CRANFIELD UNIVERSITY

PETER KERR

THE IMPACT OF DIVERSE PERFORMANCE MEASUREMENT ON THE CUSTOMER-ORIENTED SELLING BEHAVIORS OF B2B SALESPEOPLE

SCHOOL OF MANAGEMENT

PhD THESIS
Academic Year: 2011–2017

Supervisor: Dr. Monica Franco-Santos

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ABSTRACT

The pervasive use of performance measurement frameworks, such as the balanced scorecard, coupled with the growing complexity of today's B2B sales role is increasing the need for greater levels of measure diversity to evaluate the performance of the modern salesperson. Yet very little is known regarding the behavioral impacts of using more balanced and diverse measures to evaluate individual salesperson performance.

This research investigates the relationship between the use of diverse measures of performance and the customer-oriented selling behavior of B2B salespeople. Based on data collected from 274 business-to-business salespeople from Canada, the United States and the United Kingdom and using partial-least squares, structural equation modeling, the author finds that measure diversity is positively associated with salesperson customer-oriented selling behavior and that this behavior is fully mediated through salesperson attitudes towards customer-oriented selling. Findings also suggest that measure diversity within a sales performance measurement system is positively associated with increased levels of supervisory sales coaching activity.

Keywords:

Measurement diversity, non-financial measures, sales performance, sales control, attention-based theory, theory of planned behavior, customer orientation

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Peter Kerr
March 2018

This thesis is dedicated to my family –

Susan, Michael, and Kristen.

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LIST OF EQUATIONS

LIST OF ABBREVIATIONS

ABT	Attention-Based Theory
AVE	Average Variance Extracted
B2B	Business-to-Business
B2C	Business-to-Consumer
CIMO	Context-Intervention-Mechanism-Outcome
CMV	Common Methods Variance
CRM	Customer Relationship Management
DPM	Diverse Performance Measurement
HTMT	Heterotrait-Monotrait
KMO	Kaiser-Meyer-Olkin
MDI	Measurement diversity Index
MTC	Motivation to Comply
PCA	Principal Component Analysis
PLS-MGA	Partial Least Squares – Multi-Group Analysis
PLS-SEM	Partial Least Squares – Structural Equation Modeling
SPME	Sales Performance Measurement Effectiveness
SPMS	Sales Performance Measurement System
SRMR	Standardized Root Mean Square Residual
SSE	Sum of the Squared Prediction Errors
SSO	Sum of the Squared Observations
TPB	Theory of Planned Behavior
VIF	Variance Inflation Factor

1 INTRODUCTION

This chapter, comprised of five sections, provides an overview of the thesis. Section 1.1 summarizes the research background, the overall purpose of the research, and the two research questions. Section 1.2 outlines the organizational theories underpinning the study undertaken. Section 1.3 explains the research philosophy adopted and summarizes the research methods and procedures employed. Section 1.4 presents the key findings and contributions of the research. And, finally, Section 1.5 describes the organizational structure used for the remainder of the thesis.

1.1 Research Background

During the last few decades, individual performance measurement has been a topic of great concern for both management academics and practitioners (Bommer *et al.*, 1995; Neely *et al.*, 2000; Smith and Bitici, 2017). Companies measure individual performance for several reasons, such as to monitor and control employees, to develop performance, and to ensure alignment with stakeholders' interest (Grafton, Lillis and Widener, 2010; Micheli, Mura and Agliati, 2011; Beer and Micheli, 2017). The development of performance measures involves many context-specific idiosyncrasies (Otley, 2003; Franco-Santos *et al.*, 2007; Groen, Wilderom and Wouters, 2017). As a result, researchers in numerous management disciplines (e.g., operations, accounting, and human resources) have all contributed to the literature by generating their own field-specific approaches to the selection, design, and use of performance measurement systems. While a significant proportion of performance measurement and management knowledge has been applied in the sales literature, currently there is no widely accepted sales-specific framework or approach to the selection and use of effective sales performance measures.

The underdeveloped state of the sales literature regarding frameworks or approaches for measuring performance effectively is evidenced by the inconsistency and volume of measures utilized to assess sales performance (Churchill Jr., 1979) and the questionable assumption made by researchers and practitioners regarding the

interchangeable and transferable nature of various types of measures in sales (Rich et al., 1999). Measures are often selected despite being incomplete in their ability to measure a particular construct (Simons, 1995, p. 76) or inappropriate given the contextual situation in which they are used, potentially resulting in undesired outcomes, such as reduced employee satisfaction and commitment (Lau and Moser, 2008; Huffman and Cain, 2000), increased role conflict (Miao and Evans, 2012), or dysfunctional behavior (Ramaswami, 1996).

Over the past three decades, dysfunctional selling behavior associated with organizational sales performance measurement choices has become a frequently reported phenomenon in the press. For example, overemphasis on revenue measures in the 1990's was cited as the reason Sears Automotive sales staff began selling unnecessary repair services across the United States (Ordonez *et al.*, 2009b). More recently, this same overemphasis is thought to have contributed to the public scrutiny faced by Bell Canada (Johnson, 2017), TD Bank Financial Services (Young, 2017), and Wells Fargo, the latter where 3.5 million accounts were opened without customer permission (Freed, 2017). In the wake of the TD Bank Financial Services scandal, the Financial Consumer Agency of Canada and the country's Office of the Superintendent of Financial Institutions instituted a review of the selling practices of all major Canadian banks (Ligaya, 2017).

In parallel, a significant effort by academics (Verbeke et al., 2011) has gone into investigating the antecedents of sales performance. Researchers have looked at such predictors as salesperson personal characteristics (Barrick and Mount, 1991), salesperson self-efficacy (Fu *et al.*, 2010), salesperson use of technology (Rodriguez, Peterson and Krishnan, 2012), salesperson role knowledge (Weitz, Sujan and Sujan, 1986; Sujan, Sujan and Bettman, 1988), and numerous situational factors (Weitz, 1981; Roberts, Lapidus and Chonko, 1994). Unfortunately, this work has resulted in a list of factors with limited predictive power (Verbeke et al., 2011). Given the emphasis put on investigating the antecedents of sales performance, it is interesting to find that the influence exerted by the choice of sales performance measures on individual sales

performance or on selling behaviors, such as customer-oriented selling[1] (Thomas, Soutar and Ryan, 2001, p. 63), remains an under-researched area (Churchill Jr. *et al.*, 1985; Verbeke, Dietz and Verwaal, 2011).

As will later be described in the literature review section of this thesis (Chapter 2), a sales performance measurement system (SPMS) can be classified in terms of its control orientation, the types of measures utilized, and the level of measurement diversity (or dimensionality) present. To date, empirical research regarding the selection of measures within a firm's SPMS has mainly focused on investigating either the relationship between the control orientation properties of sales performance measures (Ramaswami, 1996; Fang, Evans and Zou, 2005; Melnyk, Hanson and Calantone, 2010; Miao and Evans, 2012) or the outcomes associated with the type of performance measures adopted (Ittner, Larcker and Rajan, 1997; Gibbs *et al.*, 2004; Lau and Moser, 2008). However, we still know very little about the extent to which measurement diversity, that is, the combination of financial and non-financial measures, influences employee-level outcomes, particularly customer-oriented selling behaviors. This gap in our knowledge is important, as most sales organizations have some level of measurement diversity to evaluate sales performance in use (Zoltners et al., 2012).

To date, certain management and leadership factors, such as the *level of supervision* and *span of control* (Dobbins, Cardy and Platz-Vieno, 1990), have been identified as possible influencers in the relationship between performance measurement system properties and employee-level outcomes; however, the sales literature has largely ignored other management and leadership factors, such as the impact from supervisory coaching activity (Pousa and Mathieu, 2013). This is surprising given that supervisory coaching is likely a primary communication vehicle and feedback mechanism of measurement information between the organization's performance measurement system and its salesforce (Jaworski and Kohli, 1991; Joshi and Randall, 2001), as many types of performance measures (e.g., subjective or behavioral-based

[1] Customer-oriented selling behavior refers to "the degree to which salespeople practice the marketing concept by trying to help their customers make purchase decisions that will help satisfy customer needs" (Saxe and Weitz, 1982, p. 343) rather than salesperson self-interest.

measures) are not produced by the firm's traditional accounting or customer relationship management (CRM) systems. The degree to which these measures are communicated via coaching activity may increase the attention paid to them by salespeople, potentially influencing individual selling behaviors.

1.2 Research Aim and Research Questions

Based on the gaps identified in the literature, the aim of this research is to illuminate the relationship between the use of a measurement-diverse SPMS, customer-oriented selling behavior, and supervisory coaching. Specifically, this study addresses two research questions. First, *what effect does the level of measurement diversity*[2] *within an SPMS have on customer-oriented selling behavior?* Second, *to what extent does supervisory coaching influence the relationship between measurement diversity within an SPMS and customer-oriented selling behavior*?

1.3 Theoretical Underpinning

For the development of the theoretical framework of this thesis, various well-known psychology and economics theories were investigated, such as *goal-setting theory* (Locke and Latham, 2002), *expectancy theory* (Vroom, 1964) and *agency-theory* (Holmstrom, 1979). Given the limitations associated with these theories regarding their treatment of human cognitive capabilities, the premises and predictions of two less familiar theories, *attention-based theory* (Ocasio, 1997) and *the theory of planned behavior* (Ajzen, 1991), were found more appropriate for this particular research.

Unlike economic theories that permeate the performance management and sales literatures, which assume individuals to be utility maximizers, attention-based theory (ABT) assumes organizational decision-makers have cognitive limitations, requiring them to make trade-offs and to attend to certain activities over other activities. What

[2] The terms *measurement* (or *measure*) *diversity* and *diverse performance measurement* (DPM) will be used interchangeably throughout this thesis.

they ultimately decide to focus their attention on influences employee and organizational outcomes over other possible outcomes. ABT has primarily been used as a macro-level theory to explain firm-level actions while acknowledging that individual organizational members are the ones who engage in attending.

Conversely, the theory of planned behavior (TPB) is a micro-level theory, used to predict human behavior across numerous contexts (Armitage and Conner, 2001). According to Ajzen (1991), human behavior can be determined by two factors: one's level of intention to act on a particular behavior and one's perceived ability to perform the behavior (or perceived behavioral control).[3] Because perceived behavioral control also impacts the intention to perform a particular behavior, Ajzen (1991) argues that behavioral intention can be predicted from three factors: perceived behavioral control, individual attitudes, and the subjective norm surrounding a behavior (Figure 2-11).

The set of hypotheses put forward in this thesis support a theoretical framework that proposes that diverse performance measures and supervisory coaching operate as "communication vehicles" (Ocasio, 1997, p. 191) as defined within ABT, focusing organizational member attention and influencing the underlying antecedents of behavioral intention and, ultimately, influencing the actual selling behaviors of salespeople.

1.4 Research Approach

This research is based on a positivist research philosophy and on salesperson-level data collected through an online survey. The following section details the research philosophy underpinning this study and summarizes the research methods adopted.

[3] Perceived behavioral control is defined as an individual's self-efficacy for performing a specific behavior (Ajzen, 1991). Behavioral control and perceived behavioral control are used interchangeably throughout this thesis.

1.4.1 Research Philosophy

A research philosophy underlies the design of research studies in the social sciences, as it forces the researcher to take a position regarding the nature of reality and how knowledge from that reality may be gained (Blaikie, 2007, p. 13). The establishment of a philosophical position and complimentary research paradigm is a critical aspect of high-quality management research, as it bounds the research strategy and helps clarify downstream research design choices (Blaikie, 2007, p. 56).

A researcher's ontological perspective (i.e., view of the nature of reality) establishes the epistemological possibilities or ways in which knowledge can be gained from reality. As an example, a *shallow realist* ontology assumes "an external reality consisting of things and/or events and/or states of affairs, which are controlled by natural or social laws" (Blaikie, 2007, p. 14). This position supports certain epistemological approaches to inquiry, such as *empiricism* or *falsification,* as these approaches gather knowledge through external observation while negating others that believe "it is impossible for fallible human beings to observe an external world" (Blaikie, 2007, p. 23).

This matrix of ontological and epistemological possibilities provides the philosophical foundation of the potential research paradigms and associated research strategies available to carry out social science research. For example, Table 1-1 presents key research design implications associated with two opposing research paradigms: *positivism* and *social constructionism*. A positivist research paradigm is associated with a *realist* ontology and epistemological positions more closely aligned to the natural sciences, such as *empiricism* and *falsification*, where reality is observable and can therefore be measured through objective methods (Blaikie, 2007, p. 26). Conversely, the research paradigm of *social constructionism* is aligned to the *idealist* ontology and the epistemology of *constructionism*, where reality is not believed to be objective or observable by humans and is only given meaning by people, their language, and their experiences (Blaikie, 2007, p. 16). These two opposing views have significant research design implications, and each has strengths and weaknesses in terms of its ability to support research objectives.

Positivism provides a platform for easier policy justification and potentially for faster and more economical data gathering across a wide range of research situations. However, its simplification of social phenomena and use of simplistic models and operational variables are argued to be artificial or inflexible (Easterby-Smith, Thorpe and Jackson, 2008, p. 73). In addition, its deductive approach aligns to theory testing rather than theory generation. In contrast, social constructionism excels at theory generation; however, data gathering can be costly and time consuming and data interpretation can be difficult and complex (Easterby-Smith, Thorpe and Jackson, 2008, p. 73).

Table 1-1: Positivism versus Social Constructionism

(adapted from Easterby-Smith, Thorpe and Jackson, 2008, p. 59)

	Positivism	**Social Constructionism**
The observer	Must be independent	Is part of what is being observed
Human interest	Should be irrelevant	Are the main drivers of science
Explanations	Aims to establish causality	Aim to increase general understanding of the situation
Research progresses through	Hypotheses and deductions	Gathering rich data from which ideas are induced
Concepts	Need to be defined so that they can be measured	Should incorporate stakeholder perspectives
Units of analysis	Should be reduced to simplest terms	May include the complexity of "whole" situations
Generalization through	Statistical probability	Theoretical abstraction
Sampling requires	Large numbers selected randomly	Small numbers of cases chosen for specific reasons

Much of the research conducted to-date in the performance measurement and sales performance and control literatures has been conducted using a positivist research paradigm (Churchill Jr. *et al.*, 1985; Anderson and Oliver, 1987; Eisenhardt, 1989; Locke and Latham, 2002). This approach mirrors this author's philosophical position

and therefore the research carried out within this thesis follows the positivist research paradigm.

1.4.2 Research Methods

As a positivist research study, study characteristics attempt to match those in Table 1-1 above. The research conducted is quantitative in nature, utilizing a survey instrument for data collection. The researcher has no involvement with the organizations under investigation and plays an external observer role. Constructs within the study have been reduced to simple terms and operationalized into quantitative measures coming from existing published scales where possible. At a high level, the aim of this study is to test theory and, as such, is consistent with the deductive research strategy employed by positivist research. Hypotheses are developed from a preceding literature review and established theories are tested to corroborate or falsify them through the use of statistical procedures and sampling methods allowing for some generalization to occur.

Following both a systematic and narrative review of the literature, research methods were developed in line with processes recommended by Black (1999, p. 51) and Blaikie (2010, p. 33) for conducting quantitative research within the social sciences (Figure 1-1). First, research questions and hypotheses were developed (Table 1-2). Second, research design structure was determined in the form of a cross-sectional survey. The population for the study was established as English-speaking, business-to-business salespeople[4] working in western-based companies large enough to sustain a field salesforce of 10+ salespeople. The sample frame established to support this population was then defined as salespeople working in business-to-business sectors of the economy, including manufacturing, wholesale, and business information services (i.e., technology, media, telecommunications) from the United States, Canada, and the United Kingdom, in companies with $10M+ in annual revenue and 100+ employees. Revenue- and employee-level cut-offs were used to establish larger, more formalized sales organizations capable of maintaining 10 or more field sales staff, based on the researcher's 25 years of middle and senior executive management experience in the

[4] The decision to exclusively survey business-to-business salespeople is discussed in Section 4.2 of this thesis.

business-to-business marketplace. Third, a survey instrument was created based on previously published measurement scales (where possible), which was pre-tested and piloted to ensure a survey length, layout, item wording, and meaning that should be understood by respondents as intended. Fourth, partial least squares structural equation modeling (PLS-SEM) and its associated statistical tests were chosen for testing study hypotheses. Fifth, data collection was carried out by inviting prospective respondents, through the social media site LinkedIn, to complete an online survey using Qualtrics, a web-based survey software. Lastly, data was analyzed, first to validate data quality, as well as measurement and structural model validity, and second to test research study hypotheses.

Research validity issues, which if not considered can reduce support for study conclusions, were addressed at the planning and execution stages using methods consistent with multivariate data analysis and PLS-SEM statistical validity techniques suggested by Black (1999, pp. 59–86) and Hair Jr. et al. (2017, pp. 104–187). The remainder of this subsection briefly reviews the types of validity considered.

According to Black (1999, p. 51), four types of validity issues can occur within quantitative social science research that must be addressed in support of high-quality research: internal validity, external validity, construct validity, and statistical validity. Figure 1-2 identifies where each of these validity issues occur and where strategies to address them are required (Black, 1999, p. 51).

Internal validity issues are concerned with whether the independent variable is responsible for changes in the dependent variable. Internal validity is addressed within this study through the use of well-grounded theories (i.e., ABT and TPB), the selection of independent and dependent variables previously used in the literature in a similar fashion, and the use of control variables, including salesperson compensation and salesperson tenure, which are known to influence salesperson behavior in past research.

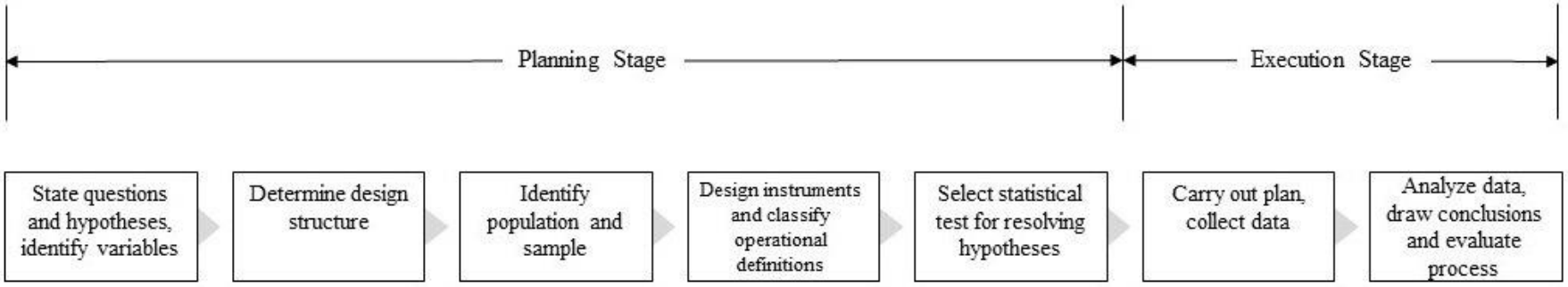
External validity issues are concerned with the generalizability of research findings. External validity is addressed within this study during several phases of the research. During population and sample frame design, respondents are chosen from a cross-section of business-to-business industries, while avoiding those sectors that have

difficulty delineating consumer and business-to-business sales activities. During the analysis phases of the research, a number of data-source bias tests are conducted to compare responders to non-responders and random sample responders to convenience sample responders.

Table 1-2: Research Questions, Hypotheses, and Variables

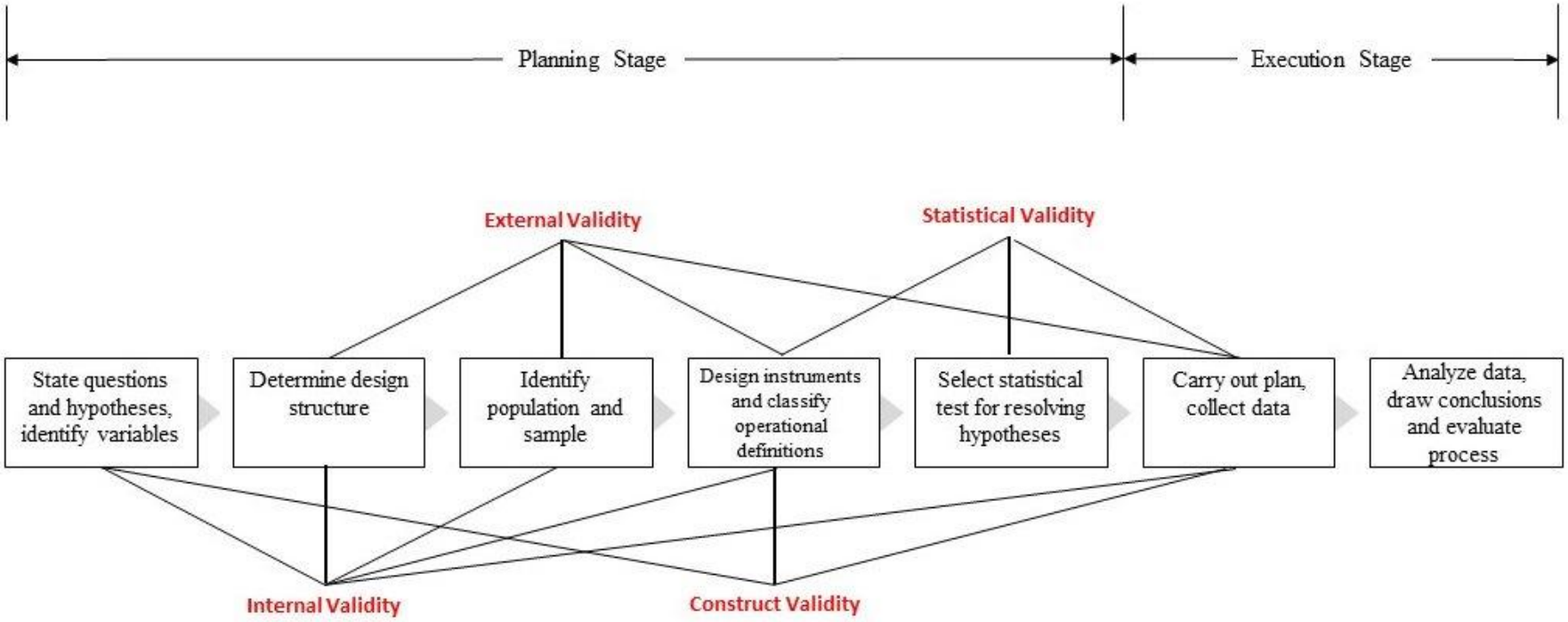
Research Questions	**R1:** What effect does the level of measurement diversity within an SPMS have on customer-oriented selling behavior?
	R2: To what extent, does supervisory coaching influence the relationship between measurement diversity within an SPMS and customer-oriented selling behavior?
Hypotheses	**H1:** There is a positive relationship between diverse performance measurement (DPM) and customer-oriented selling behavior.
	H2: The relationship between DPM and customer-oriented selling behavior is mediated by customer-oriented subjective norms.
	H3: The relationship between DPM and customer-oriented selling behavior is mediated by customer-oriented behavioral control.
	H4: The relationship between DPM and customer-oriented selling behavior is mediated by customer-oriented attitudes.
	H5: The relationship between DPM and customer-oriented selling behavior is mediated by supervisory coaching.
	H6: The relationship between DPM and customer-oriented subjective norms is mediated by supervisory coaching.
	H7: The relationship between DPM and customer-oriented perceived behavioral control is mediated by supervisory coaching.
	H8: The relationship between DPM and customer-oriented attitudes is mediated by supervisory coaching.
Study Variables	**Dependent variable:** Customer-oriented selling behavior
	Independent variable: DPM
	Mediating variables: supervisory coaching, salesperson attitudes, salesperson subjective norms, salesperson perceived behavioral control
	Control variables: salesperson tenure, salesperson compensation

Figure 1-1: Research Process[5]



[5] Adapted from Black (1999).

Figure 1-2: Impact of Validity on the Research Process[6]



[6] Adapted from (Black, 1999).

Construct validity, concerned with whether the instruments utilized within the study measure what they were supposed to, was mainly addressed during hypothesis development, research design, and instrument design/measure operationalization. Wording of all hypotheses ensured appropriate downstream operationalization was possible. Research design included pre-testing and piloting phases to review and refine scales as required. Previously published scales from high-quality[7] research studies were utilized during instrument design and were validated during pre-testing and piloting and through statistical procedures suggested by Hair Jr., Ringle and Sarstedt (2011).

Statistical validity is concerned with whether the appropriate statistical techniques were utilized to carry out the research and resolve hypotheses. Statistical validity was primarily addressed within this study during instrument design, operationalization of variables, and data collection. The survey instrument was designed to ensure appropriate statistical procedures could be utilized. Careful operationalization of variables through measurement model specification and evaluation, structural model evaluation, and hypothesis testing was conducted in line with PLS-SEM statistical procedures recommended by Hair Jr., Ringle and Sarstedt (2011) and commonly adopted within the marketing, sales performance measurement, and behavioral literatures (Fu *et al.*, 2010; Rajput, 2015; Franco-Santos and Doherty, 2017; Valaei and Nikhashemi, 2017).

1.5 Findings and Contributions

The following subsection summarizes key research findings and expected contributions to knowledge. First, consistent with expectations, the use of diverse performance measures within an SPMS is positively and significantly related to customer-oriented selling behavior amongst business-to-business salespeople. Contrary to expectations, this relationship appears to be mediated only by salespersons' attitudes regarding

[7] "High-quality" here refers to research studies published in highly-rated peer-reviewed academic journals.

customer-oriented selling and not by subjective norms or a salesperson's perceived behavioral control.

As expected, a significant and positive relationship exists between the use of diverse measures of performance and the level of supervisory coaching and this relationship mediates the relationship between DPM and subjective norms. However, contrary to expectations, supervisory coaching does not appear to influence the relationship between DPM and either salesperson customer-oriented selling attitudes or perceived behavior control within the context of this study.

This research contributes to the management literature in a number of ways. First, it contributes to the sales performance and control literature that looks at the impact that measures of performance have on employee-level outcomes (Fang, Evans and Zou, 2005; Onyemah, Rouziès and Panagopoulos, 2010; Miao and Evans, 2012; Lin, 2017) by examining the impact that one additional characteristic of an SPMS, measurement diversity, has on selling behavior. This has become particularly important given the recent high-profile cases broadcast in the press of salespeople behaving badly and the notion that narrowly defined measures of performance are the potential cause of this behavior (Ordonez *et al.*, 2009b; Freed, 2017; Johnson, 2017; Ligaya, 2017; Young, 2017).

Second, this study contributes to the performance measurement literature by examining the micro-level effects of using a diverse set of performance measures rather than the firm-level effects that have been investigated to date (Ittner, Larcker and Randall, 2003; Davis and Albright, 2004; Van der Stede, Chow and Lin, 2006; Franco-Santos, 2007; Homburg, Artz and Wieseke, 2012). It has been over twenty-five years since performance measurement frameworks such as the "balanced scorecard" (Kaplan and Norton, 1996) became a critical aspect of management research, having "the largest impact upon…[performance management] literature" (Gawankar, Kamble and Raut, 2015, p. 9); yet little is known about the effects a diverse set of individual performance measures has on salesperson behavior. While research into the use of combinations of performance measures such as employee control levers has provided some insight (Jaworski and MacInnis, 1989; Challagalla and Shervani, 1996; Ramaswami, 1996), the

performance measurement literature and, in particular, the sales performance measurement literature have not substantially addressed the impact that more balanced performance measurement system designs have on selling behavior.

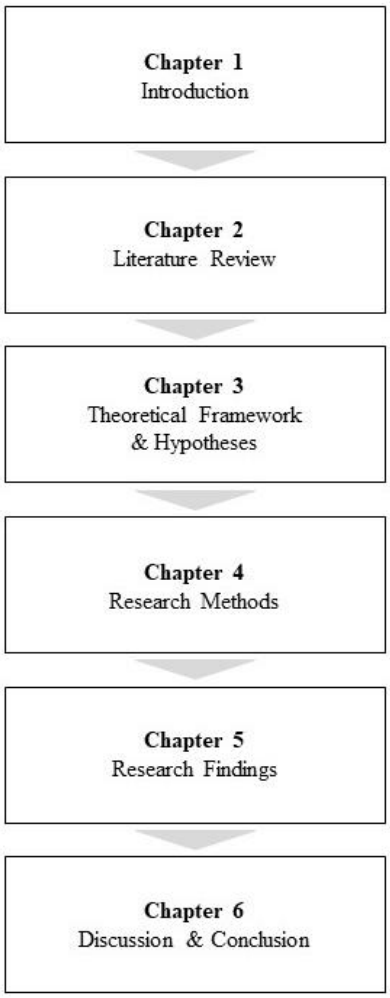
Third, this study contributes to the sales coaching literature concerned with the effects that sales coaching can have on salesperson behavior and performance (Onyemah, 2009; Pousa and Mathieu, 2013; Shannahan, Shannahan and Bush, 2013). The benefits of sales coaching are frequently discussed in the popular trade press and consulting papers, but scholarly knowledge on this topic has not kept apace. This study contributes to the field by empirically examining the impact that supervisory coaching has on the antecedents of behavioral intention and on actual customer-oriented selling behavior. In addition, the study breaks new ground in examining the influence that supervisory coaching has on the relationship between measure-diverse SPMSs and salesperson subjective norms. Using ABT, this study demonstrates how supervisory coaching, acting as an organizational communication channel, mediates the relationship between measure-diverse SPMSs and the subjective norms of salespeople. This is unique in two ways. First, supervisory coaching has been viewed as a moderating factor in past sales research (Good, 1993b) rather than as a mediating communication channel. Second, while the richness of DPM data has been discussed in terms of its usefulness in coaching discussions, up to now there has been little work done to validate this relationship empirically.

Lastly, this research contributes to the ABT literature exploring the links between, on the one hand, organizational- or macro-level and individual- or micro-level attention (Ocasio and Joseph, 2005; Oteman and Lienden, 2014) and, on the other, recent calls for further investigation into the communication channels used to transfer attentional focus down into the organization (Ocasio, Laamanen and Vaara, 2018). It empirically tests two such communication channels – an organization's SPMS and supervisory coaching – and the impact this attentional focus brings to employee-level behavior within a sales context.

1.6 Thesis Structure

Figure 1-3 outlines the structure of this thesis. The structure of this thesis is consistent with that of academic papers published in high-quality academic journals such as the *Journal of Marketing*.

Figure 1-3: Thesis Outline



The remainder of this thesis is organized as follows. First, systematic and narrative literature reviews are conducted to understand empirical work done to date, to identify research gaps, and to pose a research question for further study. Second, the theoretical framework utilized within this study is discussed and specific hypotheses for testing are put forward. Third, research methods are described for assessing data quality, measurement and structural model validity, and hypothesis testing. Fourth, data quality,

measurement evaluation, structural model evaluation, and hypothesis testing results are presented. Lastly, research findings and implications are discussed and conclusions are summarized.

2 LITERATURE REVIEW

This research is based on two separate but interrelated literature reviews. First, a systematic review of the sales performance, sales control, and performance measurement literatures was conducted to gain a better knowledge of the field in which the research is focused and to identify critical gaps in the literature. Given the gaps identified in the systematic review, a second, narrative review was conducted, focusing specifically on the relationship between the use of performance measures and employee behavior, including the theories used to explain this relationship and the influencing factors that have been considered to date. At the conclusion of the narrative review, a specific gap is chosen for investigation and research questions are put forward.

2.1 Systematic Review: Sales Performance Measurement Effectiveness

Currently, there is no widely accepted set of approaches or frameworks for the design and implementation of effective performance measurement systems in sales. The performance management literature has generated a large volume of research and produced well-established concepts on the selection and use of performance measures in the areas of employee monitoring and control (Bourne, Kennerley and Franco-Santos, 2005), performance development (Ittner and Larcker, 2002), compensation (Govindarajan and Gupta, 1985), and stakeholder alignment (Govindarajan and Gupta, 1985). This body of work has informed research in sales performance measurement but, despite this, the field remains fragmented.

There is a lack of consensus on the standards and definitions of what constitutes the effective measurement of sales performance. Johnston and Marshall (2011, p. 405) suggest that the concept of sales force effectiveness is not well defined, which may be one explanation as to the myriad of measures being utilized (Churchill Jr., 1979) and the potentially erroneous assumptions made by researchers and practitioners in their use. For example, it is incorrectly assumed that there is a high level of convergent validity and therefore, interchangeability between objective and subjective measures of individual sales performance (Rich et al., 1999). Performance measures are also often

used despite being incomplete in their ability to measure a particular construct (Simons, 1995, p. 76) or associated with undesirable outcomes, such as reduced levels of employee satisfaction and commitment (Huffman and Cain, 2000; Lau and Moser, 2008) and increased dysfunctional behavior (Ramaswami, 1996).

Behrman and Perreault (1982) argue that the construct of *sales performance* is more complex than any one individual determinant or measure can capture. Zoltners et al. (2008), for example, identify 21 task behaviors that a salesperson must undertake to be considered a high performer, while Moncrief and Marshall (2005) found 49 additional selling activities required of today's industrial salesperson that were not present two decades earlier.

Sales effectiveness can also be highly dependent on one's selling environment (Weitz, 1981; Roberts, Lapidus and Chonko, 1994; Baldauf and Cravens, 2002; Kennerley and Neely, 2002; Flaherty, Arnold and Hunt, 2007). For example, in investigating the relationship between sales performance and situational factors, Roberts, Lapidus and Chonko (1994) observed a relationship between performance and several internal selling environment variables, including the amount of training provided and the level of work overload encountered in an organization. This is problematic for two reasons. First, selling environments do not remain constant. Changes in situational factors may influence the effectiveness of certain measures of sales performance, requiring an ongoing review of measure reliability. Sales territory volatility (Ledingham *et al.*, 2013) and increasingly sophisticated and demanding customers (Jaworski and MacInnis, 1989) are examples of factors that may influence selling environment and therefore the effectiveness of the current performance measures utilized. Second, the inclusion of these measures within an SPMS may be associated with undesired employee outcomes, including dysfunctional behavior and job tension (Challagalla and Shervani, 1996) and reduced employee satisfaction (Onyemah, Rouziès and Panagopoulos, 2010), forcing sales management to choose sales performance measures that support positive and desired employee outcomes rather than negative ones.

The purpose of this systematic literature review is to better understand what is currently known about the selection and use of effective performance measures in sales. The way in which this review is conducted and the insights extracted from it have been structured in four key subsections. First, the methods used for conducting the systematic review are described; second, the definitions of key concepts are clarified; third, the descriptive and thematic findings are presented; and, finally, a set of gaps in the extant knowledge on performance measure effectiveness are identified.

2.1.1 Systematic Literature Review Method

To review the literature on sales performance measurement effectiveness (SPME), a systematic approach was chosen as it allowed for a more structured process for the search and selection of articles, data extraction, synthesis, and reporting of results (Denyer and Tranfield, 2009; Briner and Denyer, 2012). Unlike a more narrative review, the structural nature of the search and selection components of a systematic review reduces bias through the adoption of a repeatable process (Denyer and Tranfield, 2009).

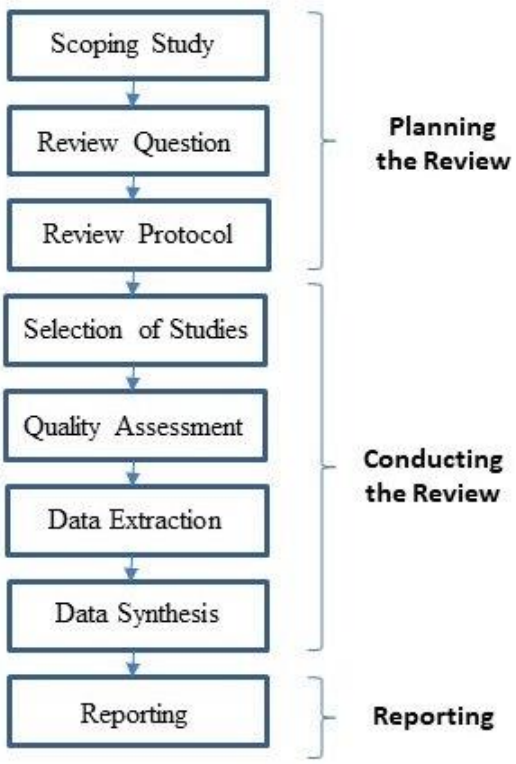
As recommended by Tranfield, Denyer and Smart (2003), the review followed an eight-step process with three major stages: (1) planning the review; (2) conducting the review; and (3) reporting the results. Figure 2-1 summarizes each of the steps, which are described in detail in the next section.

2.1.1.1 Planning the Review

Stage 1 of the systematic review process undertaken for this research involved the establishment of a review panel and the completion of a scoping study. The scoping study provided an opportunity to establish the size of the literature, clarify key terms, and set limits on subject boundaries (Denyer and Tranfield, 2009). As recommended by Tranfield, Denyer and Smart (2003), a review panel (Table 2-1) was established to provide support and direction regarding the systematic review process, help address issues regarding the inclusion or exclusion of specific articles, and review drafts of

literature review output. The scoping study culminated in the following review question, which became the focus of the systematic review investigation going forward: *What is known about the selection and use of effective performance measures in sales?*

Figure 2-1: Systematic Review Stages and Steps



2.1.1.2 Conducting the Review

The systematic literature review was conducted between January and November 2013 and was based on literature published up through 2012. In January 2018, the literature review was updated, utilizing the same queries, screening, and snowballing procedures documented within this thesis, in order to capture additional articles published between 2013 and 2017. Stage 2 of the review process included the selection of studies through a specified search strategy, namely, an assessment of study quality and relevance for review inclusion, along with data extraction, analysis, and synthesis. An initial set of keywords was developed based on the overall review question and the scoping study. The word list was then transformed into a search string to form a single query. Asterisks

(*) were utilized to capture various forms of words (e.g., use of plural) potentially used in article titles and/or abstract descriptions.

Table 2-1: Systematic Review Panel

Review Panel Member	Role
Dr. Javier Marcos	Supervisor/Systematic Review Expert • Literature recommendations and evaluation of reference list for completeness • Support for systematic review methodology • Feedback on literature review draft output
Dr. Monica Franco-Santos	Topic Advisor • Literature recommendations and evaluation of reference list for completeness • Feedback on literature review draft output
Dr. Stan Maklan	Panel Chair • Chair panel discussions • Feedback on literature review draft output
Ms. Heather Woodfield/ Ms. Mary Betts-Grey	Information Specialists • Support on search methodology

The initial search string was run against the ABI/Inform Global database to assess search result quality in terms of relevance and volume of studies returned. Several iterations of search words were completed to improve the overall relevance of articles returned. The final keyword list and search string (Table 2-2) was run against the following databases to capture published academic articles: ABI/Inform Global, Business Source Complete (EBSCO), Emerald, Science Direct, and Web of Knowledge. Dissertations were searched utilizing eTHOs (United Kingdom), NDLDT (Canada and United States), and DART (Europe). Both empirical and conceptual papers were included in the search criteria. Given the nature of the topic, it was also felt that industry

reports might provide insight into the review question. A Google search of international consultancies in sales performance and performance measurement was conducted, which returned a list of firms highlighted in Appendix 1. Websites for each of the firms listed were searched for consultancy reports relevant to the review question.

Table 2-2: Keyword List and Search String

Sales	Performance	Measurement
Selling	Effectiveness	Measure
Telemarketing	Achievement	Metric
Telesales	Attainment	KPI
	Accomplishment	Key Performance Indicator
Individual/Work	Success	Scorecard
Employee	Control	Evaluation
Worker		Rating
Job		Criteria
Role		Target
		Goal
		Objective
		Quota
		Result

Search String:

(sales* or selling or telemarketing or telesales or individual* or employee* or worker* or staff or job or role*) AND (perform* or effective* or achieve* or attain* or accomplish* or success* or control*) AND (measure* or metric* or scorecard or evaluat* or criteria or target* or goal* or objective* or quota* or result*)

Several filtering criteria (Table 2-3) were included in the search queries to reduce the article count and improve article usability. First, to ensure usability, only English-language papers were accepted. Second, a date-of-publication filter, requiring all papers selected to be published on or after 1996, was introduced. This qualification was added for several reasons. Both the role of salespeople and the nature and focus of performance measurement have changed dramatically over the last two decades. With the introduction of the balanced scorecard by Kaplan and Norton in 1996, which advocated broad diversity in performance measurement, the breadth of performance measurement studies increased substantially to include factors such as customers,

organizational culture, and strategy compared to the more limited views of control and compensation prior to 1996. In addition, selling roles have continued to evolve, given changes in technology, customer expectations, and globalization (Moncrief and Marshall, 2005). It was therefore felt that priority should be given to more recent publications. Both titles and abstracts were searched in the databases identified above to produce a total article count of 784.

Table 2-3: Search Filter Criteria

Criterion	Inclusion	Rationale
Language	• English only	• Usability by author given time and financial constraints
Date of Publication	• Articles selected via keyword search to be published on or after 1996	• Keyword date driven by introduction of "Balanced Scorecard" in performance measurement literature
	• Articles selected via snowballing and industry reports had no date constraint applied	• Snowballing date constraint removed to allow that older, seminal papers be captured • No industry date constraint due to the relatively few papers available
Type of Publication	• Both conceptual and empirical academic papers, including peer-reviewed conference and working papers and doctoral dissertations • Industry white papers and consulting reports	• To gain a full understanding of performance measurement effectiveness from both academics and practitioners

Title and abstract descriptions from each of the 784 articles were then reviewed to ensure article relevance to the review question posed. Through this process, 679 papers were eliminated. An additional 21 papers were eliminated due to article duplication across databases, leaving 84 papers.

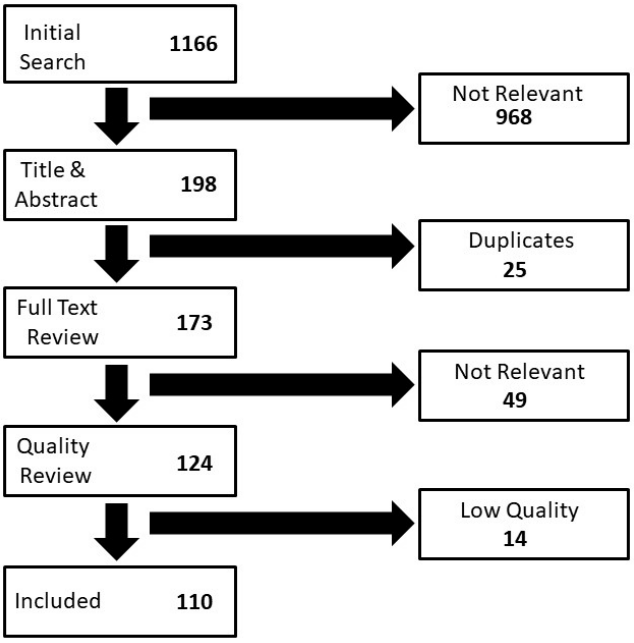
To further improve article search coverage, a snowballing procedure (Pawson *et al.*, 2004) was completed as an additive activity to the keyword search. Snowballing involved reviewing the references of the 84 selected papers for additional articles not identified previously. No date constraint was placed on article selection during snowballing, given that to be cited by any of the 84 articles, many articles would have to have been published prior to the 1996 date constraint placed on the keyword search. In addition, some older cited articles were considered seminal papers in their respective fields, providing a strong theoretical foundation to the review.

An additional 170 papers were identified through the snowballing exercise. As before, a review of titles and abstracts of each of these articles was completed to eliminate inappropriate papers. The remaining articles were then checked for duplicate titles. Once completed, the total article count for both keyword search and snowballing procedures came to 148 papers.

The combined 148 articles were subjected to a full text review for relevance. In total, 41 articles were removed at this stage. A quality assessment (see Appendix 2), recommended and adapted from Huff (1999, pp. 157–160), was conducted on the remaining 107 articles. To be included in the final selection, all academic articles needed to generate a score of 70% or higher on the assessment. Quality scoring criteria for practitioner papers was waived, given the small volume of papers available for use. Final quality screening resulted in the exclusion of 13 academic papers. From 954 potential papers, therefore, 94 were chosen for inclusion in the review.

As previously discussed, prior to the completion of this thesis, the systematic review was updated to include relevant articles published between 2013 and 2017. Using the same query and snowballing procedures as before, 212 new articles were identified. After deleting articles due to lack of relevance to the research question or to research quality, 16 additional articles were included in the updated systematic review, for a final total of 110 articles. Figure 2-2 summarizes article screening process counts, while a list of the final articles chosen for this review is included in Appendix 3.

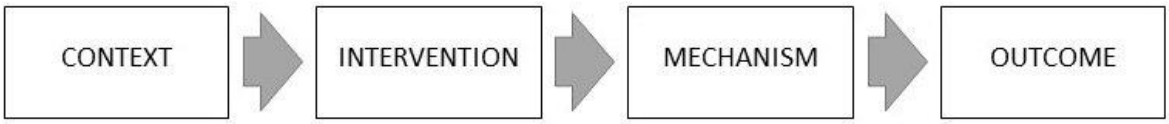
Figure 2-2: Article Selection: Screening Process Summary



A data extraction template (Appendix 4) adapted from van Aken (2004) was developed to collect key information from all 110 articles. Each completed template was then loaded into Nvivo-10 for coding and analysis, while each article was loaded into Mendeley 1.17 citing software for reference management.

Information collected from chosen articles was synthesized using a design-science approach (Becher and Trowler, 1989). Design-science methodologies answer "what" and "how" questions to solve field problems (Denyer, Tranfield and Van Aken, 2008) through the development of design propositions. In this case, context-intervention-mechanism-outcome (CIMO) logic (Denyer, Tranfield and Van Aken, 2008) was employed. Through CIMO logic, empirical findings from the chosen review papers were deconstructed into *logical prescriptions* (Pawson and Tilley, 2004), as described below. These prescriptions acted as guidelines or recommendations regarding how specific outcomes may be achieved under specific contextual conditions. Each prescription was composed of four components: context, intervention, mechanism, and outcome (Figure 2-3).

Figure 2-3: CIMO Model Prescription Structure



From a positivist perspective, the CIMO model can be explained as follows. First, *interventions* are the set of independent variables that are under investigation within each paper, while *outcomes* are dependent variables arising from changes to intervention variables. In the performance measurement literature, the measures themselves or their properties generally act as independent variables, whereas business outcomes (financial performance, market share, etc.) or individual outcomes (job satisfaction, job commitment, and behavior) act as dependent variables. Any contingency factors utilized within each empirical paper are captured as *contexts* within the CIMO framework and act as influencing variables, either mediating or moderating the relationship between interventions and outcomes. An understanding of causality is introduced within each prescription through the use of generative *mechanisms* or theories, which are used to explain how intervention type I may produce outcome O (Pawson and Tilley, 2004). Thus "if you want to achieve outcome O in context C, then use intervention type I" (Denyer et al., 2008, p. 395).

The review question posed to the literature had its roots in the field where sales managers look for explanations regarding what impact their selection of performance measures will have on the individuals whose performance is being measured. Thus, a design-science based approach, such as CIMO logic appeared appropriate. In addition, the use of CIMO logic allowed for easy capture and synthesis of the influencing factors and outcomes associated with performance measurement characteristics, which was important to answering the systematic review question. Furthermore, the CIMO approach made it easier to identify research gaps by summarizing the key relationships between performance measurement characteristics and outcomes that had been previously investigated.

From the empirical articles included in the literature review selection, 144 CIMO-based prescriptions[8] were generated and collected in Microsoft Excel. The contents of each individual prescription (context, intervention, mechanism, and outcome) was coded to capture the different types of contexts, interventions, mechanisms, and outcomes found in the selected literature. The coded list of categories was then used to construct a conceptual framework that mapped the factors influencing performance measurement effectiveness, thereby answering the review question posed.

The final step in the systematic review process was *reporting*. To allow for an increase in practitioner understanding of literature review findings, a two-stage reporting format, recommended by Tranfield, Denyer and Smart (2003), was utilized. This process included both a descriptive analysis of the literature review findings (Section 2.1.3.1), as well as a thematic synthesis of the literature (Section 2.1.3.2).

Thus, the remainder of Section 2.1 is as follows. First, key definitions associated with this systematic review are discussed. Second, both the descriptive analysis and thematic results of the systematic review are presented. Third, key gaps in the literature are identified, with one chosen for further investigation. Lastly, a summary of key findings of this systematic review are discussed.

2.1.2 Definitions

For conducting a systematic review, it is important to clarify the meaning of key terms. Sales performance measurement effectiveness resides within the literature domains of both personal selling performance, sales control, and performance management. *Sales performance* and *measurement effectiveness*, along with the *contextual elements* that influence them, are all multifaceted constructs and thus their definition is an integral part of conducting this review. They are clarified below.

[8] Given the size of this prescription table, it is not included in this thesis, but can be provided if required.

2.1.3 Sales Performance

To date, sales performance has been primarily conceptualized based on the outcome or behavior-based control orientation used by management (Anderson and Oliver, 1987). Outcome-based conceptualizations of sales performance were traditionally used by both academics and practitioners, due notably to their specific advantages. For example, outcome measures (e.g., total sales achieved in a particular accounting period) were seen as a relatively easy way of judging performance, given their straightforward measurability and the link they create between a firm's compensation costs and its financial sales performance (Anderson and Oliver, 1987). In addition, outcome-based measures appeared advantageous in their apparent objectivity, ensuring a fair and equitable evaluation system for employees (Anderson and Oliver, 1987). More recently, however, researchers began to challenge some of these assumptions and questioned their fairness. For example, Cravens and Woodruff (1973) argued that sales territories within an organization can become inequitable due to varying levels of cross-territory competitive intensity, making a measure such as sales-quota achievement unfair if not adjusted for the competitive conditions present.

To address inequities such as these, which arise from the use of any single measure of performance, the use of multiple outcome measures might be considered. This approach attempts to minimize the weight of any single measure and improve measurement completeness by capturing multiple dimensions of the sales performance phenomenon (Behrman and Perreault, 1982; Beck, Beatty and Sackett, 2014). However, Moers (2005) contends that multiple outcome measures may generate subjectivity bias. When using multiple performance measures of performance, managers subjectively weigh one measure against another, resulting in rating leniency, particularly during salary adjustment or career promotional decisions (Landy and Farr, 1980).

Conversely, behavior-based sales performance conceptualizations focus exclusively on the capabilities, behaviors, and activities of salespeople. In their seminal work, Behrman and Perreault (1982) defined sales performance as a function of a salesperson's ability to execute adequately on seven behavioral activities, including achieving quantity and quality sales objectives, controlling unnecessary company expenses, developing and maintaining customer goodwill, providing information to the

company, following company policies, developing and using technical knowledge, giving high-quality sales presentations, and working well with customers and with other personnel in the firm. Other authors separate behaviors used to accomplish job-related tasks from those behaviors that support broader organizational and social activities, referred to as organizational citizenship[9] behaviors (Motowidlo and Van Scotter, 1994; Brief and Motowidlo, 2013).

Huffman and Cain (2000) believe that behavior-based definitions of sales performance differ from outcome-based definitions because of the increased control salespeople have in attaining them. Salespeople focus their efforts on specific selling behaviors they can control. Under a behavior-based measurement system, the risk of achieving desirable outcomes remains with the organization. In contrast, an outcome-based approach places the risk of achieving objectives with the salesperson. While outcomes are partly a result of salesperson performance, they can also be the result of many other factors outside of a salesperson's control (e.g., competitive intensity and firm pricing strategy), creating potential fairness issues and a misrepresentation of the performance phenomenon, particularly in more unpredictable selling environments (Huffman and Cain, 2000).

Anderson and Oliver (1987) suggest that behaviors may be too difficult to measure and therefore are less useful for evaluation and subsequent managerial decision-making. In contrast, they also argue that outcome measures are ineffective in staff development as they do not articulate what selling behaviors are present or absent in support of supervisory coaching activities. Table 2-4 summarizes some of the advantages and disadvantages of behavioral versus outcome-based conceptualizations of performance.

Outcome and behavior-based conceptualizations of sales performance are quite distinct, with behavioral performance implicitly presuming that sales management understands the critical selling behaviors associated with success, while outcome-based

[9] Organizational citizenship is defined here as those behaviors associated with "wearing your corporate hat," such as volunteering for additional activities outside of one's role and cooperating with others.

conceptualizations provide salespeople the flexibility to use their own judgement in assessing the behavior and activity requirements of the selling situation.

Over the last century, countless studies have been conducted to identify the predictors of sales performance. A comprehensive list of these studies can be found in two meta-analyses, the one conducted by Verbeke, Dietz and Verwaal (2011) and the other by Churchill Jr. et al. (1985), which together synthesize the findings of these studies over a 90-year time span. Such predictors include salesperson behavior (Barrick and Mount, 1991), salesperson personal characteristics (Ford, Walker Jr. and Churchill Jr., 1987), salesperson self-efficacy (Fu *et al.*, 2010), cognitive knowledge (Weitz, Sujan and Sujan, 1986; Sujan, Sujan and Bettman, 1988), as well as situational contingencies (Roberts, Lapidus and Chonko, 1994). Unfortunately, research into the determinants of sales performance has resulted in a list of factors with limited predictive power. Verbeke et al. (2011), in a meta-analysis of 268 studies from 1982–2008, found that, even when combined, only 32% of the total variance in individual sales performance could be explained by the factors included in studies encompassing three decades of academic research.

Weitz (1981, p. 87) came to a similar conclusion, believing that research into the determinants of individual sales performance were "quite inconsistent, and in some cases, even contradictory," while Churchill Jr. et al. (1985, p. 113) suggested that "the ability of individual determinants to predict performance seems rather unimpressive…[and is]…somewhat discouraging." These scholars suggest that these results may be due to three possibilities. First, research results may be affected by the lack of standardization of the definition and selection of measures of sales performance (Behrman and Perreault, 1982). Second, the construct of *performance* is more complex than any one individual determinant or measure can capture (Weitz, 1981; Kennerley and Neely, 2002). And three, sales performance is highly dependent on the context in which it is taking place (Weitz, 1981; Kennerley and Neely, 2002), potentially reducing the consistency of research findings and their generalizability across different selling contexts.

Table 2-4: Sales Performance Conceptualizations

Sales Performance Conceptualization	Advantages	Disadvantages
Behavior-Based	• Allows management the ability to dictate a behavioral approach and focus, including longer-term goals or organizational citizenship behaviors • Removes the factors that trigger inequality that are inherent in outcome measures outside of a salesperson's control	• Requires significant monitoring of salesperson activities, which may not be possible given the multifaceted nature of the salesperson's role • Introduces subjectivity bias and increased complexity into the evaluation process
Outcome-Based	• Allows salespeople to develop situation-specific strategies for success • Ties compensation to firm financial performance • Availability of performance measures	• Lack of direction increases focus on short-term payoffs at the expense of longer-term, non-outcome-related activities • Difficult to identify and manage uncontrollable factors influencing outcome results

A critical evaluation of the use of *sales performance* within a small sampling of articles provides some indication of the challenges faced by researchers in defining and using the construct in empirical studies. For example, Sujan, Sujan and Bettman (1988), in an empirical article published in the *Journal of Marketing Research* that investigated the relationship between salesperson knowledge structures and sales performance, used a single 10-point Likert scale, supervisory-based evaluation to measure sales performance. They provided a single supporting reference for their choice, Landy and Farr (1980), that latter who suggest that supervisory evaluation is superior to hard performance measures. However, this same article goes on to detail the numerous biases

associated with supervisory evaluation, which undermined Sujan, Sujan and Bettman's argument.

Similarly, Brashear et al. (1997), in their investigation of selling behavior impacts on sales performance within the insurance industry, operationalize sales performance as a single, self-reported outcome measure of the number of policies sold over the last 12 months. No argument or support for this choice is put forward other than to suggest that this is an industry standard metric, nor is there any discussion regarding the limitations of using a single outcome measure of performance, such as the impact from external situational factors impeding outcome success (Wolfe and Albaum, 1962).

Challenges facing sales researchers are not limited to the use of single-item measures of performance. For example, in a seminal paper published in the *Journal of Business Research*, which focused on the development of an alternative self-reported scale for measuring the performance of industrial salespeople, Behrman and Perreault (1982) provided an excellent summary of the issues and challenges surrounding approaches to measuring sales performance, including the inability of any single measure to capture the complex nature of performance, the limited control salespeople have over outcome-based measures, and the lack of visibility for proper supervisory evaluation of field salespeople. In particular, they highlighted potential biases associated with the use of sales manager evaluations, arguing for the need for an alternative, self-evaluation approach. However, in validating their scale, the authors confirmed convergent validity by comparing their scale to the very same scales they suggested suffer from construct validity issues.

Cravens et al. (1993) operationalize sales performance at a salesforce level using three dimensions of performance adapted from the Behrman and Perreault (1982) 31-item scale: outcome performance, selling behavior performance, and non-selling behavior performance. In reviewing their choice of measures, they acknowledge the issues associated with evaluating salespeople on results that the latter can't control, suggesting behaviors are a preferred evaluation approach as they can address situational factors, such as competitive intensity and territory misallocation. However, they fail to acknowledge that, at a salesforce level, fewer uncontrollable factors, such as territory allocation biases, exist. In addition, having a team of behavior-based high performers

does not necessarily equate to departmental success. Poor sales management decisions that allocate competent selling resources to servicing the wrong accounts can have a greater impact on salesforce performance than individual factors (Cravens *et al.*, 1992). Thus, outcome measures may be more effective at a salesforce level. Because of this, the decision to include outcome measures as one dimension of performance appears appropriate. However, salesforce outcome performance was operationalized as a composite of individual salesperson outcome performance and therefore was still susceptible to individual outcome controllability issues rather than being constructed at a salesforce level of analysis.

2.1.3.1 Measurement Effectiveness

Measures of sales performance are the basis of many sales management decisions, including staffing, employee development, resource allocation, and rewards and recognition. The effectiveness of these measures is therefore paramount in quality decision-making. *Measurement effectiveness* can be conceptualized from a number of perspectives: the psychometric perspective, the performance management perspective, and the outcome-desirability perspective (Table 2-5).

A psychometric perspective proposes that measurement effectiveness is equivalent to *measurement correctness*, comprising both the validity and reliability of each measure (Herche et al., 1996; Meister, 1986). This view stresses the accuracy and strength of the measures' ability to repeatedly represent the intended construct (i.e., sales performance) over time. Measure correctness may be affected by errors or biases, most commonly found in the subjective components of a measurement system (Cocanougher and Ivancevich, 1978). In contrast, a performance management perspective suggests that measure effectiveness is akin to *measure appropriateness*, a function of the performance measure's *informativeness*, (employee) *controllability, alignment* (to organizational strategy and situational factors), *relevance, fairness*, and *completeness* (Meister, 1985; Franco-Santos and Bourne, 2008).

These individual elements of *measure appropriateness* are well rooted in performance management theory. *Agency theory* (Holmstrom, 1979), for example, points to *informativeness* as a required element to ensure a measure has the ability to

increase management's knowledge or reduce its ignorance concerning employee performance, while e*xpectancy theory* (Vroom, 1964) and *goal-setting theory* (Locke and Latham, 2002) underscore the importance of employee *controllability* over a measure's result to maintain employee motivation.

A third potential perspective of performance measurement effectiveness should also be considered, namely, *outcome desirability*. In defining sales performance, Johnston and Marshall (2011, p. 405) make a distinction between *effectiveness* and *performance*, suggesting that *performance* is a set of behaviors that can be evaluated on their contribution towards company goals, while *effectiveness* is a "summary index of organizational outcomes." In the same way, a medical doctor may prescribe an *appropriate* treatment for a health issue, but the treatment cannot be considered *effective* unless it is associated with a positive (and desired) outcome for the patient. Applying this same logic and definition of effectiveness to sales performance measures suggests that the ability of the performance measures to produce desirable or intended outcomes needs to be considered when evaluating their effectiveness.

Table 2-5: Sales Performance Measurement Effectiveness Perspectives

Perspective	Focus	Explanation
Psychometric	• Correctness as a function of validity and reliability	• The ability of a measure to adequately represent the construct being investigated and to do so consistently over time.
Performance Management	• Appropriateness or suitability	• Informativeness: refers to the ability of a measure to increase management's knowledge or reduce management's ignorance regarding employee performance • Controllability: refers to an employee's ability to influence a measure's outcome • Alignment: refers to the degree in which the measure selected will not conflict with internal or external contextual factors present • Relevance: refers to a measure's continued ability to be informative over time

Perspective	Focus	Explanation
		• Fairness: refers to a measure's ability to represent performance impartially and in an equitable manner across employees • Completeness: refers to a measure's ability to represent all facets and dimensions of a construct
Outcome Desirability	• Outcome management	• The intended or unintended consequences and results of measurement selection

The following subsections review each of the measurement effectiveness perspectives in greater detail.

2.1.3.1.1 Psychometric Perspective

The psychometric perspective encompasses measurement correctness, a function of measure validity and reliability (Herche et al., 1996; Meister, 1986). This perspective stresses the accuracy and strength of the measures used and their ability to represent the intended construct (i.e., performance) repeatedly over time.

The psychometric perspective of measurement effectiveness or construct *validity* addresses whether or not the selected metric sufficiently measures the intended performance phenomenon (Landy and Farr, 1980). There are a number of reasons why a measure may not capture the intended construct correctly. These typically arise due to errors or biases in the subjective elements of the measurement process (Landy and Farr, 1980).

There has been a significant amount of research conducted to understand evaluation method errors and biases, particularly those surrounding supervisory performance ratings, given their ubiquitous use in practice. As an example, management's lack of knowledge about an employee's effort and behavior in supporting the organization beyond what they see in sales reports can create a *halo*

effect in supervisory ratings, where outcomes (e.g., sales volumes) are overly weighted relative to less easily observable behaviors (Wilson and Jones, 2008). An employee's historical performance trend can also affect supervisory ratings, such that higher ratings may be awarded when the historical trend is on an improving slope versus a flat or declining trend (Reb and Cropanzano, 2007). Supervisors may also use input measures as a proxy for outcome quality. Cardy et al. (1987) demonstrated how people automatically associate high input quantities (e.g., number of sales calls made) with high outcome quality (e.g., total profit generated). In addition, centrality bias, associated with artificially compressing the differences in performance evaluation amongst employees, has been shown to occur when performance evaluations are transparent and shared across staff members (Bol, Kramer and Maas, 2016) or when the cost (time, money, effort) to gather employee evaluation information by the supervisor is considered high (Bol, 2011).

Another issue associated with evaluation input is cognitive categorization (Cardy *et al.*, 1987). Most input used by supervisors to evaluate employees is captured automatically (i.e., subconsciously) unless it requires effort by the observer. It is automatically categorized with the most distinct characteristics observed (e.g., the only woman in a sales department), which then drives the observer's categorization structure (Cardy et al., 1987). Given that managers make attributions regarding the cause of failed performance (i.e., see Feldman, 1981, on attribution theory), managers may have selective attention to specific inputs or experience specific information recall bias. In practice, people making supervisory observations for performance evaluation are presumed to know how to collect data accurately. However, Thornton and Zorich (1980) are able to demonstrate several common errors made during data collection, even though these can be addressed through simple training techniques.

Sturman et al. (2005) argue that the difference in performance measurement from one time period to the next denotes its temporal consistency. This consistency is a factor of the measure's *reliability* and stability over time. He demonstrates that a measure's reliability over time decreases to a state of unreliability. Chonko et al. (2000) support this position, believing that measures taken at different times are not highly related and that sales performance research outcomes are impacted by the performance

measure selected and by the point in time that outcomes are measured. Viswesvaran, Ones and Schmidt (1996) suggest this temporal consistency can be mitigated somewhat by the use of subjective measures. Subjective measures appear to maintain higher levels of reliability over time than their objective counterparts, making them more effective measures for longer-term performance measurement use.

Measurement reliability can also have other dimensions. Inter-rater reliability, for example, assumes that two people, equally knowledgeable would rate employees equally (Viswesvaran, Ones and Schmidt, 1996). Viswesvaran et al. (1996) found that the greater the number of category items being evaluated, the higher the inter-rater reliability. This suggests that a single overall performance measure in a multi-rater system may be less effective. In addition, the researchers indicate that communication and interpersonal skills are rated much less reliably than productivity or quality skills, indicating that multi-rater evaluation should potentially be kept to specific applications to maintain measurement effectiveness.

Another possible explanation for inter-rater variance involves ratee self-presentation skills. Miller and Cardy (2000) found that employees with high self-monitoring capability (i.e., the ability to change how they are perceived by others) had performance ratings with low inter-rater reliability scores. Results suggest that these individuals behave differently with different audiences (and are therefore perceived differently), producing different performance ratings. These individuals also tend to be more self-critical, resulting in a lack of convergence between their own self-evaluation and third-party ratings (Miller and Cardy, 2000).

Time and cross-rater issues are not the only reliability concerns covered in the literature. The reliability of measures across cultures has become more important as a greater number of today's sales managers manage global sales teams (Herche et al., 1996). Herche et al. (1996) suggest that measures can be categorized as either *emic* or *etic.* Emic measures are more meaningful to a specific culture, potentially having subtle meanings which are not transferrable to another culture. Conversely, etic measures are more generalizable across cultures and can be transported easily.

2.1.3.1.2 Performance Management Perspective

As previously discussed, a performance management perspective focuses on the *appropriateness* of performance measures (Bourne, Kennerley and Franco-Santos, 2005). *Measure appropriateness* has been defined in different ways in the literature. Meister (1986), Bourne et al. (2005), and Franco-Santos and Bourne (2008) take a common view regarding the specific characteristics of *appropriateness*, indicating that it is a function of measure correctness as described above as well as measure informativeness, (employee) controllability, alignment, relevance, fairness, and completeness (Table 2-2). *Agency theory* indicates that informativeness is required to ensure a measure's ability to increase management's knowledge or reduce its ignorance concerning employee performance (Hatry, 1999). One aspect of informativeness is the provision of measurement data at the correct level of aggregation, so that it is meaningful to users of the measure (Indjejikian, 1999). Controllability refers to an employee's ability to influence a measure's outcome and is also referred to as *unconditional controllability* (Locke and Latham, 2002). *Expectancy and goal theory* underscore the importance of *controllability* to maintaining employee motivation (Jaworski, 1988). *Alignment* refers to the level of fit between contextual factors, the phenomenon being measured and the characteristics of the measures selected, so that each element reinforces the other elements present (Bourne *et al.*, 2000). *Contingency theory* argues that organizations and organizational processes, such as performance measurement and management processes, must be aligned to environmental uncertainties (Donaldson, 1982). Measure *relevance* refers to a measure's ability to remain informative over time given changes in contextual factors and changes in the phenomenon being measured (Dobbins, Cardy and Platz-Vieno, 1990; Huffman and Cain, 2000). *Fairness* refers to a measure's ability to impartially, and in an equitable manner, represent the phenomenon of performance, so as to treat employees humanely and with respect (Hartmann and Slapničar, 2012). Finally, c*ompleteness* refers to a measure's ability to represent all facets and dimensions of a construct (Holmstrom, 1979).

2.1.3.1.3 Outcome Desirability Perspective

The inclusion of *outcome desirability* in a broader definition of performance measurement effectiveness is indirectly supported by a number of performance management researchers. Chenhall and Langfield-Smith (2007, p. 277) believe that "it is important to emphasize that the effectiveness of performance measurement systems will depend on how they affect individual behavior," while Tung, Baird and Schoch (2011), in defining performance measurement system effectiveness on 16 criteria, have suggested that performance measures be directly relevant to the output. In addition, a number of scholars have looked at performance measurement system effectiveness in terms of the system's ability to support overall organizational outcomes (Davis and Albright, 2004; Debusk, 2004; Crabtree and DeBusk, 2008).

Empirical evidence suggests that different measures of performance are associated with four different types of outcomes, including: (1) psychological outcomes, (2) behavioral outcomes, (3) role outcomes, and (4) business outcomes.

Psychological outcomes refer to changes in job satisfaction, job commitment, and intrinsic or extrinsic motivation, as well as to risk perceptions associated with the use of performance measures. A number of studies support a relationship between measurement choices and employee satisfaction, either in terms of job satisfaction (Lau and Martin-Sardesai, 2012; Onyemah et al., 2010), satisfaction with one's supervisor (Challagalla and Shervani, 1996; Motowidlo and Van Scotter, 1994), or satisfaction with the evaluation that was conducted (Huffman and Cain, 2000; Dobbins, Gregory et al., 1990). Additional studies claim an association between selected performance measures and employee intrinsic motivation (Miao and Evans, 2012), employee extrinsic motivation (Oliver and Anderson, 1994), employee acceptance of authority (Oliver and Anderson 1994), employee risk perception (Gibbs *et al.*, 2004), and employee commitment (Lau and Moser, 2008).

Behavioral outcomes refer to an increase in either task or capability behaviors that are desired by management. Several studies identify a relationship between measurement decisions and changes in an employee's behavioral focus. For example, Onyemah et al. (2010) claim a link between non-financial measurement use and

increases in customer-oriented behavior and administrative task focus, while Oliver and Anderson (1994) observed improvements in team-related behaviors. The use of non-financial measures has also been linked to specific task-related behaviors, such as meeting specific regulatory task requirements (Ittner, Larcker and Rajan, 1997) and improved capital investment decision-making (Gibbs *et al.*, 2004).

The literature indicates numerous examples of links between performance measurement choices and role outcomes that include role ambiguity (Miao and Evans, 2012; Challagalla and Shervani, 1996), role conflict (Cheng et al., 2007), and job tension (Jaworski and MacInnis, 1989). For example, the use of performance measures with specific combinations of outcome, activity, and capability control orientation is associated with differing levels of role ambiguity amongst salespeople (Miao and Evans, 2012).

Business outcomes refer to changes in overall organizational performance, efficiency, salesforce effectiveness, product coverage, and innovation. The use of non-financial measures has been associated with better market performance as defined by market-adjusted stock returns (Said, HassabElnaby and Wier, 2003) and the establishment of longer-term business relationships and increased product coverage (Loning and Besson, 2002), while changes in measurement diversity have been associated with changes in organizational performance (Franco-Santos, 2007).

Overall there appears to be sufficient evidence to suggest that the choice of performance measures within a performance measurement system is associated with changes in certain individual and business-level outcomes. Given the possibility that measures may inadvertently impact outcomes in an undesirable way, the importance of defining measurement effectiveness in terms of achieving desirable outcomes becomes more imperative.

2.1.3.2 Sales Performance Measurement Effectiveness

SPME, the focus of this systematic review, can be examined from different points of view. An individual salesperson's perspective of SPME may be driven primarily by fairness or ease of target attainment. A shareholder's view of SPME may be limited to a

function of goal alignment with investment objectives. SPME may be conceptualized by sales management in terms of ease of employee evaluation as well as ease of target attainment, given that management's objectives are often a composite of its team members' objectives. Each of these perspectives takes a narrow, self-interested view on desired outcomes. The intent of this review is to take a more holistic approach, by assuming a total business perspective and minimizing any single stakeholder agenda in favor of the overall good of the organization.

This review incorporates all three measurement effectiveness perspectives to construct the following, expanded definition of sales performance measurement effectiveness:

> *A set of practices which lead to appropriate and psychometrically correct behavioral or outcome-based representations of sales performance while delivering desired organizational and/or individual outcomes.*

With this enhanced definition in mind, Section 2.1.3 presents the findings of the systematic review.

2.1.4 Findings of Systematic Review

The systematic review findings are presented in three sections below. First, a descriptive analysis of the studies selected for this review is provided to ensure an adequate understanding of the source material. Second, based on a synthesis of the literature, the major factors influencing performance measurement effectiveness, as defined within this literature review, are detailed. Finally, the current state of the literature surrounding the relationship between measurement choices and employee-level outcomes is discussed and research gaps are identified where further investigation is required.

2.1.4.1 Descriptive Analysis of the Literature

Reflecting the challenges in locating relevant practitioner-based papers to address the specific review question, only three studies out of the 110 papers selected for this

review are practitioner-based (Lips et al., 2012; Ledingham et al., 2013; Schwarz et al., 2008). Of the remaining 107 academic papers, 73% are empirical and 27% are conceptual or literature reviews of the relevant subject areas. An analysis of the publication dates indicates that 65% of all articles were published on or after 1996 (Figure 2-4), where significantly more focus was placed on the use of non-financial measures, given the introduction of the balanced scorecard (Kaplan and Norton, 1996) during that time period.

Performance measurement appears relevant to a broad cross-section of traditional business functions with journals based in accounting, marketing, general management, and human resources or psychology making up 73% of the majority of article sources (Figure 2-5). As expected from the scoping study, the majority of papers (67%) relating to performance measurement effectiveness were not sales-related. Within this group, 22% of all papers looked at performance measurement from an organizational level and 25% did so from an individual employee level. The remaining 53% considered performance from a supervisor, department, CEO, or other perspective. Of those papers that focused on the sales function, 62% were based on individual sales performance, with the remaining 38% focused on overall salesforce performance or the performance of sales management. Figure 2-6 summarizes the unit of analysis used by the papers selected for this systematic review.

Figure 2-4: Selected Articles by Publication Year

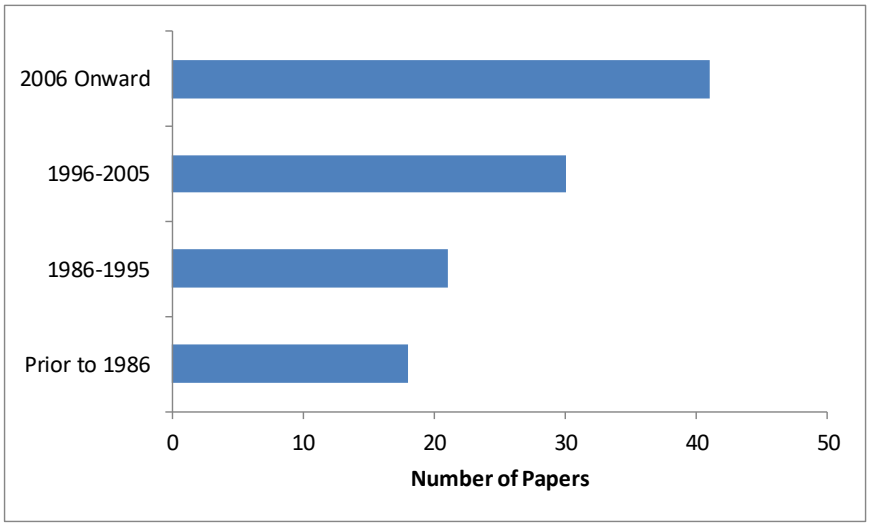
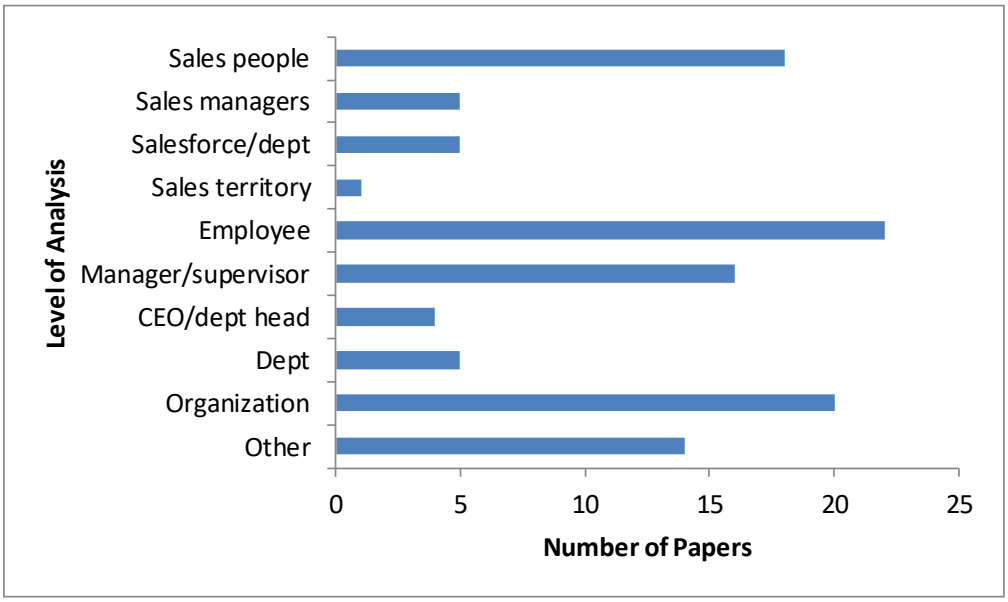


Figure 2-5: Selected Articles by Business Function

Figure 2-6: Selected Articles by Unit of Analysis



Of the 144 CIMO-based prescriptions generated from the empirical papers making up the systematic review, 30% examined how performance measure characteristics may impact measure validity or measure appropriateness. Even though

outcomes were only been considered in a limited way when defining measurement effectiveness, the remaining 70% of prescriptions investigated the employee- and business-level outcomes associated with specific performance measurement properties. An additional 22 empirical articles offered insight into the performance measurement topic; however, no CIMO-based prescriptions were generated from these papers as their empirical findings were not directly tied to the review question. Instead, these articles were either focused on scale development (Behrman and Perreault, 1982; Spiro and Weitz, 1990) or considered outcomes that were outside the review scope (Motowidlo and Van Scotter, 1994; Busby and Williamson, 2000).

Of those prescriptions focused on the relationship between measurement properties and outcomes, 65 prescriptions specifically looked at employee-level outcomes. Table 2-6 indicates that measurement diversity appears to have had the least amount of empirical work conducted regarding the relationship between measurement properties and employee-level outcomes, accounting for only 6% of the 65 prescriptions generated, while measurement type accounted for 26% of prescriptions and measure control orientation accounted for 68% of prescriptions.

Table 2-6: Measurement Properties => Employee Outcomes

	1	2	3	Total
Measurement Type	4	10	3	17
Control Orientation	14	21	9	44
Measurement Diversity	1	1	2	4

1= Behavioral Outcomes; 2= Pyschological Outcomes;
3=Role Outcomes

2.1.4.2 Factors Influencing SPME

A synthesis of the 144 CIMO-based prescriptions captured from the empirical papers making up this review was conducted to establish a conceptual framework that categorizes and integrates the various elements influencing sales performance measurement effectiveness (Figure 2-7). The framework includes contextual elements, performance measurement properties (acting as interventions), individual-level outcomes associated with performance measurement choices, and the theoretical

mechanisms linking these elements together. Because this review is focused at the level of the individual salesperson and not at the departmental (salesforce) or organizational level, organizational-level business outcomes, such as business performance, have not been included in the conceptual framework, nor are they discussed further within the body of this thesis.

The remaining sections of this chapter review each of the framework elements identified in Figure 2-7. The chapter then concludes by discussing the performance measure–outcome relationship research gaps that currently exist within the literature and investigated within this thesis.

2.1.4.2.1 Contextual Elements

Context can be thought of as the tangible and intangible components of an organization's internal or external business environment (Wolfe and Albaum, 1962). The environment in which sales organizations operate affects the nature of selling and the role of sales professionals. As early as 1962, sales management researchers acknowledged the need to adjust sales metrics based on contextual issues such as economic cycles and inconsistent levels of competitive intensity across sales territories (Wolfe and Albaum, 1962). More recently, Moncrief and Marshall (2005) identified 49 new activities salespeople must now undertake that did not exist 20 years ago, due to environmental changes in technology, globalization, and customer expectations. For these reasons, Hatch (2006) recommended that measures be frequently reviewed for continued relevance, suggesting that the level of measurement effectiveness may change over time due to internal and external contextual factors.

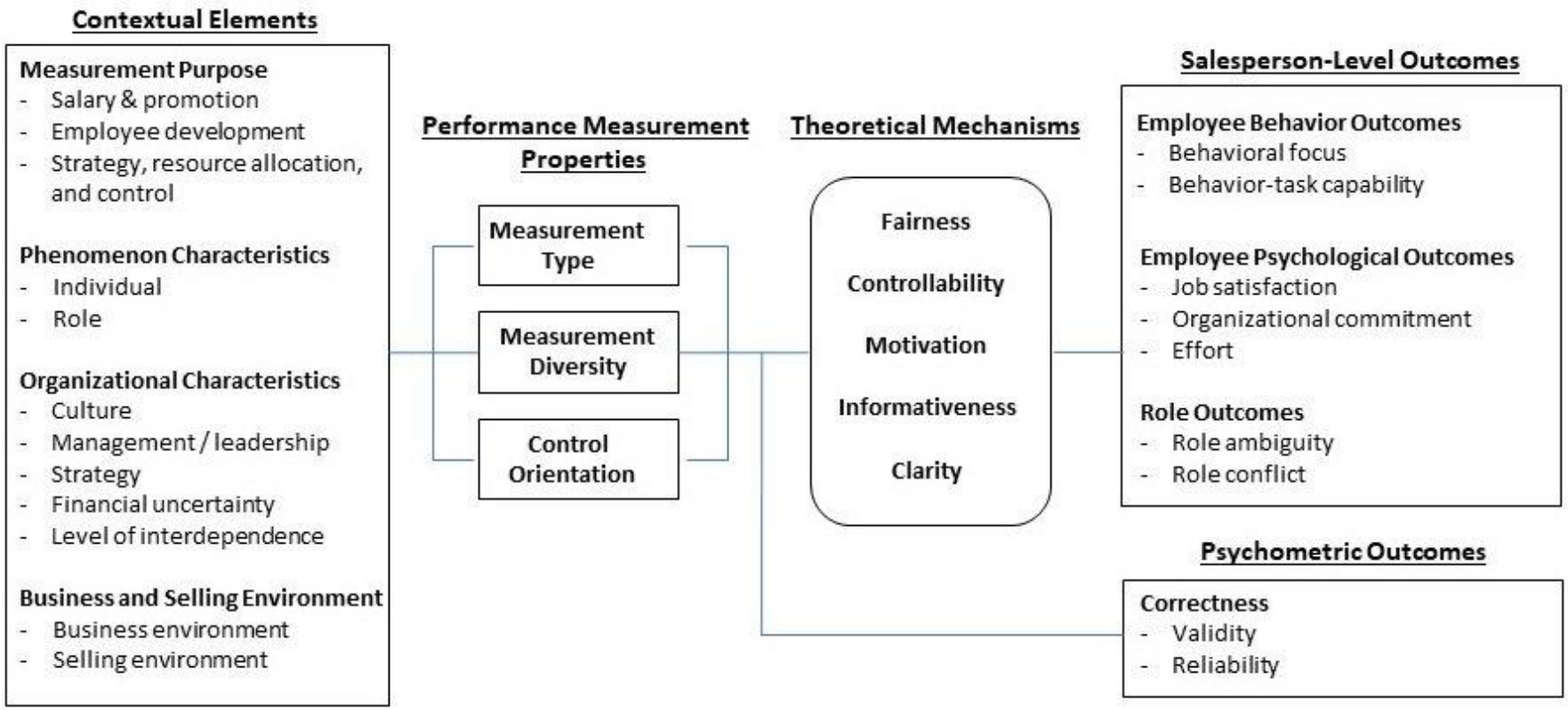
The importance of context is also acknowledged by contingency theorists, who argue that organizations and organizational processes must be designed to face environmental uncertainties (Donaldson, 1982). They believe that a more stable business environment can be managed with clearer roles and procedures, while a more unstable business environment requires a more flexible and adaptive workforce and management processes (Hatch, 2006). Thus, two organizations utilizing the same

measures of performance but facing different levels of environmental uncertainty may experience different levels of performance measurement effectiveness.

Consistent with Onyemah, Rouziès and Panagopoulos (2010), this review defines *context* or the *contextual elements associated with measurement effectiveness* to include factors both internal and external to the organization, given the boundary-spanning role played by salespeople (Verbeke, Dietz and Verwaal, 2011). The definition of *context*, however, has been extended further to also include *measurement purpose*, given its association with employee-level outcomes (Ittner, Larcker and Meyer, 2003; Gibbs et al., 2004; Franco-Santos, 2007), which are critical to this review.

Overall, the literature suggests that four major contextual categories may influence measurement effectiveness, including: (1) measurement purpose (Ittner et al., 2003; Gibbs et al. 2004; Franco-Santos, 2007); (2) internal organizational characteristics (Cravens and Woodruff, 1973; Govindarajan and Gupta, 1985; Jaworski and MacInnis, 1989; Dobbins, Cardy and Platz-Vieno, 1990; Said, HassabElnaby and Wier, 2003; Gibbs *et al.*, 2004; Hoque, 2004; Lau and Martin-Sardesai, 2012); (3) external business and selling environment characteristics (Cravens and Woodruff, 1973; Huffman and Cain, 2000; Loning and Besson, 2002; Said, HassabElnaby and Wier, 2003; Ittner et al., 1997; Said et al., 2003; Hoque, 2004; Franco-Santos, 2007), and (4) the characteristics of the phenomenon being measured (Huffman and Cain, 2000; Cravens and Woodruff, 1973; Challagalla and Shervani, 1996; Dobbins, Gregory et al., 1990; Gresov, 1989).

Figure 2-7: SPME Conceptual Framework



Measurement Purpose

Given the broad definition used for contextual elements in this paper, *measurement purpose* is included as an element of interest in terms of its potential influence on performance measurement effectiveness in sales. Measurement purpose refers to the intended use of the performance measurement system, such as for compensation and promotion decisions, employee development, resource allocation, or strategic decision-making and control. This systematic review only captured three empirical studies identifying outcomes associated with measurement purpose (Ittner et al., 2003; Gibbs et al., 2004; Franco-Santos, 2007).

For example, Ittner et al. (2003) demonstrated that when subjective, non-financial measures of performance were utilized for compensation decisions, the likelihood of supervisory evaluation bias increased, reducing measure effectiveness. Gibbs et al. (2004) suggested that subjective measures utilized for capital investment decision-making improve overall investment decision focus, while Franco-Santos (2007) concluded that a diverse set of measures may reduce overall organizational performance compared to the selection of financial-only measures of performance when measures are used for executive compensation purposes.

The conceptual literature included within this review identifies a number of additional employee-oriented uses of performance measurement systems. Measurement systems are used as catalysts for motivational purposes (Anderson and Oliver, 1987; Smith and Goddard, 2002; Peters and Connor, 1980) and for driving desired behaviors or outcomes through employee control and monitoring (Merchant, 1988; Busby and Williamson, 2000; Lau and Moser, 2008; Miao and Evans, 2012). In addition, performance measurement systems play an important role in organizational communication, acting as a common language between employees and organizational teams and a source of strategic insight for managers through the creation of organizational transparency, forcing the right questions to be asked (Busby and Williamson, 2000).

Overall, the literature appears to suggest that *measurement purpose* may influence *performance measurement effectiveness* by moderating several theoretical mechanisms associated with desired and undesired organizational outcomes. In particular, *fairness* mechanisms, associated with changes in measurement bias and control mechanisms associated with changes in employee behavior appear most susceptible.

Individual and Role Characteristics

Individual and role characteristics refer to the unique properties associated with both the sales role and individual salesperson whose performance is being measured. Five empirical studies (Huffman and Cain, 2000; Cravens and Woodruff, 1973; Challagalla and Shervani, 1996; Dobbins, Cardy and Platz-Vieno, 1990; Gresov, 1989) illustrate how differences in employees and their roles can potentially influence measurement effectiveness. Gresov (1989) and Dobbins, Cardy and Platz-Vieno (1990) propose that different levels of task uncertainty, task dependence, and role conflict are associated with reduced work efficiency when using subjective measures of performance, while Cravens and Woodruff (1973) demonstrate that under roles with high work load conditions, the use of outcome measures of performance is associated with reduced employee satisfaction. Huffman and Cain (2000) observe that performance measures adjusted for salesperson experience and skill level are associated with variations in employee satisfaction and retention.

Internal Organizational Characteristics

Numerous examples in the literature support the notion that measurement effectiveness is influenced by *organizational characteristics*, such as organizational culture (Gibbs et al., 2004; Lau and Martin-Sardesai, 2012; Franco-Santos, 2007), business strategy (Govindarajan and Gupta, 1985; Locke and Latham, 2002; Said, HassabElnaby and Wier, 2003; Hoque, 2004; Melnyk, Hanson and Calantone, 2010), organizational interdependence (Gibbs et al., 2004), and management and leadership characteristics.

Organizational culture's influence on measurement effectiveness to date has included investigations into cultural type, such as *clan* versus *adhocracy* (Franco-Santos, 2007), performance orientation (Onyemah, Rouziès and Panagopoulos, 2010), employee-supervisor trust (Gibbs *et al.*, 2004), and organizational concern for workplace fairness (Lau and Martin-Sardesai, 2012).

Measurement effectiveness is influenced by type of business strategy based on the strategy's informational needs. Certain performance measures are more informative for certain strategies then others. For example, non-financial measures are more aligned with a market differentiation strategy than financial measures, as they provide principals information critical to strategy implementation, such as customer information across accounting periods (Said, HassabElnaby and Wier, 2003).

Similar to how competition may influence the differences in one sales territory over another, organizational interdependence (i.e., the need to work through others to accomplish tasks) introduces an uncontrollable factor (i.e., the performance of other organizational members) into conceptualizations of an individual salesperson's performance. Thus non-financial measures are more effective when high levels of organizational interdependence are present as they allow employees to maintain more control over the measures by which they are evaluated (Gibbs *et al.*, 2004).

In terms of management and leadership characteristics, span of control, level of supervision, and the amount of procedural knowledge regarding an employee's role may influence measurement effectiveness. For example, in contexts where a high span of control and low supervision are evident, the descriptive nature of subjective measures provides greater task clarity and, therefore, higher levels of employee job satisfaction (Dobbins, Cardy and Platz-Vieno, 1990). Conversely, subjective measures appear to be poorer choices where managers have low procedural knowledge regarding employee tasks, as they can be associated with dysfunctional employee behavior (Jaworski and MacInnis, 1989).

In general, the literature currently argues that organizational characteristics influence performance measurement effectiveness in several ways. At an organizational level, they appear to moderate the informativeness and completeness of selected

measures, potentially impacting organizational performance. At an individual employee level, they appear to be associated with employee satisfaction and motivation by moderating salespeople's perceived control over their performance evaluation and perceptions of evaluation fairness.

Interestingly, one leadership characteristic that does not appear to have been considered in terms of its impact on measurement effectiveness, as defined within this review, is supervisory coaching. Supervisory coaching activity is known to be linked to employee outcomes such as reduced employee role ambiguity (Chakrabarty, Oubre and Brown, 2008), enhanced selling behaviors (Pousa and Mathieu, 2013), and improved salesperson self-efficacy (Gould *et al.*, 1989). Furthermore, the financial and non-financial measures used within an organization's SPMS would seem to be fertile ground for drawing necessary insight and conclusions regarding the current activities, capabilities, behaviors, and results of salespeople for staff developmental purposes. Thus, performance measures residing within an SPMS would appear a logical starting point for richer or more frequent coaching and feedback discussions between sales supervisors and salespeople, yet the literature appears silent regarding this line of inquiry.

External Business and Selling Environment Characteristics

The external factors influencing sales performance measurement effectiveness can be broken down into two categories: *business environment* characteristics and *selling environment* characteristics.

The literature suggests that *business environment* refers to the level of environmental uncertainty and risk facing an organization (Hoque, 2004). Environmental uncertainty is generally described as a function of the unpredictability in the political (Ittner, Larcker and Rajan, 1997; Smith and Goddard, 2002; Said, HassabElnaby and Wier, 2003), economic (Schwarz *et al.*, 2008), societal (Herche, Swenson and Verbeke, 1996), and technological (Smith and Goddard, 2002) environments facing the organization, while business risk has been described as both the

level of volatility in a firm's income stream or stock market return (Franco-Santos, 2007).

Selling environment, in contrast, is more associated with customer, product, and market characteristics, such as level and ownership of channel power in the supply chain (Loning and Besson, 2002), differences and volatility in sales territories (Cravens and Woodruff, 1973; Chonko *et al.*, 2000; Huffman and Cain, 2000; Lips, Dolle and Kuhnemundt, 2012), length of sales cycles (Behrman and Perreault, 1982), product type (Jackson *et al.*, 2010), length of the product development cycle (Said, HassabElnaby and Wier, 2003), product life stage (Hoque and James, 2000), and changing customer needs. For example, Ledingham et al. (2013) argue that more sophisticated and demanding customers are forcing changes to salesperson roles, which may impact the informativeness of traditional sales measures.

Empirical articles selected within the literature produced 13 prescriptions regarding the relationship between business and selling environment elements and performance measurement effectiveness. Three articles explored the relationship between non-financial versus financial measures and organizational performance from a business uncertainty context (Ittner, Larcker and Rajan, 1997; Hoque, 2004; Schwarz et al., 2008). Schwarz et al. (2008), for example, claimed that economic uncertainty may increase the need for more robust and balanced measures to increase measure informativeness and reduce the chance of sending the wrong performance signals to management. This is consistent with Hoque (2004), who argued that the use of non-financial measures under increasingly higher levels of environmental unpredictability was associated with higher levels of business performance. Ittner, Larcker and Rajan (1997) indicated that highly regulated organizations tend to have specific customer satisfaction and quality requirements that require specific focus by employees. These requirements increase the appropriateness of performance measurement systems that use non-financial (behavioral) type measures over traditional financial measures to ensure specific behaviors are followed.

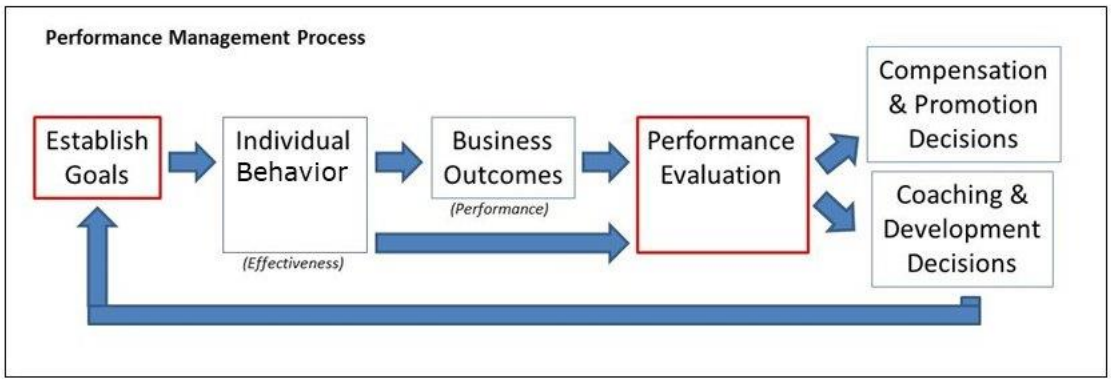
The empirical literature also includes four articles that generate eight separate prescriptions regarding selling environment and measurement effectiveness (Cravens

and Woodruff, 1973; Huffman and Cain, 2000; Loning and Besson, 2002; Said, HassabElnaby and Wier, 2003). Loning and Besson (2002) find that the level of channel power and the type of customer-salesperson relationship influence relationship outcomes and require channel coverage based on the control orientation of the performance measures selected. Similarly, Huffman and Cain (2000) and Cravens and Woodruff (1973) identify that the control orientation properties of an SPMS are associated with differences in perceived salesperson measure controllability and evaluation fairness, which, in turn, is associated with changes in employee effort and job satisfaction under varying levels of territory difficulty. Finally, Said et al. (2003) propose that the length of the product development cycle influences measurement effectiveness through alignment mechanisms associated with overall market and accounting-based performance.

2.1.4.2.2 Performance Measurement Properties

Sink (1991, p. 23) calls the measurement of organizational phenomena "complex, frustrating, difficult, challenging, important, abused and misused." Yet, performance measurement frameworks form an important component of the performance management literature given the role they play in both the goal-setting and performance evaluation steps of a typical performance management process (Figure 2-8).

Figure 2-8: Performance Management Process[10]



[10] Adapted from Zoltners, Sinha and Zoltners (2001, p. 418).

In practice, performance measurement choices abound. While this review primarily focuses on an individual, or salesperson, level of analysis, there has been a significant increase in the use of team selling over the last two decades. Some studies have suggested that 75% of organizations now use this method of selling (Ahearne et al., 2010) and, as a result, sales effectiveness research at a team level is increasing. However, Evans et al. (2012) argue that little research into the dynamics of team selling has occurred and that it is possible that the determinants of individual performance do not necessarily constitute high performance at a team or organizational level and therefore the measures required to evaluate individual performance may be different. They argue that the choice of individual versus team performance criteria may produce significantly different results, given the potential for certain individual behaviors to be detrimental to team dynamics, and that "scholarly knowledge about [individual] salespeople can and should not simply be applied to sales teams. For instance, creative or adaptive behavior may help sales people become more effective individual contributors, whereas creativity and adaptability of a sales team may lead to [negative] team dynamics" Evans et al. (2012, p. 101).

The following subsections of this chapter describe the three performance measurement system properties identified in the literature: measurement type, measurement diversity (i.e., dimensionality), and measure control orientation.

Measurement Type

Measurement type captures the subjective and objective features (Muckler and Seven, 1992), financial and non-financial aspects (Hoque, 2005), and time orientation (Govindarajan and Gupta, 1985) of the performance measures utilized. Within the sales literature, there appears to be an implicit assumption that subjective and objective measures of performance are interchangeable (Bommer *et al.*, 1995). However, empirical findings are mixed on whether objective-based and subjective-based performance measures reliably produce similar evaluations of individual sales people (Rich, Bommer, Mackenzie et al., 1999). The extent to which results differ provides some evidence

regarding the potential multi-dimensional nature of sales performance and the different conceptualizations of the phenomenon that are possible.

The arguments for and against the use of subjective measures typically rests on biases associated with supervisory or self-evaluation methods used to collect measurement data versus their data richness and breadth. Several factors are identified as potentially influencing evaluation bias. For example, Verbeke et al. (2011) believe that a person's disposition positively affects self-appraisal ratings and can be moderated further by leadership style. For example, a supportive, transformational leader who improves a salesperson's self-image may motivate the employee to rate themselves higher than they would otherwise. They suggest that management evaluations are upward-biased when salespeople have a strong sense of self or strong goal orientation.

A counter argument is put forward by Mackenzie et al. (1993), who claim that, through the use of subjective measures, supervisors can more easily evaluate staff on multiple dimensions of performance, such as organizational citizenship, that are not possible through objective measurement. Sujan et al. (1988, p. 84) support this argument, claiming that subjective measures are superior to "hard objectives because they integrate many facets of performance, some of which are not quantifiable [through objective measures]." They are implicitly arguing that directional completeness in performance measurement is potentially more important than measurement correctness. Muckler and Seven (1992) claim that differentiating between subjective and objective measures may be irrelevant because all measures have elements of subjectivity either in their selection, data collection, interpretation, or importance weighting within a performance measurement system. For example, the arbitrary inclusion of certain objective measures within an individual's performance evaluation is subjective in nature. Even company reported objectives can be perceived by performance raters differently, depending on how the information is presented (Wong and Kwong, 2005). Drawing on *prospect theory*, for example, Wong and Kwong (2005) demonstrate that more positively framed values (e.g., 93% attendance record) are perceived more positively during performance evaluation than negatively framed values (e.g., 7% absenteeism). In addition, objective measures (e.g., quota attainment) can be impacted by uncontrollable factors, such as economic conditions and sales territory

competitiveness that reduce their effectiveness, making them potentially poorer choices (Cravens and Woodruff, 1973).

The literature further distinguishes performance measures by their time orientation. Performance measures can be short-term (such as financial measures) or longer-term (such as customer relationship measures), as well as reactive (lagging indicators) or proactive (leading indicators). Relying on longer-term, non-financial measures for compensation purposes when performance is conceptualized across accounting periods, such as with a growth or differentiation strategy, has a positive impact on business performance (Govindarajan and Gupta, 1985). The short-term, backward looking nature of financial measures may shift employees' focus away from longer-term priorities, which cross accounting periods, such as the development of longer-term customer relationships (Kaplan and Norton, 1996).

Measurement Diversity

Within the performance management and management accounting literature, measurement diversity is defined as the use of performance measures across a broad selection of financial and non-financial performance categories (Ittner, Larcker and Randall, 2003; Moers, 2005; Hall, 2008). With the introduction of the balanced scorecard (Kaplan and Norton, 1996), a shift towards more multi-dimensional conceptualizations of performance have occurred within the performance management literature (Tung, Baird and Schoch, 2011). Similarly, within the sales performance literature, the use of multiple performance measures is widely accepted due to the notion that single measures are unable to represent the breadth and depth of a salesperson's performance given the construct complexity of the *sales performance* phenomenon (Johnston and Marshall, 2011, p. 423). However, empirical support surrounding the organizational benefits of measurement diversity is mixed.

Said et al. (2003) saw an improvement in market-based measures of performance for companies using a combination of both financial and non-financial measures compared to those using accounting measures alone, while no improvement in

accounting-related outcomes was observed. Franco-Santos (2007) demonstrated an increase in organizational performance when executives were compensated based on a diverse set of performance measures under conditions of relatively high or low levels of environmental risk.

Increased levels of measurement diversity have also been linked to increased bias. Moers (2005) found that the use of multiple, objective performance measures increases the likelihood of supervisor leniency in evaluation and of an increase in compressed performance ratings[11] given the opportunity to arbitrarily weight measures at their own discretion.

The extent of measurement diversity within performance measurement systems appears to be primarily an issue of completeness and correctness. While single measures may improve job clarity, given their narrow focus (Verbeke, Dietz and Verwaal, 2011), Simons (1995, p. 81) argues that the incomplete nature of single measures in representing the multi-dimensional nature of performance leads to dysfunctional behavior by motivating employees to be singularly focused rather than adaptive. Similarly, Jacoby (1978, p. 93) asks "how comfortable would we feel having our intelligence assessed on the basis of a response to a single question?" Single measures may also be more prone to measurement error, while multiple measures of performance tend to increase measure reliability and reduce measurement error (Churchill Jr., 1979).

Control Orientation

The sales control literature identifies two main management control orientations, described in Section 2.1.1.1 above, based on their role in the conceptualization of the sales performance phenomenon: outcome-based control and behavior-based control (Anderson and Oliver, 1987). Most firms' sales control systems place them somewhere between the two extreme ends of this continuum.

[11] Compressed performance ratings are defined as the insufficient differentiation in ratings between employees (Landy and Farr, 1980).

Outcome-based measures provide the salesperson with the freedom to deliver on their targets using whichever behaviors they feel are appropriate. Minimal supervision is required as management maintains control based on the achievement of outcome results, which are tied directly to salesperson compensation. Conversely, a behavior-based orientation assumes that management understands what behaviors are required for success and expects salespeople to adopt these behaviors. With a behavior-based control orientation, performance is based on continued behavioral compliance rather than the achievement of business outcomes, significantly increasing the level of employee monitoring required (Anderson and Oliver, 1987).

Motowidlo and Van Scotter (1994) suggest behavioral-based control can be broken down further into activity-based control and capability-based control. Activity-based control is related to specific job activities and work dependability. Capability-control is associated with the skills and behaviors associated with high performance. Behaviors such as customer-oriented selling or organizational citizenship are examples of sales behaviors potentially sought after by organizations. Since outcome measures do not require salespeople to actively utilize specific behaviors, it is assumed that they will not actively pursue behaviors such as organizational citizenship, reducing the effectiveness of outcome-based measures in situations requiring these behaviors to occur, such as team selling (Mackenzie, Podsakoff and Fetter, 1993).

In contrast, outcome measures may provide greater alignment between financial resources and the pay-out of employee bonuses (Ittner and Larcker, 2002), since the ability to pay bonuses is tied to financial results. However, critics of outcome measures point to several issues impacting effectiveness. First, these measures are frequently aggregated well above the control level of an individual employee, reducing their meaningfulness and increasing an employee's risk of pay-out, given the potential impact from factors outside the employee's control (Lau and Martin-Sardesai, 2012). Second, these measures typically motivate a short-term focus amongst employees (Gibbs *et al.*, 2004), which is problematic when organizational performance is defined by characteristics that cross accounting periods, such as customer satisfaction.

Recent attempts to identify high sales performers using both outbound-based measures and behavior-based measures have indicated differing results (Plank and Reid, 1994; Singh and Koshy, 2010). Salespeople may be considered high performers under one set of criteria and average or poor performers under a second set. Plank and Reid (1994) argue that sales performance, measured through behaviors versus outcome variables, are quite distinct and their relationship is moderated through organizational and environmental variables (i.e., situational contexts), underscoring the importance of understanding both the control orientation of performance measurement systems as well as the selling environment in which they operate.

2.1.4.2.3 Mechanisms Linking Measurement Design to Outcomes

Contrary to Pilbeam, Alvarez and Wilson (2012) and their exploration of interventions and outcomes within supply chain governance systems, where few theoretical explanations regarding CIMO relationships were identified, theoretical mechanisms explaining the link between the use of performance measures and individual and organizational level outcomes appear plentiful in the literature. Only 36% of the CIMO-based prescriptions extracted from empirical papers in this review do not offer theoretical explanations concerning the mechanisms linking the use of performance measures to outcomes. The remaining 64% of prescriptions utilize six different theoretical mechanisms in their explanations, including: (1) alignment mechanisms, (2) fairness mechanisms, (3) employee controllability mechanisms, (4) motivational mechanisms, (5) informativeness mechanisms, and (6) role/task clarity mechanisms.

Alignment mechanisms are associated with the extent to which a measurement system's characteristics are congruent with or fit the contextual factors present (Govindarajan and Gupta, 1985; Ittner, Larcker and Rajan, 1997). For example, current and future firm performance has been shown to decrease with the level of alignment between organizational characteristics and non-financial measures of performance (Said et al., 2003). The importance of fit/alignment is well documented in the literature (Gordon and Miller, 1976; Hayes, 1977; Otley, 1980) and supported by contingency

theory (Donaldson, 2001). In fact, Hoque (2005) claims that alignment mechanisms may be more critical than other potential direct relationships.

Fairness mechanisms refer to influence associated with the level of biases, equitability, accuracy, and consistency found in the performance evaluation system (Huffman and Cain, 2000). Five prescriptions utilize fairness mechanisms to explain the relationship between performance measurement system properties (i.e., measurement type, control orientation, and measurement diversity) and employee psychological outcomes, including job satisfaction and organizational commitment (Huffman and Cain, 2000; Gibbs *et al.*, 2004; Lau and Moser, 2008; Lau and Martin-Sardesai, 2012).

For example, under inequitable conditions, such as inconsistent levels of territory difficulty, the use of subjective measures or adjusted objective measures of performance improves fairness levels and enhances job satisfaction by mitigating potential measurement noise caused by environmental uncertainty (Prendergast and Topel, 1993; Ittner, Larcker and Meyer, 2003). Conversely, subjective measures, when used for compensation purposes, may increase the potential for measurement bias, reducing fairness levels (Prendergast and Topel, 1993).

Employee controllability mechanisms, based on *goal setting theory* (Locke and Latham, 2002) and *expectancy theory* (Vroom, 1964), are used in the literature to explain differences in employee effort relative to the level of influence an employee has over the performance measures used to evaluate their performance. For example Gibbs et al. (2004) use targets, which are inextricably tied to performance measures as a specific point on a performance measure's scale delineating satisfactory versus unsatisfactory performance, to argue that employee controllability moderates the level of employee risk associated with target achievement and potentially impacts employee motivation.

The use of subjective measures improves (employee) *controllability* in circumstances of high organizational interdependence by focusing performance strictly on individual behaviors that individual employees can control, rather than on outcomes that require team involvement (Gibbs *et al.*, 2004). Conversely, outcome-based measures, when used during conditions of inequitable sales territory difficulty, reduce

employee controllability and thus decrease employee effort and satisfaction (Cravens and Woodruff, 1973).

Motivational mechanisms refer to theories explaining changes in both intrinsic or extrinsic employee motivation based on a measure's control orientation. Salespeople with an intrinsic motivational orientation are more motivated by behavior-based measures of performance, as they provide feedback on both an employee's current behavior and the employee's capabilities (Challagalla and Shervani, 1996). Intrinsically motivated employees look to enhance their performance by increasing their role and customer knowledge (Miao and Evans, 2012).

Informativeness mechanisms, present in 23% of prescriptions, appear to be the most frequent theoretical mechanisms used to explain measurement effectiveness outcomes. Informativeness is considered a key component of many researchers' definition of measurement appropriateness (Meister, 1986; Muckler and Seven, 1992; Gibbs et al., 2004; Bourne, Kennerley and Franco-Santos, 2005). It has been investigated from a variety of measurement types (Govindarajan and Gupta, 1985; Jaworski and MacInnis, 1989; Chonko *et al.*, 2000; Gibbs *et al.*, 2004; Verbeke, Dietz and Verwaal, 2011) and across numerous contextual conditions, including different business strategies (Govindarajan and Gupta, 1985) and different management characteristics (Jaworski and MacInnis, 1989). For example, supervisory ratings that are biased lose their informativeness and therefore become ineffective measures (Prendergast and Topel, 1993). In contrast, subjective measures used with differentiated business strategies increase the level of informativeness and corresponding effectiveness (Govindarajan and Gupta, 1985). In addition, Williamson (1975) identified that a greater use of outcome-based measures increases measurement informativeness through increased clarity around outcome expectations, while Oliver and Anderson (1994) and Joshi and Randall (2001) believe that behavior-based measures are more effective in this regard, as they highlight areas of behavioral deficiency for supervisory coaching and feedback discussions.

Role or *task clarity* mechanisms refer to the level of understanding an employee has about both role procedures and expected outcomes (Joshi and Randall, 2001).

Within the selected literature, this mechanism is singularly utilized to explain changes in employee satisfaction across multiple measurement types. For example, Huffman and Cain (2000) indicate that adjusted outcome measures improve feedback quality through task clarity, increasing employee satisfaction. Conversely, Challagalla and Shervani (1996) suggest that increased levels of activity-based information, coming from non-financial, subjective measures, regarding routine tasks are likely viewed as redundant task clarity activities and therefore reduce employee satisfaction with their supervisor.

Within the performance management literature, alignment, fairness, employee control, motivation, informativeness, and role and task clarity are generally described as individual characteristics of measurement appropriateness. This review supports these findings while going further to suggest these characteristics also appear to act as theoretical mechanisms that produce intended or unintended outcomes when invoked. The nature of the intended or unintended outcomes produced is a key factor in the determination of performance measurement effectiveness.

2.1.4.2.4 Individual-Level Outcomes Associated with Performance Measure Properties

As previously discussed, performance measurement effectiveness has primarily been conceptualized by the psychometric validity of the measures utilized or their level of informativeness, controllability, alignment, relevance, fairness, and completeness. Notwithstanding the fact that outcome perspectives of performance measurement effectiveness have received little support in either the performance measurement or sales performance literatures, there is ample empirical evidence of a relationship between the use of performance measures and individual employee and job-level outcomes.

Specifically, the literature highlights three types of individual employee or job-related outcomes associated with the use of measures of performance, including: (1) psychological outcomes; (2) behavioral outcomes; and (3) role outcomes. Relationships between the use of performance measures and psychological outcomes such as employee satisfaction and motivation have been widely researched and represent 49%

of all employee-level outcome prescriptions generated from selected papers (Table 2-6). For example, Yamazaki and Yoon (2016), Lau and Martin-Sardesai (2012), and Onyemah et al. (2010) all observed a relationship between the use of different types of performance measures and employee satisfaction. Similarly, Miao and Evans (2012) and Oliver and Anderson (1994) observed associations between performance measurement properties and intrinsic and extrinsic motivation, while Lau and Moser (2008) claim a relationship between the use of performance measures and employee commitment. In addition, Moulang (2015) found a positive relationship between the interactive[12] use of performance measures and employee psychological empowerment.[13]

A number of scholars have investigated a link between measures of performance and role outcomes, such as role ambiguity, role conflict, and job tension. For example, Miao and Evans (2012) analyzed the link between various combinations of outcome, activity, and capability control-based measures of performance and role ambiguity. They found that measurement combinations that supported task completion and skill improvement (i.e., outcome control + capability control) reduced role ambiguity, while measure combinations that supported task completion while controlling how tasks were carried out (i.e., outcome control + activity control) increased role ambiguity. Additionally, Marginson et al. (2014) and Challagalla and Shervani (1997) both identified a link between the use of performance measures and changes in role ambiguity. Marginson et al. (2014) saw a negative relationship between the use of non-financial performance measures and role ambiguity, while Challagalla and Shervani (1997) saw reduced levels of ambiguity regarding a salesperson's role vis-à-vis the customer with higher levels of activity-based measures of performance.

Finally, there has been a number of investigations into the link between the use of performance measures and employee behavior, making up 29% of the total

[12] The interactive use of performance measures involves communicating measurement results to subordinates on a regular basis with the intent to use this feedback in support of behavior and performance improvement (Moulang, 2015).
[13] Psychological empowerment relates to the increase in intrinsic motivation towards one's job based on understanding the meaning or value of the work, the belief in one's ability to do the work well, the ability to control how the work is carried out, and positively perceived impacts associated with the work's output (Moulang, 2015).

prescriptions generated for this review. These investigations have focused on the relationship between employee behaviors and the type of measure utilized or the measure's control orientation. For example, Ittner and Larcker (2002) and Ittner, Larcker and Rajan (1997) observed a relationship between non-financial measures of performance and higher levels of innovation and increases in task-behavior focus. Oliver and Anderson (1994) identified a relationship between behavior-based measures and organizational citizenship behaviors, while Onyemah, Rouziès and Panagopoulos (2010) found these same measures increase employee focus and attentional behavior towards administrative tasks.

Measures of performance have also been linked to weaker or more dysfunctional behaviors. Both Jaworski and MacInnis (1989) and Ramaswami (1996) observed a relationship between dysfunctional task behaviors and activity-based measures focused on process controls. One behavior that, surprisingly, has received little attention when examining the relationship between the use of performance measures and salesperson behavior is customer-oriented selling. Customer-oriented selling, as previously defined, involves the practicing of the marketing concept at the individual salesperson-customer level (Saxe and Weitz, 1982). Salespeople, utilizing customer-oriented selling behavior, focus on understanding and solving customer problems and finding solutions that are best for the customer, regardless of whether these conflict with organizational objectives or personal self-interest.

The sales control literature has proposed that salesperson customer-oriented selling behavior is the result of a greater use of behavior-based measures of performance, which reduce employee risk and increase intrinsic motivation, allowing the salesperson to focus on appropriate behavioral selling strategies (Anderson and Oliver, 1987). However, the few investigations into these propositions have received mixed results. Oliver and Anderson (1994) found no support for their hypothesis that a greater use of behavior-based measures versus outcome-based measures would be associated with customer-oriented selling behavioral strategies. In addition, Onyemah, Rouziès and Panagopoulos (2010) observed a reduced level of customer focus with the increased use of behavior-based measures. Conversely, Cravens et al. (1993) observed a link between the use of behavior-based performance measures and customer-oriented

characteristics of the salesforce, while Franco-Santos and Bourne (2008), using case study research to evaluate the effects of performance measures on selling behavior, noted an increased focus on revenue generation and reduction in customer orientation when greater levels of outcome-based measures were in use. These latter examples are consistent with recent reports coming out of the popular press indicating dysfunctional salesperson behavior reportedly due to an overemphasis on financial, outcome-based measures (Ordonez *et al.*, 2009b; Freed, 2017; Johnson, 2017; Ligaya, 2017; Young, 2017).

Similar to the lack of research regarding performance measurement and customer-oriented selling behavior, the literature regarding the relationship between employee-level outcomes and measurement diversity within a performance measurement system is underdeveloped. To date, measurement diversity has been linked to positive psychological outcomes, such as increased levels of job satisfaction from perceived evaluation fairness (Lau and Martin-Sardesai, 2012), as well as to negative role outcomes, such as greater levels of role ambiguity and goal conflict (Cheng, Luckett and Mahama, 2007; Verbeke, Dietz and Verwaal, 2011). This is consistent with the mixed findings coming out of organizational level research, where several scholars have reported positive associations between measurement diversity and organizational effectiveness (Said, HassabElnaby and Wier, 2003; Tung, Baird and Schoch, 2011), while others could not find any evidence to support this relationship (Ittner, Larcker and Randall, 2003; De Geuser, Mooraj and Oyon, 2009).

One potential limitation of the empirical investigations concerning the relationship between the use of performance measures and employee outcomes is that the literature may not be explicitly addressing the role dependency associated with different empirical claims. At the center of this issue is the question, *Can results be generalized across different job roles?* For example, some empirical evidence is based on samples of managers only or on single organizational cases, limiting their generalizability (Hopwood, 1972; Marginson *et al.*, 2014). Others have focused on specific functional roles (Oliver and Anderson, 1994; Onyemah, Rouziès and Panagopoulos, 2010). However, different roles within organizations inherently come with differing levels of authority and thus have different levels of control over the same

measures used to evaluate them, influencing the control orientation-employee outcome relationship (Simons, 1995, p. 61). In addition, organizations operate within different cultural paradigms potentially creating different perceptions of measure evaluation fairness and ultimately employee job satisfaction (Onyemah, Rouziès and Panagopoulos, 2010).

2.1.5 Research Gaps

Table 2-7 summarizes the empirical relationships established to date between performance measurement properties and employee-level outcomes. Both measurement type and control orientation properties and their relationship with employee-level outcomes have received a substantial level of focus in the literature given the longer timeframe they have had to develop. Conversely, only one of the four measurement diversity articles is older than 10 years. This is logical, given that multi-measure framework investigations did not develop until the mid-1990's with the introduction of the balanced scorecard (Kaplan and Norton, 1996).

While substantial investigation has gone into assessing the relationship between measure-diverse performance measurement systems, such as the balanced scorecard and organizational-level outcomes, Table 2-7 suggests that the relationship between measure-diverse performance measurement systems and employee-level outcomes is quite underdeveloped. This is somewhat surprising, given that issues concerning the narrow use of accounting measures for performance evaluation, such as their short-term focus, their lack of controllability, and their inability to capture a comprehensive view of employee performance, have been documented in the performance management and sales performance literatures for over 40 years (Hopwood, 1972; Cravens and Woodruff, 1973). Furthermore, the role and responsibilities of today's salesperson continues to expand (Moncrief and Marshall, 2005; Zoltners, Sinha and Lorimer, 2008), increasing the complexity of sales performance conceptualizations. In an effort to capture this increasing dimensionality, both researchers and practitioners may be forced to increase measurement diversity in the future, raising the importance of understanding possible employee-level outcome impacts associated with this action. It is for this

reason that measurement diversity has been chosen as the measurement property for investigation in this thesis.

Given the underdeveloped status regarding the relationship between measurement diversity and employee-level outcomes overall, a contribution to the literature with regards to the relationship between measurement diversity and any of the three employee-outcome categories would be of value. Both employee psychological outcomes and role outcomes are important in the literature, in that they can often offer insights and explanations regarding employee performance. For example, several scholars have demonstrated a relationship between employee satisfaction and performance (Lau and Moser, 2008; Lau and Martin-Sardesai, 2012). In addition, the insights surrounding intrinsic and extrinsic motivation are utilized to explain employee effort and performance (Cravens and Woodruff, 1973; Sujan, 1986; Sujan and Weitz, 1986).

The gap in understanding the relationship between measurement diversity and salesperson behaviors is also important for a number of reasons. First, the emphasis on diverse measurement frameworks since the introduction of the balanced scorecard (Neely *et al.*, 2000) has increased substantially, with some suggesting that 47% of firms now use some sort of multi-item performance measurement system (Upadhaya, Munir and Blount, 2014). Second, recent high-profile cases of salespeople behaving badly, reportedly due to an overemphasis on the use of financial measures (Freed, 2017; Ligaya, 2017; Young, 2017), argues for an investigation into whether more measure-diverse performance measurement systems can reduce these dysfunctional behaviors.

As an example, the literature is currently silent regarding any relationships between measurement diversity and organizational citizenship or customer-oriented selling behavior. Both behaviors require salespeople to trade-off short-term, self-serving objectives for longer-term objectives, which benefit their team, organization, or customer. Thus, it would be expected that a greater use of non-financial, behavior-based measures would be necessary to support these selling behaviors, but currently no empirical evidence supports this position.

Third, as the role of the salesperson continues to evolve, further emphasis may be put on more measure-diverse conceptualizations of sales performance to capture all facets of the performance construct. Furthermore, this expanding role may require salespeople to adopt new behaviors to be successful in the future. For example, one area where sales has evolved is the greater emphasis on team selling (Jones *et al.*, 2005). Selling behaviors, such as organizational citizenship, which received less focus a decade ago, may become more critical to salesperson success (Podsakoff *et al.*, 2000). Thus, it is this latter gap, the relationship between measurement diversity and salesperson behavior, that becomes the focus of the remainder of this thesis.

Table 2-7: Performance Measurement - Employee Outcome Research

Measurement Properties	Employee Outcomes [B]	[P]	[R]	Reference
Measure Type				
	X			Ittner et al. (1997)
	X	X		Gibbs et al. (2004)
		X		Lau and Moser (2008)
		X		Dobbins et al. (1990)
		X	X	Marginson et al. (2014)
		X		Moulang (2015)
	X			Gill and Carter (2016)
		X		Yamazaki and Yoon (2016)
Control Orientation				
	X	X	X	Miao and Evans (2012)
	X			Fang et al. (2005)
		X		Huffman and Cain (2000)
		X		Cravens and Woodruff (1973)
		X	X	Challagalla and Shervani (1996)
	X			Ramaswami (1996)
	X	X		Oliver and Anderson (1994)
	X			Melynk et al. (2010)
	X	X		Onyemah et al. (2010)
Measurement Diversity				
	X	X	X	Miao and Evans (2012)
			X	Verbeke et al. (2011)
		X		Lau and Martin-Sardesai (2012)
	X		X	Cheng et al. (2007)

Notes: [B] = Behavioral Outcomes; [P] = Pyschological Outcomes; [R] = Role Outcomes

2.1.6 Systematic Review Summary

The objective of the systematic review was twofold. The first objective was to answer the review question: *What is known about the selection and use of effective performance measures in sales?* This was accomplished by first reviewing current definitions of *sales performance measurement effectiveness* and expanding the definition, to take into account employee- and job-related outcomes associated with the use of performance

measures. This was important, since most definitions of sales performance measurement effectiveness in the literature treat outcomes in a limited way, focusing only on the psychometric qualities of the measures and their level of appropriateness (i.e., their informativeness, controllability, fairness, etc.). With this broader definition in mind, the systematic review was carried out by collecting and synthesizing 144 CIMO-based prescriptions generated from empirical findings within the literature. A conceptual framework of sales performance measurement effectiveness was then developed from this synthesis. Each of the framework elements was then described and the theoretical mechanisms linking the various framework elements was detailed, thereby answering the review question posed.

The second objective of the systematic review was to identify literature gaps related to the enhanced definition of sales performance measurement effectiveness. Based on the three measurement properties identified (measurement diversity, measurement type, and control orientation) and the three categories of employee- and job-related outcomes (behavioral outcomes, psychological outcomes, and role outcomes), measurement diversity and its relationship to employee- and job-related outcomes appears to be the most underdeveloped in the literature. Furthermore, it is expected that a continued, heightened focus towards measurement diversity may be required given the evolving nature of the sales role and the need for a more diverse measurement set to capture the increased dimensionality of the *sales performance* construct.

As all three outcome categories are equally underdeveloped in terms of their relationship to measurement diversity, contributing knowledge to any of the three would be useful. To date, investigations into psychological or role outcomes have been conducted to explain why the relationship between performance measures and salesperson behaviors exists. Thus, identifying which behavioral relationships are associated with measurement diversity may be a more useful first step to take before attempting to explain why these relationships may be occurring.

It is for this reason that the measurement diversity-behavioral relationship will be the focus of the remainder of this thesis. In support of this, the final section of this chapter conducts a narrative review of this specific relationship.

2.2 Narrative Review: Performance Measurement and Behavior

The following section summarizes how sales behaviors have been conceptualized within the sales literature to date and discusses three selling behaviors that have been the focus of significant investigation within the literature. In addition, it details what we know about the relationship between performance measurement and individual employee behavior at a more general level and then discusses current theories that link performance measurement to employee behavior, along with their limitations. These limitations are then addressed by presenting two alternative theories to explain these relationships. Research gaps associated with this review are then presented, with two gaps selected and rationalized for further investigation. The chapter concludes with the framing of two research questions.

2.2.1 Selling Behaviors

Within the sales performance literature, selling behaviors have been investigated in multiple ways and at different levels of abstraction. Some scholars liken behaviors to individual selling activities needing to be performed, such as *visiting a customer* or *completing call reports* (Oliver and Anderson, 1994; Plank and Reid, 1994). With this information, several taxonomies of selling behaviors have been developed to help understand the differences that exist among sales positions or changes in the selling role over time (Moncrief, 1986; Moncrief, Marshall and Lassk, 2006). Alternatively, scholars have considered behaviors at a higher level of abstraction or behavioral orientation level. In this regard, three behaviors have been the focus of significant research attention: organizational citizenship (Mackenzie, Podsakoff and Fetter, 1991, 1993; Podsakoff and Mackenzie, 1994; Cadogan *et al.*, 2009; Wessels, 2011); adaptive selling behavior (Weitz, Sujan and Sujan, 1986; Spiro and Weitz, 1990; Franke and

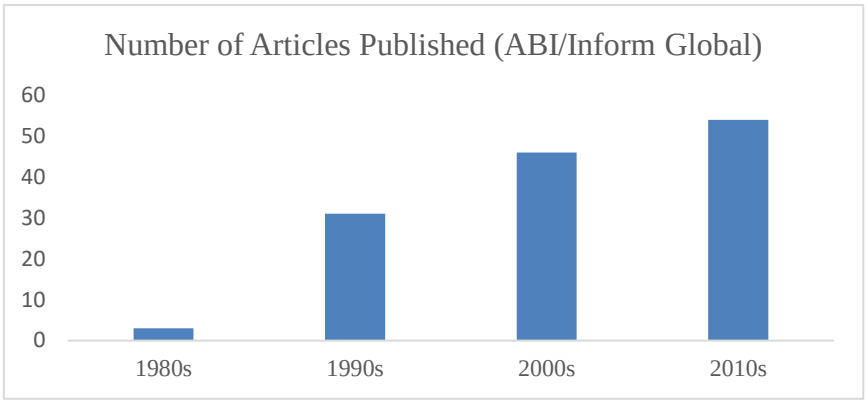
Park, 2006; Chakrabarty, Oubre and Brown, 2008; Singh and Das, 2013); and customer-oriented selling behavior (Lopez, 2000; Joshi and Randall, 2001; Ahearne, Mathieu and Rapp, 2005; Franco-Santos and Bourne, 2008; Davies *et al.*, 2009; Pousa and Mathieu, 2013; Goad and Jaramillo, 2014).

Early work on organizational citizenship behavior (OCB) was focused more on "substantive validity rather than on construct validity." As such, it is loosely defined here as a set of voluntary behaviors that support the greater good of the organization, without being specifically and formally enforced by reward or punishment systems (Podsakoff et al., 2000, p. 515), such as volunteering for additional activities outside of one's role and cooperating with others in support of team-related activities. Interest in organizational citizenship within the sales literature has come from investigations into sales ethics (Cadogan *et al.*, 2009) and the need for greater pro-social collaboration and consensus-building behaviors in team selling environments (Ahearne *et al.*, 2010). For example, Cadogan et al. (2009) examined the relationship between the moral philosophy of sales management and the ethical selling behavior of its sales team, while Ahearne et al. (2010) found a significant relationship between OCB helping behaviors and overall sales team performance.

Interest in adaptive selling behavior within sales has continued to grow (Figure 2-9). Given the boundary-spanning role of sales, numerous scholars have argued for the importance of adaptive behaviors for managing the differing needs and motivations of customers while balancing organizational priorities (Spiro and Weitz, 1990). As a result, the effects of adaptive selling behaviors are often investigated under different contingency influences such as different selling situations (Porter, Wiener and Frankwick, 2003; Kaynak *et al.*, 2016) and differing customer characteristics (Wang, 2013; Román and Juan Martín, 2014). Overall, the relationship between adaptive selling behavior and sales performance appears significant. Kaynak et al. *(*2016) reported that, in 27 empirical studies conducted between 1990 and 2009 involving adaptive selling behavior and sales performance, only four studies were unable to find a significant relationship.

Adaptive behaviors have also been likened to creative behaviors, which are of growing importance in the sales field, particularly in the business-to-business (B2B) market where salespeople now act as consultative sellers, looking for creative solutions to customer problems (Spiro and Weitz, 1990; Davies *et al.*, 2009; Wessels, 2011). For example, Porter, Wiener and Frankwick (2003) found that more complex buying situations, requiring greater sales creativity amongst salespeople, moderated the relationship between adaptive selling behavior and sales performance.

Figure 2-9: Number of Articles on Adaptive Selling



Customer-oriented salespeople are concerned with practicing the marketing concept at the salesperson-customer interaction level by understanding and solving customer problems and finding solutions that maximize customer value (Kaynak *et al.*, 2016). Similar to OCB, customer-oriented selling requires salespeople to trade-off short-term, self-serving behaviors for the longer-term benefit of others, in this case, their customer (Saxe and Weitz, 1982). Customer-oriented selling has been considered an important behavior within the sales performance literature, given its conceptual association with customer satisfaction, customer loyalty, and sales performance. Based on a meta-analysis of 16 prior studies, the relationship between customer-oriented selling behavior and sales performance appears to be statistically justified regardless of the type of sales performance measurement utilized (objective versus subjective) or type of sales position (B2C or B2B) (Jaramillo *et al.*, 2007).

Others have found mixed results regarding the relationship between customer-oriented selling and sales performance. For example, in their longitudinal study,

Jaramillo and Grisaffe (2009) did not find a significant relationship between customer-oriented selling behavior and current sales performance levels, but did observe a significant relationship with longer-term improvements in sales performance. This suggests that customer-oriented selling may be more strongly related to sales performance over longer periods, tied to the build-up of customer satisfaction and loyalty.

2.2.2 The Relationship between Performance Measurement and Behavior

As previously identified within the systematic review, numerous investigations into the relationship between performance measurement and employee behaviors have been undertaken. This research has examined behavioral impacts associated with both the types of measures adopted in employee performance evaluations as well as the underlying control orientation of the measures utilized. Overall, these studies indicate that greater use of non-financial or behavior-based measures of performance was more associated with positive behavioral outcomes than was the use of outcome-based or financial measures. For example, Ittner, Larcker and Rajan (1997) demonstrated that a greater use of non-financial measures versus financial measures was associated with increased task behaviors towards specific regulatory requirements, while Onyemah, Rouziès and Panagopoulos (2010) observed an increased focus on administrative responsibilities amongst salespeople. Similarly, Oliver and Anderson (1994) demonstrated a significant relationship between the use of behavior-based measures and OCB-type behavior. However, Ramaswami (1996) demonstrated that both outcome-based measures and process-driven, behavioral-based measures could produce dysfunctional behavior. Outcome-based measures send signals to salespeople that their rewards are associated with hitting specific targets and dysfunctional gaming, while process-driven, behavior-based measures are associated with lower self-autonomy, trust, and dysfunctional behavior (John, 1984).

As previously discussed, organizational citizenship, adaptive selling, and customer-oriented selling have all been identified in the literature as important behaviors to selling success. Furthermore, the linkage between these behaviors and the

use of specific measures of performance, particularly behavior-based measures, has been supported conceptually (Anderson and Oliver, 1987; Netemeyer *et al.*, 1997; Dubinsky and Skinner, 2002). For example, the use of behavior-based measures within a sales control system transfers risk from the individual to the company, while the opposite is true when outcome-based measures are utilized. Thus, a salesperson's "hierarchy of motivation" differs under these two approaches. Under behavioral-based control, salespeople prioritize their sales organization and their customers ahead of their own self-interest because "it is the agency that shelters the salesperson from risk" and it is the customer that is "critical to the agency's success" (Anderson and Oliver, 1987, p. 86). In addition, behavior-based measures do not require the salesperson to be encumbered with delivering immediate sales results, increasing their intrinsic motivation levels and allowing them to take a more consultative or adaptive and customer-oriented approach to selling (Singh and Abraham, 2012). Thus, it is expected that greater levels of non-financial, behavior-based measures versus financial, outcome-based measures within an SPMS would positively increase OCB, customer-oriented selling, and adaptive selling behaviors.

Notwithstanding the above, empirical evidence directly linking these constructs remains sparse, particularly around customer-oriented selling behavior. Instead, research activity has focused on investigating relationships between performance measurement use and specific dimensions or characteristics of these behaviors or their potential antecedents. For example, Oliver and Anderson (1994) found significant relationships between the use of behavior-based measures and *cooperating with the sales team*, a characteristic of OCB. In addition, they identified significant linkages between the use of behavior-based measures and smarter selling techniques aligned to adaptive selling. Miao and Evans (2012) investigated the relationship between various combinations of outcome-based and behavior-based measures and intrinsic motivation, considered a potential antecedent of adaptive behavior and customer-oriented selling (Anderson and Oliver, 1987). Finally, Moulang (2015) observed a positive relationship between the interactive use of performance measures and *employee creativity*, which is conceptualized in the sales literature as a dimension of adaptive selling behavior (Weitz, Sujan and Sujan, 1986; Evans *et al.*, 2012).

2.2.3 Theories Explaining the Relationship between Performance Measurement and Behavior

To date, management theories used to explain the relationship between performance measurement choices and employee behavior have predominantly come from psychology and economic theories, such as *goal setting theory* (Locke and Latham, 2002), *expectancy theory* (Vroom, 1964), and *agency theory* (Holmstrom, 1979). This section briefly reviews these theories and their limitations as they relate to their use within the performance measurement-employee behavior relationship literature. It then introduces two alternative theories that have been underutilized to explain this linkage to date.

2.2.3.1 Goal-Setting Theory and Expectancy Theory

Goal-setting theory (Locke and Latham, 2002) and *expectancy theory* (Vroom, 1964) link performance measurement targets (a point or level on the measurement scale used for performance measurement) with employee motivation to behave in a certain manner. The use of challenging sales performance measurement targets by sales executives has its roots in both theories. For example, Locke and Latham (2002, p. 706) claim that an increase in goal difficulty is followed by an increase in effort and performance as long as goals are specific to "direct attention and effort toward goal relevant activities." Conversely, *expectancy theory* argues that task performance increases, as the perceived probability of success (i.e., expectancy) increases (Vroom, 1964).

A contradiction between *expectancy* and *goal-setting* theory exists, given that it is reasonable to assume that as goal difficulty increases, the perceived probability of success would decrease. Garland (1984) addresses this issue by demonstrating that an individual's self-efficacy is built up over time so that higher expectancies (i.e., perceived probabilities of success) may be maintained at higher levels of goal challenge, allowing goal-setting theory and expectancy theory to operate together. Backing for this claim appears in recent sales effectiveness research, where higher levels of self-efficacy

have been shown to increase performance levels for higher difficulty tasks (Ordonez *et al.*, 2009a; Benzer *et al.*, 2014).

Goal-setting theory critics acknowledge the power that goal-setting activities have on human behavior (Ordonez *et al.*, 2009b). Their criticisms of the theory lies with the potential unwanted behavioral outcomes or prioritizations associated with goal-setting and the critics have called for better frameworks to understand both positive and negative behavioral outcomes associated with goal-setting activity (Ordonez et al., 2009b) consistent with this thesis. For example, Simons and Chabris (1999) found that ultra-specific goals forced employees to focus behavior too narrowly at the expense of important but less specified objectives. Under multiple-goal situations, Shah, Friedman and Kruglanski (2002) observed that goals that were more easily trackable were prioritized over less trackable goals, while Heneman (1972) demonstrated that short-term goals were prioritized over longer-term goals.

Early criticism surrounding expectancy theory revolved around its inability consistently to predict effort and job performance across different contextual situations (Miao and Evans, 2012). Notwithstanding this criticism, expectancy theory has been used successfully within a sales context to predict the relationship between behavior- and outcome-based controls, including measures of performance on salesperson knowledge, intrinsic motivation, role ambiguity, and job performance (Govindarajan and Gupta, 1985; Miao and Evans, 2012; Moulang, 2015).

2.2.3.2 Agency Theory

Agency theory (Holmstrom, 1979) underpins much of the relationship between performance measurement and control of employees. Agency theory is concerned with aligning agent behavior with the outcome desires of principals through the use of control systems, namely the employment contract, which allows for a trade-off of risk and incentives to induce agent effort towards principal objectives (Holmstrom, 1979). The principle of informativeness (Holmstrom, 1979), a key tenet of agency theory, proposes that performance measures are useful because monitoring measures provide the principal with information concerning the agent's actions and decisions (Franco-

Santos, 2007). The intent is to find the right combination of performance measures to capture adequately the value generated by the employee on behalf of the organization.

Aside from ensuring informativeness, a key tenet of agency theory argues that measures must also be controllable by the agent so that they can significantly influence its result. Thus, a*gency theory* has been frequently used within performance measurement research (Franco-Santos, 2007) and, in particular, used to explore the relationship between performance measurement choices and employee behavior. For example, Ittner, Larcker and Rajan (1997) found that the use of non-financial measures increased informativeness and agent focus towards those behaviors related to meeting industry regulatory requirements, while Cravens and Woodruff (1973) observed reduced levels of employee effort when using outcome-based measures under higher levels of sales territory difficulty, given reduced levels of employee control. Indjejikian (1999) documented a change from short-term to more beneficial long-term behaviors as agent risk was reduced through the use of subjective performance measures within an auto dealership.

Criticism surrounding agency theory in explaining employee behavior has focused on two issues. First, the unit of analysis in agency theory is the employee contract. Agency theory critics suggest that the employee contract is too simplistic to explain the complexity surrounding employee-employer relationships, which include informal, implicit arrangements around job activity and performance (Indjejikian, 1999). For example, Baker (1992) posits that some employee work, such as the need to be innovative or creative, cannot be objectively measured as part of the enforceable (and explicit) contract required under agency theory, making informal, implicit arrangements between manager and employee critical.

Second, the fundamental economic assumptions surrounding the agent as a self-serving, extrinsically motivated individual intent on maximizing personal utility is criticized as a narrowly defined, simplistic view of human behavior, which limits its generalizability. Davis, Schoorman and Donaldson (1997) suggest that not all human motivation is derived from self-interest and utility maximization, but instead may come from a belief in pro-organizational behaviors.

2.2.3.3 Alternative Theoretical Explanations

The relationship between measures of performance and employee behavior has predominantly been perceived as one of control, risk, and reward, given the underlying theories used to explain the relationship. In this regard, performance measurement systems have been limited in how they are conceived. For instance, they have not been widely viewed as communication vehicles capable of conveying corporate or departmental priorities or able to support developmental coaching conversations between salespeople and their supervisors. Instead, their feedback function, within the performance measurement and control literature, has been mainly limited to conveying reward and control information (Deci and Ryan, 1985; Anderson and Oliver, 1987). In addition, these theories have been criticized as offering simplistic views of human nature and human capability, seeing individual employees simply as utility maximizers with perfect information and unlimited cognitive capabilities (Davis, Schoorman and Donaldson, 1997). Based on these criticisms and limitations, two alternative theories – *ABT* (Ocasio, 1997) and *the of planned behavior* (Ajzen, 1991) – are presented below, both of which allow for a different conceptualization of performance measurement systems and a different approach to explaining employee behavior.

Unlike the theories presented above, ABT and TPB have not been significantly leveraged in the literature to explain the relationship between performance measurement and employee behavior. This is surprising, given that ABT has been used to explain both organization and organizational member actions such as organizational innovation (Nedon and Herstatt, 2014), adaptive performance (Shoss, Witt and Vera, 2012), technology search behavior (Chen, 2003), and strategy formulation (Ocasio and Joseph, 2005), as well as employee idea generation and brainstorming (Javadi, Gebauer and Mahoney, 2013). Similarly, TPB has been leveraged extensively in the management literature to rationalize and predict employee behaviors across numerous contexts, including salesperson intention to sell new products (Fu *et al.*, 2010), employee intention to use activity-based costing software (Tan and Ferreira, 2012), intentions surrounding sustainable marketing by marketing personnel (Ferdous, 2010), intentions towards hiring employees with disabilities (Ang, Ramayah and Amin, 2015), and

intentions towards environmental sustainability amongst supply chain managers (Swaim *et al.*, 2015).

The remainder of this chapter describes both ABT and TPB and posits how the two may interact.

2.2.3.3.1 Attention-Based Theory

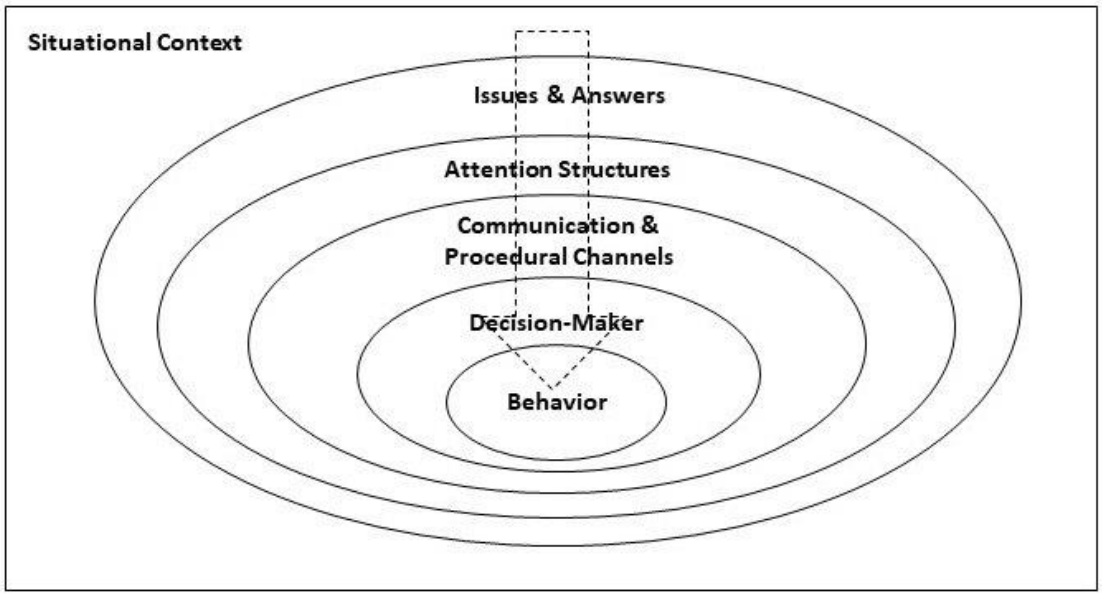
In contrast to economic theories, such as agency theory, ABT embraces the concept of *bounded rationality* (Simon, 1947), which perceives humans not as economic *utility maximizers*, but rather as *utility satisfiers*, given their cognitive limitations. Humans are believed to have attentional capacity limitations (Ocasio, 1997). Thus, what behaviors or actions people take depends on what they focus their limited attention. ABT perceives organizational behavior as a function of the distributed individual behavior of organizational members (Hutchins, 1995; Ocasio, 1997).

How organizations align organizational attention and focus on issues important to the firm, linking organizational attention to individual cognition, can be explained using three key principles of ABT developed by Ocasio (1997). First, the *focus of attention* principle posits that given the cognitive limitations of individuals, they focus their "energy, effort and mindfulness" on "a limited set of elements that enter into consciousness" (Ocasio, 1997, p. 190). Behavior and activities can gain attention through routine or well-learned actions creating automatic responses (e.g., driving a vehicle) or they require high levels of attentional capacity under controlled processing. Second, the *situated attention principle* posits that attentional focus is driven by situational foci. Thus, individuals vary their attentional focus based on the situational context in which they find themselves. Third, the *structural distribution of attention principle* posits that individual attention and perceived situational context is derived from and controlled by how organizations allocate organizational issues and answers through *communication and procedural channels*. Attention structures are used by the firm to regulate the structural distribution of attention. These include organizational norms, values and shared assumptions, senior organizational influencers, functional positions, and organizational resources. Combined, these elements "govern the

allocation of time, effort and attentional focus" of organizational members through the use of communication and procedural channels (Ocasio, 1997, p. 195).

Procedural and communication channels in the form of "formal and informal concrete activities, interactions and communications " are created by the firm's attention structures to communicate, control, and allocate the set of issues and answers to key decision-makers in support of "distributed cognition and information processing…[inducing]…organizational decision-makers to action" (Ocasio, 1997, p. 194). Examples of procedural and communication channels include personnel evaluations, customer satisfaction surveys, annual reports, performance measurement systems, and meetings (Ocasio, 1997). Figure 2-10 summarizes how organizations align organizational attention and focus on issues important to the firm, linking organizational attention to individual cognition.

Figure 2-10: Attention-Based Theory (adapted from Ocasio, 1997)



Ocasio (1997), in defining *attention* as it relates to organizational decision-makers and the strategic decisions employed by firms, suggests that the construct incorporates the focus of time and effort both on issues (i.e., problems, opportunities, threats, etc.) related to the firm's situational context and on answers to address these issues. Thus, what issues and answers organizational decision-makers choose to focus

on from all the possible alternatives, given their human limitations, influences organizational member actions and, therefore, organizational outcomes (Li *et al.*, 2013). ABT has been used to explain the breadth and effort that organizational members put towards knowledge and information searches associated with new product introduction (Fu *et al.*, 2010), as well as the level of adaptive behavior in support of employee task performance (Shoss, Witt and Vera, 2012) over other behaviors or actions on which employees could focus.

Several criticisms related to ABT are germane to this thesis. First, attention theories have been criticized for relying on "different metatheories and definitions of the [attention] construct," which has created a disparate set of empirical findings rather than a "cumulative body of work" (Ocasio, 2011, p. 1286). Attention is conceptualized differently within different research domains and is applied differently within different theories. For example, Ocasio (2011) argues that there are three key conceptualizations of attention used in organizational research, including *selective attention*, *executive attention,* and *attentional vigilance*. Selective attention is used to explain how humans focus their limited information-processing capacity on a select set of stimuli versus other stimuli. This is markedly different from attentional vigilance, which is concerned with the level of "sustained concentration" on particular stimuli, and from executive attention, which is concerned with the level of cognition focused on stimuli within working memory rather than "incoming sensory data" (Ocasio, 2011, p. 1287). Thus, defining how attention is conceptualized and which stream of attentional theory is adopted for research purposes becomes important.

A second criticism of ABT revolves around the limitations associated with the underlying information-processing view of communication channels within ABT (Ocasio, Laamanen and Vaara, 2018). Communication channels are treated only as pipes through which information flows rather than considering the nuances of communication content or the characteristics of social interaction important in understanding how attention is distributed within and between channels.

For the purposes of this thesis, *attention* is conceptualized in a manner consistent with the definition of *selective attention* used in the theoretical framework of the

attention-based view of the firm developed by Ocasio (1997) and described above. Given their limited cognitive capability, organizational members allocate their time, effort, activities, and behavior on items they selectively attend to over other possible activities and behaviors. Performance measurement systems are used by the organization as a formal communication channel to distribute those issues and actions that the firm would like attended to by organizational members over other possible activities (Oliver and Anderson, 1994; Joshi and Randall, 2001; Chenhall and Langfield-Smith, 2007). Thus, it would be expected that performance measurement systems acting as communication channels within the firm will influence employee behaviors and actions by focusing selective attention on those actions and behaviors desired by the firm over other actions and behaviors.

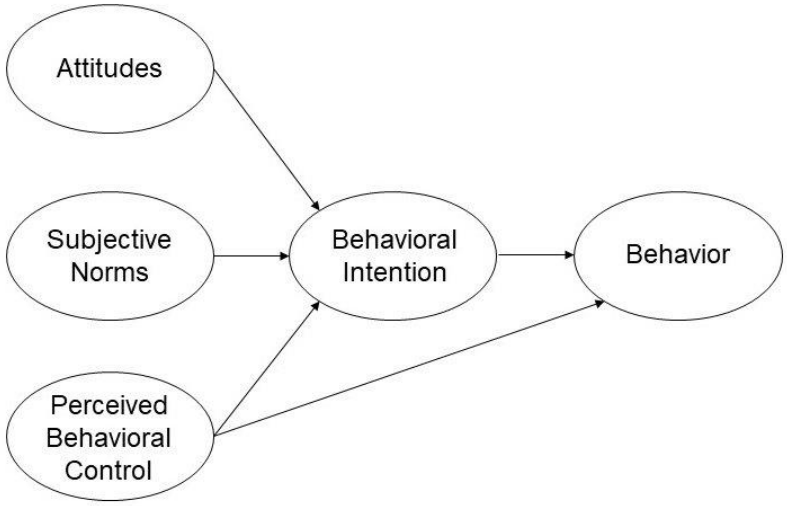
2.2.3.3.2 Theory of Planned Behavior

The relationship between performance measurement and selling behaviors can also be explained by drawing from TPB (Ajzen, 1991). According to Ajzen (1991), individual behavior is a function of both the behavioral intention towards a particular behavior and the individual's perceived behavioral control over that behavior. Furthermore, behavioral intention is derived from an individual's attitude towards the behavior, the subjective norms associated with the behavior and the perceived behavioral control over the behavior. In other words, "individuals have a high degree of intention to engage in a predicted behavior when they view the behavior favourably (attitude), comply with social pressure (subjective norms) and believe they can perform the expected behavior (perceived behavioral control)" (Swaim et al., 2016, p. 306). Thus, attitudes, subjective norms and perceived behavioral control are derived from attitudes, norms, and behavioral control-based beliefs (Armitage and Conner, 2001; Shoss, Witt and Vera, 2012). Figure 2-11 depicts the key relationships between TPB constructs in predicting behaviors.

TPB has been used to explain behaviors and/or behavioral intention across a wide variety of settings. In assessing supply manager environmental sustainability behaviors, Swaim et al. (2016) demonstrated a link between, on the one hand, supply

manager attitude, subjective norms, and perceived behavioral control and, on the other, behavioral intention towards sustainability practices. Wang et al. (2007) revealed a relationship between consumer attitudes and perceived behavioral control surrounding online shopping behavior and consumer behavioral intention while Fu et al. (2010) observed a relationship between salesperson attitudes, subjective norms, and perceived behavioral control regarding the selling of new products. Further support for TPB in predicting behavioral intention and behavioral outcomes can be found regarding blood donations (Holdershaw, Gendall and Wright, 2011), rule-following within youth shelters (Broadhead-Fearn and White, 2006), and student engagement in community service (Hellman, Hoppes and Ellison, 2006).

Figure 2-11: TPB (adapted from Ajzen, 1991)



Criticism regarding TPB revolves around two areas important to this thesis. First, several scholars have noted their inability to duplicate results concerning the predictive nature of behavioral intention antecedents, particularly subjective norms. For example, several authors have noted how weak subjective norms can be in predicting behavioral intention (Legris, Ingham and Collerette, 2003; Hubner and Florian, 2006; Fu *et al.*, 2010), while others have eliminated the variable completely when operationalizing the TPB model (Sparks *et al.*, 1995).

Second, and closely related to the first issue, is the fact that the constructs utilized within the theory may contain definitional issues that may impact the

predictability of any TPB model when operationalized. For example, the conceptualization of perceived behavioral control has been debated amongst scholars. Some scholars take a narrow view of perceived behavioral control and liken it to self-efficacy or the confidence in one's ability to perform a particular behavior (Ajzen, 1991; Fu *et al.*, 2010), while others consider perceived behavioral control and self-efficacy as different constructs, believing perceived behavioral control to be a much more complex construct (Bandura, 1992; Terry, 1993; Sparks, Guthrie and Shepherd, 1997).

2.2.3.4 Summary

This narrative review has reviewed what is known to date regarding the relationship between performance measurement and employee behaviors. It has underscored the underdeveloped state of the literature regarding a direct link between the use of performance measures and three key selling behaviors: organizational citizenship, adaptive selling, and customer-oriented selling. In addition, the major theories utilized to explain the relationship between performance measurement and employee behavior were discussed, along with their limitations regarding how they treat employee cognitive capabilities. Given these limitations, two alternative theories that have traditionally not been considered when investigating the performance measure–behavior relationship have been put forward in this thesis: ABT and TPB. Criticism regarding these theories was also discussed. These primarily center on construct conceptualization issues, underscoring the importance of construct definitions during operationalization of any research using these two frameworks.

These theories provide a new lens with which to view the performance measurement–selling behavior relationship while at the same time considering performance measurement systems in a different light, not simply as control and reward vehicles but as communication vehicles, focusing salesperson attention on behaviors considered important to the firm.

2.2.4 Research Gaps and Research Questions

The following section summarizes the relevant research gaps in the literature identified from both the systematic and narrative reviews conducted. It highlights one particular gap and offers a rationale for focusing on it. The chapter then concludes by putting forward two research questions to be addressed within the remainder of this thesis.

The systematic review provided a holistic examination of the factors influencing performance measurement effectiveness as it was defined within this thesis. In particular, the relationship between the three measurement properties – measurement type, control orientation, and measurement diversity and employee outcomes – were discussed, along with the situational factors potentially influencing these relationships. Findings indicate that there has been substantial research conducted regarding the relationship between measurement type, control orientation, and employee outcomes, while measurement diversity research is underdeveloped in terms of its relationship to psychological, role, and behavioral outcomes.

The literature review also underscored the growing importance of measurement diversity for investigation. Given the continued broadening of the sales role and, therefore, the increasing complexity of the *sales performance* construct, a broader, more diverse measurement set may be required going forward to capture this construct complexity. In addition, the narrow and exclusive focus on financial measures and their potential impact on dysfunctional selling behaviors has become a frequently reported phenomenon in the popular press. Interestingly, recent reports appear to be exclusively focused on the B2C sectors of the economy, notwithstanding the fact that B2B selling relationships may be of greater risk, given longer sales cycles and multiple customer interactions required to close larger customer transactions.

The narrative review explored the relationship between the properties of performance measures and employee behavior. This review identified gaps in the literature concerning the direct relationship between the use of performance measures and three key selling behaviors: organizational citizenship, adaptive selling, and customer-oriented selling. While specific dimensions of OCB and adaptive selling behavior have been explored, the literature is currently silent concerning the direct

relationship between the use of performance measures and customer-oriented selling behavior.

A review of existing theories along with two alternative theories for understanding the relationship between performance measurement and employee behavior was presented and additional gaps were identified for investigation. For example, ABT researchers have called for further research regarding the use of communication channels in distributing attention throughout the organization (Ocasio, Laamanen and Vaara, 2018). Interestingly, while performance measurement systems and supervisory coaching both meet the definition used by these researchers in conceptualizing communication channels for attention distribution, neither has been explicitly identified or used to any degree in attention-based research.

The relationship between measurement diversity and customer-oriented selling behavior appears to be a legitimately important gap for further investigation. While a contribution to knowledge regarding measurement diversity and any of the three selling behaviors mentioned would be of benefit, customer-oriented selling behavior appears to be the most underdeveloped. In addition, significant work has already taken place regarding the conceptual definition, construct validity, and discriminant validity of the customer-oriented selling behavior construct (Saxe and Weitz, 1982; Thomas, Soutar and Ryan, 2001; Stock and Hoyer, 2005) for use in such an investigation. Furthermore, customer-oriented selling has become of great concern to the general public and a hot button issue with government legislators, given the frequency with which incidents are reported in the press concerning dysfunctional selling behavior (Ordonez *et al.*, 2009b; Freed, 2017; Johnson, 2017; Young, 2017).

The second gap to be pursued within this thesis is an investigation of both performance measurement systems and supervisory coaching as potential communication channels to distribute performance measure information, generating attentional focus towards actions considered important to the firm. ABT provides a new lens from which to view the relationship between performance measurement and selling behaviors. An understanding of how performance measurement systems and supervisory coaching, acting as attentional communication channels, might influence

selling behaviors would be of great interest to attention-based scholars and practicing managers. While the benefits of performance measures are well recognized in terms of their control and reward capabilities, their use as communication content conveyed through performance measurement systems and supervisory coaching channels has only been considered in a limited way to date in the literature. Therefore, the following research questions have been adopted:

RQ1: W*hat effect does the level of measurement diversity within an SPMS have on customer-oriented selling behavior?*

RQ2: *To what extent does supervisory coaching influence the relationship between measurement diversity and customer-oriented selling behavior*?

3 THEORY AND HYPOTHESES

The purpose of this chapter is twofold. First, drawing from ABT (Ocasio, 1997) and TPB (Ajzen, 1991), a theoretical framework describing the relationship between the use of DPM within an SPMS and *customer-oriented selling behavior* is developed in Section 3.1. Second, a set of hypotheses are put forward to test the theoretical framework relationships in Section 3.2.

3.1 Theoretical Framework

Notwithstanding the fact that *attention* is an individual, cognitive construct, ABT within the management literature has been primarily used at the macro-level to predict firm-level, rather than individual-level, behavior (Shoss, Witt and Vera, 2012). In explaining firm-level behavior, ABT scholars acknowledge that individuals "ultimately do the attending" (Ocasio, 1997, p. 189) and articulate how organizational attention is distributed down to the individual-level. However, less effort has been made to understand the mechanisms that translate individual-level attention into individual-level behavior, given the macro focus. As a result, a gap exists in the management literature regarding how ABT is linked to individual-level behavioral theories such as TPB. However, recent ABT research from outside the management literature may provide insight into how the two theories might interact (Cialdini, Reno and Kallgren, 1990; Cialdini, Kallgren and Reno, 1991; Janiszewski, Kuo and Tavassoli, 2013; Chang and Ko, 2016; Ko *et al.*, 2017; Saunders and Frazier, 2017).

Numerous scholars outside the field of management have linked individual-level attentional focus to changes in the antecedents of behavioral intention as proposed by TPB. For example, Wang, Morey and Srivastava (2014) demonstrated how selective attention, generated through political campaign communications, influences specific attitudes towards political candidates. In addition, Saunders and Frazier (2017) observed that attention towards one's body image from sociocultural communication influences body image attitudes amongst adolescents. Similarly, Janiszewski, Kuo and Tavassoli (2013), Chang and Ko (2016), and Ko et al. (2017) established a link between selective

attention and specific attitudes towards products, corporate sponsorships, and celebrity endorsements. Less recently, in field experiments, Cialdini, Reno and Kallgren (1990) found that situated attention, in the form of focused external stimuli, was associated with increases in specific normative beliefs regarding littering within a park.

Later in this chapter, supervisory coaching is argued to be a communication channel, as defined by Ocasio (1997), that is utilized by organizations to focus individual employee attention towards specific activities and behaviors. Numerous researchers have indicated a link between coaching and perceived behavioral control or self-efficacy[14] (Ahearne, Mathieu and Rapp, 2005; Widianto, 2011; Pousa, 2012; Zhang and Zhou, 2014). For example, Goker (2006) demonstrated a relationship between supervisory coaching of student teachers and increases in self-efficacy. Thus, individual attentional focus, generated through communication channels, appears to act as a filter focusing attention on specific situational stimuli associated with certain attitudinal, normative, and behavioral control beliefs over other possible beliefs an individual could hold. These beliefs, in turn, affect individual attitudes, subjective norms, and perceived behavioral control levels (Ajzen, 1991), thus directing individual attentional focus towards specific behaviors.

ABT focuses on how organizational attention structures utilize communication and procedural channels to distribute situational context stimuli to affect the overall organizational attention and the individual attention of organizational decision-makers towards behaviors and actions of importance to the firm (Ocasio, Laamanen and Vaara, 2018). Procedural and communication channels are defined as the "formal and informal concrete activities, interactions and communications set up by the firm to induce organizational decision-makers to action on a selected set of issues" (Ocasio, 1997, p. 194). Performance measurement systems are used to focus organizational attention (Neely *et al.*, 1997), to control and motivate organizational members towards specific behaviors, activities, and outcomes (Anderson and Oliver, 1987), and to communicate

[14] Within the literature, some scholars (Ajzen, 1991; Fu *et al.*, 2010) use perceived behavioral control and self-efficacy interchangeably, while others believe perceived behavioral control to be a more complex construct (Bandura, 1992; Terry, 1993; Sparks, Guthrie and Shepherd, 1997).

"the domain in which subordinates should search for opportunities" (Kaplan and Norton, 1996, p. 79). Performance measurement frameworks have been developed to focus organizational attention on different areas, including different dimensions of corporate business performance (Azzone, Masella and Bertele, 1991), as well as on specific strategies (Govindarajan and Gupta, 1985) and on horizontal flows of materials and business processes (Lynch and Cross, 1991; Brown, 1996). Thus, performance measurement systems would be considered one type of *procedural and communication channel* to focus organizational and individual attention.

The principle of situated attention posits that what individuals focus on is triggered by the situation with which they are confronted (Ocasio, 2011). Communication channels are used to communicate the breadth of issues, answers, and activities important to the firm for organizational members to focus their action within this situational context. DPM, defined as the use of both financial and non-financial measures within a firm's SPMS (Banker, Potter and Srinivasan, 2000; Franco-Santos, 2007), overcomes "the inadequacies of [using] traditional financial measures" alone (Lau and Moser 2008, p. 55). The use of both financial and non-financial measures allows for focus to be created, not just on outcome results but also on how outcomes are accomplished by "providing signals…for improvement in crucial activities" (Ittner, Larcker and Randall, 2003, p. 722). For example, non-financial measures can cross traditional fiscal accounting periods and therefore are more congruent with those salesperson behaviors and actions that require a longer-term perspective, such as customer-oriented selling behavior (Saxe and Weitz, 1982).

The use of a more measure-diverse SPMS is more consistent with the complex, multi-dimensional nature of performance, thus increasing the likelihood that all relevant facets of the performance construct are considered (Said, HassabElnaby and Wier, 2003; Hoque, 2004, 2005; Franco-Santos, 2007) and that a more appropriate set of issues and answers is distributed for attention to the salesforce. At an organizational level, a number of scholars have demonstrated a link between diverse measurement and firm performance (Perera, Harrison and Poole, 1997; Neely, Kennerley and Martinez, 2004), while others have not been able to identify a relationship (Perera, Harrison and Poole, 1997; Neely, Kennerley and Martinez, 2004). Baird (2010) argues that measure-

diverse performance measurement systems allow managers to demonstrate strong performance in a number of areas by focusing attention on specific behaviors and skills rather than simply on business outcomes. Similarly, and consistent with ABT, Evans et al. (2007) suggest that measure-diverse performance measurement systems signal and motivate organizational members to focus attention on activities important to the firm, bolstered further by those parts of the measurement system comprised of behavior or skills-based measures that require extensive observation and feedback from sales management (Dobbins, Cardy and Platz-Vieno, 1990). Thus, the level of measurement diversity within an SPMS is the main independent study variable for this research.

The previous chapter reviewed both the organizational and external business and selling environment factors that may influence the relationship between performance measurement and employee-level outcomes. To date, some internal factors, such as *span of control* and *level of supervision* (Dobbins, Cardy and Platz-Vieno, 1990), employee-supervisor trust (Gibbs *et al.*, 2004), and supervisory procedural knowledge (Jaworski and MacInnis, 1989), have been identified as influencing the relationship between performance measures and employee outcomes.

Consistent with *agency theory* critics who suggest that the employee-employer relationship is more complex than what is assumed within the employment contract, the literature has largely ignored one aspect of the salesperson-sales manager relationship, namely, supervisory coaching and its impact on the relationship between performance measurement and salesperson behavior. This gap in the literature is surprising, given that supervisory coaching is likely a primary communication channel between organizational attention structures and the salesforce in terms of the dissemination of SPMS information.

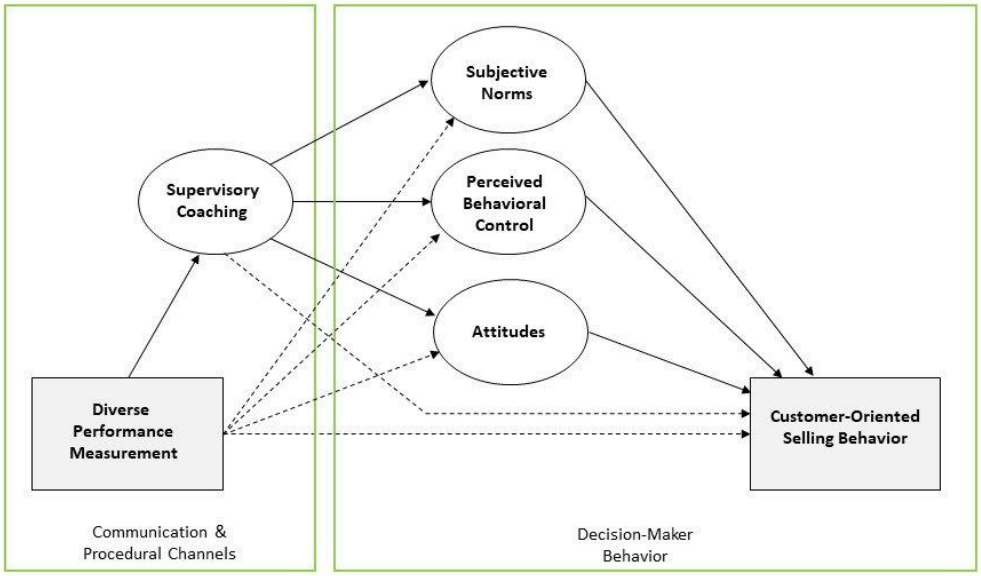
Non-financial measures of performance contained within an SPMS do not come from the firm's accounting system but are collected via supervisory observation (Saxe and Weitz, 1982; Thomas, Soutar and Ryan, 2001). Thus, communication of these particular measures is likely to occur only during supervisor-employee conversations, such as those that take place during coaching sessions. The extent to which these non-financial measures are communicated may increase the attentional focus paid to them by

salespeople (Joshi and Randall, 2001), influencing both salesperson attitudinal and normative beliefs, as previously discussed. Therefore, this line of inquiry appears to be an important gap for investigation and is included within the research study.

Customer-oriented selling behavior is defined here as the practice of the marketing concept by salespeople at an individual, one-on-one customer level (Saxe and Weitz, 1982). To behave in a customer-oriented manner means to focus on longer-term customer satisfaction, even at the expense of short-term firm profitability or personal gain, if in the best interest of the customer (Saxe and Weitz, 1982). Customer orientation has been touted as a critical success factor in support of customer satisfaction (Jaramillo *et al.*, 2007) as well as customer relationship and key account-management selling strategies that pervade the modern salesforce (Ingram *et al.*, 2005), thus underscoring its importance as a selling behavior. Given this importance, customer-oriented selling behavior has been chosen as the key behavioral construct for this study.

Figure 3-1 highlights the variables used in this study and their corresponding relationships. Section 3.2 discusses these relationships more fully through the development of specific hypotheses.

Figure 3-1: Theoretical Framework



3.2 Hypotheses Development

This section is broken down into three subsections. Section 3.2.1 summarizes the link between the use of DPM within an SPMS and customer-oriented selling behavior. Section 3.2.2 focuses on the three behavioral antecedents that influence the relationship between DPM and customer-oriented selling behavior: attitudes, subjective norms, and perceived behavioral control. Section 3.2.3 proposes how a second procedural and communication channel, that is, supervisory coaching, influences the relationship between DPM customer-oriented selling behavior, attitudes, subjective norms, and perceived behavioral control. A summary of Chapter 3 is then put forward prior to the discussion of research methods in Chapter 4.

3.2.1 DPM and Customer-Oriented Selling

Attention-based theory argues that individuals focus their time and effort on those activities and behaviors that enter their consciousness at the expense of other potential activities, and that procedural and communication channels are used by organizations to "induce organizational decision-makers to action" (Ocasio, 1997, p. 194). Sales performance measures used for salesperson evaluation purposes, are one type of procedural and communication channel, as they communicate to salespeople what is important to the organization (Hall, 2008) and thus what people should focus their attention on. Therefore, it would be expected that a firm's performance measurement system, used as a procedural and communication channel, will increase salesperson attentional focus towards specific selling behaviors and activities over others.

Salespeople, like senior level decision-makers, have numerous issues, opportunities, and threats to which they could attend using a host of behavioral approaches, given their role as organizational boundary spanners (Saxe and Weitz, 1982; Singh and Koshy, 2010). For example, they could focus on activities and behaviors that might drive short-term revenue at the expense of longer-term profitability or customer loyalty. As organizations strive to increase customer loyalty and gain repeat purchases, they are looking to their salesforce to adopt a more customer-oriented selling behavior (Saxe and Weitz, 1982). Customer-oriented selling requires salespeople to

undertake numerous tasks in support of the marketing concept, consciously trading off the achievement of immediate financial targets or personal goals for longer-term, customer benefits (Ingram *et al.*, 2005; Verbeke, Dietz and Verwaal, 2011; Evans *et al.*, 2012).

As organizational boundary spanners, salespeople are heavily impacted by situational factors outside of their control, both from inside and outside the firm (Challagalla and Shervani, 1996). More measure-diverse SPMSs, comprising a broad selection of financial and non-financial measures, including those geared towards the customer (e.g., customer satisfaction and customer life-time value), would offer greater levels of situational stimuli along with greater insight into the issues and answers surrounding salesperson behaviors, skills, and knowledge (Challagalla and Shervani, 1996) within and across accounting periods. Ittner, Larcker and Rajan (1997), for example, demonstrated that a more measure-diverse performance measurement system was associated with increased behavioral focus towards those tasks necessary to meet regulatory obligations versus less measure-diverse measurement systems. Similarly, a DPM would be expected to increase salesperson attentional focus towards more customer-oriented type behaviors over other, short-term, self-serving behaviors. The following hypothesis is therefore put forward:

> ***Hypothesis 1*** *There is a positive relationship between DPM and customer-oriented selling behavior.*

3.2.2 Behavioral Antecedent Influences

The following section puts forward hypotheses regarding the mediation role attitudes, subjective norms, and perceived behavioral control play in the relationship between DPM and customer-oriented selling behavior. As previously discussed, TPB proposes that individual behavior is derived from behavioral intention, which in turn is derived from *subjective norms* surrounding the behavior, the individual's belief in their ability to engage successfully in the behavior (i.e., *behavioral control*), and the individual's positive *attitudes* towards the behavior. In support of this theory, numerous scholars have shown a link between, on the one hand, all three behavioral antecedents and, on

the other, behavioral intention and actual behavior within and outside of the field of sales (Flannery and May, 2000; Fu et al., 2010; Holdershaw, Gendall and Wright, 2011; Swaim et al., 2015; Lu, Yeh and Chen, 2016).

Fu et al. (2010) found that, collectively, the three variables (*attitudes*, *subjective norms*, and *behavioral control*) combined to account for a relatively high portion of variance in new product selling intention. Like Fu et al. (2010), Swaim et al. (2015) found support from all three variables predicting behavioral intention towards environmentally sustainable decisions, while Flannery and May (2000) found strong support for both attitudes and subjective norms towards predicting ethical environment intentions but no support for behavioral control. These latter findings are consistent with Ajzen (1991), who suggests that the level of support each variable contributes towards behavioral intention and actual behavior fluctuates with the behavior in question and the context in which it is being investigated.

3.2.2.1 DPM and Subjective Norms

Among other things, performance measurement systems are used to communicate organizational expectations and monitor results (Busby and Williamson, 2000). For example, Gordon and Miller (1975) argue that performance measurement systems serve as feedback and coordination mechanisms between and within departments regarding organizational strategic objectives. Gawankar, Kamble and Raut (2015, p.13) suggest that performance measurement systems, such as the balanced scorecard, are "a fundamental approach to managing a business by ensuring that strategic goals in key performance areas are defined and communicated to all employees," while other scholars argue that higher performing organizations utilize performance measurement information interactively, focusing heavily on communicating performance measurement information through formal and informal communication channels (Ittner, Larcker and Randall, 2003).

As a procedural and communications channel, the information within a firm's SPMS would be expected to focus salesperson attention around organizational norms related to expected behaviors, activities, skills, and outcomes (Ocasio, 1997). Previous

field experiments have shown how raising specific attentional focus among subjects influences specific normative beliefs (Ittner, Larcker and Rajan, 1997). Similarly, a more measure-diverse SPMS, acting as a communication channel, which includes measures geared towards the customer, would be expected to focus attention and normative beliefs towards customer-oriented selling behaviors over other potential normative beliefs.

For example, the addition of non-financial measures within a performance measurement system has been shown to increase attentional focus and specific task behaviors important to the firm including, regulatory task behaviors (Ittner, Larcker and Rajan, 1997), innovation behavior (Ittner and Larcker, 2002), and an investment behavioral focus towards intangible investments (Ittner and Larcker, 2002; Hartmann and Slapničar, 2012). Since increasing levels of subjective norms towards a particular behavior are associated with increasing intention levels towards that behavior (Ajzen, 1991), one would expect higher levels of customer-oriented selling behavior to occur amongst salespeople operating with more measure-diverse performance measurement systems. Therefore, the following hypothesis is put forward:

> ***Hypothesis 2*** *The relationship between DPM and customer-oriented selling behavior is mediated by customer-oriented subjective norms.*

3.2.2.2 DPM and Perceived Behavioral Control

More diverse performance measures, including the use of both non-financial measures and financial measures, have also been linked to increased levels of perceived employee control and evaluation fairness in roles with higher task uncertainty (Hoque, 2005), such as the boundary-spanning role played by salespeople. The behavior-based nature of non-financial measures within a measure-diverse performance measurement system is seen to offer employees greater control over the measures' results (Locke and Latham, 2002) and thus improves goal expectancy and self-efficacy (Gould *et al.*, 1989; Goker, 2006; Pousa, 2012) with respect to the activities and behaviors being evaluated. Furthermore, the behavior-based measurement characteristics of measure-diverse performance

measurement systems are observable by supervisors, allowing attention to be drawn to them during salesperson development activities, such as supervisory coaching, further increasing employee self-efficacy (Onyemah, 2009). Thus, it would be expected that measure-diverse performance measurement systems, comprised of a broad set of financial and non-financial measures, including customer-oriented measures would increase salesperson behavioral control perceptions regarding customer-oriented selling behavior. Therefore, the following hypothesis is proposed.

> ***Hypothesis 3*** *The relationship between DPM and customer-oriented selling behavior is mediated by customer-oriented, perceived behavioral control.*

3.2.2.3 DPM and Attitudes

As previously discussed, attention-based theory posits that individuals focus their time and effort on those activities and behaviors that enter their consciousness, at the expense of other potential activities, and that procedural and communication channels are used by organizations to "induce organizational decision-makers to action" (Ocasio, 1997, p. 194). In addition, selective attention (through communication channels) towards specific stimuli over other stimuli increases an individual's attitude towards that stimuli, with a more intense effect in cases where attitudes are already positive (Wang, Morey and Srivastava, 2014). Thus, individuals tend to be more responsive towards channel communication towards which they already have positive attitudes.

Given that behavioral intention and actual behavior are influenced by attitudes regarding a particular behavior (Ajzen, 1991), it would be expected that, all else being equal, increases in individual attitudes regarding a particular behavior would lead to increases in behavioral intention towards a behavior and an increase in actual behavior.

As previously discussed, sales performance measures used for salesperson evaluation purposes are one type of communication channel, as they communicate to salespeople what is important to the organization (Hall, 2008) and thus on what people should focus their attention. Thus, it would be expected that a measure-diverse performance measurement system that includes customer-oriented measures of

performance and is used as a communication channel will increase salesperson attentional focus towards customer-oriented selling behaviors, increasing the individual attitudes regarding these behaviors (Wang, Morey and Srivastava, 2014). All else being equal, it then follows that this increase in attitudes would lead to higher levels of behavioral intention and actual behavioral occurrence. Therefore, the following hypothesis is proposed:

> ***Hypothesis 4*** *The relationship between DPM and customer-oriented selling behavior is mediated by customer-oriented attitudes.*

3.2.3 Supervisory Coaching Influences

As organizational boundary spanners, salespeople are heavily impacted by situational factors outside of their control, both from inside and outside the firm (Cravens and Woodruff, 1973; Chonko *et al.*, 2000; Huffman and Cain, 2000; Lips, Dolle and Kuhnemundt, 2012). Numerous examples in the literature support the notion that an organization's internal and external selling environment influences the relationship between a firm's performance measurement system and individual outcomes, including the differences and volatility in sales territories (Behrman and Perreault, 1982), the length of the sales cycle (Jackson *et al.*, 2010), the type of product being sold (Said, HassabElnaby and Wier, 2003), and the length of the product development cycle (Hoque and James, 2000). One internal situational factor that is likely to influence this relationship is *supervisory coaching*.

In ABT, procedural and communication channels are used by management to focus organizational members' attention on specific issues (Ocasio, 1997). Procedural and communication channel activities include formal and informal meetings, reports, and surveys. Traditional supervisory coaching activities would be considered a procedural and communication channel under this definition, as "coaching encompasses feedback and goes beyond supervision: it is making the subordinate aware of how he or she is performing and of using situations as teaching opportunities" (Rich, 1998, p. 55).

Sales coaching is a function of supervisory feedback, role modeling, and trust (Rich, 1998). Onyemah (2009) argues that a major aim of coaching is to shape salesperson attitudes and behaviors. Sales coaching activities have been shown to reduce employee role ambiguity (Chakrabarty, Oubre and Brown, 2008) and raise self-image (Pousa, 2012) and self-efficacy (Gould *et al.*, 1989) by providing feedback to employees regarding effective and ineffective selling behaviors. Outside of the selling field, coaching has been linked to increasing levels of self-efficacy (i.e., behavioral control) with athletes (Goker, 2006) and new employees (Prendergast and Topel, 1993).

As previously discussed, SPMSs act as communication channels to distribute attentional focus by communicating organizational outcomes and behavioral expectations. However, non-financial measures are not captured through the firm's accounting systems and many behavior-based measures within a measure-diverse performance measurement system can only be collected via supervisory observation (Prendergast and Topel, 1993) and therefore only communicated to salespeople through supervisory feedback activities. Thus, alternative communication channels, such as supervisory coaching are required to communicate some non-financial measures to salespeople to generate attentional focus. As a result, the following hypothesis is proposed:

> ***Hypothesis 5*** *The relationship between DPM and customer-oriented selling behavior is mediated by supervisory coaching.*

Subjective norms are individual perceptions held regarding the beliefs of important others regarding "what others expect" (Swaim et al., 2016 p. 307). Furthermore, their existence requires not only the presence of normative beliefs but also the motivation to comply with the normative group in question (Ajzen, 1991; Fu *et al.*, 2010). Within a sales context, Fu et al. (2010, p. 64) suggest that salesperson "normative pressure can come from marketing management, product management and sales management" tied to potential compensation and to career and promotional consequences from not meeting set expectations. Given that a salesperson's direct supervisor would have the most immediate opportunity to influence compensation as

well as career and promotional consequences, it follows that that the motivation to comply with an immediate supervisor would be expected to be high.

As discussed above, non-financial measures are not captured through the firm's accounting systems and many behavior-based measures within a measure-diverse performance measurement system can only be collected via supervisory observation (Prendergast and Topel, 1993) and therefore are only communicated to salespeople through supervisory feedback activities, such as supervisory coaching. Supervisory coaching, acting as a procedural and communication channel, would be expected to focus salesperson attention on these behavior-based measures, including customer-oriented selling behavior, and their importance to the firm, increasing customer-oriented normative beliefs. Thus, supervisory coaching would be expected to increase both normative beliefs and motivation-to-comply levels, increasing overall subjective norms. Therefore, the following hypothesis is proposed.

> ***Hypothesis 6*** *The relationship between DPM and customer-oriented subjective norms is mediated by supervisory coaching.*

As previously discussed, coaching activity has been shown to increase perceived behavioral control levels across a number of contexts. For example, Onyemah (2009) observed a relationship between supervisory coaching and salesperson self-efficacy towards selling, while Goker (2006) demonstrated a link between supervisory coaching of student teachers and increases in self-efficacy towards teaching.

Unlike traditional performance measurement systems, which only include financial outcome-based information, measure-diverse SPMSs allow sales managers to observe, collect, and communicate activity and capability-based information to their salespeople during supervisory coaching sessions to increase attentional focus regarding employee behavior and performance (Joshi and Randall, 2001; Pousa and Mathieu, 2013). This allows sales managers to raise attention of specific issues with employees and discuss alternative courses of action, improving salesperson confidence to address these issues more effectively (Corcoran *et al.*, 1995; Pousa, 2012). Thus, the following is hypothesized:

Hypothesis 7 *The relationship between DPM and customer-oriented perceived behavioral control is mediated by supervisory coaching.*

Supervisory coaching acts as a procedural and communication channel collecting and communicating information from the organization's SPMS, focusing salesperson attention on things important to the firm. A more measure-diverse SPMS would allow supervisory coaches to communicate not only outcome-based information but also activity-based and capability-based behavioral information important to the organization through to salespeople (Challagalla and Shervani, 1996), increasing attentional focus on issues and opportunities surrounding customer-oriented selling behavior, positively increasing salesperson attitudes towards customer-oriented selling.

Numerous examples have been previously discussed demonstrating how procedural and communication channels filter and focus individual attention on specific attitudinal beliefs over other beliefs, thus increasing attitudes towards specific behaviors and activities over other behaviors and activities. For example, Wang, Morey and Srivastava (2014) demonstrated how selective attention generated through political campaign communications influences specific attitudes towards political candidates, while Saunders and Frazier (2017) observed that sociocultural communication generates attentional focus towards one's body image, influencing body image attitudes in adolescents. Thus, the following hypothesis is put forward:

Hypothesis 8 *The relationship between DPM and customer-oriented attitudes is mediated by supervisory coaching.*

3.3 Chapter Summary

In summary, this thesis proposes that a positive relationship exists between DPM within an SPMS and customer-oriented selling behavior. This relationship is mediated by supervisory coaching, salesperson customer-oriented attitudes, subjective norms, and perceived behavioral control. Furthermore, as a secondary communication channel, supervisory coaching mediates the relationship between DPM and customer-oriented

selling behavior, salesperson attitudes, subjective norms, and perceived behavioral control.

4 RESEARCH METHODS

The following chapter reviews the strategy, process, and methods utilized to test the hypotheses established in Chapter 3, based on the two research questions posed:

> RQ1: W*hat effect does the level of measurement diversity within an SPMS have on customer-oriented selling behavior?*
>
> RQ2: *To what extent does supervisory coaching influence the relationship between measurement diversity and customer-oriented selling behavior*?

The chapter is organized as follows. First, using the approach suggested by Blaikie (2010, p. 18) for beginning a research inquiry in the social sciences, the overall research strategy and research paradigm is reviewed, which establishes the "logic, or…set of procedures, for answering the research question" (Section 4.1). This summarizes the approach to be utilized to gain knowledge, leveraging the philosophical position taken by the researcher and described, in detail, in Section 1.4.1 above.

The remaining steps of the process, adapted from Black (1999, p. 51), regard how to carry out quantitative research in the social sciences; they are summarized in Figure 1-1 above. First, and consistent with the research strategy and paradigm chosen, the overall research design is determined (Section 4.1). Population and sample frame are then discussed (Section 4.2). Next, collection instruments and data collection procedures are detailed (Section 4.3). Variables to be used in the research, their definition, and how they will be operationalized are then discussed (Section 4.4). Lastly, the statistical techniques chosen to confirm data quality, validate the measurement model and structural model, and test study hypotheses are reviewed (Section 4.5).

4.1 Research Strategy, Paradigm, and Overall Design

The aim of this research is to illuminate the relationship between DPM, customer-oriented selling behavior, and supervisory coaching through the use of ABT and TPB. The research strategy adopted for this study is a deductive strategy. Deductive research

strategies are utilized when the aim of a study is to test theories and associated hypotheses (Blaikie, 2010, p. 85). This is consistent with the positivist research paradigm adopted by the researcher, as described in Chapter 1.

The strategy-paradigm decision establishes the logic with which a social research inquiry will be carried out. In this case, a deductive-positivist approach advocates the following design requirements as they relate to the nature of the inquiry and how it is to be carried out (Easterby-Smith, Thorpe and Jackson, 2008, pp. 109–110).

- The nature of the inquiry for a deductive-positivist research design involves the identification of a regularity that needs an explanation.
- The inquiry approach assumes: (1) the research is independent from the phenomenon being investigated; (2) the research is undertaken utilizing hypotheses testing; (3) concepts are clearly defined and operationalized; and (4) the unit of analysis is reduced to its simplest terms.

In the case of this study, the nature of the relationship between measurement diversity within sales, customer-oriented selling behavior, and supervisory coaching is being investigated for an explanation. The researcher is independent and is not a part of the phenomenon being observed. Hypotheses are established for testing based on theoretical grounds. All constructs utilized within this research are carefully defined and based on previously published scales where possible. The unit of analysis is the B2B salesperson.

As a positivist research design, a number of data collection approaches are possible, including the use of experimental data, archival data, or primary data captured through structured interviews or survey research. As this research involves real life, in-field relationships, use of experimental data was deemed inappropriate (Blaikie, 2010, p. 168). The use of archival data is recommended when: (1) the data is readily available; (2) the data is relevant to the research questions being asked; (3) when there is insufficient time or resources to collect primary data; and (4) when the data can inform the researcher's investigation by being consistent with the researcher's population and other design elements (Pearce-Moses, 2017). A review of potential archival data sources

indicated that no publicly available database existed with the information required to answer the research question. Therefore, archival data was deemed inappropriate.

Given the nature of the inquiry, the process required to conduct structured interviews to collect data would have reduced salesperson anonymity considerably, which may have increased social desirability bias amongst survey participants (Podsakoff *et al.*, 2003; Craighead *et al.*, 2011; Podsakoff, Mackenzie and Podsakoff, 2012); therefore, it was discarded as a potential data collection method. Thus, survey research was chosen for data collection.

Once data was collected, data quality was evaluated using SPSS v24. Partial least squares, structural equation modeling (PLS-SEM) was utilized to evaluate the validity of the measures used within the study as well as the structural path of the conceptual model and to test study hypotheses. The rationale for using PLS-SEM versus alternative approaches is summarized in Section 4.5 of this thesis.

The remainder of this chapter summarizes the sampling criteria and sample frame, the data collection instrument and collection procedures, the detailed steps regarding how the measurement model and structural path model were evaluated, and how hypotheses testing was carried out.

4.2 Sampling Criteria and Sample Frame

Consistent with this study's research objectives, the study aims to generalize its findings to a population of English-speaking, western culture-based companies, operating in business-to-business markets with a salesforce of 10 or more salespeople under direct supervision. The sample frame described below reflects this generalization approach.

This study specifically targets salespeople working within B2B markets for three reasons. First, the researcher's significant experience working within the B2B marketplace allows for an enhanced understanding of the nature of the research results. Second, many of the articles appearing in the press related to dysfunctional salesperson behavior are specific to the B2C marketplace (Ordonez *et al.*, 2009b; Freed, 2017; Johnson, 2017; Ligaya, 2017; Young, 2017). An investigation into this issue within a

B2B sales context would therefore be unique. Lastly, given the typically longer sales cycle of business product sales versus consumer sales and, in many cases, the increased complexity of business products, the level and frequency of interactions between salespeople and B2B customers would be expected to be far greater than within the consumer market. This increased salesperson-customer interaction suggests that it may be more critical to understand the relationship of performance measurement to customer-oriented selling behavior within the B2B marketplace.

The researcher's experience suggests that face-to-face sales representatives generally operate with a minimum annual net-new sales quota of $1,000,000+; thus, each participating organization was required to meet a minimum $10,000,000 ($1,000,000 x 10 salespeople) in annual sales revenue to ensure a salesforce of sufficient size. To further increase the chances of a sufficient salesforce, only organizations with 100+ employees were chosen for the sample frame.

To increase the probability of identifying B2B sales personnel, only those industries that operate exclusively within B2B markets (e.g., manufacturing and wholesale trade) or where distinct B2B operating lines of business exist (e.g., media, telecommunications, technology service providers) were included in the sample frame. Table 4-1 summarizes the intended population and sample frame used for the study.

Table 4-1: Population and Sample Frame Criteria

Intended Population	Initial Sample Frame to be Used

• English-speaking, western culture-based salespeople working in pure B2B roles
• Working in companies large enough to sustain field sales departments with 10+ sales representatives
	• Salespeople operating in the following industry sectors based on NAICS 2012
	  ○ Manufacturing
	  ○ Wholesale trade
	  ○ Business Information services (e.g. technology, media, communications)
	• Minimum $10,000,000 in annual sales revenue and minimum of 100 employees

The Dun & Bradstreet NAICs database was utilized to capture the population percentage breakdown of companies meeting the $10,000,000 in annual sales and 100+ employees sample frame criteria from the three industry sectors that make up the majority of traditional B2B sales activity. Canada, the United States, and the United

Kingdom were chosen as proxies for western-based English-speaking culture. Other industry sectors were excluded from the target population because their sales representatives were either less likely to work exclusively with business customers (e.g., transportation, hospitality), did not have the term "sales" in their job titles (making them difficult to identify), or had roles that included a high percentage of service-related duties (e.g., financial services).

Out of 2,325,399 businesses listed in the target industries, only 87% had employee and revenue information available for further inclusion. Out of this number, 48,314 met the 100+ employee requirement and only 15,271 also had $10,000,000+ in annual revenue. Black (1999, p. 120) recommends a stratified random sample equivalent to 10% of the population for sample frame purposes, or 1,527 companies for this study, to ensure industry sectors are represented in proportion to the target population. For this research, a larger sample frame of 2,495 companies was chosen from the social media site LinkedIn (www.linkedin.com), as this increased the probability of achieving final sample size and it matched the data collection research budget available (Table 4-2).

Table 4-2: Population and Sample Frame Counts

Industry Sector	Population Count (%)	Sample frame Count (%)
Manufacturing	10,690 (70.0%)	1745 (70.0%)
Wholesale	3,207 (21.0%)	520 (20.8%)
Information Services	1,374 (9.0%)	230 (9.2%)
Total	15,271 (100%)	2495 (100.0%)

Notes: Information services includes: IT services, media services, and telelcom services

4.2.1.1 Sample Size

Sample size requirements for this study are based on the Partial Lease Squares – Structural Equation Modeling (PLS-SEM) statistical approach chosen, which is reviewed in Section 4.5. Consistent with Hair Jr. (2017, p. 22), two approaches are used to estimate sample size for PLS-SEM analysis. First, sample size rules of thumb suggest that PLS-SEM requires either "10 times the largest number of formative indicators to measure one

construct or 10 times the number of structural paths directed at a particular latent construct" (Hair Jr. et al., 2017, p.24). The construct customer-oriented selling behavior had seven structural paths pointing to it, which is greater than the number of formative indicators making up the construct *DPM*, suggesting a minimum sample size of 70 (10 x 7) useable observations was required.

Second, given the underlying properties of PLS-SEM, sample size estimate rules recommended by Cohen (1992) for ordinary least squares (OLS) regression can also be employed (Hair Jr. et al., 2017, p. 26). Cohen (1992) and Podsakoff et al. (2003) suggest that to maintain a significance level of 5% with a minimum R^2 value between 0.10 and 0.75, a statistical power of 80% and a model with a maximum number of structural paths of seven, pointing at an independent variable, requires a minimum sample size of 137 useable observations.

For this study, the larger of the two estimates of sample size (N=137) is utilized. The remaining sections of this chapter review the data collection approach utilized to achieve the required sample size, describe how each of the variables within the study are operationalized, and review the procedures for validating the measurement and structural models used for hypothesis testing.

4.3 Data Collection Instruments and Procedures

The following section reviews the procedures surrounding survey development, sampling criteria, sample size, and final survey distribution based on recommendations from Dillman, Smyth and Christian (2014) and Fowler Jr. (2014).

4.3.1 Survey Development

Initial questionnaire design utilized existing, published scales for all model constructs, excluding DPM, where no scale existed within an individual salesperson context. The questionnaire was then pre-tested and validated with industry practitioners and academics to ensure content validity (Podsakoff *et al.*, 2003; Craighead *et al.*, 2011). Pre-test respondents (Table 4-3) completed a web-based version of the draft survey in

Qualtrics 2017 (www.qualtrics.com). Each participant then provided feedback via a telephone interview or email exchange to confirm questionnaire wording and understanding. A number of modifications to questionnaire design and wording were made based on this feedback. In addition, several non-essential questions were eliminated to reduce survey length, as feedback indicated time to complete the survey was excessive.

Prior to commencing with final survey distribution, two pilot studies were conducted using the updated survey instrument. Research Pilot Study #1 was used to validate overall survey layout, questionnaire wording, and length of time to complete, with a sample of respondents who matched the target population described in Section 4.2. Research Pilot Study #2 was conducted to assess response rates from the planned survey distribution method. A detailed description of both pilot studies is described below.

Table 4-3: Survey Pre-Test Participants

Name	Position	Area of Knowledge	Company / University	Which Survey		Meeting	
				Manager	Salesperson	Format	Date
Javier Marcos	Sr. Lecturer	Sales Performance	Cranfield University	X	X	Email Exchange	26-Jan-15
Monica Franco	Sr. Lecturer	Performance Measures	Cranfield University	X	X	Email Exchange	09-Dec-14
Karen Peesker	PhD Student and Sales Consultant	Technology Sales	Cranfield University	X	X	Email Exchange	23-Feb-15
Eric Hachmer	SVP Sales	Business Services Sales	ADP	X	X	Telephone	09-Feb-15
Greg Murray	Sr. Territory Manager	Industrial Sales	Nestle - Purina		X	Telephone	23-Jan-15
Edward Vieira	Account Manager	Media Sales	CHCH Television		X	Telephone	30-Jan-15
Mark Cox	Managing Partner	Sales Consultant	In the Funnel	X	X	Telephone	30-Jan-15
Patrick Dunne	Sales Account Manager	Technology Sales	Bell Canada		X	Telephone	20-Jan-15
Vera Reifenstein	Sr. Director Sales & Marketing	Technology Sales	Cogeco Business Services	X	X	Telephone	12-Feb-15
Greg Smith	SVP Key Account Management	Business Services Sales	Crawford & Co.	X	X	Telephone	13-Feb-15
Jonathan Kerr	Account Manager	Business Services Sales	Dunn & Bradstreet		X	Telephone	23-Jan-15

4.3.1.1 Pilot Study #1 – Survey Layout and Questionnaire Validation

Research Pilot Study #1 was conducted by mailing a cover letter and printed copy of the updated survey to 75 anonymous industry practitioners from the researcher's professional network. Each was asked to complete a web-based version of the survey in Qualtrics 2017 (www.qualtrics.com). Each pilot study respondent then participated in a telephone discussion to get their views on survey layout, question wording, and the impact of wording on their survey responses, using the printed copy sent to them as a reference. Forty practitioners completed the survey and followed through with feedback discussions. The remaining non-respondents were sent a reminder notice to complete the survey. Thirteen additional surveys were completed and follow-up interviews were held with each of these additional respondents. Six of the 22 individuals that did not respond to the reminder notice were able to be contacted and asked why they did not participate. Four indicated that they were not allowed to participate in surveys due to company policy, while the remaining two indicated that they simply did not have the time to participate in survey research. In total, 53 participants completed surveys and provided feedback regarding survey layout and question wording. Further changes were made based on this information.

The final version of the survey comprised eight sections and 15 questions. A breakdown of each section and what it covers is included in Table 4-4 below. A copy of the final questionnaire is included in Appendix 18.

Common methods variance associated with the use of a single rater in social science surveys can be one of the most troublesome issues related to survey research, given the potential for it to introduce significant levels of systematic error between variable relationships (Podsakoff et al., 2003; Craighead et al., 2011). To address this issue proactively during the research design phase of this project, the researcher planned for two different data sources: (1) salespeople – to capture mediating and dependent variables; and (2) salespersons' direct supervisors – to capture the independent variable. As the level of analysis for this research is the salesperson, sales manager survey data

was to be appended to salesperson survey records by using a matching code[15] embedded in the Qualtrics survey invitations sent to both salesperson and sales manager. In support of this design approach, the final version of the salesperson survey was modified so that it could also be administered to sales managers. The final version of the sales manager questionnaire comprised five sections and 11 questions, as indicated in Table 4-5 below.

[15] Qualtrics software allows the researcher to embed a matching code into the URL provided to survey participants. When surveys are completed, the matching code is automatically included as one piece of survey data. Surveys can be linked together using the matching code while still providing full anonymity to survey respondents.

Table 4-4: Salesperson Questionnaire Structure

Section	Questions	Coverage Area
1	Q1 thru Q6	Demographic and firmographic information related to the survey participant
2	Q7	Sales performance measures used
3	Q8 thru Q9	Salesperson compensation structure
4	Q10 thru Q11	Customer-oriented subjective norms (Ajzen, 1991; Fu et al., 2010)
5	Q12	Customer-oriented attitudes (Stock and Hoyer, 2005)
6	Q13	Supervisory coaching (Ellinger et al., 2003)
7	Q14	Customer-oriented selling behavior (Thomas et al., 2001)
8	Q15	Perceived behavioral control (Brown et al. 2005; Fu et al., 2010)

Table 4-5: Sales Manager Questionnaire Structure

Section	Questions	Coverage Area
1	Q1 thru Q6	Demographic and firmographic information related to the survey participant
2	Q7	Sales performance measures used
3	Q8 thru Q9	Salesperson compensation structure
4	Q10	Supervisory coaching (Ellinger et al., 2003)
5	Q11	Customer-oriented selling behavior (Thomas et al., 2001)

4.3.1.2 Pilot Study #2 – Survey Distribution Validation

A second pilot study was completed to evaluate response rates of the proposed survey distribution method, to ensure the sample size was achievable. A random sample, from a U.S.-based list rental company, of 200 business-to-business sales managers from across Canada and the United States was sent a research invitation (Appendix 5) as well as glossy hard copies of both the final salesperson and sales manager surveys. The invitation explained the importance of the research study and offered a copy of the research results if each manager and one member of the manager's sales staff[16] participated in the study. Two weeks after the initial mailing, all 200 participants were emailed a reminder notice regarding survey participation and 15% (30) were further reached by telephone and reminded to participate. After five weeks, only one survey was completed and returned. In addition, 23% (45) of the survey packages mailed out were returned, marked undeliverable, as no employee matching the contact information existed at the targeted company. This was consistent with follow-up phone calls, which indicated that many targeted participants were no longer with the company indicated in the list rental database.

Nine sales managers were reached by telephone a second time and asked why they chose not to participate in the survey. All indicated the approach being utilized, which required the participation of both management and salespeople, required too much time and involvement by the sales manager to coordinate, hence their reluctance to participate. In addition, several sales managers indicated that they were not sure whether or not their organization allowed for survey participation and erred on the safe side, choosing not to participate.

Given these results, the two-source survey research approach originally planned for was rejected in favor of single-source, survey research, directly targeting B2B salespeople. Research Pilot Study #2 results also indicated that list rental quality, at an employee level, was going to be an issue. After a lengthy investigation, no other sources of higher-quality mailing list information were deemed available. As an alternative,

[16] Managers were asked to provide a list of all their salesperson direct reports so that the researcher could randomly choose one to participate in the research study.

LinkedIn was chosen as the platform from which to target the intended population. Details regarding sampling and final data collection approach are described below in Section 4.3.2.

4.3.2 Final Survey Distribution

Given the generally poor data quality associated with specific names/job titles from the rented list and the negligible response rates associated with the originally planned survey approach tested in the research pilot study, an alternative method of survey distribution, described below, was implemented.

First, the two-source survey research design was abandoned in favor of survey data gathered directly and exclusively from salespeople, without the participation of their sales manager. While the two-source approach represented a higher level of data quality (King, Rourke and DeLongis, 2014), it appeared to be an impractical approach for a study requiring a large volume of respondents across a large cross-section of organizations.

Second, given the data quality challenges surrounding rented mailing lists, LinkedIn was chosen as the best source of contact information, as its information is self-updated by LinkedIn members rather than on a periodic basis by a list rental company (Aichner and Perkmann, 2013; King, Rourke and DeLongis, 2014). Several scholars have noted the benefits of using LinkedIn as a data collection tool for hard-to-reach target groups, like salespeople, given the improved accessibility, targeting flexibility, and contact information quality compared to a traditional mailing list approach (Aichner and Perkmann, 2013; King, Rourke and DeLongis, 2014). In addition, the use of LinkedIn to proactively target respondents does not violate digital marketing legislation, such as CASL (i.e., Canada's anti-spamming legislation), as LinkedIn members are subject to LinkedIn's use policies, which require members to accept InMail communications (LinkedIn's version of email), such as research invitations, from other LinkedIn members.

The use of LinkedIn necessitated an electronic-only approach to data gathering, as no traditional mailing information is included in the LinkedIn contact database. As suggested by King, Rourke and DeLongis (2014), a random list of 2,495 of the

salespeople[17] matching the sample frame criteria (100+ employees, $10,000,000+ in annual sales revenue within the self-identified industry sectors: manufacturing, wholesale/reseller, and business information services) was sent an InMail invitation (Appendix 6), requesting their participation in the study.

The LinkedIn invitation that was distributed included a direct link to a Qualtrics 2017 (www.qualtrics.com), web-based version of the survey. Respondents were labeled Data Source #1. From the initial target InMail, 986 people received and opened their invitation. From this group, 217 survey responses (22.0% of those receiving and opening the file) were collected.

Final sample size was expected to be smaller than the 217 survey responses collected, given that some responses would be deleted for various reasons, such as missing or incomplete observations, as discussed below. To ensure appropriate sample size was achieved, an additional 449 email requests were sent to the researcher's own LinkedIn contacts who met sample frame requirements. Those responding to the survey request from this sample were labeled Data Source #2. From this list, four emails were blocked or unreceived. In total, 173 survey responses (38.9% of those able to receive and open the file) were collected, making the total number of survey responses received across both data sources 390 (27.3% of those able to receive the invitation). All data from both sources was extracted from the web-based survey and imported into SPSS v24 for preliminary analysis and subsequently imported into SmartPLS 3.2.7 for measurement and structural model validation and hypothesis testing. Final breakdown of survey responses by data source is included in Table 4-6 below.

Table 4-6: Survey Response by Data Source

	Data Source #1 Random LinkedIN	**Data Source #2 Convenience Sample**	**Total Sample**
Sent Invitations	2495	449	2944
Invitations Received	986	445	1431
Surveys Collected	217	173	390
Response Rate (vs Invitations Received)	22.0%	38.9%	27.3%
Response Rate (vs Sent Invitations)	8.7%	38.5%	13.2%

[17] This number of salespeople was chosen, as it fit within the researcher's budget.

4.4 Measurement of Study Variables

The following section outlines how each variable within this study has been operationalized. *Diverse performance measurement* (independent variable) and *customer-oriented selling behavior* (dependent variable) are the two main variables making up this study. In addition, the study includes four mediating variables (*attitudes, subjective norms, perceived behavioral control*, and *supervisory coaching*) and two control variables (*salesperson tenure* and *salesperson compensation*). A summary of all constructs is presented in Table 4-7 below.

Table 4-7: List of Study Variables

Variable Type		Construct	Operationalization
Exogenous	Independent Variable	DPM	23-item construct (7-point Likert Scale) adapted from Zuriekat et al. (2011)
Endogenous	Dependent Variable	Customer-Oriented Selling Behavior	5-item construct (7-point Likert Scale) Thomas et al. (2001)
Endogenous	Mediating Variables	(Customer-Oriented) Attitudes	6-item construct (7-point Likert Scale) Stock and Hoyer (2005)
		(Customer-Oriented) Subjective Norms	Normative Beliefs 4-item construct (7-point Likert Scale) Ajzen (1991); Fu et al. (2010) x Motivation to Comply with Norm Group 4-item construct (7-point Likert Scale) Brown et al. 2005; Fu et al. (2010)
		(Customer-Oriented) Perceived Behavioral Control	Single-item - Confidence Score Brown et al. 2005; Fu et al. (2010)
		Supervisory Coaching	8-item construct (7-point Likert Scale) Ellinger et al. (2003)
Exogenous	Control Variables	Salesperson Compensation Structure	Numeric variable – Percent of total compensation fixed (versus variable pay)
Exogenous		Salesperson Tenure	Numeric Variable – Number of years in current or similar sales role

4.4.1 Independent Variable: DPM

Consistent with Scott and Tiessen (1999), Moers (2005), and Franco-Santos (2007), DPM, also referred to in the performance management literature as measurement diversity, was defined as a performance measurement system that uses both financial and non-financial measures of performance. Within the performance management literature, measurement diversity has been operationalized in several different ways: (a) as a binary-categorical variable denoting the presence or absence of measurement diversity (Franco-Santos, 2007); (2) as a formula-based index of measurement diversity (MDI) calculated as the squared sum of the weight of each performance measurement utilized (Patelli, 2006); or (3) as an average of standardized Likert-scale ratings measuring the extent to which each measurement category is used within an organization (Yaghi, 2007; Zuriekat, Salameh and Alrawashdeh, 2011; Park, Lee and Chae, 2017). For this study, the latter approach is adopted so that DPM can be conceptualized, as a multi-item construct offering a continuum of varying levels of measurement diversity.

By definition, DPM is conceptualized as a construct with multiple dimensions of salesperson performance, none of which may correlate highly with the others (Bommer *et al.*, 1995). Furthermore, changes in the DPM construct would only be expected to occur with changes in the underlying indicators. Thus, DPM has the characteristics of a formative measure (Cadogan and Lee, 2013), and has been operationalized as such. This is consistent with recent research conducted of a similar construct, the balanced scorecard, where the use of a formative measure was adopted (Park, Lee and Chae, 2017).

As no scale for DPM existed within an individual salesperson context, a new scale was developed based on the existing sales performance literature (Churchill Jr., 1979; Behrman and Perreault, 1982; Spiro and Weitz, 1990; Bommer et al., 1995; Herche, Swenson and Verbeke, 1996; Rich, Bommer, MacKenzie et al., 1999; Chonko et al., 2000; Fatt, 2000; Chenhall and Langfield-Smith, 2007; Johnston and Marshall, 2011, pp. 407–414; Miao and Evans, 2012).

A list of potential performance measures (Table 4-8) was gathered and categorized from the marketing, personal selling, and sales performance management

literature. Consistent with Morissette (1996) and Franco-Santos (2007), measures were categorized as financial if they were (1) expressed as a monetary unit or (2) expressed as a ratio, resulting in manipulations of information expressed in monetary units or a combination of monetary units and non-monetary units. All other measures were categorized as non-financial. For organizational purposes, non-financial measures were grouped into five sub-categories, comprising customer outcomes, salesperson knowledge, salesperson skills, salesperson traits, and salesperson activity. The extent to which each type of performance measure is utilized to evaluate salesperson performance was captured using a 7-point Likert scale from *Never-Used* to *Always-Used,* based on the question: *"When your supervisor is evaluating your sales performance, please rate the extent to which you believe your supervisor uses the following criteria to identify you as a high, medium or low sales performer."*

Table 4-8: List of Financial and Non-Financial Performance Measures

FINANCIAL MEASURES	NON-FINANCIAL MEASURES
Financial Results (e.g. total sales achieved)	Customer Satisfaction
Account Penetration / Order Size	Customer Retention
Expense Management	Customer Lifetime Value
	Product Knowledge
	Customer Knowledge
	Industry Knowledge
	Planning Skills
	Time Management Skills
	Prospecting Skills
	Listening Skills
	Presentation Skills
	Persuading Skills
	Showing Initiative
	Flexibility
	Creativity
	Showing Good Judgment
	Being Dependable
	Demonstrating Pro-Customer Behaviors
	Demonstrating Pro-Team Behaviors
	Sales Activities (e.g. Number of sales calls made)
	Level of Effort
	Work Attendance

The overall comprehensiveness and understandability of the individual items were evaluated during pre-testing and piloting of the survey as discussed in Section 4.31 above. The non-financial measure *demonstrating pro-customer behaviors* was removed from the study, given its possible circular relationship with the dependent variable *customer-oriented selling behavior*, before further operationalization procedures were conducted.

As no scale previously existed, initial dimensionality was established through a principal component analysis (PCA), with varimax rotation (Field, 2009, p. 628). Sample adequacy was tested to ensure PCA was appropriate, using the Kaiser-Meyer-Olkin measure with *KMO* = 0.900, considered good (Field, 2009 p. 647). Bartlett's test of sphericity x^2 (274) was highly significant ($p \leq 0.001$), indicating items correlated sufficiently large enough for the principal component analysis. Since the sample size was greater than 250 (N=274) and the mean of communalities was greater than 60% (M=0.674), Kaiser's criterion of selecting factors with eigenvalues greater than 1 was utilized (Hair Jr. et al., 2010, p. 111). Six components had eigenvalues greater than 1.

Table 4-9 shows the results of the factor loadings after rotation, with all items loading into the categories expected a priori. The intent of this analysis was to identify initial dimensionality, with further confirmatory analysis conducted at a later step. As such, factor loadings greater than 0.6, consistent with a more exploratory approach, were maintained at this stage of scale development (Hair Jr. et al., 2010, p. 118). The items that cluster on the same components suggest that component 1 represents salesperson traits, component 2 represents customer outcomes, component 3 represents salesperson skills, component 4 represents salesperson activity, component 5 represents salesperson knowledge, and component 6 represents salesperson results.

Further scale confirmatory analysis and reliability steps regarding DPM and all other study variables were completed through SmartPLS 3.2.7. The DPM construct is multi-dimensional and the underlying dimensions (i.e., traits, knowledge, customer outcomes, etc.) may not correlate highly with each other, as each represents a different facet of performance measurement. Hair Jr., Ringle and Sarstedt (2011) recommend that these types of construct characteristics are consistent with a second-order, formative variable. As such, DPM was categorized as a formative second-order construct during

subsequent measurement model evaluation with all subscales treated as lower-order constructs of DPM.

Table 4-9: DPM – Principal Component Analysis

	F1	F2	F3	F4	F5	F6
Diverse Performance Measurement						
Traits - Judgment	0.852					
Traits - Creativity	0.850					
Traits - Flexibility	0.832					
Traits - Dependability	0.801					
Traits - Initiative	0.773					
Traits - Team work	0.626					
Skills - Presentation		0.756				
Skills - Listening		0.734				
Skills - Persuading		0.718				
Skills - Planning		0.686				
Skills- Prospecting		0.638				
Skills- Time Mgmt.		0.578				
Cust - Lifetime Value			0.845			
Cust - Satisfaction			0.749			
Cust - Retention			0.749			
Knowledge - Product				0.792		
Knowledge - Customer				0.779		
Knowledge - Industry				0.778		
Activities - Output					0.782	
Activities - Attendance					0.632	
Activities - Effort					0.597	
Financial Results						0.786
Account Ratios						0.626
Expense Results						0.534
Kaiser-Meyer Olkin = .900						
Eigenvalues	9.175	2.008	1.709	1.512	1.280	1.127

4.4.2 Dependent Variable: Customer-Oriented Selling Behavior

Customer-oriented selling behavior refers to "the degree to which salespeople practice the marketing concept by trying to help their customers make purchase decisions that will satisfy customer needs" (Saxe and Weitz, 1982, p. 344). Salespeople using

customer-oriented selling behavior focus on increasing long-term customer satisfaction. In addition, they avoid actions that sacrifice the interest of the customer for personal self-interest, such as a quick sale (Thomas, Raymond, Soutar and Ryan, 2001).

Customer-oriented selling behavior was measured using a 5-item scale developed by Thomas, Soutar and Ryan (2001), refined from the original 12-item scale developed by Saxe and Weitz (1982) to "reduce response fatigue and acquiescence bias and allow for the incorporation of the construct to be used in larger studies" (Thomas, Soutar and Ryan, 2001, p. 68) similar to this study. Scale items are based on a 7-point Likert scale. Scale anchors denote the validity of the various item statements in terms of the proportion of a salesperson's customers with which the salesperson behaves in a particular way. Anchors include: "False for all customers," "True for only a few customers," "True for less than 50% of customers," "True for about 50% of customers," "True for more than 50% of customers," "True for most customers," and "True for all customers."

4.4.3 Mediating Variables

The following subsection reviews the four mediating variables utilized within this study.

4.4.3.1 Attitudes

Attitude was defined and operationalized in a manner consistent with Stock and Hoyer (2005), as a way of thinking or feeling for or against customers, utilizing their existing 6-item, 7-point Likert scale, measuring salesperson customer-oriented attitudes. This scale has been previously tested to ensure it offers discriminant validity with respect to the customer-oriented selling behavior construct being utilized in this study.

4.4.3.2 Subjective Norms

Subjective norms are defined, in a manner consistent with Armitage and Conner (2001, p. 485), as "global perceptions of social pressures…from salient others weighted by the motivation to comply with these groups or individuals." Consistent with previous operationalizations of subjective norms (Ajzen, 1991; Fu et al., 2010), each item within the construct *normative beliefs* (i.e., the perception of social pressures from salient others) is multiplied by its corresponding item within the *motivation to comply* construct.

Normative beliefs and *motivation to comply* were operationalized as two 4-item, 7-point Likert scale constructs, consistent with the scale developed and used by Fu et al. (2010) and adapted from Ajzen (1991). Four normative reference groups are included in this study, including "immediate supervisor," "marketing/product management," "other sales managers," and "top management." Further pre-testing and piloting of the survey questions making up the two scales was also completed. Each item within the 4-item subjective norms construct was created using the following formulas:

SN1 = CO_boss x Motivate_boss
SN2 = CO_mgrs x Motivate_oth
SN3 = CO_mktg x Motivate_mktg
SN4 = CO_execs x Motivate_exec

SN1 signifies the subjective norms associated with the direct supervisor, SN2 is the subjective norms associated with other sales managers, SN3 is the subjective norms associated with marketing and product management, and SN4 is the subjective norms associated with senior/top management.

Prior to multiplying the individual normative belief measure with their corresponding motivation to comply measure, unidimensionality and scale reliability of the two underlying constructs were assessed. A principal component analysis (varimax rotation) was undertaken. The Kaiser-Meyer Olkin (KMO) measure verified sample adequacy of both constructs (Field, 2009, p. 647). Bartlett's test of sphericity indicated that correlations between construct items in both scales was sufficiently large. Both scales loaded onto their own respective single component based on each only having

one component with eigenvalues greater than 1, supporting the unidimensionality of both scales. Both the *normative beliefs* and *motivation to comply* scales had high reliabilities, with Cronbach alpha scores greater than .8 (Field, 2009, p. 674). Figure 4-1 indicates the factor loadings for both scales.

Figure 4-1: PCA Analysis – Normative Beliefs and Motivation to Comply

	F1
Normative Beliefs	
Norms - other sales mgrs	0.907
Norms - direct supervisor	0.894
Norms - top mgmt	0.853
Norms - mktg & prod mgmt	0.828
Kaiser-Meyer Olkin	0.820
Eigenvalues	3.042
Cronbach alpha	0.894

	F1
Motivation to Comply	
MTC with supervisor	0.934
MTC with other mgrs	0.845
MTC with mktg & prod mgmt	0.812
MTC with top mgmt	0.755
Kaiser-Meyer Olkin	0.747
Eigenvalues	2.823
Cronbach alpha	0.842

Notes: mgrs=managers; top mgmt = senior executive team; mktg & prod mgmt = marketing and product management; MTC = motivation to comply

4.4.3.3 Perceived Behavioral Control

Consistent with Ajzen (1991), the construct of *perceived behavioral control* is defined in a similar way to the concept of self-efficacy, or the belief in one's ability to perform a particular behavior. The scale was operationalized in a manner similar to Fu et al. (2010), using a single composite score, representing the confidence level of salespeople in behaving in a customer-oriented manner. The confidence score is calculated as follows. Sample respondents are asked their confidence (from 0 to 100%) in exhibiting customer-oriented selling behaviors "as well as or better than" different percentages of salespeople from across their company, in 10% increments (from 10% to 99%). Two of the increments are included below as examples.

- *"I am _____% confident I am able to act in a customer-oriented manner as well as or better than 90%–99% of the salespeople within our company."*
- *"I am _____% confident I am able to act in a customer-oriented manner as well as or better than 80%–89% of the salespeople within our company."*

The confidence scores for each of the 10 increments is summed together for an overall perceived behavioral control score for each survey respondent.

4.4.3.4 Supervisory Coaching

To date, supervisory coaching has primarily been utilized as a moderating rather than mediating variable. For greater clarity on why the interactive effect of supervisory coaching is positioned as a mediation effect rather than a moderation effect within this study, the following argument is offered.

A moderating variable is defined as a "qualitative or quantitative variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable" (Baron and Kenny, 1986, p. 1174). This definition is consistent with investigations into the interactive effects of supervisory coaching in previous sales performance research where supervisory coaching has been looked at from a contingency perspective, potentially playing a role in strengthening or weakening the existing relationship between individual employees and job performance (Good, 1993b).

Conversely, mediating variables are defined as variables that "account for the relationship between the predictor and the criterion. Mediators explain how external physical events take on internal psychological significance. Whereas moderator variables specify when certain effects will hold, mediators speak to how or why such effects occur" (Baron and Kenny, 1986, p. 1176). Mediation is said to occur when "the following conditions ensue: (1) variations in the independent variable significantly account for variations in the mediating variable (path A); (2) variations in the mediator account for variations in the dependent variable (path B); and (3) when paths A and B are controlled for, the relationship between the independent variable and the dependent variable becomes insignificant" (Baron and Kenny, 1986, p. 1176).

Within the framework of ABT, as it is used within this study, supervisory coaching is acting as a communication channel through which to convey organizational priorities to organizational members. While an SPMS is also considered a

communication channel, it is unable to communicate to salespeople much of the non-financial information required of a DPM system without supervisory feedback conversations, such as those that occur during supervisory coaching. Furthermore, supervisory coaching activities utilize the diverse measurement information within an SPMS to provide feedback to salespeople. Thus, one would expect that Condition (1), variations in an SPMS, would influence supervisory coaching. The logical arguments put forward regarding Hypotheses 5 through 8 support the notion that variations in the mediation variable, *supervisory coaching*, would be associated with variations in the independent variables *customer-oriented selling behavior*, *attitudes*, *subjective norms*, and *perceived behavioral control*. Lastly, an elimination of supervisory coaching activity would be expected to reduce significantly or potentially to eliminate the impacts of DPM on the three behavioral antecedents without the ability to communicate much of the information within an SPMS. Thus, much of the influence of the SPMS on the behavioral antecedents attitudes, subjective norms, and perceived behavioral control, must come through supervisory coaching to occur, consistent with the definitions and conditions of mediation put forward by Baron and Kenny (1986).

Numerous supervisory coaching scales exist within the leadership literature. The construct has been previously operationalized to reflect the level of coaching activity being undertaken (Ellinger, Ellinger and Keller, 2003) and the knowledge, skills, and attitudes observable from both the point of view of the team member or team leader (Park, McLean and Yang, 2008; Hagen and Peterson, 2015) as well as the perceived level of overall coaching effectiveness from the team member's perspective (Agarwal, Angst and Magni, 2009). Supervisory coaching in this study represents the level of coaching activity undertaken from the perspective of the individual salesperson and, as such, the Ellinger, Ellinger and Keller (2003) 8-item, 7-point Likert-based scale was used to operationalize the construct.

4.4.4 Control Variables

Within the sales literature, compensation and tenure are both heavily cited as potential influencers of sales behaviors (Anderson and Oliver, 1987; John and Weitz, 1989;

Flaherty and Weinberger, 2001; Baldauf and Cravens, 2002; Flaherty, Arnold and Hunt, 2007; Miao and Evans, 2012; Kwan, Yim and Zhou, 2015) and, as such, may influence customer-oriented selling behaviors. The following subsections review the rationale for the use of these two control variables within the present study.

4.4.4.1 Salesperson Tenure

Individual-level attention-behavior mechanisms can be either routine or automatic based on "well-learned activities," or they may require significant attentional capability in the case of less routine or new stimuli (Ocasio, 1997, p. 190). A common example provided is that of a new driver, who must have far more attentional focus in the operation of a vehicle through traffic than an individual with significant driving experience. Similarly, less tenured salespeople may require greater levels of attentional focus towards customer-oriented selling behavior than higher tenured salespeople.

O'Hara, Boles and Johnston (1991) and Pettijohn, Pettijohn and Taylor (2000) argue that past work experience is linked to an increased level of expertise and knowledge, which may bias more tenured salespeople towards greater or lesser levels of customer-oriented selling depending on learned past experiences, while Onyemah (2009) and Pousa (2012) did not find any support for this position. Furthermore, there have been mixed results regarding the impact of salesperson tenure on supervisory coaching effectiveness (Oliver and Anderson, 1994). Given the above, salesperson tenure is controlled for within the study, but no specific predictions are given regarding its impact on the main relationship between DPM and customer-oriented selling behavior.

Salesperson tenure has been operationalized as a single numerical variable that represents the number of years the salesperson has been in their current role or one similar to it.

4.4.4.2 Salesperson Compensation

In the literature, fixed-pay roles are generally more associated with behavioral-based control systems and customer-oriented selling behaviors (Anderson and Oliver, 1987). Conversely, variable-pay roles are associated with outcome-based control and selling-oriented behaviors (Shadish, Cook and Campbell, 2002). Therefore, *salesperson compensation* is included in this study as an alternative explanation of the main relationship that can be statically controlled for (Hair Jr. *et al.*, 2014). *Salesperson compensation* has been operationalized as a single numerical variable representing the percent of a salesperson's total annual compensation that is fixed-pay. In addition, multigroup analysis was undertaken as a secondary analysis activity to compare salespeople operating with high variable pay versus those with low variable pay. For this analysis, the reciprocal value, representing the percent of a salesperson's total annual compensation that is variable, was utilized.

4.5 Data Analysis Procedures

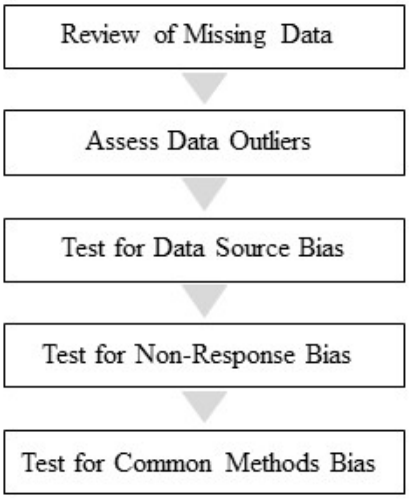
The following section outlines the steps undertaken to: (1) establish data quality based on the use of a survey instrument to collect data (Section 4.5.1); (2) evaluate the measurement model (Section 4.5.2); and (3) evaluate the structural model (Section 4.5.3).

PLS-SEM was utilized to evaluate both the measurement model and structural path model for this study rather than covariance-based structural equation modeling (CB-SEM) or other multivariate techniques, given the sample size and inclusion of formative measures (Hair Jr. et al., 2014). Lowry and Gaskin (2014) suggest that under these conditions, PLS-SEM tends to achieve higher levels of statistical power than other relevant statistical techniques. Furthermore, a CB-SEM approach would likely have required a sample size of 300–500 cases or more to converge given model complexity (Lowry and Gaskin, 2014).

4.5.1 Data Quality Assessment

Per Jarvis et al. (2003), a number of steps were undertaken to ensure a satisfactory level of data quality was achieved for this study prior to evaluating the measurement model's validity and the testing of hypotheses. The following reviews each of the steps presented in Figure 4-2. Actual data quality assessment results are presented in Section 5.1 of this thesis.

Figure 4-2: Data Quality Steps



First, a review of missing data was carried out in a manner consistent with recommendations provided by Hair Jr. et al. (2010, p. 48). All records were deleted if 50% or more of survey information was missing or if the survey respondents failed to provide dependent variable information. Second, data outliers were assessed. Outliers are "observations with a unique combination of characteristics identifiable as distinctly different from other observations" (Hair Jr. et al., 2010, p. 64). Outliers can be generated due to a number of reasons, including: data entry/coding mistakes; an extraordinary event accounting for the uniqueness of the data point; or an extraordinary observation where no explanation is available (Hair Jr. et al., 2010, p. 65). For this analysis, outlier identification and determination was conducted using recommendations based on Hair Jr. et al. (2010, p. 64), who advise that, given a sample size of 390, any observations with variables having an absolute standard score of 4 or greater is to be identified as a possible outlier. Once identified, outliers were investigated to determine

their final status as described in Section 5.12. Third, a number of tests for data bias were conducted including: (1) a non-parametric comparison of means tests between the random sample and the convenience sample to ensure the convenience sample was not statistically different; (2) non-response bias tests; and (3) common methods bias or variance tests.

A more detailed description of the non-response bias test and common methods tests are described below.

Non-response bias is concerned with the statistical differences between those respondents that completed the questionnaire versus those that chose not to – in effect, biasing the survey. Non-response bias was tested using two approaches. First, a comparison of early versus late responders was conducted on all metric[18] survey items (Armstrong and Terry, 1977). This approach assumes that late responders are essentially non-responders to the initial invitation to participate in the research. The second approach compared incomplete responses (50%+ of missing information) to completed responses (Armstrong and Terry, 1977). The assumption with this approach was that incomplete responses are essentially non-responses, as these surveys are never utilized in the final sample.

Common methods bias or variance was then tested for. Common methods variance (CMV) is measurement error caused by the methods utilized to collect data (Podsakoff *et al.*, 2003). CMV can occur for several reasons, including the use of a single rater as the source of the predictor and criterion variable, social desirability, mood state, leniency bias, item ambiguity, and item primary effects (Podsakoff *et al.*, 2003; Craighead *et al.*, 2011; Podsakoff, Mackenzie and Podsakoff, 2012).

To address the single rater issue, numerous scholars (Podsakoff *et al.*, 2003) recommend a complete methodological separation of the independent variable and dependent variable by utilizing two different data sources for each variable to ensure that the "mind set of the source or rater to bias the observed relationship between the

[18] For this survey, Likert-scale items are considered metric scales.

predictor and criterion variable" does not occur (Podsakoff et al., 2003, p. 887). Given that it may not be possible to separate data sources for numerous reasons, including time, money, complexity, availability of information, etc., Podsakoff et al. (2003), Craighead et al. (2011), and Podsakoff, Mackenzie and Podsakoff (2012) all propose other potential options to minimize CMV, including having respondents complete the survey questionnaire sections at different times, in different locations, under a different context, or through the use of a different question format. Other proposed recommendations for addressing the various methods biases include ensuring responder anonymity, reducing evaluation apprehension, counterbalancing question order in the survey, and improving scale items to reduce ambiguity (Podsakoff *et al.*, 2003).

For this study, a number of ex-post and ex-anti remedies to minimize CMV were implemented. First, and as previously stated, the original research plan was to utilize a two-source data collection approach, where both salespeople and their respective supervisors would provide input, to reduce CMV issues related to a single rater. This strategy was abandoned based on inadequate response rates and negative feedback by pre-test participants. Pre-test participants were further asked their views concerning salesperson response impacts if the final survey was broken into two parts, which would be electronically sent one week apart. This proposal was not well received, as almost all pre-test participants felt that response rates for the second survey would be extremely low. Based on this feedback, a single survey format was maintained.

Research design elements that were implemented and utilized for the final survey include: (1) use of existing, published survey scales, where the original survey development process addressed CMV issues; (2) pre-testing and piloting of each survey item with respondents in the target population to ensure item clarity and reduced ambiguity; (3) direct and voluntary participation of sales representatives without the involvement of their management team and with assurance to responders of complete anonymity to reduce social desirability bias and survey apprehension; (4) physical separation of predictor and criterion variables within the survey; and (5) use of different scale anchors on predictor and criterion variables.

In addition to the above design-stage elements used to mitigate CMV within the study, an assessment of CMV was done subsequent to data collection. Harman's one-factor test (Podsakoff *et al.*, 2003) was utilized to test for the presence of CMV. All variables of interest were loaded into an unrotated factor analysis. According to Harman's one-factor test, if CMV existed, either a one-factor solution would have emerged or one factor would have accounted for the majority of total covariance (Podsakoff et al., 2003). An unrotated, principal component analysis was conducted on the variables making up the study in support of the one-factor test.

4.5.2 Measurement Model Evaluation

Modeling complex relationships involves the use of both reflective and formative latent variables (Jarvis *et al.*, 2003; Wetzels, Odekerken-Schroder and van Oppen, 2009; Hair Jr. *et al.*, 2018). Given the differences in the makeup of the two types of latent variables, construct validity of reflective and formative measures should be validated differently (Jarvis *et al.*, 2003). To identify each measure as either reflective or formative, all measures were subjected to a seven-step theoretical categorization of measurement type (Jarvis *et al.*, 2003). Once a theoretical measurement-type decision was made, a confirmatory tetrad analysis (CTA) was conducted to provide further empirical support for the theoretical categorization (Jarvis et al., 2003). Jarvis et al. (2003) suggest that empirical justification should only be used as a confirmatory step and that theoretical and conceptual justification should prevail under conflicting situations. Once each measure was categorized as reflective or formative, measure validation was conducted. The following subsections review the validation steps undertaken for both reflective and formative measures.

4.5.2.1 Reflective Measure Validation

Construct validity was established for all reflective measures using the five-step process in Table 4-10, as recommended by Hair Jr. et al. (2017, p. 122). To establish content validity, measures were operationalized from previously published scales. All scale items were pre-tested with a selection of academics and industry practitioners and

piloted with a random sample of salespeople, consistent with the sample frame profile, to ensure concepts were understood as intended and question wording and questionnaire format was appropriate (Black, 1999, p. 232).

Unidimensionality was initially established through principal component analysis (varimax rotation) to ensure single-factor loadings. The internal consistency reliability of each scale was then established within PLS-SEM by evaluating the composite reliability scores for a target value of 0.7 or greater (Hair Jr. et al., 2017, p. 111). In PLS-SEM, composite reliability scores are preferred to Cronbach alpha scores given that Cronbach's alpha coefficients are underreported within a PLS-SEM context due to alpha's sensitivity to the number of construct items (Hair Jr. et al., 2017, p. 111).

Convergent validity measures the extent to which different items making up the same measure correlate together, and therefore have a high proportion of variance in common. Convergent validity is established in this study by ensuring items load on to factors with an average variance extracted (AVE) value of 0.5 or higher (Hair Jr. et al., 2017, p. 113) . The AVE represents the mean of each item's load factor squared (i.e., the load factor's *variance extracted*) and is represented by the formula:

Equation 4-1: Average Variance Extracted

$$AVE = \frac{\sum_{i=1}^{n} L_i^2}{n},$$

where L_i represents each factor loading with *i* being the number of items within the factor (Hair Jr. et al., 2017, p. 115).

Discriminant validity examines whether model constructs are distinct from other constructs. For proof of discriminant validity, this study uses a three-test approach recommended by Hair Jr. et al. (2017, pp. 115–122). First, the outer weights of all items are evaluated to ensure that they load onto their respective construct more than they correlate to any other construct. Second, the Fornell-Larcker criterion is assessed, which confirms that the square root of the AVE of the construct is greater than the next highest correlation with another construct. The logic is that each construct should share more variance with its indicators than with other constructs.

Under certain circumstances, the Fornell-Larcker Criterion may fail to indicate a lack of discriminant validity (Henseler, Ringle and Sarstedt, 2015). Therefore, a third test, the Heterotrait-Monotrait (HTMT) ratio, was calculated and confirmed to be less than 0.85 (Henseler, Ringle and Sarstedt, 2015). The HTMT evaluated the ratio of between-trait correlations to within-trait correlations, providing an estimate of the true correlation if both constructs were perfectly measured (Hair Jr. et al., 2017, p. 118).

Table 4-10: Reflective Measure Validation Steps

Construct Validity	Reflective Measure Validation
Content Validity	Use of existing, published scales Pre-testing and piloting of scales to ensure appropriate question meaning and wording
Unidemensionality	Confirmed through principal component analysis
Reliability	Basd on internal consistency reliability, validated by: Composite reliability > 0.7
Convergent Validity	Item load factors < 0.4 eliminated Item load factors between 0.4-0.7 eliminated if it raises AVE or composite reliability above threshold and item count >= 3 Average variance extracted (AVE) >= 0.5
Discriminant Validity	Indicator outer weights > cross-correlations with other constructs Farnell-Larcker criteria - square of construct AVE > cross-correlations with other construts Heterotrait-monotrait-ratio (HTMT) < 0.85

Bootstrapping[19] was then conducted to generate a distribution of the HTMT statistic and a bootstrap confidence interval. If any confidence interval in the analysis contains the value 1, this indicates a lack of discriminate validity (Hair Jr. et al., 2017, p. 120). Since PLS-SEM makes no assumptions regarding sample distribution,

[19] Because PLS-SEM does not assume a normal distribution, regular regression analysis to test coefficients for significance was not possible. Bootstrapping draws a large number of subsamples (usually 5000) from the original sample to generate PLS path models and uses the coefficients generated to produce a bootstrap distribution as an approximation of the sampling distribution for significance testing (Hair Jr. et al., 2017, p. 87).

bootstrapping may not produce unbiased estimates of the true value of a parameter's mean across subsamples, thereby producing confidence interval coverage errors,[20] particularly with small or asymmetrical samples (Hair Jr. et al., 2017, p. 155). This is addressed through the use of "bias corrections which adjust for the resulting deviations in the bootstrap distribution" (Hair Jr. et al., 2017, p.156). For this thesis, all bootstrapping was conducted using the bias-corrected and accelerated (BCa) bootstrapping procedure recommended by Efron (1987).

4.5.2.2 Formative Measure Validation

One higher-order, reflective-formative measure was utilized within the study to capture fully all the dimensions of the construct DPM within an individual salesperson context. The validation of the underlying reflective subscales of DPM were previously described in Section 4.5.2.1. As a result, the following subsection details the four-step process undertaken to validate the higher order formative construct DPM, as recommended by Hair Jr. et al. (2017, p. 139) and outlined in Table 4-11.

Table 4-11: Formative Measure Evaluation Steps

Construct Validity	Formative Measure Validation
Content Validity	Use of existing, published scales Pre-testing and piloting of scales to ensure appropriate question meaning and wording
Convergent Validity	Redundancy analysis indicates correlation between formative measure and alternative measure of construct > 0.7
Collinearity of Indicators Assessment	Variance inflation factor (VIF) < 5
Signficance and relevance of formative indicators	Outer weight p-value <= 0.05; OR Outer loading >= .5; OR Outer loading p-value <= .05; AND outer loading > .1; AND Indicator demonstrates theoretical importance and content does not overlap with other indicatores

[20] A confidence interval coverage error occurs when the stated confidence interval, intended to be a 95% confidence interval, is actually only a 90% confidence interval (Hair Jr. et al., 2017, p. 156).

Convergent validity, which is concerned with ensuring that the formative construct in question is measuring what it intends to measure, was established through redundancy analysis (Hair Jr. et al., 2017, p. 140). To conduct a redundancy analysis, Hair Jr., Ringle and Sarstedt (2011) recommend that the formative measure be used as an exogenous variable to predict an endogenous variable, essentially an alternative measure of the construct in question. The alternative measure used is either a multi-item reflective measure, or if survey size is of concern, a single measure representing the construct. Given survey length concerns within this study, a single measure was utilized as the alternate measure of the construct. The alternative measure was operationalized as a single numeric value representing the number of measurement categories out of the six available (i.e., skills, traits, knowledge, customer outcomes, activity, results) that respondents believed were used by their direct supervisor in evaluating their performance as a salesperson. Higher values indicate a greater number of measurement categories used, and therefore a higher level of measurement diversity. Redundancy analysis suggests that a path coefficient of 0.7 or greater should be realized to confirm convergent validity (Hair Jr. et al., 2017, p. 140).

Next, the presence of excess collinearity was assessed by testing the variance inflationary factor (VIF) for all formative constructs for a target value less than 5 (Hair Jr. et al., 2017, p. 143). The VIF score, is used to explain the amount of variance of one formative indicator not explained by the remaining indicators of a formative construct (Hair Jr. et al., 2017, p. 143). A VIF value of 5 or higher for a particular formative indicator indicates that at least "80% of its variance is accounted for by the remaining formative indicators associated with the construct," suggesting excessive collinearity (Hair Jr. et al., 2017, p. 144).

The last step in establishing validity is to confirm whether individual formative indictors contribute to the construct's formation by observing each indicator's relative and absolute significance. Bootstrapping, as explained previously, is used to confirm if the outer weights and outer loadings are significantly different from zero, to confirm their relative or absolute significance.

All indicators with outer weight ($p \leq 0.05$) were considered "relatively important" and were maintained. The remaining formative indicator outer weights were reviewed to ensure they were either greater than 0.5 or were significant ($p \leq 0.05$), which are

considered “absolutely important” to be maintained (Hair Jr. et al., 2017, p. 148). Formative indicators with an outer loading greater than 0.1, meeting neither of these requirements but considered theoretically critical to the construct and having no overlap in content with other indicators, were also maintained (Hair Jr. et al., 2014).

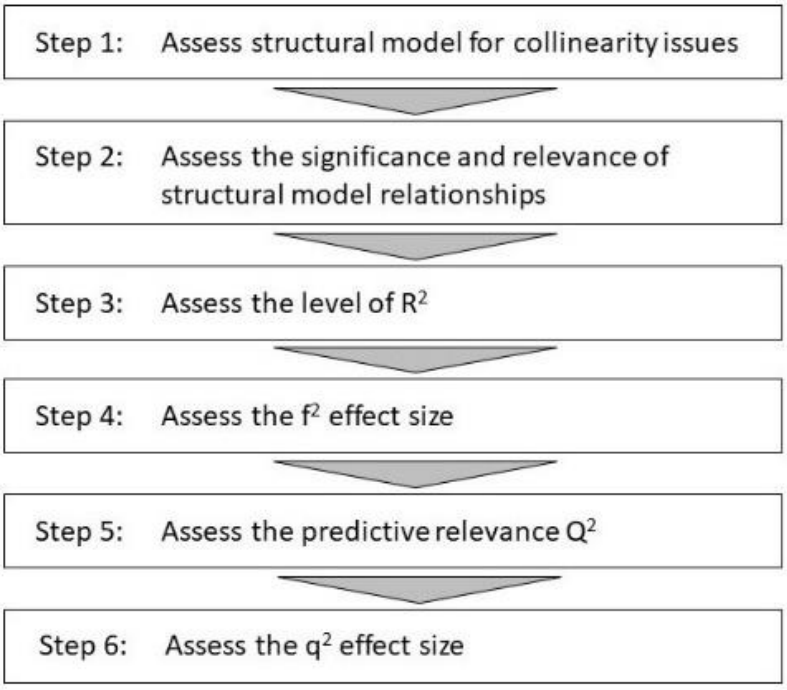
4.5.3 Structural Model Evaluation and Hypotheses Testing

The structural model is evaluated using the six-step structural model assessment procedure (Figure 4-3) recommended by Hair Jr., Ringle and Sarstedt (2011). First, collinearity issues are assessed using inner VIF values, similar to measurement model evaluation. Second, standardized path coefficient values are calculated for each hypothesized model relationship. PLS-SEM does not rely on any distribution assumptions; therefore, normal parametric significance testing cannot be conducted. Instead, significance testing of hypothesized relationships is evaluated through bootstrapping (Hair Jr., Ringle and Sarstedt, 2011), as previously discussed. Bootstrapping randomly chooses a large number of subsamples[21] to estimate the model. With these subsamples, PLS-SEM is able to derive standard errors and determine t-statistics and p-values for all path coefficients (Hair Jr. et al., 2017, p. 149).

Interactive (mediation) effects within PLS-SEM are tested using an assessment of the significance of the indirect effect (i.e., the path coefficient of the path from the independent variable to the mediating variable multiplied by the path coefficient of the path from the mediating variable to the dependent variable) versus the direct effect. Bootstrapping is utilized to calculate the significance of the indirect effect. This is compared to the significance of the direct effect using a similar bootstrapping operation. If the direct effect is non-significant and the indirect effect is significant, we can conclude that the mediator fully mediates the relationship between independent and dependent variable. If, however, the direct effect indicates a significant relationship, then we conclude that the mediator variable only partially mediates the relationship between independent and dependent variables (Hair Jr. et al., 2017, pp. 238–243).

[21] According to Hair Jr., Ringle and Sarstedt (2011), 5,000 subsamples are normally used for bootstrapping purposes.

Figure 4-3: Structural Model Assessment Procedure



The coefficient of determination (R^2 value) is then used to evaluate the model, providing an indication of the model's predictive power between exogenous and endogenous latent variables (Hair Jr., Ringle and Sarstedt, 2011). Once R^2 values are calculated, the *effect size* of each is determined (f^2 value) based on the impact to the model when the specific variable is excluded, per the formula below:

Equation 4-2: R^2 Effect Size

$$f^2 = \frac{R^2_{included} - R^2_{excluded}}{1 - R^2_{included}}$$

Hair Jr. et al. (2017, p. 201) suggest that f^2 values 0.02, 0.15, and 0.35 indicate small, medium, and large effects, respectively.

The final two steps in the process are to examine the model's predictive relevance or Stone-Geisser Q^2 value and the relative impact of the predictive relevance via the q^2 effect size. Hair Jr. et al. (2017, p. 202) recommends using the cross-validated

redundancy[22] approach to calculate Q^2 – a blindfolding technique where every nth data point is omitted from an endogenous variable and parameters are estimated based on the remaining data points. The SmartPLS blindfolding procedure requires an omission distance, between 5 and 10, to be entered into this procedure, which does not divide evenly into the sample size (Hair Jr. et al., 2017, p. 204). The omission distance is then used to identify which series of data points are omitted. Given the sample size (N=274), 7 is used as the omission distance. Resulting estimates are used to calculate Q^2, based on the formula:

Equation 4-3: Predictive Relevance – Stone-Geisser Q^2 Value

$$Q^2 = 1 - \frac{SSE}{SSO},$$

where *SSO* is the sum of the squared observations and *SSE* is the sum of the squared prediction errors based on a blindfolding procedure. Q^2 values larger than zero indicate that the model has predictive relevance for those respective endogenous constructs (Hair Jr. et al., 2017, p. 202). The q^2 effect size of predictive relevance is then calculated similar to the f^2 effect size by the formula:

Equation 4-4: Predictive Relevance Effect Size (q^2)

$$q^2 = \frac{Q^2_{included} - Q^2_{excluded}}{1 - Q^2_{included}}$$

Like the f^2, q^2 effect sizes are considered small, medium, or large if q^2 values are greater than 0.02, 0.15, and 0.35, respectively (Henseler and Sarstedt, 2013).

Some scholars now recommend also conducting an assessment of overall model fit (Henseler and Sarstedt, 2013). However, unlike CB-SEM models, which "estimate parameters so that the differences between the sample covariances and those predicted by the theoretical/conceptual model are minimized" (Hair Jr. et al., 2014, p. 192), PLS-

[22] Two methods are available for calculating Q^2 values, cross-validated communality and cross-validated redundancy. Cross-validated redundancy has been chosen, as it "builds on [the] structural model and measurement model" approach used in PLS-SEM analysis (Hair Jr. et al., 2017, p. 207).

SEM attempts to maximize total variance, making traditional goodness-of-fit models ineffectual. Hair Jr. et al. (2017, p. 193) argue that a PLS-SEM structural model is evaluated based on its predictive capabilities, which "do not allow for testing the overall goodness of fit." Several goodness-of-fit model indices common to CB-SEM have been tested in PLS-SEM, with mixed results. Currently, only the standardized root-mean square residual (SRMR) model fit measure is included within SmartPLS. As such, it is the only fit measure presented in Section 6.5.1, discussing model evaluation.

4.5.4 Additional Analysis

Beyond the analysis undertaken to test hypotheses, two additional analysis were conducted. First, analysis was conducted to explore further the relationship between supervisory coaching and customer-oriented selling behaviors. Hair Jr. et al. (2017, p. 237) recommend the use of multiple mediation to get a "more complete picture of the mechanisms through which an exogenous construct affects an endogenous construct." Therefore, multiple mediation was conducted, to assess any relationship between supervisory coaching and customer-oriented selling, while considering all mediating effects of attitudes, subjective norms, and perceived behavioral control simultaneously.

Second, comparative multigroup analysis was conducted to further explore the impact that sales tenure and sales compensation had on the structural model. The following two subsections review these analyses. Chapter 5 then presents the results of all planned analyses.

4.5.4.1 Multiple Mediation Analysis

Multiple mediation analysis, based on the following steps and recommendations by Hair Jr. et al. (2017, pp. 236–238), was conducted to assess the mediation effects of salesperson attitudes, subjective norms, and perceived behavioral control simultaneously on the relationship between *supervisory coaching* and *customer-oriented selling behavior*. Multiple mediation is evaluated based on comparing the direct effect (i.e., the path coefficient and its significance) between *supervisory*

coaching and *customer-oriented-oriented selling behavior* against the total indirect effect of the same relationship. If the direct effect is not significant (p>0.05) and the total indirect effect is significant (p≤0.05), then full mediation is occurring, while if the direct effect is significant (p≤0.05) and the total indirect effect is significant (p≤0.05), then partial mediation is said to be occurring. In either case, the specific indirect effects of the three mediating variables, salesperson *attitudes, subjective norms*, and *perceived behavioral control*, can then be evaluated to identify which is influencing the relationship between *supervisory coaching* and *customer-oriented selling behavior*. If neither the direct or total indirect effect is significant (p>0.05), then no mediation effect is occurring and no further investigation is required.

Specific indirect effects are calculated as the product of the two path coefficients *p1*(coaching=>attitudes) and *p2*(attitudes=>customer-oriented selling behavior) when all relationships are included within the structural model. The total indirect effect is calculated as the sum of all specific indirect effects, or:

Equation 4-5: Total Indirect Effect

$$\text{Total indirect effect} = (p1*p2) + (p3*p4) + (p5*p6)$$

4.5.4.2 Comparative Multigroup Analysis

PLS-SEM multigroup analysis was undertaken in SmartPLS to examine model results when a subsample of high-tenure salespeople versus a subsample of low-tenure salespeople was evaluated, as well as a subsample of salespeople operating with a high variable-pay compensation structure versus those with a low variable-pay compensation structure. Multigroup analysis allows for statistical significance testing of the absolute difference between model values for two subsets of data, including their path coefficients and R^2 (Hair Jr. et al., 2018, p. 148). For this procedure, model results for respondents in the low-tenure group were compared to the high-tenure group and those respondents in the high variable-pay group were compared to the low variable-pay groups were compared.

The respondents were categorized by calculating the median for both variable-pay compensation and salesperson tenure. Respondents with tenure or compensation values greater than the median were allocated to the high tenure and high variable-pay groups respectively, while sample respondents with tenure or compensation values less than the median were assigned to the low tenure and low variable-pay groups respectively. Those sample respondents with values directly on the median were not included in the multigroup analysis. The median was chosen over the statistical mean as a better indicator of central tendency, given that no assumptions were made about data normality within this study (Field, 2009, p. 133).

This approach effectively takes the continuous variables *tenure* and *variable pay* and treats them like categorical, binary variables. This procedure is not generally recommended in the social sciences for testing hypotheses, as it reduces statistical power and runs the risk of overestimating variability between groups, as those respondents with values close to the median but on opposite sides are now considered very different, rather than very similar (Cohen, 1983). However, it is being used here solely to provide additional depth to previously undertaken analysis and not for hypotheses testing. A somewhat more appropriate approach would have been to split the sample into three groups and compare those two groups furthest from median, leaving those respondents with values closer to the median out of the analysis (Hair Jr. et al., 2018, p. 152). In the case of this study, sample size was insufficient to split the sample into three groups to perform multigroup analysis in this manner.

Several types of multigroup analysis can be completed for both parametric and non-parametric data. As the data sample makes no previous assumptions regarding its parametric nature, the PLS-MGA, non-parametric, multigroup analysis procedure was utilized to compare the subsamples (Hair Jr. et al., 2018, pp. 150–158). PLS-MGA utilizes a bootstrapping sample (5,000 bootstraps) to compare bootstrap estimates in one group against the bootstrap estimates in the other group in order to construct t-statistics and p-values for significance testing of the absolute differences between groups.

5 RESEARCH FINDINGS

This chapter presents the analysis undertaken to evaluate data quality, assess the measurement and structural models being utilized, and test the hypotheses put forward in Chapter 3. The chapter is organized as follows. Section 5.1 reviews the data quality results, including missing data analysis, data outlier analysis, data source bias, non-response bias, and common methods variance testing. Section 5.2 reviews reflective and formative variable categorization, confirming whether or not the theoretical category assignments were supported by empirical tests. Section 5.3 and Section 5.4 review the results of the measurement model evaluation undertaken for both reflective and formative measures, respectively. Section 5.5 presents sample descriptive statistics, while Section 5.6 summarizes the structural model evaluation results. Section 5.7 presents results from hypothesis testing. Finally, Section 5.8 reviews the results from the additional multiple mediation and multigroup analysis. The chapter concludes by summarizing key findings (Section 5.9).

5.1 Data Quality Assessment

The following subsections summarize the preliminary analysis conducted on the survey data to ensure data quality. Data normality testing was not conducted, as the statistical techniques utilized in this study are non-parametric in nature and do not make assumptions regarding data distribution.

5.1.1 Review of Missing Data

All survey data collected was reviewed for missing data. Per recommendations from Hair Jr. et al. (2010, p. 48), all records were deleted if 50% or more of survey information was missing or if the survey respondent failed to provide dependent variable information. Out of the 390 responses received, 80 survey responses had records with more than 50% of survey information missing, while an additional 30 survey responses had the dependent variable missing. Therefore, all of these survey records were deleted.

All remaining missing values for each respondent were investigated and were deemed allowable, as they were legitimate survey response options. As an example, 11 respondents did not complete questions concerning variable compensation because the respective respondents were paid 100% by fixed salary.

5.1.2 Assessing Outliers

Outliers are "observations with a unique combination of characteristics identifiable as distinctly different from other observations" (Hair Jr. et al., 2010, p. 64). Outliers can be generated due to a number of reasons including: data entry/coding mistakes, an extraordinary event accounting for the uniqueness of the data point, or an extraordinary observation where no explanation is available (Hair Jr. et al., 2010, p. 65). For this analysis, outlier identification and determination was conducted using recommendations based on Hair Jr. et al. (2010, pp. 64–70). Given the sample size (N=390), any observations with variables having an absolute standard score of 4 or greater was identified as a possible outlier.

An analysis of standard scores indicates that only observations 169, 238, 265, and 274 exceeded the threshold on more than one variable. In addition, no identified outlier had values so extreme as to affect mean or standard deviation. A review of the four observations did not indicate any further issues with these records and, as such, all were kept for further analysis, as recommended by Hair Jr. et al. (2010, p. 70).

5.1.3 Sample Bias

A number of tests were conducted to assess potential sample bias including data source bias, non-response bias, and common methods variance. Section 5.1.3.1 reviews the test conducted for data source bias, Section 5.1.3.2 reviews the two tests conducted for non-response bias, and Section 5.1.3.3 summarizes the common method variance tests conducted.

5.1.3.1 Data Source Bias

To evaluate data source bias, a comparison of means was conducted to compare Data Source #2 (the convenience sample) against Data Source #1 (the random sample) using a non-parametric test (Field, 2009, pp. 539–583). Comparisons were completed for the three metric demographic variables as well as all survey items making up the independent and dependent variables. Results indicate that 31 of the 34 survey items tested indicate no significant differences between the two data source samples (p>0.05). However, *salesperson tenure* was significantly higher for Data Source #2 respondents (M=9.74) than for Data Source #1 respondents (M=7.10, U=7638.00, z=-2.511, p≤0.05, r=-0.152). This indicates that Data Source #2 is biased towards sales representatives with more tenure. In addition, Data Source #2 respondents (M=5.60) reported the use of presentation skills within their firm's SPMS significantly more than did Data Source #1 respondents (M=5.11, U=7854.50, z=-2.237, p≤0.05, r=-0.135), indicating that Data Source #2 is somewhat biased towards the use of one aspect of non-financial performance measures in measuring salesperson performance, namely, presentation skills. Effect sizes for all biased data identified above are all below 0.3, indicating a small effect (Armstrong and Terry, 1977). *Presentation skills* was maintained for further analysis for content validity reasons. *Salesperson tenure* was also maintained, with any impacts being addressed during multigroup analysis (Section 5.8.2).

5.1.3.2 Non-Response Bias

Non-response bias was tested using two approaches. First, a comparison of early versus late responders was conducted on all metric[23] survey items (Armstrong and Terry, 1977). Results indicate that out of the 64 survey items comprising metric variables in the study, 63 show no significant difference (p>0.05) between early and late responders. For late responders, one indicator within the supervisory coaching scale, Coach_4 (M=5.4), is significantly higher than the early responder group (M=5.1, U=5960.50, p≤0.5, r=-0.127). This suggests that non-responders may be biased towards *soliciting feedback* during coaching sessions compared to the study sample.

[23] For this survey Likert-scale items are considered metric scales.

The second approach utilized compares incomplete responses (50%+ of missing information) to completed responses (Armstrong and Terry, 1977). Results of a Mann-Whitney test indicate that 24 of the 27 items available for testing showed no significant difference between complete and incomplete surveys ($p>0.05$). The remaining three survey items all showed significant differences between complete and incomplete survey respondents ($p\leq0.05$). The three items are associated with the use of non-financial measures of performance, suggesting that the final study sample is biased towards a greater use of non-financial measures of performance for salesperson evaluation, including salesperson product knowledge, customer satisfaction, and persuasion skills versus those not responding to the survey.

Overall, the results of the non-response bias tests are mixed with some non-response bias present. In particular, the final sample appears somewhat biased towards the use of non-financial measures of performance. Items identified as significant within the non-response bias test (customer satisfaction, product knowledge, and persuasion skills) were maintained within the model, given their content validity significance within the measurement model and to ensure an adequate number of items per construct (Podsakoff *et al.*, 2003).

5.1.3.3 Common Methods Variance

CMV is measurement error caused by the methods utilized to collect data (Podsakoff *et al.*, 2003). CMV can occur for several reasons including the use of a single rater as the source of the predictor and criterion variable, social desirability, mood state, leniency bias, item ambiguity, and item primary effects (Podsakoff *et al.*, 2003; Craighead *et al.*, 2011; Podsakoff, Mackenzie and Podsakoff, 2012).

Harman's one-factor test was used to assess the level of CMV (Podsakoff *et al.*, 2003) present. In total, 13 components were extracted with eigenvalues greater than 1 from the PCA analysis conducted. The main factor explained only 19.5% of the total covariance. While not conclusive, this suggests that CMV should not be a big factor in the results of this study.

5.2 Measurement Classification

All model measures were classified as either reflective or formative based on decision rules recommended by Jarvis et al. (2003) and summarized in Table 5-1 and Table 5-2. To empirically confirm the theoretical classifications made, a confirmatory tetrad analysis (CTA) was conducted on all constructs with four or more items, as recommended by Hair Jr. et al. (2018, p. 97). Thus, CTA was completed for DPM and two of its lower-order variables – *traits* and *skills* – as well as *supervisory coaching*, *subjective norms*, and *customer-oriented selling behavior*. Results of the CTA analysis support the theoretical classifications made for all variables, except *DPM*. As presented in Table 5-1, DPM had been classified as formative based on theoretical guidelines and for consistency with previous research (Park, Lee and Chae, 2017). However, empirical results supported a reflective measurement type. Gerbing and Anderson (1988) indicate that CTA should only be used to confirm theoretical assignments and that, in the event of a conflict, the initial theoretical classification should be maintained.

Once all measures were classified, reflective and formative measurement evaluation was undertaken (Sections 5.3 and 5.4), followed by the reporting of descriptive statistics (Section 5.5), structural model evaluation (Section 5.6), hypotheses testing (Section 5.7), and the reporting of additional analysis (Section 5.8). The chapter concludes by summarizing overall results in Section 5.9.

5.3 Reflective Measurement Model Evaluation

Principal component analysis (PCA) with varimax rotation (Gerbing and Anderson, 1988) was conducted on all multi-item reflective measures to assess the unidimensionality of all previously published scales using SPSS v24. All measures demonstrated acceptable Kaiser-Meyer-Olkin measure levels, indicating the sample was sufficient to conduct PCA. In addition, Bartlett's test of sphericity x^2 (274) was highly significant ($p \leq 0.001$) for all scales, indicating that each scale's items correlated to a sufficiently large extent for the principal component analysis. All remaining confirmatory measurement and structural model evaluation and hypothesis testing was

conducted within SmartPLS version 3.2.7 using procedures as indicated in Section 4.5. Results are summarized below.

Scale reliability was confirmed by ensuring that composite reliability scores were within the range (0.7–0.95), as specified by Hair Jr. et al. (2017, p. 111). As previously discussed, composite reliability scores are considered more appropriate to evaluate scale reliability than Cronbach alpha within PLS-SEM, as Cronbach alpha tends to underestimate scale reliability due to its sensitivity to the number of scale items (Nunnally and Bernstein, 1994). Composite reliability was within the target range for all constructs, excluding the construct *traits*, which was slightly above the upper threshold at 0.952. Two scale items, *creativity* and *judgment*, which were correlating highly with other construct items, were eliminated successively until a satisfactory composite reliability score was achieved.

Factor loadings of all reflective measures were then reviewed for individual item reliability (Nunnally and Bernstein, 1994). The construct *supervisory coaching* had one item with a load factor between 0.4 and 0.7 (Coach_8); however, AVE and composite reliability scores for supervisory coaching were within the desired threshold. Therefore, this item was kept, as recommended by Hair Jr. et al. (2014).

The construct *customer-oriented selling behavior* had four items below 0.7, which, if removed, would reduce the construct to less than three items – not recommended by (Hair Jr. *et al.*, 2014). In this case, the construct's AVE was reviewed to ensure adequate convergent validity. AVE was less than the recommended 0.5 level; therefore, the lowest item loading of the construct (SOCO_4) was deleted, followed by the second lowest item (SOCO_2), until AVE rose above the threshold (AVE=0.541) for satisfactory convergent validity (Hair Jr. et al., 2014).

The construct *results* had one item with a load factor between 0.4 and 0.7 and AVE score below required threshold values. This item was eliminated and AVE increased to within the desired threshold level (AVE=0.649). All remaining reflective constructs had load factors greater than 0.7 and AVE measures greater than 0.5, as required to support convergent validity, so no further item changes were made.

Two tests for discriminant validity were conducted on all reflective constructs as recommended by Hair Jr. et al. (2017, pp. 115–122). First, the Fornell-Larcker criteria

was applied to ensure that the square root of each construct's AVE was greater than the construct's correlation to other measures. Appendix 7-1 indicates Fornell-Larcker criteria were achieved, as the square root of each construct's AVE was greater than the construct's correlation to other measures. Second, the HTMT ratio of each measure was calculated to ensure a value less than 0.85 was achieved (Appendix 7-2). Results indicate all HTMT ratios were less than the 0.85 threshold and none of the combinations of constructs had a confidence interval value of 1, as recommended by Hair Jr. et al. (2017, p. 118).

Therefore, all reflective measures met reliability, convergent validity, and discriminant validity requirements. Table 5-3 summarizes the final factor loadings, scale reliability, and convergent validity for all multi-item reflective constructs used within the model.

Table 5-1: Measurement Classification – DPM

Decision Rules - Reflective (vs. Formative) Constructs	Diverse Performance Measurement	Diverse Performance Measurement Lower Order Constructs					
		Knowledge	Traits	Skills	Customer Outcomes	Activity	Results
Direction of causality is from construct to measure	x	✓	✓	✓	✓	✓	✓
Items are manfestations of construct (versus defining characteristics)	x	✓	✓	✓	✓	✓	✓
Changes in construct would cause changes in items	x	✓	✓	✓	✓	✓	✓
Changes in items would not cause changes in construct	x	✓	✓	✓	✓	✓	✓
Items are interchangable - dropping an item does not change meaning of construct	x	✓	✓	✓	✓	✓	✓
Measures expected to be correlated (higher internal consistency)	x	✓	✓	✓	✓	✓	✓
Items are required to have the same antecedents and consequences	x	✓	✓	✓	✓	✓	✓
Theorectical Conclusion	Formative	Reflective	Reflective	Reflective	Reflective	Reflective	Reflective
Empirical Support (Confirmatory Tetrad Analysis)	**No**	n/a	Yes	Yes	n/a	n/a	n/a

Table 5-2: Measurement Classification – Remaining Variables

Decision Rules - Reflective (vs. Formative) Constructs	Customer-Oriented Selling	Attitudes	Behavioral Control	Subjective Norms	Supervisory Coaching
Direction of causality is from construct to measure	✓	✓	n/a	✓	✓
Items are manfestations of construct (versus defining characteristics)	✓	✓	n/a	✓	✓
Changes in construct would cause changes in items	✓	✓	n/a	✓	✓
Changes in items would not cause changes in construct	✓	✓	n/a	✓	✓
Items are interchangable - dropping an item does not change meaning of construct	✓	✓	n/a	✓	✓
Measures expected to be correlated (higher internal consistency)	✓	✓	n/a	✓	✓
Items are required to have the same antecedents and consequences	✓	✓	n/a	✓	✓
Theorectical Conclusion	Reflective	Reflective	Single item	Reflective	Reflective
Empirical Support (Confirmatory Tetrad Analysis)	Yes	Yes		Yes	Yes

Table 5-3: Reflective Measure Validity and Reliability

	λ	CR	AVE
Traits		0.918	0.738
Dependability	0.878		
Flexibility	0.877		
Initiative	0.883		
Display of team-work pro-team/company-related behavior	0.796		
Skills		0.886	0.566
Listening skills	0.847		
Persuading, negotiating, and closing skills	0.734		
Planning skills	0.778		
Presentation skills	0.770		
Prospecting and targeting skills	0.672		
Time and territory management skills	0.698		
Knowledge		0.906	0.763
Customer knowledge	0.875		
Industry knowledge	0.915		
Product knowledge	0.828		
Activity		0.831	0.625
Work attendance	0.804		
Level of effort put forward	0.881		
Level of activity performed (e.g., numb,er of sales calls made)	0.672		
Customer Outcomes		0.883	0.715
Customer retention	0.840		
Customer satisfaction (e.g., net promoter score)	0.821		
Customer life-time value	0.875		
Results		0.785	0.649
Account/territory ratios, such as penetration rates and average order size	0.898		
Expense and expense ratios, such as meeting travel budget	0.702		
Customer-Oriented Selling behavior		0.776	0.541
I try to find out what kind of product would be most helpful to the customer	0.626		
I have the customer's best interest in mind	0.860		
I offer the product that is best suited to the customer's problem	0.701		
Attitudes		0.837	0.509
I think customer interaction contributes to my personal development	0.698		
I enjoy interacting with customers	0.624		
Customer orientation is one of my personal goals	0.723		
Customer orientation is very important within my job	0.824		
A good salesperson has to have the customer's best interest in mind	0.685		
Subjective Norms		0.923	0.749
Your direct supervisor	0.914		
Top management	0.839		
Other sales managers	0.887		
Marketing and product management	0.820		
Supervisory Coaching		0.919	0.589
My supervisor uses anologies, scenarios, and examples to help me learn	0.761		
My supervisor encourages me to broaden my perspective by helping me see the big picture	0.819		
My supervisor provides me with constructive feedback	0.853		
My supervisor solicits feedback from me to ensure that their interactions are helpful to me	0.795		
My supervisor provides me with resources so I can perform my job more effectively	0.761		
To help me think through issues, my supervisor asks questions rather than providing me solutions	0.757		
My supervisor sets expectations with me and communicates the importance of those expectations based on the broader goals of the organization	0.770		
My supervisor uses role playing to aid in my development	0.595		

Note: N=274; λ is the factor loading of each item; CR is the composite reliability; AVE is the average variance extracted

5.4 Formative Measurement Model Evaluation

The following section reviews the measurement model evaluation results for the second-order, formative measure, DPM, including tests for convergent validity, collinearity, and formative indicator significance, as summarized in Table 4-11.

Convergent validity was established through redundancy analysis, as recommended by Hair Jr. et al. (2017, p. 140). Redundancy analysis results indicated a path coefficient of 0.768, which was above the required threshold of 0.70, thus supporting convergent validity.

Excessive collinearity was tested for by ensuring that the variance inflationary factor (VIF) for DPM was less than 5, as recommended by Hair Jr., Ringle and Sarstedt (2011). Since DPM is a higher-order construct, the formative indicators requiring assessment are the underlying first-order constructs. Each first-order construct was transformed into an individual, formative item indicator using the two-stage approach,[24] recommended by Hair Jr. et al. (2018, p. 53). The VIF score was then evaluated for each indicator to confirm all were below the threshold of 5. Outer VIF analysis results are summarized in Appendix 8.

In assessing formative measure indicator significance, 5,000 bootstrap samples were taken to generate *t*-statistics and *p*-values for each of the six indicators' loadings and outer weights. Five of the six indicators making up the DPM construct (*traits, customer outcomes, knowledge, results*, and *activities)* had insignificant outer weights ($p>0.05$), suggesting that these indicators lacked relative importance, while the indicator *skills* was significant at the $p\leq0.05$ level and, therefore, was maintained as relatively important. A further review of the remaining indicators' outer loadings shows that four of the indicators (*activity*, *customer outcomes*, *knowledge*, *traits)* had high and significant loadings ($p\leq0.05$), and thus were considered absolutely important and were maintained as recommended by Hair Jr. et al. (2014).

[24] The two-stage approach is a statistical approach recommended by Hair Jr. et al. (2017, p. 53) to convert a second-order construct into a first-order construct by transforming each multi-item first-order construct into a single latent variable score. Under the two-stage approach, each latent variable score becomes an individual item within the new (first-order) construct.

The remaining indicator, *results*, had an outer loading less than 0.5 but was significant at the $p \leq 0.05$ level. The indicator is considered a critical theoretical aspect of the DPM construct, it does not overlap with other construct content, and had a load factor greater than 0.1; therefore, it was maintained, as recommended by Hair Jr. et al. (2014). Appendix 9 summarizes the formative indicator significance test results.

Therefore, convergent validity, collinearity, and formative indicator significance tests for the formative measure, DPM, were all met.

5.5 Descriptive Statistics

Descriptive statistics were provided for all variables in Tables 5-5, 5-6, and 5-7 above, based on raw data. Table 5-4 summarizes the stated frequency use for all performance measures included in this study, where *% Often Used* equals the percent of sample respondents who stated that they believe their manager used the particular measures *often*, *very often*, or *always* to evaluate them as a high, medium, or low performer. Those measures removed from the final model due to model evaluation are indicated with an asterisk. As expected, financial results, such as total sales revenue achieved, were used almost ubiquitously across the sample (92.7%). Other noteworthy performance measures include *persuasion skills* (83.6%) and *customer knowledge* (80.3%). The least used measure of individual sales performance appears to be *expense management* (13.1%).

Data indicates that the sample is made up of respondents across multiple B2B industries but has a higher representation in the information services (44.9%) sector versus the sample frame. Respondents appear to spend greater amounts of time on managing existing accounts (56.2%) than on acquiring new customers (43.8%). Average sales tenure of the sample is 8.6 years, due to less tenured respondents within the business information services sector. In addition, the average percentage of fixed pay was 60.4%, indicating a higher level of fixed-pay compensation versus variable-pay compensation amongst sample respondents. A breakdown of sample respondents by

country indicates that the majority of respondents came from Canada (45%), with the remainder coming from the United States (28%) and the United Kingdom (28%).

Table 5-4: Sales Performance Measures – Frequency of Use

Performance Measure	% Often Used
Traits	
Dependability	78.1%
Flexibility	66.4%
Creativity*	68.2%
Judgement*	75.5%
Initiative	72.3%
Display of team-work pro-team/company-related behavior	79.2%
Display of pro-customer behavior*	77.4%
Skills	
Listening skills	74.8%
Persuading, negotiating, and closing skills	83.6%
Planning skills	74.1%
Presentation skills	74.8%
Prospecting and targeting skills	76.3%
Time and territory management skills	67.5%
Knowledge	
Customer knowledge	80.3%
Industry knowledge	77.0%
Product knowledge	78.8%
Activity	
Work attendance	60.6%
Level of effort put forward	75.2%
Level of activity performed (e.g., number of sales calls made)	67.2%
Customer Outcomes	
Customer retention	67.5%
Customer satisfaction (e.g., net promoter score)	54.4%
Customer life-time value	47.1%
Results	
Financial Results, such as total sales revenue*	92.7%
Account/territory ratios, such as penetration rates	40.9%
Expense and expense ratios, such as meeting your travel budget	13.1%

Notes: N=274, % Often Used includes "Often Used", "Very Often Used" or "Always Used"; *Variable removed from final model

Table 5-5: Descriptive Statistics

Variable	Unit of Measure	Min	Max	Mean	SD
Traits					
Dependability	Survey Scale	1.00	7.00	5.270	1.644
Flexibility	Survey Scale	1.00	7.00	5.011	1.726
Initiative	Survey Scale	1.00	7.00	5.522	1.744
Displaying team-work pro-team/company-related behavior	Survey Scale	1.00	7.00	5.507	1.613
Skills					
Listening skills	Survey Scale	1.00	7.00	5.416	1.631
Persuading, negotiating, and closing skills	Survey Scale	1.00	7.00	5.803	1.457
Planning skills	Survey Scale	1.00	7.00	5.299	1.499
Presentation skills	Survey Scale	1.00	7.00	5.380	1.625
Prospecting and targeting skills	Survey Scale	1.00	7.00	5.409	1.572
Time and territory management skills	Survey Scale	1.00	7.00	5.084	1.730
Knowledge					
Customer knowledge	Survey Scale	1.00	7.00	5.456	1.631
Industry knowledge	Survey Scale	1.00	7.00	5.540	1.592
Product knowledge	Survey Scale	1.00	7.00	5.653	1.686
Activity					
Work attendance	Survey Scale	1.00	7.00	4.854	1.974
Level of effort put forward	Survey Scale	1.00	7.00	5.350	1.729
Level of activity performed (e.g., number of sales calls made)	Survey Scale	1.00	7.00	5.208	1.755
Customer Outcomes					
Customer retention	Survey Scale	1.00	7.00	5.047	1.973
Customer satisfaction (e.g., net promoter score)	Survey Scale	1.00	7.00	4.522	2.029
Customer life-time value	Survey Scale	1.00	7.00	4.248	2.137
Results					
Account/territory ratios, such as penetration rates	Survey Scale	1.00	7.00	4.007	1.885
Expense and expense ratios, such as meeting your travel budget	Survey Scale	1.00	7.00	2.522	1.680

Notes: N=274, SD= Standard Deviation

Table 5-6: Descriptive Statistics

Variable	Unit of Measure	Min (%)	Max (%)	Mean	SD
Customer-Oriented Selling behavior					
I try to find out what kind of product would be most helpful…	Survey Scale	1.00	7.00	6.679	0.798
I have the customer's best interest in mind	Survey Scale	2.00	7.00	6.511	0.697
I offer the product that is best suited to the customer's problem	Survey Scale	1.00	7.00	6.566	0.908
Attitudes					
I think customer interaction contributes to my personal development	Survey Scale	1.00	7.00	6.354	0.977
I enjoy interacting with customers	Survey Scale	1.00	7.00	6.635	0.699
Customer-orientation is one of my personal goals	Survey Scale	2.00	7.00	6.212	1.034
Customer-orientation is very important within my job	Survey Scale	2.00	7.00	6.376	0.938
A good salesperson has to have the customer's best interest in mind	Survey Scale	1.00	7.00	6.460	0.930
Normative Beliefs Concerning Customer-Oriented Selling behavior					
Your direct supervisor	Survey Scale	1.00	7.00	5.920	1.383
Top management	Survey Scale	1.00	7.00	5.810	1.455
Other sales managers	Survey Scale	1.00	7.00	5.784	1.385
Marketing and product management	Survey Scale	1.00	7.00	5.478	1.434
Motivation to Comply					
Your direct supervisor	Survey Scale	5.00	7.00	6.266	0.651
Top management	Survey Scale	4.00	7.00	6.135	0.789
Other sales managers	Survey Scale	4.00	7.00	5.583	0.745
Marketing and product management	Survey Scale	3.00	7.00	5.481	0.981

Notes: N=274, SD= Standard Deviation

Table 5-7: Descriptive Statistics

Variable	Unit of Measure	Min (%)	Max (%)	Mean	SD
Supervisory Coaching					
My supervisor uses anologies, scenarios, and examples to help me learn	Survey Scale	1.00	7.00	5.292	1.607
My supervisor encourages me to broaden my perspective…	Survey Scale	1.00	7.00	5.555	1.477
My supervisor provides me with constructive feedback	Survey Scale	1.00	7.00	5.522	1.468
My supervisor solicits feedback from me…	Survey Scale	1.00	7.00	5.150	1.588
My supervisor provides me with resources…	Survey Scale	1.00	7.00	5.299	1.429
To help me think through issues, my supervisor asks questions…	Survey Scale	1.00	7.00	5.230	1.572
My supervisor sets expectations with me and communicates…	Survey Scale	1.00	7.00	5.551	1.507
My supervisor uses role playing to aid in my development	Survey Scale	1.00	7.00	3.76	1.996
Perceived Behavioral Control	Composite	10.00	995.00	841.777	239.940
Sales Experience (in years)	Numeric (in years)	0.50	40.00	8.563	8.180
Fixed-Pay Compensation (%)	Percentage	0.00	100.00	60.380	23.968
Sales Role - Farming	Percentage	0.00	100.00	56.241	30.641
Sales Role - Hunting	Percentage	0.00	100.00	43.759	30.641
Industry - Manufacturing	Dummy Variable	.00 (84%)	1.00 (16%)	-	-
Industry - Wholesale	Dummy Variable	.00 (94%)	1.00 (6%)	-	-
Industry - Media Services	Dummy Variable	.00 (92%)	1.00 (8%)	-	-
Industry - IT Services	Dummy Variable	.00 (55%)	1.00 (45%)	-	-
Industry - Telecom Services	Dummy Variable	.00 (91%)	1.00 (9%)	-	-
Industry - Other Business Services	Dummy Variable	.00 (85%)	1.00 (15%)	-	-
Country - Canada	Dummy Variable	.00 (55%)	1.00 (45%)	-	-
Country - United States	Dummy Variable	.00 (72%)	1.00 (28%)	-	-
Country - United Kingdom	Dummy Variable	.00 (72%)	1.00 (28%)	-	-

Notes: N=274, SD= Standard Deviation

5.6 Structural Model Evaluation

Correlation analysis for all constructs included in the model are presented in Table 5-8. In addition, the results of the six-step structural model evaluation and hypotheses tests are presented below and summarized in Figure 5-1.

Table 5-8: Correlation Matrix

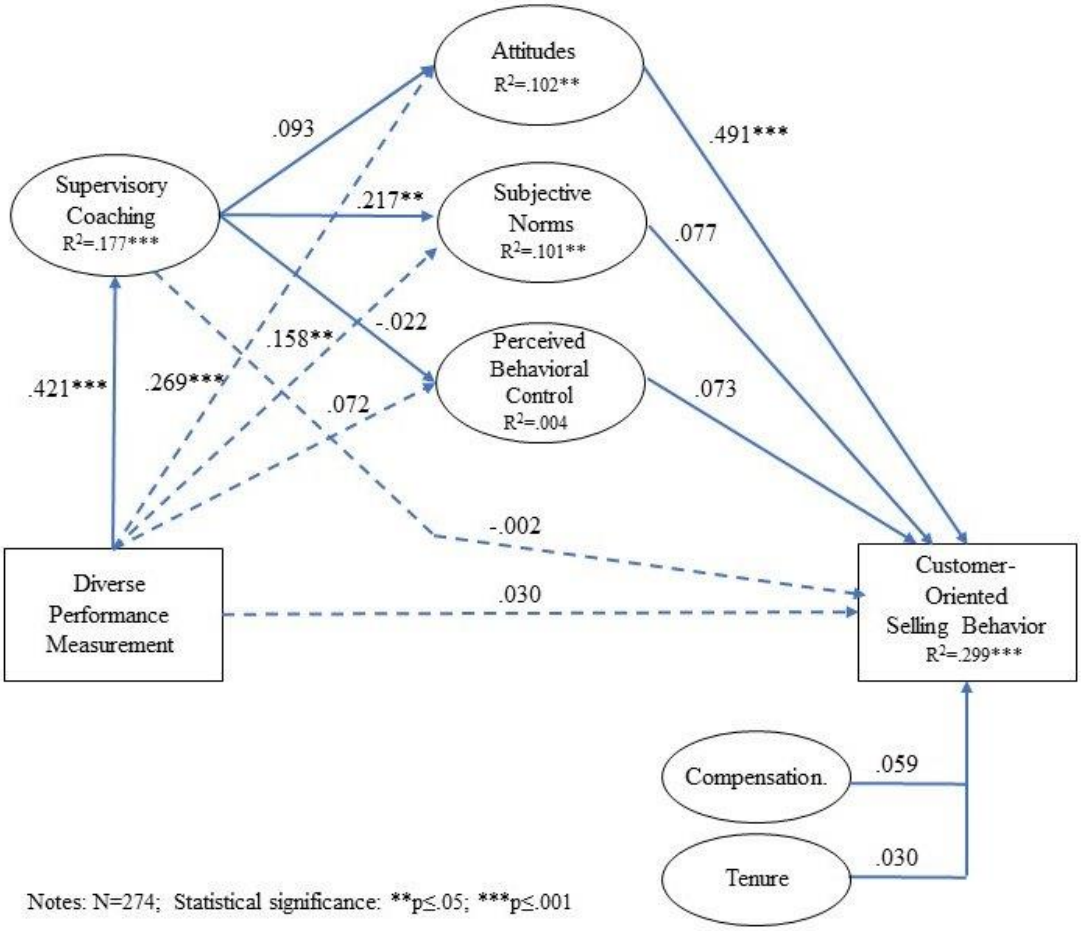
	1	2	3	4	5	6	7
1 Attitudes							
2 Behavioral Control	.127*						
3 Supervisory Coaching	.206**	.008					
4 Salesperson Compensation	.013	-.138*	-.021				
5 Customer-Oriented Selling behavior	.532**	.137*	.131*	.048			
6 Diverse Performance Measurement	.308**	.063	.421**	.005	.206**		
7 Subjective Norms	.237**	.045	.284**	-.007	.203**	.250**	
8 Salespreson Tenure	.124*	.150*	-.061	-.236**	.088	.006	-.001

Notes: N=274; Correlation significance: *p≤.05; **p≤.001

The structural model was first assessed for collinearity issues. All inner VIF values were below the threshold of 5 indicated by (Hair Jr., Ringle and Sarstedt, 2011), suggesting that no critical collinearity issues existed within the structural model (Appendix 10).

The coefficient of determination (R^2) statistics and standardized path coefficients and their corresponding significance levels for the structural model were calculated and summarized in Tables 5-9 and 5-10, respectively. Appendix 11 summarizes total effects of model relationships. As previously discussed, PLS-SEM model quality is based on the model's predictive quality or R^2 values rather than a goodness-of-fit index common in CB-SEM (Hair Jr., Ringle and Sarstedt, 2011). Overall, the model had an R^2 value of 0.299 for customer-oriented selling behavior. This is consistent with a range of self-reported behavioral R^2 values (0.19 to 0.38) produced by previous theory of planned behavior survey research (Armitage and Conner, 2001).

Figure 5-1: Path Coefficients and R^2 Values



Effect size[25] (f^2) for each of the variables was also calculated (Appendix 12) to assess each variable's contribution to the endogenous variables within the model. *DPM* had a small effect on *attitudes* (f^2=0.066), a medium effect on *supervisory coaching* (f^2=0.215), and a small effect on *subjective norms* (f^2=0.023). *Supervisory coaching* also had a small effect on *subjective norms* (f^2=0.043). Finally, a*ttitudes* had a medium effect on *customer-oriented selling behavior* (f^2=0.293).

Q^2 values were also calculated for each endogenous construct to understand their predictive relevance, as suggested by Fornell and Larcker (1981). Q^2 values larger than

[25] Effect sizes in SmartPLS are generated by the software, using latent variable scores included in the model that are then excluded. This differs from results obtained by manually calculating effect sizes, due to model modifications, which is an incorrect approach to calculating effect size (Hair Jr. et al., 2017, p. 201).

zero were attained for *attitudes* (Q^2=0.044), *supervisory coaching* (Q^2=0.092), *customer-oriented selling behavior* (Q^2=0.123), and *subjective norms* (Q^2=0.067). Appendix 13 summarizes the Q^2 values for all endogenous variables.

Appendix 14 summarizes the results of the q^2 effect sizes on each endogenous construct. The effect size (q^2) was calculated to ascertain the relative impact each construct has on the predictive relevance of endogenous constructs. Overall, the relative effect of model variables on endogenous constructs was small.

As previously discussed in Section 4.5.3, there is debate surrounding the use of goodness-of-fit indices in evaluating PLS-SEM models. PLS-SEM is focused on prediction; thus, R^2 values are generally used to assess model quality. That being said, overall model fit was calculated using a conservative threshold of the SRMR index of 0.08 recommended by Henseler and Sarstedt (2013). Based on this threshold, model fit was considered good (*SRMR*=0.061) and significant ($p \leq 0.05$).

Table 5-9: Coefficient of Determination (R^2) Values

	Original Sample (β)	Sample Mean (β)	SD	*t*-statistic	*p*-Value
Attitudes	0.102 **	0.118	0.048	2.102	0.036
Perceived Behavioral Control	0.004	0.015	0.014	0.303	0.762
Supervisory Coaching	0.177 ***	0.192	0.055	3.252	0.001
Customer-Oriented Selling Behavior	0.299 ***	0.322	0.064	4.671	0.000
Subjective Norms	0.101 **	0.116	0.043	2.368	0.018

Notes: N=274; statistical significance: **p≤.05; ***p≤.001

Table 5-10: Path Coefficients

	Original Sample (β)	Sample Mean (β)	SD	*t*-statistic	*p*-Value
Attitudes => Customer-Oriented Selling Behavior	0.491 ***	0.492	0.065	7.593	0.000
behavioral Control => Customer-Oriented Selling Behavior	0.073	0.075	0.053	1.383	0.167
Supervisory Coaching => Attitudes	0.093	0.091	0.061	1.519	0.129
Supervisory Coaching => Behavioral Control	-0.022	-0.025	0.073	0.303	0.762
Supervisory Coaching => Customer-Oriented Selling Behavior	-0.002	-0.001	0.052	0.048	0.962
Supervisory Coaching => Subjective Norms	0.217 **	0.215	0.074	2.930	0.003
Salesperson Compensation => Customer-Oriented Selling Behavior	0.059	0.060	0.058	1.018	0.309
Diverse Performance Measurement => Attitudes	0.269 ***	0.281	0.084	3.218	0.001
Diverse Performance Measurement => Perceived Behavioral Control	0.072	0.081	0.072	1.004	0.315
Diverse Performance Measurement => Supervisory Coaching	0.421 ***	0.433	0.063	6.635	0.000
Diverse Performance Measurement => Customer-Oriented Selling Behavior	0.030	0.035	0.064	0.474	0.636
Diverse Performance Measurement => Subjective Norms	0.158 **	0.173	0.067	2.376	0.018
Subjective Norms => Customer-Oriented Selling Behavior	0.077	0.076	0.055	1.387	0.165
Salesperson Tenure => Customer-Oriented Selling Behavior	0.030	0.029	0.051	0.587	0.557

Notes: N=274; statistical significance: **p≤.05; ***p≤.001

5.7 Testing of Hypotheses

The following section summaries the results from the eight hypothesis tests conducted.

5.7.1 Hypothesis 1: DPM and Customer-Oriented Selling Behavior

Hypothesis 1 proposes that the use of DPM is positively associated with the customer-oriented selling behavior of salespeople. A review of path coefficients and total effects and their significance levels (Table 5-10 and Appendix 11) indicates that the relationship between DPM and customer-oriented selling behavior is both positive and statistically significant (β=0.205, $p\leq$0.05). Therefore, Hypothesis 1 is supported. The greater the measurement diversity in an SPMS, the more customer-oriented selling behavior is present.

5.7.2 Hypothesis 2: DPM, Subjective Norms, and Customer-Oriented Selling Behavior

Hypothesis 2 asserts that the relationship between the use of DPM and customer-oriented selling behavior is mediated by subjective norms. Appendix 15 indicates that the direct effect between DPM and customer-oriented selling behavior is positive but not statistically significant (β=0.030, p>0.05). Likewise, the indirect effect of the use of DPM on customer-oriented selling behavior through subjective norms is positive but not statistically significant (β=0.021, p>0.05). Thus, Hypothesis 2 is not supported.

While a measure-diverse performance measurement system appears to be positively and significantly related to higher levels of subjective norms (β=0.158, $p\leq$0.05), subjective norms do not appear to be significantly related to customer-oriented selling behavior (β=0.077, $p\geq$0.05) to a sufficient level to generate a statistically significant interaction effect.

5.7.3 Hypothesis 3: DPM, Perceived Behavioral Control, and Customer-Oriented Selling Behavior

Hypothesis 3 asserts that the relationship between the use of DPM and customer-oriented selling behavior is mediated by perceived behavioral control. Appendix 15 indicates that the direct effect between DPM and customer-oriented selling behavior is positive but not statistically significant (β=0.030, p>0.05). Additionally, the indirect effect of DPM on customer-oriented selling behavior through perceived behavioral control is positive but not statistically significant (β=0.005, p>0.05). Therefore, Hypothesis 3 is not supported.

The relationship between DPM and perceived behavioral control is positive but not statistically significant (β=0.072, p>0.05). Likewise, the relationship between perceived behavioral control and customer-oriented selling behavior is positive but not statistically significant (β=0.073, p>0.05). There appears to be no significant relationship between measure-diverse performance measurement systems and salesperson perceived behavioral control. In addition, within the context of this study, no significant relationship appears to exist between behavioral control and customer-oriented selling behavior.

5.7.4 Hypothesis 4: DPM, Attitudes, and Customer-Oriented Selling Behavior

Hypothesis 4 proposes that the relationship between the use of DPM and customer-oriented selling behavior is mediated by salesperson attitudes. Appendix 15 indicates that the direct effect between DPM and customer-oriented selling behavior is positive but not statistically significant (β=0.030, p>0.05). However, the indirect effect of DPM on customer-oriented selling behavior through attitudes is both positive and statistically significant (β=0.132, $p\leq$0.05). Therefore, Hypothesis 4 is supported.

The relationship between DPM and salesperson attitudes is positive and statistically significant (β=0.269, $p\leq$0.001). Likewise, the relationship between salesperson attitudes and customer-oriented selling behavior is positive and statistically significant (β=0.491, $p\leq$0.001). Thus, there appears to be a significant relationship

between measure-diverse performance measurement systems and customer-oriented selling behavior through salesperson attitudes. *Attitudes* appears to fully mediate the relationship between DPM and customer-oriented selling behavior.

5.7.5 Hypothesis 5: DPM, Supervisory Coaching, and Customer-Oriented Selling Behavior

Hypothesis 5 proposes that the relationship between the use of DPM and customer-oriented selling behavior is mediated by supervisory coaching. Appendix 15 indicates that the direct effect between DPM and customer-oriented selling behavior is positive but not statistically significant (β=0.030, p>0.05). Likewise, the indirect effect of the use of *DPM* on customer-oriented selling behavior through supervisory coaching is not statistically significant (β=-0.001, p>0.05). Thus, Hypothesis 5 is not supported.

While a DPM system appears to be positively and significantly related to higher levels of supervisory coaching as anticipated (β=0.421, $p\leq$0.001), supervisory coaching does not appear to be significantly related to customer-oriented selling behavior (β=-0.002, p>0.05).

5.7.6 Hypothesis 6: DPM, Supervisory Coaching, and Subjective Norms

Hypothesis 6 proposes that the relationship between the use of DPM and subjective norms is mediated by supervisory coaching. Appendix 15 indicates that the direct effect between DPM and subjective norms is both positive and statistically significant (β=0.158, $p\leq$0.05). In addition, the indirect effect of DPM on subjective norms through supervisory coaching is both positive and statistically significant (β=0.091, $p\leq$0.05). Therefore, supervisory coaching partially mediates the relationship between DPM and subjective norms. Therefore, Hypothesis 6 is supported.

The relationship between DPM and salesperson supervisory coaching is positive and statistically significant (β=0.421, $p\leq$0.001). Likewise, the relationship between supervisory coaching and subjective norms is positive and statistically significant (β=0.217, $p\leq$0.05). Therefore, there appears to be a significant relationship between

measure-diverse performance measurement systems and subjective norms, which is partially mediated by supervisory coaching.

5.7.7 Hypothesis 7: DPM, Supervisory Coaching, and Perceived Behavioral Control

Hypothesis 7 proposes that the relationship between the use of DPM and perceived behavioral control is mediated by supervisory coaching. Appendix 15 indicates that the direct effect between DPM and perceived behavioral control is positive but not statistically significant (β=0.072, p>0.05). In addition, the indirect effect of DPM on perceived behavioral control through supervisory coaching is not statistically significant (β=-0.009, p>0.05). Therefore, Hypothesis 7 is not supported.

There appears to be no relationship, direct or indirect, between measure-diverse performance measurement systems and salesperson perceived behavioral control towards customer-oriented selling behavior.

5.7.8 Hypothesis 8: DPM, Supervisory Coaching and Attitudes

Hypothesis 8 proposes that the relationship between the use of DPM and salesperson attitudes is mediated by supervisory coaching. Appendix 15 indicates that the direct effect between DPM and attitudes is both positive and statistically significant (β=0.269, $p\leq$0.001). However, the indirect effect of DPM on salesperson attitudes through supervisory coaching, while positive, is not statistically significant (β=0.091, p>0.05). Therefore, Hypothesis 8 is not supported.

While measure-diverse performance measurement systems appear to be related to salesperson attitudes, this relationship does not appear to be mediated through supervisory coaching, given the weak relationship between supervisory coaching and salesperson attitudes (β=0.093, p>0.05).

5.8 Additional Analysis and Results

The following subsection describes the results of additional analysis conducted beyond the testing of the proposed hypotheses.

5.8.1 Supervisory Coaching Influences

Hypotheses 5 through 8 explored the interactive effects of supervisory coaching on: (1) the relationship between DPM and customer-oriented selling behavior and (2) the relationship between DPM and salesperson attitudes, subjective norms, and perceived behavioral control. In addition, a multiple mediation analysis was conducted to get a "more complete picture of the mechanisms through which an exogenous construct affects an endogenous construct" (Hair Jr. et al., 2017, p. 237), by examining the interaction effect from attitudes, subjective norms, and perceived behavioral control simultaneously on the relationship between supervisory coaching and customer-oriented selling behavior.

Appendix 15 results indicate that neither the direct path (β=-0.002, p>0.05) nor the total indirect path between DPM and customer-oriented selling behavior were significant (β=0.061, p>0.05). Therefore, a multiple mediation effect does not exist and the individual indirect effects from salesperson attitudes, subjective norms, or perceived behavioral control do not need to be further considered (Hair Jr. et al., 2017, p. 237). Within the context of this study, supervisory coaching appears to have no significant influence on the customer-oriented selling behavior of salespeople.

5.8.2 Control Variables

Salesperson *tenure* and *salesperson compensation* were used as control variables within the model. Model results indicate that neither salesperson tenure (β=0.030, p>0.05) nor salesperson compensation (β=0.059, p>0.05) has a statistically significant relationship with customer-oriented selling behavior (Table 5-9).

Further analysis was undertaken using the two control variables to examine model output differences between high-tenured salespeople versus those salespeople with lower tenure. In addition, salespeople operating with a high variable-pay

compensation structure versus those with a low variable-pay compensation structure were also compared. Both group comparisons were undertaken using the multigroup analysis procedure within SmartPLS, described above in Section 4.5.5.

Results, summarized in Appendices 16 and 17, indicate no statistically significant differences in model relationships (path coefficients) or R^2 values when comparing salespeople with high variable compensation[26] to those with low variable compensation or when comparing salespeople with high role tenure[27] to those with low role tenure.

5.9 Chapter Summary

In summary, eight hypotheses were tested. Hypothesis 1, which proposed that a positive relationship existed between the use of measure-diverse performance measurement systems in sales and customer-oriented selling behavior was supported by the data. As expected, the use of a more diverse set of performance measures including both financial and non-financial measures appear to be associated with higher levels of salesperson customer-oriented selling behavior. Hypotheses 2 and 3 are not supported, as results did not indicate that subjective norms or behavioral control mediate the relationship between DPM and customer-oriented selling behavior. Hypothesis 4 was supported. Data indicates that salesperson attitudes mediates the relationship between DPM and salesperson customer-oriented selling behavior.

The remaining hypotheses tested the influence that supervisory coaching has on customer-oriented selling behavior. Hypothesis 5, which proposed that supervisory coaching mediated the relationship between DPM and customer-oriented selling behavior was not supported. Additionally, Hypotheses 6 and 7 were not supported, as results indicate that supervisory coaching does not mediate the relationships between

[26] High variable-pay compensation includes anyone with more than 30% (the median value) of their pay coming from variable pay.
[27] High role tenure is anyone with more than five years (the median value) of sales experience in their current role or a similar one.

DPM and attitudes or behavioral control. However, data did support the argument that supervisory coaching mediates the relationship between DPM and subjective norms.

Lastly, neither of the two control variables utilized within this thesis (*salesperson tenure* or *salesperson compensation*) appear to have any statistically significant impact on any of the hypotheses regarding the relationship between DPM and customer-oriented selling behavior. Further multigroup analysis confirmed this finding, as no significant model output differences could be found when comparing high-tenured sample respondents to low-tenured respondents or when comparing high variable-pay respondents to low variable-pay respondents.

6 DISCUSSION AND CONCLUSION

This chapter discusses the results presented in Chapter 5. It is organized into four sections. Section 6.1 discusses the implications of the research findings and the key contributions made. Section 6.2 addresses the limitations associated with the research study. Section 6.3 discusses areas for further research based on the findings from this study. Section 6.4 provides final research conclusions.

6.1 Research Implications and Key Contributions

The purpose of this research was twofold. First, the research sought to understand the impact that one type of organizational communication channel, the SPMS, had on salesperson behavior and its underlying antecedents. Specifically, the research looked at the impact from the use of a measure-diverse SPMS on customer-oriented selling behavior, directly and through interaction effects from salesperson attitudes, subjective norms, and perceived behavioral control. Second, the research sought to understand the influence a second communication channel, supervisory coaching, had on the relationship between the a measure-diverse SPMS and the antecedents of customer-oriented selling behavior. Specifically, this sought to study the interaction effects of supervisory coaching on the relationship between a measure-diverse SPMS and salesperson attitudes, subjective norms, and perceived behavioral control. These hypotheses were tested using survey data from salespeople operating within B2B industry sectors across Canada, the United States, and the United Kingdom in 2017. The following subsections discuss the research implications associated with the research findings and the key contributions made.

6.1.1 Research Implications

Hypothesis 1 argued for a positive relationship between a measure-diverse SPMS and customer-oriented selling behavior. This hypothesis was tested through PLS-SEM using a bootstrapping technique to evaluate the statistical significance of the derived path

coefficients and total effects between model relationships. Results indicated support for this hypothesis.

ABT suggests that communication vehicles within the organization, such as a firm's performance measurement system, focus organizational member attention and effort towards specific activities over other potential activity on which they could focus their limited cognitive capabilities (Ocasio, 1997). Within this study, survey data indicates that the use of financial results to measure individual sales performance appears almost ubiquitous, with 92.6% stating that financial results, such as revenue attainment, are either *often*, *very often*, or *always* used to measure their sales performance. Given the almost ubiquitous use of financial measures, the true differences in measurement diversity across the study sample come from the depth and breadth of non-financial measurement use, including those measures that take a customer-oriented perspective, such as customer satisfaction, customer retention, and customer life-time value. Thus, it is not surprising that higher levels of measurement diversity within a firm's SPMS would focus attention towards customer-oriented type behaviors. In addition, these results are consistent with other work that has demonstrated a link between the use of more diverse measures and specific employee behavior (Oliver and Anderson, 1994; Ittner, Larcker and Rajan, 1997).

Hypotheses 2, 3, and 4 proposed that the relationship between a measure-diverse SPMS and customer-oriented selling behavior was mediated by salesperson subjective norms, perceived behavioral control, and attitudes, respectively. All three hypotheses were tested through a PLS-SEM bootstrapping procedure, which allowed for the identification of partial, full, or negligible mediation effects. Hypothesis 4 argued that salesperson customer-oriented attitudes would mediate the relationship between a measure-diverse SPMS and customer-oriented selling behavior. The data confirms support for Hypothesis 4. This is consistent with numerous studies that use TPB to test the relationship between behavioral antecedents, behavioral intention, and actual behavior, which indicates strong support for *attitudes* as a predictor of behavioral intention and actual behavior within a sales setting and across other contexts (Wang *et al.*, 2007; Fu *et al.*, 2010; Holdershaw, Gendall and Wright, 2011).

Hypothesis 2 argued that customer-oriented normative beliefs held by salespeople would mediate the relationship between a measure-diverse SPMS and customer-oriented selling behavior, while Hypothesis 3 argued that salesperson customer-oriented perceived that behavioral control would mediate the relationship between a measure-diverse SPMS and customer-oriented selling behavior. The data indicates that both hypotheses are refuted.

The results for Hypothesis 2 are only somewhat surprising. While TPB argues for three antecedents (attitudes, subjective norms, and perceived behavioral control) of behavioral intention and subsequent behavior, scholars have had difficulty empirically replicating results for subjective norms as a predictor of behavioral intention (Legris, Ingham and Collerette, 2003; Hubner and Florian, 2006; Fu *et al.*, 2010), "leading researchers to conclude that its role in influencing intentions may be context dependent" (Fu et al., 2010, p. 65). Shepperd, Hartwick and Warshaw (1988) suggest that *subjective norms* is the weakest component of the TPB model, and others have chosen to remove it from the framework completely (Sparks *et al.*, 1995). Based on an analysis of 30 different behaviors, Trafimow and Finlay (1996) argue that individuals can be primarily attitude- or subjective norm-driven in their behavior, implying that for any one behavioral application, one of the two antecedents will be rather weak.

In addition, behavioral intention, the mechanism linking the antecedents to actual behavior, is "assumed to capture the motivational factors which influence behavior" (Ajzen, 1991, p. 181). Deci, Koestner and Ryan (1999) indicate that extrinsic motivational mechanisms may undermine intrinsically motivated behavior. Fu et al. (2010), suggest that, within the context of individual selling behavior, attitudes are likely intrinsically motivated while subjective norms are more associated with extrinsic motivational factors, given the power of the normative group (i.e., management) to dictate rewards and recognition for compliance. Thus, the motivation to behave in a specific fashion, generated by normative beliefs, may be weaker within a supervisor-employee context.

Finally, *behavioral intention* and *actual behavior* are distinct constructs. While *behavioral intention* has been shown to be a predictor of actual behavior,[28] other confounding factors, not included within the TPB framework, reduce its correlation and predictive power. Thus, the predictive power of the antecedents used within this study may not be as strong when linked directly to actual[29] customer-oriented selling behavior rather than indirectly, through behavioral intention.

Similar to Hypothesis 2, the results of Hypothesis 3 are somewhat surprising given perceived behavioral control's prominence as a direct predictor of actual behavior within TPB. However, a number of explanations may account for this result. First, several authors have argued that *perceived behavioral control* may be a more complex construct than has been conceptualized to date and that it is not equivalent to the current definition, which is more narrowly defined as self-efficacy (Bandura, 1992; Terry, 1993). Still others support the notion of using an alternative construct, *perceived difficulty*, rather than *perceived behavioral control* (Sparks, Guthrie and Shepherd, 1997) within the TPB framework. While acknowledging this debate, the current study uses a more traditional perspective of *perceived behavioral control* recommended by Ajzen (1991), which is likened to self-efficacy, or one's confidence in one's ability to perform (Ajzen, 1991, p. 184). Thus, the difference in construct conceptualization and operationalization may be weakening path coefficient statistical significance and overall predictive power.

Second, according to Ajzen (1991), three criteria must be valid for perceived behavioral control to support behavioral prediction: (1) the measure of perceived behavioral control being undertaken must correspond to the behavior in question; (2) perceived behavioral control must remain stable during the period in which actual behavior is measured; and (3) perceived behavioral control must reflect actual control. Based on overall research design and survey development, both criteria (1) and (2) have

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[28] Meta-analysis (Armitage and Conner, 2001) indicates a correlation of behavioral intention with actual behavior of R=0.47, explaining 22% of the variance (R^2=0.22).

[29] The term "actual customer-oriented selling behavior" is used within this thesis to differentiate it from behavioral intention, however, within the context of this study, actual behavior is self-reported rather than observed behavior.

been met. Item wording within the survey ensured that the constructs of *customer-oriented selling behavior* and *perceived control* of that behavior were consistent. In addition, given the use of a self-reported survey, no time lapse occurred during the reporting of behavioral control or actual behavior, maintaining the required stability of perceived behavioral control.

With regards to criterion (3), differences between perceived and actual behavioral control can occur when salespeople have insufficient knowledge regarding the behavior, when resources have changed, or when the buying situation has changed, causing "unfamiliar elements… [to]…enter the situation" (Ajzen, 1991, p. 185). Salespeople are boundary spanners, which can introduce uncontrollable situational factors, heavily impacting their role (Cravens and Woodruff, 1973; Chonko *et al.*, 2000; Huffman and Cain, 2000; Lips, Dolle and Kuhnemundt, 2012). Thus, it is conceivable that some or all of these control issues have occurred for sample participants, increasing the difference between actual and perceived behavioral control and reducing its predictive power towards customer-oriented selling behavior within this study. Ajzen (1991) suggests that, in any particular application of TPB, *perceived behavioral control* may or may not be needed to improve overall predictive power.

Hypotheses 6, 7, and 8 argued that *supervisory coaching* mediates the relationship between *diverse sales performance measurement* and *subjective norms, perceived behavioral control*, and *attitudes*, respectively.

As expected, Hypothesis 6, which argued that supervisory coaching mediates the relationship between DPM and *subjective norms*, was supported by the data. An SPMS acts as communication channel to distribute attentional focus by communicating organizational outcomes and behavioral expectations to organizational members. However, non-financial measures not captured through the firm's accounting systems can only be collected via supervisory observation (Prendergast and Topel, 1993) and communicated to salespeople through feedback activities, such as supervisory coaching.

This is supported by the statistically significant relationship between *DPM* and *supervisory coaching* in the study results. Using performance measurement information during feedback and role modeling, characteristic of coaching activities (Rich, 1998),

supervisors clarify their own position regarding the importance of customer-oriented selling behavior, likely increasing the normative beliefs regarding customer-oriented selling of their salespeople.

Furthermore, supervisory coaching appears only partially to mediate the relationship between DPM and subjective norms. This is logical, given that, as a communication channel, an SPMS has the ability to communicate what is important and what is not important to management (Ukko, Tenhunen and Rantanen, 2007). At least a portion of the diverse performance measures utilized can be communicated directly to salespeople without supervisory coaching through the firm's SPMS. Thus, a measure-diverse SPMS plays a statistically significant direct role in increasing levels of subjective norms.

Hypotheses 7 and 8 argued that supervisory coaching mediates the relationship between a *measure-diverse SPMS* and *perceived behavioral control* and *attitudes*, respectively. Not surprisingly, results indicated a positive and statistically significant relationship between DPM and supervisory coaching. A measure-diverse SPMS allows sales managers to observe, collect, and communicate activity and capability-based information to their salespeople during supervisory coaching sessions, allowing for more frequent and potentially richer discussions that increase attentional focus regarding employee behavior and performance (Pousa and Mathieu, 2013).

Study results concerning the direct relationship beween supervisory coaching and perceived behavioral control, as well as the direct relationship between supervisory coaching and attitudes, were more surprising. Coaching activity has been shown to increase perceived behavioral control or self-efficacy levels across a number of contexts within and outside the field of sales (Goker, 2006; Moen and Allgood, 2009; Onyemah, 2009; Baron and Morin, 2010). In addition, coaching discussions provide an opportunity for supervisors to identify behavioral opportunities as well as identify resource gaps and other behavioral obstacles (Ellinger, Ellinger and Keller, 2003), allowing sales managers to raise attention to specific issues and alternative courses of action (Corcoran *et al.*, 1995; Pousa, 2012), improving salespeople's confidence to

address these issues more effectively (Challagalla and Shervani, 1996; Armitage and Conner, 2001).

The direct path between supervisory coaching and attitudes, while positive, was not statistically significant. This is surprising, given past theoretical and empirical support for the notion that communication channels, such as supervisory coaching, filter and focus selective attention on attitudinal beliefs over other beliefs, increasing specific behavioral attitudes over other attitudes (Ocasio, 1997; Wang, Morey and Srivastava, 2014; Saunders and Frazier, 2017; Ocasio, Laamanen and Vaara, 2018).

The weak relationship between supervisory coaching and perceived behavioral control and supervisory coaching and attitudes ultimately caused a non-signficant mediation effect, refuting both hypotheses. Given past empirical and theoretical support for a relationship between supervisory coaching and perceived behavioral control and between supervisory coaching and attitudes, other explanations need to be visited.

Both attitudes and perceived behavioral control are belief-specific constructs (Armitage and Conner, 2001). Attitudes are driven by beliefs regarding a particular behavior (Ajzen, 1991), while perceived behavioral control does not measure the general state of confidence of an employee regarding every situation and behavior, but rather only specific situations and behaviors. The supervisory coaching construct utilized in this study is a general coaching scale that measures the perceived level of coaching activity from the coachee's perspective (Ellinger, Ellinger and Keller, 2003), rather than measuring the amount of coaching related to customer-oriented selling behavior. Thus, it is quite conceivable that supervisors used supervisory coaching sessions to influence salesperson attitudes and behavioral control of other behaviors and capabilities deemed important to the superivsor, such as deal-closing skills. While we know a positive relationship exists between coaching and subjective norms regarding customer-oriented selling behavior, which suggests that customer-oriented selling behavior does have a place within the supervisor's coaching priorities, we do not know if other selling behaviors or salesperson capabilities are of higher importance and of greater focus during supervisory coaching discussions, thus impacting the *coaching–perceived behavioral control* and *coaching–attitude* relationship strength.

Hypothesis 5 proposed that *supervisory coaching* mediates the relationship between *DPM* and *customer-oriented selling behavior*. Hypothesis 5 was not supported by the data. While a positive and statistically significant relationship exists between DPM and supervisory coaching, the relationship between supervisory coaching and customer-oriented selling behavior was not significant. Furthermore, upon conducting additional, multiple mediation analysis, which looked at the relationship between supervisory coaching and customer-oriented selling behavior through all interaction effects (attitudes, subjective norms, and perceived behavioral control) simultaneously, no significant relationship was identified. This suggests that, within the context of this study, supervisory coaching had no influence on salesperson customer-oriented selling behavior.

This result is somewhat surprising, given that the coaching literature indicates substantial evidence of a relationship between supervisory coaching and employee behavior (Doyle and Roth, 1992; Good, 1993a; Onyemah, 2009; Ellinger *et al.*, 2011) and the sales literature indicates specific support for the influence of supervisory coaching on customer-oriented selling behavior (Pousa and Mathieu, 2013). As discussed above, supervisory coaching's inability to influence customer-oriented selling behavior directly or indirectly through salesperson attitudes, subjective norms, and perceived behavioral control may be associated with the nature of the coaching construct. Within this study, supervisory coaching was measured with a general scale, measuring overall coaching activity (Ellinger, Ellinger and Keller, 2003). Sales coaching can involve numerous topics, such as closing techniques, service issues, or how to position one's product versus competitors, and may not include coaching activity related to customer-oriented selling, reducing the predictability of this scale. Therefore, to be more useful, scales of this nature may need to measure the level of coaching activity targeted at a particular selling behavior in the future.

6.1.2 Key Contributions

Easterby-Smith et al. (2004, p.372) claim that social science knowledge contributions can be made in one of two ways: (1) by summarizing or categorizing existing knowledge in a new way to draw insights and demonstrate relevance; or (2) by

identifying an existing gap in knowledge, and revealing how past research is "incomplete, inadequate or incommensurate." Based on this logic, this paper makes seven contributions to knowledge.

First, this research contributes to the ABT literature exploring the links between organizational (macro) level and individual (micro) level attention structures (Ocasio and Joseph, 2005; Oteman and Lienden, 2014). Two contributions here are of note.

ABT scholars have identified a need to expand the role of communication vehicles within the ABT framework to address a "more dynamic approach to attention allocation" (Ocasio, Laamanen and Vaara, 2018, p. 156). They suggest that for this expanded role to occur, future investigation needs to occur into "the content and practices of communication… [and] …social interaction that builds on speech, gestures, texts, discourses, and other means... [as well as into] …communication through social interactions, both within and between communication channels" (Ocasio, Laamanen and Vaara, 2018, p. 157).

First, in support of this avenue of investigation, this study expands the inventory of potential organizational communication channels by: (1) empirically testing two additional communication vehicles not previously considered in the literature, namely, sales performance measurement systems and supervisory coaching, and their attentional impact on employee-level behavior within a sales context; and (2) assessing the impact between these two communication channels.

Second, the study proposes and tests an expanded framework that links macro-level ABT to micro-level TPB in an effort to further explain how attention-focusing communication channels, such as an SPMS, may influence individual organizational member's actions. This is important, as ABT scholars are looking to broaden the attentional frameworks with information-processing limitations (Ocasio, Laamanen and Vaara, 2018) and embrace other frameworks that support a deeper understanding of communication, going beyond a "pipes of information… [approach to an] …encoding, interpreting, and focusing" approach (Ocasio, 1997, p. 189). Thus, understanding how attentional stimuli is processed into individual behaviors and actions becomes an important aspect of ABT expansion.

Next, this research contributes to the performance measurement and sales performance and control literature that looks at the impact that measures of performance have on employee-level outcomes (Fang, Evans and Zou, 2005; Onyemah, Rouziès and Panagopoulos, 2010; Miao and Evans, 2012). It offers two contributions in this area.

First, it demonstrates a clear link between the use of more measure-diverse performance measurement systems and customer-oriented selling behavior (Ittner, Larcker and Randall, 2003; Davis and Albright, 2004; Van der Stede, Wim, Chow and Lin, 2006; Franco-Santos, 2007; Homburg, Artz and Wieseke, 2012). It has been over 25 years since performance measurement frameworks, such as the balanced scorecard (Kaplan and Norton, 1996), became a critical aspect of management research and was described as "the largest impact upon…[performance management] literature" (Gawankar, Kamble and Raut, 2015, p. 9). Yet, little is known about the effects a diverse set of individual performance measures has on salesperson behavior. While research into the use of combinations of performance measures as employee control levers has provided some insight (Jaworski and MacInnis, 1989; Challagalla and Shervani, 1996; Ramaswami, 1996), the performance measurement literature and, in particular, the sales performance measurement literature have not substantially addressed the impacts that more balanced performance measurement system designs have on selling behavior.

Second, the use of compensation structure as a control variable within this study provides an opportunity to understand the potential impact that conflicting sales control systems elements have on customer-oriented selling behavior. A measure-diverse SPMS is more aligned to a behavior-based view of sales control, whereas a less diverse, financially focused SPMS is associated with an outcome-based control system (Anderson and Oliver, 1987). One characteristic of a behavior-based control system is that it tends to have a high fixed-pay compensation structure, whereas an outcome-based control system is made up of a high variable-pay compensation.

Study results indicate no statistically significant difference between customer-oriented selling behavior when the sales control system is in alignment (high measurement diversity + low variable pay) and when it is out of alignment (high

measurement diversity + high variable pay). This is important, as most studies to date regarding control levers have only considered combinations of control variables, rather than examining the impact from a complete set of sales performance measures used within a typical B2B salesforce. Salespeople, as boundary spanners, are faced with a multitude of competing and potentially conflicting objectives (Evans *et al.*, 2012), thus a more holistic understanding of the impacts associated with a more measure-diverse SPMS adds to the sales control and sales performance literature.

Lastly, this study contributes to the sales coaching literature concerned with the effects that sales coaching can have on salesperson behavior and performance (Onyemah, 2009; Pousa and Mathieu, 2013; Shannahan, Shannahan and Bush, 2013). Two contributions are put forward in this area.

First, this study suggests that alternative interaction effects that are currently not being addressed in the literature may be occurring in sales coaching investigations. Using ABT, this study argues that supervisory coaching is a communication channel and, within this context, that it exhibits mediating rather than moderating interaction effect properties. This is important as, to date, supervisory coaching in its role as one of many internal situational factors, such as culture, has been primarily conceived as a moderating variable to investigate alternative contingency rationales for behavioral and performance results (Good, 1993b). Depending on the application, researchers may want to consider supervisory coaching's mediating effects in future research.

Second, the benefits of sales coaching are frequently discussed in the popular trade press and consulting papers but scholarly knowledge on this topic has not kept pace. This study contributes to the field by empirically examining the impact that supervisory coaching has on the antecedents of salesperson behavioral intention towards customer-oriented selling and actual behavior. In addition, the study breaks new ground in examining the influence that supervisory coaching has on the relationship between a measure-diverse SPMS and salesperson subjective norms by demonstrating how supervisory coaching, acting as an organizational communication channel, mediates this relationship. This is important because, up to now, the richness of more measure-diverse performance measurement system data has been discussed in terms of its usefulness in

coaching discussions (Oliver and Anderson, 1994; Joshi and Randall, 2001), but little work has been done to test empirically its influence on supervisory coaching activity levels.

6.1.3 Implications for Practice

One of the main catalysts for undertaking this research study was the frequent occurrence of high-profile cases of salespeople behaving badly that have permeated the press over the past decade (Ordonez *et al.*, 2009b; Freed, 2017; Johnson, 2017; Young, 2017). These stories have cited the overemphasis of financial measures in evaluating salesperson performance as one of the main catalysts for salespeople acting in a non-customer-oriented fashion. Within this context, this research has a number of implications for practice.

First, sales performance measures and performance measurement systems do not simply monitor performance; they also influence behaviors through attitudes and normative beliefs. In particular, this study demonstrates that the use of a more measure-diverse SPMS can increase salesperson customer-oriented selling behavior. Thus, when evaluating the effectiveness of one's SPMS, sales managers need to go beyond ensuring that measures of performance are psychometrically correct or appropriate from a performance-management perspective; they also need to consider the employee outcomes generated by their SPMS. As an example, for those organizations looking for ways to implement a more market-oriented business strategy throughout their organization in the form of customer-oriented selling behavior, a more measure-diverse performance measurement system would be considered more effective than a less-diverse system, as the former would be aligned to the market-oriented outcomes desired by the firm.

Second, sales coaching has become an important activity in many sales organizations (Rich, 1998; Pousa and Mathieu, 2013). This research offers two important implications for practice in this area. First, for those organizations wanting to generate higher levels of coaching activity between sales managers and their sales

teams, one factor they should consider is the level of measurement diversity within their SPMS. A measure-diverse SPMS can provide richer, behavior-based, and capability-based information (Challagalla and Shervani, 1996) on the basis of which more frequent and effective supervisory coaching activities may occur. Second, this research indicates that supervisory coaching, while generally considered an employee development tool, is also a legitimate communication channel for influencing the normative beliefs of salespeople. This is important, as it provides yet another medium for communicating departmental, business unit, or company priorities, objectives, and cultural values.

6.2 Study Limitations

Like most social science research, the results of this study are subject to a number of limitations. First, the random sample used in this study was augmented with a convenience sample to increase sample size. While the use of a convenience sample is inconsistent with the positivist nature of this research, procedures were undertaken to mitigate some of the issues associated with its use which included ensuring convenience sample respondents met sample frame requirements and assessing the statistical differences between each sample group's demographics. Analysis indicated that the convenience sample was biased towards higher levels of salesperson tenure and the use of presentation skills for performance measurement. In addition, analysis was also run to evaluate sample bias between respondents and non-respondents of this study. Results indicated that, compared to the non-respondents, respondents were biased towards a greater use of non-financial measures – such as customer satisfaction, product knowledge, and persuasion skills – as measures of performance. This may be due to the fact that some of those salespeople who are primarily measured on financial outcomes would see the participation in this study as taking time away from achieving sales results and, therefore, from their compensation. Future research should consider survey response rate differences amongst behavior-based and outcome-based salespeople.

In addition, the final sample size (N=274), while considered sufficient for the statistical methods conducted on the complete sample, prevented splitting the sample into three groups (low, medium, and high) during multigroup analysis of sales tenure

and the variability of salesperson compensation structures. Instead, the sample had to be split in two, at the median, which meant that, during analysis, respondents with very similar tenure or compensation structure values, but on different sides of the median, were categorized as very different.

Second, the use of the social media site LinkedIn as the data gathering vehicle for this research created two limitations. First, it created a potential sample bias in that a salesperson would have to be a LinkedIn member to have an opportunity to be selected for the research study. Second, stratified sampling selection of research invitations was constrained by LinkedIn membership distribution and LinkedIn InMail distribution procedures; thus, the final random sample was not proportionally equivalent to the sample frame or population from an industry sector perspective. This was exasperated further by the inclusion of a convenience sample to increase overall sample size. Both the random sample generated by LinkedIn and the convenience sample were highly skewed towards salespeople within the business information services sector, reducing the generalizability of these results.

Third, measure conceptualization and operationalization may have introduced a number of study limitations. For the purposes of this study, *perceived behavioral control* was conceptualized as a single-item measure calculating the confidence score that salespeople reported regarding their ability to sell in a customer-oriented manner. This approach conceptualizes perceived behavioral control in line with the self-efficacy-based conceptualization initially used by (Ajzen, 1991), which is consistent with other sales research (Fu *et al.*, 2010) but debated by numerous other scholars as to its applicability (Bandura, 1992; Terry, 1993; Sparks, Guthrie and Shepherd, 1997). In addition, to reduce the length of the survey instrument, *customer-oriented selling behavior* was operationalized using a 5-item scale developed by Thomas, Soutar and Ryan (2001) rather than the original 12-item scale developed by Saxe and Weitz (1982). During measurement model evaluation, this 5-item scale was reduced to three items, potentially impacting content validity and results. Lastly, *supervisory coaching* was operationalized using a previously published scale, frequently used in coaching research; however, this captures the general level of coaching activity occurring between supervisor and employee, rather than the specific level of coaching related to

developing customer-oriented selling behavior, potentially reducing its predictive power.

In terms of research design, a decision was taken to not capture the construct *behavioral intention*, given concerns about survey respondents' ability to differentiate between *customer-oriented selling attitudes, customer-oriented selling behavioral intention,* and *customer-oriented selling behavior* within a single survey. Both *customer-oriented attitudes* and *customer-oriented selling behavior* had previously published scales readily available for use that also had been previously evaluated in terms of their discriminant validity from each other. Contrariwise, there was no existing scale for behavioral intention available. The exclusion of behavioral intention may have reduced overall model predictive power and path coefficient relationship significance for those behavioral antecedent-based hypotheses refuted in this study.

Finally, the use of a cross-sectional, single-rater survey introduced two limitations to the results of this research. First, as a study based solely on single-rater responses, the research remains susceptible to common methods variance (Podsakoff *et al.*, 2003). Although numerous ex-anti and ex-post remedies were undertaken during research design and analysis both to mitigate CMV and to test for its possible presents, common methods bias may still exist. Second, and consistent with all cross-sectional research, the cross-sectional design of this study prohibits the claim of causal relationships between variables. Instead, this study can only claim associations and statistical predictability between variables.

6.3 Areas of Further Research

Results from this study raise a number of issues and opportunities for future research. First, mixed results were achieved in terms of the strength and predictive power of TPB antecedents. Future research may consider alternative conceptualizations of each of the three variables, particularly *perceived behavioral control,* given its weak relationship with supervisory coaching and customer-oriented selling behavior. Similarly, future

research may want to introduce behavioral intention into the current model to reassess antecedent relationships and the predictive power of the model.

Second, the lack of relationship between supervisory coaching and salesperson attitudes and behavioral control is surprising. Future research may want to consider the development of specific coaching scales that measure coaching levels specific to a particular behavior, such as customer-oriented selling, rather than using a general-purpose coaching scale, as was done for this study.

Third, this research underscores the ability of a measure-diverse SPMS to predict customer-oriented selling behavior. Future research may want to consider the role that DPM plays in predicting other important selling behaviors, such as adaptive behavior or organizational citizenship. Adaptive behavior has been identified as a key antecedent of salesperson performance (Churchill Jr. *et al.*, 1985), while organizational citizenship is cited as an important behavior of team selling (Podsakoff and Mackenzie, 1994). Like customer-oriented selling, organizational citizenship requires salespeople to trade-off individual, self-serving objectives for objectives that serve the team. Thus, this particular behavior would appear to benefit greatly from the ABT–TPB framework developed for this study.

Finally, while this study suggests a positive and significant relationship between measure-diverse SPMSs and customer-oriented selling behavior, it is unclear what impact higher levels of measurement diversity have on salesperson financial outcome performance. This would be an important line of inquiry given contradictory evidence concerning the use of DPM and financial outcomes at an organizational level (Said, HassabElnaby and Wier, 2003; Hoque, 2004; Franco-Santos, 2007).

6.4 Research Conclusions

The purpose of this research study was to answer two research questions. First, *what effect does the level of measurement diversity within an SPMS have on customer-oriented selling behavior?* Second, *to what extent does supervisory coaching influence*

the relationship between measurement diversity within an SPMS and customer-oriented selling behavior?

With regards to the first research question, measurement diversity within a firm's SPMS is positively and significantly related to customer-oriented selling behavior. This relationship appears to be fully mediated by salesperson customer-oriented attitudes. With regards to the second research question, supervisory coaching does not appear to significantly influence the relationship between a measure-diverse SPMS and customer-oriented selling behavior. While a positive and significant relationship exists between DPM and supervisory coaching, the relationship between supervisory coaching and customer-oriented attitudes is not significant. Because *attitudes* appear to be the only significant predictor of actual behavior within this study, the non-significant relationship between it and supervisory coaching negates any possible effects supervisory coaching may have on customer-oriented selling behavior. Supervisory coaching does appear to positively and significantly influence subjective norms; however, *subjective norms* does not appear to influence customer-oriented selling behavior within the context of this study.

Overall conclusions from this study are as follows. First, given the overwhelming use of financial measures across sample respondents, differences in measurement diversity within this study are driven by the depth and breadth of non-financial measures. Thus, this study indicates that, within an SPMS, higher levels of non-financial measures, including salesperson traits, skills, knowledge, and activity level, as well as customer outcomes, such as customer satisfaction, customer retention, and customer life-time value, are associated with higher levels of customer-oriented selling behavior.

Second, the level of supervisory coaching that exists within a sales organization is influenced by the measurement diversity of the organization's SPMS. In addition and contrary to previous research (Pousa and Mathieu, 2013), supervisory coaching, while having the ability to influence the normative beliefs of salespeople, does not appear to influence customer-oriented selling behavior.

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APPENDICES

Appendix 1 – Results of Google Search for International Consultancies

Accenture	Mercuri International
Alvarez & Marsal	Miller Heimann
Bain & Company	Milliman
Bates White	Monitor Group
The Brattle Group	Navigant Consulting
Bearing Point	Novantis LLC
Booz Allen Hamilton	Oliver Wyman
Boston Consulting Group	Pearl Meyer & Partners
CapGemini	Point B
Censeo Consulting Group	Price Waterhouse Coopers
Charles River Associates	PRTM
Cornerstone Research	Putnam Associates
Corporate Executive Board	Sales Performance Consultants Inc.
CRA International	SBR Consulting
Dean & Company	Silent Edge
Deloitte Consulting LLP	Simon-Kucher & Partners
Easton Associates, LLC	The Cambridge Group
Ernst & Young	The Chartis Group
Horvath & Partners	Towers Perrin
Huthwaite	Triage Consulting
IBM Global Business Services	Trinity Partners LLC
Jabian Consulting	Vivaldi Partners
LEK Consulting	West Monroe Partners
Marakon Associates	ZS Associates
McKinsey & Company	
Mercer LLC	

Appendix 2 – Quality Assessment Template

Academic: Conceptual Papers	1	2	3	4	5
Is the need for (or purpose of) theory development well established?					
Is previous theory adequately summarized?					
Is paper well organized and clear?					
Is paper adequately linked back to the literature?					
Academic: Quantitative Papers	**1**	**2**	**3**	**4**	**5**
Are the study's propositions and hypotheses clearly articulated?					
Are important premises and assumptions identified?					
Is the methodology of the paper clearly identified?					
Are data collection methods described adequately?					
Are the sampling strategy and sample explained?					
Are the findings adequately and accurately described?					
Are results clearly related back to original propositions, hypothesis, research questions, and data analysis?					
Has the author adequately considered alternative explanations for the results?					
Academic: Qualitative Papers	**1**	**2**	**3**	**4**	**5**
Is the purpose of the research adequately established?					
Are methods of collecting and analyzing data adequately described?					
Was the writer able to gather information about key events from appropriate sources?					
Is there evidence that informants trusted the researcher and were likely honest in information sharing?					
Has the author adequately considered alternative interpretations of the data presented?					
Is there evidence of systematically considering evidence that contradicts the author's interpretation?					
Grey Literature / Practitioner Papers	**1**	**2**	**3**	**4**	**5**
Are the author's claims clear and relevant to the review question?					
Are the sources that back claims made transparent?					
Are assumptions or limitations detailed?					
Does the author relate claims to others' work?					
Are limitations of the study clearly stated?					

Appendix 3 – Selected Articles for Review

Year	Authors	Title	Empirical (y/n)	Purpose	Literature Source (Journal)
1972	Kwandwalla, P.N.	The effect of different types of competition on the use of management controls	y	Investigating the link between competitive conditions and the use of increasingly tighter mgmt. control systems	Journal of Accounting Research
1973	Cravens, D. W.; Woodruff, R. B.	An approach for determining criteria of sales performance	y	Greater insight into the determination of valid performance measures.	Journal of Applied Pyschology
1975	Kerr, S	On the folly of rewarding A while hoping for B	y	Describing a phenomenon where management hopes to get one outcome but inadvertently gets another due to inappropriate measure selection for rewards	Academiy of Management
1982	Behrman, D.N; Perreault, W.D.	Measuring the performance of industrial salespersons	y	Develop a "better" measure of industrial salesperson performance	Journal of Business Research
1982	Peters, L.H; Fisher, C.D.; O'Connor, E.J.	The moderating effect of situational control of performance variance on the relationship between individual differences and performance	y	Examining the validity of individual performance variation productiveness	Personnel Psychology
1982	Saxe, R.; Weitz, B.A.	The SOCO scale: a measure of the customer orientation of salespeople	y	Establish a scale ot measure customer orientation of sales people	Journal of Marketing Research
1984	Govindarajan, V.	Appropriateness of accounting data in performance evaluation: an empirical examination of environmental uncertainty as an intervening variable	y	Investigating the relationship between environmental uncertainty and performance evaluation style	Accounting, Organizations & Society
1985	Churchill, G.A.; Ford, N.M.; Hartley, S.W.; Walker, O.C	The determinants of salesperson performance: a meta-analysis	y	Understand the determinants of individual sales performance	Journal of Marketing Research
1985	Govindarajan, V.; Gupta, A.K.	Linking control systems to business unit strategy – impact on performance	y	Establish a link between SBU strategies and control system elements	Accounting, Organizations & Society
1988	Avila, R.A.; Fern, E.F.; Mann, O.K	Unravelling criteria for assessing the performance of salespeople: a causal analysis	y	The relationship between sales behaviours and the degree to which salespeople achieve sales goals	Journal of Personnel Selling & Sales Manaagement
1989	Dubinsky, A.J.; Skinner, S.J.; Whittler, T.E.	Evaluating sales personnel: an attribution theory perspective	y	How sales managers make attributions towards salesperson performance	Journal of Personnel Selling & Sales Manaagement
1989	Gresov, C.	Exploring fit and misfit with multiple contingencies	y	Impact of multiple contingencies on organizational design and business unit effectiveness	Administrative Sciences Quarterly
1989	Jaworski, B.J; MacInnis, D.J.	Marketing Jobs and Management Controls: Toward a Framework	y	Examine the effects of "types of controls" on marketing personnel	Journal of Market Research

Year	Authors	Title	Empirical (y/n)	Purpose	Literature Source (Journal)
1990	Dobbins, G.H.; Cardy, R.L.; Platz-Vieno, S.J.	A contingency approach to appraisal satisfaction: an initial investigation of the joint effects of organizational variables and appraisal characteristics	y	Selection of organizational variables as potential moderators of appraisal satisfaction.	Journal of Management
1990	Spiro, R.L.; Weitz, B.A.	Adaptive Selling: Conceptualization, Measurement, and Nomological Validity	y	Developing and testing a scale to identify the level of adaptive selling individual salespeople are undertaking.	Journal of Marketing Research
1993	MacKenzie, S.B.; Podsakoff, P.M.; Fetter, R.	The impact of organizational citizenship behaviour on evaluations of salesperson performance	y	Test the relative impact of OCB on supervisory evaluations in a sales context	Joiurnal of Marketing
1994	Motowidlo, S.J.; Van Scotter, J.R.	Evidence that task performance should be distinguished from contextual performance.	y	How useful it is to distinguish "between task and contextual performance	Journal of Applied Pyschology
1994	Oliver, R.L.; Anderson, E.	An empirical test of the consequences of behaviour and outcome-based sales control systems	y	The characteristics/dimensions and implications of behaviour-based vs outcome-based control systems	Journal of Marketing
1994	Roberts, J.A; Lapidus, R.S.; Chonko, L,B.	An exploratory examination of situational variables, effort and salesperson performance	y	Relationship between seven different situational variables (Quotas, training, time mgmt., work overload, job-relevant information, budget resources, materials & equipment), effort and salesperson performance.	Journal of Marketing
1995	Bommer, W.H.; Johnson, J.L.; Rich, G.A.; Podsakoff, P.M.; Mackenzie, S.B.	On the Interchangeably of objective and subjective measures of employee performance: a meta-analysis	y	Authors investigate the relationship between objective and subjective performance measures and to understand their correlation	Personnel Psychology
1995	Jackson Jr., D.W.; Schlacter, J.L., Wolfe, W.G.	Examining the bases utilized for evaluating salespeoples' performance	y	What bases sales managers use to evaluate salespeople.	Journal of Personnel Selling & Sales Manaagement
1996	Challagalla, G.N; Shervani, T.A.	Dimensions and types of supervisory control: effects on salesperson performance and satisfaction	y	Explore in detail the effects of control types on sales person performance and satisfaction	Journal of Marketing
1996	Herche, J.; Swenson, M.J, Verbeke, W	Personal selling constructs and measures: emic versus etic approaches to cross-national research	y	Evaluating "the transportability of personal selling measures across cultural boundaries"	European Journal of Marketing
1996	Ramaswami, S.N.	Marketing controls and dysfunctional behaviour: a test of traditional and contingency theory postulates	y	Impacts marketing controls have on employee behaviours and satisfaction.	Journal of Marketing
1997	Ittner, C.D.; Larcker, D.F.; Rajan, M.V	The choice of performance measures in annual bonus contracts	y	Factors that influence the relative weights placed on financial and non-financial measures in CEO bonus contracts.	The Accounting Review

Year	Authors	Title	Empirical (y/n)	Purpose	Literature Source (Journal)
1997	Neely, A; Richards, H.; Mills, J.; Platts, K.; Bourne, M.	Designing performance measures: a structured approach	y	Testing a framework to support the selection of appropriate individual and organizational measures of performance.	International Journal of Operatoins & Productions Management
1999	Rich, G.A; Bommer, W.H.; MacKenzie, S.B.; Podsakoff, P.M.; Johnson, J.L.	Apples & Apples or Apples & Oranges – A Meta-Analysis of Objective and Subjective Measures of Sales Person Performance	y	Understand the relationship between objective and subjective measures of salesperson performance (e.g. correlation	Journal of Personnel Selling & Sales Manaagement
2000	Busby, J.S.; Williamson, A.	The appropriate use of performance measurement in non-production activity	y	Investigating the appropriate and inappropriate uses of performance measurement on the non-production oriented activity	International Journal of Operatoins & Productions Management
2000	Chonko, L.B.; Loe, T.N.; Roberts, J.A; Tanner, J. F.	Sales Performance: Timing of Measurement and Type of Measurement Make a Difference	y	Highlighting the challenges with specific measures under specific conditions (reliability & consistency)	International Journal of Operatoins & Productions Management
2000	Hoque, Z.; James, W.	Linking balanced scorecard measures to size and market factors: impact on organizational performance	y	Draw links between four contingency factors (Organizational Size, Product Life-Cycle Stage and Strength of Market position), usage of balanced scorecard and organizational performance	Journal of Management Accounting Research
2000	Huffman, C; Cain, L.B.	Effects of Considering Uncontrollable Factors in Sales Force Performance Evaluation	y	Examine the effects of accounting for uncontrollable factors on the perceived fairness and usefulness of evaluation systems	Psychology & Marketing
2001	Joshi, A.W.; Randall, S.	The indirect effects of organizational controls on salesperson performance and customer orientation	y	Testing their hypothesis regarding the link between types of organizational control and the mechanisms of task clarity and affective commitment on salesperson performance	Journal of Business Research
2002	Ittner, C. D; Larke, D. F.	Determinants of Performance Measure Choices in Worker Incentive Plans	y	Identify what factors influence the choice of performance measures in worker (non-management) incentive plans	Journal of Labor Economics
2002	Loning, H; Besson, M	Can Distribution Channels Explain Differences in Marketing and Sales Performance Measurement Systems?	y	What environmental variables emerge to explain the variety of different performance measurement systems	European Management Journal
2003	Ittner, C.D.; Larker, D.F.' Meyer, M.W.	Subjectivity and the weighting of performance measures: evidence from a balanced scorecard.	y	How the different types of performance measures (financial vs. non-financial), qualitative vs quantitative, drivers (of key imperatives) vs. results – are weighted	The Accounting Review
2003	Lawler III, E.E.	Reward practices and performance management system effectiveness	y	Measuring – the effectiveness of the PMS under various reward conditions.	Organizational Dynamics

Year	Authors	Title	Empirical (y/n)	Purpose	Literature Source (Journal)
2003	Said, A.A.	An empirical investigation of the performance consequences of nonfinancial measures	y	Impact of using nonfinancial measures for executive compensation on current and future accounting-based (ROA) and market-based definitions of performance	Journal of Management Accounting Research
2004	Gibbs, M.; Merchant, K.A.; Van Der Stede, W.A; Vargus, M.E.	Determinants and effects of subjectivity in incentives	y	Understand what the major determinants are in the selection/use of subjectivity in incentive plans	The Accounting Review
2004	Hoque, Z.	A contingency model of the association between strategy, environmental uncertainty and performance measurement: impact on organizational performance	y	Investigate the extent to which the use of non-financial measures for performance evaluations may play a significant role in the relationship between situational factors and organizational performance	International Business Review
2004	Wang, G; Netemeyer, R. G.	Salesperson creative performance: conceptualization, measurement and nomological validity	y	Conceptualizing the construct of salesperson creative performance and developing an instrument to measure it	Journal of Business Research
2005	Bourne, M.; Kennerley, M.; Franco-Santos, M	Managing through measures: a study of impact on performance	y	Understand the link between performance measurement use and business performance.	Journal of Manufacturing Technology Management
2005	Fang, E; Evans, K.R.; Zou, S.	The moderating effect of goal-setting characteristics on the sales control systems-job performance relationship	y	To test a new contingency model in which goal-setting characteristics (ie. goal difficulty, goal specificity and goal participation) are hypothesized to moderate the effects of sales control systems on job performance.	Journal of Business Research
2005	Hoque, Z.	Linking environmental uncertainty to non-financial performance measures and performance: a research note	y	Test whether non-financial measures can lead to improved organizational performance under conditions of increased environmental uncertainty.	The British Accounting Review
2005	Moers, F	Discretion and bias in performance evaluation: the impact of diversity and subjectivity	y	Examining the impact of performance measurement diversity and the use of subjective measures on performance evaluation bias.	Accounting, Organizations & Society
2006	Henri, J.	Organizational culture and performance measurement systems	y	Frame and test the relationships between organizational culture and two attributes of performance measurement systems: diversity of measurement and the nature of use	Accounting, Organizations & Society
2007	Burney; L; Widener, S.K.	Strategic performance measurement systems, job-relevant information, and managerial behavioural responses – role stress and performance	y	Drawing a link between individual behaviour and the alignment/tightness of fit between an organizations strategy and its (strategic) performance measurement system	Behavioral Research in Accounting

Year	Authors	Title	Empirical (y/n)	Purpose	Literature Source (Journal)
2007	Cheng, M.M.; Luckett, P.F.; Mahama, H.	Effect of perceived conflict among multiple performance goals and goal difficulty on task performance	y	Exploring the relationship between perceived overall goal difficulty (from a culmination of multiple measures); goal conflict (across the measures) and task performance.	Accounting & Finance
2007	Flaherty, K.E.; Arnold, T.J; Hunt, C.S.	The influence of the selling situation on the effectiveness of control: toward a holistic perspective	y	Factors that impact the effectiveness of control in a holistic manner	Journal of Personnel Selling & Sales Manaagement
2007	Franco-Santos, M.	The performance impact of using measurement diversity in executives' annual incentive systems	y	To understand the impact on organizational performance based on different measures used in executive compensation	PhD Thesis
2008	Deadrick, D., L.; Gardner, D. G.	Maximal and typical measures of job performance: an analysis of performance variability over time	y	Proposing a new framework for distinguishing between maximum and typical job performance	Human Resource Management Review
2008	Franco-Santos, M; Bourne, M	The impact of performance targets on behaviour: a closer look at sales force contexts	y	Investigate the behavioural effects of sales performance targets in relation to incentive pay plans and sales performance measures	Centre for Business Performance – Cranfield School of Management
2008	Lau, C., M.; Moser, A.	Behavioral effects of nonfinancial performance measures: the role of procedural fairness	y	Draw a link between the use of nonfinancial measures, the perceived fairness of the measures and the implications of fairness to positive work behaviour.	Behavioral Research in Accounting
2008	Lu, Y.	Managing the design of performance measures – the role of agencies	y	Attempting to connect the process used to select measures to the quality of the measures themselves.	Public Performance & Management Review
2009	Amyx, D.; Bhuian, S.	Salesperf: the salesperson service performance scale	y	Develop scale which measures the effectiveness of a salespersons service delivery	Journal of Personnel Selling & Sales Manaagement
2010	Jackson Jr., D.W.; Schlacter, J.L., Bridges, C.M.; Gallan, A.S.	A comparison and expansion of the bases used for evaluating salespeople's performance	y	Updating and extending the research conducted in 1995 (and 1983) regarding what bases sales managers use to evaluate sales people.	Journal of Marketing Theory & Practice
2010	Melynk, S.A.; Hanson, J.D.; Calantone, R.J.	Hitting the target…but missing the point: resolving the paradox of strategic transition	y	Investigating the "conventional wisdom" of using measures, standards and rewards to communicate new directions and priorities	Long Range Planning

Year	Authors	Title	Empirical (y/n)	Purpose	Literature Source (Journal)
2010	Onyemah, V; Rouzies, D.; Panagopoulos, N.G.	How HRM control affects boundary-spanning employees' behavioural strategies and satisfaction: the moderating impact of cultural performance orientation	y	Investigating the effectiveness of salesforce control systems on sales behaviours	The International Journal of Human Resources Management
2011	Bol, J. C.	The determinants and performance effects of managers' performance evaluation bias	y	Investigating whether info gathering and employee-manager relationships contribute to performance evaluation bias	The Accounting Review
2011	Lau, C.M.	Nonfinancial and financial performance measures: how do they affect employee role clarity and performance?	y	Relative effect of nonfinancial measure vs. financial measures on role clarity and ultimately performance.	Advances in Accounting, Incorporating Advances in International Accounting
2011	Tung, A.; Baird, K.; Schoch, H.P.	Factors influencing the effectiveness of performance measurement system	y	Association between multi-dimensional PMS and Organizational effectiveness	International Journal of Operatoins & Productions Management
2011	Verbeke, W; Dietz, B.; Verwaal, E.	Drivers of sales performance: a contemporary meta-analysis, Have salespeople become knowledge brokers?	y	Assess the key determinants of sales performance	Journal of the Academy of Marketing Science
2012	Charbonnier-Voirin, A; Roussel, P	Adaptive Performance: A new scale to measure individual performance in organizations	y	Propose and develop a new scale to measure adaptive performance.	Canadian Journal of Administrative Sciences
2012	Lau, C., M; Martin-Sardesai, A. V.	The role of organisational concern for workplace fairness in the choice of a performance measurement system	y	Effects PMS have on organizational outcomes	The British Accounting Review
2012	Lips, T; Dolle, R.; Kuhnemundt, S.	Sales Performance Excellence – Managing Sales effectively and internationally in the manufacturing industry	y	Assess the current status of salesforce performance within the Manufacturing sector	Horvath & Partners - Consulting White Paper
2012	Miao, F; Evans, K.R.	Effects of formal sales control systems: a combinatory perspective	y	Effects of combing "well-established, formal sales control styles – outcome, capability and activity control"	International Journal of Research in Marketing
2013	Berger, J; Harbring, C.; Slwka, D.	Performance appraisals and the impact of forced distribution - an experimental investigation	y	Test impact on employee productivity based on forced and natural baseline ratings distribution	Management Science

Year	Authors	Title	Empirical (y/n)	Purpose	Literature Source (Journal)
2013	Bourne, M; Pavlov, A.; Franco-Santos, M; Lucianetti, L.; Mura, M.	Generating organizational performance. The contributing effects of performance measurement and human resource management practices	y	Investigate how performance measurement and employee engagement impact performance	International Journal of Operations & Productions Management
2014	Barlett, J; Johnson, E; Reckers, P.	Accountability and role effects in balanced scorecard performance evaluations. When strategy timeline is speciified.	y	Test impact of specific timelines on performance evaluation focus between lagging and leading performance measures	European Accounting Review
2014	Marginson, D; McAulay, L; Rouse, M.; van Zijl, T.	Examining a positive psychological role for performance measures	y	Test impact of diagnostic vis-à-vis interactive utilization of performance measures influences role ambiguity and performance	Management Accounting Research
2014	McAdam, R.; Hazlett, S.; Galbraith, B.	The role of performance measurement models in multi level alignment	y	To understand the role and impact performance measures have on alignment between business strategy and functionality strategy and functional strategy and daily routine	Internatioal Journal of Operations & Production Management
2014	Melynk, S.A.; Bititci, U.; Platts, K.; Tobias, J.; Andersen, B.	Is performance measurement and management fit for the future?	y	To resolve a paradox between positives and negatives assocaited with performance measurement by looking at the fit betweem the measurement system and the business environment	Management Accounting Research
2014	Upadhaya, B.; Munir, R.; Blout, Y.	Association between performance measurement systems and organizational effectiveness	y	Investigate relationship between performance measurement systems and organizational effectiveness within the financial services sector of a developing country	International Journal of Operations & Productions Management
2015	Moulang, C.	Performance measurement system use in generating psychological empowerrment and individual creativity	y	Investigate impact of performance measurement systems on manager psychological empowerment and creativity	Accounting and Finance
2016	Bol, J. C.; Kramer, S.; Maas, V. S.	How control system design affects performance evaluaton compression: the role of information accuracy and outcome transparency	y	Impact of outcome-based and behaviour-baesd controls on evaluation compression as influenced by information accuracy and outcome transparency	Accounting, Organizations & Society
2016	Gill, P. J.; Carter, S. L.	Graphic feedback, performance feedback and goal setting increased staff compliance with a data collection task at a large residential facility	y	Impact of measure presentation on job compliance	Journal of Organizational Behavior Management
2016	Yamazaki, Y.; Yoon, J.	A cross-national study of fairness in Asia: How perceptions of lack-of-group bias and transparency in performance evaluation system related to job satisfaction	y	Understand the impact perceived evaluation fairness has on job satifaction of managers	Human Resource Management

Year	Authors	Title	Empirical (y/n)	Purpose	Literature Source (Journal)
2017	Dewi, F.G.; Halim, A.Sugiri, S.; Nahartyo, E.	Performance measurement information, job rotation, role stress, and performance: an investigation of local government	y	Impact of financial and non-financial measures of performance on role ambiguity and role stress	European Research Studies Journal
2017	Smith, M.; Bititci, U.S.	Interplay between performance measurement and management, employee engagement and performance	y	Understand interplay between performance measurement, management, employee engagement and performance	International Journal of Operations & Productions Management
1976	Gordon, L.A.; Miller, D	A contingency framework for the design of accounting information systems	n	Establishing a framework to support the design of accounting information system	Accounting, Organizations & Society
1978	Demski, J.S.; Feltham, G.A.	Economic incentives in budgetary control systems	n	Propositions regarding how and why "budgets" (ie. measures for monitoring/control) should be utilized for motivation purposes	The Accounting Review
1979	Churchill, G.A.	A paradigm for developing better measures of marketing constructs	n	Outlines a procedure to develop better measures of marketing constructs.	Journal of Marketing Research
1979	Holmstrom, B.	Moral hazard and observability	n	Demonstrate how informativeness in the form of additional (imperfect) information improves principal-agent outcomes	Bell Journal of Economics
1979	Ouchi, W.G.	A conceptual framework for the design of organizational control mechanisms	n	Establishment of a framework to support the design of control systems	Management Science
1980	Landy, F.J.; Farr, J.L.	Performance Rating	n	Review of literature surrounding effectiveness of supervisory rates in evaluating individual performance	Psychological Bulletin
1980	Otley, D.T.	The contingency theory of management accounting: achievement and prognosis	n	Contingency-based framework for evaluating management accounting systems	Accounting, Organizations & Society
1980	Peters, L.H.; O'Connor, E.J.	Situational constraints and work outcomes: the influences of a frequently overlooked construct	n	Conceptual framework for which to review the literature surrounding the factors which are potential moderators of performance.	Academiy of Management Review

Year	Authors	Title	Empirical (y/n)	Purpose	Literature Source (Journal)
1981	Weitz, B.A	Effectiveness in sales interactions: a contingency framework	n	Contingency framework for investigating determinants of sales performance	Journal of Marketing
1987	Anderson, E.; Oliver, R. L	Perspectives on Behavior-Based Versus Outcome-Based Salesforce Control Systems	n	Framework for selecting an appropriate salesforce control system	Journal of Marketing
1988	Antle, R.; Demski, J.S	The controllability principle in responsibility accounting	n	Examining "controllability" - the notion that a manager should only be evaluated on what they can control.	The Accounting Review
1988	Jaworski, B.J.	Toward a theory of marketing control: environmental context, control types, and consequences	n	Developing a theory/framework of marketing control	Journal of Marketing
1988	Merchant, K.A.	Progressing toward a theory of marketing control: a comment	n	Critical review of the Jaworski paper	Journal of Marketing
1989	Banker, R.D.; Datar, S.M.	Sensitivity, precision, and linear aggregation of signals for performance evaluation	n	Approach regarding the key factors/signal characteristics to support the selection of the optimal weighting of multiple "signals" for an aggregate measure of performance.	Journal of Accounting Research
1992	Muckler, F.A	Selecting performance measures: "objective" versus "subjective" measurement	n	Proposing a model to support the selection of performance measures	Human Factors
1993	Cravens, D.W.; Ingram, T.N; LaForce, R.W., Young, C.E.	Behavior-based and outcome-based salesforce control systems	n	Empirically testing the propositions put forward by Anderson & Oliver (1987) around the fit between salesforce characteristics and the associated control system in use.	Journal of Marketing
1993	Prendergast, C.; Topel, R.	Discretion and bias in performance evaluation	n	The impacts of subjectivity on individual worker performance appraisals	European Economic Review
1995	Simons, R.	Levers of Control – chapters: 1 and 4	n	Summary of control literature for managers	Book

Year	Authors	Title	Empirical (y/n)	Purpose	Literature Source (Journal)
1999	Indjejikian, R.	Performance evaluation and compensation research: an agency perspective	n	Highlight the arguments and issues surrounding performance measurement selection and useful for the purposes of management compensation/incentives	Accounting Horizons
1999	Manoochehri, G.	Overcoming obstacles to developing effective performance measure	n	Why organizations go through a performance measurement change	MCB University Press
1999	Waggoner, D.B.; Neely, A.D.; Kennerley, M.P.	The forces that shape organizational performance measurement systems: an interdisciplinary review	n	Explore the key factors that impact performance measurement system evolution.	International Journal of Production Economics
2002	Locke, E.A.; Latham, G.P.	Building a practically useful theory of goal setting and task motivation	n	Summarizing 35 years of empirical research on goal-setting theory	American Psychologist
2002	Smith, P.C.; Goddard, M.	Performance management and operational research: a marriage made in heaven?	n	Review of the performance management literature based on a framework they layout sees Strategy driving Measurement, Analysis and Response through to the organization	Journal of the Operational Research Society
2005	Baldauf, A; Cravens, D.W.; Piercy, N.F.	Sales management control research - synthesis and an agenda for future research	n	Examining the current state of knowledge regarding sales management “control strategies”	Journal of Personnel Selling & Sales Manaagement
2005	Moncrief, W.C.; Marshall, G.W.	The evolution of the seven steps of selling	n	Highlighting the transformative factors which have influenced the selling function to transform (in their opinion) the traditional seven steps of selling.	Industrial Marketing Management
2007	Chenhall, R.H; Langfield-Smith; K.	Multiple Perspectives of Performance Measures	n	To underscore how multi-disciplinary performance measurement study has been and therefore importance of reviewing across disciplines to understand full insight	European Management Journal

Year	Authors	Title	Empirical (y/n)	Purpose	Literature Source (Journal)
2008	Schwarz, J; Beal, D.; Buchar, M; Dany, O.; Halliday, K; Harle, N.; Le Couedic, A.; Martin, D; Motoshima, Y; Rogozinski, M; Schwetlick, A.	Choosing Performance Metrics	n	Review and selection of appropriate performance measures for sales depts of banks	BCG Consulting Report
2010	Singh, R.; Koshy, A.	Determinants of B2B salespersons' performance and effectiveness: a review and synthesis of literature	n	Understanding of key predictors of performance and effectiveness and definitions.	Journal of Business & Industrial Marketing
2011	Johnston, M.W; Marshall, G.W	Chapter 13 – Evaluating Salesperson Performance	n	Provide sales managers with a set of principles related to measuring salesperson performance.	Textbook: Churchill, Ford Walker's Salesforce Management, 10th edition
2012	Franco-Santos, M.; Lucianetti, L.; Bourne, M.	Contemporary performance measurement systems: a review of their consequences and a framework for research	n	Develop a conceptual framework for understanding the literature on the consequences of contemporary performance measurment systems	Management Accounting Research
2013	Ledingham, D; Kovac, M; Heric, M; Montaville, F	Is complexity killing your sales model?	n	New sales model to address the complexity of today's sales environment	Bain & Company - Consulting White Paper
2014	Beck, J.; Beatty, A. S.; Sackett, P.R.	On the distribution of job performance: the role of measurement characteristics in observed departures from normality	n	To argue the need for seven characteristics of performance meaurement prior to inferences about job performance distribution	Personnel Psychology

Appendix 4 – Data Extraction Template

a) Article Classification

Doc#	
Title	
Author(s)	
Year	
Search Source	
Snowball	
Type of Literature (Academic, etc.)	
Quality Score	
Journal/Other	
Literature Domain	
Content Type (QL, QT, TH)	
Research Methodology	
Country	
Sector	
Unit of Analysis	

b) Article Content Extraction

What is the author trying to achieve?	
How is the literature informed by or linked to an existing body of empirical or theoretical research?	
What are the key findings/claims being made that are relevant to my review question?	
What can I make of these findings? (How do they support my review question?)	

c) CIMO Prescription Extraction

CONTEXT	INTERVENTION	MECHANISM	OUTCOME
What is the context of the literature? Who are the individuals of interest (stakeholder group, demographics, role/position)? What interpersonal relationships are occurring? What aspects of institutional setting are at play (politics, interdependencies, etc.)? What aspects of the wider environment or infrastructure are at play?	What is being tested?	What "power" can be seen or inferred to be acting on the intervention within the context to lead to an outcome?	What are the outcomes (primary and secondary) and how are they measured?

Appendix 5 – Pilot Study #2 – Research Invitation

Cranfield UNIVERSITY
School of Management

Re: Sales Research Participation Opportunity

Dear <Prospect>,

I am a former telecom executive now completing a PhD in Sales Performance. The following paper summarizes the sales research I am currently conducting with Sales Managers from across North America and the United Kingdom. I am hoping you might be interested in participating as well. It will take very little of your time and your participation will give you free access to the research findings once the project is completed.

Participation details are included on page 2. Your insights would be invaluable to my research. I hope you will consider participating.

Sincerely,

Peter Kerr, BBA, MBA
PhD Candidate
Cranfield School of Management
Cranfield University, Bedfordshire, United Kingdom

About Cranfield School of Management

Cranfield School of Management is one of the oldest and most prestigious business schools in the UK. It is part of Cranfield University, the UK's only wholly postgraduate university specializing in science, technology, engineering and management.

The school is known for its excellence in leadership development and for its powerful industry links and real-world focus. The school is consistently ranked high in both graduate and executive education rankings (ranked #1 in the world for International Programs in Customized Executive Education – Financial Times, ranked in Top 10 Best International Business Schools – Forbes, MBA Program ranked 13th in Europe and 46th in the World – Economist Magazine).

Cranfield UNIVERSITY
School of Management

Sales Research Participation Opportunity

Are Your Sales Performance Measures Hindering Your Team's Selling Behaviors?

Sales managers are continually pressed to drive higher and higher levels of performance from their sales team. Research suggests that, depending on the selling environment, the choice of measures used to evaluate individual salesperson performance may hinder selling behaviors important to sales success. How can sales managers know which measures support rather than hamper selling efforts within their organization?

Research Proposal:
This PhD research study examines the relationship between a firm's sales performance measurement system and salesperson behavior and asks how this relationship is influenced by factors within one's selling environment, such as the level of supervisory coaching. The intent is to help sales managers improve their selection of sales performance measures to maximize sales success.

Why Participate?
As a participating company, you will be provided with the full results of this study, which can be used to evaluate the effectiveness of your organization's current measures of sales performance. There is no cost to participate and your involvement throughout the research study is minimal. All data is collected anonymously and is only reported at an aggregated level.

Your sales team's involvement is limited to the following:

- *Sales Manager:* Completion of one, 10-minute online survey
- *1 Salesperson:* Completion of one 10-minute, online survey by a salesperson who has reported to the above sales manager for a minimum of one year

To Participate:

Please email peter.kerr@cranfield.ac.uk or call Peter Kerr at 905-570-6587 to inform us of your interest in participating. Alternatively, I will be following up with you directly by phone.

Project Team:

Peter Kerr, BBA, MBA – Lead Researcher
PhD Candidate
Cranfield School of Management
peter.kerr@cranfield.ac.uk

Dr. Monica Franco-Santos
Senior Lecturer, Business Performance
Cranfield School of Management
monica.franco@cranfield.ac.uk

Appendix 6 – LinkedIn InMail Research Invitation

Hi <FIRSTNAME>

I am hoping you can help me out. I am completing my PhD in Sales and desperately need additional salespeople to participate in my research study on sales performance.

The study involves completing an online survey at:
https://cranfielduniversity.eu.qualtrics.com/jfe/form/SV_1QVDNADvekupY8d?&MatchID=LINK

The survey will take approximately 10–12 minutes to complete once you click on the link above. Your survey responses are completely confidential and anonymous, as the system does not capture any personal information that would identify the survey participant or their organization. Results will be used for research purposes only and will only be reported at a total aggregated level from companies across North America and the United Kingdom.

Everyone who participates will be given a free copy of the research findings, which you may pass on to your organization if you wish.

I really hope you will consider participating in this important research as your voice needs to be heard. Feel free to email me if you have any questions or concerns.

Thanks for your consideration.

Peter Kerr
PhD Candidate
Cranfield School of Management
peter.kerr@cranfield.ac.uk

About Cranfield School of Management
Cranfield School of Management is one of the oldest and most prestigious business schools in the UK. It is part of Cranfield University, the UK's only wholly postgraduate university specializing in science, technology, engineering and management.

The school is known for its excellence in leadership development and for its powerful industry links and real-world focus. The school is consistently ranked high in both graduate and executive education rankings (ranked #1 in the world for International Programs in Customized Executive Education – Financial Times, ranked in Top 10 Best International Business Schools – Forbes, MBA Program ranked 13th in Europe and 46th in the World – Economist Magazine).

Appendix 7 – Discriminant Validity

7-1) Fornell-Larcker Results

	1	2	3	4	5	6	7	8	9	10	11	12
1 Activity	**0.790**											
2 Attitudes	0.208	**0.714**										
3 Behavioral Control	0.077	0.128	**1.000**									
4 Supervisory Coaching	0.237	0.205	0.008	**0.767**								
5 Customer-Oriented Selling	0.098	0.533	0.137	0.130	**0.735**							
6 Customer Outcomes	0.221	0.150	-0.034	0.246	0.112	**0.846**						
7 Diverse Performance Measurement	0.655	0.292	0.065	0.415	0.208	0.583	**0.596**					
8 Knowledge	0.379	0.143	0.093	0.280	0.160	0.434	0.731	**0.873**				
9 Results	0.219	0.024	-0.066	0.210	0.022	0.373	0.382	0.224	**0.806**			
10 Skills	0.411	0.276	0.063	0.406	0.170	0.336	0.833	0.475	0.267	**0.752**		
11 Subjective Norms	0.129	0.238	0.046	0.284	0.203	0.183	0.246	0.155	0.067	0.208	**0.866**	
12 Traits	0.600	0.271	0.056	0.305	0.205	0.391	0.862	0.541	0.204	0.595	0.220	**0.859**

Notes: N=274; Bold numbers on the diagonal show the average variance extracted (AVE). The rest of the numbers are the squared construct correlations.

7-2) Heterotrait-Monotrait (HTMT) Results

Correlations	Original Sample (B)	Sample Mean (B)	Bias-Corrected Confidence Interval 2.5%	97.5%
Attitudes => Activity	0.274	0.296	0.143	0.412
Behavioral Control => Activity	0.084	0.111	0.014	0.173
Behavioral Control => Attitudes	0.140	0.153	0.044	0.260
Coaching => Activity	0.286	0.295	0.158	0.441
Coaching => Attitudes	0.234	0.253	0.131	0.323
Coaching => Behavioral Control	0.038	0.086	0.024	0.036
Customer-Oriented Selling => Activity	0.165	0.201	0.069	0.262
Customer-Oriented Selling => Attitudes	0.705	0.703	0.526	0.859
Customer-Oriented Selling => Behavioral Control	0.158	0.166	0.037	0.318
Customer-Oriented Selling => Coaching	0.179	0.203	0.090	0.267
Customer Outcomes => Activity	0.292	0.299	0.141	0.441
Customer Outcomes => Attitudes	0.194	0.222	0.083	0.287
Customer Outcomes => Behavioral Control	0.062	0.085	0.009	0.114
Customer Outcomes => Coaching	0.294	0.297	0.158	0.433
Customer Outcomes => Customer-Oriented Selling	0.185	0.202	0.080	0.314
Knowledge => Activity	0.479	0.480	0.305	0.638
Knowledge => Attitudes	0.173	0.195	0.076	0.290
Knowledge => Behavioral Control	0.100	0.108	0.019	0.246
Knowledge => Coaching	0.314	0.316	0.161	0.470
Knowledge => Customer-Oriented Selling	0.251	0.260	0.120	0.411
Knowledge => Customer Outcomes	0.526	0.527	0.382	0.651
Results => Activity	0.356	0.387	0.179	0.519
Results => Attitudes	0.072	0.162	0.048	0.060
Results => Behavioral Control	0.103	0.126	0.014	0.245
Results => Coaching	0.311	0.318	0.151	0.480
Results => Customer-Oriented Selling	0.159	0.211	0.038	0.232
Results => Customer Outcomes	0.594	0.598	0.435	0.764
Results => Knowledge	0.323	0.334	0.150	0.526
Skills => Activity	0.515	0.513	0.349	0.655
Skills => Attitudes	0.343	0.354	0.194	0.506
Skills => Behavioral Control	0.086	0.123	0.017	0.128
Skills => Coaching	0.445	0.447	0.304	0.572
Skills => Customer-Oriented Selling	0.235	0.262	0.115	0.378
Skills => Customer Outcomes	0.400	0.402	0.247	0.535
Skills => Knowledge	0.553	0.554	0.363	0.725
Skills => Results	0.418	0.425	0.253	0.588
SuBjective Norms => Activity	0.172	0.195	0.079	0.272
SuBjective Norms => Attitudes	0.275	0.283	0.155	0.395
SuBjective Norms => Behavioral Control	0.071	0.089	0.023	0.142
SuBjective Norms => Coaching	0.299	0.301	0.167	0.442
SuBjective Norms => Customer-Oriented Selling	0.256	0.265	0.131	0.394
SuBjective Norms => Customer Outcomes	0.217	0.222	0.098	0.350
SuBjective Norms => Knowledge	0.172	0.182	0.066	0.297
SuBjective Norms => Results	0.105	0.151	0.038	0.173
SuBjective Norms => Skills	0.244	0.249	0.127	0.362
Traits => Activity	0.727	0.729	0.585	0.847
Traits => Attitudes	0.325	0.327	0.170	0.488
Traits => Behavioral Control	0.083	0.098	0.023	0.188
Traits => Coaching	0.334	0.334	0.186	0.477
Traits => Customer-Oriented Selling	0.310	0.314	0.152	0.488
Traits => Customer Outcomes	0.467	0.468	0.309	0.595
Traits => Knowledge	0.622	0.623	0.472	0.749
Traits => Results	0.300	0.308	0.140	0.466
Traits => Skills	0.683	0.683	0.547	0.792
Traits => Subjective Norms	0.248	0.250	0.118	0.383

Appendix 8 – Excessive Collinearity Test – VIF Analysis

Indicator	VIF
Diverse Performance Measurement	
Activity	1.607
Customer Outcomes	1.427
Knowledge	1.612
Results	1.213
Skills	1.682
Traits	2.294

Note: VIF is the variance inflation factor

Appendix 9 – Formative Indicator Significance and Relevance Analysis

Outer Weight Analysis

	Original Sample (β)	Sample Mean (β)	SD	*p*-Value	Bias Corrected Confidence Interval 2.50%	97.50%
Activity => DPM	0.094	0.09	0.151	0.533	-0.197	0.384
Customer Outcomes => DPM	0.219	0.208	0.151	0.148	-0.055	0.538
Knowledge => DPM	0.057	0.059	0.162	0.722	-0.249	0.381
Results => DPM	-0.043	-0.042	0.138	0.756	-0.3	0.236
Skills => DPM	0.613	0.586	0.167	0.000 **	0.288	0.924
Traits => DPM	0.290	0.277	0.190	0.126	-0.096	0.627

Notes: (N=274); β is the outer weight; SD is the standard deviation;
** is significant at (p≤.05)

Outer Loading Analysis

	Original Sample (β)	Sample Mean (β)	SD	*p*-Value	Bias Corrected Confidence Interval 2.50%	97.50%
Activity => DPM	0.581	0.553	0.115	0.000 **	0.359	0.793
Customer Outcomes => DPM	0.568	0.544	0.107	0.000 **	0.367	0.77
Knowledge => DPM	0.626	0.602	0.13	0.000 **	0.368	0.853
Results => DPM	0.295	0.281	0.127	0.020 **	0.057	0.554
Traits => DPM	0.819	0.785	0.089	0.000 **	0.652	0.945

Notes: (N=274); β is the outer loading, SD is the standard deviation;
** is significant at (p≤ .05)

Appendix 10 – Inner Variance Inflation Factor (VIP) Assessment

	1	2	3	4	5	6	7
1 Attitudes					1.173		
2 Perceived Behavioral Control					1.050		
3 Supervisory Coaching	1.215	1.215					1.215
4 Salesperson Compensation					1.075		
5 Customer-Oriented Selling Behavior							
6 Diverse Performance Measurement	1.215	1.215	1.000		1.149		1.215
7 Subjective Norms					1.101		
8 Salesperson Tenure					1.093		

Notes: N=274

Appendix 11 – Total Effects

	Original Sample (B)	Sample Mean (B)	SD	*t* -statistic	*p* -Value
Attitudes => Customer-Oriented Selling Behavior	0.491 ***	0.491	0.065	7.545	0.000
Perceived Behavioral Control => Customer-Oriented Selling Behavior	0.073	0.076	0.052	1.388	0.165
Supervisory Coaching => Attitudes	0.093	0.089	0.060	1.532	0.126
Supervisory Coaching => Perceived Behavioral Control	-0.022	-0.024	0.073	0.301	0.763
Supervisory Coaching => Customer-Oriented Selling Behavior	0.061	0.059	0.035	1.717	0.086
Supervisory Coaching => Subjective Norms	0.217 **	0.215	0.074	2.921	0.003
Salesperson Compensation => Customer-Oriented Selling Behavior	0.059	0.061	0.059	0.994	0.320
Diverse Performance Measurement => Attitudes	0.308 ***	0.322	0.077	4.024	0.000
Diverse Performance Measurement => Perceived Behavioral Control	0.063	0.069	0.075	0.835	0.404
Diverse Performance Measurement => Supervisory Coaching	0.421 ***	0.434	0.063	6.715	0.000
Diverse Performance Measurement => Customer-Oriented Selling Behavior	0.205 **	0.216	0.074	2.780	0.005
Diverse Performance Measurement => Subjective Norms	0.250 ***	0.265	0.060	4.146	0.000
Subjective Norms => Customer-Oriented Selling Behavior	0.077	0.077	0.055	1.387	0.166
Salesperson Tenure => Customer-Oriented Selling Behavior	0.030	0.029	0.051	0.583	0.560

Notes: N=274; statistical significance: **p≤.05; ***p≤.001

Appendix 12 – Effect Size (f^2) on Endogenous Variables

	Endogenous Variables				
	1	2	3	5	7
1 Attitudes				0.293	
2 Perceived Behavioral Control				0.007	
3 Supervisory Coaching	0.008	0.000			0.043
4 Compensation				0.005	
5 Customer-Oriented Selling Behavior					
6 Diverse Performance Measurement	0.066	0.004	0.215	0.001	0.023
7 Subjective Norms				0.008	
8 Salesperson Tenure				0.001	

Notes: N=274

Appendix 13 – Predictive Relevance (Q^2) Assessment

	SSO	SSE	Q^2
Attitudes	1,370.0	1,310.2	0.044
Perceived Behavioral Control	274.0	277.6	-0.013
Supervisory Coaching	2,192.0	1,990.6	0.092
Customer-Oriented Selling Behavior	822.0	720.5	0.123
Subjective Norms	1,096.0	1,022.2	0.067

Notes: N=274; SSO is sum of squared oBservations;
SSE is sum of the squared prediction errors; Omission distance used is 7

Appendix 14 – Predictive Relevance Effect Size (q^2)

	Endogenous Variables				
	1	2	3	5	7
1 Attitudes				0.098	
2 Perceived Behavioral Control					
3 Supervisory Coaching	0.001	-0.007			0.027
4 Compensation				-0.001	
5 Customer-Oriented Selling Behavior					
6 Diverse Performance Measurement	0.025	-0.005		-0.005	0.012
7 Subjective Norms				-0.001	
8 Salesperson Tenure				-0.005	

Notes: N=274; Omission distance is 7

Appendix 15 – Mediation Analysis – Direct and Indirect Effects

Path	Effect Type	Effect	p-Value
DPM => CO	Direct	0.030	0.557
DPM => SubNorm => CO	Indirect	0.021	0.310
DPM => Bcontrol => CO	Indirect	0.005	0.500
DPM => Attitudes => CO	Indirect	0.132 **	0.003
DPM => Coach => CO	Indirect	-0.001	0.964
DPM => SubNorm	Direct	0.158 **	0.018
DPM => Coach => SubNorm	Indirect	0.091 **	0.005
DPM => Bcontrol	Direct	0.072	0.315
DPM => Coach => Bcontrol	Indirect	-0.009	0.773
DPM => Attitudes	Direct	0.269 ***	0.001
DPM => Coach => Attitudes	Indirect	0.039	0.153
Multiple Mediation Analysis			
Coach => CO	Direct	-0.002	0.962
Coach => CO	Ttl. Indirect	0.061	0.086
Coach => SubNorm => CO	Indirect	0.017	0.204
Coach => Bcontrol => CO	Indirect	-0.002	0.814
Coach => Attitudes => CO	Indirect	0.046	0.152

Notes: N=274; DPM is diverse performance measurement;
SubNorm is subjective norms; Bcontrol is perceived behavioral control;
Coach is supervisory coaching; CO is customer-oriented sellling behavior;
Statistical significance: **p≤.05; ***p≤.001

Appendix 16 – Multigroup Analysis (High Variable Pay vs. Low Variable Pay)

Path Coefficients	$\beta_{Difference}$	*p* -value
Attitudes => Customer-Oriented Selling Behavior	0.034	0.600
Perceived Behavioral Control => Customer-Oriented Selling Behavior	0.092	0.783
Supervisory Coaching => Attitudes	0.021	0.440
Supervisory Coaching => Perceived Behavioral Control	0.094	0.730
Supervisory Coaching => Subjective Norms	0.002	0.512
Diverse Performance Measurement => Attitudes	0.121	0.268
Diverse Performance Measurement => Perceived Behavioral Control	0.165	0.212
Diverse Performance Measurement => Supervisory Coaching	0.141	0.197
Diverse Performance Measurement => Customer-Oriented Selling Behavior	0.158	0.134
Diverse Performance Measurement => Subjective Norms	0.042	0.457
Subjective Norms => Customer-Oriented Selling Behavior	0.174	0.080

Notes: $N_{high\ variable\ pay}$ = 136; $N_{low\ variable\ pay}$ = 108 (caution small sample size);
$\beta_{Difference}$ is the absolute difference between the path coefficients of high variable pay salespeople and low variable pay salespeople; Statistical significance: **p≤.05

R^2 Values	$\beta_{Difference}$	*p* -value
Attitudes	0.102	0.176
Perceived Behavioral Control	0.004	0.330
Supervisory Coaching	0.177	0.176
Customer-Oriented Selling Behavior	0.299	0.229
Subjective Norms	0.101	0.359

Notes: $N_{high\ variable\ pay}$ = 136; $N_{low\ variable\ pay}$ = 108 (caution small sample size);
$\beta_{Difference}$ is the absolute difference between the R^2 of high variable pay salespeople and low variable pay salespeople;
Statistical significance: **p≤.05

Appendix 17 – Multigroup Analysis (High Tenure vs. Low Tenure)

Path Coefficients	$\beta_{Difference}$	*p* -value
Attitudes => Customer-Oriented Selling Behavior	0.068	0.291
Behavioral Control => Customer-Oriented Selling Behavior	0.059	0.709
Supervisory Coaching => Attitudes	0.125	0.188
Supervisory Coaching => Perceived Behavioral Control	0.175	0.878
Supervisory Coaching => Subjective Norms	0.000	0.502
Diverse Performance Measurement => Attitudes	0.044	0.586
Diverse Performance Measurement => Perceived Behavioral Control	0.112	0.728
Diverse Performance Measurement => Supervisory Coaching	0.059	0.672
Diverse Performance Measurement => Customer-Oriented Selling Behavior	0.020	0.446
Diverse Performance Measurement => Subjective Norms	0.203	0.116
Subjective Norms => Customer-Oriented Selling Behavior	0.028	0.415

Notes: $N_{high\ tenure} = 130$; $N_{low\ tenure} = 127$;

$\beta_{Difference}$ is the absolute difference between the path coefficients of high tenure salespeople and low tenure salespeople; Statistical significance: **p≤.05

R^2 Values	$\beta_{Difference}$	*p* -value
Attitudes	0.018	0.458
Perceived Behavioral Control	0.016	0.591
Supervisory Coaching	0.050	0.661
Customer-Oriented Selling Behavior	0.076	0.254
Subjective Norms	0.102	0.159

Notes: $N_{high\ tenure} = 130$; $N_{low\ tenure} = 127$;

$\beta_{Difference}$ is the absolute difference between the R^2 of high tenure salespeople and low tenure salespeople;
Statistical significance: **p≤.05

Appendix 18 – Survey Instrument

Sales Performance Effectiveness and Measurement Survey

Questionnaire

Cranfield UNIVERSITY
School of Management

Sales Effectiveness Survey

The following survey is part of an academic research study being conducted by Cranfield University to help improve our knowledge of sales effectiveness. The survey will take approximately 10 minutes to complete.

Your Confidentiality is Assured

We kindly ask you to respond to our questions as honestly as possible. We understand the importance of personal confidentiality in completing surveys of this nature. This survey has been designed to avoid capturing any information that could identify you or your organization.

Individual survey responses are held in confidence and not shared with your supervisor or any other individuals within your organization or elsewhere. Cranfield University will only use the information provided for research purposes at an aggregated level.

If you have any further concerns regarding the confidential nature of this survey, feel free to contact Peter Kerr at **peter.kerr@cranfield.ac.uk** .

Thank you for participating in this important research study.

INSTRUCTIONS: Please answer all questions within the survey based on your current company, supervisor and sales role.

1) Select the country you primarily work in:

- ○ United States
- ○ Canada
- ○ United Kingdom
- ○ Other Please Specify: _____

2) With regards to your sales role within your company, please indicate the percentage of time spent between the following sales activities:

Selling products/services to my company's existing customers	☐ %
Acquiring new customer accounts for my company	☐ %
Total	☐ %

3) Select the statement that best describes how you carry out your current sales role:

- ○ I operate primarily as an "inside salesperson" selling products/services to prospects and/or customers through the telephone or other electronic means.
- ○ I operate primarily as an "inside salesperson" qualifying leads for other sales employees through the telephone or other electronic means.
- ○ I operate primarily as a "field salesperson" selling products/services to prospects and/or customers through face to face conversations at the customer's place of business or at our company or through the telephone or other electronic means.

4) Select the statement that best describes how you carry out your current sales role:

- ○ I operate primarily within a team-selling model where I and my sales colleagues work together to close sales transactions.
- ○ I operate primarily as an individual sales contributor.

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5) Enter the number of years you have been in your current sales role or one very similar to it (for partial years, please use a decimal – e.g. 4.5 years):

☐ years

6) Select the statement below that best describes the industry you primarily work in:

- ○ Manufacturing (of Consumer, Commercial or Industrial Products)
- ○ Wholesale or Resale of Products
- ○ Media / Broadcasting / Publishing Services
- ○ Information Technology Services
- ○ Telecommunications Services
- ○ Other Business Service Industry
- ○ Personal / Consumer Services

7) When your supervisor is evaluating your sales performance, please rate the extent to which you believe your supervisor uses the following criteria to identify you as a high, medium or low sales performer:

	Never Used	Very Rarely Used	Rarely Used	Sometimes Used	Often Used	Very Often Used	Always Used	Not Applicable
FINANCIAL RESULTS INCLUDING:.								
Sales financial achievement (e.g. total sales revenue, sales results versus quota)	○	○	○	○	○	○	○	○
Account / territory ratios such as penetration rates, average order size	○	○	○	○	○	○	○	○
Expense and expense ratios such as meeting your travel or entertainment budget	○	○	○	○	○	○	○	○
CUSTOMER-OUTCOMES INCLUDING:								
Customer satisfaction (e.g. Net Promoter Score)	○	○	○	○	○	○	○	○
Customer retention	○	○	○	○	○	○	○	○
Customer life-time value	○	○	○	○	○	○	○	○
SALESPERON KNOWLEDGE INCLUDING								
Product knowledge	○	○	○	○	○	○	○	○
Competitor knowledge	○	○	○	○	○	○	○	○
Customer knowledge	○	○	○	○	○	○	○	○
Industry knowledge	○	○	○	○	○	○	○	○

7) Cont'd - When your supervisor is evaluating your sales performance, please rate the extent to which you believe your supervisor uses the following criteria to identify you as a high, medium or low sales performer:

	Never Used	Very Rarely Used	Rarely Used	Sometimes Used	Often Used	Very Often Used	Always Used	Not Applicable
SALESPERSON SKILLS INCLUDING:.								
Planning skills	O	O	O	O	O	O	O	O
Time and territory management skills	O	O	O	O	O	O	O	O
Prospects and targeting skills	O	O	O	O	O	O	O	O
Listening to the customer skills	O	O	O	O	O	O	O	O
Persuading, negotiating and closing skills	O	O	O	O	O	O	O	O
SALES ACTIVITIES AND BEHAVIORS								
Level of activity performed (e.g. number of sales calls made, number of prospects visited)	O	O	O	O	O	O	O	O
Gathering of competitive information	O	O	O	O	O	O	O	O
Demonstrating initiative	O	O	O	O	O	O	O	O
Demonstrating flexibility	O	O	O	O	O	O	O	O
Demonstrating good judgement	O	O	O	O	O	O	O	O
Being dependable	O	O	O	O	O	O	O	O
Level of effort put forward	O	O	O	O	O	O	O	O
Displaying team-work, pro-team/company related behavior	O	O	O	O	O	O	O	O
Displaying pro-customer related behavior	O	O	O	O	O	O	O	O
Work attendance	O	O	O	O	O	O	O	O

8) Please estimate the percentage of your total annual compensation that is fixed (i.e. salary) versus variable (i.e. commission or performance bonus):

Fixed Pay (i.e. salary)	☐ %
Individually Based Variable Pay (i.e. individual-based commission or performance bonus)	☐ %
Team Based Variable Pay (i.e. team-based commission or performance bonus)	☐ %
Total	☐ %

[Skip to question 10 if sales employee's fixed pay is 100%]

9) Please indicate the extent to which the following criteria are used to calculate the variable pay portion of your total annual compensation as a salesperson:

	Never Used	Very Rarely Used	Rarely Used	Sometimes Used	Often Used	Very Often Used	Always Used	Not Applicable
FINANCIAL RESULTS - such as total sales versus quota	O	O	O	O	O	O	O	O
CUSTOMER OUTCOMES – such as customer satisfaction or customer retention	O	O	O	O	O	O	O	O
SALESPERSON KNOWLEDGE – such as product knowledge or competitive knowledge	O	O	O	O	O	O	O	O
SALESPERSON SKILLS - such as planning skills or presentation skills	O	O	O	O	O	O	O	O
SALESPERSON ACTIVITIES OR BEHAVIORS – such as the number of sales calls made or effort level	O	O	O	O	O	O	O	O

.

10) Please indicate the extent to which you believe each of the following people / groups within your company considers customer-oriented behavior to be important:

	Extremely Unimportant	Very Unimportant	Somewhat Unimportant	Neither Important Nor Unimportant	Somewhat Important	Very Important	Extremely Important	Not Applicable
Your immediate supervisor	O	O	O	O	O	O	O	O
Other sales managers	O	O	O	O	O	O	O	O
Marketing / product management	O	O	O	O	O	O	O	O
Top management.	O	O	O	O	O	O	O	O

11) Please indicate the extent to which you are motivated to comply with the wishes of the following people/groups within your company:

	Extremely Unmotivated	Very Unmotivated	Somewhat Unmotivated	Neither Motivated Nor Unmotivated	Somewhat Motivated	Very Motivated	Extremely Motivated	Not Applicable
Your immediate supervisor	O	O	O	O	O	O	O	O
Other sales managers	O	O	O	O	O	O	O	O
Marketing / product management	O	O	O	O	O	O	O	O
Top management.	O	O	O	O	O	O	O	O

12) Customer-oriented behavior involves understanding customer needs and wants and always doing what's right for the customer, regardless of whether this conflicts with your organization's short-term goals / priorities or your personal goals / priorities.

Please indicate your level of agreement with the following statements regarding customer-oriented behavior:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree	Not Applicable
I consider myself to be very customer-oriented.	○	○	○	○	○	○	○	○
I think that customer interaction contributes to my personal development within the company.	○	○	○	○	○	○	○	○
I enjoy interacting with customers.	○	○	○	○	○	○	○	○
Customer orientation is one of my personal goals.	○	○	○	○	○	○	○	○
Customer orientation is very important within my job.	○	○	○	○	○	○	○	○
A good salesperson has to have the customer's best interest in mind.	○	○	○	○	○	○	○	○

13) Please indicate your level of agreement with the following statements regarding your immediate supervisor:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree	Not Applicable
My supervisor uses analogies, scenarios and examples to help me learn.	○	○	○	○	○	○	○	○
My supervisor encourages me to broaden my perspective by helping me see the big picture.	○	○	○	○	○	○	○	○
My supervisor provides me with constructive feedback.	○	○	○	○	○	○	○	○
My supervisor solicits feedback from me to ensure that their interactions are helpful to me.	○	○	○	○	○	○	○	○
My supervisor provides me with resources so I can perform my job more effectively.	○	○	○	○	○	○	○	○
To help me think through issues, my supervisor asks questions, rather than providing me solutions.	○	○	○	○	○	○	○	○
My supervisor sets expectations with me and communicates the importance of those expectations based on the broader goals of the organization.	○	○	○	○	○	○	○	○
My supervisor uses role-playing to aid in my development.	○	○	○	○	○	○	○	○

14) When dealing with customers and/or prospects, indicate the proportion of customers and/or prospects with whom you act as the statement describes:

	False for all customers	True for only a few customers	True for less than 50% of customers	True for about 50% of customers	True for more than 50% of customers	True for most customers	True for all customers	Don't Know	Not Applicable
I try to sell as much as I can rather than satisfy a customer.	○	○	○	○	○	○	○	○	○
I try to figure out what a customer's needs are.	○	○	○	○	○	○	○	○	○
I have the customer's best interest in mind.	○	○	○	○	○	○	○	○	○
I try to bring a customer with a problem together with a product/service that helps him/her solve that problem.	○	○	○	○	○	○	○	○	○
I offer the product/service that is best suited to the customer's problem.	○	○	○	○	○	○	○	○	○
I believe that it is necessary to stretch the truth in describing a product/service to a customer.	○	○	○	○	○	○	○	○	○
I try to sell a customer all I can convince the customer to buy, even if it is more than a wise customer would buy.	○	○	○	○	○	○	○	○	○
I paint too rosy a picture of products/services to make them sound as good as possible.	○	○	○	○	○	○	○	○	○
I decide what products/services to offer on the basis of what I can convince the customer to buy, not on the basis of what will satisfy the customer in the long run.	○	○	○	○	○	○	○	○	○
I try to find out what kind of products/services would be most helpful to a customer.	○	○	○	○	○	○	○	○	○

15) Customer-oriented behavior involves understanding customer needs and wants and always doing what's right for the customer, regardless of whether this conflicts with your organization's short-term goals / priorities or your personal goals / priorities.

Please indicate your level of confidence (where 1% is not at all confident and 100% is completely confident) in your ability to consistently act in a customer-oriented manner as well as or better than the following groups of salespeople within your company:

Example: The first group represents only 0 – 9% of all salespeople within your company. If you are completely confident that you can behave in a customer-oriented manner as well as or better than this group of salespeople in your company – you might input 100 to indicate you are 100% confident. If you are less confident, you would pick a lower number.

I am _____ % confident I am able to act in a customer-oriented manner as well as or better than 0 – 9% of the sales people within our company.

I am _____ % confident I am able to act in a customer-oriented manner as well as or better than 10 – 19% of the sales people within our company.

I am _____ % confident I am able to act in a customer-oriented manner as well as or better than 20 – 29% of the sales people within our company.

I am _____ % confident I am able to act in a customer-oriented manner as well as or better than 30 – 39% of the sales people within our company.

I am _____ % confident I am able to act in a customer-oriented manner as well as or better than 40 – 49% of the sales people within our company.

I am _____ % confident I am able to act in a customer-oriented manner as well as or better than 50 – 59% of the sales people within our company.

I am _____ % confident I am able to act in a customer-oriented manner as well as or better than 60 – 69% of the sales people within our company.

I am _____ % confident I am able to act in a customer-oriented manner as well as or better than 70 – 79% of the sales people within our company.

I am _____ % confident I am able to act in a customer-oriented manner as well as or better than 80 – 89% of the sales people within our company.

I am _____ % confident I am able to act in a customer-oriented manner as well as or better than 90 – 99% of the sales people within our company.

Thank you for participating in this research study.


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