time-mapping (or time diary) approach because it provides a comprehensive record for the period (Pentland et al. [71]). However, sampling and data collection have limitations that we address through random sampling procedures and reliability checks. To do this, our approach used a single-wave design to collect a representative, cross-sectional sample of average manager time-use across activities. To make the recording process easier on managers (and less time consuming) they could choose from a list of common activities that had been pre-coded for ease. Managers could also add

their own individual codes to reference any common activities that were not listed. Finally, managers were instructed that for those activities that were less common, they could provide personal notes recording the activities they were engaged in.

Participation and compliance were encouraged through ensured confidentiality when sales managers received the time-mapping worksheet for a one-month period during quarter 2 and were asked to log their daily activity in 15-minute increments over the course of one week. Managers were asked to track an "average" work week; the one-month period enabled them to avoid weeks with anomalies (e.g., vacations, intense training). For ease, managers referred to the alpha-coded list (discussed above) of the most common activities generated by a random subset of managers. We classified these behaviors into five time allocation categories: (1) managing people (e.g., coaching and providing feedback), (2) planning and analysis (e.g., managing and synthesizing information), (3) customer interaction (e.g., selling and service), (4) administrative tasks (e.g., paperwork and reporting), and (5) downtime (e.g., travel time).

Sales team experience

We measured team experience (Exp_{it}) as the average salesperson experience (in years) among all team members. We provide the descriptive statistics of these variables and other additional control variables from the main equation in Table 2 and report correlations for the variables in Table 3.

Table 2. Descriptive statistics.

Variable	M	SD	Definition
Performance ($Perf_t$)	96.16	4.35	Measured as the %-to-quota for a sales manager's team i in quarters t and t − 1.
Performance ($Perf_{t-1}$)	95.96	4.23	
Salesperson experience (Exp_{it})	12.32	5.18	Measured as the average number of years of sales experience for all the salespeople on sales team i at time t.
Managing people (Avg.) Total time (MP_{it})	14.72 29.6%	7.88	Time the sales manager of sales team i at time t allocated to any of a group of activities: coaching and mentoring, assisting others, troubleshooting, performance management, attending staff meetings, providing guidance, and communicating the corporate vision and strategy to the sales staff. Specifically, managing people includes only the activities in which a sales manager is actively interacting and engaging with their salespeople.
Planning and analysis (Avg.) Total time (PA_{it})	3.81 7.7%	5.64	Time the sales manager of sales team i at time t allocated to developing sales goals, strategies and plans, market and territory analysis, competitor evaluations, competitive intelligence gathering and analysis, forecasting, performance assessment, and interviewing. While information gathered during these activities may ultimately be shared with sales representatives (e.g., market or competitive intelligence), time spent on planning and analysis does not involve interacting directly with sales representatives and is performed solely by the sales manager.
Customer interaction (Avg.) Total time (CI_{it})	10.27 20.7%	8.59	Time the sales manager of sales team i at time t allocated to prospecting, lead generation, sales calls, service calls, after-sales follow-ups, and taking customer calls. These include times when the sales manager engages in some type of customer contact but does not have his or her subordinate present. For example, a sales manager who is prospecting with a salesperson would categorize this time as managing people, whereas a manager who calls on a prospect alone would categorize this as customer interaction.
Administrative (Avg.) Total time (AD_{it})	13.92 28.0%	9.54	Time the sales manager of sales team i at time t allocated to personnel reports, report tracking, daily/weekly sales updates, surveys, corporate e-mails, responding to non-sales voicemails, entering data into CRM systems, non-management meetings, conference calls, and so on.
Downtime (Avg.) Total time (DT_{it})	6.98 14.0%	7.43	Time the sales manager of sales team i at time t allocated to other activities that must be included and controlled for, including meals, travel time, and personal calls.

Note. Constructs representing managerial activities (managing people, planning and analysis, customer interaction, administrative tasks, and downtime) are reported in hours.

Table 3. Correlation table.

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
1. Log of performance ($\ln(Perf_{it})$)	−0.040	0.045	1									
2. Log of lag performance ($\ln(Perf_{i,t-1})$)	−1.306	0.957	0.323	1								
3. Log of % time managing people ($\ln(MP_{it})$)1	−1.524	0.0935	0.187	0.046ns	1							
4. Log of % time planning and analysis ($\ln(PA_{it})$)	−3.242	1.319	−0.133	0.023ns	0.012ns	1						
5. Log of % time customer interaction ($\ln(CI_{it})$)	−2.037	1.235	0.084	0.027ns	−0.225	0.066ns	1					
6. Log of % time administration ($\ln(AD_{it})$)	−1.328	0.721	−0.074	−0.048ns	0.018ns	−0.320	−0.134	1				
7. Average sales rep experience in years (Exp_{it})	12.265	5.251	0.158	0.236	−0.169	0.064ns	0.058ns	−0.115	1			
8. Average sales manager work week ($TotalTime_{it}$)	49.704	15.424	0.016ns	0.053ns	0.089	0.029ns	0.162	−0.051ns	0.108	1		
9. Average span of control ($Span_{it}$)	5.195	2.391	0.028ns	0.016ns	0.071	0.090	0.015ns	−0.001ns	0.150	0.046ns	1	
10. Max experience on sales team (Max_{it})	23.412	9.048	0.019ns	0.015ns	−0.083	0.093	0.030ns	−0.081	0.435	0.158	0.293	1

ns Not significant at $p < .05$.

We added 1 before taking the log of % of time allocations.

Instrumental variables

The salesperson survey asked about salespeople's perceptions of their sales managers' ability to manage/coach (5 items; *Coaching*). We used the mean value of responses. The sales manager survey consisted of 12 items that addressed sales managers' perceptions of their ability to synthesize information (3 items; *Synthesize Information*), engage in sales control (4 items; *Sales Control*), and use technology (5 items; *Technology Usage*). We conducted a factor analysis and obtained four distinct factors. We then used the factor scores for each of the four factors as the instrumental variables: *Coach*, *Info*, *Sales*, and *Tech* (see Web Appendix A for a description of the factors and Web Appendix B for details of the estimation procedure).

Results

We present the results of the first-stage regression in Table 4. Overall, the model exhibited a good fit at both stages. In the first stage, each model had a fairly good fit with the survey instruments. The majority of the instruments were significant (p <.01), and the coefficients exhibited signs and magnitudes with strong face validity. We perform two tests to evaluate the quality of our instruments. First, we evaluate the strength of our instruments. The first column in Table 4 for each of the six instrumental variable regressions ("Exog.") contains the results of the model with only the exogenous variables. The second column ("Full") reports the results of the model with the instruments along with the exogenous variables. A comparison of the F-statistics and R-square values across each of the two models suggests that the instruments in the instrumental variable regression improve the fit of the models. For example, the F-statistic (R^2) of the managing people regression improves from 12.994 (0.339) to 14.638 (0.589) from the exogenous-only model to the full model. Staiger and Stock ([89]) suggest that the bias introduced by weak instruments is of the order of the inverse of the F-statistic from the instrumental variable regression. Furthermore, Stock and Watson ([90]) suggest that F-statistics greater than 10 are acceptable because they correspond to a bias of less than 10% in the estimates. Staiger and Stock ([89]) test for the instrumental variable regression in our data does not indicate the presence of poor instruments. The lowest F-statistic for a "Full" model in Table 4 is 12.880. Thus, any weak instrument introduces, at worst, less than a 7.76% bias. We provide further evidence of the quality of the instruments in the "Robustness checks" section.

Table 4. Instrumental variable regression results.

		Managing people ln(MP_it)		Planning and analysis ln(PA_it)		Customer interaction ln(CI_it)		Managing people × experience ln(MP_it) × Exp_it		Planning and analysis × experience ln(PA_it) × Exp_it		Customer interaction × experience ln(CI_it) × Exp_it	
	Variable	Exog.	Full	Exog.	Full	Exog.	Full	Exog.	Full	Exog.	Full	Exog.	Full
Exogenous variables	Intercept	−1.757***	−1.859***	−4.679***	−4.674***	−2.887***	−2.737***	−3.606	−5.641	−15.263**	−15.217**	−12.552*	−9.529*
$\ln(\text{Perf}_{i,t-1})$		−0.119*	−0.105	−0.068	−0.071	0.004	−0.032	−2.292**	−1.862	−0.541	−0.480	0.361	−0.299
$\ln(\text{AD}_{it})$		−0.010	−0.047	−0.617***	−0.589***	−0.214	−0.188	1.426	0.429	−7.471***	−7.319***	−3.099*	−2.462
Exp_{it}		−0.048**	−0.047**	−0.030**	−0.010**	0.010*	0.008*	−2.640***	−2.491***	−3.326***	−3.333***	1.471***	1.895***
TotalTime_{it}		0.008*	0.009*	0.001	0.002	0.012*	0.009	0.127*	0.137*	−0.0004	0.008	0.141*	0.104
Span_{it}		0.002	0.018	0.089*	0.098*	0.010	0.001	0.254	0.584	0.921	1.197*	−0.062	−0.235
Max_{it}		0.010	0.008	0.003	0.003	−0.007	0.001	0.329	0.211	0.058	−0.003	0.184	0.015
Instrumental variables	Coach_i		0.103***		0.307***		−0.078***		2.330***		1.605***		−2.538***
Info_i			−0.056***		0.030***		0.025		−4.596***		2.081***		4.775***
Sales_i			−0.161***		0.056*		0.129***		−5.221***		4.806***		0.652***
Tech_i			0.005*		0.491***		−0.068***		2.566***		−5.486***		−0.652***
$\text{Exp}_{it}\text{xCoach}_i$			0.002***		0.018***		−0.012**		0.109***		1.046***		−1.242***
$\text{Exp}_{it}\text{xInfo}_i$			−0.015***		0.006		0.002		−0.542***		1.055***		0.467**
$\text{Exp}_{it}\text{xSales}_i$			−0.019***		−0.042***		0.016***		−0.525***		−1.381***		0.487**
$\text{Exp}_{it}\text{xTech}_i$			0.004		0.043***		−0.003**		0.253***		1.987***		−0.220*
Fit	F-statistic	12.994	14.638	13.344	16.111	3.862	17.589	19.504	26.846	23.478	32.751	10.098	12.880
R^2		0.339	0.589	0.345	0.612	0.273	0.631	0.435	0.723	0.481	0.761	0.285	0.556

Exog. = exogenous variables only; full = exogenous + instrumental variables.

$p < .10$.

$p < .05$.

$p < .01$.

Next, we focus on the focal equation of this study. We estimated two models, one with none of the interactions between the three focal time allocations and sales team experience and one with all the interactions. In both equations, we find that (1) the intercept is significant, suggesting that there is a baseline of expected performance (76.9%-to-quota for the full model); (2) the lag of performance is significant, controlling for some heterogeneity across teams and inertia of performance quarter-over-quarter (0.164 for the full model); (3) sales team experience is positive and significant, suggesting that more experienced sales teams are more likely to have higher levels of sales performance (0.001 for the full model); and (4) all the time allocation variables are significant, suggesting that sales manager time allocations play a key role in explaining sales team performance. We also find that adding the interactions significantly improves the variance explained from 0.262 to 0.305, suggesting that sales manager time allocations significantly affect sales team performance depending on the level of sales team experience (see Table 5).

Table 5. Sales team performance regression results.

Variable	No interactions estimate (Std. error)	Full model estimate (Std. error)
Intercept	−0.252 (0.125)**	−0.262 (0.141)*
Lag performance (ln(Perf$_{i,t-1}$))	0.171 (0.039)***	0.164 (0.041)***
Sales manager time allocation variables		
Managing people (ln(MP$_{it}$))	0.133 (0.037)***	0.163 (0.041)***
Planning and analysis (ln(PA$_{it}$))	−0.034 (0.009)***	−0.039 (0.008)***
Customer interaction (ln(CI$_{it}$))	0.448 (0.124)***	0.346 (0.109)***
Administrative tasks (ln(AD$_{it}$))	−0.123 (0.039)***	−0.114 (0.039)***
Sales team experience		
Experience (Exp$_{it}$)	0.002 (0.0005)***	0.001 (0.0003)***
Other covariates		
Avg. work week (TotalTime$_{it}$)	0.00001 (0.0002)ns	0.00001 (0.0002)ns
Span of control (Span$_{it}$)	−0.002 (0.002)ns	−0.002 (0.002)ns
Maximum experience (Max$_{it}$)	0.0003 (0.0006)ns	0.0003 (0.0007)ns
Interaction effects		
ln(MP$_{it}$) × Exp$_{it}$	–	0.008 (0.002)***
ln(PA$_{it}$) × Exp$_{it}$	–	0.003 (0.001)***
ln(CI$_{it}$) × Exp$_{it}$	–	−0.012 (0.003)***
Control function variables		
ê$_{it}$MP	−0.035 (0.016)**	−0.057 (0.067)ns
ê$_{it}$PA	0.010 (0.010)ns	−0.015 (0.002)***
ê$_{it}$CI	−0.009 (0.004)**	0.027 (0.004)***
ê$_{it}$MPxExp	–	−0.0004 (0.001)ns
ê$_{it}$PAxExp	–	0.002 (0.001)ns
ê$_{it}$CIxExp	–	−0.002 (0.003)ns
Overall model fit		
R^2	0.262	0.305

$p < .10$.
$p < .05$.
$p < .01$.

Managing people

Our analysis indicates that the performance impact of the proportion of time spent managing people varies substantially depending on the sales team's experience. We find the direct effect of the log of the proportion of time spent managing people is positive (0.163; *p* <.01) and the interaction between the log of the proportion of time spent managing people and sales team experience is positive (0.008; *p* <.01), in support of H1.

Planning and analysis

Our analysis indicates that the performance impact of the proportion of time spent on planning and analysis activities varies substantially depending on the experience level of the sales team. We find that the direct effect of the log of the proportion of time spent on planning and analysis is negative (−0.039; *p* <.01) and the interaction between the log of the proportion of time spent on planning and analysis and sales team experience is positive (0.003; *p* <.01), in support of H2.
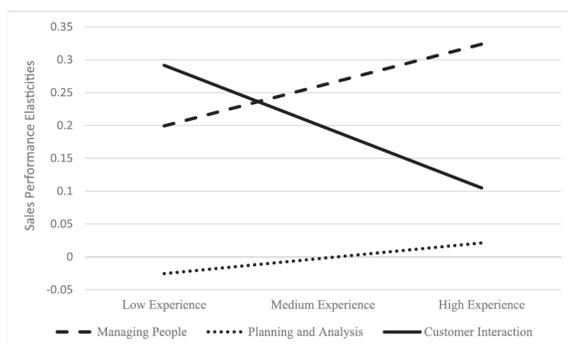
Customer interaction

Our analysis indicates that the performance impact of the proportion of time spent on customer interaction varies depending on the team's experience level. We find the direct effect of the log of the proportion of time spent on customer interaction is positive (0.346; *p* <.01) and the interaction between the proportion of time spent on customer interaction and sales team experience is negative (−0.012; *p* <.01), in support of H3.

Elasticities of time allocations

The results of the analysis suggest that sales team experience moderates the effectiveness of sales manager time allocations (managing people, planning and analysis, and customer interaction) on sales team performance. Given the nature of our log-log model specification, we are able to compute elasticities of these time allocations conditional on sales teams with low ($\mu_{Exp} - 1.5\sigma_{Exp}$), medium ($\mu_{Exp}$), and high ($\mu_{Exp} + 1.5\sigma_{Exp}$) levels of salesperson experience. We demonstrate the values of these elasticities in Figure 1.

Figure 1. Sales performance elasticities by activity and sales team experience.

As Figure 1 shows, teams with low levels of experience have increases in sales team performance of 0.291% (0.199%) when time allocation for customer interaction (managing people) increases by 1%. However, teams with high levels of experience have increases in sales team performance of 0.324%

(0.105%) when time allocation for managing people (customer interaction) increases by 1%. When teams have a medium level of experience, the increases in sales team performance are 0.262% when sales managers allocate time to managing people and 0.198% when allocating time to customer interaction. Furthermore, sales managers have a marginal decrease of –0.025% (increase of 0.021%) in sales team performance when they allocate an additional 1% of time to planning and analysis for teams that have low (high) levels of experience.

Other findings

The proportion of time managers allocate to administrative tasks is negative (–0.114; p <.01), the time managers spend working in a given week (TotalTime) is non-significant (0.00001; p >.10), the span of control of a manager (Span) is non-significant (–.002; p >.10), and the maximum experience of a salesperson on a given team (Max) is non-significant (0.0003; p >.10). In general, these results suggest that time spent on administrative tasks should be limited as much as possible. Moreover, the time a manager spends working in a given week, the number of salespeople on the team, and the maximum experience of a salesperson on a given team are unrelated to sales team performance. Finally, two of the residuals from the control function ($\hat{\varepsilon}_{it}^{PA}$ and $\hat{\varepsilon}_{it}^{CI}$) are significant, helping correct for the potential endogeneity of manager time allocations.

Robustness checks

We also need to test whether the current control function approach is appropriate for the given context. With regard to the error specification, we tried excluding the error components that were not significant in the original model ($\hat{\varepsilon}_{it}^{MP}$, $\hat{\varepsilon}_{it}^{MPxExp}$, $\hat{\varepsilon}_{it}^{PAxExp}$, and $\hat{\varepsilon}_{it}^{CIxExp}$). We found no significant changes in the parameter estimates of the model. With regard to the selection of instruments, we used four different approaches to determine whether the instruments were appropriate and valid. First, we tested whether the four main instruments (*Coach*, *Info*, *Sales*, and *Tech*) could explain the log of sales team performance (see Web Appendix C). We found that these instruments were unable to explain sales team performance. Second, we obtained the estimated residuals from the sales team performance regression ($\hat{u}_i$) and then regressed $\hat{u}_i$ on the instruments and ran the Sargan ([84]) test. None of the instruments were correlated with $\hat{u}_i$, and we could not reject the null that the instruments are exogenous. Third, we estimated the endogenous variable regressions by systematically removing each of the instruments one at a time across all equations to determine whether a specific instrument significantly changed the results. The parameter estimates obtained from the sales team performance equation remained stable across iterations. This suggests that the instrumental variable procedure was able to control for the potential endogeneity of sales manager time allocations and did not suffer from a weak instruments problem.

Discussion

Understanding sales manager time allocation is essential to optimizing sales performance (Mehta, Dubinsky, and Anderson [59]). Competitive pressures and increased performance expectations on the front line (Jasmand, Blazevic, and de Ruyter [38]) have driven many managers to take part in customer-facing sales activities alongside traditional management activities to help their teams reach performance goals. However, this functional pursuit of sales performance conflicts with the strategic pursuit of team growth and development typical of the sales manager role (Nguyen et al. [67]). This

reality has forced managers to make activity tradeoffs without a clear understanding of the ideal balance for ultimate sales team performance. Instead, sales managers are blindly attempting to balance managing and selling activities to meet the needs of their teams. Our findings provide insight into best practices in time allocation for sales managers and set the stage for exploring optimal allocations in future work.

By isolating short-term performance implications of hybrid management, we dispute the conventional belief that autonomy at higher experience levels is ideal. Instead, we find that managers should work closely with and coach their more experienced sales teams to spur performance increases. Similarly, while convention pushes for a high level of coaching and close monitoring of less experienced sales teams, we find that these activities provide only a slight increase in team capabilities as these newer teams struggle to implement new ideas and practices without a solid foundation of knowledge on which to build. Only with experience do teams gain the foundational skill sets necessary to capitalize on increasing levels of manager direction and coaching guidance.

While misaligned manager activities lead to waste (Menon and Thompson [60]), team dynamics can provide direction for managers to prioritize activities that maximize team potential. Recall Frank and Sarah from our introductory example. Both managers favored time spent managing people over other activities, but their teams' performance varied greatly. Team experience provides some explanation of why performance may differ across similar management scenarios. In Frank's case, a more experienced team capable of applying and generating value from high-level insights and coaching direction made the hours he dedicated to managing people more effective in driving sales performance. Now consider Beth and Jeremy, both of whom dedicated their time to customer interactions (minimizing their time managing salespeople). In Beth's case, a less experienced team benefits more from her direct support of team goals. Such teams derive value from hybrid managers who provide guidance and coaching to a point, after which they can dedicate support to customer interaction activities.

Theoretical implications

Several theoretical implications arise from our findings, the first of which involves aligning sales manager time allocation schemas with contingency characteristics (e.g., team experience) to maximize sales team performance (Kabadayi, Eyuboglu, and Thomas [42]). Managers may struggle in part because they defer to industry best practices for such insights. This practice, based on "Darwinian economics", maintains that competitive markets force optimal behavior, because less optimal behaviors are suppressed by market mechanisms (Anderson [4]). A key issue with this approach is the extent to which managers know what optimal behavior is and whether they implement it. Typically promoted from the sales force ranks, managers may default to past selling behaviors with little understanding of the performance tradeoffs of these versus other activities. Our findings with regard to time allocation and the substantive impact of relatively small adjustments in time allocation to align with contextual contingencies offer a starting point for researchers to uncover time allocation best practices.

This research also provides insight and guidelines for emerging work surrounding sales coaching (e.g., Nguyen et al. [67]; Onyemah and Anderson [68]) and the unique implications of manager activities within the sales domain. Seen as a way to equip salespeople with knowledge, skills, and abilities necessary for success; sales coaching may often be encouraged only in the case of less experienced

teams. However, this research advocates for the benefits of manager engagement with experienced individuals as they may require coaching interventions to remain motivated in later career stages (Cron [19]). Our findings discourage the tendency of leaders to focus on fixing weaknesses (e.g. lack of experience) rather than on leveraging employee strengths (Roberts et al. [82]), and encourage a focus on development of experienced teams.

Finally, our research provides insights into the evolving role demands of sales managers (Flaherty [26]). Our qualitative findings support the notion that sales managers are often tasked with multiple and competing demands (i.e., selling and managing), which can result in role conflict, stress, and diminished performance as demands exceed available resources (Mom, Van Den Bosch, and Volberda [63]). These results support a growing call for research exploring the complexities of ambidexterity that manifests within organizational roles (e.g., Hughes and Ogilvie [37]). Our findings extend current work by demonstrating that contingency factors play a significant role in the performance implications of multiple activities being pursued within a single role. Ambidexterity research can build from these insights to identify additional factors that influence optimal balance between tactical and strategic manager activities.

Managerial implications

Managers are vulnerable to wasting time, energy, and resources in overused and misapplied management styles and practices (Menon and Thompson [60]). Our findings however, present a number of particularly compelling implications for sales organizations surrounding optimal time allocation decisions for managers. Firstly, we find that sales managers can most efficiently use their time by engaging in person-focused behaviors (Burke et al. [14]) rather than "back-office" activities; suggesting they prioritize managing and selling activities. Of course, all management activities demonstrate some level of diminishing returns over-time, and managers should consider the value of time allocated relative to tradeoffs inherent in the decision. By exploring marginal returns of time investments, this research offers an initial set of guidelines for managers to better calibrate time management strategies with unique sales team needs. Using team experience as a guide, sales managers can better gauge the proportion of time they should be allocating to different activities.

The counterintuitive findings of this research also raise interesting and pertinent implications for organizations. Despite a common belief that little is to be gained from spending time with experienced sales teams, our results suggest that this is not always the case. Instead, our findings align with productivity research (e.g., Menon and Thompson [60]) that points to flaws in assuming that experienced teams no longer need direction. Specifically, our findings indicate that highly experienced teams perform better when their managers allocate more time to managing, whereas less experienced teams required less managing and more direct customer interaction on the part of the sales manager. Although contrary to what one might expect, we offer potential explanations based on insights from this study as well as extant research. One explanation is that experienced teams are better suited to handle customers alone, and sales managers may find themselves interrupting sales processes and norms or even damaging existing customer relationships by taking on selling activities for their team. On the other hand, when confronted with less experienced salespeople, the sales manager's intuition may be to over-manage, when in fact additional time spent directly with customers may be needed until the sales team has built the necessary competencies to adequately manage their territories.

Ultimately, our findings challenge reactive time management decisions and encourage organizations to support strategic time allocation in the sales manager role. Such actions can reduce the tendency of newly promoted sales managers to simply "fall back" on selling activities that they are comfortable with, or over emphasize managing activities as a result of focusing only on weaknesses (e.g., Roberts et al. [82]). In all, as companies strive toward the most effective and efficient use of their human sales resources, our results indicate that firms should be cognizant of the role played by experience in alignment of manager time and sales team needs. Practical ramifications extend to structure, selection, training, evaluation, and compensation – all of which offer potential for future research.

Finally, our findings indicated that planning and analysis activities did little to benefit team performance, particularly among less experienced sales teams. While this suggests that managers should allocate minimal time to these activities, it also suggests deficiencies in planning and analysis skills necessary for fruitful information management. Managers in this study were not able to capitalize on the information gathered, perhaps because of a lack of uninterrupted time to generate unique insights from data, lack of adequate knowledge or training to do so effectively, or an inability to communicate the information in an effective way. Moreover, the competitive transparency, availability of information, or competitive regulations may prevent managers from gathering high-level, valuable insights that are unique from those of competitors. Generating value from information-gathering activities requires organizations to take steps to ensure that managers have proper training and access to filtered, actionable data.

Our findings prompt important questions about why sales managers may not be "getting it right." Lacking decision tools or best practices guidelines and faced with pressures to reach sales goals, managers may either simply "guess wrong" or default to allocating time to the activities with which they are most comfortable. Our research guides allocation decisions that reduce waste tied to over-managing inexperienced teams and under-managing experienced teams.

Limitations and future research

This study offers a starting point that paves the way for future research on the impact of sales manager time allocation on sales team performance. As with any research, this study has limitations, the first of which is the single-company frame. We focused on a single site because doing so enabled us to control for extraneous and contextual factors. Insufficient consideration of the organizational context and pooling data across firms could skew results and produce artefactual findings. However, it would be worthwhile to examine the time allocation of sales managers facing a duality of roles in other industries to assess generalizability.

We also found that planning and analysis activities were not as beneficial as people-facing activities (selling and managing), but this could be due to the industry context. A more dynamic industry (e.g., technology) might provide the opportunity to capitalize on back-office activities such as planning and analysis. This could be an important consideration in future work, as the competitive value of information can vary across industries. While future studies would help corroborate our results, we believe our findings generalize to other sales contexts because of the similarities in sales manager responsibilities and time management challenges across the industries and firms participating in the qualitative portion of this study.

Another limitation concerns sales manager activities. While the study's time-mapping procedure (i.e., sales managers recorded their time allocation in 15-minute increments over one week) provided a rich account of activities and time allocation, the accuracy of self-reported time use can be problematic. Managers may have inflated their time allocation responses to achieve a perception of more hours worked per week. By examining time allocation across activities (vs. total time worked), we mitigate some concern here, as it is not likely that managers would systematically over- or under-report time spent in specific categories. However, future research should attempt to record time use in a more objective manner. Additionally, our research is limited by the single-wave approach to diary data collection. In time-use data collection, longitudinal studies can provide higher quality responses for reasons such as: subject learning that occurs with each wave of data collection (e.g., Juster [40]). However, multi-wave design also introduces concerns related to representativeness, generalizability, and inferences based on the assumed random distribution of study subjects; ultimately raising validity concerns that would need to be addressed. With the goal of building a model of sales manager time-use that creates a foundation for future work; our cross-sectional approach provides the necessary foundation for more nuanced, future work exploring moderating contexts of time-use through multi-wave model design. Finally, considering time-use data collection; quality of time use, other time allocation categories, leader behaviors, and team characteristics could potentially influence the relationships we studied. For example, from a team characteristics standpoint, future studies could explore the phenomena of self-managed sales teams or transactive memory systems in organizational units (Hollingshead [36]).

Similarly, we note limitations with the moderating variables considered in this study. Specifically, a lack of dyadic data documenting interactions between individual team members and sales managers, limits our ability to address implications of individual level experience on allocation decisions. It is likely that when making daily allocation decisions the individual experience level of an employee influences manager decisions. While average team experience may inform the most lucrative unit-level allocations, future studies should explore the implications of time allocation decisions when individual-level experience is considered. Additional team characteristics should also be explored in future studies. Characteristics such as team size (i.e., manager span of control) should be further explored to better understand the implications of time allocation when team member interactions vary in length and personalization. This study also opens an avenue of research into manager characteristics such as over- and under-worked managers. Exploring how managers working well above the average time (over-worked) allocate their time compared with their under-worked counterparts could provide additional insights into why misallocation occurs. Other manager characteristics of interest include leadership styles or manager orientations that may affect the tendency of a manager to allocate more time toward one activity over another–specifically given the large variance in how managers were deciding to allocate their time

Finally, our findings suggest that managers should focus allocation efforts on customer interactions when managing less experienced teams. Yet doing so potentially risks future team development. Because manager customer interaction activities occur in the absence of a salesperson, there is not an available opportunity for salesperson learning, role modeling, or observation. This combined with the decreased emphasis on managing people (e.g., coaching) could result in salespeople receiving little or no guidance or developmental growth. As such, there may be long-term effects of time allocation

decisions that the current study did not capture. Future research should consider the implications of sales manager time allocation decisions on the capability development and performance of the sales team. We hope that our research provides the foundation for these and other avenues of investigation.

Acknowledgments

Footnotes

1 *These examples are from the focal firm of this study. All names are pseudonyms to protect confidentiality.*

2 *Time (t) is measured in quarters.*

3 *We do not include the proportion of downtime because it would cause the time allocation variables to equal 100%.*

4 *Supplemental data for this article is available online at https://0-doi-org.libus.csd.mu.edu/10.1080/08853134.2020.1717961.*

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