Goal Consensus, Subordinates' Prior Performances, and Supervisors' Resource Allocation Preferences

目標一致性、員工前期績效與主管資源分配之偏好

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Abstract

This study uses field data from a realty company in Taiwan to investigate the relationship between goal consensus (involving both regional managers and branch managers), branch offices' prior sales performance, and regional managers' resource allocation preferences. Additionally, this study examines whether a branch office's previous sales performance affects the goal consensus–resource allocation preference relation. The results show that the greater the goal consensus between regional and branch managers, the more likely a branch office is to receive advertising funding, and the better the previous sales performance of a branch office, the more likely a regional manager deploys senior sales agents to the branch office. However, the branch offices' prior sales performance does not have any moderating effect on the goal consensus–resource allocation preference relation. Ultimately, our findings suggest that a supervisor's decision to distribute resources to a subordinate is affected both by his/her preferred goal and by the subordinate's past contributions.

【Keywords】goal consensus, subordinate's prior performance, supervisor's resource allocation preference

摘 要

本研究以臺灣的某房仲業者為研究對象，欲了解分店店長與區主管之間的目標的一致性，以及分店店長的前期績效是否會影響區主管資源分配之偏好。本研究同時進一步探討分店店長的前期績效是否會強化目標一致性與區主管資源分配偏好之間的關聯性。研究結果顯示，當區主管與分店店長之間的目標偏好越趨一致時，區主管越會分配較多的廣告資金給該店長所屬之分店，而當分店店長前期表現較好時，區主管較會調度資深業務人員於該分店中。然而，研究結果卻未發現分店店長的前期績效會強化目標一致性與區主管資源分配偏好之間的關聯性。惟就整體而言，本研究研究結果仍顯示，區主管資源分配之決策會受到其所偏好的目標與分店店長前期績效所影響。

【關鍵字】目標一致性、員工前期績效、主管資源分配偏好

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1. Introduction

Firms make use of scarce firm-specific resources to maintain production and a competitive advantage (Schlapp, Oraiopoulos, and Mak, 2015; Cheng and Kesner, 1997). Despite the undeniably important process of allocating scarce resources, there has been a paucity of empirical research examining the factors that shape supervisors' resource allocation choices (Pfeffer and Salancik, 1974; He, Chen, and Zhang, 2004). To determine the precise dynamics of resource allocation decisions, it is important to recognize how individuals handle these decision situations (De Cremer, 2003). In particular, resource allocation decisions take place in organizations regularly, and organizations rely on managers to carry out such decisions to maintain their competitive advantage (Ulrich and Lake, 1991). It is, therefore, critical to identify the factors, obstacles, and problems that influence supervisors' resource allocation preferences.

This study investigates the factors that influence a supervisor's resource allocation preferences. Specifically, we analyze whether these preferences are affected by the level of goal consensus between supervisors and their subordinates and subordinates' prior performance. We further examine whether subordinates' prior performance acts as a moderator and affects the relationship between goal consensus and supervisors' resource allocation preferences. To complete this study, we collect field-based archival and survey data from a major realty company in Taiwan, and examine the associations between the degree of supervisor–subordinate consensus in prioritizing goals, subordinates' prior performance, and supervisors' resource allocation preferences for advertising funding and deploying senior salespersons.

In this study, we operationalize supervisor–subordinate goal consensus by measuring how consistently the company's goals are prioritized by both regional and branch managers. The hierarchical structure of the company includes a chain of command that flows from a regional manager to several branch managers in their region. Therefore, we view one region[1] as a group, survey the regional and branch managers about their perceived priorities among the company's goals, and calculate the goal-consensus score

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[1] This case company has a presence in 33 regions and there are at least two branch offices within each region. The classification of different regions is based on the company's catalog.

between each regional manager–branch manager pair in the group. Consistent with our estimated projection, we find that a higher goal consensus between branch and regional manager priorities makes the regional manager more likely to allocate advertising funding to the branch manager's office. Additionally, we find that a regional manager is more likely to deploy senior salespersons to branch managers who have superior prior sales performance. However, we do not find a statistically significant association between the interactions of goal consensus and branch offices' prior sale performance on resource allocation preferences. This finding may suggest that although the two factors—goal consensus and subordinates' prior performance may exist simultaneously, they may play different and independent roles in affecting a regional manager's allocation preferences.

This study contributes to the existing managerial accounting literature in two ways. First, prior studies address how a consensus on company goals affects subordinate organizational commitment, job satisfaction, turnover, performance and the company's ability to realize its goals (Jensen and Meckling, 1976; Lambert, 2001; Ouchi, 1980; Ho, Wu, and Wu, 2014; Witt, 1998). Past studies also provide evidence that managers can take different actions to increase the goal consensus among the members within their organizations or how leaders view and define their followers (Abernethy and Brownell, 1997; Merchant, 1985; Abernethy, Dekker, and Schulz, 2015; Floyd and Wooldridge, 1992; Knight, Pearce, Smith, Olian, Sims, Smith, and Flood, 1999; Hsiung and Lee, 2021). These studies significantly clarify the impact of goal consensus on individuals and how to increase the goal consensus among the members within an organization. However, prior literature fails to address how supervisors react to supervisor–subordinate goal consensus. This study contributes to the literature by taking a broader perspective on supervisors' behavior toward supervisor–subordinate goal consensus and by showing that supervisor–subordinate goal consensus can affect the former's resource allocation preferences.

Second, we shed light on factors that can affect supervisors' resource allocation preferences. This issue is important because the allocation of limited resources within organizations or group members plays a key role in many aspects of managerial accounting. Despite the importance of resource allocation, previous studies mainly focus on the determinants of supervisors' reward-allocation preferences or behavior (He et al., 2004; Leventhal, 1980; Pfeffer and Langton, 1988). These studies do not consider what factors influence supervisors' preferences in distributing subordinates' job-related

resources. Our study contributes to this line of research by showing that a supervisor's resource allocation decision may be based on both self-preferences and subordinates' past performances. Past studies (e.g., Pfeffer and Langton, 1988; Kabanoff, 1991; Törnblom and Vermunt, 2007) show that decision makers may be motivated by what they perceive to be important and may make decisions in ways consistent with their own preferences. Our results are consistent with the above notion that decision makers may allow both their self-preferences and performance-related information about their subordinates to influence their resource allocation preferences.

The remainder of this article is organized as follows. Section 2 presents the literature review and hypothesis development. Section 3 presents the research design and variable measurements, and Section 4 discusses the empirical results. Section 5 provides the conclusions and limitations along with the authors' remarks.

2. Literature Review and Hypothesis Development

2.1 Goal Consensus and Resource Allocation Preferences

Supervisors are often charged with allocation and/or distribution decisions for subordinates throughout organizations. To complicate such decisions further, potential disparity among subordinates is often present in allocation decisions (Majerczyk and Thomas, 2021). As resources are scarce within the organization, resource allocation decision within the organization is a political matter (Pfeffer and Salancik, 1974).

The organization may be viewed as a group of coalitions (Pfeffer and Salancik, 1974; Mannix, 1993; Stevenson, Pearce, and Porter, 1985). Persistent differences in specific issues, contexts, and outcomes create different coalitions within an organization. Specifically, a coalition is defined as two or more members who cooperate to obtain a mutually desired outcome that satisfies the interest of the coalition rather than those of the entire group within which it is embedded (Polzer, Mannix, and Neale, 1998). Often, coalition members focus on their own gain at the expense of the rest of the group. In the organizational context, information on whether the coalition is achieving its goals is ambiguous, because knowledge about whether payoffs clearly lead to winners and losers is not always available in the organization. Imperfect knowledge and information; therefore, may cause coalition members to continue pursuing unsuccessful courses of action

(Stevenson et al., 1985).

Once organizational members perceive their interests and discuss issues, the coalition begins to form and conflicts among members are emerged. The answer to what decisions will be made lies in examining who has the power in a particular decision context (Pfeffer and Salancik, 1974; Pettigrew, 2009). Salancik and Pfeffer (1974) indicate that when there are differences in the objectives and preferences of organizational participants, the associated problem becomes whose interests are served and who controls and initiates organizational action. They show that, when organizational resources are limited and critical to organizational subunits, power becomes a significant factor (variable) in explaining resource allocation decisions. Power influences resource allocation decisions and processes that are directed toward an organization's subunits when resources are limited and function as a vital input for accomplishing goals (Pfeffer and Salancik, 2003; Pfeffer, 1981).

In a hierarchical organization, power is normally determined by the role rather than the person's attribution (Salancik and Pfeffer, 1977). A supervisor, therefore, can produce the desired outcomes, and accomplish the subunits' goals by controlling the resources on which the subunit depends. The hierarchical arrangement of position implies that the organization gives more power, information, resources, control and authority to more highly placed members. Lending further support to this view, Stevenson et al. (1985) point out that the organizational position largely determines the information and resources available to members; thus, formal position gives some actors a great deal more leverage in bargaining situations than others. Supervisors, therefore, are expected to have greater opportunities to create a dominant coalition and control the availability of resources between subordinates who are part of the dominant coalition and those who are part of a non-dominant coalition.

Supervisors own preferences concerning certain tasks may be driven by supervisors overemphasizing the need to provide input to tasks they prefer (Delfgaauw and Souverijn, 2016; Feichter, 2023). Studies have shown that a decision maker's desire to reach a particular outcome influences their judgments, behaviors, and decisions (Epley and Gilovich, 2016; Boiney, Kennedy, and Nye, 1997). To fulfill their preferred goals, supervisors may use authority to allocate resources, mainly to control other subunits to achieve goals that conform with their own goals. Specifically, supervisors are more likely

to distribute resources to subordinates who show similar interests (goals) to increase collective success through activities that strengthen their capacity and resolve against others' interests in order to protect their own interests (Mithani and O'Brien, 2021).

However, in the social interactions between supervisors and subordinates, neither of the parties plays a completely passive role. Supervisors and subordinates build not only on their own roles in the social relationship but also the other party's corresponding role in that same relationship (Hsiung and Lee, 2021). Differentiated resource allocation may cause some subordinates to circuitously reduce their job performance and their altruism toward colleagues, which may reduce collaboration, low product quality and deteriorate overall performance (Xu, Huang, Lam, and Miao, 2012). This scenario may possible to deter supervisors to distribute resource that only contingent on their own preferred goals or interest. However, because the power differentials between a supervisor and a subordinated, an act of direct retaliation by a subordinate may trigger even greater hostility form the offending supervisor (Tepper, Moss, and Duffy, 2011). As a result, subordinates who receive unequitable resource may remain silence and accept such differentiation.

In summary, in the setting of our research site, a regional manager has his own preferred goals. The favored goals of a regional manager reveal either his own preferences or the priority that the regional manager considers essential for his own region. In both cases, however, the regional manager's preferred goals are subjectively absolute, because the regional manager allows neither discrimination among alternative preferences nor the possibility that he might perceive his own priorities and actions as morally distressing (March, 1991; Shapira, 2002). The regional manager is, therefore, more likely to perceive his preferred goals to be important and to prioritize his acts in pursuit of his preferred goals. Since resources are limited within the region, to increase the possibility of achieving his preferred goals, he will have the incentive to distribute more resources to branch managers who have similar goal priorities in order to strengthen their capacity and protect their own interests. Therefore, we argue that branch managers with cohesive goals are more likely to receive more resources than branch managers with incohesive goals. This leads to our first hypothesis (H1):

H1: The greater the degree of goal consensus, the more resources received by the branch manager's office, and vice versa.

2.2 Subordinates' Prior Performance and Resource Allocation Preference

Allocators' distributive decisions are context-sensitive, and there are few conditions under which allocators use one signal distributive rule to distribute all resources (Meindl, 1989; Kabanoff, 1991). For example, Konow (2001) states that when the goal of the distributor is productivity, allocators are more likely to distribute resources equitably; nonetheless, allocators may also be motivated by other concerns such as self-interest, which also affect the allocators' distribution preferences. Cook and Hegtvedt (1983) suggest that goal interactions are important determinants of the selection of distribution rules, and different rules can be used simultaneously or in combination. Babcock and Loewenstein (1997) also indicate that an individual's choice is affected by both self-interest and moral correction. In line with the above studies, Leventhal, Michaels, and Sanford (1972) demonstrate that when there is a sizeable difference in levels of performance among group members, allocators prefer using a distribution rule to simultaneously reward superior performers while keeping all members sufficiently satisfied to prevent negative feelings.

Similarly, a regional manager's allocation preferences may be affected not only by his own preferred goals but also by other factors (e.g., the performance of branch managers). In our case company, the responsibilities of the regional manager are ensuring that the branch offices within his region achieve the required performance (i.e., target sales revenues) and maximizing the overall performance of the branch offices within the region. In other words, the regional managers in our case company rely on branch managers to complete their own tasks, and individual performance counts toward the overall performance of branch offices within their region. It is therefore reasonable to expect that the focus of the regional manager is task-directed and achievement-oriented. People who have task-directed relationships tend to apply distributive rules that maximize overall productivity (Kabanoff, 1991; Cook and Hegtvedt, 1983; Sondak, Neale, and Pinkley, 1999; Pfeffer and Langton, 1988). In this case, the distribution preferences of the allocator reflect the productivity or contributions of the recipients.

The task-directed relationship between branch managers and the regional manager leads to the use of distributive rules that reflect the productivity of the branch managers, in other words, the equity rules. Moreover, according to the expectancy value of the theory of motivation, behavior results from the decisions made to maximize one's overall expected

outcome level (Sniezek, May, and Sawyer, 1990; Mitchell, 1982). The past performance of branch managers constitutes information for regional managers by which to form expectations about the future performance of the branch managers; the regional manager's decision may be contingent upon the past performance of branch managers and affect the allocation preferences of the regional manager. As a supervisor's decision is influenced not only by personal preferences but also by the subordinate's past performance (Sutcliffe and McNamara, 2001; Kor and Mahoney, 2005), it can be concluded that a branch office with a previous record of inferior performance affects the regional manager's decision regarding resource distribution.

Given that regional managers tend to be achievement-oriented and the perception of the future performance of branch managers is prone to vary according to whether their past performance meets the regional manager's expectations, we predict that the regional manager's resource dispersion preferences mirror the contributions of the branch managers. This leads to our second hypothesis:

H2: The better the prior sales performance of a branch manager's office, the more likely that the office receives resources, and vice versa.

2.3 Impact of Subordinates' Prior Performance on Relationship between Goal Consensus and Resource Allocation Preferences

Besides investigating the individual relationship between goal consensus and supervisors' resource allocation preferences and the individual relationship between subordinates' prior performance and supervisors' resource allocation preferences, we further explore the interaction between goal consensus and subordinates' prior performance on supervisors' resource allocation preferences. Allocators may not use a single principle to distribute resources, and the pursuit of one principle may coincide or conflict with the pursuit of another (Konow, 2001; Cook and Hegtvedt, 1983). Because both goal consensus and subordinates' performance are antecedents that can affect allocators' preferences for distributing resources, it is, therefore, interesting to investigate whether situational factors (achievement orientation) reinforce the influence of self-interest factors (i.e., preferred goals) on supervisors' allocation preferences.

Given that a regional manager seeks to ensure that a preferable goal can be achieved while simultaneously maximizing the overall performance of the branch offices within his

region, he should be more likely to allocate resources to branch managers who both share his goals and boast superior performance. However, although achieving preferable goals and maximizing overall performance are both important and benefit the regional manager, preference for these two factors may create conflict; the effect of one given factor (e.g., preferable goal) might prevail over another (Lerner and Whitehead, 1980; Törnblom, 1988; Sondak et al., 1999). That is, the effect of goal consensus might reduce the effect of the subordinate's prior performance, and vice versa.

Nonetheless, the availability of information can provide individuals with considerable opportunity to support and reinforce their preference and biases (Luft, Shields, and Thomas, 2016; Liu, 2022). Decision-makers usually explore and collect information that aids particular positions (Healy, 2016; Das and Teng, 1999). In such case, supervisor attention is drawn to information that appeals to their interests, and they view this information as fundamental to the allotment decision. Accordingly, supervisors are expected to be affected by information that differentiates subordinates and that supports their beliefs when they consider allocation decisions for their subordinates (Majerczyk and Thomas, 2021). If the information supports supervisors' previous beliefs and is accessible for the initial allocation decision, supervisors give extra resources to subordinates who are better reflected in that information. This initial decision can thus lead to favoritism, in which supervisors allocate more resources to advantaged subordinates to support this decision (Majerczyk and Thomas, 2021).

Hence, we posit that with information such as prior performance, regional managers are motivated to be consistent with and justify this initial allocation preference in their resource allocation decision in which they dispose more resources to branch managers with similar goal priority and better prior performance. Therefore, we state our third hypothesis as follows:

H3: The prior sales performance of a branch office reinforces the relationship between the degree of goal consensus and the resources received by the office.

3. Methods

3.1 Research Site

Founded in 1987, the target research site is the largest realty company in Taiwan. At

the time of the study, the company had 474 branch offices in Taiwan and was expanding its overseas operations in China and Japan.

As the largest realty company in Taiwan, the research site is focused on maintaining its competitive advantage, reputation, profits and a leadership position in Taiwan. To implement its vision and strategy, the company ask top executives, mid-level managers, and representatives of frontline sales personnel to list goals and a vision that can help the company maintain its advantages and leadership position in the realty industry.

Based on the survey results and discussions, the company selects the following four equally-important goals as its business directions and strategies: 1) expanding market share and improving financial performance, 2) customer-focused quality management, 3) team management, and 4) implementation of ideology. Detailed descriptions of these four goals are presented in Table 1.

Table 1 Four Goals

Goals	Statement
Expanding market share and improving financial performance	(1) Growth rate of the number of house deals in each branch office (2) Growth rate of the number of entrusted houses in each branch office (3) Growth rate of the sales revenues of each branch office (4) Break-even point of each branch office (5) Cost control of each branch office
Customer-focused quality management	(1) Rate of customer satisfaction in each branch office (2) Protection of customers' rights (3) Management of the construction and maintenance of customer relationships
Team management	(1) Talent management in each branch office (2) Turnover rate in each branch office (3) Ambience of coordination, team member support, and communication between team members in each branch office
Implementation of company ideology	(1) Identifies the company ideology (2) Understands the importance of ethics or does what is right

The company's top management communicates these four goals to regional managers and gives them the freedom to determine their priorities in response to changes in the market. Regional managers communicate their goal priorities to branch managers at monthly meetings; however, branch managers may adjust their priorities according to the

various circumstances at their own branch offices. Therefore, there can be inconsistency between the goals of regional and branch managers.

Under the hierarchical structure of this target company, a regional manager has the authority and discretion to decide how advertising funding and salespersons are delegated among the branch offices within the region.[2] This creates an opportunity for regional managers to influence the advertising funding and the number of senior/junior salespersons a branch office can receive and possess. Since the organizational resources that a regional manager receives from headquarters are fixed and limited, it is impossible to meet the resource needs of all branch managers. Therefore, there is a possibility that the resource distribution is skewed in favor of certain branch managers.

3.2 Data Collection

To examine our hypotheses, we collect data from multiple sources at the research (case study) site. First, we interview the top management team to understand the goal-setting process and the underlying implications and specifications of their goals. Given the information from these interviews, we then develop the survey questionnaires. The top management team review the questionnaire drafts, randomly select regional and branch managers, and pilot-test them.

Later, we conduct a field survey with the regional and branch managers of the case company. The case company help us distribute a paper-based survey to 33 regional and 431 branch managers. In total, we receive responses from 28 regional and 272 branch managers (with 84% and 63% response rates from regional and branch managers, respectively).[3] Of these, only 1% of the regional managers and 15% of the branch managers are female, and the average tenures for regional managers and branch managers

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2 The branch offices in this case company are all chain stores. Although the case company owns and operates the branch offices, the case company gives authority to regional managers to decide how advertising funding and salespersons are delegated among the branch offices within the region based on the circumstances of the region and each branch office. From the interview we conducted with the top management team, regional managers, and branch office managers, resource allocation decisions are made on a monthly basis.

3 We conduct a nonresponse analysis to compare respondents and nonrespondents. Our results show that the two groups did not differ significantly in terms of tenure or gender ($p > 0.10$). Therefore, the results indicate that nonresponse bias was not a serious concern in our study.

in their positions are 8 and 6 years, respectively. The surveys were conducted between January 1, 2017 and June 30, 2017. The questions on the regional/branch manager surveys are included in Appendix A. Finally, we collect the case company's monthly financial information and data related to the branch offices from January 1, 2017 to June 30, 2017 and match them with the survey data.[4]

3.3 Measurement of Independent Variables

3.3.1 Goal Consensus between Regional and Branch Managers ($CONSENSUS_{i,t}$)

We operationalize the goal consensus between both regional and branch managers by measuring how consistently a regional and branch manager pair prioritize the four goals. This method of measuring goal consensus helps us to identify the level of agreement between a regional and branch manager regarding the importance of the goals pursued by the case company.

We use the Analytic Hierarchy Process (AHP) approach developed by Saaty (2000) to develop a ratio scale from the pairwise comparisons to obtain the priorities of both regional and branch managers. The AHP approach has several advantages. First, it addresses the direction of the difference between two profiles and provides an objective formula by which to process the subjective and personal preferences of an individual, thereby overcoming the major limitations of Euclidean distance. Additionally, the normalized relative weight provides more information than the ranking. Second, the AHP works by developing priorities for alternatives, and the prioritization process solves the problem of handling each subject's distinct significance with respect to the values of different alternatives. Finally, the AHP allows inconsistency in judgments and provides users with directions for improving their judgment and understanding of the problem (Saaty, 2000).

We ask both regional and branch managers to compare all the criteria in a pairwise fashion, where each level (six comparisons in all) uses a scale ranging from 1 to 9. The judgments of the pairwise comparisons help us to establish a matrix. After constructing the

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4   The information and financial department in the case company help us collect and confirm corrections to all the financial data they obtained. We winsorize the 1% extreme observations on each tail for continuous regression variables to control the effect of outliers on our empirical results.

judgment matrices, we compute the consistency ratio (CR)[5] from the matrices to examine the response consistency and ensure that the validity in the respondent conceptualizations of each goal increased with the lines of the goal description (e.g., "Goal A is more important than Goal B" should be invariant as lines of detail are added to the description of goals). Following Saaty (1977), the threshold value of the CR must be CR ≤ 0.10, but a ratio less than 0.20 is considered tolerable. The results show that the average CRs at a significance level of 0.05 for the group of regional managers and branch managers are 0.17 and 0.19, respectively. This indicates a moderate degree of consistency of judgment among the respondents, indicating that the validity of our survey data, and the AHP is not a significant concern.

After examining the consistency, we follow prior studies (Dong, Zhang, Hong, and Xu, 2010; Wu and Xu, 2012; Chiclana, Mata, Martinez, Herrera-Viedma, and Alonso, 2008) and apply an AHP consensus model[6] to measure the consensus index between a regional manager and a branch manager. This number thus represents the degree of consensus of the judgment matrix between a regional and branch manager and serves as our *CONSENSUS* score for a regional and branch manager pair.

3.3.2 Branch Office Prior Performance ($PERF_{i,t-1}$)

To measure a branch office's prior performance, we use an indicator variable $PERF_{i,t-1}$, which was equal to one if the branch office's (t-1)-th month of sales revenues is ranked in the top 25 percent of the sales revenue within the same region and same month and zero otherwise.

3.4 Measurement of Dependent Variables

3.4.1 Regional Manager Resource Allocation Preferences ($Ab\_SENIOR_{i,t}$ and $Ab\_ADV_{i,t}$)

A regional manager has the right to distribute the amount of advertising funding and to (re)deploy and adjust the number of salespersons in branch offices by way of

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5   Unlike studies (e.g., Bedford, 2015; Guenther and Heinicke, 2019) that use rating scales to construct their main variables and apply statistical methods such as Harman's single factor score or three-phase confirmatory factor analysis to examine common method biases in their survey data (e.g., Podsakoff, MacKenzie, and Podsakoff, 2003; Podsakoff, MacKenzie, and Podsakoff, 2012), the AHP approach uses the consistency ratio (CR) to measure data validity.

6   The consensus models are explained in Appendix B.

discretionary allocations; nevertheless, branch-specific characteristics (e.g., the larger the size of the branch office, the greater the need for sales personnel and advertising funding), the seasonality of the housing market, and the regional manager's preferences toward each branch office all affect the regional manager's resource allocation decision on these offices. In other words, both the resources that a branch office requires to maintain its daily business as well as the regional manager's personal "preferences" toward the branch office influence the regional manager's resource allocation decision.

To measure the "unexpected" portion of resources in each branch office, we regress each branch office's monthly ratio of the number of senior sales agents[7] to the total number of sales agents ($SENIOR_{i,t}$) and the allocated advertising funding ($ADV_{i,t}$) on the following key branch-specific characteristic variables: branch size ($OFFICE\_SIZE_{i,t}$), branch age ($OFFICE\_AGE_{i,t}$), branch manager's service period ($MGT\_TENURE_{i,t}$), targeted sales revenue of the branch office ($TARGET_{i,t}$), average property price per deal sold by the branch office ($PRICE_{i,t}$), number of houses managed by the branch office ($NUM\_ENTRUST_{i,t}$), and total number of branch offices in the same region ($NUM\_BRANCH_{i,t}$). We also include months and regions to control for time and regional effects that could be conjunct with the regional manager's resource allocation decision. The residuals from these two models represent the unexpected portion (preferences) of resources distributed to the branch office. A higher value residual term indicates that more unexpected resources are given to the branch office, and a lower residual term indicates that fewer unexpected resources are allocated to the branch office. The regression results of equations (1) and (2) are shown in Appendix C, and detailed variable definitions are presented in Table 2. The regression models are expressed as follows:

$$
\begin{aligned}
SENIOR_{i,t} = \ & \alpha_0 + \alpha_1 OFFICE\_SIZE_{i,t} + \alpha_2 MGT\_TENURE_{i,t} + \alpha_3 TARGET_{i,t} + \alpha_4 PRICE_{i,t} \\
& + \alpha_5 NUM\_ENTRUST_{i,t} + \alpha_6 NUM\_BRANCH_{i,t} + \sum MONTH + \sum REGION \\
& + \delta_{i,t}\,, \qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad (1)
\end{aligned}
$$

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7 Senior salespersons are valuable human resources for branch offices. Senior salespersons are more capable of handling complex job-related circumstances and sharing organizational knowledge, and hence contribute toward improving organizational performance in the long run, as the employee service period length reflects an upward-sloping tenure-productivity profile (McDaniel, Schmidt, and Hunter, 1988; Wright and Bonett, 2002; Abraham and Medoff, 1985).

$$ADV_{i,t} = \beta_0 + \beta_1 OFFICE\_SIZE_{i,t} + \beta_2 MGT\_TENURE_{i,t} + \beta_3 TARGET_{i,t} + \beta_4 PRICE_{i,t}$$
$$+ \beta_5 NUM\_ENTRUST_{i,t} + \beta_6 NUM\_BRANCH_{i,t} + \sum MONTH + \sum REGION +$$
$$\zeta_{i,t}. \tag{2}$$

3.5 Regression Models for Hypothesis 1

We used Ordinary Least Squares regression (OLS) models to determine whether the level of goal consensus between the regional and branch managers is related to a branch receiving a greater unexpected portion of senior salespersons and advertising funding. We use the residuals from models (1) and (2) as the variables of interest and examine the association between $CONSENSUS_{i,t}$ and $Ab\_SENIOR_{i,t}$ and $Ab\_ADV_{i,t}$.

Personal characteristics, environmental factors, and organizational structure determine the decision-making process (Dean and Sharfman, 1996; Wally and Baum, 1994; Paolillo and Vitell, 2002; Sayegh, Anthony, and Perrewé, 2004). Following prior studies, we include the regional manager's age ($REGIONAL\_AGE_{i,t}$), gender ($REGIONAL\_GENDER_{i,t}$), and tenure ($REGIONAL\_TENURE_{i,t}$) to control for the influence of these characteristics on resource allocation decisions. We also include the branch office's ratio of senior salespersons in the previous month (allocated advertising funding in previous month) to control for the lagged effect of distributed resources on the regional manager's resource allocation decision. In addition, we include the branch manager's age ($MGT\_AGE_{i,t}$), gender ($MGT\_GENDER_{i,t}$), and tenure ($MGT\_TENURE_{i,t}$) to control for the effect of the branch manager's characteristics on the regional manager's resource allocation decisions. We also include the average property price per deal sold by the branch office $(PRICE_{i,t})$, the number of houses managed by the branch office ($NUM\_ENTRUST_{i,t}$), the office size ($OFFICE\_SIZE_{i,t}$), the office age ($OFFICE\_AGE_{i,t}$), and the turnover rate ($TURN_{i,t}$) to control for the impact of office characteristics on the regional manager's resource allocation decisions. Finally, we include the number of branch offices in the same region ($NUM\_BRANCH_{i,t}$), the property transactions that occurred in the administrative district ($CYCLE_{i,t}$), the residential housing price index in the administrative district ($INDEX_{i,t}$), the month ($MONTH$), and the region effect ($REGION$) to control for the influence of time and the environment on the regional manager's resource allocation decisions. Detailed variable definitions are presented in Table 2. Our models for H1 take the following forms:

Table 2 Variable Definitions

Variable	Definition
$SENIOR_{i,t}$	The number of senior salespersons to the total number of salespersons of branch office i in the t-th month of the year.
$ADV_{i,t}$	Natural log of advertising funding for branch i in the t-th month of the year.
$Ab\_SENIOR_{i,t}$	Unexpected portion of ratio of senior salespersons for branch i in the t-th month of the year; this denotes the residual term estimates from model (1).
$Ab\_ADV_{i,t}$	Unexpected portion of advertising funding for branch i in the t-th month of the year; this denotes the residual term estimates from model (2).
$CONSENSUS_{i,t}$	Consensus index calculated from the AHP pairwise comparison between a regional manager and branch manager.
$PERF_{i,t-1}$	An indicator variable that equals 1 if the branch office's (t-1)-th month of sales revenues are ranked in the top 25 percent of the sales revenues within the same region and zero otherwise.
$REGIONAL\_AGE_{i,t}$	A categorical variable that equals 1 if a regional manager's age is in group 1 (20–24 yr) and equals 5 if a regional manager's age is in group 5 (40 yr and above).
$REGIONAL\_GENDER_{i,t}$	An indicator variable that equals 1 if a regional manager is male and zero otherwise.
$REGIONAL\_TENURE_{i,t}$	Length of the regional manager's service period in years as a regional manager in region i.
$MGT\_AGE_{i,t}$	A categorical variable that equals 1 if a branch manager's age is in group 1 (20–24 yr) and equals 5 if a branch manager's age is in group 5 (40 yr and above).
$MGT\_GENDER_{i,t}$	An indicator variable that equals 1 if a branch manager is male and zero otherwise.
$MGT\_TENURE_{i,t}$	Length of the branch manager's service period in years as a branch manager in branch office i.
$PRICE_{i,t}$	Natural logarithm of the average property price per deal sold by branch office i in the t-th month of the year.
$TARGET_{i,t}$	Natural logarithm of monthly targeted sales revenues of branch i in the t-th month of the year.
$NUM\_ENTRUST_{i,t}$	Total number of houses managed by branch office i in the t-th month of the year.
$OFFICE\_SIZE_{i,t}$	Total number of employees of branch office i in the t-th month of the year.
$OFFICE\_AGE_{i,t}$	Number of years of existence of branch office i.
$TURNOVER_{i,t}$	Monthly employee turnover at branch i.
$NUM\_BRANCH_{i,t}$	Total number of branch offices in the same region as branch office i in the t-th month of the year.
$CYCLE_{i,t}$	Natural logarithm of the number of monthly residential house transactions made in an administrative district classified by the Taiwan Construction and Planning Agency's Interior Ministry.
$INDEX_{i,t}$	Taiwan residential housing price index in the administrative district of branch i, classified by the Taiwan Construction and Planning Agency Ministry of the Interior.
$MONTH$	Indicator variables representing months.
$REGION$	Indicator variables that capture the regional fixed effect.

$$
\begin{aligned}
Ab\_SENIOR_{i,t} = \ & \gamma_0 + \gamma_1 CONSENSUS_{i,t} + \gamma_2 REGIONAL\_GENDER_{i,t} + \gamma_3 REGIONAL\_ \\
& AGE_{i,t} + \gamma_4 REGIONAL\_TENURE_{i,t} + \gamma_5 SENIOR_{i,t-1} + \gamma_6 MGT\_AGE_{i,t} \\
& + \gamma_7 MGT\_GENDER_{i,t} + \gamma_8 MGT\_TENURE_{i,t} + \gamma_9 PRICE_{i,t} + \gamma_{10} NUM\_ \\
& ENTRUST_{i,t} + \gamma_{11} OFFICE\_SIZE_{i,t} + \gamma_{12} OFFICE\_AGE_{i,t} + \gamma_{13} TURN_{i,t} \\
& + \gamma_{14} NUM\_BRANCH_{i,t} + \gamma_{15} CYCLE_{i,t} + \gamma_{16} INDEX_{i,t} + \sum MONTH + \\
& \sum REGION + \mu_{i,t}, \qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad (3) \\
Ab\_ADV_{i,t} = \ & \alpha_0 + \alpha_1 CONSENSUS_{i,t} + \alpha_2 REGIONAL\_GENDER_{i,t} + \alpha_3 REGIONAL\_ \\
& AGE_{i,t} + \alpha_4 REGIONAL\_TENURE_{i,t} + \alpha_5 ADV_{i,t-1} + \alpha_6 MGT\_AGE_{i,t} + \\
& \alpha_7 MGT\_GENDER_{i,t} + \alpha_8 MGT\_TENURE_{i,t} + \alpha_9 PRICE_{i,t} + \alpha_{10} NUM\_ \\
& ENTRUST_{i,t} + \alpha_{11} OFFICE\_SIZE_{i,t} + \alpha_{12} OFFICE\_AGE_{i,t} + \alpha_{13} TURN_{i,t} \\
& + \alpha_{14} NUM\_BRANCH_{i,t} + \alpha_{15} CYCLE_{i,t} + \alpha_{16} INDEX_{i,t} + \sum MONTH \\
& + \sum REGION + \varphi_{i,t}. \qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad (4)
\end{aligned}
$$

3.6 Regression Models for Hypothesis 2

Prior studies highlight the jointly determined relationship between the branch office's resources and its performance (Abraham and Medoff, 1985). Insufficient resources may cause a branch office to exhibit inferior performance, and a branch office with inferior performance in turn receives fewer resources. Hence, the impact of resource allocation preferences influences branch office performance development over time, and vice versa. To accommodate the jointly determined problem between the branch office's resources and its performance, we used Two-Stage Least Squares (2SLS) regression models to control for the contemporaneous relation between the branch office's received resources and its sales performance and to examine our second hypothesis. We use $Ab\_SENIOR_{i,t}$ and $Ab\_ADV_{i,t}$ as the dependent variables and $PERF_{i,t-1}$ as the response variable, and use the same set of control variables in our third and fourth equations as the first-stage regression models. Subsequently, we regress the branch office's prior sales performance ($PERF_{i,t-1}$) on the previous unexpected portion of branch office's received resources ($Ab\_SENIOR_{i,t-1}$ and $Ab\_ADV_{i,t-1}$) and a set of control variables as our second-stage regression model.[8] Detailed variable definitions are presented in Table 2. Our models for H2 take the following forms:

---

8 We include office age, office manager tenure, number of houses sold in previous month, number of houses managed, and month and region fixed effects as control variables in the second regression.

$$
\begin{aligned}
Ab\_SENIOR_{i,t} = {} & \gamma_0 + \gamma_1 PERF_{i,t-1} + \gamma_2 REGIONAL\_GENDER_{i,t} + \gamma_3 REGIONAL\_AGE_{i,t} + \\
& \gamma_4 REGIONAL\_TENURE_{i,t} + \gamma_5 SENIOR_{i,t-1} + \gamma_6 MGT\_AGE_{i,t} + \gamma_7 MGT\_ \\
& GENDER_{i,t} + \gamma_8 MGT\_TENURE_{i,t} + \gamma_9 PRICE_{i,t} + \gamma_{10} NUM\_ENTRUST_{i,t} + \\
& \gamma_{11} OFFICE\_SIZE_{i,t} + \gamma_{12} OFFICE\_AGE_{i,t} + \gamma_{13} TURN_{i,t} + \gamma_{14} NUM\_BRANCH_{i,t} \\
& + \gamma_{15} CYCLE_{i,t} + \gamma_{16} INDEX_{i,t} + \sum MONTH + \sum REGION + \mu_{i,t} ,
\end{aligned}
\tag{5}
$$

$$
\begin{aligned}
Ab\_ADV_{i,t} = {} & \alpha_0 + \alpha_1 PERF_{i,t-1} + \alpha_2 REGIONAL\_GENDER_{i,t} + \alpha_3 REGIONAL\_AGE_{i,t} + \\
& \alpha_4 REGIONAL\_TENURE_{i,t} + \alpha_5 MGT\_AGE_{i,t} + \alpha_6 MGT\_GENDER_{i,t} + \alpha_7 MGT\_ \\
& TENURE_{i,t} + \alpha_8 TARGET_{i,t} + \alpha_9 PRICE\_AREA_{i,t} + \alpha_{10} NUM\_ENTRUST_{i,t} + \\
& \alpha_{11} OFFICE\_SIZE_{i,t} + \alpha_{12} OFFICE\_AGE_{i,t} + \alpha_{13} TURN_{i,t} + \alpha_{14} NUM\_BRANCH_{i,t} \\
& + \alpha_{15} CYCLE_{i,t} + \alpha_{15} INDEX_{i,t} + \sum MONTH + \sum REGION + \varphi_{i,t} .
\end{aligned}
\tag{6}
$$

3.7 Regression Models for Hypothesis 3

To examine our third hypothesis, we also use 2SLS regression models and used equations (5) and (6) as the baseline models. We use the product term of $CONSENSUS_{i,t}$ and $PERF_{i,t-1}$ to test the impact of subordinates' past performance on the association between goal consensus ($CONSENSUS_{i,t}$) and the regional manager's resource allocation preferences ($Ab\_SENIOR_{i,t}$ and $Ab\_ADV_{i,t}$). Detailed variable definitions are presented in Table 2. Our models for H3 take the following forms:

$$
\begin{aligned}
Ab\_SENIOR_{i,t} = {} & \gamma_0 + \gamma_1 CONSENSUS_{i,t} + \gamma_2 PERF_{i,t-1} + \gamma_3 CONSENSUS_{i,t} \times PERF_{i,t-1} + \\
& \gamma_4 REGIONAL\_GENDER_{i,t} + \gamma_5 REGIONAL\_AGE_{i,t} + \gamma_6 REGIONAL\_ \\
& TENURE_{i,t} + \gamma_7 SENIOR_{i,t-1} + \gamma_8 MGT\_AGE_{i,t} + \gamma_9 MGT\_GENDER_{i,t} + \gamma_{10} MGT\_ \\
& TENURE_{i,t} + \gamma_{11} PRICE_{i,t} + \gamma_{12} NUM\_ENTRUST_{i,t} + \gamma_{13} OFFICE\_SIZE_{i,t} + \\
& \gamma_{14} OFFICE\_AGE_{i,t} + \gamma_{15} TURN_{i,t} + \gamma_{16} NUM\_BRANCH_{i,t} + \gamma_{17} CYCLE_{i,t} + \\
& \gamma_{18} INDEX_{i,t} + \sum MONTH + \sum REGION + \mu_{i,t} ,
\end{aligned}
\tag{7}
$$

$$
\begin{aligned}
Ab\_ADV_{i,t} = {} & \alpha_0 + \alpha_1 CONSENSUS_{i,t} + \alpha_2 PERF_{i,t-1} + \alpha_3 CONSENSUS_{i,t} \times PERF_{i,t-1} + \\
& \alpha_4 REGIONAL\_GENDER_{i,t} + \alpha_5 REGIONAL\_AGE_{i,t} + \alpha_6 REGIONAL\_ \\
& TENURE_{i,t} + \alpha_7 ADV_{i,t-1} + \alpha_8 MGT\_AGE_{i,t} + \alpha_9 MGT\_GENDER_{i,t} + \alpha_{10} MGT\_ \\
& TENURE_{i,t} + \alpha_{11} PRICE_{i,t} + \alpha_{12} NUM\_ENTRUST_{i,t} + \alpha_{13} OFFICE\_SIZE_{i,t} + \\
& \alpha_{14} OFFICE\_AGE_{i,t} + \alpha_{15} TURN_{i,t} + \alpha_{16} NUM\_BRANCH_{i,t} + \alpha_{17} CYCLE_{i,t} + \\
& \alpha_{18} INDEX_{i,t} + \sum MONTH + \sum REGION + \varphi_{i,t} .
\end{aligned}
\tag{8}
$$

4. Empirical Analysis

4.1 Descriptive Statistics, Pearson and Spearman Correlations

We present the descriptive statistics of the variables in Table 3. The average ratio of senior salespersons for a branch office is 0.25 and the natural logarithm of the average advertising funding allocation for a branch office is 10.30. In addition, $Ab\_SENIOR_{i,t}$ ranges from -0.44 to 0.71, and $Ab\_ADV_{i,t}$ ranges from -4.49 to 7.67. A higher inequity in the total number of senior salespersons and the amount of advertising funding indicate that regional managers allocate more unexpected senior salespersons and advertising funding to a branch office and vice versa. $CONSENSUS_{i,t}$ ranges from 0.01 to 1.00, with 1.00 indicating a complete consensus with the company's goals; around 30% of the branch offices have prior sales performance ranked in the top 25 percent in the same region and the same month.

Table 4 shows the Pearson and Spearman correlations[9] among the variables. We find that $Ab\_SENIOR_{i,t}$ is positively correlated with $PERF_{i,t-1}$, $REGIONAL\_AGE_{i,t}$, $PRICE_{i,t}$, $DEAL_{i,t}$, and $CYCLE_{i,t}$. This may indicate that better prior sales performance, higher property price per deal, a greater number of houses sold, and higher residential house transactions are associated with higher allocation of unexpected senior salespersons. We also find that $Ab\_ADV_{i,t}$ is positively correlated with $CONSENSUS_{i,t}$. These findings indicate that the level of goal consensus is correlated with a higher allocation of unexpected advertising expenditure. Although some significant and strongly correlated coefficients are found between the independent variables in Table 3, multicollinearity is unlikely to be a concern as the variance inflation factor (VIF) values are lower than 10 (Kutner, Nachtsheim, and Neter, 2004).

4.2 Goal Consensus, Subordinates' Prior Performance, and Resource Allocation Preferences

The empirical results for our hypotheses are shown in Table 5. Columns (1) and (2) in Table 5 show that the effect of goal consensus ($CONSENSUS_{i,t}$) is positive and statistically significant in relation to $Ab\_ADV_{i,t}$ ($t = 2.37$, $p < 0.01$) but not $Ab\_SENIOR_{i,t}$ ($t = 0.41$, p

---

9 The upper right coefficients are Spearman correlation coefficients.

Table 3 Descriptive Statistics (n = 1,637)

Variables	Mean	Std. dev.	Min	Max
$SENIOR_{i,t}$	0.25	0.20	0.00	1.00
$ADV_{i,t}$	10.30	0.98	0.00	11.70
$Ab\_SENIOR_{i,t}$	0.00	0.18	-0.44	0.71
$Ab\_ADV_{i,t}$	0.00	1.53	-4.49	7.67
$CONSENSUS_{i,t}$	0.74	0.23	0.00	1.00
$PERF_{i,t-1}$	0.30	0.46	0.00	1.00
$REGIONAL\_AGE_{i,t}$	4.78	0.47	3.00	5.00
$REGIONAL\_GENDER_{i,t}$	0.99	0.12	0.00	1.00
$REGIONAL\_TENURE_{i,t}$	8.22	5.44	1.00	26.00
$MGT\_AGE_{i,t}$	3.87	0.86	2.00	5.00
$MGT\_GENDER_{i,t}$	0.84	0.36	0.00	1.00
$MGT\_TENURE_{i,t}$	6.17	4.31	0.08	25.92
$PRICE_{i,t}$	13.73	5.76	0.00	18.64
$TARGET_{i,t}$	14.35	0.24	13.34	15.07
$NUM\_ENTRUST_{i,t}$	4.37	2.69	0.00	18.50
$OFFICE\_SIZE_{i,t}$	7.97	1.11	5.00	13.00
$OFFICE\_AGE_{i,t}$	11.24	7.43	0.49	28.76
$TURNOVER_{i,t}$	0.03	0.07	0.00	0.40
$NUM\_BRANCH_{i,t}$	10.76	5.05	1.00	25.00
$CYCLE_{i,t}$	4.44	1.94	0.62	8.14
$INDEX_{i,t}$	101.10	1.15	99.46	103.02

= 0.69). We find that the subordinate's prior performance ($PERF_{i,t-1}$) is positively related to $Ab\_SENIOR_{i,t}$ ($t = 2.70$, $p < 0.01$) but not $Ab\_ADV_{i,t}$ ($t = 1.47$, $p = 0.14$) in columns (3) and (4) of Table 5. These findings show that after controlling for the known factors that influence regional managers' decisions regarding the distribution of senior salespersons and advertising funding, the closer the goal consensus between the regional and branch manager, the more likely it is for the regional manager to distribute more than necessary advertising funding for the branch office and vice versa. In addition, the higher the sales performance for a branch office, the more likely it is for the regional manager to distribute more than necessary senior salespersons for the office. These findings suggest that regional managers use funding to show their support to branch managers who share similar goal priorities with them, and that they tend to distribute more senior sales personnel to

Table 4 Pearson and Spearman Correlation Coefficients ($n = 1,637$)

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. SENIOR$_{i,t}$	1.00	0.12***	0.87***	-0.01	0.03	0.18***	0.02	-0.08***	0.09***	0.15***
2. ADV$_{i,t}$	0.05**	1.00	0.05**	0.74***	0.02	0.05**	0.04*	-0.02	0.03	0.05**
3. Ab_SENIOR$_{i,t}$	0.88***	0.01	1.00	0.05**	0.03	0.13***	0.05**	-0.01	0.02	0.04
4. Ab_ADV$_{i,t}$	-0.03	0.90***	-0.01	1.00	0.03	0.03	0.06***	0.06***	-0.03	-0.02
5. CONSENSUS$_{i,t}$	0.02	0.06**	0.02	0.07**	1.00	-0.03	-0.10***	0.03	-0.07***	-0.04
6. PERF$_{i,t-1}$	0.14***	0.05*	0.12***	0.03	-0.02	1.00	0.01	0.01	0.01	0.03
7. REGIONAL_AGE$_{i,t}$	0.01	-0.01	0.06**	0.01	-0.09***	0.01	1.00	0.24***	0.58***	-0.03
8. REGIONAL_GENDER$_{i,t}$	-0.07***	-0.01	-0.01	0.04	-0.01	0.01	0.20***	1.00	0.19***	0.02
9. REGIONAL_TENURE$_{i,t}$	0.12***	0.01	0.03	-0.04	-0.01	-0.01	0.50***	0.16***	1.00	0.01
10. MGT_AGE$_{i,t}$	0.14***	0.06**	0.03	0.02	-0.04*	0.03	-0.01	0.02	0.02	1.00
11. MGT_GENDER$_{i,t}$	0.09***	0.05*	0.02	0.01	-0.05**	0.01	0.05**	-0.05	0.10***	0.18***
12. MGT_TENURE$_{i,t}$	0.17***	0.06**	0.01	-0.02	-0.01	-0.01	-0.02	-0.03	0.05**	0.51***
13. PRICE$_{i,t}$	0.09***	0.01	0.09***	-0.03	-0.01	0.01	0.05*	0.02	0.05**	0.01
14. TARGET$_{i,t}$	0.33***	0.23***	0.01	-0.03	0.03	0.14***	-0.01	-0.07***	0.16***	0.15***
15. NUM_ENTRUST$_{i,t}$	-0.03	0.03	0.01	0.02	-0.01	0.10***	0.01	0.01	0.02	-0.02
16. OFFICE_SIZE$_{i,t}$	-0.11***	0.08***	0.00	0.03	0.02	0.16***	0.11***	-0.04	0.02	0.03
17. OFFICE_AGE$_{i,t}$	0.15***	0.04	0.00	-0.01	0.01	0.04*	0.02	-0.09***	0.05**	0.16***
18. TURNOVER$_{i,t}$	-0.13***	-0.02	-0.08***	-0.01	0.02	-0.09***	-0.05**	-0.02	-0.06**	0.05**
19. NUM_BRANCH$_{i,t}$	0.25***	0.07***	0.01	-0.04	-0.03	-0.03	-0.11***	-0.25***	0.17***	0.18***
20. CYCLE$_{i,t}$	0.11***	-0.02	0.07**	-0.06**	0.17***	-0.01	-0.15***	0.03	-0.04	0.01
21. INDEX$_{i,t}$	-0.18***	-0.10***	-0.05**	-0.03	-0.03	-0.01	0.20***	0.14***	0.01	0.03

Note: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$ (two-tailed test)

See Table 2 for variable definitions

Table 4 (cont.) Pearson and Spearman Correlation Coefficients ($n = 1,637$)

	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.
1. SENIOR$_{i,t}$	0.10***	0.20***	0.24***	0.38***	0.03	0.10***	0.20***	-0.12***	0.18***	0.06***	-0.14***
2. ADV$_{i,t}$	0.06***	0.07***	0.08***	0.26***	0.01	0.07***	0.05**	-0.02	0.06**	-0.01	-0.14***
3. Ab_SENIOR$_{i,t}$	0.04	0.04	0.12***	0.02	0.01	0.03	0.01	-0.08***	-0.01	0.04*	-0.05*
4. Ab_ADV$_{i,t}$	0.01	-0.05**	-0.05*	-0.11***	-0.01	-0.01	-0.06**	-0.01	-0.09***	-0.06**	-0.02
5. CONSENSUS$_{i,t}$	-0.05*	0.03	-0.01	0.03	-0.03	0.02	-0.02	0.03	-0.07***	0.18***	-0.04*
6. PERF$_{i,t-1}$	0.01	0.01	-0.02	0.13***	0.10***	0.15***	0.05**	-0.10***	-0.04	-0.01	-0.01
7. REGIONAL_AGE$_{i,t}$	0.01	-0.04*	-0.07***	-0.03	0.04	0.15***	-0.01	-0.05**	-0.16***	-0.17***	0.21***
8. REGIONAL_GENDER$_{i,t}$	-0.05**	-0.02	-0.07***	-0.08***	0.01	-0.03	-0.10***	-0.01	-0.15***	0.04	0.14***
9. REGIONAL_TENURE$_{i,t}$	0.10***	0.03	0.09***	0.12***	0.01	0.04	0.09***	-0.07***	0.13***	-0.02	0.08***
10. MGT_AGE$_{i,t}$	0.18***	0.52***	0.06*	0.15***	-0.03	0.02	0.20***	-0.05**	0.18***	0.01	0.01
11. MGT_GENDER$_{i,t}$	1.00	0.24***	0.07***	0.13***	-0.01	0.02	0.11***	-0.05**	0.12***	0.01	-0.01
12. MGT_TENURE$_{i,t}$	0.21***	1.00	0.13***	0.20***	-0.05*	0.02	0.24***	-0.04*	0.16***	0.06***	-0.06**
13. PRICE$_{i,t}$	-0.02	0.03	1.00	0.25***	-0.03	-0.06**	0.17***	-0.04	0.24***	0.17***	-0.17***
14. TARGET$_{i,t}$	0.11***	0.22***	0.13***	1.00	0.06***	0.32***	0.23***	-0.07***	0.09***	0.05**	-0.21***
15. NUM_ENTRUST$_{i,t}$	0.01	-0.04	0.10***	0.06	1.00	0.27***	-0.01	-0.03	-0.09***	-0.02	0.15***
16. OFFICE_SIZE$_{i,t}$	0.01	0.03	0.11***	0.32***	0.27***	1.00	0.04*	-0.01	-0.20***	-0.18***	0.12***
17. OFFICE_AGE$_{i,t}$	0.04*	0.20***	0.02	0.20***	0.01	0.06**	1.00	-0.07***	0.21***	0.10***	-0.23***
18. TURNOVER$_{i,t}$	-0.05**	-0.04	0.00	-0.09***	-0.03	-0.01	-0.05**	1.00	-0.09***	-0.05**	0.02
19. NUM_BRANCH$_{i,t}$	0.11***	0.15***	-0.03	0.11***	-0.10***	-0.19***	0.15***	-0.08***	1.00	-0.04	-0.13***
20. CYCLE$_{i,t}$	0.01	0.07**	0.06	0.05*	-0.03	-0.21***	0.11***	-0.06**	-0.05*	1.00	-0.03
21. INDEX$_{i,t}$	-0.01	-0.08***	0.12***	-0.21***	0.14***	0.11***	-0.19***	0.02	-0.18***	-0.02	1.00

Note: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$ (two-tailed test)

See Table 2 for variable definitions

branch offices with better prior sales performance. Echoing prior studies (Foa, Converse, Tömblom, and Foa, 1993; Wilson, Sin, and Conlon, 2010; Leventhal, 1976; Sutcliffe and McNamara, 2001), these findings suggest that allocators prefer to distribute financial resources to recipients who show similar preferences (goals) and tend to distribute resources in accordance with recipients' contributions, as allocators believe this will maximize performance and productivity over the long term.

The insignificant relationship between goal consensus and the number of senior sales personnel is not surprising. In this case company, the allocation of salespersons requires that the regional manager negotiate with the branch managers; regional managers may be required to justify the criticality of transferring and redeploying senior salespersons to a specific branch office in the region. Therefore, it is only when the regional managers have strong incentives and reasons (e.g., to ensure the overall sales performance of branch offices within their region) that regional managers (re)deploy senior salespersons to a specific branch office.

The effect of a branch's prior performance on the association between goal consensus and the regional manager's resource allocation preferences is also presented in Table 5. Columns (6) and (7) in Table 5 show that the product term of goal consensus and the branch offices' past performance is statistically insignificant in relation to either $Ab\_SENIOR_{i,t}$ or $Ab\_ADV_{i,t}$, which indicates that the impact of goal consensus on regional managers' resource allocation decisions does not depend on the subordinates' previous performance. These findings suggest that although the two factors (goal consensus and subordinates' previous performance) may exist simultaneously and act as antecedents that influence regional managers' resource allocation preferences, they may affect regional managers' resource allocation preferences separately and individually; therefore, H3 is not supported.

With regards to our control variables, we find that ratio of senior salespersons (allocated advertising funding) in the previous month is positive and significantly related to $Ab\_SENIOR_{i,t}$ ($Ab\_ADV_{i,t}$), indicating that regional managers adjust the branch office's unexpected portion of senior salespersons (advertising funding) according to how many senior salespersons (advertising funding) a branch had in the previous month. In addition, we find that branch offices with longer-serving managers, a longer period of existence, and that are located in regions with more branch offices are less likely to receive more than

necessary senior salespersons. These findings are not surprising because branch managers with more experience and branch offices that are already well-known by neighbors may not need extra senior salespersons to handle complex job-related situations and cultivate customer loyalty. As a regional manager must negotiate with branch managers to (re) deploy senior salespersons, it is much more difficult for regional managers to adjust senior salespersons in a region with more branch offices. We also find that branch offices with more houses managed are positively and significantly related to $Ab\_ADV_{i,t}$ suggesting that regional managers give more advertising funding to branch offices with more houses to sell.

4.3 Additional Tests

4.3.1 Alternative Measure of Branch Office's Prior Performance

In our main empirical analysis, we use the branch office's prior sales revenues to operationalize its performance. As indicated in Section 2.2, one responsibility of the regional manager is ensuring that branch offices within his region achieve their required performance (i.e., target sales revenues) and maximize the overall performance of the branch offices within the region. Therefore, to further test the robustness of our results, we consider whether the branch office achieved its target sales revenue in the previous month as an alternative measurement of the office's prior performance.

A dummy variable equals one if the branch office achieved its target sales revenues in the previous month; otherwise it equals zero. Empirical results are similar to what we find in Table 5 and present in Table 6. From Table 6, we observe that after we control for factors that could affect the regional manager's resource allocation decision, $ACHIEVE_{i,t-1}$ is positively and significantly related to $Ab\_SENIOR_{i,t}$ ($t = 4.32, p < 0.01$) but not $Ab\_ADV_{i,t}$ ($t = 1.60, p = 0.11$). In addition, we also find that the product term of goal consensus and the branch offices' past performance is statistically insignificant in relation to either $Ab\_SENIOR_{i,t}$ ($t = -0.49, p = 0.62$) or $Ab\_ADV_{i,t}$ ($t = 1.15, p = 0.24$).

4.3.2. Excluding Observations without Change in Allocation of Advertising Funding and Senior Salespersons

To confirm our empirical results, we limit our focus to branch-monthly observations that demonstrate changes in the allocation of advertising funding and senior salespersons

Table 5 Goal Consensus, Subordinates' Prior Performance, and Resource Allocation Preferences

Dependent variable	$Ab\_SENIOR_{i,t}$ (t-statistic)	$Ab\_ADV_{i,t}$ (t-statistic)	$Ab\_SENIOR_{i,t}$ (t-statistic)	$Ab\_ADV_{i,t}$ (t-statistic)	$Ab\_SENIOR_{i,t}$ (t-statistic)	$Ab\_ADV_{i,t}$ (t-statistic)
	(1)	(2)	(3)	(4)	(5)	(6)
$CONSENSUS_{i,t}$	0.01 (0.41)	0.39** (2.37)			-0.01 (-0.24)	0.10** (2.58)
$PERF_{i,t-1}$			0.03*** (2.70)	0.17 (1.47)	0.01*** (2.68)	0.08 (1.51)
$CONSENSUS \times PERF_{i,t-1}$					0.01 (0.02)	-0.02 (-0.67)
$REGIONAL\_AGE_{i,t}$	0.01 (0.67)	0.16 (1.60)	0.01 (0.76)	0.14 (1.40)	0.01 (0.73)	0.16* (1.65)
$REGIONAL\_GENDER_{i,t}$	-0.02 (-0.68)	1.00*** (3.09)	-0.02 (-0.78)	0.99*** (3.04)	-0.02 (-0.78)	0.98*** (3.04)
$REGIONAL\_TENURE_{i,t}$	-0.01 (-0.15)	-0.03*** (-4.00)	-0.01 (-0.12)	-0.03*** (-3.84)	-0.01 (-0.10)	-0.03*** (-3.98)
$SENIOR_{i,t-1}$	0.58*** (34.09)		0.58*** (33.56)		0.58*** (33.53)	
$ADV_{i,t-1}$		0.25*** (7.19)		0.25*** (7.27)		0.25*** (7.12)
$MGT\_AGE_{i,t}$	0.01 (0.69)	0.03 (0.59)	0.01 (0.64)	0.02 (0.49)	0.01 (0.63)	0.03 (0.63)
$MGT\_GENDER_{i,t}$	0.01 (0.16)	0.01 (0.12)	0.01 (0.20)	-0.01 (-0.10)	0.01 (0.18)	0.01 (0.09)
$MGT\_TENURE_{i,t}$	-0.01*** (-3.06)	-0.02 (-1.50)	-0.01*** (-3.00)	-0.01 (1.38)	-0.01*** (-2.99)	-0.01 (-1.44)
$PRICE_{i,t}$	0.01*** (3.66)	-0.01 (-0.32)	0.01*** (3.84)	-0.01 (-0.36)	0.01*** (3.82)	-0.01 (-0.33)
$NUM\_ENTRUST_{i,t}$	0.01 (0.33)	0.03*** (2.08)	0.01 (0.06)	0.03* (1.81)	0.01 (0.05)	0.03* (1.88)
$OFFICE\_SIZE_{i,t}$	0.01*** (3.45)	-0.04 (-1.05)	0.01*** (2.74)	-0.05 (-1.18)	0.01*** (2.75)	-0.05 (-1.32)
$OFFICE\_AGE_{i,t}$	-0.01*** (-3.96)	0.01 (0.09)	-0.01*** (-3.96)	0.01 (0.12)	-0.01*** (-3.95)	0.01 (0.08)
$TURNOVER_{i,t}$	-0.03 (-0.64)	-0.38 (-0.69)	-0.01 (-0.28)	-0.25 (-0.45)	-0.01 (-0.28)	-0.26 (-0.47)
$NUM\_BRANCH_{i,t}$	-0.01*** (-4.47)	0.01 (0.29)	-0.01*** (-4.36)	0.01 (0.43)	-0.01*** (-4.35)	0.01 (0.37)
$CYCLE_{i,t}$	0.01 (1.60)	-0.02 (-0.23)	0.01 (1.57)	-0.03 (-0.27)	0.01 (1.57)	-0.03 (-0.30)
$INDEX_{i,t}$	-0.01 (-0.83)	0.03 (0.22)	-0.01 (-0.81)	0.03 (0.26)	-0.01 (-0.81)	0.03 (0.24)
MONTH	Included	Included	Included	Included	Included	Included
REGION	Included	Included	Included	Included	Included	Included
Model	OLS	OLS	2SLS	2SLS	2SLS	2SLS
Adjusted R-Squared	0.47	0.11	0.48	0.10	0.48	0.11
F-Value	51.45***	7.77***	52.01***	7.61***	48.60***	7.37***
Observations	1,637	1,637	1,637	1,637	1,637	1,637

Note: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$ (two-tailed test)

See Table 2 for variable definitions.

Table 6 An Alternative Measure of the Branch Office's Prior Performance

Dependent variable	$Ab\_SENIOR_{i,t}$ (t-statistic)	$Ab\_ADV_{i,t}$ (t-statistic)	$Ab\_SENIOR_{i,t}$ (t-statistic)	$Ab\_ADV_{i,t}$ (t-statistic)
	(1)	(2)	(3)	(4)
$CONSENSUS_{i,t}$			-0.01 (-0.21)	0.10** (2.59)
$ACHIEVE_{i,t-1}$	0.06*** (4.32)	0.24 (1.60)	0.06*** (4.36)	0.10 (1.53)
$CONSENSUS_i \times ACHIEVE_{i,t-1}$			-0.01 (-0.49)	0.05 (1.15)
$REGIONAL\_AGE_{i,t}$	0.01 (0.53)	0.13 (1.31)	0.01 (0.50)	0.15 (1.51)
$REGIONAL\_GENDER_{i,t}$	-0.02 (-0.62)	1.01*** (3.12)	-0.02 (-0.60)	1.00*** (3.08)
$REGIONAL\_TENURE_{i,t}$	-0.01 (-0.26)	-0.03*** (-3.90)	-0.01 (-0.26)	-0.03*** (-3.98)
$SENIOR_{i,t-1}$	0.57*** (32.61)		0.57*** (32.56)	
$ADV_{i,t-1}$		0.25*** (7.35)		0.25*** (7.21)
$MGT\_AGE_{i,t}$	0.01 (0.81)	0.03 (0.56)	0.01 (0.80)	0.03 (0.65)
$MGT\_GENDER_{i,t}$	0.01 (0.19)	-0.01 (-0.10)	0.01 (0.15)	0.01 (0.10)
$MGT\_TENURE_{i,t}$	-0.01*** (-2.85)	-0.01 (-1.35)	-0.01*** (-2.84)	-0.01 (-1.39)
$PRICE_{i,t}$	0.01*** (3.86)	-0.01 (-0.37)	0.01*** (3.81)	-0.01 (-0.22)
$NUM\_ENTRUST_{i,t}$	0.01 (0.23)	0.03* (1.92)	0.01 (0.23)	0.03* (1.95)
$OFFICE\_SIZE_{i,t}$	0.01*** (2.84)	-0.04 (-1.07)	0.01*** (2.84)	-0.05 (-1.18)
$OFFICE\_AGE_{i,t}$	-0.01*** (-3.50)	0.01 (0.28)	-0.01*** (-3.46)	0.01 (0.22)
$TURNOVER_{i,t}$	-0.02 (-0.46)	-0.31 (-0.56)	-0.02 (-0.45)	-0.33 (-0.59)
$NUM\_BRANCH_{i,t}$	-0.01*** (-4.80)	0.01 (0.23)	-0.01*** (-4.78)	0.01 (0.15)
$CYCLE_{i,t}$	0.01* (1.66)	-0.02 (-0.23)	0.01* (1.65)	-0.02 (-0.22)
$INDEX_{i,t}$	-0.01 (-0.54)	0.04 (0.35)	-0.01 (-0.56)	0.05 (0.40)
MONTH	Included	Included	Included	Included
REGION	Included	Included	Included	Included
Model	2SLS	2SLS	2SLS	2SLS
Adjusted R-Squared	0.47	0.10	0.47	0.10
F-Value	52.27***	7.59***	48.85***	7.37***
Observations	1,637	1,637	1,637	1,637

Note: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$ (two-tailed test)

See Table 2 for variable definitions.

and re-examine whether our results remain for this sub-sample. Branch-monthly observation is excluded if the office's senior salespersons ratio (allocating advertising funding) in the (t-1)-th month equals the senior salespersons ratio (allocating advertising funding) in the t-th month.

The empirical results are presented in Table 7. From columns (1) and (2) in Table 7, $Ab\_ADV_{i,t}$ is positively correlated with $CONSENSUS_{i,t}$ ($t = 1.93$, $p < 0.1$) but not $Ab\_SENIOR_{i,t}$, which is consistent with what we find in Table 5. Columns (3) and (4) in Table 7 are similar to those in Table 5. That is, subordinates' prior performance ($PERF_{i,\,t-1}$) is positively related to $Ab\_SENIOR_{i,t}$ ($t = 1.80$, $p < 0.1$) but not $Ab\_ADV_{i,t}$. Finally, columns (5) and (6) in Table 7 show that the product term of goal consensus and the branch offices' past performance is statistically insignificant in relation to either $Ab\_SENIOR_{i,t}$ or $Ab\_ADV_{i,t}$.

4.3.3 Effect of Goal Consensus on Relationship between Resource Allocation Preferences and Abnormal Sales Performance

In addition to investigating the association among goal consensus, the branch manager's prior performance, and the regional manager's resource allocation preferences, we further examine whether the regional manager's resource allocation preferences lead to superior sales performance for the branch in the future. In addition, we investigate whether goal consensus reinforces their association.

To measure the abnormal sales performance of a branch office, we regress the office's total sales revenue on the key branch-specific characteristic variables.[10] The higher the residual term, indicating that the office has more unexpected sales performance, and vice versa. We then regress the office's abnormal sales performance at one period lag of abnormal resource allocation with a set of control variables that could influence branch performance (Ghosh and Lusch, 2000; Fu, 2009; Lee, Sheldon, and Turban, 2003; Hansen and Wernerfelt, 1989).

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10 We include number of houses managed, average property price per deal sold by branch office, branch office's age, office manager's tenure, and number of branch offices into the regression model, in addition to month and region fixed effects, as these variables could affect the sales performance of a branch office (Ghosh and Lusch, 2000; Fu, 2009; Lee et al., 2003).

Table 7 Excluding Observations without Change in Allocation of Advertising Funding and Senior Salespersons

Dependent variable	$Ab\_SENIOR_{i,t}$ (t-statistic) (1)	$Ab\_ADV_{i,t}$ (t-statistic) (2)	$Ab\_SENIOR_{i,t}$ (t-statistic) (3)	$Ab\_ADV_{i,t}$ (t-statistic) (4)	$Ab\_SENIOR_{i,t}$ (t-statistic) (5)	$Ab\_ADV_{i,t}$ (t-statistic) (6)
$CONSENSUS_{i,t}$	0.01 (0.18)	0.36* (1.93)			0.01 (0.80)	0.08* (1.87)
$PERF_{i,t-1}$			0.03* (1.80)	-0.09 (-0.66)	0.01* (1.81)	-0.04 (-0.67)
$CONSENSUS_{it} \times PERF_{i,t-1}$					-0.01 (-0.30)	0.01 (0.02)
$REGIONAL\_AGE_{i,t}$	-0.01 (-0.18)	-0.06 (-0.56)	0.01 (0.46)	-0.07 (-0.68)	0.01 (0.49)	-0.06 (-0.55)
$REGIONAL\_GENDER_{i,t}$	-0.06** (-2.10)	0.69** (2.03)	-0.06* (-1.80)	0.70*** (2.05)	-0.06* (-1.80)	0.70** (2.05)
$REGIONAL\_TENURE_{i,t}$	0.01 (0.92)	-0.01 (-0.82)	-0.01 (-0.81)	-0.01 (-0.76)	-0.01 (-0.80)	-0.01 (-0.84)
$SENIOR_{i,t-1}$	0.58*** (23.96)		0.63*** (21.61)		0.63*** (21.57)	
$ADV_{i,t-1}$		1.59*** (16.02)		1.61*** (16.14)		1.60*** (16.00)
$MGT\_AGE_{i,t}$	-0.01 (-0.23)	0.04 (0.67)	-0.01 (-0.37)	0.04 (0.69)	-0.01 (-0.33)	0.04 (0.71)
$MGT\_GENDER_{i,t}$	0.01 (0.16)	0.09 (0.72)	-0.01 (-0.05)	0.07 (0.59)	0.01 (0.03)	0.08 (0.71)
$MGT\_TENURE_{i,t}$	-0.01 (-1.33)	-0.01 (-0.81)	-0.01 (-0.93)	-0.01 (-0.82)	-0.01 (-0.98)	-0.01 (-0.84)
$PRICE_{i,t}$	0.01** (1.98)	-0.01 (-0.75)	0.01*** (2.62)	-0.01 (-0.91)	0.01*** (2.59)	-0.01 (-0.79)
$NUM\_ENTRUST_{i,t}$	0.01 (0.58)	0.01 (0.11)	-0.01 (-0.12)	0.01 (0.13)	-0.01 (-0.08)	0.01 (0.17)
$OFFICE\_SIZE_{i,t}$	0.01** (2.52)	-0.08* (-1.90)	0.01 (0.51)	-0.07 (-1.63)	0.01 (0.43)	-0.07* (-1.74)
$OFFICE\_AGE_{i,t}$	-0.01*** (-3.30)	-0.01 (-0.02)	-0.01*** (-3.02)	-0.01 (0.01)	-0.01*** (-2.88)	0.01 (0.02)
$TURNOVER_{i,t}$	-0.09 (-1.61)	-0.51 (-0.80)	-0.08 (-1.16)	-0.55 (-0.84)	-0.08 (-1.15)	-0.58 (-0.90)
$NUM\_BRANCH_{i,t}$	-0.01*** (-3.67)	-0.01 (-1.46)	-0.01*** (-2.95)	-0.01 (-1.49)	-0.01*** (-2.92)	-0.01 (-1.47)
$CYCLE_{i,t}$	0.01 (0.87)	-0.04 (-1.51)	-0.01 (-0.25)	-0.03 (-1.19)	-0.01 (-0.46)	-0.04 (-1.51)
$INDEX_{i,t}$	0.01 (0.65)	0.01 (0.35)	0.01 (0.78)	0.01 (0.32)	0.01 (0.84)	0.01 (0.34)
MONTH	Included	Included	Included	Included	Included	Included
REGION	Included	Included	Included	Included	Included	Included
Model	OLS	OLS	2SLS	2SLS	2SLS	2SLS
Adjusted R-Squared	0.41	0.16	0.41	0.16	0.41	0.16
F-Value	23.99***	13.33***	25.05***	13.10***	22.86***	12.14***
Observations	975	1,340	975	1,340	975	1,340

Note: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$ (two-tailed test)

  See Table 2 for variable definitions.

The relationship between resource allocation preferences and the branch office's abnormal sales performance is presented in Table 8: both $Ab\_SENIOR_{i,t-1}$ and $Ab\_ADV_{i,t-1}$ are positively associated with the branch office's abnormal sales performance ($t = 5.45$ $p < 0.01$; $t = 2.06$, $p < 0.05$). These findings provide evidence of a direct and positive relationship between resource allocation preferences and the branch office's abnormal sales performance. In addition, we find that the coefficients of $Ab\_SENIOR_{i,t-1} \times CONSENSUS_{i,t}$ and $Ab\_ADV_{i,t-1} \times CONSENSUS_{i,t}$ are significant and positive ($t = 4.59$, $p < 0.01$; $t = 1.67$, $p < 0.10$), showing that when the regional and branch manager have a higher level of goal consensus, branch offices with an unexpected proportion of resources are more likely to exhibit superior sales performance. These results echo studies finding that supervisors have an incentive to give more resources to subordinates who show similar preferences, and that bias reinforces the unequal ratio of high to low performance because of the disparity in resource allocation (Turban and Jones, 1988; Broughton and Mills, 1980).

4.3.4 Lead-Lag Relationship between Goal Consensus and Resource Allocation Preferences

In our main test, we investigate the association between goal consensus and the branch office's current unexpected proportion of resources. However, the effect of goal consensus on the regional manager's allocation decisions may be reflected in a future period rather than the current period. As a result, we further investigate whether goal consensus is associated with the branch office's unexpected proportion of resources in the future.

To explain the lagged effect of goal consensus on resource allocation preference, we regress one-period lead abnormal resource indicators ($Ab\_SENIOR_{i,t+1}$ and $Ab\_ADV_{i,t+1}$) on goal consensus and rerun equations (3) and (4). The regression results are shown in Table 9.

Similar to what we find in Table 5, Table 9 shows that goal consensus ($CONSENSUS_{i,t}$) has a significant positive relationship with abnormal advertising funding ($t = 2.60$, $p < 0.01$), but not the ratio of senior salespersons ($t = 0.85$, $p = 0.40$).

4.3.5 Controlling for Changes in Branch Managers during the Sample Period

In our main test, we calculate the goal-consensus score between each regional manager–branch manager pair in a region and argue that the level of goal consensus

Table 8 Effect of Goal Consensus on the Relationship between Resource Allocation Preference and Abnormal Sales Performance

Dependent variable	$Ab\_PERF_{i,t}$ (t-statistic) (1)	$Ab\_PERF_{i,t}$ (t-statistic) (2)	$Ab\_PERF_{i,t}$ (t-statistic) (3)	$Ab\_PERF_{i,t}$ (t-statistic) (4)
$Ab\_SENIOR_{i,t-1}$	0.65*** (5.45)	0.02 (1.12)		
$Ab\_ADV_{i,t-1}$			0.04** (2.06)	0.01 (1.63)
$CONSENSUS_{i,t}$		0.12 (1.37)		0.15 (1.27)
$CONSENSUS_{i,t} \times Ab\_SENIOR_{i,t-1}$		1.08*** (4.59)		
$CONSENSUS_{i,t} \times Ab\_ADV_{i,t-1}$				0.04* (1.67)
$MGT\_AGE_{i,t}$	-0.01 (-0.07)	-0.01 (-0.26)	0.01 (0.05)	0.01 (0.07)
$MGT\_GENDER_{i,t}$	0.09 (1.53)	0.09 (1.65)	0.09 (1.63)	0.10* (1.69)
$MGT\_TENURE_{i,t}$	-0.01 (-0.38)	-0.01 (-0.34)	-0.01 (-0.57)	-0.01 (-0.55)
$PRICE_{i,t}$	0.05*** (15.30)	0.05*** (15.17)	0.06*** (15.56)	0.06*** (15.58)
$NUM\_ENTRUST_{i,t}$	-0.01 (-0.86)	-0.01 (-0.86)	-0.01 (-0.80)	-0.01 (-0.83)
$OFFICE\_SIZE_{i,t}$	-0.04** (-1.97)	-0.04** (-2.05)	-0.03 (-1.49)	-0.03 (-1.51)
$OFFICE\_AGE_{i,t}$	-0.01 (-0.29)	-0.01 (-0.12)	-0.01 (-0.31)	-0.01 (-0.31)
$TURNOVER_{i,t}$	-0.59* (-1.92)	-0.55* (-1.80)	-0.68** (-2.23)	-0.69** (-2.24)
$NUM\_BRANCH_{i,t}$	0.01 (1.09)	0.01 (1.15)	0.01 (0.56)	0.01 (0.52)
$CYCLE_{i,t}$	0.03 (1.38)	0.02 (0.85)	0.04* (1.88)	0.03* (1.73)
$INDEX_{i,t}$	-0.06 (-1.51)	-0.05 (-1.24)	-0.08** (-2.02)	-0.08* (-1.93)
MONTH	Included	Included	Included	Included
REGION	Included	Included	Included	Included
Model	OLS	OLS	OLS	OLS
Adjusted R-Squared	0.14	0.15	0.13	0.13
F-Value	13.72***	13.69***	12.37***	11.35***
Observations	1,637	1,637	1,637	1,637

Note: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$ (two-tailed test)

See Table 2 for variable definitions.

Table 9 Lagged Effect of Goal Consensus

Dependent variable	$Ab\_SENIOR_{i,t+1}$ (t-statistic) (1)	$Ab\_ADV_{i,t+1}$ (t-statistic) (2)
$CONSENSUS_{i,t}$	0.01	0.39**
	(0.85)	(2.22)
$REGIONAL\_AGE_{i,t}$	-0.01	0.19*
	(-0.34)	(1.71)
$REGIONAL\_GENDER_{i,t}$	-0.06*	0.81**
	(-1.82)	(2.25)
$REGIONAL\_TENURE_{i,t}$	0.01	-0.04***
	(1.03)	(-4.20)
$SENIOR_{i,t-1}$	0.47***	
	(22.33)	
$ADV_{i,t-1}$		0.19***
		(5.48)
$MGT\_AGE_{i,t}$	0.01	0.04
	(0.68)	(0.64)
$MGT\_GENDER_{i,t}$	0.01	0.05
	(0.82)	(0.44)
$MGT\_TENURE_{i,t}$	-0.01**	-0.02
	(-2.37)	(-1.61)
$PRICE_{i,t}$	0.01	0.01
	(0.35)	(0.31)
$NUM\_ENTRUST_{i,t}$	0.01*	0.02
	(1.90)	(1.04)
$OFFICE\_SIZE_{i,t}$	0.01	-0.06
	(1.63)	(-1.30)
$OFFICE\_AGE_{i,t}$	-0.01**	0.01
	(-2.54)	(0.27)
$TURNOVER_{i,t}$	0.01	0.89
	(0.20)	(1.42)
$NUM\_BRANCH_{i,t}$	-0.01***	0.01
	(-4.72)	(0.41)
$CYCLE_{i,t}$	0.02***	-0.03
	(5.43)	(-0.81)
$INDEX_{i,t}$	-0.04***	-0.34***
	(-5.39)	(-4.27)
MONTH	Included	Included
REGION	Included	Included
Model	OLS	OLS
Adjusted R-Squared	0.32	0.10
F-Value	26.10***	6.82***
Observations	1,637	1,637

Note: *** $p < 0.01$, ** $p < 0.05$, and *$p < 0.10$ (two-tailed test)

See Table 2 for variable definitions.

between the regional manager and the branch manager affects the regional manager's resource allocation preferences. However, the fact that a few branch managers transferred from one branch to another during our sample period may have confounded our main results.[11]

To alleviate this concern, we create an indicator variable representing changes in branch managers (*CHANGE*) during the sample period and include this variable in regression models (3) and (4) to control for the impact of changes in branch managers. Table 10 reports the regression results for hypothesis 1. The results are similar once we control for the potential confounding effects.

5. Conclusion and Limitations

In this study, we examine whether the goal consensus between regional and branch managers, and branch managers' prior performance affect regional manager resource allocation preferences for branch offices. Furthermore, we investigate whether a branch office's past performance affects the relation between goal consensus and the regional manager's resource allocation preferences. The empirical results indicate that the higher the level of goal consensus between regional and branch office managers, the more advertising funding is distributed to the branch office after controlling for the impact of branch office characteristics. We also find that the better the branch manager's prior performance, the more senior sales agents are allocated to the branch office. However, we do not observe a moderating effect of branch offices' prior performance on the relationship between goal consensus and the tendency to receive a more unexpected portion of resources. Overall, our results suggest that regional managers' resource allocation preferences vary with the level of goal consensus and with subordinates' prior performance.

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11 Due to its own concerns, the case company distributes the survey and remains anonymity among its managers. Therefore, we cannot identify which branch managers answered our survey but later transferred to new branch offices during our sample period. We are provided information on which branch office the branch manager belonged to at the time he/she did the survey, non-confidential information (e.g., branch manager's age and tenure), and whether the branch office has changed branch managers.

Table 10 Controlling for Changes in Branch Managers

Dependent variable	$Ab\_SENIOR_{i,t}$ (t-statistic) (1)	$Ab\_ADV_{i,t}$ (t-statistic) (2)
$CONSENSUS_{i,t}$	0.01	0.42***
	(0.42)	(2.63)
$REGIONAL\_AGE_{i,t}$	0.01	0.17*
	(0.83)	(1.74)
$REGIONAL\_GENDER_{i,t}$	-0.03	0.94***
	(-1.01)	(2.88)
$REGIONAL\_TENURE_{i,t}$	-0.01	-0.04***
	(-0.52)	(-4.20)
$SENIOR_{i,t-1}$	0.59***	
	(34.64)	
$ADV_{i,t-1}$		0.25***
		(7.25)
$MGT\_AGE_{i,t}$	0.01	0.02
	(0.64)	(0.41)
$MGT\_GENDER_{i,t}$	0.01	0.03
	(0.66)	(0.29)
$MGT\_TENURE_{i,t}$	-0.01***	-0.01
	(-3.43)	(-1.27)
$PRICE_{i,t}$	0.01***	-0.01
	(3.50)	(-0.46)
$NUM\_ENTRUST_{i,t}$	0.01	0.03*
	(0.27)	(1.84)
$OFFICE\_SIZE_{i,t}$	0.01***	-0.05
	(3.28)	(-1.24)
$OFFICE\_AGE_{i,t}$	-0.01***	0.01
	(-3.76)	(0.12)
$TURNOVER_{i,t}$	-0.03	-0.39
	(-0.63)	(-0.70)
$NUM\_BRANCH_{i,t}$	-0.01***	0.01
	(-5.47)	(0.34)
$CYCLE_{i,t}$	0.02***	-0.04
	(6.35)	(-1.16)
$INDEX_{i,t}$	-0.04***	-0.29***
	(-5.72)	(-3.95)
$CHANGE_{i,t}$	-0.01	0.01
	(-0.18)	(0.05)
MONTH	Included	Included
REGION	Included	Included
Model	OLS	OLS
Adjusted R-Squared	0.47	0.10
F-value	56.25***	7.97***
Observations	1,637	1,637

Note: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$ (two-tailed test)

See Table 2 for variable definitions.

Like most other studies, this research has several limitations. First, as in other studies, there is the problem of generalization. Given the unique organizational context of the case company, our results may not be generalizable to other companies. For instance, an organization with sufficient resources to meet all the resource needs of its subordinates or an organization whose relations between members are not task-directed may not face the same difficulties as the case company discussed here. This is because when facing scarce resources, both goal consensus and achievement orientation may encourage unequal resource allocation.

Second, because of a lack of data, we are unable to directly measure whether regional managers inequitably allocate resources among branch offices in the region. Instead, we use residuals from the regression models to proxy allocate inequity, which may not fairly or accurately represent the inequity caused by a regional manager's resource allocation decision. Moreover, irrespective of whether resource allocation preferences exist among branch offices, it is not possible to confidently assert that inequity is intentional and affected by goal consensus or branch offices' prior performance.

Finally, as the concept of the level of goal consensus holds at a static point in time, it would be inappropriate to treat goal consensus as though it is continuous. However, the date of each survey response is unknown because it is the case company that helps us to distribute and collect the surveys. Therefore, the only data records that we could assess are the interval of time during which goal consensus occurred. In addition, we are unable to calculate change in goal consensus because the case company's assistance in this study is limited to distributing the survey questionnaire once; there are thus no other channels by which to contact the branch and regional managers of the case company.

Despite these potential limitations, the study yields empirical evidence of how the supervisor–subordinate goal consensus and subordinates' past performance affect the supervisors' resource allocation preferences. A salient feature of this study is that it highlights the fact that resource allocation decisions among subordinates depend on supervisor preferences and interests. Therefore, it is crucial for every organization to understand how to distribute resources fairly, avoiding idiosyncratic preferences and self-interest in decisions related to resource distribution. To resolve unfair resource allocation problems, organizations must not only implement different control mechanisms to monitor distribution processes but also encourage an atmosphere of open discussion and debate

that welcomes bottom-up participation to facilitate mutual understanding and optimize distribution decisions to meet organizational aims. Finally, managers must realize the importance of accountability, they must focus on organizational consequences rather than personal benefits or preferences, and consider the interests of other stakeholders (Anderson and Brown, 2010).

In summary, this study reveals that goal consensus between regional and branch managers and branch managers' previous sales performance are primarily associated with regional managers' decisions to distribute resources among branch offices.

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Appendix A. Survey Questionnaire for Regional Managers/Branch Managers

Dear colleague:

This survey aims to understand the extent to which our regional and branch managers understand and prioritize their company's goals. The collected data will only be used for academic purposes and your supervisor will NOT have access to individual answers. Please respond according to your own judgment and observation.

1. Please specify your gender.   Male   Female

2. Please specify your age group. ☐ 20–24 ☐ 25–29 ☐ 30–34 ☐ 35–39
☐ 40 or above

3. Please specify your education level. ☐ High school ☐ College/University
☐ Master's degree or above

4. How many years of experience do you have as a regional head/branch manager?

Appendix A. Survey Questionnaire for Regional Managers/Branch Managers (cont.)

Based on your comprehension of your company's goals (1. Expanding market share and improving financial performance, 2. Customer-focused quality management, 3. Team (branch office) management, and 4. Implementation of company's ideology), please determine which goal is more important and the weights of their importance on a scale from 1 to 9 ("9" represents most important and "1" represents equally important). Please ensure the consistency of your priority.

	9:1	8:1	7:1	6:1	5:1	4:1	3:1	2:1	1:1	1:2	1:3	1:4	1:5	1:6	1:7	1:8	1:9	
Expanding market share and improving financial performance																		Customer-focused quality management
Expanding market share and improving financial performance																		Team management
Expanding market share and improving financial performance																		Implementation of company ideology
Customer-focused quality management																		Team management
Customer-focused quality management																		Implementation of company ideology
Team management																		Implementation of company ideology

Appendix B. Consensus Index

For a given goal, a regional manager/branch manager makes a judgment on weighting the four goals with the scale ranging from one to nine, as shown in Appendix A; these rankings are presented in a matrix form. The size of the matrix ($n \times m$) depends on the number of elements; in our case, it is four × four.

$$X=[x_{ij}]=\begin{bmatrix} 1 & \cdots & x_{1n} \\ \vdots & \ddots & \vdots \\ 1/x_{1n} & \cdots & 1 \end{bmatrix} . \quad (1)$$

Equation (1) demonstrates matrix X, which represents $X=[x_{ij}]$; the comparison element value is $[x_{ij}]= 1/x_{ji}$ for $i \neq j$, where i is the n-th column of the matrix and j is the m-th row of the matrix. After the individual score is calculated, the individual score is aggregated into group decision making. The formula is as follows:

$$X^{G}=[x_{ij}]^{G}=\prod_{n=1}^{m}(x_{ij}^{(n)})\lambda^{K} , \quad (2)$$

where X^{G} is the group matrix for all decision makers ($n = 1,2,\ldots,m$), decision makers are considered to have different weight vectors λ^{k}, which have values between 0 and 1. In the event where the decision maker considers weights to be equally important, then $\lambda^{k} =1/m$. Then, the row geometric mean method (RGMM) is selected for the prioritization group decision method using the following formula:

$$w_{i} = \frac{\sqrt[1/n]{\prod_{j=1}^{n} x_{ij}}}{\sum_{i=1}^{n}\left(\prod_{j=1}^{n} x_{ij}\right)} . \quad (3)$$

In equation (3), the collective weight is w_i, where $i = 1,2,\ldots,n,$ and the group consistency score is measured using the geometric consistency index GCI:

$$GCI(X)=\frac{2}{(n-1)(n-2)}\sum_{i<j}((logx_{ij}) - (logw_i) + (logw_j))^{\wedge}2 . \quad (4)$$

Appendix C. Regression Results for Equations (1) and (2)

Dependent variable	$SENIOR_{i,t}$ (*t*-statistic) (1)	$ADV_{i,t}$ (*t*-statistic) (2)
$OFFICE\_SIZE_{i,t}$	0.07** (2.49)	0.02 (0.48)
$OFFICE\_AGE_{i,t}$	0.01 (1.35)	0.01 (0.73)
$MGT\_TENURE_{i,t}$	0.01** (2.30)	0.01 (0.18)
$TARGET_{i,t}$	2.20*** (15.80)	0.47** (2.25)
$PRICE_{i,t}$	0.01 (0.01)	0.49*** (3.52)
$NUM\_ENTRUST_{i,t}$	0.02* (1.89)	0.02 (1.07)
$NUM\_BRANCH_{i,t}$	0.01** (2.02)	0.03*** (3.46)
MONTH	Include	Include
REGION	Include	Include
Model	OLS	OLS
Adjusted R-squared	0.29	0.21
F-Value	41.86***	28.08***
Observations	1,637	1,637

Note: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$ (two-tailed test)

See Table 2 for variable definitions.

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Nai-Yng Liu is an Assistant Professor in Graduate Institute of Accounting, National Central University. Liu's research interest is managerial accounting, including management control system and cost accounting. Her research works have been published in Taiwanese and international journals, including *Taiwan Accounting Review*, *Journal of Accounting Review*, and *Journal of Management Accounting Research*.

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