

Analyzing the Impact of Strategic Performance Management Systems and Role Ambiguity on Performance: A Qualitative Approach

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Abstract This research questions the assumption that strategic performance measurement systems (SPMS) that define strategic goals at the individual job level reduce role ambiguity and ensure desired employee outcomes. Through qualitative research of both white-collar and blue-collar jobs, we seek to determine the types of jobs most amenable to SPMS guidance.

Keywords Strategic performance measurement systems · Role ambiguity · Job related information · Strategic outcomes

1 Introduction

Strategic performance measurement systems are software programs used by businesses to align strategy with individual performance [10, 11, 17]. They have been indirectly related with individual performance through mediators [4–6]. Role ambiguity is an example of these mediators as hypothesized by Asare and Conger [1]. Role ambiguity is the perception that one lacks information required to be proficient on the job, therefore, leading to feelings of helplessness and confusion [1, 8, 9].

SPMS enhance employees' performance through low role ambiguity by providing them with job-relevant information [10]. Job-relevant information is information needed by employees to perform their job duties the extent to which it should be clearly communicated to them [8, 10]. The more job-relevant information available to employees the higher their expected performance and productivity [1]. This is because, job-relevant information improves jobs understanding [8, 10].

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Fig. 1 Proposed research model

While prior research illustrates how SPMS relates to performance, it is largely supported by quantitative, positivist analysis. Also, the phenomena by which role ambiguity affects individual performance is not well understood as there are conflicting findings [11], creating a gap in the literature. With a qualitative study from a constructionist worldview, we seek to bridge this literature gap by exploring the phenomena by which SPMS affects individual performance with the research questions below (Fig. 1):

RQ1: How does an SPMS affect role ambiguity?

RQ2: How does role ambiguity affect individual performance?

This research is important because SPMS are represented as applying to all work; yet, no evaluation of different types of jobs has been conducted. This research will seek to determine if there is a range of jobs to which SPMS apply because it might alter company behavior in SPMS use. In addition, it may show whether further research is needed to clarify all of the contingencies relating to SPMS and its applicability.

This research contributes to the literature by exploring the SPMS—performance phenomenon to provide a deeper understanding of how SPMS and performance relate to each other. Further, we bring a subjective constructionist perspective to the conversation as current research is more tilted towards positivist perspectives where there is one reality. With this goal, we will conduct multiple qualitative case studies to obtain the perspectives of managers and non-managers as well as the perspectives of white and blue collar workers on the SPMS—performance phenomenon.

In the next sections, we detail the relevant literature and research conduct. The next section describes relevant research on SPMS and role ambiguity. Next, SPMS research is linked with role ambiguity and job-related information. Then, role ambiguity links to individual performance are explored. Lastly, the research methodology and expectations are developed.

2 Background

This section provides a summary of research on SPMS, role ambiguity, job performance, and their linkages to identify the gaps that this research seeks to analyze.

2.1 SPMS

An SPMS is “an information system containing financial and non-financial measures that are derived from strategy and designed to align individual actions with organizational strategy” [3]. Thus, SPMS serve four main purposes—convert strategy into measurable actions, clarify job duties, monitor individual and department-level performance, and provide feedback on the status of performance to the individual and to management [1].

Strategy is a course of action that enables an entity to compete in the market place [12]. This course of action is translated into levels of detail, such as initiative, project, and, eventually into individual job targets and performance measures that can be clarified, monitored, and measured by SPMS [6, 10]. For this purpose, SPMS are equipped with financial and non-financial performance measures and feedback tools that communicate and clarify employee job duties [4, 11, 16]. To be effective in clarifying tasks and monitoring performance SPMS should properly convert strategy into measurable actions [13].

SPMS clarify tasks by communicating job requirements that have been converted from the strategy from which it is cascaded down to business unit goals and then to individual-level goals [10, 11]. Thus, through the decomposition process, managers define strategic work components and assign them to departments and individuals across the organization [11]. Moreover, individuals can always go back to the SPMS to further clarify their goals. For example, an employee who does not remember how his/her tasks relate to the organization’s strategy can obtain that information from the SPMS. Those receiving conflicting task directions from different managers can also obtain clarity from the SPMS as it documents employee task requirements.

In addition to clarifying and communicating job requirements to departments and individuals, SPMS also aid managers in monitoring individual-level activities and achievements [5, 6] and departments [2, 3, 14]. SPMS can monitor financial and non-financial goals that have been converted from strategy [10]. In particular, SPMS helps managers to monitor performance by comparing actual individual and department-level financial and non-financial goals with targets prescribed by the SPMS [5]. Thus, SPMS enables managers to monitor both individual and department-level performance.

To summarize, SPMS convert strategy into measurable actions, clarify tasks, and help managers, and monitor performance at the individual and department levels by comparing actual performance to expected performance. This research focuses on the relationship between SPMS and individual-level performance.

2.2 Sources of Role Ambiguity

Role ambiguity is a lack of clarity about job requirements that results in an employee becoming confused about his/her job [8, 9, 11]. Role ambiguity may be

viewed as the difference between the information needed to perform a job and the information that is actually available [8]. Role ambiguity may come from a variety of sources in an organization [6, 8]. During the strategy setting process top management teams develop strategy and assign them to department heads who then deconstruct the strategy into individual-level goals [6, 10, 11]. However, if the goals are deconstructed incorrectly, assigned to the wrong departments or individuals, or otherwise misconstrued in some way, the errors can result in role ambiguity for the individual assigned to execute the tasks.

An example illustrates the problems that might occur. Assume a hypothetical organization in which the management team designs strategy and asks the planning department to cascade it down to individual-level goals. The cascading strategy used may result in a couple of ambiguities down the organization structure [13]. First, the planning department, responsible for receiving strategy from the management team and cascading it down to various departments may not clearly cascade down the strategy to the departments. This is a source of role ambiguity as the incoherent cascading of strategy to various departments translates to lack of understanding of what is required of individual employees [8, 13]. Second, role ambiguity may come about when department heads receive the correct information from the planning department but do not understand the roles to be played by their departments in implementing the strategy [6, 8]. Third, managers may receive the right strategy information from department heads but may not be able to assign corresponding job duties to employees in clear and coherent manner, leading to employee level role ambiguity [8]. Lastly, role ambiguity may come about when the management team is unable to convey the message behind strategy to managers and department heads in a clear manner [13]. While all these sources of role ambiguity are important, we focus on manager-level and employee-level role ambiguity and refer to them as role ambiguity in this study.

2.3 SPMS and Role Ambiguity

The extant research indirectly associates SPMS with individual performance [4–6]. For example, Burney and Widener [8] assert SPMS that are closely tied to strategy minimize role ambiguity by providing individuals with job-related information and that resulting low role ambiguity enhances individual performance. Despite Burney and Widener's [8] assertions, the phenomenon by which SPMS affect performance through reduced role ambiguity is not clear [11].

SPMS minimize role ambiguity by translating strategy into individual-level goals [8]. To be effective in minimizing role ambiguity, SPMS should be able to convert strategy into measurable actions and communicate those actions to employees in a coherent manner [11]. Also, SPMS should provide employees with feedback as to how they are performing in relation to strategy [11]. SPMS that are able to perform these functions are deemed to be closely tied to strategy and clearly specify employee goals [4, 6, 9, 11]. These SPMS minimize role ambiguity as

employees become aware of what is expected of them [8]. Further, SPMS formalize goals and job duties by putting them in writing, which minimizes employee uncertainties about their job duties [8]. Thus, an SPMS that is closely tied to strategy minimizes role ambiguity by converting strategy into actionable tasks, communicating tasks to employees and monitoring tasks to ensure that they are performed according to strategy [9].

Some authors (e.g. [10]) argue that SPMS provide individuals with job-related information as a means of minimizing role ambiguity. Burney and Widener [8] also argue that job-related information serves as a source of reference that help individuals to clarify task ambiguities with managers and guide them in performing their day-to-day duties. Further, individuals who are provided with job-related information are more likely to return to the job-related information source for more information [8]. Thus, while role ambiguity and job-related information seem similar, role ambiguity reflects the extent to which individuals understand their duties while job-related information reflects the extent to which individuals have information to do the understanding [8]. In summary, SPMS increases job-related information, which in turn should decrease role ambiguity.

Despite the arguments in the above paragraphs, three things are still not clear in the literature regarding how an SPMS relates to role ambiguity. First, it is not clear whether job-related information actually has to increase before role ambiguity could be minimized or both happen at the same time. For instance, from the earlier example, delivery drivers know from the SPMS that for every hour they spent delivering products last year, they have 42 min for the current year (30% less). However it is not clear whether the drivers' role ambiguities reduce just because they know their current year goals from the SPMS. This is because there is little to no role ambiguity in truck driving so simply altering drivers' goals does not necessarily alter their role ambiguities. Rather, altering goals by simply reducing prior year delivery times could annoy drivers which can lead to low morale and high turnover among drivers. Thus, research that explores how SPMS affects both white and blue collar role ambiguity is necessary. This study serves this purpose by studying managers, non-managers, white and blue collar workers in a single study. Second, detailed perspectives of individuals (employees and managers) on how they perceive SPMS to minimize role ambiguity with or without job-related information is not clear. Lastly, as far as we are aware only one research [8], has studied how SPMS affects role ambiguity and was conducted from positivist perspectives on management accountants (white collar workers), tilted more towards the researchers' worldviews. Moreover, because the study surveyed only white-collar workers it is not clear as to how SPMS affect role ambiguity of blue-collar workers. Hence, there is the need to explore how SPMS affects both white and blue-collar workers in a single study. With research question 1: How does an SPMS affect role ambiguity? This literature gap will further be bridged by exploring how SPMS minimize role ambiguity from a constructionist perspective where the truth is subjective. In doing this, we will rely on individual (employees and managers) accounts of how in their practical experiences SPMS affect role ambiguity with or without job-related information.

2.4 *Role Ambiguity and Individual Performance*

When role ambiguity is minimized, it is argued to enhance individual performance [8, 11]. However, this phenomenon is not well understood, as there are conflicting findings in the literature [11]. For example, some authors argue there is a negative relationship between role ambiguity and individual performance, where individual performance increases as role ambiguity decreases [8, 11]. Others assert there is a U-shape relation between individual performance and role ambiguity, where individual performance decreases with increases in role ambiguity to a point beyond which individual performance increases even if role ambiguity increases [11]. Still, others argue there is an \cap -shape distribution between individual performance and role ambiguity, where individual performance increases with increases in role ambiguity to a point beyond which individual performance decreases as role ambiguity increases [11]. Alternatively, we may find that more than one of the distributions hold for different types of jobs.

In sum, while the current streams of research provide insights into how role ambiguity affects performance, they studied limited contexts. Also, these studies mostly are positivist where there is one reality (c.f. [6, 8, 11]). Moreover, few studies provide detailed accounts of employees' views on how role ambiguity affects their performance. Thus, a unifying account of how role ambiguity affects performance that uses a subjective constructivist perspective may provide new insights into the phenomena. Consequently, with research question 2: How does role ambiguity affects individual performance? We employ a case study methodology from a subjective constructivist perspective to explore the phenomenon by which role ambiguity affects individual performance.

3 **Methodology**

Given the lack of clarity on the SPMS—performance phenomenon and the inductive nature of our research questions [16], this research adopts a multiple qualitative case study methodology. This methodology will enable us to explore SPMS in different contexts [16] with multiple data sources [7]. We will explore the research questions from a subjective constructivist perspective, where the truth is in the eyes of the beholder, to provide research participants the opportunity to share their stories and experiences through semi-structured interviews [7].

Interview data will be analyzed by identifying interpretable units and organizing them into meaningful categories [16, 18]. With this approach, we expect the outcome of this study to be a deeper understanding of the SPMS—Performance phenomenon. We will follow the steps recommended for conducting qualitative case study research and analyzing qualitative data (by Creswell [7]; Saldaña [18]). These are appropriateness of case study for the research under consideration, case identification and selection, data collection and analysis, and case interpretation.

3.1 *The Cases*

Qualitative case study is suitable for ‘how’ research questions with a goal of providing an understanding of a phenomenon [7, 15]. Qualitative cases explore real-life, bounded systems through contextual detail and in-depth analyses [7], which is the objective of this research. Further, given conflicting explanations from prior research on the SPMS—performance phenomenon and, especially, how role ambiguity affects performance, multiple qualitative case studies should improve our understanding of the phenomenon. With these objectives, we will conduct separate case studies in five business segments of a utility company located in the Southern United States, including wholesale, retail, mining, generation, and transmission units. We will conduct semi-structured interviews to obtain the perspectives of managers, non-managers, white and blue-collar workers on how SPMS affect their performances. The managers will represent both white-collar and blue-collar units. Hopefully, the distinct characteristics of participants and their experiences with SPMS in each context (case) will not only bring diverse perspectives to the study but also make the study more robust by explaining some of the contradictions of past research [16].

Case studies are appropriate for qualitative research when there are well defined contexts within which the researcher seeks an understanding of a phenomenon [7, 20]. This study meets these criteria as exploring how SPMS affect individual performance within the contexts of the five business segments, each with its own unique management and corporate culture. To gain access to the organization, formal letters of intent explaining the research and the benefits to the organization will be sent to the directors of accounting and human resources, both of whom have agreed to the study in informal conversations.

Cases should bring different perspectives to the phenomenon being studied [7]. To meet this criterion, the cases we have identified for this study have distinct SPMS and job requirements that come with their own role ambiguities, making them appropriate for the study. For each business segment, we will select a total of 18 individuals as recommended by Saldaña, [18] for initial study. At least three managers and three non-managers as well as six white-collar and six blue-collar workers will be selected. This will enable us to represent all blue and white-collar perspectives of the SPMS—performance phenomenon. We will select participants by drawing alternate random and purposeful samples of individuals such that purposeful samples follow random samples for each organization studied. We will end with three purposeful and two random groupings. Our goal is to select demographics that will be underrepresented after drawing random samples, using purposive sampling. Thus, samples such will mix white-collar and blue-collar workers and managers in each of five business segments.

Qualitative case studies are more credible when cases’ characteristics reflect the phenomenon being studied [7, 20]. Given this facts and that this study is intended to provide a more complete understanding of the SPMS—performance phenomenon,

the five cases were chosen as having experienced the phenomenon in very different contexts. Thus, the cases provide credibility because of their differences.

Components of the SPMS—Performance phenomenon as illustrated by current literature are the focus of this research. These are:

1. How SPMS relate to role ambiguity and
2. How role ambiguity relates to individual performance.

The first component addresses research question 1 and the second addresses research question 2. In summary, the cases that we have identified and will be selecting for this study are more likely to have characteristics that reflect the SPMS—performance phenomenon and as a result make our study more robust [16].

3.2 Data Collection

Before conducting interviews, we will first collect secondary data. This will be comprised of employee performance evaluation scores for the past 5 years, firm mission and vision statements (as documented on company website), and strategy. In addition, we will document business unit goals and objectives as prescribed by the company's SPMS and how those goals relate to firm strategy. The objective of collecting these secondary data is to enable us document how the company's strategy relates to its vision and mission. It will also inform us on how the strategy has been translated into business segments' and employees' goals and objectives. We will also interview the planning group (the team that translated the organization strategy into individual job duties). This, along with the secondary data will provide us with a better understanding of how, on paper, the SPMS is intended to function. Understanding the data will make us better informed when designing interview protocols to be used in primary data collection [18] and enable us to properly interpret them [16].

In conducting interviews, we will rely on semi-structured techniques as they blend structured and unstructured formats. Semi-structured interviews will enable us to keep participants focused on interview questions and at the same time allow them to elaborate on their feelings, attitudes and perceptions about the SPMS—performance phenomenon [7, 15]. In addition, since we will be collecting similar data across the business segments, we will start interviews as and when business segments are ready to be interviewed. However, we will finish conducting all interviews in one business segment before moving to another. The objective here is to rely on our experience with one segment to anticipate and address potential challenges in subsequent segments. In addition, since most employees schedule their vacations after July, we will collect data from June 1st to July 31st in 2017.

These decisions on data collection meet the criteria that data should be extensive and drawn from multiple sources [7] as multiple sources bring different perspectives (subjective realities) into the study, a basic premise on which constructionist

qualitative studies are based [20]. We discuss our interview protocols in the next paragraphs.

3.3 Interview Protocols

Interview protocols will cover topics such as SPMS, role ambiguity, job-related information, and individual performance as highlighted in research questions 1 and 2. We will also leave room for participants to extend the discussions to cover issues that may arise [7, 15]. Moreover, we will encourage respondents to interpret and answer questions from their own perspectives [7, 20]. We intend to allow participants to answer questions from their experiences with SPMS and expect that the order of questioning may deviate from the protocol as we encourage participants to express themselves freely [16].

Since we will be interviewing 15 individuals for each business unit, we plan to conduct five sets of face-to-face interviews in each business unit where three different people will be interviewed in each set. To encourage participants to give honest answers, we will interview managers and non-managers separately. We expect each interview section to last between 1 and 2 h. All interviews will be recorded and transcribed afterwards for analysis to prevent data loss [16]. To ensure that we are consistent with the themes that we will gather from interviews, we will compare and validate the interview data with the secondary data [7, 15, 18].

As interviews are completed, we will conduct reflection sessions to discuss what we have observed in the session. We will also discuss our own reactions to the interviewees to ensure that personal perspectives do not bias research results. Questions of interpretation will be revisited with an individual respondents.

Once all interview data have been collected, we will discuss transcribed data between ourselves on how SPMS' relate to role ambiguity (research question 1) and how role ambiguity in turn relates to individual performance (research question 2) [7, 18]. These discussions will be based on how each of us perceive and interpret interview results [16, 18]. Findings will be validated with key informants from the interviewees.

3.4 Data Analysis

Within-case and between-case analyses will be conducted and will include case descriptions, histories, and chronologies, focusing on key issues and grouping them into themes [7]. Initially, we will use attribute (grammatical) and descriptive (elemental) first-cycle coding techniques. We are choosing these coding techniques for four reasons. First, attribute coding will enable us to separate participant demographic information into manager, non-manager, white collar and blue collar workers for future management and reference [18]. Second, descriptive coding will

enable us to break down interview data [16] so that we can summarize topics into words and phrases (units) that can be interpreted [18]. Third, units from descriptive coding will serve as foundation for second or third cycle coding if needed [18]. Lastly, breaking data down into words and phrases will provide us with more understanding of the data and help us see evidence through multiple perspectives without being biased towards participant impressions and behaviors [16].

After coding, we will perform ‘within’ case analyses for each case by performing the following tasks. First, we will look for patterns among codes and group similar codes into sub-categories without regard to descriptive attributes (first-level groupings). Next, we will repeat this process for the sub-categories and further group similar sub-categories into categories (second-level groupings). Lastly, we will repeat the process for categories and group similar categories into themes (third-level groupings). We will perform these tasks such that we arrive at as many codes, sub-categories, categories and themes for each case for each of the research questions as recommended by Saldaña [18]. This will find commonalities across managers and non-managers. Then, we will repeat the process within the descriptive categories to determine differences between managers, long-time employees, genders (if there is enough variation), age groups, and so on to the extent possible.

After within-case analyses, we will perform cross-case analyses. This analysis will be conducted in a similar manner. First, without regard to descriptive attributes, we will analyze similarities of themes across the groups. Then, we will analyze mindful of the descriptive categories to determine the extent to which the different grouping alter the feelings, attitudes, and perspectives of the respondents. From the analyses, we will seek to define the core category around which the basis for theoretical foundations can be developed [18].

3.5 Case Interpretation

After analysis, we will interpret our findings and draw conclusions based on our research questions [7]. This will be done separately for each of the themes that we will be developing from ‘within’ and cross case analyses for each research question. We plan to follow Toulmin’s [19] argument model, to develop claims, provide evidence of those claims, and warrants to develop logic about the claims, based on our academic and past research credentials. The steps to analyzing the observational data come first, to note the event. The prior analysis of within and between cases analysis will surface events, pattern categories and, relationships between them. The categories become the claims, and the events become the evidence of those claims. The warrants are anecdotes about the circumstance of the stories told by the respondents and any pre or post comments that might relate. Evidence both within and between categories of similarities and differences will be used to develop theoretical claims.

For research question 1, we will discuss how themes generated from the interview data explain how SPMS provide job-related information. Role ambiguity and how it is affected by the presence, use, and feedback in the SPMS will be discussed at all levels and used to provide the validating warrants of claims relating to similarities and differences between the groups.

The process will be repeated for research question 2, discussing how role ambiguity, if present, relates to individual performance and, if the SPMS helps or hinders the perceptions of role ambiguity and how.

4 Conclusions

In this research, we propose that the SPMS—employee performance phenomenon needs to be further explored for a better understanding. We reviewed the literature and proposed a multiple qualitative case study research with a subjective constructionist worldview as appropriate for exploring the phenomenon. This research is important because prior research that has studied the phenomenon have mostly been quantitative studies with little focus on qualitative data. In addition, the phenomena have been studied with positivist worldviews with little attention to constructionist worldviews. Most importantly, the phenomenon by which SPMSs affect performance is not well understood, as there are conflicting findings in the literature. To resolve the conflicts, research questions on how SPMS affect role ambiguity and how role ambiguity affects performance are proposed to guide this study. In exploring the SPMS—performance phenomenon, the research questions will be the guide for collecting primary (interviews) and secondary data (documents on SPMS, employee performance evaluations and organization mission, vision, and strategy). Data will be collected from five business segments—Wholesale, retail, generation, mining, and transmission, of a utility company located in the Southern United States. We selected this organization because each of the five business segments has distinct management teams and organizational cultures that will help make our findings more robust. After exploring the phenomenon, we expect our findings, as outcomes, to (a) bridge the gap in the literature and (b) provide a further understanding of how SPMS affects individual performance in organizations. This will keep organizations well informed about individual outcomes that may result from implementing SPMS.

Appendix

The Interview Protocol

1. Tell me about how you spend your day at work. What are the major elements of your job?

2. Are there any parts of your job you are not clear about how to perform or not clear about what is expected of you? [review job as described above]
3. What information do you need from outside your job to do your work? Where does it come from? Do you always have it? Do you ever think you need more or other information to do your job? What type? Where might it come from? Why don't you have it?
4. In your opinion, what makes you a successful employee of this organization? Are there some elements of your job performance that might be improved? What and how?
5. Do you pay attention to the firm's SPMS and its feedback? How do you use it? What impact does it have on your job?
6. In a few words, can you describe the vision, mission, and strategy of your organization?
7. How does your organization's business model work relative to your job?
8. From the vision, mission and strategy you describe, describe your role in their implementation?
9. In your opinion, how does your role help your organization achieve its strategy?
10. A strategic performance management system, also known as SPMS, is used in your organization. Does it apply to your job? And how? What are benefits of SPMS to you? To your job?
11. To what extent and how does the SPMS help you do your job? To what extent and how does the SPMS help you understand your job duties?
12. What kind of information does your SPMS provide you? How is this information relevant to your job?
13. What do you do when you have questions about your job?
14. On what criteria are your performance evaluations based?
15. From your experience, how does the SPMS affect your performance evaluation?
16. Do you think your performance evaluation might be different if you had a better understanding of your job duties? Could the SPMS provide that understanding?
17. Does your performance evaluation process refer to the SPMS or your SPMS performance?

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