

# Assessing Outcomes from Business-to-Business Selling

---

Per Ivar Seljeseth

NORD UNIVERSITY BUSINESS SCHOOL

# **Assessing Outcomes from Business-to-Business Selling**

**Per Ivar Seljeseth**

PhD in Business  
Nord University Business School

PhD in Business no. 84 (2021)

**Assessing Outcomes from Business-to-Business Selling**

Per Ivar Seljeseth

© Per Ivar Seljeseth, 2021

ISBN: 978-82-92893-74-6

ISSN 2464-4331

Print: Trykkeriet NORD

Nord University

N-8049 Bodø

Tel: +47 75 51 72 00

[www.nord.no](http://www.nord.no)

All rights reserved.

No part of this book may be reproduced, stored in a retrieval system, or transmitted by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission from Nord University

*To my grandmother and grandfather*

## ACKNOWLEDGMENTS

The writing of this thesis has been a beautiful journey of learning. First, conducting a systematic literature review of the methods used in sales research gave me valuable insights into the multiple ways to conduct sales research surveys. Second, the literature review introduced me to the many valuable topics within sales research.

There are a few people I would like to show my appreciation to. First, I would like to thank my main supervisor, Professor Tor Korneliussen, for his excellent guidance throughout this unknown journey and for all the effort he spent reading and commenting on my papers. Second, I would like to thank my co-supervisor, Professor Michael Greenacre, for his valuable contributions, particularly with regard to the data analyses. Third, I would like to thank Nord University Business School and Professor Frode Nilssen for all support in writing my thesis.

Finally, and most importantly, I would like to thank my family—Elisabeth, Lise, Philip, and Julian—for their patience and understanding during these years of extraordinary workload.

Per Ivar Seljeseth

January 2021

## **ABSTRACT**

The importance of personal selling as a marketing tool has increased in recent decades, along with the maturing sales research discipline. However, researchers have noted the need for sales research to improve some of its research design practices regarding the conceptualizations and operationalizations of constructs and the use of data sources and respondents. This thesis responds to these issues by investigating the conceptualization, operationalization, data sources, and respondents used to assess outcomes from business-to-business (B2B) selling—also termed B2B sales performance outcomes.

Sales performance outcomes represent the outcomes that salespeople produce and range from economic outcomes, such as sales revenue, to outcomes associated with salespeople's customer interactions, such as customer satisfaction. Sales researchers frequently use these outcomes as dependent variables to estimate antecedents' effects on the outcomes and thereby identify antecedents to improved selling. Consequently, developing dependable knowledge of successful selling relies on reliable and validly assessed outcomes. Also, sales managers depend on reliable and validly assessed outcomes because of the intense managerial focus on optimizing outcomes from selling. For example, precise assessments of sales performance outcomes enable managers to detect low performance on critical outcomes and to take actions for improvement.

Despite these outcomes' importance, previous research provides little guidance or consensus on how they should be assessed. Further, although the antecedents of improved selling have been investigated extensively and are the subject of reviews and meta-analyses, sales performance outcomes have not

been reviewed. Therefore, this thesis provides the first investigation and review of this topic by addressing the following overarching research question: how do researchers assess outcomes from B2B selling?

A systematic literature review was conducted to answer this research question. To be included in the review, studies need to assess the outcomes from B2B selling, be empirical, be quantitative, and be published relatively recently (2001–2015). The search resulted in 139 studies. Data were extracted from these studies, and a unique dataset was created describing how researchers assess the outcomes, including the studies' measures, use of objective and/or subjective measures, number of measures, respondents, and data sources. Each of these methodological issues required specific data analysis, examination, and evaluation in relation to particular previous research and were thus handled in four research papers.

The first paper investigates the measures used to assess the outcomes. The reviewed studies use a large variety of measures, and a large portion of the studies use a few measures of sales revenue to assess the outcomes. Using such few measures disregards the multiple types of outcomes desired from B2B selling. Further, many studies fail to measure outcomes beneficial to customers, such as offer value and customer satisfaction. This paper contributes with recommendations for improving these measures and reveals the need to develop theory explaining which outcomes are desired from B2B selling.

The second paper suggests such a theory by developing the B2B Sales Performance Outcomes Chain. This chain contributes as the first complete theoretical framework conceptualizing desired outcomes from B2B selling. The framework identifies seven main types and 21 subtypes of outcomes and can be used to select measures with stronger construct validity.

The third paper investigates key methodological issues related to assessing the outcomes—namely, the number of measures, objective versus subjective measures, and respondent types. Further, this paper examines differences in methods published across journals. The reviewed studies use methods ranging from best-practice methods published in the highest-ranked journals to those associated with biased assessments. The review reveals an inconsistency in sales research as many reviewed studies use methods that previous research has associated with biases, for example, the use of few measures, subjective measures, salespeople’s self-ratings, and single-source ratings. This paper contributes to future sales research by proposing guidelines for improved methods to assess the outcomes.

The fourth paper investigates the data sources used to assess the various outcomes from B2B selling. The evaluation reveals the widespread use of salespeople and sales managers to rate economic outcomes and outcomes related to salespeople’s customer interactions. These are among the most critical outcomes from B2B selling, but company records and customers, respectively, can provide considerably more reliable and valid assessments of these outcomes than salespeople and sales managers. This paper contributes by suggesting the most reliable and valid data sources to assess specific types of outcomes from B2B selling.

In summary, this thesis shows the large variety of quality and sophistication in the methods to assess outcomes from B2B selling. Moreover, this thesis reveals the widespread use of methods that, according to previous research, do not provide the most reliable and valid assessments—for example, the use of few revenue-focused measures, subjective measures, self-ratings, and single-source measures as well as a mismatch between data sources and collected measures. This finding indicates the need for many researchers to



reevaluate their methods. Further, this finding appeals to a future debate and research on the methodological warnings and recommendations relevant to sales research. This thesis contributes to such future debate and research by suggesting theoretical frameworks, guidelines, and future research directions to improve the assessed outcomes from B2B selling.

# TABLE OF CONTENTS

Acknowledgments.....	iv
Abstract.....	v
Table of contents .....	ix
1. Introduction .....	1
1.1. Background of the thesis' research question.....	1
1.1.1. How this thesis responds to previous research.....	1
1.1.2. The importance of B2B sales performance outcomes .....	2
1.1.3. The lack of guidance on methods and probable consequences .....	4
1.1.4. The complexity of assessing B2B sales performance outcomes .....	7
1.1.5. The overarching research question and how this thesis answers it .	8
1.2. Overview of the four research papers .....	12
1.2.1. How the research papers answer the thesis' research question .....	12
1.2.2. The interrelatedness of the research papers .....	17
1.3. Outline of the thesis.....	19
2. Theoretical background.....	20
2.1. Definitions .....	20
2.2. The nature of B2B selling .....	21
2.3. Outcomes from B2B selling .....	22
2.4. Measures to assess outcomes from B2B selling .....	24
2.5. Number of measures to assess outcomes from B2B selling.....	26
2.6. Types of measures to assess outcomes from B2B selling.....	26
2.7. Data sources and respondents to assess outcomes from B2B selling.....	27
3. Methods.....	31
3.1. Using a systematic literature review to answer the research questions ...	31
3.2. Philosophy of science .....	33
3.3. The research steps in the systematic literature review.....	36

3.4. Data analyses.....	40
3.4.1. Data analysis in Paper 1.....	40
3.4.2. Data analysis in Paper 2.....	42
3.4.3. Data analysis in Paper 3.....	42
3.4.4. Data analysis in Paper 4.....	43
3.5. Validity and reliability.....	44
3.6. Ethical considerations .....	47
4. Summary of the research papers.....	48
4.1. Paper 1. “Measures to assess B2B sales performance outcomes: A systematic review and future directions” .....	48
4.2. Paper 2. “Desired outcomes from B2B selling: A systematic review and conceptualization” .....	50
4.3. Paper 3. “Methods to assess outcomes from B2B selling: A systematic review, cross-journal examination, and guidelines” .....	50
4.4. Paper 4. “Data sources to assess sales performance outcomes” .....	52
5. Conclusions and implications .....	53
5.1. Conclusions.....	53
5.1.1. Conceptualization of the outcomes .....	54
5.1.2. Operationalization of measures .....	54
5.1.3. The number of measures .....	57
5.1.4. Objective and subjective measures.....	57
5.1.5. Single or multiple respondent types .....	58
5.1.6. Respondent types .....	59
5.1.7. Data source to assess various types of outcomes.....	60
5.2. Implications for researchers.....	61
5.3. Implications for managers.....	63
5.4. Limitations and future research .....	64
References .....	66

6. The four research papers .....	76
6.1. Paper 1: “Measures to assess B2B sales performance outcomes: A systematic review and future directions” .....	77
6.2. Paper 2: “Desired outcomes from B2B selling: A systematic review and conceptualization” .....	117
6.3. Paper 3: “Methods to assess outcomes from B2B selling: A systematic review, cross-journal examination, and guidelines” .....	156
6.4. Paper 4: “Data sources to assess sales performance outcomes” .....	201



# **1. INTRODUCTION**

This first chapter presents the background of this thesis' overarching research question and the research papers comprising this thesis. First, this chapter introduces sales research's need to improve its research design practices and how this thesis aims to contribute to such progress. Next, this chapter defines the central construct in this thesis—B2B sales performance outcomes—and explain the construct's importance for research and management. Further, this chapter outlines possible problems for researchers and managers due to the little guidance on methods to assess these outcomes. Then, this chapter explains the complexity of assessing outcomes from B2B selling.

Next, the overarching research question is presented as well as how this thesis aims to answer this question and which aspects of the respective methods are investigated. Moreover, this chapter introduces two vital concepts for research and measurement quality—validity and reliability—used in this thesis to evaluate researchers' methods to assess these outcomes. Last, this chapter introduces the four research papers and outlines the remaining chapters in this thesis.

## **1.1. Background of the thesis' research question**

### **1.1.1. How this thesis responds to previous research**

As a subdiscipline of marketing, personal selling has increased in importance considerably over the last few decades (Moncrief, Marshall, and Watkins 2000) along with the maturing sales research discipline (Asare, Yang, and Alejandro 2012). As any research discipline matures and expands, a critical

examination of its research methods becomes necessary due to more complex research questions and the need for more sophisticated methods to answer such questions (Crook et al. 2010).

A review of research methods in sales research (Asare et al. 2012) between 1980 and 2008 reveals that sales research needs to improve some of its research design practices. Specifically, the authors encourage future sales research to conceptualize and operationalize constructs. Further, the authors express concerns regarding bias stemming from single-source surveys and urge future sales research to investigate the use of respondent types. The importance of construct operationalizations and concerns regarding single-source bias are supported by Rapp, Gabler, and Ogilvie (2020).

This thesis addresses these issues by investigating the conceptualization, operationalization, data sources, and respondents used to assess an important construct in sales research—B2B sales performance outcomes, also termed outcomes from B2B selling. Outcomes from selling are broadly defined as the outcomes that salespeople produce (Anderson and Oliver 1987) and range from economic outcomes, such as sales revenue (Zallocco, Pullins, and Mallin 2009), to outcomes related to customer interactions, such as customer satisfaction (Wang, Hoegg, and Dahl 2018).

### **1.1.2. The importance of B2B sales performance outcomes**

Organizational performance outcomes are the ultimate dependent variables in just about every management research area (Richard et al. 2009). Likewise, sales performance outcomes are important and frequently used dependent variables (Asare et al. 2012) in the extensive research field investigating antecedents that can influence and improve selling (Limbu et al. 2016; Verbeke, Dietz, and Verwaal 2011).

The frequent use of sales performance outcomes in sales research demonstrates the importance of these outcomes. Asare et al. (2012) review 1,346 empirical sales research studies published between 1980 and 2008 and find that 18% of these studies use sales performance outcomes as dependent variables. Further, this review reveals the increasing use of these outcomes as dependent variables: Among the studies published by the end of the review period, 26% use sales performance outcomes as dependent variables.

The importance of sales performance outcomes is also related to the outcomes' function in sales research. Researching the antecedents to improved selling is a widespread goal among sales researchers (Limbu et al. 2016). When investigating such antecedents, sales performance outcomes are used as dependent variables to identify the effect of or response to a change in antecedents (Robson and McCartan 2016). By detecting such relationships (covariance), researchers can identify antecedents that can improve selling (Ohiomah, Benyoucef, and Andreev 2020). Consequently, the reliability and validity of the assessed antecedents and outcomes influence the reliability of the estimated covariances (Hair et al. 2010). Reliably and validly assessed outcomes are therefore fundamental for identifying dependable antecedents to improved selling (Rapp et al. 2020; Ghauri and Grønhaug 2002). A recent report reveals that fewer than 20% of firms investing in sales enablement were able to effectively determine their return on investment (Miller Heiman Group 2018), thus demonstrating the importance of research on these antecedents and the measurements conducted in such research (Rangarajan et al. 2020).

For sales managers, assessing outcomes from selling is essential (Zallocco et al. 2009) because of the strong managerial focus on optimizing sales outcomes (Zoltners, Sinha, and Lorimer 2008). In many firms, personal selling is an essential part of marketing, ultimately judged by its contributions to firms'



overall organizational performance. Reliable and valid measures of performance outcomes are essential for evaluating firms' and managers' specific actions (Richard et al. 2009) as well as for detecting low performance on essential outcomes and determining necessary managerial actions to improve such performance (MacInnis 2011).

### **1.1.3. The lack of guidance on methods and probable consequences**

Even though the methods used to assess variables are important for research quality (Ghauri and Grønhaug 2002), previous research offers little guidance on methods to assess outcomes from selling—for example, which outcomes to measure (Siguaw, Kimes, and Gassenheimer 2003). Further, to the best of my knowledge, a review of the methods researchers use to assess sales performance outcomes has not been conducted. This lack of such a review may have led to this little guidance on methods and stands in contrast to the reviews (e.g., Herjanto and Franklin 2019) and meta-analyses (e.g., Ohiomah et al. 2020; Verbeke et al. 2011; Albers, Mantrala, and Sridhar 2010; Churchill et al. 1985) on the antecedents of sales performance.

The meta-analyses on the antecedents of sales performance use different outcomes in their analyses. While Ohiomah et al. (2020) and Albers et al. (2010) only use economic outcomes, such as sales revenue and profits, Herjanto and Franklin (2019) also use outcomes related to buyer-seller relationships. Verbeke et al. (2011) take one step further and call upon future researchers to address the fundamental question of what constitutes sales performance outcomes in today's economy. The present thesis responds to this question by suggesting a conceptualization of the outcomes from B2B selling.

The little guidance on methods to assess these outcomes may create serious problems for sales researchers. Regarding measures, it is advisable to

use multiple measures to capture the different types of outcomes desired from selling (Henard and Szymanski 2001; Churchill et al. 1985). Thus, without a proper conceptualization of the outcomes, researchers may use measures that cannot capture the essential outcomes from the specific type of selling investigated (Richard et al. 2009). If essential outcomes remain unobserved, subsequent model testing may be inappropriate, and the results can lead to incorrect conclusions (Fornell and Larcker 1981). For example, salesforce incentives may positively influence short-term sales revenue but may negatively influence long-term customer relationships (Zoltners, Sinha, and Lorimer 2012). Thus, if incentive research assesses the outcomes by solely measuring sales revenue, the incentives' possible adverse effects on other critical outcomes will remain unobserved, and the conclusions may be incorrect (Fornell and Larcker 1981). Further, including insufficient measures in research models may lead to research models that are too simple for our complex reality (MacInnis 2011). Such simplified models may only provide a partial understanding of the research problem being studied and likely generate deficient conclusions (Hult et al. 2008; Richard et al. 2009).

Further, the little guidance may cause researchers to fail to assess outcomes that managers deem essential, which may in turn threaten sales research's managerial relevance and applicability (Zallocco et al. 2009; Richard et al. 2009). Indeed, previous research outlines an apparent gap between how sales researchers and practitioners view sales performance outcomes (Zallocco et al. 2009). Furthermore, researchers may assess different outcomes across studies, thereby making it difficult, if not impossible, to synthesize findings across studies and achieve cumulative knowledge building (Katsikeas et al. 2016). Also, the use of different outcomes across studies limits researchers' ability to classify outcomes in meta-analyses and investigate how antecedents

may influence specific types of sales performance outcomes (Verbeke et al. 2011).

Finally, regarding methods to assess the outcomes, researchers may, for example, use less reliable and valid data sources and respondents, which could bias the assessed outcomes. Such biased assessments of the outcomes represent a serious threat to the reliability of research findings and can accentuate inaccurate or less important antecedents of sales performance. In summary, predictions and models are only as strong as the data collected to test them (Rapp et al. 2020). Thus, weak measures and methods to assess the outcomes represent a severe threat to theory testing (Katsikeas et al. 2016) and knowledge building in sales research (Hult et al. 2008).

Sales managers may also suffer from the little guidance on measures and methods to assess outcomes from B2B selling. For example, research reveals that managers lag behind research on sales performance (Zallocco 2009) and may have problems selecting measures to assess sales success (Haines 2004; Ingram et al. 2005). Invalid and biased measures may cause managers to overlook low performance on critical outcomes, which can in turn hinder managerial decisions and actions for improving such performance (MacInnis 2011).

#### **1.1.4. The complexity of assessing B2B sales performance outcomes**

Several factors make it complex to assess outcomes from B2B selling. First, these assessments are complicated because B2B selling's strategic role requires B2B salespeople to participate in numerous activities and produce multiple types of outcomes (Cron, Baldauf, and Leigh 2014). This multiplicity of outcomes is confirmed by sales managers and salespeople surveyed in two studies suggesting 19 (Zallocco et al. 2009) and 31 (Behrman and Perreault 1982) relevant outcomes to assess. Consequently, assessing multiple types of outcomes requires a set of measures reflecting these outcomes and data sources or respondents to provide reliable and valid measures (Groves et al. 2009; Ghauri and Grønhaug 2002).

Second, these assessments may be complicated by the dynamics and fundamental changes over the last few decades (Cuevas 2018) in external and internal organizational environments, setting new and rising standards for the sales profession (Jones et al. 2005). Further, because of the growing recognition of the importance of customer satisfaction, customer loyalty, and long-term customer relationship management, today's salespeople are asked to do more, and the job has become more complex. Thus, firms look beyond the transaction-based concept of immediate sales revenue when measuring and evaluating sales performance outcomes (Zallocco et al. 2009).

Third, these assessments are complex because B2B selling can take various forms across different sales contexts, such as different industries, products, and/or organizational philosophies (Singh and Abraham 2010). Different sales contexts may require different outcomes to be produced. Thus, the specific context should influence which outcomes should be assessed (Richard et al. 2009). B2B selling often takes two primary forms: transactional and consultative B2B selling (Davie, Stephenson, and Valdivieso De Uster 2010).

While transactional B2B selling typically involves selling off-the-shelf products (Parvinen et al. 2013), consultative B2B selling typically involves customizing solutions. Such customizing requires, for example, co-creation (Töytäri and Rajala 2015) and customer relationships (Storbacka et al. 2009), which may lead to a more diverse set of outcomes relevant for assessment compared to transactional B2B selling.

Fourth, these assessments are complex because of the little guidance from previous research on appropriate methods to assess outcomes from selling. Further, the methods relevant to assess the outcomes are treated inconsistently in sales research as the methods frequently used in published studies are simultaneously criticized in the literature for often causing biased assessments. Previous research suggests that such bias is associated with, for example, the use of too few measures (Hult et al. 2008; Richard et al. 2009), subjective measures (Rich et al. 1999; Jaramillo, Carrillat, and Locander 2005), single types of respondents (Jap and Anderson 2004; Hulland, Baumgartner, and Smith 2018), and salespeople's self-ratings (Rich et al. 1999; Paulhus 2002; Jaramillo et al. 2005; Tourangeau and Yan 2007; Steenkamp, De Jong, and Baumgartner 2010). In summary, the complexity of assessing outcomes from B2B selling enhances the importance of the present thesis' investigation of how these outcomes are assessed.

#### **1.1.5. The overarching research question and how this thesis answers it**

The importance of assessing outcomes from B2B selling and the potential problems from assessments with weak reliability and validity lead to the overarching research question of this thesis: how do researchers assess outcomes from B2B selling?

To answer this research question, this thesis investigates how researchers attend to the following methodological issues related to assessing outcomes from B2B selling: the conceptualization of the outcomes and operationalization of measures, the number of measures and types of measures (objective versus subjective measures), and the types of data sources and respondents.

These methodological issues are examined using a literature review, more precisely termed a methodological literature review, as this is the most effective way to become familiar with research methods (Onwuegbuzie and Frels 2016). Further, a literature review is an effective tool for identifying conflicts and gaps in research (Boot, Sutton, and Papaioannou 2016) as well as issues that can improve research (Onwuegbuzie and Frels 2016). Furthermore, a literature review can be used to develop theoretical frameworks and guidelines to improve future research (Snyder 2019).

The present thesis is based on a systematic literature review in contrast to a traditional (scoping and narrative) or integrative literature review (Onwuegbuzie and Frels 2016). There are multiple reasons for this. First, a systematic literature review aims to identify all relevant studies (Jesson, Matheson, and Lacey 2012) and may therefore have stronger internal validity by avoiding bias from subjectively selecting studies (Boot et al. 2016) or only reviewing single studies (Jesson et al. 2012). Further, a systematic review enables tabular features, making it easier to interpret large amounts of data (Boot et al. 2016). Last, a systematic review includes transparent methods for collecting, including, and evaluating studies (Jesson et al. 2012), ensuring that the conclusions are grounded in the gathered data and not fabricated (Boot et al. 2016).

The studies included in the present review assess sales performance outcomes as dependent variables and only investigate B2B selling because of the differences between B2B and business-to-consumer (B2C) selling (Lilien 2016). Further, the reviewed studies are solely quantitative because of the dominance of quantitative studies in sales research (Asare et al. 2012) and the differences between quantitative and qualitative research methods (Onwuegbuzie and Frels 2016; Ghauri and Grønhaug 2002). Although some qualitative studies include quantified data and that qualitative data can be coded and quantified to allow statistical analysis, quantitative and qualitative research differ regarding their perspectives on knowledge, research objectives, information of interest, measures, and data collection (i.e., how and where to collect data) (Ghauri and Grønhaug 2002). As such, adding qualitative studies into this review may have made a manageable review in terms of time and resources unfeasible, created distractions from the main focus of the review, and threatened the accuracy of the data collection and data analysis (Boot et al. 2016). Last, as the overarching research question asks how researchers assess the outcomes, the included studies were published relatively recently (2001–2015) in contrast to a historical examination far back in time. The review includes 139 studies that fulfill these inclusion criteria.

The measures and methods used to assess the outcomes in the reviewed studies are evaluated in relation to two primary issues associated with research quality—the validity and reliability of assessments (e.g., Seale 2009; McGivern 2013). Validity refers to the degree to which research designs, measures, and methods deliver accurate and unambiguous evidence (McGivern 2013) and reflects whether the reported results are true (Seale 2009). Further, validity refers to the degree to which a study measures what it intends to measure (e.g., McGivern 2013).

There are multiple types of validity evaluations (e.g., Voorhees et al. 2016; Ghauri and Grønhaug 2002). However, researchers often evaluate research quality in terms of internal and external validity. Internal validity refers to the extent to which causal relationships between variables can be inferred, while external validity refers to the extent to which findings can be generalized to populations and other settings (Seale 2009; McGivern 2013; Ghauri and Grønhaug 2002). Researchers can use a third type of validity test—measurement validity (Seale 2009)—which refers to the degree to which measures successfully measures concepts (Seale 2009; Ghauri and Grønhaug 2002).

Evaluating measurement validity is important when assessing the construct of outcomes from B2B selling because it is an abstract construct that cannot be directly observed because of its multiple components (revenue, profit, customer satisfaction, etc.) (Groves et al. 2009). The most crucial form of validity for such an abstract construct is construct validity (Ghauri and Grønhaug 2002), which refers to the extent to which measures reflect or represent the components constituting the construct (Groves et al. 2009; Ghauri and Grønhaug 2002). Thus, if a study lacks construct validity, the findings are worthless, and the internal and external validity of the research findings are also destroyed (Ghauri and Grønhaug 2002).

Among, the several types of construct validity evaluations (Seale 2009; Ghauri and Grønhaug 2002), this thesis evaluates construct validity by determining how well the measures conform to expectations from previous research/theory (Seale 2009). This evaluation is applied when examining researchers' use of measures to assess the outcomes.



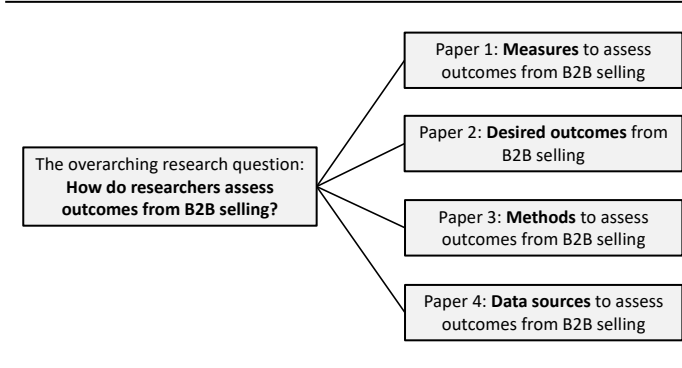
The validity-related objective of reporting accurate research results (Seale 2009) also relies on measures' reliability, defined as measures' stability across repetitive assessments (Groves et al. 2009; Ghauri and Grønhaug 2002). The differences between an observed score in a survey and the "true" score is systematic bias and random error (Ghauri and Grønhaug 2002). Systematic bias can occur from respondents' stable underreporting and overreporting (Groves et al. 2009), for example, self-ratings that tend to overreport personal achievements. Random error can occur from personal and situational factors (Groves et al. 2009), for example, ratings influenced by a positive or negative incident close to the survey. Systematic bias and random error represent the criteria used to evaluate reliability associated with objective and subjective measures and the various data sources and respondents used to assess the outcomes.

## **1.2. Overview of the four research papers**

### **1.2.1. How the research papers answer the thesis' research question**

Each of the four research papers answers the overarching research question, with separate research questions investigating particular methodological issues related to assessing these outcomes, as shown in Figure 1 and explained in later paragraphs.

Figure 1. The four research papers



These methodological investigations required collecting various data categories from the reviewed studies to explore how sales researchers assess the outcomes. The data was organized in accordance with the investigated methodological issues, which resulted in a unique and large dataset. The analysis of the data representing each methodological issue required specific data analysis. Further, the evaluation of the results had to be conducted in relation to previous research particularly relevant to each methodological issue investigated. Thus, a thorough investigation meant that each methodological issue needed to be investigated in a separate research paper, leading to four research papers. The following paragraphs introduce the research questions and contributions of each research paper.

*The first paper* investigates the measures used to assess the outcomes from B2B selling and therefore explores an essential aspect of how the outcomes are assessed. The paper aims to answer the following research questions: *which measured do researchers use to assess outcomes from B2B selling?* The research question was answered through a systematic review of the measures used to assess outcomes from B2B selling in 139 studies published in 17 journals. The paper shows the large variety of measures used to

assess the outcomes and the most frequent sets of measures used in the reviewed studies. The paper contributes by evaluating the construct validity provided by these measures by examining how the measures correspond to previous research on outcomes from B2B selling. Further, the paper contributes recommendations on how researchers can improve these measures.

*The second paper* responds to the finding in the first paper, which reveals that there are currently no complete theoretical frameworks suggesting which outcomes are desired from B2B selling. The second paper suggests such a theoretical framework by answering the following research question: *which outcomes are desired from B2B selling?* The paper answers this question by organizing the outcomes measured in the reviewed studies, thereby creating and contributing a complete theoretical framework conceptualizing the desired outcomes from B2B selling. This framework can be used for multiple purposes and is a proper tool for operationalizing measures to assess outcomes from B2B selling.

*The third paper* investigates three key methodological issues vital for assessing outcomes from B2B selling and addresses two research questions: *how appropriate are the methods researchers use to assess B2B sales performance outcomes, and are there differences in methods published in different journals?* The paper examines the following three key methodological issues: the number of measures, the type(s) of measures (objective and subjective, and the type(s) of respondents. Further, the paper examines differences in methods published across the 17 journals that contributed studies to the review. The examination reveals substantial variation in the quality and sophistication of methods—from those that may provide biased assessments to best-practice methods published in the highest-ranked

journals. The paper contributes by evaluating the methods and providing guidelines on improved methods to assess the outcomes.

*The fourth paper* investigates the data sources used to assess various outcomes from B2B selling by addressing the following research question: *which data sources do researchers use to assess the various types of outcomes from B2B selling, and which data sources are appropriate to assess the various types of outcomes?* The paper answers these research questions by examining the data sources (e.g., company records, sales managers, salespeople, and customers) used to assess various types of outcomes in the reviewed studies. The examination reveals the widespread use of data sources that do not provide the most reliable and valid assessments of the outcomes they assess. The paper contributes by suggesting the most appropriate data sources to assess various types of outcomes.

Table 1. Overview of the research papers in the thesis

	Paper 1	Paper 2	Paper 3	Paper 4
<b>Title</b>	Measures to assess B2B sales performance outcomes: A systematic review and future directions	Desired outcomes from B2B selling: A systematic review and conceptualization	Methods to assess outcomes from B2B selling: A systematic review, cross-journal examination, and guidelines	Data sources to assess sales performance outcomes
<b>Author(s)</b>	Seljeseth, Korneliussen, Greenacre	Seljeseth	Seljeseth, Korneliussen, Greenacre	Seljeseth
<b>Research question(s)</b>	Which measures do researchers use to assess outcomes from B2B selling?	Which outcomes are desired from B2B selling?	How appropriate are the methods researchers use to assess B2B sales performance outcomes, and are there differences in methods published in different journals?	Which data sources do researchers use to assess the various outcomes from B2B selling, and do researchers use the most valid data sources to assess the various outcomes?
<b>Method(s)</b>	Cluster analysis	Quantitative and conceptual	Cluster analysis and correspondence analysis	Cross-tabulations and ranking
<b>Key findings/ contributions</b>	Researchers use 151 different measures to assess the outcomes, and seven sets of measures are frequently used. A large portion of the studies measure only sales revenue and thus disregard the multiple types of outcomes from B2B selling. The paper suggest how researchers can improve the measures used to assess the outcomes.	The study suggests the first complete theoretical framework conceptualizing the outcomes desired from B2B selling with the B2B Sales Performance Outcomes Chain. The chain suggests seven main types/categories and 21 subtypes/subcategories of outcomes desired from B2B selling.	Researchers use methods with substantial variations in quality and sophistication —from methods that may provide biased assessments to best-practice methods published in the highest-ranked journals. This study suggest guidelines on methods to assess the outcomes.	There is a widespread use of data sources that do not provide the most reliable and valid assessments of the outcomes. This study suggests guidelines on the most appropriate data sources to assess the various outcomes from selling.
<b>Publication status</b>	Previous versions of the paper are presented at the 48th EMAC Annual Conference 2019 and the 16th Conference of the International Federation of Classification Societies 2019. Previous versions submitted to Industrial Marketing Management (ABS level 3) and Journal of the Academy of Marketing Science (ABS level 4). After passing the review processes it was not accepted for publication. Also, previous version submitted to Journal of Personal Selling and Sales Management (ABS level 2). The editor invited us to resubmit a new version of this paper, which will be done in 2021.	Preveous version presented at the 20th Conference of the European Association for Education and Research in Commercial Distribution 2019. Previous version submitted to Industrial Marketing Management (ABS level 3). After passing the review process it was not accepted for publication. The paper will be submitted to Journal of Business and Industrial Marketing (ABS level 3) in 2021.	Previous version submitted to Journal of the Academy of Marketing Science (ABS level 4). After passing the review process it was not accepted for publication. The paper will be submitted to Industrial Marketing Management (ABS level 3) in 2021.	The paper is submitted to Journal of Personal Selling and Sales Management (ABS level 2) in December 2020.

### **1.2.2. The interrelatedness of the research papers**

The four research papers comprising this thesis are interrelated in the following ways: The first research paper investigates the measures used to assess outcomes from B2B selling. The search for appropriate theoretical frameworks to evaluate the measures used by the reviewed studies reveals a lack of frameworks conceptualizing outcomes desired from B2B selling.

The second research paper contributes to overcoming this lack of frameworks by suggesting a theoretical framework that conceptualizes desired outcomes from B2B selling and the construct of B2B sales performance outcomes. Consequently, the first and second research papers investigate two interrelated theoretical and methodological issues. The first paper investigates how researchers operationalize measures of outcomes from B2B selling, while the second paper develops a conceptualization of these outcomes. This conceptualization can be used to operationalize measures to assess the outcomes, which is the subject of the first research paper.

Once the investigation of the measures and conceptualizing the outcomes were completed, the third research paper takes a relevant next step by investigating three key methodological issues vital for assessing the outcomes: the number of measures, the types of measures (objective and subjective measures), and the types of respondents. Further, the third research paper examines how journals attend to these three key methodological issues by examining differences in methods used in studies published in different journals.

Regarding the number of measures used to assess the outcomes, the first and third research papers are interrelated. The first paper examines the number of measures used to assess the outcomes and reveals that researchers

use from one to 30 measures. This large variety of measures and the importance of the number of measures for assessing the outcomes supported the inclusion of this issue in the third research paper's examination of methods published across journals. Thus, the third paper examines differences in the number of measures across journals.

The third research paper examines the use of objective measures from company records and subjective measures from multiple types of respondents. The result from this examination is evaluated in relation to previous research, which show considerable differences in these data sources' ability to provide reliable and valid assessments of outcomes from selling. Each data source may provide reliable and valid assessments of certain outcomes while likely providing less reliable and valid assessments of other outcomes. These differences reveal the need to investigate which data sources are used to assess the various types of outcomes.

This investigation is conducted in the fourth research paper. Thus, the third and fourth research papers are interrelated as they investigate objective and subjective measures and various data sources and respondents used to assess the outcomes. The fourth research paper goes one step further and "connects" these data sources with the measured outcomes. More concretely, the fourth research paper examines which data sources (e.g., company records, sales managers, salespeople, and customers) are used to assess various outcomes in the reviewed studies. Previous research on various data sources' ability to assess different types of outcomes reliably and validly are used to evaluate and suggest the most appropriate data sources to assess various types of outcomes.

### **1.3. Outline of the thesis**

This thesis is structured into six chapters. Chapter 2 defines the key term B2B sales performance outcomes and provides the theoretical background for assessing these outcomes. Chapter 3 presents the methods used in the thesis and research papers, including philosophical approaches, as well as how the systematic review was conducted and how the data was analyzed. Chapter 3 also evaluates the validity, reliability, and ethics associated with the research conducted in the thesis. Chapter 4 summarizes the findings and contributions of the four research papers. Chapter 5 discusses conclusions, implications for researchers and managers, limitations, and suggestions for future research. Then, the references are outlined and Chapter 6 presents the four research papers composing this thesis.



## **2. THEORETICAL BACKGROUND**

This chapter introduces relevant research related to the assessing of B2B sales performance outcomes. First, this chapter introduces key definitions and the nature of B2B selling, outcomes from B2B selling, and measures to assess these outcomes, which are applied in the first and second research papers. The chapter then introduces relevant research on the number of measures, objective and subjective measures, and data sources and respondents used to assess outcomes from B2B selling, which are applied in the second and third research papers.

### **2.1. Definitions**

Sales performance outcomes can be broadly defined as the outcomes that salespeople produce (Anderson and Oliver 1987) and range from economic outcomes, such as sales revenue, to outcomes associated with salespeople's customer interactions, such as customer satisfaction. Despite the outcomes' frequent and increasing use as dependent variables in sales research (Asare et al. 2012) and even though researchers have discussed numerous measures to assess the outcomes, no theoretical solution has yet been suggested to measure the outcomes (Siguaw et al. 2003).

The conceptualization of the outcomes-from-B2B-selling construct has a widespread impact on how it should be assessed. First, a conceptualization outlines the components of a construct (Groves et al. 2009; Ghauri and Grønhaug 2002), which, in this case, means outlining the various types of outcomes. This outlining provides guidance for operationalizing measures of the outcomes (Ghauri and Grønhaug 2002) and shows how the

conceptualization and operationalization of this construct are interconnected (Groves et al. 2009; Ghauri and Grønhaug 2002). Thus, to select measures to assess outcomes from B2B selling, one needs to understand the nature of B2B selling and subsequently conceptualize the desired outcomes from this type of selling. In turn, these outcomes indicate which data sources or respondents are relevant or most appropriate to assess the themselves (Groves et al. 2009). For example, using company records to assess sales revenue, and customers to assess customer satisfaction.

## **2.2. The nature of B2B selling**

B2B and B2C interactions are both parts of complex marketing contexts (Gummesson and Polese 2009). Like B2B customers, consumers/B2C customers can buy complex and customized products and services and operate in complex networks and relationships with their families, friends, and numerous suppliers. Further, similar to participants in B2B customers' buying centers, consumers often interact with household "buying centers" comprising family members who act as buyers, payers, users, and shareholders (Gummesson and Polese 2009).

However, B2B selling differs from B2C selling in several ways. First, B2B salespeople often work with value chain intermediaries' networks, while B2C salespeople work with end consumers. Thus, B2B marketers face fewer customers and engage in far larger transactions in terms of economic value compared to B2C marketers. To a more considerable degree, these larger transactions are technical and economic value propositions rather than perceptual brand value propositions (Lilien 2016). Thus, B2B selling, as opposed to B2C selling, is likely to involve more rational buying criteria, more complex

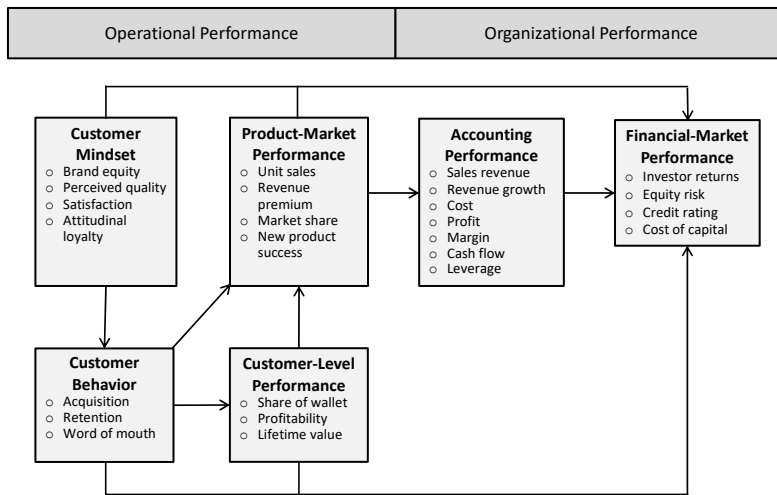
and lengthy decision processes (Dawes, Lee, and Dowling 1998; Manning, Reece, and Ahearne 2010), more people (Gartner 2019), and better trained buying-decision participants (Dawes et al. 1998; Manning et al. 2010).

Whereas B2C selling often takes place within organizational boundaries (e.g., retail stores), B2B salespeople often operate as “boundary spanners” inside and outside their selling companies (Nygaard and Dahlstrom 2002). Thus, compared to B2C selling, B2B selling involves a far more extensive range of stakeholders, such as financial analysts, purchasing agents, engineers, manufacturing managers, and lawyers (Lilien 2016). In summary, these differences between B2B and B2C selling suggest that B2B selling is required to produce more complex and numerous sets of outcomes compared to B2C selling.

### **2.3. Outcomes from B2B selling**

As personal selling is a marketing function, theory on marketing performance outcomes can help conceptualize outcomes from B2B selling and operationalize valid measures to assess such outcomes (Groves et al. 2009; Seale 2009). Katsikeas et al. (2016) provide a theoretical framework on marketing performance outcomes that largely correspond with the outcomes desired from B2B selling, as suggested in prior research (e.g., Cuevas 2018). Figure 2 exhibits this theoretical framework.

Figure 2. The Marketing Performance Outcome Chain



Adapted from Katsikeas et al. (2016)

This framework suggests six main categories of outcomes divided into operational and organizational performance. The outcomes can also be divided into outcomes directly beneficial for customers and the selling company (Zoltners et al. 2008). The customer outcomes are shown in the customer mindset category, and the company outcomes are shown in the five remaining main categories.

The framework organizes the outcomes in a value chain structure that shows how various outcomes from marketing relate to and influence each other. The framework illustrates well how B2B marketing and selling outcomes influence each other, for example, how customer mindset, such as customer satisfaction, influences customer behavior, such as customer retention (e.g., Rauyruen and Miller 2007; Blocker et al. 2011). Further, the framework shows how customer behavior, such as customer retention, influences customer-level performance, such as customers' lifetime value; product-market performance,

such as unit sales (Rauyruen and Miller 2007); and accounting performance, such as sales revenue, cost, and profit (Lam et al. 2004; Rauyruen and Miller 2007). Last, the framework shows how accounting-performance, such as sales revenue, cost, and profits, are antecedents of financial-market performance, such as investor returns.

## **2.4. Measures to assess outcomes from B2B selling**

Because B2B selling is expected to produce multiple types of outcomes, the outcomes-from-B2B-selling construct is an abstract construct that cannot be directly observed (Groves et al. 2009). To assess such an abstract construct, one must use measures that reflect the multiple components (i.e., types of outcomes) that constitute the construct, also termed construct validity (Groves et al. 2009; Ghauri and Grønhaug 2002). Thus, research that conceptualizes the various types of outcomes desired from B2B selling could provide a basis for the operationalization of measures. However, to the best of my knowledge, no previous research provides such conceptualization.

Therefore, to operationalize measures of these outcomes, one has to rely on several research studies. Two previous research studies attempt to operationalize these measures by interviewing practitioners in B2B selling—namely, sales managers and salespeople (Zallocco et al. 2009; Behrman and Perreault 1982). These two studies confirm the need for multiple measures. However, the studies suggest different measures and thus do not contribute to a consensus on valid measures nor on which outcomes are desired from B2B selling.

The primary measure of sales performance outcomes should be sales revenue, which is the most important outcome from selling (Zallocco et al.

2009). However, the salesperson's expanded role over the last few decades (Cuevas 2018) requires measures with a more long-term focus, such as relationship expansion and customer satisfaction (Hughes and Ogilvie 2020).

Further, the measures must be adapted to the outcomes desired from the particular type of selling investigated and the growing diversity of customer expectations in B2B markets. This diversity suggests that B2B salespeople should conduct two main types of selling: transactional and consultative B2B selling (Davie et al. 2010). Transactional B2B selling typically involves selling off-the-shelf products (Parvinen et al. 2013), while consultative B2B selling typically involves selling customized solutions (Cuevas 2018). Any selling needs to create basic outcomes, such as service quality (Töytäri and Rajala 2015), offer value (Blocker et al. 2012), customer satisfaction (Wang et al. 2018), and customer loyalty (Lam et al. 2004). However, with consultative B2B selling, the products and services are customized, which requires salespeople to create additional outcomes. Such additional outcomes could include salespeople's and customers' ability to co-create products and services (Töytäri and Rajala 2015) and salespeople's ability to cooperate with other departments within the selling firm to create customized solutions (Steward et al. 2010; Guenzi and Panzeri 2015). Further, customization requires strong buyer-seller relationships (Storbacka et al. 2009; Mullins et al. 2014) and market intelligence regarding customer needs (Flint, Woodruff, and Gardial 2002). Consequently, to assess outcomes from consultative B2B selling, one needs a larger variety and number of measures compared to transactional B2B selling.

## **2.5. Number of measures to assess outcomes from B2B selling**

Previous paragraphs have introduced research on outcomes from B2B selling, showing that B2B salespeople are required to produce multiple types of outcomes (Cuevas 2018). These multiple types of outcomes indicate that the outcomes-from-B2B-selling construct is a multi-dimensional abstract construct that needs multiple measures to be assessed (Martinez-Martin 2010; Groves et al. 2009; Ghauri and Grønhaug 2002). Practitioners confirm this multiplicity by suggesting 19 (Zallocco et al. 2009) and 31 (Behrman and Perreault 1982) measures to assess outcomes from B2B selling. Consequently, using only one or a few measures to assess B2B selling outcomes typically provides only a partial assessment of the outcomes from B2B selling.

## **2.6. Types of measures to assess outcomes from B2B selling**

Sales performance outcomes can be assessed using both objective and subjective measures. Objective measures usually consist of numbers extracted from company records of “hard” economic outcomes, such as sales revenue, sales quota compliance, and profits (Churchill et al. 1985). Subjective measures are ratings from sales managers, salespeople, and customers and are valid to assess “soft” outcomes associated with salespeople’s customer interactions, such as offer value, customer satisfaction, and customer relationships.

Two meta-analyses show that subjective measures assess sales performance outcomes quite differently than objective measures, revealing a shared variance of only 20% (Rich et al. 1999) and 11.6% (Jaramillo et al. 2005) between subjective and objective measures of the outcomes. As such, subjective measures may be poor indicators of economic outcomes, so it is

preferable to assess such outcomes using objective measures from company records when available (Dess and Robinson 1984).

However, subjective measures are valuable and relevant, but they should be combined with an additional source of measures (Rapp et al. 2020). The complementary benefits of subjective and objective measures make it valuable to combine both types of measures when assessing sales performance outcomes (Bagozzi, Verbeke, and Gavino 2003) as subjective measures are vital to assess soft outcomes while objective measures provide reliable assessments of hard economic outcomes.

## **2.7. Data sources and respondent to assess outcomes from B2B selling**

Four data sources are used to assess sales performance outcomes: company records, sales managers, salespeople, and customers. Thus, when using subjective measures, the choice of data source(s) involves selecting which types of respondents to use.

*Single or multiple data sources.* The choice of data source involves choosing whether to use single or multiple data sources in the same study. Multiple data sources can be combinations of objective and subjective measures or combinations of several types of respondents. The combining of ratings from multiple types of respondents is recommended to attenuate respondent bias (Hulland et al. 2018) because ratings from a single type of respondent at a specific point in time may entail such bias (Jap and Anderson 2004). Schmitz, Lee, and Lilien (2014) recommend using three types of respondents—salespeople, sales managers, and customers—to overcome respondent bias. Further, when assessing buyer-seller relationships, using



multiple types of respondents, such as salespeople and customers, is recommended to provide richer assessments (Hughes, Le Bon, and Rapp 2013; Hulland et al. 2018).

*Company records.* Company records are preferred over respondent ratings to assess economic outcomes due to their more robust reliability (Dess and Robinson 1984). Company records are typically subject to detailed government regulations regarding accounting, auditing, and reporting, which may be one cause for this robust reliability. The main limitation of objective measures is their inability to assess soft outcomes from selling, such as customer satisfaction and customer relationships. However, company records can provide reliable assessments of actual customer loyalty from customer repurchase data over time.

Company records may not always provide 100% accurate assessments as they can be manipulated on purpose or by accident, at least in the short term. For example, salespeople addicted to bonuses may manipulate sales reports on purpose (Zoltners et al. 2012), while incorrect accruals of sales revenue could accidentally bias company records.

*Salespeople.* Salespeople have the best insights into their tactics, efforts, and interactions with customers, as well as their interactions with departments, managers, and colleagues within their own company. However, salespeople's self-ratings are associated with respondent bias from various causes. First, the meta-analysis by Jaramillo et al. (2005) reveals that salespeople rate sales performance outcomes quite differently from objective measures. Thus, it is preferable to avoid using salespeople's self-ratings to assess economic outcomes when such measures are available from company records (Dess and Robinson 1984). Second, this meta-analysis reveals that salespeople rate sales performance outcomes differently from sales managers.

This difference may be caused by salespeople's narrower definition of the outcomes compared to sales managers (Rich et al. 1999). Third, self-ratings from salespeople are associated with respondent bias from socially desirable responding (Steenkamp et al. 2010), which may cause salespeople to rate sales performance outcomes better than they are in reality (Paulhus 2002; Tourangeau and Yan 2007).

*Sales managers.* Sales managers are likely to be knowledgeable about sales performance outcomes as they have easy access to relevant information sources, such as company records, customers, and salespeople. Further, sales managers expect a wider variety of outcomes than salespeople (Rich et al. 1999), which may strengthen the validity of sales managers' ratings. Furthermore, sales managers typically have a bird's-eye view to compare their subordinates' outcomes (Jaramillo et al. 2005).

Similar to salespeople, sales managers rate sales performance outcomes differently than objective measures, as shown in the meta-analysis by Jaramillo et al. (2005). Thus, it is also preferable to avoid using sales managers' ratings to assess economic outcomes when such measures are available from company records. However, sales managers' ratings are shown to be twice as reliable as salespeople's ratings to assess economic outcomes (Jaramillo et al. 2005). Further, sales managers rate salespeople's customer interactions, such as trustworthiness, technical knowledge, product knowledge, and availability, quite different from how customers rate these outcomes. Thus, it is preferable to refrain from using sales managers' ratings to assess such outcomes when customer ratings are available (Cannon and Spiro 1991).

*Customers.* Customers are naturally in the best position to provide reliable evaluations of salespeople's customer interactions, such as gaining trust, providing advice, and providing high-quality customer service (Cannon

and Spiro 1991). Further, customers may be the best data source to evaluate salespeople as salespeople are required to satisfy customer needs (Lambert, Sharma, and Levy 1997). The high importance of salespeople's customer interactions (e.g., Williams and Attaway 1996; Wang, Dou, and Zhou 2012; Wang et al. 2018) suggests using the most reliable and valid data source to assess such outcomes, which is customers.

### **3. METHODS**

This chapter presents the methods used in this thesis. First, this chapter explains why a systematic literature review is appropriate to answer the research questions. Next, the chapter discusses the philosophy of science associated with a systematic literature review and this thesis before presenting the research steps involved in the review. Then, the chapter describes the data analyses in each research paper and evaluates the validity and reliability of the thesis before finally addressing ethical considerations regarding the thesis.

#### **3.1. Using a systematic literature review to answer the research questions**

The overarching research question and the research questions in the four research papers require an examination of how researchers assess outcomes from B2B selling. This examination of researchers' methods can be conducted with a literature review (Cooper 2010; Boot et al. 2016) for the following reasons. First, a literature review is the most effective way to become familiar with the research methods used in previous research (Onwuegbuzie and Frels 2016). Second, a literature review is an effective tool for identifying conflicts and gaps in previous research (Boot et al. 2016) as well as issues that can improve future research (Onwuegbuzie and Frels 2016). Third, a literature review is suitable for developing theoretical frameworks and guidelines to improve future research (Snyder 2019).

A literature review can be conducted as a traditional (scoping) review or as a systematic review (Boot et al. 2016). While traditional literature reviews entail a purposive selection of studies by the reviewer and a discursive

examination, systematic literature reviews aim to identify all relevant studies and examine each study according to predefined criteria (Jesson et al. 2012). A systematic literature review was chosen for the present thesis due to the following strengths. First, a systematic literature review includes organized and transparent methods for collecting, including, synthesizing, and evaluating studies (Jesson et al. 2012). Such transparency makes it easier to judge the methods and findings in this thesis (Boot et al. 2016). Second, such transparency strengthens the conclusions' auditability, ensuring the conclusions are grounded in the gathered data rather than fabricated to support a prior assumption (Boot et al. 2016). Third, a systematic literature review may have stronger internal validity as this approach avoids bias from a subjective selection of studies (Boot et al. 2016) or from only reviewing single studies, which could be done in a traditional review (Jesson et al. 2012). Finally, a systematic review enables graphical and tabular features, making it easier to interpret large amounts of data and findings (Boot et al. 2016), which is the case in the present review and thesis.

A systematic and quantitative literature review applied to answer clearly defined research questions includes a descriptive research design (McGivern 2013; Onwuegbuzie and Frels 2016). The research questions in this thesis' research papers require a literature review that describes the following methodological issues related to assessing the outcomes: the measures, the number of measures, the types of measures (objective and subjective), and the types of respondents and data sources. Consequently, the data collected from all the reviewed studies to describe all these methodological issues resulted in a relatively large dataset. Further, each methodological issue requires specific data analysis and examination, resulting in multiple analyses and evaluations. Furthermore, the findings regarding each methodological issue must be

evaluated in relation to previous research with specific relevance for each issue. Thus, a thorough investigation of how researchers assess outcomes from selling requires investigating these methodological issues over four research papers.

Systematic literature reviews share similarities with meta-analyses regarding their quantitative procedures and statistical analyses. However, meta-analyses emphasize synthesizing the results and findings in studies (e.g., Cooper and Hedges 2009; Cooper 2010), while this thesis requires synthesizing the research methods used in studies, termed a methodological literature review (Onwuegbuzie and Frels 2016). Thus, a systematic review is appropriate over a meta-analysis to answer the research questions of this thesis (Cooper and Hedges 2009; Cooper 2010).

### **3.2. Philosophy of science**

Philosophy of science is the systematic study of scientific activity and knowledge, which includes different scientific paradigms (Gilje and Grimen 1993). These paradigms represent various scientific perspectives on what can be counted as facts (Kuhn 2012) and how to study and understand the world (Patton 2015). Thus, scientific paradigms determine the frameworks and principles for research methods (Guba and Lincoln 1994).

Each scientific paradigm covers three scientific levels. First, the ontology level includes assumptions about how reality actually is and what can be known about it. Second, the epistemology level expresses how we can acquire knowledge about reality. Third, the methodology level includes techniques for generating information about reality (Easterby-Smith, Thorpe, and Jackson 2012).

The present thesis and systematic literature review are rooted in the post-positivistic paradigm. The post-positivistic ontology argues that social science research should be objective despite acknowledging human limitations in providing objective and irrefutable knowledge (Lincoln and Guba 2000). According to Onwuegbuzie and Frels (2016), literature reviews align with the post-positivistic view of objective but imperfect knowledge. According to post-positivists, “the absolute truth” that positivists claim exists is nowhere to be found (Wildemuth 1993).

The post-positivistic drive toward objectivity (Lincoln and Guba 2000) aligns with systematic literature reviews’ ability to give the most trustworthy answers to specific review questions (Boot et al. 2016). This trustworthiness is strengthened by the ambition of reviewing all relevant studies in systematic literature reviews (Jesson et al. 2012). This ambition strengthens such reviews’ internal validity by reducing bias from the subjective selection of studies (Boot et al. 2016).

The post-positivistic acknowledging of human limitations in providing objective knowledge (Lincoln and Guba 2000) aligns with systematic literature reviews’ limitations to providing objective and value-neutral knowledge. These limitations are related to the series of decisions that must be made when conducting such reviews. These decisions are influenced by researchers’ perspectives, such as what studies to include and what fragments of the research to emphasize or criticize (Onwuegbuzie and Frels 2016). The present literature review is based on several subjective decisions regarding, for example, study inclusion criteria and the methodological issues to focus on. Thus, rather than attempting to be objective and value-neutral, literature reviewers should strive to be systematic to minimize biases (Onwuegbuzie and Frels 2016).

The post-positivistic epistemology proposes that knowledge is built by adding building blocks, such as generalizations, to the existing edifice of knowledge (Lincoln and Guba 2000). The present systematic review on how the reviewed studies assess outcomes from B2B selling aims to be a generalization of how *all* B2B sales researchers assess these outcomes.

Furthermore, the post-positivistic epistemology establishes that researchers should try to eliminate biases in empirical data (Onwuegbuzie and Frels 2016) to generate findings that are “probably true” (Lincoln and Guba 2000). Such efforts to eliminate biases aligns strongly with the present thesis’ primary goal—to contribute to reducing biases and improving the reliability and validity of quantitative assessments in empirical research.

The review reveals the widespread use of subjective ratings from respondents, which may be associated with respondent bias. The present evaluation acknowledges that subjective ratings are based on linguistic interpretations of survey questions (Solberg 2001) and that answers to such questions are often socially constructed (Gilje and Grimen 1993) and can never be absolutely certain (Gilje and Grimen 1993; Slagstad 1995). Further, the present evaluation acknowledges that salespeople’s self-ratings of sales performance outcomes may suffer from respondent bias (Podsakoff et al. 2003). Such respondent bias may come from overreporting of socially desirable behaviors and underreporting of behaviors that are socially undesirable (Fishbein and Ajzen 2010).

On the methodological level, post-positivists use both quantitative and qualitative methods (Lincoln and Guba 2000). However, a post-positivistic approach to literature reviews is likely to emphasize quantitative studies (Onwuegbuzie and Frels 2016), which is the scope for the present review. Further, to analyze, handle, and synthesize quantitative data, the obvious



choice it to use quantitative approaches (Boot et al. 2016), which are conducted in the present thesis.

To analyze the quality of research, post-positivists use conventional benchmarks, such as validity, reliability, and objectivity (Lincoln and Guba 2000). Similarly, in this thesis, reliability and validity are used to evaluate the methods used to assess the outcomes from B2B selling. Further, this thesis' push for objectivity is enhanced by following the strict standards of conducting systematic literature reviews (Boot et al. 2016; Littell, Corcoran, and Pillai 2008).

Post-positivism accepts both inductive and deductive research approaches, and this thesis' systematic literature review encompasses a research paradigm of open-mindedness in observations and inductive bottom-up generalizations from a large number of collected data (Ladyman 2002).

### **3.3. The research steps in the systematic literature review**

The present systematic literature review provides data to answer the overarching research question and the research questions in the four research papers. Thus, the review's research steps in the research papers are similar: for example, the collection of studies, inclusion criteria, and data recording. Therefore, the method sections in the four research papers share large similarities. The systematic review is conducted in accordance with the guidelines suggested by Palmatier, Houston, and Hulland (2018) and Littell et al. (2008) and consists of the following research steps.

The first step was to gather empirical studies measuring B2B sales performance outcomes. The included studies had to be published in scientific journals as such studies represent the highest level of research (Nord and Nord

1995; Ngai 2005), and systematic literature reviews tend to focus on the highest-quality research available (Boot et al. 2016). Furthermore, researchers generally use such journals to disseminate studies and acquire knowledge (Nord and Nord 1995; Ngai 2005). Thus, the present review excluded master theses, doctoral dissertations, conference papers, unpublished papers, and textbooks (Ngai 2005).

The primary sources were scientific journals that, according to the review by Asare et al. (2012), publish research on personal selling and sales management. The six journals that Asare et al. (2012) claim publish the highest number of sales research studies were examined issue by issue (i.e., *Journal of Personal Selling & Sales Management*, *Industrial Marketing Management*, *Journal of Marketing*, *Journal of the Academy of Marketing Science*, *Journal of Business & Industrial Marketing*, and *Journal of Business Research*). The other eleven journals that publish sales research according to Asare et al. (2012) were examined through an online keyword search on each journal's website using separate keywords like "sales performance," "sales," "selling," and "sales effectiveness" (i.e., *Journal of Marketing Theory and Practice*, *International Journal of Research in Marketing*, *Journal of Marketing Research*, *European Journal of Marketing*, *Journal of Applied Psychology*, *Marketing Intelligence & Planning*, *Journal of Business-to-Business Marketing*, *Journal of International Marketing*, *Marketing Science*, *Psychology & Marketing*, *Women in Management Review*).

In the next step, the collected studies were examined in relation to the following study inclusion criteria. First and foremost, the studies must assess sales performance outcomes as dependent variables associated with at least one sales-related independent variable (Katsikeas et al. 2016). Researchers use various labels for the sales-performance-outcomes construct; thus, these

various labels were accepted for inclusion, including substitutes for “sales” (e.g., “salesperson,” “sales team/force,” “key account manager,” “sales trainee,” and “sales territory”) and substitutes for “performance outcomes” (e.g., “outcomes,” “productivity,” “success,” “effectiveness,” and “excellence”).

Further, the included studies only investigate B2B selling because of its differences from B2C selling (Lilien 2016; Dawes et al. 1998; Manning et al. 2010). Furthermore, the included studies are quantitative (as opposed to qualitative) for the following reasons: Foremost, the scope of the review needs to reflect the review audience (Boot et al. 2016), which is the sales research community. The studies published by this community are 68% purely quantitative and only 6% purely qualitative (Asare et al. 2012), indicating a major focus on quantitative research methods among sales researchers. Additionally, the review excludes qualitative studies to avoid being too wide and unmanageable. Conducting a single, completely comprehensive review is generally not feasible given time and resource constraints. The differences between qualitative and quantitative studies in such a comprehensive review could also create distractions from the review's main focus (Boot et al. 2016). Indeed, a clear distinction between quantitative and qualitative research is their different research methods (Onwuegbuzie and Frels 2016), which is the main focus of this thesis. These differences would have increased the workload at the expense of the selectivity and accuracy of the data analysis and evaluations (Boot et al. 2016). Thus, such differences often require splitting the pool of relevant studies (Boot et al. 2016), which is accomplished by including only quantitative studies in the present review. Lastly, as systematic literature reviews are most closely aligned with the quantitative research tradition, such reviews typically emphasize quantitative research rather than qualitative research (Onwuegbuzie and Frels 2016).

Finally, the overarching research question and the goal of investigating how researchers assess these outcomes required a review of relatively recent research instead of a historical review far back in time. Thus, the included studies were published in the last 15 years. Since the studies were collected in 2016, the review includes studies published between 2001 and 2015. Meta-analyses and literature reviews were excluded, along with studies that did not provide information regarding this review's inclusion criteria.

Screening the text of the collected studies to ensure they met all the inclusion criteria generated 139 studies published in 17 journals, as shown in Table 2.

Table 2. The journals and the number of studies contributing to the review

Journals	Total	
	n = 139	%
<i>Journal of Personal Selling &amp; Sales Management</i>	30	21.6
<i>Industrial Marketing Management</i>	29	20.9
<i>Journal of Marketing</i>	16	11.5
<i>Journal of the Academy of Marketing Science</i>	15	10.8
<i>Journal of Business &amp; Industrial Marketing</i>	14	10.1
<i>Journal of Business Research</i>	9	6.5
<i>Journal of Marketing Theory and Practice</i>	5	3.6
<i>International Journal of Research in Marketing</i>	4	2.9
<i>Journal of Marketing Research</i>	4	2.9
<i>European Journal of Marketing</i>	3	2.2
<i>Journal of Applied Psychology</i>	3	2.2
<i>Marketing Intelligence &amp; Planning</i>	2	1.4
<i>Journal of Business-to-Business Marketing</i>	1	0.7
<i>Journal of International Marketing</i>	1	0.7
<i>Marketing Science</i>	1	0.7
<i>Psychology &amp; Marketing</i>	1	0.7
<i>Women in Management Review</i>	1	0.7

The table can be read like this: *Journal of Personal Selling and Sales Management* contributes 30 studies to this review, which constitutes 21.6% of the reviewed studies.

In the final step, the data of interest was extracted and organized into an evaluative framework. Such a framework is key in systematic reviews for data extraction and data categorization and for ensuring that the reviewed studies are handled in a consistent manner (Boot et al. 2016). In accordance with the research questions in each paper, the evaluative framework included the following sections to record the extracted data: measures, types of measures (objective and subjective measures), data sources, and types of respondents.

During the review process, the coding protocol was advanced and refined with new coding classes to record new categories of data as they arose. To ensure accuracy and transparency during the review process, a coding protocol was developed in Excel following the procedure recommended by Lipsey and Wilson (2001) regarding how to code extracted data. The protocol organized the studies by year of publication and by author(s). To ensure quality and reliability, the coding process was repeated a second time.

### **3.4. Data analyses**

#### **3.4.1. Data analysis in Paper 1**

Paper 1 examines the measures used in the reviewed studies to assess B2B sales performance outcomes. The final dataset from the review included 139 studies using 151 different measures to assess the outcomes. A data matrix was used to record whether each measure was present or absent in each study, coded as 1 or 0, respectively. The final data matrix comprised 139 rows

(the studies) and 151 columns (the measures), showing which measures were used in each study.

For interpretation purposes, a cluster analysis was conducted on the measures to break down the large dataset of studies and measures into groups of studies using similar measures. This categorization was conducted as groups of similar studies are easier to examine than each individual study and measure alone (Hair et al. 2010). The cluster analysis was conducted on the presence/absence matrix of measures using a hierarchical clustering algorithm, which required two decisions: 1) how to quantify the differences between the studies in terms of the dichotomous observations (presence/absence of measures) and 2) which clustering criteria to use to join clusters of studies in the hierarchical process.

Concerning the first decision, the Jaccard Index of Similarity (Greenacre and Primicerio 2013) is suitable for quantifying the similarities between two studies as the dataset consists of mostly absent measures and only a few measures are present in each study. The problem with conducting a cluster analysis on such a dataset is that the most common similarity among the studies is a large number of absent measures, which need to be ignored in the present cluster analysis.

Concerning the second decision, the Ward (1963) criterion was used to combine clusters, which displayed the hierarchical clustering of the data structure in the form of a dendrogram (e.g., Tan, Steinbach, and Kumar 2006; Greenacre and Primicerio 2013). The dendrogram shows clusters of studies with similar (homogeneous) measures of B2B sales performance outcomes. Then, the level of homogeneity within each of the clusters and between the clusters was measured. The clusters of studies using homogeneous measures

provided a typology of the sets of measures researchers use to assess the outcomes (Hair et al. 2010).

### **3.4.2. Data analysis in Paper 2**

Paper 2 aims to develop a theoretical framework of the desired outcomes from B2B selling. This theoretical framework was developed by categorizing the measured outcomes in the reviewed studies into an initial framework for marketing performance outcomes (Katsikeas et al. 2016). This initial framework was adjusted and adapted to B2B selling during the review process of recording and categorizing the measured outcomes. The adaptation was conducted by removing categories of outcomes that were not measured by the reviewed studies and adding new categories for measured outcomes that did not fit into the initial framework.

### **3.4.3. Data analysis in Paper 3**

Paper 3 examines three key methodological issues in the reviewed studies as well as differences in the methods published in different journals. The first step of data analysis for this paper involved creating three cross-tabulations for the three key methodological issues and for the 17 journals. In the next step, three cluster analyses were performed to group journals that publish similar methods. The clustering algorithm uses the same distance measure between the row profiles—the Chi-square distance—as the distance measure used in the correspondence analyses (see below), which we performed to visualize the tables (Greenacre 2016). The specific algorithm used was Ward clustering (Ward 1963), which optimizes between-cluster distance variance in each step of the clustering process. Finally, three correspondence analyses were conducted to visualize the row profiles in correspondence

analysis maps (CA-maps) (Greenacre 2016). CA-maps aid in data interpretation by visualizing essential patterns (Hair et al. 2010). The present analysis used the version of correspondence analysis known as the contribution biplot (Greenacre 2013). This analysis generates arrows in CA-maps representing the various types of methods investigated. A journal's location in line with the arrow and location between the center cross and the arrowhead indicate the value of the journal profiles (Greenacre 2010) and, thus, the method used by the studies published in each journal. Journals located close to the center in the CA-maps tend to publish studies with methods that are close to the average for the reviewed studies. A location away from the center and toward a specific type of method shows that a journal publishes studies that use this particular type of method to a greater degree than average for the reviewed studies.

#### **3.4.4. Data analysis in Paper 4**

Paper 4 examines the data sources used to assess B2B sales performance outcomes in the reviewed studies. The measured outcomes were categorized within an initial framework with the four data sources (company records, sales managers, salespeople, and customers). The initial framework was expanded during the review process by adding two new categories of data sources to record measures assessed by combinations of respondents (sales managers and salespeople as well as sales managers, salespeople, and customers). Thus, adding these two categories of data sources, the final framework included six categories of data sources. Finally, the measured outcomes were reordered in accordance with the frequency that they were assessed in the reviewed studies.



### 3.5. Validity and reliability

Internal validity is one aspect of a quality assessment or a critical appraisal of a systematic review. Essentially, internal validity refers to the degree to which one can believe a study's results—in other words, how close the results are to the truth (Boot et al. 2016). Ensuring a high level of internal validity requires the researcher to avoid systematic bias and errors, for example, from reviewing only single studies (Jesson et al. 2012) or from selecting studies subjectively, which is often done in traditional literature reviews (Boot et al. 2016). To avoid such bias, a systematic review was conducted in this thesis.

In a systematic review, internal validity is facilitated by using a standard set of guidelines to execute the review (Boot et al. 2016). To ensure internal validity, the present review and thesis followed the guidelines from Palmatier et al. (2018) and Littell et al. (2008). These guidelines require the research to formulate clear research questions; provide clear definitions of the construct, population (studies), and inclusion criteria; identify all relevant studies; record the data into a predefined protocol; use data analyses to identify clusters, patterns, and relationships; present the data clearly and completely in tables and figures; interpret and discuss the core results to provide a deeper understanding; and discuss the implications for researchers, practitioners, and future research.

Early on in the systematic literature review's scientific development process, it was considered desirable to collect all relevant studies. However, more recently, there has been increasing recognition that even the most exhaustive search cannot collect the entire universe of studies (Boot et al. 2016). Thus, "fitness for purpose" is the appropriate aspiration for the collected

studies' coverage of the review scope, which is underpinned by the trade-off of rigour versus relevance (Bennet et al. 2005).

Through an extensive search for studies, including an issue-by-issue review of the journals and keyword searches on the journals' websites, the present review aimed to include all relevant studies. This search for studies resulted in 139 studies. This number of studies and the aim of collecting all relevant studies through an extensive search provide good coverage of the review scope and satisfactory internal validity (Boot et al. 2016).

However, two particular biases may have influenced this thesis' internal validity. First, by excluding unpublished studies, this review may suffer from the reasoning editors use when selecting which studies to publish, also called publication bias (Gilbody and Song 2000). Second, by excluding non-English studies, this review overlooks potentially valuable information from such studies (Song et al. 2010).

External validity (also termed generalizability or applicability) is another aspect essential to a quality assessment of studies conducting systematic reviews. External validity refers to the degree to which the results from a study can be applied to the population identified by the research question (Boot et al. 2016) or applied to another population (population validity), another setting (ecological validity), or over time (historical validity) (Dekkers et al. 2010).

The present review used a strict and detailed set of study inclusion criteria, such as the requirement that the studies research B2B selling and be empirical and quantitative. Using a strict set of inclusion criteria provided a clear definition of the population investigated (i.e., the particular type of sales research). This clear definition of the population and the large sample (of reviewed studies) provides satisfactory external validity (generalizability) to reviews with similar inclusion criteria (Boot et al. 2016).

The population validity and ecological validity of the investigated outcomes, measures, and number of measures have uncertain generalizability to, for example, reviews of B2C sales research. This uncertain generalizability is caused by the often wider variety of desired outcomes from B2B selling compared with B2C selling (e.g., Lilien 2016; Dawes et al. 1998; Manning et al. 2010). However, the present investigations of subjective and objective measures and the types of respondents and data sources may have satisfying population validity and ecological validity to reviews of B2C sales research because of similar methods to assess the outcomes. Regarding historical validity, changes in the sales profession and the advance of sales research have not occurred rapidly (Cuevas 2018; Asare et al. 2012). Thus, the present investigations have relatively robust historical validity over a short historical period, but this validity is more uncertain over a longer historical period.

Reliability is also a vital aspect of a quality assessment of a systematic literature review. The reliability of such review refers to the trustworthiness of the results and the degree to which both the review and the study results are reproducible (Boot et al. 2016). This study is highly reproducible because of the rigorous procedures and study inclusion criteria as well as the good coverage of the population with 139 reviewed studies (Boot et al. 2016; Cooper 2010).

Further, the data investigated in this review are categorical and such data require little evaluation from the researcher to be recorded correctly in the data protocol. Also, the coding process was repeated a second time to ensure the accuracy of the recorded data. Furthermore, the reliability of systematic reviews relates to whether the study findings are substantial enough to have a practical impact and thus to be meaningful (Boot et al. 2016). The present thesis' analyses reveal patterns of considerable size regarding how

researchers assess the outcomes and represent clear findings with reliable implications for sales researchers.

### **3.6. Ethical considerations**

The present thesis uses secondary data sources and does not include information about firms or people from interviews, questionnaires, or observations. Thus, the present thesis has few ethical considerations regarding, for example, negative influences on respondents, the anonymity of respondents, or the confidentiality of firms (Bell and Bryman 2007).

However, one ethical consideration that needs to be addressed is the assurance that this research was conducted in accordance with the professional responsibilities of a researcher (Steneck 2006). These responsibilities include searching for the truth in an independent, honest, and forthright way (Bunge 1996). Independence and honesty are ensured by strictly following the principles of systematic reviews in this review. These principles require open-mindedness in observations and inductive bottom-up generalizations from an extensive collection of data (Ladyman 2002).

The Nord University Business School financed the work conducted for this thesis, so there are few potential conflicts of interest regarding the findings. By using public funding, this thesis is obligated to return the best possible results to both the public and the scientific community, which includes reporting findings correctly and honestly.

## 4. SUMMARY OF THE RESEARCH PAPERS

This chapter consists of four sections, with each section outlining each research paper's research question(s), methods, findings, and key contributions to the thesis. Each research paper is outlined in the context of the overarching research question, and all the papers are interconnected as they all investigate various methodological issues related to assessing B2B sales performance outcomes. The research papers are written to align with various scientific conferences' and journals' requirements and are therefore independent papers with different formats.

### 4.1. Paper 1. “Measures to assess B2B sales performance outcomes: A systematic review and future directions”

Paper 1 investigates an essential issue of assessing B2B sales performance outcomes: the measures used to assess such outcomes. Despite the importance of assessing outcomes from selling, the literature provides little consensus or guidance on which measures should be used to assess such outcomes (Siguaw et al. 2003; Ingram et al. 2005). Thus, Paper 1 addresses the following research question: *which measured do researchers use to assess outcomes from B2B selling?*

The study answers the research question through a systematic review of the measures used to assess outcomes from B2B selling in 139 published studies. The review shows that researchers assess these outcomes very differently by using 151 different measures. This large variety of measures

demonstrates the lack of consensus among researchers regarding measures to assess the outcomes.

A cluster analysis of the measures was conducted to simplify the large dataset of studies and measures, which disclosed seven sets of measures used to assess the outcomes. These sets of measures were evaluated in relation to previous research explaining outcomes from B2B selling. The evaluation shows that a large portion of the reviewed studies basically only measure sales revenue and overlook outcomes associated with salespeople's customer interactions. Consequently, these studies disregard the multiple types of outcomes desired from B2B selling and the critical importance of fruitful customer interactions in B2B selling addressed in research and by practitioners.

This paper provides three contributions. First, by demonstrating the lack of consensus on measures and the narrow assessment of outcomes, this paper addresses the need for many sales researchers to reevaluate their measures of these outcomes. Second, this study categorizes the measures into those that assess outcomes beneficial to customers and those that assess outcomes beneficial to selling companies. This categorization provides detailed insights into frequently assessed company outcomes and less frequently assessed customer outcomes. These insights offer help for researchers to conduct more balanced assessments of company and customer outcomes in future research. Third, this paper suggests recommendations for improved measures of the outcomes.

## **4.2. Paper 2. “Desired outcomes from B2B selling: A systematic review and conceptualization”**

Paper 2 contributes to further narrowing the research gap regarding outcomes from B2B selling and valid measures to assess such outcomes by developing a theoretical framework conceptualizing the outcomes desired from B2B selling. The sales literature does not offer such a conceptualization despite the importance of these outcomes to research and management. This study addresses the following research question: *which outcomes are desired from B2B selling?*

The research question was answered by organizing the reviewed studies' measured outcomes into a value chain framework. This organizing led to the creation of the B2B Sales Performance Outcomes Chain. This chain is the first complete theoretical framework conceptualizing the outcomes desired from B2B selling and suggest seven main types and 21 subtypes of outcomes. Further, the chain shows how the various outcomes relate to and influence each other. Researchers can use the chain to select measures to assess the outcomes or investigate hypotheses and research models that include the outcomes. Managers can use the chain as an overarching executive tool for targeting and monitoring outcomes and for directing sufficient effort toward realizing the various desired outcomes.

## **4.3. Paper 3. “Methods to assess outcomes from B2B selling: A systematic review, cross-journal examination, and guidelines”**

Paper 3 investigates three key methodological issues vital for assessing B2B sales performance outcomes: how many measures to use, what type(s) of

measures to use, and what type(s) of respondents to use. This study investigates these methodological issues because the sales literature offers little guidance and appears inconsistent on these issues. This inconsistency implies that sales researchers frequently use methods that previous research associates with biased assessments. This study addresses the following two research questions to resolve these gaps: *how appropriate are the methods researchers use to assess B2B sales performance outcomes, and are there differences in methods published in different journals?*

This study answers these research questions through a systematic review of the three key methodological issues in the reviewed studies. Further, this study examines differences in these methods across the 17 journals publishing the reviewed studies.

This study provides several contributions to improve researchers' methods for assessing the outcomes. First, it exhibits a large variety of possible research methods and pinpoints their various sophistication and quality. Second, this study reveals the widespread use of methods that may not provide the most reliable and valid assessments. This finding indicates the need for many sales researchers to scrutinize and reevaluate their methods. Third, the examination shows how studies in the highest-ranked journals provide more reliable and valid assessments by combining objective and subjective measures and multiple types of respondents to a larger degree than average for the reviewed studies. Last, this study contributes by suggesting guidelines for improved methods to assess the outcomes.



#### **4.4. Paper 4. “Data sources to assess sales performance outcomes”**

Paper 4 investigates the data sources used to assess the various types of outcomes from B2B selling. The outcomes can be assessed using four data sources: company records, sales managers, salespeople, and customers. This investigation is motivated by the data sources’ various ability to provide reliable and valid assessments of different types of outcomes. Further, the investigation is motivated by the little guidance on which data sources should be used to assess various types of outcomes. The study addresses the following two research questions: *which data sources do researchers use to assess the various outcomes from B2B selling, and do researchers use the most valid data sources to assess the various outcomes?*

This study answers the research questions by examining and evaluating the data sources used to assess the outcomes in the reviewed studies. The study provides two main contributions. First, it reveals the widespread use of salespeople and sales managers to rate economic outcomes and outcomes associated with salespeople’s customer interactions. However, these are outcomes that company records and customers, respectively, can provide considerably more reliable assessments of. By identifying such widespread mismatches between the data sources used in research and the outcomes they assess, this study should encourage sales researchers to reevaluate the data sources they use to assess various outcomes. Second, this study suggests the first concrete guidelines on the most valid data sources to assess various outcomes and outcomes that preferably could be assessed using each data source.

## 5. CONCLUSIONS AND IMPLICATIONS

### 5.1. Conclusions

This thesis is based on a systematic literature review of the methods used to assess outcomes from B2B selling in 139 published studies. The review reveals variation in the quality and sophistication of methods researchers use to assess these outcomes, demonstrating the lack of consensus regarding these methods. Further, this thesis evidences a sizeable inconsistency in sales research—namely, the widespread use of methods to assess the outcomes that have been criticized in research for being associated with biases. This large variety of methods and this inconsistency in sales research may stem from the little guidance on methods to assess these outcomes.

This thesis also reveals that studies published in the highest-ranked journals use best-practice methods to a larger degree than average among the reviewed studies. This finding may be expected, but it is valuable to identify which concrete methods these studies conduct better. Thus, these studies can serve as best-practice examples of research methods that ensure more robust reliability and validity of assessed outcomes.

The lack of consensus and the variation in the quality of the methods used to assess the outcomes from B2B selling call for many sales researchers to reevaluate and improve their research methods. This thesis contributes to such a reevaluation by suggesting methods that may need improvement, theoretical frameworks and guidelines on improved methods, and particular issues for further investigations. The following paragraphs complete the discussion on each of the investigated methodological issues in this thesis.

### **5.1.1. Conceptualization of the outcomes**

Proper conceptualization of the outcomes from B2B selling are important because these outcomes constitute an abstract and complex construct containing multiple types of outcomes (Groves et al. 2009). Further, such conceptualization provides a foundation to enable an operationalization of measures with solid construct validity (Groves et al. 2009; Ghauri and Grønhaug 2002).

This thesis extends previous research conceptualizing outcomes from marketing (Katsikeas et al. 2016) by adapting this conceptualization to B2B selling. This adaption provides the first complete theoretical framework that conceptualizes desired outcomes from B2B selling, as represented by the B2B Sales Performance Outcomes Chain. This framework suggests seven main types and 21 subtypes of outcomes from B2B selling. This framework can help many researchers develop measures that reflect the multiple types of outcomes and improve the construct validity of future assessments.

This framework also extends and systemizes the multiple outcomes from B2B selling suggested in earlier research on B2B selling and marketing. The framework particularly systemizes outcomes directly beneficial to customers, such as customer satisfaction (Cravens 1995), offer value (Blocker et al. 2012), service quality (Töytäri and Rajala 2015), customer relationships (Storbacka et al. 2009), customer loyalty (Lam et al. 2004), and co-creation of products and services (Töytäri and Rajala 2015).

### **5.1.2. Operationalization of measures**

The large variety of measures and the large variety of the number of measures used to assess the outcomes show that researchers have different understandings and conceptualizations of this same construct. These

differences raise concerns regarding how sales performance outcomes are labeled in research. For example, when measuring only sales revenue to assess the outcomes, it would be more literally and scientifically accurate to name the dependent variable “sales revenue” and not “sales performance outcomes.” Further, this wide variety of measures and number of measures raise questions regarding whether the various measures perform equally well and which differences in construct validity they will eventually involve.

A large portion of the reviewed studies use relatively few sales revenue measures to assess the outcomes. The need for such measures is evident by the fact that sales revenue is the most important outcome from selling. Further, such measures are highly reliable when using sales revenue data from company records (Dess and Robinson 1984).

However, the reviewed studies’ widespread use of relatively few sales revenue measures stands in contrast to the salesperson's expanded role (Cuevas 2018) and focus on customer relationships and customer satisfaction (Hughes and Ogilvie 2020). Further, using few sales revenue measures stands in contrast to the multiple measures suggested by practitioners in B2B selling (Zallocco et al. 2009; Behrman and Perreault 1982; Cron et al. 2014). Also, this contrast may indicate a valuable strength of qualitative research designs as two of these studies (Zallocco et al. 2009; Cron et al. 2014) are qualitative studies. These two studies used in-depth interviews via an open-ended interview approach that enabled respondents to freely articulate their experiences and knowledge (McGivern 2013). This interview approach may have stimulated the practitioners to express a broad range of desired outcomes relevant to assess. Behrman and Perreault’s (1982) study is mainly quantitative, but they used qualitative research techniques to prepare their research instrument with a panel of judges comprising, among others, sales and marketing managers.

Also, solely assessing sales revenue contrasts the multiple types of outcomes suggested by the present conceptualizations in the B2B Sales Performance Outcomes Chain. Further, such measurement overlooks how critical outcomes influence each other (Katsikeas et al. 2016), as suggested in this chain. For example, creating customer satisfaction is important to achieve customer retention (e.g., Rauyruen and Miller 2007; Blocker et al. 2011), which is essential for creating unit sales (Rauyruen and Miller 2007) and sales revenue (Lam et al. 2004; Rauyruen and Miller 2007).

Another central tendency among the reviewed studies is the much more frequent measurement of company outcomes and the less frequent measurement of customer outcomes. This tendency reveals the need for sales researchers to increase their measurement of customer outcomes in future sales research.

Choosing which measures to assess such an abstract and multi-dimensional construct as the outcomes from B2B selling involves the fundamental conflict of reliability and validity in survey research (Franke, Rapp, and Andzulis 2013). In this context of assessing outcomes from selling, this conflict refers to balancing reliability and construct validity. For example, using multiple measures to assess one type of outcome may strengthen that specific outcome's reliability and reveal stronger relationships between antecedents and the outcome (e.g., Churchill 1979). However, using multiple measures to assess one type of outcome may come at the expense of using the measures to assess multiple types of outcomes (Richins 2004), which is crucial for construct validity (Groves et al. 2009; Ghauri and Grønhaug 2002). The balancing of reliability and validity is essential to avoid using too many measures. Overly long questionnaires could result in respondents having to dedicate a significant

amount of effort and time, thus potentially lowering response rates and measurement reliability (e.g., Richins 2004; Drolet and Morrison 2001).

### **5.1.3. The number of measures**

The review reveals substantial variability in the number of measures used to assess the outcomes from B2B selling and the widespread practice of using few measures. Using too few measures is inadequate to capture and reflect abstract constructs with multiple components (Groves et al. 2009; Ghauri and Grønhaug 2002), such as the multiple types of outcomes from B2B selling (e.g., Zallocco et al. 2009; Behrman and Perreault 1982; Cron et al. 2014). Thus, construct validity—namely, how well the measures conform to previous research—is not satisfying for those studies using few measures to assess such constructs that previous research has suggested consist of multiple components/types of outcomes (Seale 2009).

### **5.1.4. Objective and subjective measures**

This thesis extends the research on subjective and objective measures in sales research. Subjective measures are the most commonly used measures in the reviewed studies even though economic outcomes are the most frequently measured outcomes. The use of subjective measures to assess economic outcomes stands in contrast to the fact that subjective measures can be poor indicators of objective sales performance outcomes (Jaramillo et al. 2005; Rich et al. 1999). Thus, researchers strongly recommend using objective measures to assess economic outcomes when such measures are available from company records (Dess and Robinson 1984).

To a large extent, the reviewed studies published in the highest-ranked journals follow the best practice of combining subjective and objective

measures, as recommended in research (Rapp et al. 2020; Bagozzi et al. 2003). These studies combine subjective and objective measures to a larger degree than average among the reviewed studies. Such combination enables researchers to harness the complementary benefits of subjective and objective measures (Bagozzi et al. 2003), for example, by using reliable, objective measures of economic outcomes and valid subjective measures of sales peoples' customer interactions.

One possible explanation of the dominant use of subjective measures in the reviewed studies may stem from researchers' limited access to objective measures from company records. Further, this frequent use of subjective measures rated by respondents may arise from the convenience of using one data source that can assess both the antecedents and the outcomes of B2B selling and thus provide all the data necessary for a research study.

#### **5.1.5. Single or multiple respondent types**

This thesis extends previous research regarding the use of single or multiple respondent types in research surveys. Previous research recommends using multiple respondent types to reduce respondent bias (Hulland et al. 2018; Jap and Anderson 2004) and provide richer assessments (Hughes et al. 2013; Hulland et al. 2018). In contrast, half of the reviewed studies use one sample of salespeople as respondents.

However, the present review shows that the highest-ranked journals tend to publish studies that follow the best practice of using multiple respondents, as suggested in previous research (Hulland et al. 2018; Schmitz et al. 2014; Hughes et al. 2013; Jap and Anderson 2004). The studies published in these highest-ranked journals use two (dyadic) respondent types to a much larger degree than average among the reviewed studies. Further, these

highest-ranked journals are the only journals that publish studies using three (triadic) respondent types.

One plausible explanation for the frequent use of one type of respondents in the reviewed studies may be the additional effort needed for data collection and analysis when using multiple types of respondents. However, the studies published in the highest-ranked journals appear to have overcome this convenience barrier, apparently recognizing the robust reliability and validity of using multiple respondent types.

#### **5.1.6. Respondent types**

The present thesis extends previous research on appropriate respondents to use in sales research surveys. Most of the current reviewed studies use salespeople and sales managers as respondents, either separately or in combination. However, previous research reveals several concerns regarding such respondents. First, salespeople and sales managers are not preferable for assessments of economic outcomes (Jaramillo et al. 2005; Rich et al. 1999). Further, salespeople's self-ratings are generally associated with respondent bias from socially desirable responding (Steenkamp et al. 2010). Last, sales managers are not preferable for rating several outcomes related to salespeople's customer interactions (Cannon and Spiro 1991). Thus, it is interesting that only a small portion of the reviewed studies use customers as respondents even though customers can provide the most reliable and valid assessments of outcomes related to salespeople's customer interactions (Cannon and Spiro 1991; Lambert et al. 1997), which are critical outcomes for successful B2B selling (Wang et al. 2012; Wang et al. 2018; Töytäri and Rajala 2015; Blocker et al. 2012; Lam et al. 2004; Storbacka et al. 2009; Mullins et al. 2014). The importance of these outcomes and the little use of customers as



respondents indicate the need to increase the use of customers as respondents in research surveys.

### **5.1.7. Data sources to assess various types of outcomes**

This thesis extends previous research on various data sources' ability to assess different types of outcomes. The present analysis connected the data sources used to assess various outcomes in the reviewed studies. This analysis provided a categorization of the measured outcomes by each of the data sources.

This categorization reveals the widespread use of salespeople and sales managers to rate sales revenue even though using company records to assess such outcomes provides the most reliable and valid assessments (Jaramillo et al. 2005; Rich et al. 1999). Further, salespeople and sales managers are frequently used to rate outcomes related to salespeople's customer interactions despite customers' ability to provide the most reliable and valid assessments of such outcomes (Cannon and Spiro 1991; Lambert et al. 1997).

The following reasons may explain this widespread use of salespeople and sales managers to assess economic outcomes and outcomes related to salespeople's customer interactions. Most importantly, researchers usually have limited access to company records and customer files. Thus, salespeople and sales managers may be chosen due to convenience and tradition. Second, such outcomes are critical in B2B selling, so researchers may tend to measure them despite lacking access to the most appropriate data sources. Finally, this non-optimal use of data sources to measure outcomes may be influenced by the lack of research, debate, and frameworks on appropriate data sources to assess various types of outcomes from selling. This thesis contributes such a review and evaluation and suggests such a framework.

The examination also reveals that relatively few outcomes are measured using company records and customers. This finding indicates the need to increase the variety of outcomes measured using company records and customers to utilize these data sources' ability to provide reliable and valid assessments of essential outcomes from B2B selling.

## **5.2. Implications for researchers**

Sales researchers should recognize that sales research and practitioners believe B2B selling should produce multiple types of outcomes and that a large portion of the present reviewed studies use measures that ignore this multiplicity. This difference indicates that many sales researchers may need to reevaluate their measures to avoid a theory gap related to such an essential construct in sales research. In such a reevaluation, the selected measures should be based on robust theory (Richard et al. 2009) and construct validity to ensure the measures reflect the multiple types of outcomes (Groves et al. 2009; Ghauri and Grønhaug 2002).

The B2B Sales Performance Outcomes Chain developed in this thesis is suitable to conceptualize and operationalize the outcomes and can contribute to this reevaluation and improved construct validity. Further, researchers can use this framework to develop research models and hypotheses as the framework suggests how the outcomes are related to and influence each other.

The present literature review provides researchers an extensive outline of the large variety of survey methods available to assess the outcomes from B2B selling. Researchers can use this outline to select methods to assess outcomes from selling and to develop sales and marketing survey designs in

general. Further, the present evaluation of methods should alert sales researchers to recognize the varying sophistication of sales research methods. In particular, researchers need to recognize methods associated with biased assessments and exercise caution when using such methods. Furthermore, the guidelines and frameworks presented in this thesis provide researchers valuable insights into methods to generate the most reliable and valid assessments of the outcomes from B2B selling.

Moreover, researchers can improve their assessments of these outcomes by adopting the method-related best practices used in the reviewed studies published in the highest-ranked journals. In particular, these studies attenuate respondent bias and strengthen the reliability and validity of the assessed outcomes by combining objective and subjective measures (Bagozzi et al. 2003) and using multiple types of respondents (Hulland et al. 2018; Jap and Anderson 2004; Schmitz et al. 2014; Hughes et al. 2013).

Researchers may need to more fully recognize the problems associated with the widespread use of salespeople and sales managers to rate economic outcomes and outcomes related to salespeople's customer interactions. Such outcomes are critical in B2B selling; thus, sales researchers should consider increasing their use of company records and customers to achieve more reliable and valid assessments of such outcomes. Also, researchers should preferably increase the number and variety of outcomes assessed using company records and customers. Finally, researchers can use the suggested guidelines on the most reliable and valid data sources to assess various outcomes.

### 5.3. Implications for managers

This thesis is based on an examination of how researchers assess outcomes from B2B selling but does not examine how managers assess these outcomes. However, effective sales management depends on reliable and valid assessments of these outcomes as B2B selling has become more challenging (Paesbrugghe et al. 2020) and fewer salespeople are failing to meet their sales goals (Hyken 2018). Reliable and valid assessments of the outcomes are vital for managers to detect failing outcomes and dysfunctional sales efforts and to take necessary action to improve selling (Zoltners et al. 2008).

When assessing outcomes from selling, managers collect the same measures from the same data sources as researchers using questionnaires, interviews, and company records. Thus, the evaluations and recommendations in this thesis provide valuable and actionable guidance to managers as well.

Managers should acknowledge firms' problems in selecting appropriate measures of sales success (Haines 2004) and avoid assessing solely economic outcomes due to the growing importance of, for example, customer relationships and customer satisfaction (Hughes and Ogilvie 2020; Zallocco et al. 2009). Managers should also recognize the measures suggested by practitioners in B2B sales research (Zallocco et al. 2009; Behrman and Perreault 1982; Cron et al. 2014).

To ensure to select measures with broad coverage of the outcomes, managers can use the B2B Sales Performance Outcomes Chain with its seven main types and 21 subtypes of outcomes. Further, this framework can be used as a management tool, outlining the multiple responsibilities for sales managers and salespeople. The framework can help firms develop strategies for their sales operations, select areas for improvement, and allocate sufficient

resources to realize targeted outcomes. Further, managers can use this framework to educate, train, monitor, and manage salespeople regarding the outcomes they are required to produce.

Managers have easy access to all data sources relevant to assess the outcomes: company records, sales managers, salespeople, and customers. This access is a valuable benefit as using the most appropriate data sources is vital for reliable and valid assessments of the outcomes. Managers are advised to combine objective measures from company records with subjective measures (Bagozzi et al. 2003) from several types of respondents (Hulland et al. 2018; Jap and Anderson 2004; Schmitz et al. 2014; Hughes et al. 2013).

Company records can be used to gain the most reliable and valid assessments of economic outcomes, and customers can be used to gain the most reliable and valid assessment of outcomes associated with salespeople's customer interactions. Further, sales managers and salespeople can be used to rate outcomes associated with sales operations. However, such ratings should be interpreted with caution because of the probable respondent bias, particularly when using salespeople's self-ratings. The present suggested data sources appropriate to assess the various types of outcomes provides managers with actionable guidelines.

#### **5.4. Limitations and future research**

This thesis investigates the methods used to assess outcomes from B2B selling in published quantitative research. Thus, this research frame does not include unpublished studies, qualitative studies, or studies on B2C selling, all of which may have contributed to validating the present findings (Onwuegbuzie and Frels 2016). Further, regardless of the attempt to collect all published

studies satisfying the present literature review's inclusion criteria, some eligible studies may not have been detected and included in the review.

Further, despite recognizing the relevance of the 21 types of outcomes suggested in the B2B Sales Performance Outcomes Chain, this thesis does not validate these outcomes. Such validation is an essential task for future research and could involve qualitative and quantitative research techniques to allow practitioners in B2B selling to rate the importance of the outcomes and/or the measures used to assess the outcomes. Such validation could aim to develop a standard set of measures adapted to, for example, statistical analyses frequently used in sales research, such as structural equation modeling (Asare et al. 2012). Such a validated standard set of measures would guide researchers on appropriate measures and improve future assessments and sales research. Further, such an investigation could help researchers create research models that include the outcomes managers deem important. Such adaptation could narrow the research-practice gap that sales researchers have pinpointed throughout history (Pullins et al. 2017). Finally, if researchers could agree on applying such a standard set of measures, this would help synthesize findings across studies and improve cumulative knowledge building in sales research (Katsikeas et al. 2016; Verbeke et al. 2011).

This thesis reveals the widespread use of salespeople's self-ratings despite the potential respondent bias associated with such ratings. Thus, future research could investigate the relationships between ratings from salespeople, sales managers, and customers, for example, ratings of outcomes associated with salespeople's customer interactions. Such an investigation could provide guidance on combining such respondent to reduce respondent bias.

## REFERENCES

- Anderson, E., & Oliver, R. L. (1987). Perspectives on Behavior-Based Versus Outcome-Based Salesforce Control Systems. *Journal of Marketing*, 51(4), 76-88.
- Albers, S., Mantrala, M. K., & Sridhar, S. (2010). Personal Selling Elasticities: A Meta-Analysis. *Journal of Marketing Research*, 47(5), 840-853.
- Asare, A. K., Yang, J., & Brashear Alejandro, T. G. (2012). The State of Research Methods in Personal Selling and Sales Management Literature. *Journal of Personal Selling & Sales Management*, 32 (4), 473-489.
- Bagozzi, R. P., Verbeke, W., & Gavino J. C. Jr. (2003). Culture Moderates the Self-Regulation of Shame and its Effects on Performance: The Case of Salespersons in the Netherlands and the Philippines. *Journal of Applied Psychology*, 88(2), 219-322.
- Behrman, D. N., & Perreault, W. D. Jr. (1982). Measuring the Performance of Industrial Salespeople. *Journal of Business Research*, 10(September), 355-369.
- Bell, E., & Bryman, A. (2007). The Ethics of Management Research: An Exploratory Content Analysis. *British Journal of Management*, 18(1), 63-77.
- Bennet, J., Lubben, F., Hogarth, S., & Campbell, B. (2005). Systematic Reviews of Research in Science Education: Rigour or Rigidity? *International Journal of Science Education*, 27(4), 387-406.
- Blocker, C. P., Cannon, J. P., Panagopoulos, N. G., & Sager, J. K. (2012). The Role of the Sales Force in Value Creation and Appropriation: New Directions for Research. *Journal of Personal Selling & Sales Management*, 32(1), 15-27
- Blocker, C. P., Flint, D. J., Myers, M. B., & Slater, S. F. (2011). Proactive Customer Orientation and its Role for Creating Customer Value in Global Markets. *Journal of The Academy of Marketing Science*, 39(2), 216-233.
- Boot, A., Sutton, A., & Papaioannou, D. (2016). *Systematic Approaches to a Successful Literature Review*. London: SAGE Publications Ltd.
- Bunge, M. A. (1996). *Finding Philosophy in Social Science*. New Heaven, Conn: Yale University Press.

- Cannon, J. P., & Spiro, R. (1991). The Measurement of Salesperson Performance: Comparing Self-Evaluations with Customer Evaluations. In Gilly, M. et al. (Eds.). *Enhancing Knowledge Development in Marketing. Summer Educators' Proceedings* (pp 1-10). Chicago, IL: American Marketing Association.
- Chan, A.-W., & Altman, D. G. (2005). Identifying Outcome Reporting Bias in Randomised Trials on PubMed: Review of Publications and Survey of Authors, *BMJ*, *330*(7494, 753), 1-6.
- Churchill, G. A., Jr. (1979). A Paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research*, *16*(1), 64-73.
- Churchill, G. A., Ford, N. M., Hartley, S. W., & Walker, O. C. Jr. (1985). The Drivers of Salesperson Performance: A Meta-Analysis. *Journal of Marketing Research*, *22*(2), 103-118.
- Cooper, H. (2010). *Research Synthesis and Meta-Analysis: A Step-by-Step Approach*. Thousand Oaks, California: SAGE Publications Inc.
- Cooper, H., & Hedges, L. V. (2009). Research Synthesis as a Scientific Process. In Cooper, H., Hedges, L. V., & Valentine, J. C. (Eds.). *The Handbook of Research Synthesis and Meta-Analysis* (pp 3-16). New York: Russell Sage Foundation.
- Cravens, D. W. (1995). The Changing Role of the Sales Force. *Marketing Management*, *4*(2), 49-54.
- Cron, W. L., Baldauf, A., & Leigh, T. W. (2014). The Strategic Role of the Sales Force: Perceptions of Senior Sales Executives. *Journal of the Academy of Marketing Science*, *42*, 471-489.
- Crook, R. T., Shook, C. L., Morris, M. L., & Madden, T. M. (2010). Are We There Yet? An Assessment of Research Design and Construct Measurement Practices in Entrepreneurship Research. *Organizational Research Methods*, *13*(1), 1-15.
- Cuevas, J. M. (2018). The Transformation of Professional Selling: Implications for Leading the Modern Sales Organization. *Industrial Marketing Management*, *69*(February), 198-208.
- Davie, C., Stephenson, T., & Valdivieso De Uster, M. (2010). Three Trends in Business-to-Business Sales. *McKinsey Quarterly* *19*(May), 1-4.
- Dawes, P. L., Lee, D. Y., & Dowling, G. R. (1998). Information Control and Influence in Emergent Buying Centers. *Journal of Marketing*, *62*(3), 55-68.



- Dekkers, O. M., von Elm, E., Algra, A., Romijn, J. A., & Vandenbroucke, J. P. (2009). How to Assess the External Validity of Therapeutic Trials: A Conceptual Approach. *International Journal of Epidemiology*, 39(1), 89-94.
- Dess, G. G., & Robinson, R. B. Jr. (1984). Measuring Organizational Performance in the Absence of Objective Measures: The Case of the Privately-Held Firm and Conglomerate Business Unit. *Strategic Management Journal*, 5(3), 265-273.
- Drolet, A. L., & Morrison, D. G. (2001). Do We Really Need Multiple-Item Measures in Service Research? *Journal of Service Research*, 3(3), 196-204.
- Easterby-Smith, M., Thorpe, R., & Jackson, P. R. (2012). *Management Research*. London: SAGE Publications Ltd.
- Fishbein, M., & Ajzen, I. (2010). *Predicting and Changing Behavior. The Reasoned Action Approach*. New York: Psychology Press.
- Flint, D. J., Woodruff, R. B., & Gardial, S. F. (2002). Exploring the Phenomenon of Customers' Desired Value Change in a Business-to-Business Context. *Journal of Marketing*, 66(4), 102-117.
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39-50.
- Franke, G. R., Rapp, A., & Andzulis, J. M. (2013). Using Shortened Scales in Sales Research: Risks, Benefits, and Strategies. *Journal of Personal Selling & Sales Management*, 33(3), 319-328.
- Gartner. (2019). *CSO Update: The New B2B Buying Journey and Its Implication for Sales*. Gartner Report. <https://emtemp.gcom.cloud/ngw/globalassets/en/sales-service/documents/trends/cso-update.pdf>.
- Ghauri, P., & Grønhaug, K. (2002). *Research Methods in Business Studies*. Harlow, UK: Pearson Education Limited.
- Gilbody, S. M., & Song, F. (2000). Publication Bias and the Integrity of Psychiatry Research. *Psychological Medicine*, 30(2), 253-258.
- Gilje, N., & Grimen, H. (1993). Samfunnsvitenskapens Forutsetninger. Innføring i Samfunnsvitenskapenes Vitenskapsfilosofi. Oslo: Universitetsforlaget.
- Greenacre, M. (2010). *Biplots in Practice*. Bilbao: BBVA Foundation. Free download from [www.multivariatestatistics.org](http://www.multivariatestatistics.org).
- Greenacre, M. (2013). Contribution Biplots. *Journal of Computational and Graphical Statistics*, 22(1), 107-122.

- Greenacre, M. (2016). *Correspondence Analysis in Practice*. Florida: Chapman & Hall / CRC Press.
- Greenacre, M., & Primicerio, R. (2013). *Multivariate Analysis of Ecological Data*. Bilbao: Fundación BBVA. Free official download from [www.multivariatestatistics.org](http://www.multivariatestatistics.org).
- Groves, R. M., Fowler, F. J. Jr., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2009). *Survey Methodology*. Hoboken, New Jersey: John Wiley & Sons, Inc.
- Guba, E. G. & Lincoln, Y. S. (1994). Competing Paradigms in Qualitative Research. In Denzin, N. K., & Lincoln, Y. S. (Eds.). *Handbook of Qualitative Research* (pp 105-117). Thousand Oaks, CA: SAGE Publications Inc.
- Guenzi, P., & Panzeri, F. (2015). How Salespeople see Organizational Citizenship Behaviors: An Exploratory Study Using the Laddering Technique. *Journal of Business and Industrial Marketing*, 30(2), 218-232.
- Gummesson, E., & Polese, F. (2009). B2B is not an Island! *Journal of Business & Industrial Marketing*, 24(5/6), 337-350.
- Haines, M. (2004). Sales Metrics and the Sales Dashboard: Gear up for Improved Accountability. *VARBusiness*, 20(12), pp. 60.
- Hair, J. F. Jr., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis*. Upper Saddle River, New Jersey: Prentice-Hall.
- Henard, D. H., & Szymanski, D. M. (2001). Why Some New Products are More Successful Than Others. *Journal of Marketing Research*, 38(3), 362-375.
- Herjanto, H., & Franklin, D. (2019). Investigating Salesperson Performance Factors: A Systematic Review of the Literature on the Characteristics of Effective Salespersons. *Australasian Marketing Journal*, 27(2), 104-112.
- Hughes, D. E., Le Bon, J., & Rapp, A. (2013). Gaining and Leveraging Customer-Based Competitive Intelligence: The Pivotal Role of Social Capital and Salesperson Adaptive Selling Skills. *Journal of The Academy of Marketing Science*, 41(1), 91-110.
- Hughes, D. E., & Ogilvie, J. L. (2020). When Sales Becomes Service: The Evolution of the Professional Selling Role and an Organic Model of Frontline Ambidexterity. *Journal of Service Research*, 23(1), 22-32.
- Hulland, J., Baumgartner, H., & Smith, K. M. (2018). Marketing Survey Research Best Practices: Evidence and Recommendations from a Review of JAMS Articles. *Journal of the Academy of Marketing Science*, 46(1), 92-108.

- Hult, G. T. M., Ketchen, D. J. Jr., Griffith, D. A., Chabowski, B. R., Hamman, M. K., Dykes, B. J., Pollitte, W. A., & Cavusgil, S.T. (2008). An Assessment of the Measurement of Performance in International Business Research. *Journal of International Business Studies*, 39(6), 1064-1080.
- Hyken, S. (2018). *57% of Salespeople Missed Their Quotas Last Year*. Forbes. <https://www.forbes.com/sites/shephyken/2018/09/02/77-of-sales-reps-missed-their-quotas-last-year/#6e7633a052e4>.
- Ingram, T. N., LaForge, R. W., Locander, W. B., MacKenzie, S. B., & Podsakoff, P. M. (2005). New Directions in Sales Leadership Research. *Journal of Personal Selling & Sales Management*, 25(2), 137-154.
- Jap, S. D., & Anderson, E. (2004). Challenges and Advances in Marketing Strategy Field Research. In Moorman, C., & Lehmann, D. R. (Eds.). *Assessing Marketing Strategy Performance* (pp 269-292). Cambridge, MA: Marketing Science Institute.
- Jaramillo, F., Carrillat, F. A., & Locander, W. B. (2005). A Meta-Analytic Comparison of Managerial Ratings and Self-Ratings. *Journal of Personal Selling & Sales Management*, 25(4), 315-328.
- Jesson, J. K., Matheson, L., & Lacey, F. M. (2012). *Doing Your Literature Review: Traditional and Systematic Techniques*. London: SAGE Publications Ltd.
- Jones, E., Brown, S. P., Zoltners, A. A., & Weitz, B. A. (2005). The Changing Environment of Selling and Sales Management. *Journal of Personal Selling & Sales Management*, 25(2), 105-111.
- Katsikeas, C. S., Morgan, N. A., Leonidou, L. C., & Hult, G. T. M. (2016). Assessing Performance Outcomes in Marketing. *Journal of Marketing*, 80(2), 1-20.
- Kuhn, T. S. (2012). *The Structure of Scientific Revolutions*. Chicago: The University of Chicago.
- Ladyman, J. (2002). *Understanding Philosophy of Science*. Abingdon, Oxon: Routledge.
- Lam, S. Y., Shankar, V., Erramilli, M. K., & Murthy, B. (2004). Customer Value, Satisfaction, Loyalty, and Switching Costs: An Illustration from a Business-to-Business Service Context. *Journal of the Academy of Marketing Science*, 32(3), 293-311.

- Lambert, D. M., Sharma, A., & Levy, M. (1997). What Information can Relationship Marketers Obtain from Customer Evaluations of Salespeople? *Industrial Marketing Management*, 26(2), 177-187.
- Lilien, G. (2016). The B2B Knowledge Gap. *International Journal of Research in Marketing*, 33(3), 543-556.
- Limbu, Y. B., Jayachandran, C., Babin, B. J., & Peterson, R. T. (2016). Empathy, Nonverbal Immediacy, and Salesperson Performance: The Mediating role of Adaptive Selling Behavior. *Journal of Business & Industrial Marketing*, 31(5), 654–667.
- Lincoln, Y. S., & Guba, E. G. (2000). Paradigmatic Controversies, Contradictions, and Emerging Confluences. In Denzin, N. K., & Lincoln, Y. S. (Eds.). *The Handbook of Qualitative Research* (pp. 163-188). Thousand Oaks, CA: Sage Publications Inc.
- Littell, J. H., Corcoran, J., & Pillai V. (2008). *Systematic Reviews and Meta-Analysis*. New York: Oxford University Press.
- Lipsey, M. W., & Wilson, D. B. (2001). *Practical Meta-Analysis*. Thousand Oaks, CA: SAGE Publications Inc.
- MacInnis, D. J. (2011). A Framework for Conceptual Contributions in Marketing. *Journal of Marketing*, 75(4), 136-154.
- Manning, G., Reece, B., & Ahearne, M. (2010). *Selling Today: Creating Customer Value*. Upper Saddle River, New Jersey: Prentice Hall.
- Martinez-Martin, P. (2010). Composite Rating Scales. *Journal of the Neurological Sciences*, 289(1-2), 7-11.
- McGivern, Y. (2013). *The Practice of Market Research: An Introduction*. Harlow, UK: Pearson Education Limited.
- Miller Heiman Group (2018). *Sales Enablement Grows up: 4th Annual Sales Enablement Report*. CSO Insights: The Research Division of Miller Heiman Group. Littleton, CO.
- Moncrief, W. C., Marshall, G. W., & Watkins, C. (2000). Tracking Academic Research in Selling and Sales Management: Authors, Authorships, Academic Institutions, and Journals. *Journal of Personal Selling & Sales Management*, 20(2), 99-108.

- Mullins, R. R., Ahearne, M., Lam, S. K., Hall, Z. R., & Boichuk, J. P. (2014). Know Your Customer: How Salesperson Perceptions of Customer Relationship Quality Form and Influence Account Profitability. *Journal of Marketing*, 78(6), 38-58.
- Ngai, E. W. T. (2005). Customer Relationship Management Research (1992-2002): An Academic Literature Review and Classification. *Marketing Intelligence & Planning*, 23(6), 582-605.
- Nord, J.H. & Nord, G.D. (1995). MIS Research: Journal Status and Analysis. *Information & Management*, 29(1), 29-42.
- Nygaard, A., & Dahlstrom, R. (2002). Role Stress and Effectiveness in Horizontal Alliances. *Journal of Marketing*, 66(2), 61-83.
- Ohiomah, A., Benyoucef, M., & Andreev, P. (2020). A Multidimensional Perspective of Business-to-Business Sales Success: A Meta-Analytic Review. *Industrial Marketing Management*, 90(October), 435-452.
- Onwuegbuzie, A. J., & Frels, R. (2016). *7 Steps to a Comprehensive Literature Review*. London: SAGE Publications Ltd.
- Paesbrugghe, B., Rangarajan, D., Hochstein, B., & Sharma, A. (2020). Evaluation of Salespeople by the Purchasing Function: Implications for the Evolving Role of Salespeople. *Journal of Personal Selling & Sales Management*, 40(4), 289-305.
- Palmatier, R. W., Houston, M. B., & Hulland, J. (2018). Review Articles: Purpose, Process, and Structure. *Journal of the Academy of Marketing Science*, 46(1), 1-5.
- Parvinen, P., Aspara, J., Kajalo, S., & Hietanen, J. (2013). Sales Activity Systematization and Performance: Differences Between Product and Service Firms. *Journal of Business & Industrial Marketing*, 28(6), 494-505.
- Patton, M. Q. (2015). *Qualitative Research and Evaluation Methods*, London: SAGE Publications Ltd.
- Paulhus, D. L. (2002). Socially Desirable Responding: The Evolution of a Construct. In Braun, H. I., Jackson, D. N., & Wiley, D. E. (Eds.). *The Role of Constructs in Psychological and Educational Measurement* (pp 49-69). Mahwah, New Jersey: Lawrence Erlbaum Associates.

- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-T., & Podsakoff, N. P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology, 88*(5), 879-904.
- Pullins, E. B., Timonen, H., Kaski, T. & Holopainen, M. (2017). An Investigation of the Theory Practice Gap in Professional Sales. *Journal of Marketing Theory and Practice, 25*(1), 17-38.
- Rangarajan, D., Dugan, R., Rouziou, M., & Kunkle, M. (2020). People, Process, and Performance: Setting an Agenda for Sales Enablement Research. *Journal of Personal Selling & Sales Management, 40*(3), 213-220.
- Rapp, A., Gabler, C., & Ogilvie, J. (2020). A Holistic Perspective of Sales Research: Areas of Consideration to Develop More Comprehensive Conceptual and Empirical Frameworks. *Journal of Personal Selling & Sales Management, 40*(4), 227-233.
- Rauyruen, P., & Miller, K. E. (2007). Relationship Quality as a Predictor of B2B Customer Loyalty. *Journal of Business Research, 60*(1), 21-31,
- Rich, G. A., Bommer, W. H., MacKenzie, S. B., Podsakoff, P. M., & Johnson, J. L. (1999). Methods in Sales Research: Apples and Apples or Apples and Oranges? A Meta-Analysis of Objective and Subjective Measures of Salesperson Performance. *Journal of Personal Selling & Sales Management, 19*(4), 41-52.
- Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2009). Measuring Organizational Performance: Towards Methodological Best Practice. *Journal of Management, 35*(3), 718-804.
- Richins, M. L. (2004). The Material Values Scale: Measurement Properties and Development of a Short Form. *Journal of Consumer Research, 31*(1), 209-219.
- Robson, C., & McCartan, K. (2016). *Real World Research: A Resource for Users of Social Research Methods in Applied Settings*. West Sussex: John Wiley & Sons Ltd.
- Schmitz, C., Lee, Y.-C., & Lilien, G. L. (2014). Cross-Selling Performance in Complex Selling Contexts: An Examination of Supervisory- and Compensation-Based Controls. *Journal of Marketing, 78*(3), 1-19.

- Seale, C. (2009). Validity, Reliability and the Quality of Research. In Seale, C. (Eds.). *Researching Society and Culture* (pp 71-83). London: SAGE Publication Ltd.
- Siguaw, J. A., Kimes, S. E., & Gassenheimer, J. B. (2003). B2B Sales Force Productivity: Applications of Revenue Management Strategies to Sales Management. *Industrial Marketing Management*, 32(7), 539-551.
- Singh, R., & Abraham, K. (2010). Determinants of B2B Salespersons' Performance and Effectiveness: A Review and Synthesis of Literature. *Journal of Business & Industrial Marketing*, 25(7), 535-546.
- Slagstad, R. (1995). *Positivisme og Vitenskapsteori: Et Essay om den Norske Positivismestriden*. Oslo: Universitetsforlaget.
- Snyder, H. (2019). Literature Review as a Research Methodology: An Overview and Guidelines. *Journal of Business Research*, 104(November), 333-339.
- Solberg, B. (2001). Vitenskap og Etikk. In Seglen, E. (Eds.) *Vitenskap, Teknologi og Samfunn*. Oslo: J. W. Cappelens Forlag a.s.
- Song, F., Parekh, S., Hooper, L., Loke, Y. K., Ryder, J., Sutton, A. J., Hing, C., Kwok, C. S., Pang, C., & Harvey, I. (2010). Dissemination and Publication of Research Findings: An Updated Review of Related Biases. *Health Technology Assessment*, 14(8), 1-219.
- Steenkamp, J.-B. E. M., De Jong, M. G., & Baumgartner, H. (2010). Socially Desirable Response Tendencies in Survey Research. *Journal of Marketing Research*, 47(2), 199-214.
- Steneck, N. H. (2006). Fostering Integrity in Research: Definitions, Current Knowledge, and Future Directions. *Science and Engineering Ethics*, 12(1), 53-74.
- Steward, M. D., Walker, B. A., Hutt, M. D., & Kumar, A. (2010). The Coordination Strategies of High-Performing Salespeople: Internal Working Relationships That Drive Success. *Journal of the Academy of Marketing Science*, 38(5), 550-566.
- Storbacka, K., Ryals, L., Davies, I. A., & Nenonen, S. (2009). The Changing Role of Sales: Viewing Sales as a Strategic, Cross-Functional Process. *European Journal of Marketing*, 43(7/8), 890-906.
- Tan, P.-N., Steinbach, M., & Kumar, V. (2006). *Introduction to Data Mining*. Essex: Pearson Education Limited.

- Tourangeau, R., & Yan, T. (2007). Sensitive Questions in Surveys. *Psychological Bulletin*, 133(5), 859-883.
- Töytäri, P., & Rajala, R. (2015). Value-Based Selling: An Organizational Capability Perspective. *Industrial Marketing Management* 45(February), 101-112.
- Verbeke, W., Dietz, B., & Verwaal, E. (2011). Drivers of Sales Performance: A Contemporary Meta-Analysis—Have Salespeople Become Knowledge Brokers? *Journal of the Academy of Marketing Science*, 39(3), 407-428.
- Voorhees, C. M., Brady, M. K., Calantone, R., & Ramirez, E. (2016). Discriminant Validity Testing in Marketing: An Analysis, Causes for Concern, and Proposed Remedies. *Journal of the Academy of Marketing Science*, 44(1), 119-134.
- Wang, G., Dou, W., & Zhou, N. (2012). The Interactive Effects of Sales Force Controls on Salespeople Behaviors and Customer Outcomes. *Journal of Personal Selling & Sales Management*, 32(2), 225-243.
- Wang, C., Hoegg, J., & Dahl, D. W. (2018). The Impact of a Sales Team's Perceived Entitativity on Customer Satisfaction. *Journal of the Academy of Marketing Science*, 46(3), 190-211.
- Ward, J. H. (1963). Hierarchical Grouping to Optimize an Objective Function. *Journal of the American Statistical Association*, 58(301), 236-244.
- Wildemuth, B. (1993). Post-Positivist Research: Two Examples of Methodological Pluralism. *Library Quarterly* 63(4), 450-468.
- Williams M., & Attaway, J. S. (1996). Exploring Salespersons' Customer Orientation as a Mediator of Organizational Culture's Influence of Buyer-Seller Relationships. *Journal of Personal Selling & Sales Management*, 16(4), 33-52.
- Zalocco, R., Pullins, E. B., & Mallin, M. L. (2009). A Re-Examination of B2B Sales Performance. *Journal of Business & Industrial Marketing*, 24(8), 598-610
- Zoltners, A. A., Sinha, P., & Lorimer, S. E. (2008). Sales Force Effectiveness: A Framework for Researchers and Practitioners. *Journal of Personal Selling & Sales Management*, 27(2), 115-131.
- Zoltners, A. A., Sinha, P., & Lorimer, S. E. (2012). Breaking the Sales Force Incentive Addiction: A Balanced Approach to Sales Force Effectiveness. *Journal of Personal Selling & Sales Management*, 32(2), 171-186.



## 6. THE FOUR RESEARCH PAPERS

### **Paper 1:**

Measures to assess B2B sales performance outcomes: A systematic review and future directions

### **Paper 2:**

Desired outcomes from B2B selling: A systematic review and conceptualization

### **Paper 3:**

Methods to assess outcomes from B2B selling: A systematic review, cross-journal examination, and guidelines

### **Paper 4:**

Data sources to assess sales performance outcomes

## Paper 1:

# Measures to assess B2B sales performance outcomes: A systematic review and future directions

Per Ivar Seljeseth<sup>1</sup> • Tor Korneliussen<sup>1</sup> • Michael Greenacre<sup>1,2</sup>

### Abstract

Precisely assessed sales performance outcomes is fundamental for sales researchers to identify antecedents that can improve sales performance. However, researchers use different measures to assess the outcomes and the literature offers little guidance on valid measures. The use of divergent or insufficient measures represents a threat to the outcomes' construct validity and the identification of dependable antecedents. To help improve future assessments and sales research, this study examines and evaluates the measures researchers use to assess outcomes from business-to-business (B2B) selling. A systematic literature review of 139 published studies reveals a surprisingly wide variety of 151 different measures used to assess these outcomes. A cluster analysis identifies seven sets of measures used. A large number of the studies measure only sales revenue and ignore outcomes beneficial to customers, such as customer value and customer satisfaction. Measuring only sales revenue disregards the multiple types of outcomes desired from B2B selling and threatens construct validity, and thus, theory testing and knowledge building in sales research. Recommendations for improved measures and further research are suggested.

**Keywords:** B2B sales performance outcomes • measures • review • cluster analysis

✉ Per Ivar Seljeseth, [per.i.seljeseth@nord.no](mailto:per.i.seljeseth@nord.no)  
Tor Korneliussen, [tor.a.korneliussen@nord.no](mailto:tor.a.korneliussen@nord.no)  
Michael Greenacre, [michael.greenacre@gmail.com](mailto:michael.greenacre@gmail.com)

<sup>1</sup> Nord University Business School, Post box 1490, 8049 Bodø, Norway

<sup>2</sup> Department of Economics and Business, Universitat Pompeu Fabra, and Barcelona Graduate School of Economics, Ramon Trias Fargas 25-27, Barcelona, 08005, Spain

## Introduction

Which measures should researchers use to assess outcomes from B2B selling? This question is an essential one for sales researchers. These outcomes, also termed B2B sales performance outcomes, represent all the results salespeople produce (Anderson and Oliver 1987) and embrace multiple types of outcomes (Zallocco, Pullins, and Mallin 2009; Davie, Stephenson, and Valdivieso De Uster 2010; Marshall, Moncrief, and Lassk 1999). According to Zoltners, Sinha, and Lorimer (2008), the outcomes from selling can be divided into two categories: those beneficial to the selling company (company outcomes), such as sales revenue (Zallocco, Pullins, and Mallin 2009); and those beneficial to customers (customer outcomes), such as customer satisfaction (Wang, Hoegg, and Dahl 2018).

These outcomes play an essential role in the extensive research on antecedents to sales performance (Limbu et al. 2016; Verbeke, Dietz, and Verwaal 2011). Thus, reliable and valid assessed outcomes are vital to identify dependable antecedents and build knowledge in sales research (Katsikeas et al. 2016; Hult et al. 2008; Rapp, Gabler, and Ogilvie 2020; Ghauri and Grønhaug 2002). To the best of our knowledge, sales performance outcomes have not been reviewed yet, while the antecedents to sales performance have been subjects of several reviews (e.g., Herjanto and Franklin 2019) and meta-analyses (e.g., Ohiomah, Benyoucef, and Andreev 2020; Verbeke, Dietz, and Verwaal 2011; Albers, Mantrala, and Sridhar 2010).

Despite the importance of accurate assessments of sales performance outcomes (Rangarajan et al. 2020), there is some confusion regarding how to measure these outcomes. First, previous research offers little guidance on measures to assess such outcomes (Siguwaw, Kimes, and Gassenheimer 2003;

Ingram et al. 2005). Further, researchers often use different measures to assess the outcomes. For example, Rapp, Agnihotri, and Baker (2015) use only one measure—sales revenue—to assess the outcomes, while Autry, Williams, and Moncrief (2013) use nine measures that cover both customer and company outcomes. Many researchers use multiple measures of sales performance outcomes without covering customer and company outcomes. For example, Schepker and Good (2013) use seven measures that only assess customer outcomes, while Johnson and Friend (2015) use six measures that only assess economic company outcomes. This use of different metrics makes it uncertain how researchers conceptualize the construct—outcomes from B2B selling and how to ensure construct validity when assessing it.

This lack of clarity about measures to assess these outcomes may create the following problems for sales research. First, using too few or insufficient measures will create oversimplified dependent variables providing only partial examination and understanding of the studied effects (Hult et al. 2008; Richard et al. 2009). Further, using insufficient measures may lead to overlooking antecedents' negative effects on unobserved outcomes. For example, looking only at sales revenue to assess outcomes from sales force incentives will likely identify a positive influence on short-term sales revenue but overlook its possible negative influence on customer relationships (Zoltners, Sinha, and Lorimer 2012). Consequently, insufficient measures may lead to deficient conclusions (Hult et al. 2008; Richard et al. 2009). Furthermore, if researchers fail to measure outcomes essential to the specific type of selling investigated (Richard et al. 2009) or fail to assess outcomes managers deem important, this shortcoming will reduce sales research's managerial relevance (Richard et al. 2009). Last, the use of different measures across studies makes synthesis

across studies and cumulative knowledge building difficult (Katsikeas et al. 2016).

To help resolve this lack of clarity and improve researchers' measures of the outcomes, this study addresses the following research question: Which measures do researchers use to assess outcomes from B2B selling?

The question is answered using the following research steps. First, a systematic literature review is conducted to provide the most reliable picture of the measures researchers use and to identify issues that need improvement (Onwuegbuzie and Frels 2016). Second, a cluster analysis simplifies the data set by grouping studies with similar measures and identifying the most frequent sets of measures (Hair et al. 2010). Third, to help the examination, the measures are summarized and categorized into measures of company outcomes and customer outcomes.

As "sales performance outcomes" is an abstract construct including multiple components/types of outcomes (Groves et al. 2009), construct validity is the most crucial validity (Ghauri and Grønhaug 2002). Construct validity will be evaluated by examining the extent to which the measures represent the various outcomes desired from B2B selling (Groves et al. 2009; Ghauri and Grønhaug 2002) as suggested in previous research (Seale 2009).

This investigation provides five contributions. First, this paper offers the first review of how researchers understand and operationalize B2B sales performance outcomes—important and frequently used dependent variables in sales research (Asare, Yang, and Alejandro 2012). Second, the examination and evaluation reveal to what degree researchers' measures correspond to how previous research portrays outcomes from B2B selling. Third, the paper suggests how researchers can improve such measures, and fourth, directions

for future research are provided. Last, this paper presents valuable insights for sales managers to improve these measures as well.

The next section outlines previous research regarding measures to assess B2B sales performance outcomes, followed by a description of the methods used in this study. The results are presented and discussed, followed by conclusions, implications, and suggestions for further research.

## Measures of B2B sales performance outcomes

The most obvious measure of sales performance outcomes is sales revenue, the most important outcome from selling (Zallocco, Pullins, and Mallin 2009). However, the fundamental changes in personal selling over the last few decades (Cuevas 2018) require today's salespeople to engage in a growing number of roles and activities, and to create multiple types of outcomes beyond sales revenue (Marshall, Moncrief, and Lask 1999). Two studies interviewing B2B sales managers and salespeople proposed relatively large numbers of measures—19 (Zallocco, Pullins, and Mallin 2009) and 31 (Behrman and Perreault 1982)—necessary to assess outcomes from B2B selling.

The measures used to assess the outcomes should be adapted to the nature of the specific selling context investigated (Richard et al. 2009). The fundamental changes in selling in the last few decades (Cuevas 2018) include an increasing diversity of customer expectations (Davie, Stephenson, and Valdivieso De Uster 2010). This diversity implies that B2B customers perform buying processes that are more or less transactional and consultative and that salespeople need to conduct various types of selling on the continuum of transactional and consultative B2B selling (Davie, Stephenson, and Valdivieso De Uster 2010). The type of selling affects what outcomes are desired and need to be measured.

Transactional B2B selling typically involves the sale of off-the-shelf products and a growing systematization of sales operations (Parvinen et al. 2013), often relying on third-party distributors and digital technologies (Sharma and Sheth 2010). Similar to any other type of personal selling, transactional B2B selling needs to create multiple outcomes, such as sales revenue, profit,

service quality (Töytäri and Rajala 2015), offer value (Blocker et al. 2012), customer satisfaction (Cravens 1995), and customer loyalty (Lam et al. 2004).

Consultative B2B selling typically involves selling customized and complex solutions (Davie, Stephenson, and Valdivieso De Uster 2010). The customization and sellers' and buyers' co-creation of products and services highly rely on salespeople (Töytäri and Rajala 2015) as they are often the only connection between a selling firm and its customers (Wang, Dou, and Zhou 2012). Further, the close cooperation between buyer and seller in consultative B2B selling requires salespeople to establish and strengthen customer relationships (Storbacka et al. 2009). In addition, customization of products and services requires salespeople to successfully cooperate with colleagues and other departments in their firms (Guenzi and Panzeri 2015; Steward et al. 2010; Borman and Motowidlo 1997; MacKenzie, Podsakoff, and Fetter 1993). Consequently, assessing outcomes from consultative B2B selling likely requires a higher number of measures than transactional B2B selling.

The measured outcomes can be categorized into those that are directly beneficial for the selling company (company outcomes), such as sales revenue, and those that are directly beneficial for the buying company (customer outcomes), such as customer satisfaction (Zoltners, Sinha, and Lorimer 2008). Company and customer outcomes may influence each other, as satisfied buyers (customer outcome) may increase future sales revenue (company outcome). In the opposite direction, high sales revenue could lead to investments in quality, resulting in higher customer satisfaction (Zoltners, Sinha, and Lorimer 2008).

An outcome from selling can be assessed with a single-item measure or multi-item measures. For example, sales revenue can be assessed with a single-item measure of sales revenue or with multi-item measures, such as sales



growth and fulfillment of sales quotas. The measures of sales performance outcomes are typically collected from company records (objective measures), questionnaires, and interviews with salespeople, managers, or customers (subjective measures). The outcomes can be measured on various levels, including the individual level, sales force level, or firm level.

## Methods

### Research design and procedure

In line with this study's descriptive research design, five research steps were conducted. First, a systematic literature review was undertaken to investigate the measures researchers use to assess B2B selling outcomes. A literature review can provide the most reliable picture of the measures researchers use, identify issues that need improvement (Onwuegbuzie and Frels 2016), and develop knowledge to improve future research (Snyder 2019). A literature review that is systematic aims to include all relevant studies to avoid bias from a subjective study selection and strengthen internal validity (Boot et al. 2016). Further, the transparent methods in systematic literature reviews (Jesson, Matheson, and Lacey 2012) ensure the results will be grounded in the gathered data and not fabricated (Boot, Sutton, and Papaioannou 2016). After the studies were collected, the measures used to assess the outcomes were extracted and recorded in an evaluative framework.

Second, a cluster analysis grouped studies with similar measures to identify the sets of measures used to assess the outcomes. In the third step, the measures were summarized and categorized into measures of company outcomes and customer outcomes. Fourth, the measures' construct validity was evaluated, and finally, recommendations to improve these measures were formed.

## **Study-eligibility criteria**

To be included in this review, the studies had to be empirical, quantitative, and contain at least one dependent variable measuring sales performance outcomes. This dependent variable had to be associated with at least one sales-related independent variable since we investigate personal selling. Further, because sales researchers employ different labels for sales performance outcomes, the review also included studies with alternate terms for “sales” and “performance.” More specifically, researchers substitute “sales” with “salesperson,” “sales force,” “sales team,” “sales trainee,” “individual,” “job,” “key account manager,” and “sales territory.” They also substitute “performance” with “outcomes,” “evaluations,” “productivity,” “effectiveness,” “success,” and “excellence.”

Further, included studies should only investigate B2B selling because of the higher complexity of most B2B selling compared to most business-to-consumer (B2C) selling (Lilien 2016; Manning et al. 2010; Dawes, Lee, and Dowling 1998). In addition, the research question of how researchers measure these outcomes requires a focus on relatively recent research instead of a historical review going far back in time. Thus, the included studies were published in the period 2001–2015. Meta-analyses and literature reviews were excluded, along with studies that do not provide sufficient information regarding the eligibility criteria for the present examination.

## **Data source**

The units of analysis in this study are published studies emerging from a systematic review conducted in accordance with the recommendations of

Boot, Sutton, and Papaioannou (2016). The primary data source consisted of scientific journals that, according to Asare, Yang, and Alejandro (2012), publish research on personal selling and sales management. We first examined, issue by issue, the six journals that Asare, Yang, and Alejandro (2012) claimed have the highest publishing rates of sales research (*Journal of Personal Selling & Sales Management*, *Industrial Marketing Management*, *Journal of Marketing*, *Journal of the Academy of Marketing Science*, *Journal of Business & Industrial Marketing*, and *Journal of Business Research*). Then, we examined the other eleven journals highlighted by Asare, Yang, and Alejandro (2012) (i.e., those that publish less sales research) (*Journal of Marketing Theory and Practice*, *International Journal of Research in Marketing*, *Journal of Marketing Research*, *European Journal of Marketing*, *Journal of Applied Psychology*, *Marketing Intelligence & Planning*, *Journal of Business-to-Business Marketing*, *Journal of International Marketing*, *Marketing Science*, *Psychology & Marketing*, and *Women in Management Review*). These journals were examined using an online keyword search on the journals' websites. Keywords such as "sales," "selling," "sales performance," and "sales effectiveness" were employed. This process identified 139 studies satisfying the study-eligibility criteria for the present examination. The studies were published in the 17 journals shown in Table 1. A complete list of the studies is available from the first author upon request.

Table 1. Journals covered by the review.

Journal	Number of studies
Journal of Personal Selling & Sales Management	30
Industrial Marketing Management	29
Journal of Marketing	16
Journal of the Academy of Marketing Science	15
Journal of Business & Industrial Marketing	14
Journal of Business Research	9
Journal of Marketing Theory and Practice	5
International Journal of Research in Marketing	4
Journal of Marketing Research	4
European Journal of Marketing	3
Journal of Applied Psychology	3
Marketing Intelligence & Planning	2
Journal of Business-to-Business Marketing	1
Journal of International Marketing	1
Marketing Science	1
Psychology & Marketing	1
Women in Management Review	1
Total	139

## Evaluative framework and data coding

To ensure the measures were handled consistently, an evaluative framework was used to record the extracted measures (Boot, Sutton, and Papaioannou 2016). We did not predefine this framework prior to conducting the review but developed the framework throughout the review process by adding new measures as they occurred. Consequently, the number of measures in the evaluative framework grew throughout the review process. In the end, we identified 151 various measures, which are listed in the appendix.

The measures were recorded as present or absent in each study, coded as 1 or 0, respectively. The final data matrix thus comprised 139 rows (the studies) and 151 columns (the measures), indicating precisely which measures of B2B sales performance outcomes were used in each study.

## Data analysis

To identify the sets of measures used to assess the outcomes, we needed to break down the extensive data set into groups of studies with similar sets of measures because groups of studies with similar measures are easier to examine than all individual studies and measures (Hair et al. 2010). For this purpose, a cluster analysis was conducted on the measures used to assess the outcomes.

The cluster analysis was conducted on the presence/absence matrix of measures using a hierarchical clustering algorithm, which required two crucial decisions: (1) how to quantify the differences between the studies in terms of the dichotomous observations (presence/absence of measures); and (2) which clustering criterion to use to join clusters of studies in the hierarchical process.

Concerning the first decision, the Jaccard index of similarity (named after the botanist Paul Jaccard; e.g., see Greenacre and Primicerio 2013) is suitable to quantify the similarity between two studies. This index is the number of measures found in both studies divided by the total number of measures found in at least one of the studies. For example, if 15 out of the 151 measures are identified in at least one of two studies being compared, and six of those are found in both, then the Jaccard similarity is  $6/15 = 0.4$ . The dissimilarity between the two studies is then  $1 - 0.4 = 0.6$ , which is the same as counting the number of measures that are not common between the two studies (i.e., nine measures) divided by the number in both:  $9/15 = 0.6$ . This particular way of assessing differences between studies is justifiable because our sparse data set consists of mostly absent measures and only a few measures present in each study. The problem with conducting a cluster analysis on such a data set is that the most common similarity among the studies is the large set of absent

measures, while the aim of the present cluster analysis is to categorize studies based on those measures that are present. The low number of measures present in any particular pair of studies required ignoring all those measures not identified in either of a pair of studies.

The Ward criterion was chosen to combine clusters (Ward 1963). This approach ensured maximum dispersion between the clusters and minimum dispersion within each cluster, where dispersion was measured by the multivariate equivalent of variance. The result of hierarchical clustering is a display of the structure in the data in the form of a dendrogram, or binary tree (e.g., see Tan, Steinbach, and Kumar 2006; Greenacre and Primicerio 2013). The dendrogram shows the clusters of studies with similar (homogeneous) measures of B2B sales performance outcomes—that is, high within-cluster homogeneity in terms of measured outcomes.

The level of homogeneity within each of the clusters was measured by averaging the Jaccard similarities between all pairs of studies in a cluster. This average takes a value between 0 and 1, like the Jaccard similarity itself, where 1 indicates total similarity (i.e., all studies are identical in their measures) and 0 indicates total dissimilarity (i.e., none of the studies have any measures in common). The same measure of homogeneity can be computed between two clusters, and the level of within-cluster homogeneity is expected to be higher than the level of between-cluster homogeneity, which is the basic objective of the clustering.

## **Evaluation of the measures**

“Sales performance outcomes” is an abstract construct, and such abstract construct cannot be directly observed because of its multiple

components/types of outcomes (Groves et al. 2009). The most crucial validity of such an abstract construct is construct validity (Ghauri and Grønhaug 2002), which refers to the extent measures reflect or represent the components that constitute the construct (Groves et al. 2009). This study evaluates construct validity by valuing how well the measures represent the various outcomes desired from B2B selling (Groves et al. 2009) as suggested in previous research (Seale 2009).



## Results

The review identified 139 studies that measure B2B sales performance outcomes. This relatively large number of studies shows the widespread use of these outcomes as dependent variables in sales research and provides a reasonably reliable representation of the measures that researchers use. The reviewed studies use a surprisingly high number of 151 different measures to assess B2B sales performance outcomes, as shown in the appendix. This wide variety of measures demonstrates the lack of consensus on these measures among researchers. Measures marked with “O” in the appendix are objective measures collected from company records, and measures marked with “S” are subjective measures rated by respondents through questionnaires or interviews.

### **Number of measures used to assess the outcomes**

Summing all the measures used to assess B2B sales performance outcomes in the 139 studies resulted in a total of 752 assessments; thus, on average, the studies use 5.4 measures to assess the outcomes. The studies use from one to 30 measures to assess these outcomes, and the distribution of the number of measures used in each study is shown in Figure 1. The figure can be read like this: 32 studies (23% of the reviewed studies) use one measure; none of the studies use 12 measures; and only one study uses 30 measures.

Figure 1 reveals the common practice of using relatively few measures to assess the outcomes by showing that 45% of the reviewed studies use three or fewer measures. Only a minor portion of the studies uses multiple measures, as only 20% (28 studies) of the reviewed studies use eight or more measures.

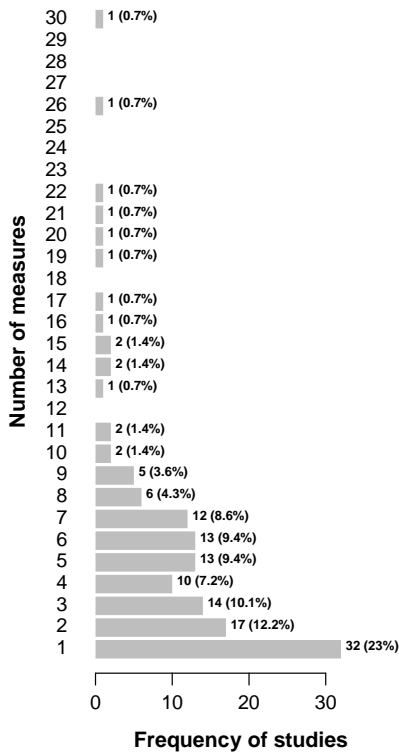


Figure 1. Number of measures and frequency of studies

The appendix shows how frequently each measure is used in the reviewed studies or, in other words, the number of studies that use each of the measures. The appendix can be read like this: sales revenue is the most frequently used measure; it appears 60 times and is included in 43% of the reviewed studies. Sales revenue vs. quotas/objectives is the second most used measure; it appears 54 times and is included in 39% of the studies. At the other end of the continuum, 55 measures are only used in one study, and 29 measures are only used in two studies.

## Clusters of studies with similar sets of measures

The cluster analysis succeeded in categorizing the studies into groups with similar sets of measures used to assess the outcomes. The clusters are displayed in a dendrogram in Figure 2. The examinations of the clusters are based on an eight-cluster solution, shown by the cut-point in the dendrogram. The cut-point is based on two considerations. First, the cut-point should cut the dendrogram where there is a large difference between subsequent “nodes” (joining points); second, the cut-point should create a number of clusters that enables a meaningful interpretation of each cluster.

The numbers from 1 to 8 in Figure 2 mark the eight clusters. The first column on the right-hand side of the dendrogram shows the years the studies were published. The two far-right columns show the number of measures of B2B sales performance outcomes in digits as well as in bar-chart form. The closer to the right the lines that connect the studies in each cluster are, the more similar the studies are in their use of measures. Many studies cluster at the level of zero as they use exactly the same measures.

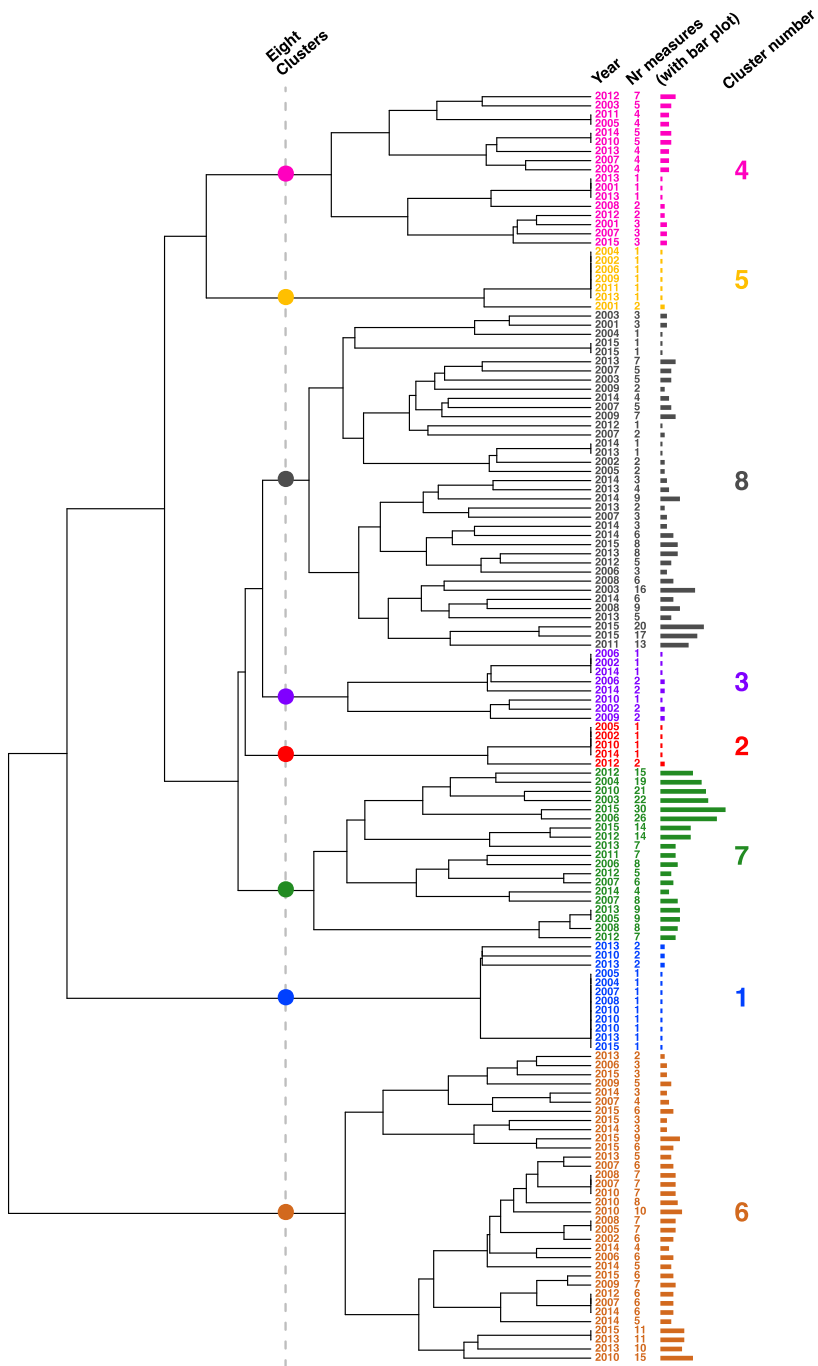


Figure 2. Dendrogram from the cluster analysis.

The level of within- and between-cluster homogeneity among the studies is shown in Table 2. The underlined numbers along the diagonal show the level of homogeneity within each cluster, and the numbers off the diagonal show the level of homogeneity between the clusters. The average within-cluster homogeneity is 0.466, and the average between-cluster homogeneity is 0.023; thus, most clusters are much more homogeneous internally than compared to other clusters. The sole exception is Cluster 8, which has slightly higher between-cluster homogeneity with Cluster 6 than within-cluster homogeneity. Consequently, seven of the eight clusters show homogeneity with common measures within each cluster, and reveal seven sets of measures used to assess the outcomes.

Table 2. Levels of homogeneity within clusters (underlined) and between clusters (off the diagonal).

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8
Cluster 1	<u>0.765</u>							
Cluster 2	0.006	<u>0.800</u>						
Cluster 3	0.003	0.008	<u>0.351</u>					
Cluster 4	0.004	0.009	0.024	<u>0.297</u>				
Cluster 5	0.000	0.000	0.000	0.096	<u>0.857</u>			
Cluster 6	0.004	0.001	0.014	0.160	0.006	<u>0.426</u>		
Cluster 7	0.000	0.001	0.003	0.040	0.004	0.111	<u>0.182</u>	
Cluster 8	0.004	0.004	0.010	0.039	0.014	0.050	0.029	<u>0.048</u>

Table 3 shows the size of the clusters in number of studies and percentage of all the reviewed studies. The far-right column shows the average number of measures used to assess the outcomes in each cluster of studies. The rows show the measures that appear in 25% or more of the studies in the respective clusters and the frequency at which these measures are used. For example, the table can be read as follows: Cluster 1 includes 12 studies, which account for 8.6% of all the reviewed studies. These studies use an average of

1.3 measures to assess the outcomes. All 12 studies in this cluster measure objective sales revenue vs. quotas/objectives.

Table 3. Clusters of studies and their most frequently used measures.

Clusters and measures	Number of studies	Percent of all the reviewed studies	Average number of measures per clusters
<b>Cluster 1. Objective Sales vs. Quotas</b>	<i>n</i> = 12	8.6 %	1.3
Objective sales revenue vs. quotas/objectives	12		
<b>Cluster 2. Objective Sales Growth</b>	<i>n</i> = 5	3.6 %	1.2
Objective sales revenue growth	5		
<b>Cluster 3. Objective Sales</b>	<i>n</i> = 8	5.8 %	1.5
Objective sales revenue	6		
Objective sales numbers of units/orders/contracts	3		
<b>Cluster 4. Few Essential Types of Outcomes</b>	<i>n</i> = 17	12.2 %	3.4
Sales revenue	17		
New customers attracted/conversion rate	6		
Actual customer loyalty	5		
Profit/margins/contributions	5		
Overall sales performance	5		
<b>Cluster 5. Overall Sales Performance</b>	<i>n</i> = 7	5.0 %	1.1
Overall sales performance	7		
<b>Cluster 6. Subjective Sales Revenue</b>	<i>n</i> = 34	24.5 %	6.3
Sales revenue vs. quotas/objectives	32		
Sales revenue	31		
Market share /-growth	28		
Sales to major customers	22		
Sales of high profit-margin products	22		
Sales of new products	19		
<b>Cluster 7. Multiple Types of Outcomes</b>	<i>n</i> = 19	13.7 %	12.6
Customer orientation: understand customers needs/real concerns	14		
Create solutions for requirements/problems	14		
Sales presentations: clear/concise/effective	12		
Sales revenue vs. quotas/objectives	10		
Convincing customers that problems/concerns are understood	9		
Market share /-growth	9		
Knowing applications and functions	8		
Sales revenue	8		
Knowing the company's products/services	6		
Knowing design and specifications	6		
Sales of new products	6		
Sales of high profit-margin products	6		
Using established contacts to develop new accounts	5		
Build customers' business/help customers achieve results	5		
Profit/margins/contributions	5		
Cost/investments/recourses/time used	5		
<b>Cluster 8. Enrichment of the Types of Outcomes</b>	<i>n</i> = 37	26.6 %	5.4
Profit/margins/contributions	11		
Sales revenue vs. quotas/objectives	10		
<b>Total</b>	139	100 %	5.4

To provide an overview of the measures used in the clusters of studies, these measures are summarized and categorized into company and customer outcomes in Table 4. The numbers show how often each measure is used in the studies in the clusters.

Table 4. Measures of company and customer outcomes.

Company outcomes		Customer outcomes	
Sales revenue	56	Customer orientation: understand customers needs/real concerns	14
Sales revenue vs. quotas/objectives	52	Create solutions for requirements/problems	14
Market share /-growth	37	Sales presentations: clear/concise/effective	12
Sales of high profit-margin products	28	Convincing customers that problems/concerns are understood	9
Sales of new products	25	Knowing applications and functions	8
Sales to major customers	22	Knowing the company's products/services	6
Profit/margins/contributions	21	Knowing design and specifications	6
Objective sales revenue vs. quotas/objectives	12	Build customers' business/help customers achieve results	5
Overall sales performance	12		
Objective sales revenue	6		
New customers attracted/conversion rate	6		
Objective sales revenue growth	5		
Actual customer loyalty	5		
Cost/investments/recourses/time used	5		
Using established contacts to develop new accounts	5		
Objective sales numbers of units/orders/contracts	3		

The table can be read like this: Sales revenue is categorized as a measure of company outcomes. Sales revenue is used 56 times by the studies in the clusters, and thus, is the most frequently used measure. These frequencies diverge from the total summarizing of measures presented in the appendix because the clusters include only measures that appear in 25% or more of the studies in the respective cluster.

## Discussion

### Measures used in the clusters of studies

The cluster analysis identifies seven clusters of studies using homogeneous measures to assess B2B sales performance outcomes. The following paragraphs present these clusters of studies and discuss the construct validity of the measures used in each cluster.

As shown in Table 3, Clusters 1, 2, and 3 include 18% of the reviewed studies and are named “*Objective Sales vs. Quotas*,” “*Objective Sales Growth*,” and “*Objective Sales*,” respectively. The studies in these three clusters share the similarity of using only objective measures of sales revenue and units sold, and they use the lowest average number of measures per study: 1.3, 1.2, and 1.5 measures, respectively. Thus, these studies mainly use one measure of sales revenue to assess the outcomes.

The use of objective measures of performance is strongly supported and encouraged when such numbers are available (Dess and Robinson 1984) because subjective measures can be poor indicators of sales performance outcomes (Jaramillo, Carrillat, and Locander 2005). An additional strength of the measures used in the studies in Cluster 1 (*Objective Sales vs. Quotas*) and Cluster 2 (*Objective Sales Growth*) is their assessment of sales revenue in the form of fulfillment of sales quotas and sales growth, respectively. Both sales vs. quotas and sales growth are measures that can take into account, for example, various sales skills and market conditions that can make selling easier or more difficult. For instance, sales quotas can be set at low/moderate levels for salespeople who are inexperienced or operating in difficult market conditions, and they can be set at high levels for skilled salespeople working in good



market conditions. Fulfillment of sales quotas and sales growth may therefore provide more useful assessments at an individual level than plain numbers of sales revenue.

Researchers may have plausible causes for using only one sales revenue measure as the dependent variable. However, if they do so, they should preferably label the dependent variable “sales revenue” and not “sales performance outcomes” because B2B selling often requires creating multiple types of outcomes beyond revenue. Consequently, by measuring sales revenue only, the studies in Clusters 1, 2, and 3 assess company outcomes and ignore customer outcomes, such as offer value (Blocker et al. 2012), customer satisfaction (Cravens 1995), customizing and co-creation (Töytäri and Rajala 2015), and customer relationships (Storbacka et al. 2009).

Measuring only sales revenue provides weak construct validity and may result in oversimplified models and examinations of complex empirical contexts (Hult et al. 2008). Such simplified models and examinations represent a threat to theory testing (Katsikeas et al. 2016) and knowledge building (Hult et al. 2008). Further, measuring only sales revenue may fail to assess outcomes that managers deem essential, threatening the applicability and managerial relevance of research (Richard et al. 2009).

The next cluster (Cluster 4) is named “*Few Essential Types of Outcomes*” and includes 12% of the reviewed studies. All the studies in this cluster measure sales revenue, and about one-third of the studies include other important measures, such as new customers attracted/conversion rate, actual customer loyalty, profit/margins/contributions, and overall sales performance, as supplements. Despite the use of relatively few measures (3.4), these measures cover important outcomes in addition to sales revenue. However, similar to the studies in Clusters 1, 2, and 3, the studies in Cluster 4 solely

measure company outcomes and ignore customer outcomes, with the same consequences for construct validity as in Clusters 1, 2, and 3.

Next, Cluster 5 includes 5% of the reviewed studies and is named “*Overall Sales Performance*” because all the studies in this cluster use overall sales performance to assess B2B sales performance outcomes. Most of these studies use only this measure, so the average number of measures used in this cluster is only 1.1 per study. The term “overall” provides no exact meaning or operationalization of sales performance outcomes, so each study respondent has to make his or her subjective interpretation of what outcomes are desired from B2B selling. Therefore, using such a single overall measure to assess outcomes from B2B selling involves an uncertain construct validity.

Cluster 6 is a large cluster that includes 25% of the reviewed studies and is named “*Subjective Sales Revenue*” because various subjective measures of sales revenue are used to assess the outcomes. The strength of these measures is a thorough assessment of sales revenue. These are highly valuable measures because the primary goal of any sales force is to create sales revenue (Zallocco, Pullins, and Mallin 2009). However, these measures have two limitations. First, despite an average of 6.3 measures per study, the measures cover only one type of outcome—sales revenue. Thus, the measures used in the studies in this cluster share the same limitation as those used in Clusters 1, 2, and 3—they solely assess the company outcome sales revenue and overlook essential customers outcomes. Therefore, as with Clusters 1–3, such narrow measures to assess outcomes from B2B selling may provide a weak construct validity. Second, the studies in Cluster 6 use subjective measures collected through questionnaires or interviews, while the studies in Clusters 1–3 use objective measures collected from company records. The subjective measures of sales revenue used in Cluster 6 may therefore have lower reliability than equivalent

objective measures extracted from company records (Jaramillo, Carrillat, and Locander 2005; Rich et al. 1999) as used in Clusters 1–3.

Next, Cluster 7 is named *“Multiple Types of Outcomes”* and includes 14% of the reviewed studies. The studies in this cluster use the highest average number of measures (13) per study to assess the outcomes. With so many measures, the studies in this cluster have the broadest operationalization and coverage of the various outcomes among all the clusters. The measures used in this cluster assess essential customer outcomes, such as service quality (Töytäri and Rajala 2015), offer value (Blocker et al. 2012), customer satisfaction (Cravens 1995), customization and co-creation (Töytäri and Rajala 2015), and customer relationships (Storbacka et al. 2009). Also, the studies in this cluster measure essential company outcomes beyond sales revenue, such as market share, cost, and profit. Consequently, the measures used by the studies in Cluster 7 provide the strongest construct validity among the clusters.

Finally, Cluster 8 is named *“Enrichment of the Types of Outcomes”* and is the largest cluster with 27% of the reviewed studies. The measures used in the studies in this cluster have a low level of homogeneity and therefore provide no common set of measures to evaluate in relation to construct validity. However, this cluster contributes significantly to the total number of various measures. Of the 151 total measures across all studies in the review, 52 are used solely in the studies in Cluster 8. Consequently, these “unique” measures enrich the variety of measures to assess each type of outcome. For example, the cluster contributes 15 measures to assess customer satisfaction, eight measures to assess perceived quality, six measures to assess profit, five measures to assess sales behavior, four measures to assess salespeople’s contributions to management, and four measures to assess customers’ perceived value.

## Measures of company and customer outcomes

As shown in Table 4, the reviewed studies measure both company and customer outcomes when they assess B2B sales performance outcomes. However, company outcomes are considerably more frequently measured than customer outcomes, and the most frequently used measures of company outcomes are various indicators of sales revenue. This imbalance between the measuring of company and customer outcomes indicates an underestimation of the importance of customer outcomes. Further, it indicates an underestimation of the strong influence that customer outcomes (e.g., customer satisfaction) may have on company outcomes in B2B selling (e.g., sales revenue). Moreover, despite measuring customer orientation, customizing solutions, product knowledge, and building of customers' business, most of the reviewed studies overlook to assess several critical outcomes from B2B selling, such as service quality, offer value, customer satisfaction, co-creation, and customer relationships.

## Conclusions and implications

Construct validity of the measures used to assess sales performance outcomes is fundamental for knowledge building in sales research. However, previous research provides little consensus or guidelines on which measures should be used to assess these outcomes. This study contributes to resolving this vagueness by conducting a major systematic review and providing the following conclusions and contributions.

The systematic review of 139 studies provides a reliable picture of the measures researchers use to assess outcomes from B2B selling. The review reveals an unexpected total of 151 various measures used to assess the outcomes, clearly demonstrating the researchers' lack of consensus. This considerable dissimilarity of measures is obstructing synthesis of results across studies and cumulative knowledge building in sales research (Katsikeas et al. 2016).

To break down the sizable data set of studies and measures, a cluster analysis was conducted to group studies with similar measures. This analysis identified seven sets of measures used to assess B2B selling outcomes.

The construct validity of these seven sets of measures was evaluated in relation to how previous research describes outcomes from B2B selling. This examination shows a large difference in how sales research describes outcomes from B2B selling and how the reviewed studies operationalize and measure these outcomes. Further, the examination reveals that a major portion of the reviewed studies uses only one measure of sales revenue to assess the outcomes, in conflict with the multiple types of desired outcomes from B2B selling. Thus, according to previous research, such narrow assessments provide not a strong construct validity. Only a minor group of the

reviewed studies uses a broad range of measures in accordance with multiple types of outcomes, and thus provides an assessment with robust construct validity.

Our summary and categorization of the measures used in the clusters of studies reveal a much more frequent measuring of company outcomes than customer outcomes. This smaller attention to customer outcomes indicates that many studies use measures that lag behind the contemporary sales research's portrayal of outcomes desired from B2B selling (Cuevas 2018; Moncrief and Marshall 2005). It is particularly surprising how many of the studies ignore measuring outcomes critical for success in today's competitive B2B markets, such as offer value (Blocker et al. 2012), customer satisfaction (Cravens 1995), and customer relationships (Storbacka et al. 2009).

The consequence of neglecting to measure such critical customer outcomes may be an incomplete understanding of the investigated phenomenon (Hult et al. 2008), which may, in turn, weaken theory testing (Katsikeas et al. 2016) and knowledge building (Hult et al. 2008). Also, ignoring critical customer outcomes may imply ignoring outcomes that managers in B2B selling deem important (Zallocco, Pullins, and Mallin 2009). Such a difference between research and management practice may reduce the relevance and applicability of research and undermine managers' confidence in sales research (Richard et al. 2009).

## **Implications for researchers**

The present review exposes the widespread practice among researchers of using solely sales revenue measures to assess B2B selling outcomes. Despite the importance of sales revenue measures, researchers should recognize the

substantial difference between this single measure and the multiple types of outcomes desired from B2B selling (Cuevas 2018; Moncrief and Marshall 2005).

Researchers should recognize there is lower interest in measuring company outcomes than customer outcomes, and a narrow focus on the former contrasts with the importance of customer satisfaction and customer loyalty in B2B selling. Thus, researchers should consider increasing their measuring of critical customer outcomes from B2B selling, such as service quality (Töytäri and Rajala 2015), offer value (Blocker et al. 2012), customer satisfaction (Cravens 1995), customization and co-creation (Töytäri and Rajala 2015), and customer relationships (Storbacka et al. 2009). Including such measures in future research will strengthen the construct validity of the assessed outcomes and, subsequently, improve future theory testing and knowledge building in sales research.

We offer the following recommendations to improve the construct validity of the assessed B2B selling outcomes. First, the measures should be founded on robust theory on outcomes desired in the specific context researched. In addition, the measures should provide sufficient coverage of both company and customer outcomes. Furthermore, researchers should study the suggested implications of using various types of measures as explained in the examinations of the reviewed studies' measures. These suggested implications provide researchers with theoretical rationales for selecting measures. Last, researchers can select measures from our summary of measures in Table 4. Researchers who want to use multiple measures to assess each type of outcome will find valuable suggestions among the wide variety of measures outlined in the appendix.

The present review also indicates the need to discuss how researchers should label these outcomes. For example, sales revenue is frequently used to

assess the dependent variable labeled “sales performance outcomes.” However, it would be more precise to label such variables “sales revenue” and not “sales performance outcomes” as B2B selling is required to create multiple types of outcomes beyond sales revenue.

We encourage researchers to explain their theoretical rationale behind their choice of measures to assess these outcomes, which unfortunately only a few of the reviewed studies do. The present evaluations of the measures researchers have employed can provide valuable theoretical considerations that can be used for formulating such a rationale.

## **Implications for managers**

Sales managers have a strong focus on assessing (Zoltners, Sinha, and Lorimer 2008) and optimizing sales performance outcomes (Zallocco, Pullins, and Mallin 2009). Such assessments are vital to evaluate sales strategies and specific actions (Richard et al. 2009) and to detect low performance that needs managerial actions to be improved (MacInnis 2011).

The lack of clarity on valid measures to monitor sales performance outcomes may create problems for sales management. A recent report revealed that fewer than 20% of firms were able to determine the return on investment (ROI) of sales enablement investments (Miller Heiman Group 2018). Further, fewer salespeople today accomplish their sales goals (Hyken 2018) as B2B selling has become more challenging (Paesbrughe et al. 2020).

Although the present study investigates researchers’ measures, it also provides useful insights and guidance for managers. Both researchers and managers assess the same outcomes and gather the measures from the same



sources (i.e., company records and questionnaires and interviews with sales managers, salespeople, and customers).

Managers should be attentive to researchers' tendency to use only a few measures to assess customer outcomes. Managers should avoid this practice due to the growing importance of customer satisfaction, customer loyalty, and long-term relationships in B2B selling (Zallocco, Pullins, and Mallin 2009). Further, managers will find valuable suggestions on measures from our summary of measures in Table 4 and the range of measures outlined in the appendix.

Managers have insights into their sales force's goals and strategy and outcomes important for success in their firm's industry and markets (Zoltners, Sinha, and Lorimer 2008). Such goals, strategies, and desired outcomes should be reflected in the measures managers use to assess the outcomes.

## **Limitations and further research**

This study offers a systematic review of the measures used to assess outcomes from B2B selling but provides no systematic development of which outcomes are desired from B2B selling. Therefore, our contributions should be further developed with investigations and classifications of outcomes desired from B2B selling. Such classifications of desired outcomes are important for further development of valid measures of these outcomes.

Future research should try to develop a standard set of measures for B2B selling outcomes. Such a set of measures would serve as guidance on which measures to use and would thus improve the construct validity of these outcomes. In addition, if researchers use such a common set of measures in

future studies, it would help synthesize findings across studies and enable cumulative knowledge building in the field (Katsikeas et al. 2016).

Further, and in light of the growing importance of conducting both transactional and consultative B2B selling, future research should investigate the nature of these two types of B2B selling. Based on such investigations, researchers should examine which outcomes are desired from such types of selling and develop valid measures to assess these outcomes.

In summary, this study provides an empirical and theoretical foundation for the recommendations for further research. This foundation demonstrates the need for future research on measures of these essential dependent variables.

## Appendix. Frequency of measures of B2B sales performance outcomes.

Measure	Objective or subjective measure	Number of studies with the measure	Rate of appearance in studies (%)	Measure	Objective or subjective measure	Number of studies with the measure	Rate of appearance in studies (%)
Sales revenue	S	60	43.2	Customers include our product in consideration set	S	2	1.4
Sales revenue vs. quotas/objectives	S	54	38.8	Abreast of new services and successfully offering them	S	2	1.4
Market share /-growth	S	42	30.2	Detect causes of product operating failures	S	2	1.4
Sales of high profit-margin products	S	30	21.6	Improve customers' profitability/efficiency	S	2	1.4
Sales of new products	S	27	19.4	Customers' willingness to pay a price premium	S	2	1.4
Sales to major customers	S	26	18.7	Committed relationships with customers	S	2	1.4
Profit/margins/contributions	S	25	18.0	Trustworthy	S	2	1.4
Overall sales performance	S	18	12.9	Genuinely concerned	S	2	1.4
Customer orientation: understand customers needs/real concerns	S	17	12.2	Regret cooperation (inv)	S	2	1.4
Customer satisfaction	S	17	12.2	Recommended by customers	S	2	1.4
Create solutions for requirements/problems	S	16	11.5	Customers buy most additional products we/I offer	S	2	1.4
Customer relationships: long term/important/effective	S	13	9.4	Objective win/lose sales opportunities	O	2	1.4
Objective sales revenue vs. quotas/objectives	O	13	9.4	Sales in territory	S	2	1.4
Sales presentations: clear/concise/effective	S	12	8.6	Sales to new customers	S	2	1.4
Objective sales revenue	O	12	8.6	Sales per customer on average	S	2	1.4
Assisting supervisor in achieving his/her goals	S	10	7.2	Objective profits/profit margin	S	2	1.4
Actual customer loyalty	S	10	7.2	Gifts/promotional allowances are used responsibly	S	2	1.4
Sales revenue growth	S	10	7.2	Commissions paid/earned	S	2	1.4
Cost/investments/recourses/time used	S	10	7.2	Cashflow from operations	S	2	1.4
Convincing customers that problems/concerns are understood	S	9	6.5	Sales results/productivity	S	2	1.4
Information given to customers: accurate/important	S	8	5.8	Overall work attitude	S	1	0.7
Knowing applications and functions	S	8	5.8	Professional growth	S	1	0.7
Customer value/quality/price ratio	S	8	5.8	Objective sales calls numbers	O	1	0.7
Build customers' business/help customers achieve goals	S	8	5.8	Sales calls numbers	S	1	0.7
Sales of (profitable) long-term contracts	S	8	5.8	Effective use of audiovisual aids	S	1	0.7
ROI/efficiency	S	8	5.8	Meet supervisor's expectations	S	1	0.7
New customers attracted/conversion rate	S	7	5.0	Sales team's ability to run itself	S	1	0.7
Knowing the company's products/services	S	6	4.3	Sales team's teamwork efficiency	S	1	0.7
Knowing design and specifications	S	6	4.3	Sales team's teamwork effectiveness	S	1	0.7
Closing ratio, win/lose sale, product is chosen	S	6	4.3	Generating sales volume from team sales	S	1	0.7
Attaining sales activity quantity/standards	S	5	3.6	Helping other salespeople	S	1	0.7
Using established contacts to develop new accounts	S	5	3.6	Coordinating handling of post-sales problems with colleagues	S	1	0.7
Paperwork kept accurately and completely	S	5	3.6	Information sharing	S	1	0.7
Intended customer loyalty	S	5	3.6	Information about customers collected accurately	S	1	0.7
Objective sales revenue growth	O	5	3.6	Information: accurate, to customers and people in own company	S	1	0.7
Cross-selling	S	5	3.6	Questions are answered correctly	S	1	0.7
Profit growth	S	5	3.6	Customers are evaluating our product	S	1	0.7
Selling expertise/skills/ability/roles/responsibilities	S	4	2.9	Products and services are very good compared to competitors	S	1	0.7
Flexible sales approaches	S	4	2.9	Customers' need for additional products are exploited	S	1	0.7
Adaptive sales approaches from customer to customer	S	4	2.9	Customers' need for additional products are covered	S	1	0.7
Responsive to customer needs	S	4	2.9	Abreast with the company's production/technological development	S	1	0.7
Knowing products/competitors/customer needs	S	4	2.9	Service	S	1	0.7
Easily accessible	S	4	2.9	Service after the sale	S	1	0.7
Customer relationship: maintaining/improving	S	4	2.9	Checking on delivery	S	1	0.7
Share of wallet	S	4	2.9	Checking customer satisfaction	S	1	0.7
Quickly generating sales in dollars/units/orders	S	4	2.9	Handle customer complaints	S	1	0.7
Sales to current customers	S	4	2.9	Individual attention	S	1	0.7
Planning each sales call	S	3	2.2	Technical assistance	S	1	0.7
Planning sales strategies for each customer	S	3	2.2	Important supplier for customers	S	1	0.7
Feedback to management	S	3	2.2	Fairness reputation	S	1	0.7
Records kept accurately/completely/timely	S	3	2.2	Absolute price levels	S	1	0.7
Submitting required reports on time	S	3	2.2	Pricing power in the market	S	1	0.7
Co-operation with non-sales closely/discuss strategies	S	3	2.2	Customer's satisfaction/relationship with salesperson	S	1	0.7
Understand customer business/goals	S	3	2.2	Mutual trust	S	1	0.7
Abreast of the industry's production/technological development	S	3	2.2	Positive opinion	S	1	0.7
Follow up on product use/experience	S	3	2.2	Conflict reduction	S	1	0.7
Trouble shooting post-sales/product application problems	S	3	2.2	Mutual salesperson-customer: take no power advantage	S	1	0.7
Advocate for customers within seller's company	S	3	2.2	Mutual salesperson-customer: willingness to cooperate	S	1	0.7
Mutual profitability/welfare development/concern	S	3	2.2	Mutual salesperson-customer: willingness to owe favors	S	1	0.7
Customer relationships: effort/investments	S	3	2.2	Sales leads generated	S	1	0.7
Pleasant/enjoyable collaboration	S	3	2.2	Major accounts—identifying/cultivating	S	1	0.7
Keep promises, customers depend on seller	S	3	2.2	Retain current customers while increasing new customers	S	1	0.7
Have customers' best interest in mind	S	3	2.2	Customers buy most additional required products from me/us	S	1	0.7
Objective sales numbers of products/units/orders/contracts	O	3	2.2	Get additional sales opportunities	S	1	0.7
Sales numbers of orders	S	3	2.2	Objective sales: proportion of a specific brand	O	1	0.7
ROS, output vs. input	S	3	2.2	Sales growth objectives	S	1	0.7
Overall sales effectiveness	S	3	2.2	Operating income	O	1	0.7
Planning coverage of territory/customers	S	2	1.4	Objective return on sales	O	1	0.7
Planning daily activities	S	2	1.4	Objective number of contacts per purchase	O	1	0.7
Experimenting with different sales approaches	S	2	1.4	EBIT, objective earnings before interest and taxes	S	1	0.7
Varying sales styles from situation to situation	S	2	1.4	Financial performance	S	1	0.7
Top management satisfaction with salesperson/team/manager	S	2	1.4	Operating within the budget	S	1	0.7
Discussing sales strategies with various departments	S	2	1.4	Travel and lodging money is spent carefully	S	1	0.7
Identify new product/service ideas	S	2	1.4	Entertaining only when it's in company's best interest	S	1	0.7
Recommend operational/procedural improvements	S	2	1.4	Controlling cost in other areas of the company	S	1	0.7
Support in own company for closing sales/serving customers	S	2	1.4				

## References

- Anderson, Eirin, and Richard L. Oliver. 1987. "Perspectives on Behavior-Based Versus Outcome-Based Salesforce Control Systems." *Journal of Marketing* 51 (4):76-88.
- Albers, Sönke, Murali K. Mantrala, and Shrihari Sridhar. 2010. "Personal Selling Elasticities: A Meta-Analysis." *Journal of Marketing Research* 47 (5):840-53.
- Asare, Anthony K., Jing Yang, and Thomas G. Brashear Alejandro. 2012. "The State of Research Methods in Personal Selling and Sales Management Literature." *Journal of Personal Selling & Sales Management* 32 (4):473-89.
- Autry, Chad W., Michael R. Williams, and William C. Moncrief. 2013. "Improving Professional Selling Effectiveness through the Alignment of Buyer and Seller Exchange Approaches." *Journal of Personal Selling & Sales Management* 33 (2):165-84.
- Behrman, Douglas N., and William D. Perreault Jr. 1982. "Measuring the Performance of Industrial Salespersons." *Journal of Business Research* 10 (3):355-70.
- Blocker, Christopher P., Joseph P. Cannon, Nikolaos G. Panagopoulos, and Jeffrey K. Sager. 2012. "The Role of the Sales Force in Value Creation and Appropriation: New Directions for Research." *Journal of Personal Selling & Sales Management* 32 (1):15-27.
- Boot, Andrew, Anthea Sutton, and Diana Papaioannou. 2016. *Systematic Approaches to a Successful Literature Review*. London: SAGE Publications.
- Borman, Walter C., and Stephan J. Motowidlo. 1997. "Task Performance and Contextual Performance: The Meaning of Personnel Selection Research." *Human Performance* 10 (2):99-109.
- Cravens, David W. 1995. "The Changing Role of the Sales Force." *Marketing Management* 4 (2):49-54.
- Cuevas, Javier Marcos. 2018. "The Transformation of Professional Selling: Implications for Leading the Modern Sales Organization." *Industrial Marketing Management* 69 (February):198-208.

- Davie, Christopher, Tom Stephenson, and Maria Valdivieso De Uster. 2010. "Three Trends in Business-to-Business Sales." *McKinsey Quarterly* 19 (May):1-4.
- Dawes, Philip L., Don Y. Lee, and Grahame R. Dowling. 1998. "Information Control and Influence in Emergent Buying Centers." *Journal of Marketing* 62 (3):55-68.
- Dess, Gregory G., and Richard B. Robinson Jr. 1984. "Measuring Organizational Performance in the Absence of Objective Measures: The Case of the Privately-Held Firm and Conglomerate Business Unit." *Strategic Management Journal* 5 (3):265-73.
- Ghauri, Pervez, and Kjell Grønhaug. 2002. *Research Methods in Business Studies*. Harlow, UK: Pearson Education Limited.
- Greenacre, Michael, and Raul Primicerio. 2013. *Multivariate Analysis of Ecological Data*. Bilbao: Fundación BBVA. Free official download from [www.multivariatestatistics.org](http://www.multivariatestatistics.org).
- Groves, Robert M., Floyd J. Fowler Jr., Mick P. Couper, James M. Lepkowski, Eleanor Singer, and Roger Tourangeau. 2009. *Survey Methodology*. Hoboken, New Jersey: John Wiley & Sons, Inc.
- Guenzi, Paolo, and Frederico Panzeri. 2015. "How Salespeople see Organizational Citizenship Behaviors: An Exploratory Study Using the Laddering Technique." *Journal of Business & Industrial Marketing* 30 (2):218-32.
- Hair, Joseph F. Jr., William C. Black, Barry J. Babin, and Rolph E. Anderson. 2010. *Multivariate Data Analysis*. Upper Saddle River, NJ: Prentice-Hall.
- Herjanto, Halimin, and Drew Franklin. 2019. "Investigating Salesperson Performance Factors: A Systematic Review of the Literature on the Characteristics of Effective Salespersons." *Australasian Marketing Journal* 27 (2):104-12.
- Hult, G. Tomas M., David J. Ketchen Jr., David A. Griffith, Brian R. Chabowski, Mary K. Hamman, Bernadine Johnson Dykes, Wesley A. Pollitte, and S. Tamer Cavusgil. 2008. "An Assessment of the Measurement of Performance in International Business Research." *Journal of International Business Studies* 39 (6):1064-80.

- Hyken, Shep. 2018. *57% of Salespeople Missed Their Quotas Last Year*. Forbes. Free official download from <https://www.forbes.com/sites/shephyken/2018/09/02/77-of-sales-reps-missed-their-quotas-last-year/#6e7633a052e4>.
- Ingram, Thomas N., Raymond W. LaForge, William B. Locander, Scott B. MacKenzie, and Philip M. Podsakoff. 2005. "New Directions in Sales Leadership Research." *Journal of Personal Selling & Sales Management* 25 (2):137-54.
- Jaramillo, Fernando, Francois A. Carrillat, and William B. Locander. 2005. "A Meta-Analytic Comparison of Managerial Ratings and Self-Ratings." *Journal of Personal Selling & Sales Management* 25 (4):315-28.
- Jesson, Jill K., Lydia Matheson, and Fiona M. Lacey. 2012. *Doing Your Literature Review: Traditional and Systematic Techniques*. London: SAGE Publications Ltd.
- Johnson, Jeff S., and Scott B. Friend. 2015. "Contingent Cross-Selling and Up-Selling Relationships with Performance and Job Satisfaction: An MOA-Theoretic Examination." *Journal of Personal Selling and Sales Management* 35 (1):51-71.
- Katsikeas, Constantine S., Neil A. Morgan, Leonidas C. Leonidou, and G. Tomas M. Hult. 2016. "Assessing Performance Outcomes in Marketing." *Journal of Marketing* 80 (2):1-20.
- Lam, Shun Y., Venkatesh Shankar, M. Krishna Erramilli, and Bvsan Murthy. 2004. "Customer Value, Satisfaction, Loyalty and Switching Cost: An Illustration from Business-to-Business Service Context." *Journal of the Academy of Marketing Science* 32 (3):293-311.
- Lilien, Gary L. 2016. "The B2B Knowledge Gap." *International Journal of Research in Marketing* 33 (3):543-56.
- Limbu, Yam B., Chinnappa Naidu Jayachandran, Barry J. Babin, and Robin T. Peterson. 2016. "Empathy, Nonverbal Immediacy, and Salesperson Performance: The Mediating role of Adaptive Selling Behavior." *Journal of Business & Industrial Marketing* 31 (5): 654-67.
- MacInnis, Deborah J. 2011. "A Framework for Conceptual Contributions in Marketing." *Journal of Marketing* 75 (4):136-54.

- Mackenzie, Scott B., Philip M. Podsakoff, and Richard Fetter. 1993. "The Impact of Organizational Citizenship Behavior on Evaluations of Salesperson Performance." *Journal of Marketing* 57 (1):70-80.
- Manning, Gerald L., Barry L. Reece, and Michael Ahearne. 2010. *Selling Today: Creating Customer Value.* Upper Saddle River, New Jersey: Prentice Hall.
- Marshall, Greg W., William C. Moncrief, and Felicia G. Lassk. 1999. "The Current State of Sales Force Activities." *Industrial Marketing Management* 28 (1):87-98.
- Miller Heiman Group. 2018. *Sales Enablement Grows up: 4th Annual Sales Enablement Report.* CSO Insights: The Research Division of Miller Heiman Group. Littleton, CO.
- Moncrief, William C., and Greg W. Marshall. 2005. "The Evolution of the Seven Steps of Selling." *Industrial Marketing Management* 34 (1):13-22.
- Ohiomah, Alhassan, Morad Benyoucef, and Pavel Andreev. 2020. "A Multidimensional Perspective of Business-to-Business Sales Success: A Meta-Analytic Review." *Industrial Marketing Management* 90 (October):435-52.
- Onwuegbuzie, Anthony J., and Rebecca Frels. 2016. *7 Steps to a Comprehensive Literature Review.* London: SAGE Publications Ltd.
- Paesbrugge, Bert, Deva Rangarajan, Bryan Hochstein, and Arun Sharma. 2020. "Evaluation of Salespeople by the Purchasing Function: Implications for the Evolving Role of Salespeople." *Journal of Personal Selling & Sales Management* 40 (4):289-305.
- Parvinen, Petri, Jaakko Aspara, Sami Kajalo, and Joel Hietanen. 2013. "Sales Activity Systematization and Performance: Differences Between Product and Service Firms." *Journal of Business & Industrial Marketing* 28 (6):494-505.
- Rangarajan, Deva, Riley Dugan, Maria Rouziou, and Mike Kunkle. 2020. "People, Process, and Performance: Setting an Agenda for Sales Enablement Research." *Journal of Personal Selling & Sales Management* 40 (3):213-20.
- Rapp, Adam, Raj Agnihotri, Thomas L. Baker. 2015. "Competitive Intelligence Collection and use by Sales and Service Representatives: How Managers' Recognition and Autonomy Moderate Individual Performance." *Journal of the Academy of Marketing Science* 43 (3):357-74.

- Rapp, Adam, Colin Gabler, and Jessica Ogilvie. 2020. "A Holistic Perspective of Sales Research: Areas of Consideration to Develop More Comprehensive Conceptual and Empirical Frameworks." *Journal of Personal Selling & Sales Management* 40 (4):227-33.
- Rich, Gregory A., William H. Bommer, Scott B. MacKenzie, Philip M. Podsakoff, and Jonathan L. Johnson. 1999. "Methods in Sales Research: Apples and Apples or Apples and Oranges? A Meta-Analysis of Objective and Subjective Measures of Salesperson Performance." *Journal of Personal Selling & Sales Management* 19 (4):41-52.
- Richard, Pierre J., Timothy M. Devinney, George S. Yip, and Gerry Johnson. 2009. "Measuring Organizational Performance: Towards Methodological Best Practice." *Journal of Management* 35 (3):718-804.
- Seale, Clive. 2009. "Validity, Reliability and the Quality of Research." In Seal, C. (Eds.). *Researching Society and Culture* (pp 71-83). London: SAGE Publication Ltd.
- Sharma, Arun, and Jadish N. Sheth. 2010. "A Framework of Technology Mediation in Consumer Selling: Implications for Firms and Sales Management." *Journal of Personal Selling & Sales Management* 30 (2):121-9.
- Siguaw, Judy A., Sheryl E. Kimes, and Jule B. Gassenheimer. 2003. "B2B Sales Force Productivity: Applications of Revenue Management Strategies to Sales Management." *Industrial Marketing Management* 32 (7):539-51.
- Snyder, Hannah. 2019. "Literature Review as a Research Methodology: An Overview and Guidelines." *Journal of Business Research* 104 (November):333-9.
- Steward, Michelle D., Beth A. Walker, Michael D. Hutt, and Ajith Kumar. 2010. "The Coordination Strategies of High-Performing Salespeople: Internal Working Relationships That Drive Success." *Journal of the Academy of Marketing Science* 38 (5):550-66.
- Storbacka, Kaj, Lynette Ryals, Iain A. Davies, and Suvi Nenonen. 2009. "The Changing Role of Sales: Viewing Sales as a Strategic, Cross-Functional Process." *European Journal of Marketing* 43 (7/8):890-906.



- Schwepker, Charles H. Jr., and David J. Good. 2013. "Improving Salespeople's Trust in the Organization, Moral Judgment and Performance Through Transformational Leadership." *Journal of Business & Industrial Marketing* 28 (7):535-46.
- Tan, Pang-Ning, Michael Steinbach, and Vipin Kumar. 2006. *Introduction to Data Mining*. Essex: Pearson Education Limited.
- Töytäri, Pekka, and Risto Rajala. 2015. "Value-Based Selling: An Organizational Capability Perspective." *Industrial Marketing Management* 45 (February):101-12.
- Verbeke, Willem, Bart Dietz, and Ernst Verwaal. 2011. "Drivers of Sales Performance: A Contemporary Meta-Analysis - Have Salespeople Become Knowledge Brokers?" *Journal of the Academy of Marketing Science* 39 (3):407-28.
- Wang, Guangping, Wenyu Dou, and Nan Zhou. 2012. "The Interactive Effects of Sales Force Controls on Salespeople Behaviors and Customer Outcomes." *Journal of Personal Selling & Sales Management* 32 (2):225-43.
- Wang, Chen, JoAndrea Hoegg, and Darren W. Dahl. 2018. "The Impact of a Sales Team's Perceived Entitativity on Customer Satisfaction." *Journal of the Academy of Marketing Science* 46 (3):190-211.
- Ward, Joe H. Jr. 1963. "Hierarchical Grouping to Optimize an Objective Function." *Journal of the American Statistical Association* 58 (301):236-44.
- Zallocco, Ronald, Ellen Bolman Pullins, and Michael L. Mallin. 2009. "A Re-Examination of B2B Sales Performance." *Journal of Business & Industrial Marketing* 24 (8):598-610.
- Zoltners, Andris A., Prabhakant Sinha, and Sally E. Lorimer. 2008. "Sales Force Effectiveness: A Framework for Researchers and Practitioners." *Journal of Personal Selling & Sales Management* 27 (2):115-31.
- Zoltners, Andris A., Prabhakant Sinha, and Sally E. Lorimer. 2012. "Breaking the Sales Force Incentive Addiction: A Balanced Approach to Sales Force Effectiveness." *Journal of Personal Selling & Sales Management* 32 (2): 171-86.

## Paper 2:

# Desired outcomes from B2B selling: A systematic review and conceptualization

Per Ivar Seljeseth

### ABSTRACT

Even though the outcomes from selling are fundamental in research and management, the literature provides no conceptualization of which outcomes are desired from selling. This lack of conceptualization may cause researchers and managers to focus on insufficient outcomes, which may in turn harm research quality and effective sales management. To resolve this gap, this study presents a systematic review of outcomes measured in 139 studies on business-to-business (B2B) selling. The review reveals the widespread practice of measuring insufficient outcomes, which indicates the need for conceptualizing the outcomes desired from B2B selling. The present study contributes to such conceptualization by organizing the measured outcomes in a value chain framework to create the “B2B Sales Performance Outcomes Chain.” This chain is the first complete theoretical framework conceptualizing the outcomes desired from B2B selling and includes seven main types/categories and 21 subtypes/subcategories of outcomes. This framework can guide researchers in selecting valid outcomes to explore their models and hypotheses. In addition, managers can use this framework as an executive tool for targeting, monitoring, and directing sufficient efforts toward achieving all desired outcomes. Implications for researchers, managers, and future research are suggested.

**Keywords:** sales performance outcomes, B2B selling, systematic review, conceptualization.

Corresponding author: Per Ivar Seljeseth

Phone: + 47 909 58246. Mailing address: Nord University Business School, Post Box 1490, 8048 Bodø, Norway. E-mail address: per.i.seljeseth@nord.no

# 1. Introduction

Sales performance outcomes describe what salespeople produce (Anderson and Oliver 1987) and are used to evaluate salespeople's achievements (Verbeke, Dietz, and Verwaal 2011). These outcomes are frequently used as dependent variables in empirical research (Asare, Yang, and Alejandro 2012) to identify factors that can improve selling (March and Sutton 1997). Consequently, measuring appropriate and sufficient outcomes is vital for knowledge building in sales research.

Furthermore, sales managers strongly focus on the outcomes that salespeople produce because personal selling creates both high revenue and high costs (Mantrala, Alberts, Gopalakrishna, and Joseph 2008). The average salesforce investment ranges from 10% to 40% of sales revenue (Heide 1999), and improved salesforce effectiveness can increase sales revenue by at least 10% (Zoltners, Sinha, and Lorimer 2008). Consequently, effective sales management requires that appropriate and sufficient outcomes are targeted, monitored, and created.

Despite the importance of these outcomes, the sales literature provides no conceptualization of which outcomes are desired from selling. Surprisingly, the primary motivation for having a salesforce—namely, the outcomes salespeople produce—is not conceptualized in the literature. Further, the literature provides no common agreed-upon operationalization suggesting valid measures to assess outcomes from selling (Siguaw, Kimes, and Gassenheimer 2003) though such operationalization could contribute to the conceptualization of these outcomes. Previous attempts to operationalizing outcomes from business-to-business (B2B) selling have provided very different measures: out of the 18 measures that Zallocco, Pullins, and Mallin (2009)

suggested and the 31 measures that Behrman and Perreault (1982) suggested, only five share similarities. This large difference between measures substantiates the cloudiness surrounding the outcomes desired from B2B selling and the urgent need for conceptualizing these outcomes.

This lack of conceptualization of the outcomes desired from B2B selling may create substantial problems for researchers and managers. Researchers may, for example, use solely measures of sales revenue to assess outcomes from selling and overlook important outcomes, such as offer value and customer satisfaction. Overlooking important outcomes may generate research models with insufficient outcomes that, in turn, may generate insufficient assessments and weak conclusions. Such weak conclusions may threaten theory testing and knowledge building in sales research. Managers may also suffer from this lack of conceptualization if they select insufficient outcomes to target, monitor, and manage. Managers focusing on a narrow set of outcomes may consequently experience problems achieving all the outcomes desired from B2B selling. Consequently, conceptualizing the desired outcomes from B2B selling represents a vital step for improving future sales research and management practice. Therefore, the following research question is addressed: which outcomes are desired from B2B selling?

The methods used to answer this research question differ from those used in previous research associated with the outcomes from B2B selling. While Zallocco et al. (2009) conducted qualitative interviews with practitioners in B2B selling regarding measures to assess the outcomes, the present study undertakes a quantitative systematic review of measures used to assess outcomes in research on B2B selling. First, by collecting empirical studies that measure B2B sales performance outcomes and then extract and organize the measures in a predefined framework of marketing outcomes (Katsikeas,

Morgan, Leonidou, and Hult 2016). Then, by evaluating the measured outcomes in relation to the outcomes that should be generated in B2B selling as suggested in the literature. Finally, by organizing the outcomes in a value chain framework to create the “B2B Sales Performance Outcomes Chain.”

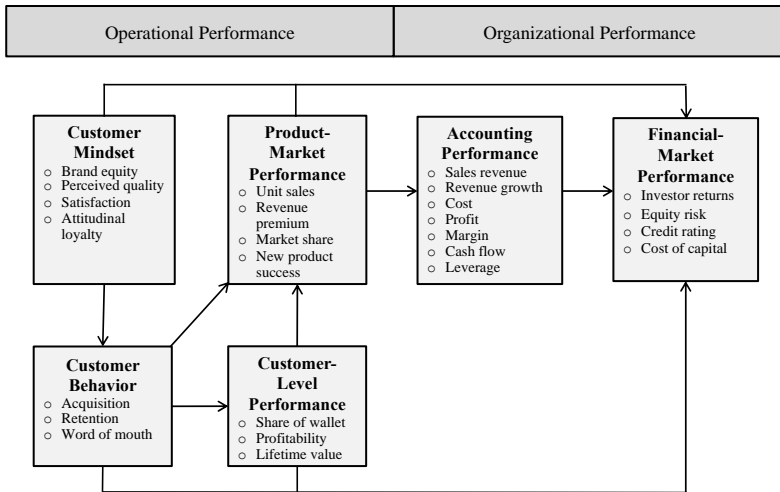
The present study provides three contributions. First, this study contributes by showing which outcomes researchers measure when assessing outcomes from B2B selling. Such a systematic review of sales performance outcomes has not been conducted until now despite the multiple reviews of the antecedents of sales performance (e.g., Churchill, Ford, Hartley, and Walker 1985; Verbeke et al. 2011). Second, this study contributes by evaluating how the measured outcomes in the reviewed studies correspond with the outcomes the literature suggests are desired from B2B selling. This evaluation provides essential insights into the multiple types of desired outcomes from B2B selling and pinpoints outcomes that are frequently overlooked by the reviewed studies. These overlooked outcomes demonstrate the need for researchers to re-evaluate the outcomes that they measure. Third, this study contributes by developing a complete theoretical framework—the B2B Sales Performance Outcomes Chain—that conceptualizes main categories and subcategories/types of desired outcomes from B2B selling. This framework provides unique insights into the multiple types of outcomes desired and generated in B2B selling. Researchers can use this framework to select valid outcomes to explore their theoretical models and hypotheses. In addition, managers can use this framework as an executive tool for targeting, monitoring, and directing sufficient efforts toward achieving all the outcomes desired from B2B selling. For example, they can use this framework to develop sales strategies and select areas for improvements and to train and evaluate salespeople in relation to the multiple outcomes they are required to produce.

The following sections describe the theory and methods used in the present study followed by the results and discussion. Then, conclusions and implications for researchers and managers are presented. Finally, the limitations of the study as well as recommendations for future research are suggested.

## 2. Outcomes from B2B selling

Outcomes from personal selling comprise what salespeople produce (Andersen and Oliver 1987). This broad definition corresponds with research suggesting that salespeople should produce multiple types of outcomes (e.g., Cuevas 2018; Marshall, Moncrief, and Lassk 1999). Further, these multiple suggested outcomes correspond with practitioners proposing a relatively high number of measures necessary to assess outcomes from B2B selling. For example, Behrman and Perreault (1982) and Zallocco et al. (2009) interviewed sales managers and salespeople in B2B selling and suggested using 19 and 31 measures, respectively, to assess these outcomes. These measures identify multiple types of outcomes that are valid to assess and thus indicate that there are multiple types of outcomes desired from B2B selling. Unfortunately, these two studies suggested quite different outcomes and thus do not contribute to conceptualizing the desired outcomes from B2B selling.

As personal selling is a marketing function, theory on marketing performance outcomes can contribute as an overarching framework to theorize outcomes from B2B selling. Katsikeas et al. (2016) provide such a theoretical framework on marketing performance outcomes, and this framework largely corresponds with outcomes desired from B2B selling (e.g., Cuevas 2018; Marshall et al. 1999). Figure 1 exhibits this theoretical framework.



**Fig. 1.** The Marketing Performance Outcome Chain

Adapted from Katsikeas et al. (2016)

This framework suggests six main categories of outcomes, divided into two groups—operational performance outcomes (i.e., customer mindset, customer behavior, product-market performance, and customer-level performance) and organizational performance outcomes (i.e., accounting performance and financial-market performance). Operational performance outcomes result from a firm’s various value chain activities, which in turn lead to economic outcomes, or organizational performance outcomes (Hamann, Schiemann, Bellora, and Guenther 2013).

The framework’s value chain structure shows how various marketing outcomes relate to each other and influence each other. The framework illustrates well how B2B marketing and selling outcomes influence each other, for example, how customer mindset, such as customer satisfaction, influences customer behavior, such as customer retention (e.g., Rauyruen and Miller 2007; Blocker et al. 2011). Further, the framework shows how customer



behavior, such as customer retention, influences customer-level performance, such as customers' lifetime value, product-market performance, such as unit sales (Rauyruen and Miller 2007), and accounting performances, such as sales revenue, cost, and profit (Lam, Shankar, Erramilli, and Murthy 2004; Rauyruen and Miller 2007). Last, the framework shows how accounting performance, such as sales revenue, cost, and profits, are antecedents of financial-market performance, such as investor returns.

The framework of outcomes is created from a selling firm's perspective and illustrates outcomes desired from marketing. Also, the various outcomes indicate the multiple stakeholders to these outcomes, or in other words, by whom the outcomes from selling are desired. First, the outcomes indicate the selling firm's primary stakeholders that benefit from and desire the various outcomes. For example, sales managers and salespeople want to create loyal customers and unit sales because such outcomes influence their job satisfaction, wages, and bonuses. Further, non-selling employees desire high sales revenue and profit because it influences their job security. Lastly, the owners of the selling firm desire investor return and low equity risk. Second, the outcomes indicate the buying firm's interest in the outcomes from selling. The buying firm and its buying centers, departments, and stakeholders have a clear desire for customer value and customer satisfaction.

In this dual perspective of outcomes desired from the selling and the buying firm, the outcomes can be divided into those directly beneficial to the selling company (company outcomes) or customers (customer outcomes) (Zoltners et al. 2008). Customer outcomes are shown in the customer mindset category, and company outcomes are shown in the five remaining main categories in the framework. This illustrates how customer outcomes are indirectly precious to the selling company and that the company outcomes

depend on customer outcomes. Further, the framework also illustrates the need for balancing company and customer outcomes as certain outcomes can be conflicting. For example, reduced prices can increase customer value but also reduce the selling company's profits.

As this framework (Katsikeas et al. 2016) were able to include most of the measured outcomes in the reviewed studies, the framework was used as evaluative framework and the basis for our B2B Sales Performance Outcomes Chain conceptualizing the outcomes form B2B selling.

### **3. Methods**

#### **3.1. Research design and procedure**

The research question (i.e., which outcomes are desired from B2B selling) was answered using a descriptive research design with a systematic review. Four research steps were employed to answer the research question. First, published empirical studies measuring outcomes from B2B selling were collected. Second, the measured outcomes were organized into a predefined initial evaluative framework of outcomes from marketing (Katsikeas et al. 2016). The categories of measured outcomes in this initial evaluative framework were adapted to B2B selling during the review process. Third, the measured outcomes in the studies were evaluated in relation to the outcomes desired from B2B selling suggested in the sales literature. Fourth, the categories and subcategories of outcomes were organized into a value chain framework to create The B2B Sales Performance Outcomes Chain.

#### **3.2. Sources and search for studies**

The primary sources of studies were scientific journals that, according to the review by Asare et al. (2012), publish research on personal selling and sales management. The journals that according to Asare et al. (2012) claimed publish the highest number of sales research studies were examined issue by issue (i.e., *Journal of Personal Selling & Sales Management*, *Industrial Marketing Management*, *Journal of Marketing*, *Journal of the Academy of Marketing Science*, *Journal of Business & Industrial Marketing*, and *Journal of Business Research*). The other journals in Asare et al.'s (2012) review were examined

using an online keyword search on the journals' websites, including keywords like "sales performance," "sales," "selling," and "sales effectiveness." The gathered studies were then examined using the study inclusion criteria for this review.

### **3.3. Study inclusion criteria**

A clear set of study inclusion criteria restricts this review. First, to be included in the review, studies need to assess sales performance outcomes as dependent variables associated with at least one sales-related independent variable. The literature employs various labels for the concept of sales performance outcomes; thus, substitutes were accepted, including substitutes for "sales" (e.g., "salesperson," "sales team/force," "key account manager," "sales trainee," and "sales territory") and substitutes for "performance outcomes" (e.g., "outcomes," "productivity," "success," "effectiveness," and "excellence"). Second, to be included, studies must solely investigate B2B selling because of the higher complexity in B2B selling compared to business-to-consumer (B2C) selling (Dawes, Lee, and Dowling 1998). Data collection revealed a substantial number of studies that mixed respondents involved in B2B and B2C selling or concealed information about which of these markets the respondents were operating in. Such studies were excluded from this review, together with studies using samples consisting of students or other non-sales-related occupations. Third, to be included, studies must be empirical (as opposed to conceptual) and use a quantitative (as opposed to qualitative) methodological approach. Fourth, to be included, studies must be published during the 2001–2015 period. Last, meta-analyses and literature reviews were

excluded, along with studies that do not provide information regarding the eligibility criteria set for this review.

### 3.4. Contributing journals and reviewed studies

The gathered studies were examined in relation to the study inclusion criteria, and this process generated 139 studies published in 17 journals, as shown in Table 1. An outline of the reviewed studies is available upon request.

**Table 1**  
The journals and the number of studies contributing to the review.

Journals	Total n = 139
Journal of Personal Selling & Sales Management	21.6
Industrial Marketing Management	20.9
Journal of Marketing	11.5
Journal of the Academy of Marketing Science	10.8
Journal of Business & Industrial Marketing	10.1
Journal of Business Research	6.5
Journal of Marketing Theory and Practice	3.6
International Journal of Research in Marketing	2.9
Journal of Marketing Research	2.9
European Journal of Marketing	2.2
Journal of Applied Psychology	2.2
Marketing Intelligence & Planning	1.4
Journal of Business-to-Business Marketing	0.7
Journal of International Marketing	0.7
Marketing Science	0.7
Psychology & Marketing	0.7
Women in Management Review	0.7

Notes: Values are percentages.

Table 1 shows that the following journals publish the most studies assessing B2B sales performance outcomes: *Journal of Personal Selling and Sales Management*, *Industrial Marketing Management*, *Journal of Marketing*, *Journal of the Academy of Marketing Science*, *Journal of Business & Industrial Marketing*, and *Journal of Business Research*.

### **3.5. Evaluative framework and coding**

In systematic reviews, a predefined evaluative framework is key for data extraction, coding, and categorization and for ensuring that different studies are handled in a consistent manner (Boot, Sutton, and Papaioannou 2016). Katsikeas et al.'s (2016) framework for marketing performance outcomes (i.e., "The Marketing Performance Outcomes Chain") was tested as an initial evaluative framework for the present review. The framework succeeded in including a large number of the reviewed measures and was therefore used as an initial evaluative framework for categorizing the extracted measures.

During the review process of extracting and recording the measures, the coding protocol was continually advanced and refined. New coding classes for measures were added to record new types of measures, so the number of various measures grew throughout the review process. Moreover, new categories and subcategories of measured outcomes were added to the framework throughout the review process to include measured outcomes that did not fit into the initial framework's categories. Categories and subcategories of outcomes that were not measured by the reviewed studies were removed from the initial framework. This process adapted the initial framework to B2B selling to create the B2B Sales Performance Outcomes Chain.

For accuracy and transparency in the review process, a coding protocol was developed in Excel in accordance with the procedure recommended by Lipsey and Wilson (2001) to specify how the studies and extracted measures should be coded. The studies were organized by publication year and author(s). The studies and the coding protocol were reviewed and adjusted a second time to eliminate misclassification.

## **4. Results and discussion**

This section presents and discusses the results of the study. First, the major characteristics of the measured outcomes are presented followed by an explanation of how the initial evaluative framework was adapted to B2B selling. Then, the measured outcomes are evaluated. Finally, the categories of outcomes are organized in a value chain framework to create the B2B Sales Performance Outcomes Chain. This chain represents a complete theoretical framework conceptualizing the outcomes desired from B2B selling.

### **4.1. The measured outcomes**

The reviewed studies use from one to 30 measures to assess B2B sales performance outcomes, with an average of 5.4 measures per study. The studies use a large variety of 151 various measures to assess the outcomes. A detailed outline of all the measures and their frequency of use is shown in the appendix. Measures with a label that begins with “objective” are objective measures collected from company records. All other measures in the table are subjective measures rated by respondents.

### **4.2. Adaption of the evaluative framework**

To conceptualize the outcomes from B2B selling, the measures used in the reviewed studies were organized in an initial evaluative framework in accordance with Katsikeas et al.'s (2016) framework of marketing outcomes. The initial evaluative framework was adapted to B2B selling during the review process and involved three adjustments. First, two new categories of outcomes

emerged—“sales behavior” and “internal contributions”—to capture measures of sales behavior and contributions that salespeople provide to, for example, management, colleagues, and firm operations. Second, a new category of outcomes emerged—“overall sales performance”—to capture overall measures of sales performance outcomes. Third, the category of outcomes named “financial market performance” was removed because none of the reviewed studies measures such outcomes. Measures of economic outcomes, such as operating income, profit, cost, and cash flow are included in the “accounting performance” category of outcomes.

Table 2 shows the final evaluative framework adapted to B2B selling, which includes eight main categories and 22 subcategories of outcomes and the frequency that each category of outcomes is measured: (1) sales behavior, (2) internal contributions (to management, strategy, and marketing, to sales management, to the sales team and other salespeople, and to operations and non-sales), (3) customer mindset (satisfaction, perceived quality, perceived offer value, relationship, and intentional loyalty), (4) customer behavior (new customers acquired, actual loyalty, and word of mouth), (5) customer-level performance (share of wallet and lifetime value), (6) product-market performance (sales revenue and market share), (7) accounting performance (operating income, profit, cost, and cash flow), and (8) overall sales performance. The table can be read like this: 5.3% of the measures assess outcomes in the sales behavior category, and 1.1% of the measures assess contributions to management, strategy, and marketing.



**Table 2**  
Frequency of measured B2B Sales Performance Outcomes.

Categories and subcategories of outcomes	Total n = 139
<b>Sales Behavior</b>	<b>5.3</b>
Sales behavior	5.3
<b>Internal Contributions</b>	<b>5.5</b>
Contributions to management, strategy, marketing	1.1
Contributions to sales management	3.1
Contributions to salesteam & other salespeople	0.3
Contributions to operations & non-sales	1.1
<b>Customer Mindset</b>	<b>29.3</b>
Satisfaction	3.3
Perceived quality	16.9
Perceived offer value	3.6
Relationship	4.8
Intentional loyalty	0.7
<b>Customer Behavior</b>	<b>2.9</b>
New customers acquired	1.2
Actual loyalty	1.5
Word of mouth	0.3
<b>Customer-Level Performance</b>	<b>1.1</b>
Share of wallet	0.9
Lifetime value	0.1
<b>Product-Market Performance</b>	<b>42.7</b>
Sales revenue	37.2
Market share	5.6
<b>Accounting Performance</b>	<b>8.9</b>
Operating income	0.1
Profit	6.3
Cost	2.3
Cash Flow	0.3
<b>Overall Sales Performance</b>	<b>4.3</b>
Overall sales performance	4.3

Notes: Values are percentages.

### 4.3. Evaluation of the measured outcomes

This section evaluates the outcomes measured in the studies in relation to outcomes desired from B2B selling. As shown in Table 2, the largest category of measured outcomes is product-market performance (43%) followed by customer mindset (29%) and accounting performance (9%). The three smallest

categories of measured outcomes are overall sales performance (4%), customer behavior (3%), and customer-level performance (1%).

### **Product-market performance**

The largest category of measured outcomes, product-market performance (43%), includes the largest subcategory of outcomes—sales revenue (37%). The reviewed studies use a large number of 22 various measures to assess sales revenue, and sales in dollars (8%) and sales versus quota (7%) are the two most frequently measured outcomes in this category, as shown in the appendix. The market share subcategory is assessed by only 6% of the measures even though market share is a widely used marketing performance goal and measure among managers (Farris, Bendle, Pfeifer, and Reibstein 2006).

Cross-selling is only assessed by 1% of the measures, and up-selling is not measured by any of the reviewed studies, as shown in the appendix. Cross-selling refers to selling additional unrelated products and services, and up-selling refers to selling better and more expensive products and services than the customer initially requested. The low interest in assessing cross- and up-selling is noteworthy because of their importance for maximizing customer value (Bolton, Lemon, and Verhoef 2008). However, up-selling is likely indirectly assessed by associated measures, such as sales of high profit-margin products and sales of profitable long-term contracts.

### **Customer mindset**

The second-largest category of measured outcomes is the customer mindset category (29%). This category includes customers' experiences with and opinions about, for example, the selling company, the offer value, and the

salesperson's efforts. These are essential outcomes because of their critical influence on customer loyalty and repeat purchase (Lam et al. 2004). The customer mindset category includes outcomes that are interrelated and thus challenging to categorize. For example, quality and offer value can be antecedents, components, and measures of customer satisfaction, and customer satisfaction can in turn be closely connected to customer relationship. The measures recorded in the satisfaction subcategory are solely explicit measures of satisfaction and not antecedents or components of satisfaction.

The largest subcategory of customer mindset is perceived quality (17%), which is assessed with a large number of 35 various measures, as shown in the appendix. Customer relationship is the second-largest subcategory, assessed by 5% of the measures. However, one may expect more studies to assess customer relationship as establishing long-term customer relationships is an essential goal for most businesses today (e.g., Weitz and Bradford 1999). Further, salespeople play a critical role in the formation and maintenance of long-term customer relationships (Williams and Attaway 1996; Verbeke, Frank, Bakker, and Dietz 2008; Weitz and Bradford 1999).

The perceived offer value subcategory is only assessed by 4% of the measures. This modest interest stands in contrast to the competitive advantage created from offer value (Mizik and Jacobsen 2003) and salespeople's tremendous impact on customers' perceived offer value (Cravens 1995). Salespeople often have the best insights and opportunities to create value for customers (Blocker, Cannon, Panagopoulos, and Sager 2012), and salespeople must often clearly demonstrate the value they can deliver to earn time with customers (Flint, Woodruff, and Gardial 2002). Further, offer value is

critical for surviving and growing in competitive markets (Vargo and Lusch 2004).

Customer satisfaction is only assessed by 3% of the measures despite the critical influence that customer satisfaction has on customer loyalty and repeat purchase (Lam et al. 2004). Because salespeople are likely the only connection between selling firms and their customers, salespeople have a direct effect on customers' perceptions of firms and their subsequent purchases from firms (Wang, Dou, and Zhou 2012). Customer satisfaction is an essential source of competitive advantage (Rust, Zeithaml, and Lemon 2000) and has a substantial impact on business performance (Ittner and Larcker 2003; Anderson, Fornell, and Lehmann 1994) as it can increase revenue and reduce price elasticity (Fornell 1992).

The subcategory intentional customer loyalty is only assessed by 1% of the measures. This low interest in customer loyalty stands in contrast to salespeople's role in creating satisfied customers (Cravens 1995) and subsequently loyal customers (Lam et al. 2004) and in deriving multiple rewards from loyal customers. Loyal customers are price-tolerant repeat purchasers (Sánchez, Vijande, and Gutiérrez 2011) who are more profitable than newly acquired customers (Reichheld 1996). Further, loyal customers contribute to positive word of mouth (Sánchez et al. 2011) that may attract new customers. It is a growing view that customer loyalty is strategically important (Johnson, Barksdale, and Boles 2001) and essential for securing long-term performance in business relationships (Ittner and Larcker 2003).

### **Accounting performance**

The third-largest category of measured outcomes is accounting performance (9%), and the dominate subcategory is profit (6%). The interest in

assessing profit is understandable because many salespeople have autonomy to set prices and face strong pressure to fulfill their sales quotas. In other words, profit can be harmed by salespeople who use discounts to increase sales revenue and fulfill their sales quotas. The second largest subcategory, cost, is assessed by only 2% of the measures. This relatively low interest in assessing cost stands in contrast to the high costs related to personal selling (Heide 1999).

### **Internal contributions**

The fourth-largest category of measured outcomes is internal contributions, assessed by 6% of the measures. The category includes four subcategories: salespeople's contributions to management, strategy, and marketing (1%); contributions to sales management (3%); contributions to the sales team and other salespeople (0.3%); and contributions to operations and non-sales colleagues (1%).

The low interest in assessing salespeople's contributions disregards the sales literature's emphasis on such contributions from salespeople. First, regarding contributions to management, strategy, marketing, and sales management, salespeople are primary sources of knowledge about customers and competitors (Speier and Venkatesh 2002). Salespeople are in the best position to anticipate changes in customer needs (Flint et al. 2002), and disseminating such market knowledge throughout the organization is vital for adapting marketing strategies to the environment (Kohli and Jaworski 1990).

Second, regarding contributions to the sales team, other salespeople, operations, and non-sales colleagues, a salesperson's ability to relate to colleagues, socialize, and build an internal network are all predictors of sales success (Guenzi and Panzeri 2015). Prosocial organizational behavior is vital for

salespeople (Borman and Motowidlo 1997) and has been shown to contribute to improving business performance (MacKenzie, Podsakoff, and Fetter 1993). Further, contributing to other employees may lead those employees to provide services in return, and salespeople need contributions from a diverse set of organizational members to create competitive value propositions for customers (Steward, Walker, Hutt, and Kumar 2010).

### **Sales behavior**

Sales behavior is the fifth-largest category of measured outcomes and is assessed by 5% of the measures. One could question why researchers use measures of sales behavior to assess outcomes from selling as researchers typically distinguish between behavior and outcomes in selling and often view behavior as an antecedent to these outcomes (e.g., Anderson and Oliver 1987; Cravens, Ingram, LaForge, and Young 1993). Viewing sales behavior as different from outcomes from selling is likely one of the major causes for the relatively low frequency with which sales behavior is used to assess outcomes in the reviewed studies. However, as shown in the appendix, the sales behavior category includes measures of important sales behavior, such as sales calls, work attitude, skills, job activity, planning, and adaptive selling styles. The importance of such sales behavior is probably one reason researchers use measures of sales behavior to assess outcomes from selling.

### **Overall sales performance**

The third-smallest category of measured outcomes (4%) is overall sales performance, which includes the following outcomes: overall sales performance, overall effectiveness, overall productivity, overall results, overall goal achievement, and effectiveness. Using one measure as an overall

assessment of the outcomes from selling may simplify the assessment of this complicated and multifaced construct. However, rating such an overall measure may be difficult for respondents as it requires at least three cognitive steps: (1) to know all the outcomes that are desired from B2B selling, (2) to be able to evaluate each type of outcome, and (3) to merge all the evaluations of the outcomes into one overall rating of the outcomes.

### **Customer behavior**

The second-smallest category of measured outcomes is customer behavior (3%), which includes the following subcategories: new customers acquired, actual loyalty, and word of mouth. The low interest in assessing new customers acquired (1%) stands in contrast to the fact that approximately 20% of a salesperson's time is spent selecting prospects (Trailer 2006) and that selecting prospects is the most cumbersome part of the selling process (Moncrief and Marshall 2005). Ineffective decisions regarding customer acquisition can cause lost time in pursuing bad prospects (D'Haen and Van den Poel 2013) and can decrease firms' overall value over time (Hansotia and Wang 1997).

Only 1.5% of the measures assess the subcategory actual customer loyalty. This low interest in assessing *actual* customer loyalty involves the same worries as the low interest in assessing *intentional* customer loyalty with implications similar to those discussed for intentional loyalty in the customer mindset category of outcomes. The subcategory word of mouth is only assessed by 0.3% of the measures despite its importance for attracting new prospects.

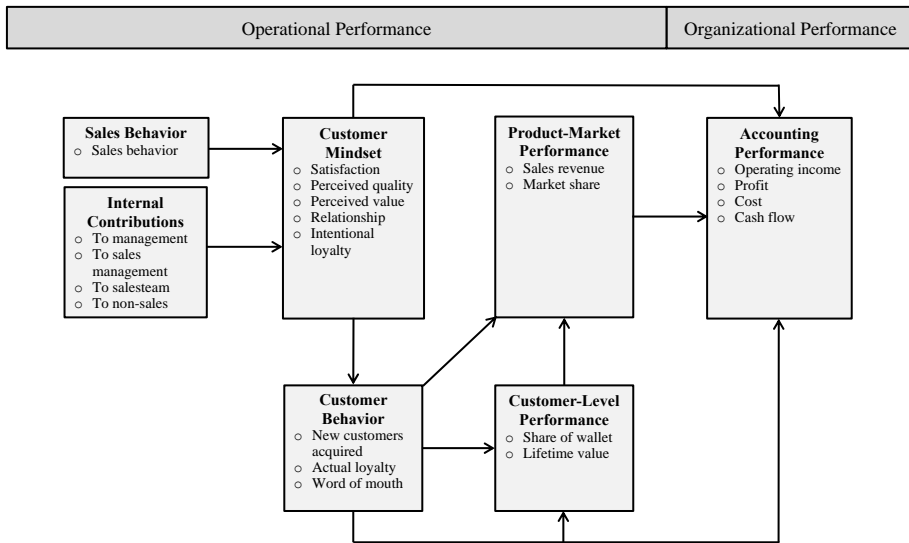
## **Customer-level performance**

The smallest category of measured outcomes is customer-level performance, assessed by only 1% of the measures. This category contains the subcategories share of customer wallet and customers' lifetime value. The low interest in measuring such outcomes disregards the importance of these outcomes. First, share of customer wallet refers to the share of customers' purchases in a specific category from a specific supplier and is the ultimate measure of customer loyalty (Jones and Sasser 1995). Second, assessments of customers' lifetime value are essential for facilitating better resource allocation toward specific customers (Reinartz and Kumar 2000) and for increasing sales productivity (Jones, Brown, Zoltners, and Weitz 2005).

## **4.4. The B2B Sales Performance Outcomes Chain**

The reviewed studies provide a large number of various measured outcomes that in turn provide multiple categories and subcategories of outcomes from B2B selling, as shown in Table 2. The relationships between categories of outcomes from marketing (Katsikeas et al. 2016) were used to organize the categories of outcomes from the present review. This organizing led to the value chain model—the B2B Sales Performance Outcomes Chain—as shown in Figure 2. The chain covers multiple types of important outcomes from B2B selling and thus serves as a complete theoretical framework conceptualizing the outcomes desired from B2B selling. Further, the chain suggests how categories/types of outcomes are related to and influence each other.





**Fig. 2.** The B2B Sales Performance Outcomes Chain.

Overall outcomes do not fit into a value-chain framework of outcomes, thus the category overall sales performance, as shown in Table 2, was not included in the B2B Sales Performance Outcomes Chain. Excluding this category provided a value chain framework with seven main types/categories and 21 subtypes/subcategories of outcomes classified in line with operational and organizational performance. The two new categories of outcomes arising from the reviewed studies—sales behavior and internal contributions—were placed at the start of the value chain as sales behavior and internal contributions influence customer mindset.

The bottom-up approach in this study provides a finer-grained understanding of the outcomes from B2B selling by showing the specific categories and subcategories of these outcomes. This finer-grained outline of the outcomes contributes to an increased understanding of how salespeople contribute to operational and organizational performance. Further, this

theoretical re-aggregation provides new and valuable explanations for the relationships between the categories of outcomes, particularly the categories under operational performance. Namely, the chain shows (1) how sales behavior and salespeople's internal contributions influence customer mindset; (2) how customer mindset influences accounting performance and customer behavior; (3) how customer behavior influences product-market performance, customer-level performance, and accounting performance; (4) how customer-level performance influences product-market performance; and (5) how product-market performance influences accounting performance.

These multiple types of outcomes reveal the need for using subjective and objective measures to assess the outcomes. Sales behavior, internal contributions, and customer mindset can be assessed using subjective measures collected from respondents. Product-market performance and accounting performance can be assessed using objective measures from company records. Customer behavior and customer-level performance can be assessed using both subjective and objective measures.

## 5. Conclusions and implications

The objective of this study was to conceptualize the outcomes desired from B2B selling. Through a systematic search for studies that measure outcomes from B2B selling, 139 studies were collected and reviewed. Then, the measures used to assess these outcomes were extracted and organized in an evaluative framework made for marketing outcomes.

The review shows that researchers use a large number of 151 various measures to assess the outcomes. This wide variety of measured outcomes demonstrates the lack of consensus and conceptualization of the outcomes desired from B2B selling. This lack of conceptualization may cause researchers and managers to select and focus on insufficient outcomes, which may in turn harm research quality and effective sales management.

The evaluation of the measured outcomes demonstrates the timely need for conceptualizing these outcomes, particularly for researchers. This need is shown by the many studies that fail to measure many of the outcomes the literature suggests are desired from B2B selling. For example, less frequently measured outcomes among the reviewed studies include profit, market share, customer relationship, perceived offer value, customer satisfaction, and internal contributions. Further, only a few studies measure, for example, cost, customer loyalty, new customers acquired, share of customer wallet, word of mouth, and customers' lifetime value. Failing to measure many of these desired outcomes may provide insufficient assessments that are weakly grounded in theory on the nature of B2B selling. In turn, insufficient assessments may represent a shortcoming in research models that cause limited explanations that weaken theory testing, conclusions, and knowledge building.

To help researchers and managers select and focus on appropriate outcomes, the present study contributes the first complete theoretical framework conceptualizing the outcomes desired from B2B selling—B2B Sales Performance Outcomes Chain. The chain includes seven main types/categories and 21 subtypes/subcategories of outcomes and shows how the outcomes are related to and influence each other. This conceptualizing represents a vital step for refining these outcomes and thus improving future research and management practice.

### **5.1. Implications for researchers**

Researchers should acknowledge the implications of the large variety of different outcomes measured in the reviewed studies. First, this wide variety of measured outcomes demonstrates the cloudiness among researchers regarding which outcomes to measure. This cloudiness creates a risk that researchers will use insufficient outcomes in their research. Thus, researchers should be aware of this risk and recognize that using insufficient outcomes may create research that is weakly grounded in theory, which may in turn lead to weak theory testing and conclusions. Researchers investigating B2B selling should particularly be careful to avoid using insufficient outcomes because of the multiple types of outcomes desired from B2B selling. In other words, these researchers should be careful to avoid creating research models that conflict with the nature of B2B selling. Second, researchers should acknowledge that this wide variety of measured outcomes may be partly caused by the lack of conceptualization regarding which outcomes are desired from B2B selling. This lack of conceptualization of such a vital construct represents a major problem in research that is resolved in the present study.

The present evaluation of the measured outcomes in the reviewed studies provides three implications for researchers. First, researchers should recognize the multiple types of desired outcomes that are not measured in a large portion of the reviewed studies. This widespread practice disregards the multiple types of outcomes desired from B2B selling and indicates that researchers should reevaluate the outcomes they use in their research. Second, the numerous desired outcomes that are overlooked in many of the reviewed studies should remind researchers to measure such outcomes and strive to adopt the measured outcomes to the literature and practice of B2B selling. Third, researchers should apply the broad range of theories used in the present evaluation to select outcomes based on theoretical considerations.

Further, researchers should use the B2B Sales Performance Outcomes Chain to reevaluate and select the outcomes they use in their research. The chain provides a complete presentation of the multiple types of outcomes desired from B2B selling. Researchers should thoroughly evaluate the importance of every type of outcome and clearly explain their rationale for choosing a particular set of outcomes. For an in-depth understanding of each type of outcome, researchers should study the measures used in the reviewed studies to assess each type of outcome, as shown in the appendix. Last, researchers can use the chain to develop hypotheses based on the relationships between the different types of outcomes outlined in the chain.

## **5.2. Implications for managers**

Sales managers are obligated to manage sales performance outcomes. The importance of managing these outcomes is heightened due to the high revenue and high costs involved in selling. Managers who target and monitor a

narrow and insufficient set of outcomes may consequently implement inadequate sales efforts and may face problems generating all the outcomes desired from B2B selling. Thus, selecting appropriate and sufficient outcomes to target and monitor is vital for managing a salesforce's excellence and effectiveness.

The B2B Sales Performance Outcomes Chain can be employed as a holistic management tool for selecting outcomes to target, monitor, and manage. The chain provides an overview and conceptualization of the desired outcomes from B2B selling and includes 21 types of desired outcomes. The multiple outcomes included in the chain should highlight the need for managers to target a broader range of outcomes when developing sales strategies and selecting areas for improvements. Managers should evaluate each type of outcome included in the chain in relation to their firms' sales strategy and outcomes essential for sales success in their industry and markets. Managers should then prioritize and target the most valuable outcomes for their firms.

The B2B Sales Performance Outcomes Chain is also a valuable tool for educating and training salespeople on the multiple types of outcomes they are required to produce. Further, the chain provides salespeople with vital insights into how various outcomes are generated and influence each other. Salespeople should also be monitored and evaluated on the same outcomes they are trained to produce to avoid insufficient focus and efforts from the salesforce. For example, if only sales revenue is monitored, salespeople would likely strive to generate sales revenue and may put forth less efforts to generate other outcomes (e.g., customer satisfaction and customer relationship). Consequently, narrow training and outcome monitoring could have severe consequences for any firm selling in a competitive B2B market. The

B2B Sales Performance Outcomes Chain is a vital management tool for avoiding such narrow focus and negative consequences.

An essential task for any sales manager is to detect low-performance efforts and outcomes that need to be improved. Thus, managers should be aware of the consequences of the widespread practice among the reviewed studies of measuring insufficient outcomes. If managers practice such insufficient measuring and monitoring, they may gather insufficient information that overlooks efforts and outcomes that need to be improved. Overlooking low performance on important outcomes threatens holistic and effective sales management and can be avoided by using the B2B Sales Performance Outcomes Chain.

### **5.3. Limitations and future research**

The present study investigates the outcomes measured in research on B2B selling. An investigation of the outcomes measured in research on B2C selling or among practitioners in B2B selling would likely provide valuable extensions of the present findings.

The present review evidences the lack of consensus regarding which outcomes are appropriate to measure in research on B2B selling. To resolve this lack of consensus, the present study contributes by conceptualizing the outcomes desired from B2B selling with the B2B Sales Performance Outcomes Chain. Future research should test the validity of this conceptualization in various types of B2B selling, industries, and market conditions.

A valuable direction for future research is to investigate the outcomes that practitioners desire and measure in today's B2B selling. The outcomes that practitioners target and measure should be compared to the outcomes that

researchers measure, as revealed in the present review. The goal of such an investigation should be to align the outcomes measured in research with the outcomes desired in the practical world of B2B selling. Such alignment would contribute to improving the managerial relevance of and trust in sales research.

Moreover, further research should investigate how practitioners in B2B selling value the importance of each type of outcomes included in the B2B Sales Performance Outcomes Chain. Such an investigation would help clarify the most important outcomes to use in research as well as improve the managerial applicability of future sales research.



## Appendix

The frequency of use of B2B sales performance outcomes measures.

Categories, subcategories, and measures	Total n = 139
<b>Sales Behavior</b>	<b>5.3</b>
<i>Sales behavior</i>	5.3
Objective sales calls	0.1
Sales calls	0.1
Overall work attitude	0.1
Selling expertise, skills, roles, and responsibilities	0.4
Professional growth	0.1
Attaining sales/job activity standards/quantity of work	0.7
Planning each sales call	0.4
Planning coverage of territory/customers	0.3
Planning daily activities	0.3
Planning sales strategies for each customer	0.4
Flexible sales approaches	0.5
Experimenting with different sales approaches	0.3
Adapting sales approaches/styles to customers	0.5
Adapting sales approaches/styles to situations	0.3
Using established contacts to develop new accounts	0.7
Effective use of audiovisual aids	0.1
<b>Internal Contributions</b>	<b>5.5</b>
<i>Contributions to management, strategy, marketing</i>	1.1
Top management's satisfaction with salesperson/team	0.1
Feedback to management	0.4
Discussing sales strategies with various departments	0.3
Identify new product/service ideas	0.3
<i>Contributions to sales management</i>	3.1
Assisting supervisor achieving his/her goals	1.3
Meeting supervisor's expectations	0.1
Selling team's ability to run itself	0.1
Paperwork kept accurate and complete	0.7
Records kept accurate, complete, up-to-date	0.4
Submitting required reports on time	0.4
<i>Contributions to sales team &amp; other salespeople</i>	0.3
Generating sales volume from team sales	0.1
Helping other salespeople	0.1
<i>Contributions to operations &amp; non-sales</i>	1.1
Recommend operation and procedure improvements	0.3
Relationships in own company for serving customers/close sales	0.3
Coordinating the handling of post-sales problems with other employees	0.1
Work closely/discuss selling strategies/close sales - with non-sales	0.4
<b>Customer Mindset</b>	<b>29.3</b>
<i>Satisfaction</i>	3.3
Customer's satisfaction	2.3
Customer's satisfaction/relationship with salesperson	0.1
Pleasant/enjoyable collaboration	0.4
Customer's positive opinion	0.1
Customer depends on seller/- keep his/her promises.	0.4
<i>Perceived quality</i>	16.9
Understand customer's business/goals	0.4
Understand customer's needs/real concerns, customer orientation	2.3
Convincing customers that problems/concerns are understood	1.2
Information sharing with customers	0.1
Collect customer info accurately	0.1
Information, accurate/important, are given to customers	1.1
Information, accurate, given to customers & people in own company	0.1
Customer's questions are answered correctly	0.1
Sales presentations - clearly/concisely/effective	1.1
Customers are evaluating our product	0.1
Customers include our product in their consideration set	0.3
Customer-need-responsive	0.5
Make solutions to requirements/problems/questions/objections	2.1

## Appendix

Continued

Categories, subcategories, and measures	Total n = 139
Products and services are very good compared to competitors	0.1
Customer's needs for additional products are exploited	0.1
Customer's needs for additional products are covered	0.1
Knowing the company's products/services	0.8
Knowing designs and specifications	0.8
Knowing applications and functions	1.1
Knowing products/competitors/customer needs	0.5
Abreast of the company's new services and successfully offering them	0.3
Abreast of the industry's production and technology	0.4
Keeping up with the company's production/technology	0.1
Service	0.1
Service after-the-sales	0.1
Checking on delivery	0.1
Follow up on product use/experience	0.4
Checking customer's satisfaction	0.1
Troubleshooting post-sales/product application problems	0.4
Handle customer's complaints	0.1
Detect causes of operating failure of products	0.3
Salesperson is easy accessible	0.5
Individual attention to customers	0.1
Technical assistance	0.1
Advocate for customers within the salesperson's company	0.4
<i>Perceived value</i>	<i>3.6</i>
Customer value, quality/price ratio	1.1
Build customers' business, help customers achieve goals/results	1.1
Improve customers' profitability/efficiency	0.3
Be an important supplier for customers	0.1
Mutual profitability	0.4
Reputation of being fair	0.1
Customers willingness to pay a price premium	0.3
Absolute price levels	0.1
Pricing power in the market	0.1
<i>Relationship</i>	<i>4.8</i>
Customer relationship; long term, effective	1.7
Customer relationship; efforts/investments	0.4
Customer relationship; maintaining/improving	0.5
Committed relationship	0.3
Salesperson are trustworthy	0.3
Mutual trust	0.1
Conflict reduction	0.1
Salesperson is genuinely concerned	0.3
Have customers best interest in mind	0.4
Regret cooperatin (inv) with the salesperson	0.3
Mutual - take no power advantage	0.1
Mutual willingness to cooperate	0.1
Mutual willingness to owing favors	0.1
<i>Intentional customer loyalty</i>	<i>0.7</i>
Intentional loyalty/retention/repurchase	0.7
<b>Customer Behavior</b>	<b>2.9</b>
<i>New customers acquired</i>	<i>1.2</i>
Sales leads generated	0.1
New customers attracted	0.9
Major accounts - identified/cultivated	0.1
<i>Actual customer loyalty</i>	<i>1.5</i>
Actual loyalty/retention/repurchase	1.3
Retain current customers while increasing new customers	0.1
<i>Word of mouth</i>	<i>0.3</i>
Recommending likelihood	0.3

**Appendix**

Continued

Categories, subcategories, and measures	Total n = 139
<b>Customer-Level Performance</b>	<b>1.1</b>
<i>Share of wallet</i>	0.9
Share of customers' wallet	0.5
Customers buy the most additional products they require from us	0.1
Customers buy the most additional products we offer	0.3
<i>Lifetime value</i>	0.1
Gaining additional sales opportunities	0.1
<b>Product-Market Performance</b>	<b>42.7</b>
<i>Sales revenue</i>	37.2
Objective sales revenue/volume	1.6
Objective sales numbers of products/units/orders/contract	0.4
Objective win/lose sales opportunities	0.3
Objective sales vs. Quota/objectives	1.7
Objective sales growth	0.7
Objective sales proportion of a specific brand	0.1
Sales revenue in dollars/euro	8.1
Sales in orders	0.4
Quickly generating sales	0.5
Closing ratio, win/lose sale	0.8
Sales vs. quota/objectives	6.9
Sales growth	1.3
Sales vs. growth objectives	0.1
Sales in territory	0.3
Sales to major customers/accounts	3.5
Sales to current customers	0.5
Sales to new customers	0.3
Sales of new company products (line)	3.6
Sales of high profit-margin products	4.0
Sales of (profitable) long-term contracts	1.1
Sales per customer in average	0.3
Cross-selling	0.7
<i>Market share</i>	5.6
Market share (-growth)	5.6
<b>Accounting Performance</b>	<b>8.9</b>
<i>Operating income</i>	0.1
Operating income	0.1
<i>Profit</i>	6.3
Objective profit margin	0.3
Objective return on sales	0.1
Objective number of contacts per purchase	0.1
Objective earnings before interest & taxes/EBIT	0.1
ROI/efficiency	1.1
ROS/output vs input	0.4
Financial performance	0.1
Profit/margins/contributions	3.3
Profit growth	0.7
<i>Cost</i>	2.3
Cost/expenses/investments/recourses used	1.2
Operating within the budgets	0.1
Gifts/promotional allowances are used responsibly	0.3
Travel- and lodging money are spent carefully	0.1
Entertaining only when its in the company's best interest	0.1
Controlling cost in other areas in the company	0.1
Commissions paid/earned	0.3
<i>Cash Flow</i>	0.3
Cashflow from operations	0.3
<b>Overall Sales Performance</b>	<b>4.3</b>
Overall sales performance/effectiveness/result/goal achievements	3.1
Effectiveness regarding time/presentations/teamwork/plans/cost	1.2

Notes: Values are percentages.

Items named "Objective..." are objective measures. All other items are subjective measures.

## References

- Anderson, E., & Oliver, R. L. (1987). Perspectives on Behavior-Based Versus Outcome-Based Salesforce Control Systems. *Journal of Marketing*, 51(4), 76-88.
- Anderson, E. W. Fornell, C., & Lehmann, D. R. (1994). Customer Satisfaction, Market Share, and Profitability. *Journal of Marketing*, 58(3), 53-66.
- Asare, A. K., Yang, J., & Brashear Alejandro, T. G. (2012). The State of Research Methods in Personal Selling and Sales Management Literature. *Journal of Personal Selling & Sales Management*, 32(4), 473-489.
- Behrman, D. N., & Perreault, W. D. Jr. (1982). Measuring the Performance of Industrial Salespeople. *Journal of Business Research*, 10(September), 355-369.
- Blocker, C. P., Cannon, J. P., Panagopoulos, N. G., & Sager, J. K. (2012). The Role of the Sales Force in Value Creation and Appropriation: New Directions for Research. *Journal of Personal Selling & Sales Management*, 32(1), 15-27.
- Blocker, C. P., Flint, D. J., Myers, M. B., & Slater, S. F. (2011). Proactive Customer Orientation and its Role for Creating Customer Value in Global Markets. *Journal of The Academy of Marketing Science*, 39(2), 216-233.
- Bolton, R. N., Lemon, K. N., & Verhoef, P. C. (2008). Expanding Business-to-Business Customer Relationships: Modeling the Customer's Upgrade Decision. *Journal of Marketing*, 72(1), 46-64.
- Boot, A., Sutton, A., & Papaioannou, D. (2016). *Systematic Approaches to a Successful Literature Review*. London: SAGE Publications.
- Borman, W. C., & Motowidlo, S. J. (1997). Task Performance and Contextual Performance: The Meaning of Personnel Selection Research. *Human Performance*, 10(2), 99-109.
- Churchill, G. A., Ford, N. M., Hartley, S. W., & Walker, O. C. Jr. (1985). The Drivers of Salesperson Performance: A Meta-Analysis. *Journal of Marketing Research*, 22(2), 103-118.
- Cravens, D. W. (1995). The Changing Role of the Sales Force. *Marketing Management*, 4(2), 49-54.

- Cravens, D. W., Ingram, T. N., LaForge, R. W., & Young, C. E. (1993). Behavior-Based and Outcome-Based Salesforce Control Systems. *Journal of Marketing*, 57(4), 47-59.
- Cuevas, J. M. (2018). The Transformation of Professional Selling: Implications for Leading the Modern Sales Organization. *Industrial Marketing Management*, 69(February), 198-208.
- Dawes, P. L., Lee, D. Y., & Dowling, G. R. (1998). Information Control and Influence in Emergent Buying Centers. *Journal of Marketing*, 62(3), 55-68.
- D'Haen, J., & Van den Poel, D. (2013). Model-Supported Business-to-Business Prospect Prediction Based on an Iterative Customer Acquisition Framework. *Industrial Marketing Management*, 42(4), 544-551.
- Farris, P. W., Bendle, N. T., Pfeifer, P. E., & Reibstein, D. J. (2006). *Marketing Metrics: 50+ Metrics Every Executive Should Master*. Upper Saddle River, NJ: Pearson Education.
- Flint, D. J., Woodruff, R. B., & Gardial, S. F. (2002). Exploring the Phenomenon of Customers' Desired Value Change in a Business-to-Business Context. *Journal of Marketing*, 66(4), 102-117.
- Fornell, C. (1992). A National Customer Satisfaction Barometer: The Swedish Experience. *Journal of Marketing*, 56(1), 6-21.
- Guenzi, P., & Panzeri, F. (2015). How Salespeople see Organizational Citizenship Behaviors: An Exploratory Study Using the Laddering Technique. *Journal of Business & Industrial Marketing*, 30(2), 218-232.
- Hamann, M. P., Schiemann, F., Bellora, L., & Guenther, T. W. (2013). Exploring the Dimensions of Organizational Performance: A Construct Validity Study. *Organizational Research Methods*, 16(1), 67-87.
- Hansotia, B. J., & Wang, P. (1997). Analytical Challenges in Customer Acquisition. *Journal of Interactive Marketing*, 11(2), 7-19.
- Heide, C. P. (1999). *Dartnell's 30th Sales Force Compensation Survey*. Chicago: Dartnell Corporation.
- Ittner, C. D., & Larcker D. F. (2003). Coming up Short on no Financial Performance Measurement. *Harvard Business Review*, 81(11), 88-95.
- Johnson, J. T., Barksdale Jr., H. C., & Boles, J. S. (2001). The Strategic Role of the Salesperson in Reducing Customer Defection in Business Relationships. *Journal of Personal Selling & Sales Management*, 21(2), 123-134.

- Jones, E., Brown, S. P., Zoltners, A. A., & Weitz, B. A. (2005). The Changing Environment of Selling and Sales Management. *Journal of Personal Selling & Sales Management*, 25(2), 105-111.
- Jones, T. O., & Sasser, W. E. Jr. (1995). Why Satisfied Customers Defect. *Harvard Business Review*, 73(6), 88-99.
- Katsikeas, C. S., Morgan, N. A., Leonidou, L. C., & Hult, G. T. M. (2016). Assessing Performance Outcomes in Marketing. *Journal of Marketing*, 80(2), 1-20.
- Kohli, A. K., & Jaworski, B. J. (1990). Marketing Orientation: The Construct, Research Propositions, and Managerial Implications. *Journal of Marketing*, 54(2), 1-19.
- Lam, S. Y, Shankar, V., Erramilli, M. K., & Murthy, B. (2004). Customer Value, Satisfaction, Loyalty and Switching Cost: An Illustration from Business-to-Business Service Context. *Journal of the Academy of Marketing Science*, 32(3), 293-311.
- Lipsey, M. W., & Wilson, D. B. (2001). *Practical Meta-Analysis*. Thousand Oaks, CA: SAGE Publications.
- MacKenzie, S. B., Podsakoff, P. M., & Fetter, R. (1993). The Impact of Organizational Citizenship Behavior on Evaluations of Salesperson Performance. *Journal of Marketing*, 57(1), 70-80.
- Mantrala, M. K., Alberts, S., Gopalakrishna, S., & Joseph, K. (2008). Introduction: Special Issue on Enhancing Sales Force Productivity. *Journal of Personal Selling & Sales Management*, 18(2), 109-113.
- March, J. G., & Sutton, R. I. (1997). Organizational Performance as a Dependent Variable. *Organization Science*, 8(6), 698-706.
- Marshall, G. W., Moncrief, W. C., & Lassk, F. G. (1999). The Current State of Sales Force Activities. *Industrial Marketing Management*, 28(1), 87-98.
- Mizik, N., & Jacobsen, R. (2003). Trading Off Between Value Creation and Value Appropriation: The Financial Implications of Shifts in Strategic Emphasis. *Journal of Marketing*, 67(1), 63-76.
- Moncrief, W. C., & Marshall, G. W. (2005). The Evolution of the Seven Steps of Selling. *Industrial Marketing Management*, 34(1), 13-22.
- Rauyruen, P., & Miller, K. E. (2007). Relationship Quality as a Predictor of B2B Customer Loyalty. *Journal of Business Research*, 60(1), 21-31,

- Reichheld, F. F. (1996). *The Loyalty Effect*. Boston, MA: Harvard Business School.
- Reinartz, W. J., & Kumar, V. (2000). On the Profitability of Long-Life Customers in a Noncontractual Setting: An Empirical Investigation and Implications for Marketing. *Journal of Marketing*, 64(4), 17-35.
- Rust, R. T., Zeithaml, V. A., & Lemon, K. N. (2000). *Driving Customer Equity: How Customer Lifetime Value is Reshaping Corporate Strategy*. New York: The Free Press.
- Sánchez, J. Á. L., Vijande, M. L. S., & Gutiérrez, J. A. T. (2011). The Effect of Manufacturer's Organizational Learning on Distributor Satisfaction and Loyalty in Industrial Markets. *Industrial Marketing Management*, 40(4), 624-635.
- Siguaw, J. A., Kimes, S. E., & Gassenheimer, J. B. (2003). B2B Sales Force Productivity: Applications of Revenue Management Strategies to Sales Management. *Industrial Marketing Management*, 32(7), 539-551.
- Speier, C., & Venkatesh, V. (2002). The Hidden Minefields in the Adoption of Sales Force Automation Technologies. *Journal of Marketing*, 66(3), 98-111.
- Steward, M. D., Walker, B. A., Hutt, M. D., & Kumar, A. (2010). The Coordination Strategies of High-Performing Salespeople: Internal Working Relationships That Drive Success. *Journal of the Academy of Marketing Science*, 38(5), 550-566.
- Trailer, B. (2006). Understanding What THE Sales Manager is up Against. *Harvard Business Review*, 84(7/8), 48-55.
- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing*, 68(1), 1-17.
- Verbeke, W., Dietz, B., & Verwaal, E. (2011). Drivers of Sales Performance: A Contemporary Meta-Analysis—Have Salespeople Become Knowledge Brokers? *Journal of the Academy of Marketing Science*, 39(3), 407-428.
- Verbeke, W., Frank, D. B., Bakker, A. B., & Dietz, B. (2008). When Intelligence is (Dys)Functional for Achieving Sales Performance. *Journal of Marketing*, 72(4), 44-57.
- Wang, G., Dou, W., & Zhou, N. (2012). The Interactive Effects of Sales Force Controls on Salespeople Behaviors and Customer Outcomes. *Journal of Personal Selling & Sales Management*, 32(2), 225-243.

- Weitz, B. A., & Bradford, K. D. (1999). Personal Selling and Sales Management: A Relationship Marketing Perspective. *Journal of the Academy of Marketing Science*, 27(2), 241-255.
- Williams, M., & Attaway, J. S. (1996). Exploring Salespersons' Customer Orientation as a Mediator of Organizational Culture's Influence of Buyer-Seller Relationships. *Journal of Personal Selling & Sales Management*, 16(4), 33-52.
- Zallocco, R., Pullins, E. B., & Mallin, M. L. (2009). A Re-Examination of B2B Sales Performance. *Journal of Business & Industrial Marketing*, 24(8), 598-610.
- Zoltners, A. A., Sinha, P., & Lorimer, S. E. (2008). Sales Force Effectiveness: A Framework for Researchers and Practitioners. *Journal of Personal Selling & Sales Management*, 27(2), 115-131.



## Paper 3:

# Methods to assess outcomes from B2B selling: A systematic review, cross-journal examination, and guidelines

Per Ivar Seljeseth<sup>1</sup> • Tor Korneliussen<sup>1</sup> • Michael Greenacre<sup>1,2</sup>

### Abstract

This study extends research on best practices of marketing survey methods to the domain of assessing sales performance outcomes. Despite the importance of sales performance outcomes, the literature provides little guidance on methods that can provide the most reliable and valid assessments of these outcomes. Further, sales research appears inconsistent as some of the methods sales researchers use are criticized in sales research for biasing the assessed outcomes. This study provides a systematic review and evaluation of three key yet inconsistent methodological issues vital to assessing sales performance outcomes in business-to-business (B2B) selling: how many measures to use, the use of objective and subjective measures, and what type of respondents to use. Further, we examine how these methods are published across journals. The review contains 139 studies published in 17 journals. Our analyses reveal a widespread usage of methods that are criticized in sales research. However, the highest-ranked marketing journals show best practices on the use of respondents and objective and subjective measures. Guidelines on methods and avenues for further research are suggested.

**Keywords** B2B selling • Sales performance outcomes • Assessment • Methods • Systematic review • Cluster analysis • Correspondence analysis

✉ P. I. Seljeseth, per.i.seljeseth@nord.no  
T. Korneliussen, tor.a.korneliussen@nord.no  
M. Greenacre, michael.greenacre@upf.edu

<sup>1</sup> Nord University Business School, Post box 1490, 8049 Bodø, Norway

<sup>2</sup> Universitat Pompeu Fabra, Barcelona GSE, Ramon Trias Fargas 25-27, Barcelona, 08005, Spain.

## Introduction

Sales performance outcomes reflect salespeople's achievements (Verbeke, Dietz, and Verwaal 2011) and are used as dependent variables in 18% of empirical sales studies (Asare, Yang, and Alejandro 2012). Thus, precise assessment of these outcomes is fundamental for determining factors that can improve selling (March and Sutton 1997). However, despite the importance of assessing these outcomes, the literature offers few guidelines on methods that can provide the most reliable and valid assessments of the outcomes.

This study contributes to developing such guidelines on three key methodological issues vital to assess outcomes from business-to-business (B2B) selling: how many measures to use, what types of measures to use, and what types of respondents to use. We chose to examine these particular issues due to their inconsistent treatment in sales research: namely, methods that are frequently used in sales research are simultaneously criticized in sales research for not providing the most reliable and valid assessments of sales performance outcomes. Assessments with weak reliability and validity can bias findings, conclusions, and recommendations (Katsikeas et al. 2016) and threaten knowledge building in research (Hult et al. 2008). The following paragraphs introduce these key methodological issues and explain their inconsistencies.

The number of measures used to assess the outcomes from selling are essential to the validity of the assessed outcomes. The validity of quantitative assessments is a primary issue for research quality (e.g., Seale 2009; McGivern 2013) and refers to the degree research designs, measures, and methods deliver accurate and unambiguous assessments and that research measures what it intends to measure (e.g., McGivern 2013). Construct validity is the most crucial form of validity for an abstract construct that cannot be directly

observed because of its multiple components (Ghauri and Grønhaug 2002; Groves et al. 2009). Outcomes from B2B selling is such an abstract construct including multiple types of outcomes, and construct validity refers to the extent measures reflect the various types of outcomes (Groves et al. 2009; Ghauri and Grønhaug 2002). However, meta-analyses reveal that sales researchers tend to be insensitive to the multiple types of outcomes from selling when assessing sales performance outcomes (Verbeke et al. 2011). In other words, researchers' measures disregard the multiple types of outcomes B2B salespeople should produce (Zallocco, Pullins, and Mallin 2009; Behrman and Perreault 1982; Cron et al. 2014). Thus, the number of measures used to assess the outcomes from B2B selling is essential to investigate.

The types of measures used to assess outcomes can be divided into objective and subjective measures. Objective measures are often collected from company records, and subjective measures are rated by respondents, such as salespeople, sales managers, and customers. Previous research reveals the different abilities subjective and objective measures have to assess various types of outcomes from selling reliably and validly. (Jaramillo, Carrillat, and Locander 2005; Rich et al. 1999).

While validity refers to which extent the measures can deliver accurate and unambiguous assessments (McGivern 2013), reliability refers to which extent measures are stable across repetitive assessments (Groves et al. 2009; Ghauri and Grønhaug 2002). The reliability of quantitative assessments can be threatened by systematic bias and random error associated with subjective measures (Ghauri and Grønhaug 2002). Subjective measures are necessary to assess "soft" outcomes, such as customer satisfaction, but appear to be poor indicators of "hard" economic outcomes, such as sales revenue, compared to company records (Jaramillo et al. 2005; Rich et al. 1999). Objective measures

are therefore highly recommended to assess economic outcomes (Dess and Robinson 1984). Consequently, the strong influence these types of measures have on the assessed outcomes' validity and reliability makes it essential to investigate the use of objective and subjective measures.

The types of respondents used to rate outcomes from selling are mainly salespeople, sales managers, and customers. Previous research reveals that these respondents have different abilities to reliably and validly assess various types of outcomes from selling. Salespeople and sales managers are the two most widely used respondents in sales research (Williams and Plouffe 2007). However, meta-analyses reveal salespeople and sales managers to rate sales performance outcomes differently (Jaramillo et al. 2005) and that salespeople and sales managers also rate the outcomes different from objective sales performance outcomes (Jaramillo et al. 2005; Rich et al. 1999). Further, when selecting respondents, researchers need to decide whether to use a single type or multiple types of respondents in the same study. A meta-analysis reveals that the use of a single type of respondent (i.e., salespeople) dominates in sales research (Asare et al. 2012) even though respondent biases can be eliminated or at least attenuated by using multiple types of respondents (Hulland, Baumgartner, and Smith 2018). Consequently, deciding what type(s) of respondents to use has a large impact on the reliability and validity of assessed outcomes and is thus an important subject to investigate.

The present study extends research by Hulland et al. (2018) on marketing survey research best practices and research on sales survey methods by Asare et al. (2012), Williams and Plouffe (2007), and Bush and Grant (1994). These previous studies examine similarities and differences in methods published in different journals but provide no complete and detailed examination of methods published in all the journals contributing studies to their reviews.

Such an examination would provide detailed insights into the methods published in each journal and thus which journals are publishing methods recommended in the literature. Further, such a detailed examination would provide insights into, for example, the degree to which highly ranked journals publish methods that are recommended in research. Furthermore, a detailed examination would show if journals dedicated to sales and B2B marketing publish methods that account for the specific methodological issues related to assessing outcomes from B2B selling. Thus, such detailed insights would provide valuable contributions and thus represent a gap in sales research.

The inconsistencies in and lack of guidance on these three key methodological issues may cause researchers to use methods providing assessments of outcomes from selling with weak reliability and validity, which in turn threatens theory testing and knowledge building in sales research. To help improve such assessments, research quality, and knowledge building, we address two research questions: how appropriate are the methods researchers use to assess B2B sales performance outcomes, and are there differences in methods published in different journals? The appropriateness of the methods is evaluated in terms of their abilities to provide reliable and valid assessments of the outcomes.

We answer the first research question with a systematic review conducted in accordance with the guidelines in Palmatier, Houston, and Hulland's (2018) *Journal of the Academy of Marketing Science* article and the guidelines recommended by Littell, Corcoran, and Pillai (2008). Based on the research questions and scope of the review, we conducted a systematic search of studies that measure B2B sales performance outcomes and fulfilled the reviews' inclusion criteria. This search identified 139 studies published in 17 journals. Then, we extracted information about the three key methodological

issues and recorded this information in an evaluative framework. Further, we analyzed and evaluated the methods used to assess the outcomes in relation to the theoretical considerations presented in the next section of this paper. Last, we discuss the results and implications for researchers, managers, and future research. The present study focuses solely on these three key methodological issues, which provides a more in-depth and detailed examination and evaluation of these key issues than previous studies.

We answer the second research question on the differences in methods published in different journals by conducting a cluster analysis and correspondence analysis between the journals and the three key methodological issues. Thus, this study also contributes by being the first to provide a complete and detailed outline of the methods published in each journal that publishes sales research. The present examination highlights methods published in the highest ranked journals, most of which are ABS-4 journals. This examination shows to the degree to which the highest ranked marketing journals publish methods recommended in the literature, and if certain journals contribute with best practices of methods to assess B2B sales performance outcomes. Further, the examination highlights methods published in journals dedicated to research on sales and B2B marketing by analyzing the degree to which studies published in these journals account for the particular methodological concerns of assessing outcomes from B2B selling.

The answers to both research questions contribute with extensive insights into methods to assess B2B sales performance outcomes. These insights provide grounding for our suggested guidelines on methods for the most reliable and valid assessments of outcomes from B2B selling.

The next section outlines theoretical considerations regarding the three key methodological issues followed by a presentation of the methods used in

the present study. Then, the results are outlined and discussed followed by conclusions. Finally, implications for researchers and managers, including guidelines for assessing B2B sales performance outcomes, and suggestions for further research are drawn.

## Theoretical considerations on assessment methods

This section provides theoretical considerations regarding how many measures to use, what types of measures to use, and what types of respondents to use to assess B2B sales performance outcomes.

### Number of measures

In empirical research, a construct can be assessed by a single measure or by multiple measures. Single measures may be valid to assess concrete concepts (Rossiter 2002), such as sales revenue, but may be insufficient for valid assessments of more abstract and complex constructs (Martinez-Martin 2010).

Outcomes from B2B selling is such an abstract and complex construct because B2B salespeople are required to produce multiple types of outcomes (Cuevas 2018), for example, sales revenue, customer value (Töytäri and Rajala 2015), customer acquisition (e.g., D’Haen and Van den Poel 2013), customer satisfaction (Wang, Hoegg and Dahl 2018), buyer-seller relationships (Mullins et al. 2014), customer loyalty (Weitz and Bradford 1999), and market share (Farris et al. 2006). Two empirical studies confirm the need for a large number of measures to assess outcomes from B2B selling. Salespeople and sales managers in B2B selling, interviewed by Behrman and Perreault (1982) and Zallocco et al. (2009) suggested a relatively high number of measures—19 and 31, respectively—necessary to assess outcomes from B2B selling. Consequently, the abstract nature of the outcomes from B2B selling with its multiple types of outcomes, requires the use of multiple measures to ensure construct validity (Groves et al. 2009; Ghauri and Grønhaug 2002



## Types of measures

As mentioned earlier, sales performance outcomes can be assessed with both subjective and objective measures. Subjective measures are ratings from respondents, such as salespeople, sales managers, and customers, and are necessary to assess soft outcomes, such as offer value, offer quality, customer satisfaction, and customer relationships. Objective measures are mainly numbers extracted from company records of hard economic outcomes, such as sales revenue, quota compliance, and profits (Churchill et al. 1985).

Very few attempts have been made to explain whether subjective or objective measures are preferable to assess sales performance outcomes. The implicit assumption appears to be that subjective and objective measures of sales performance outcomes are strongly correlated and interchangeable (Rich et al. 1999). However, two meta-analyses reveal that subjective and objective measures assess sales performance outcomes quite differently and, thus, that subjective measures can be poor indicators of objective sales performance outcomes. Rich et al. (1999) find a shared variance of only 20% between subjective and objective measures of sales performance outcomes, and Jaramillo et al. (2005) find a shared variance of only 11.6% between subjective measures rated by salespeople and objective measures and a shared variance of only 19.4% between subjective measures rated by managers and objective measures. These two meta-analyses demonstrate that objective measures provide more reliable and valid assessments of hard economic outcomes compared to subjective measures. Objective measures are, therefore, preferable to assess economic outcomes when available (Dess and Robinson 1984).

Combining subjective and objective measures to assess sales performance outcomes is highly recommended because of their complementary benefits (Bagozzi, Verbeke, and Gavino 2003). The strengths and limitations of subjective and objective measures are mainly contrary to each other. As noted, objective measures provide the most reliable and valid assessments of hard economic outcomes but are unable to assess many types of soft outcomes, which subjective measures are able to assess. However, even though combining subjective and objective measures is theoretically robust and methodologically defensible, it is seldom done in sales research (Bagozzi et al. 2003).

## **Types of respondents**

The choice of respondents involves two decisions. First, researchers must choose whether to use a single type or multiple types of respondents in the same study, and second, they must choose the most appropriate type(s) of respondents for their work. Researchers should select respondents who are capable of providing the most reliable and valid assessments for their particular research questions (Hulland et al. 2018). The following paragraphs outline theoretical considerations on the use of a single type and multiple types of respondents in the same study and the three main types of respondents used in sales research (salespeople, sales managers, and customers).

### **Single type or multiple types of respondents**

Measures from a single type of respondent at a specific point in time can be prone to common method bias (Jap and Anderson 2004), thus combining ratings from multiple types of respondents is recommended to attenuate

respondent biases (Hulland et al. 2018). Further, using three types of respondents in one study, such as salespeople, sales managers, and customers, may help overcome common method bias (Schmitz, Lee, and Lilien 2014).

Salespeople, sales managers, and customers have different positions and knowledge to assess various types of sales performance outcomes. For example, when assessing buyer-seller relationships, using two types of respondents, such as salespeople and customers, is recommended to ensure a richer assessment (Hughes, Le Bon, and Rapp 2013; Hulland et al. 2018).

### **Salespeople's self-ratings**

Salespeople's self-ratings involve salespeople assessing their own individual sales performance outcomes. Indeed, salespeople have the best insights into their own efforts as well as into their cooperation internally with coworkers and externally with customers, thus making them particularly suitable for assessing outcomes from their sales behavior. As a result, they are by far the most widely used respondents in sales research (Williams and Plouffe 2007).

However, the widespread use of salespeople's self-ratings' stands in contrast to the problems of such ratings related to response biases and compromised validity. Self-ratings rely on individual thoughts and feelings about one's own personal attributes and may be biased from various perceptions of individual selves (Shore, Shore, and Thornton 1992). Also, respondents may provide answers that make them look good or may even lie in surveys (Paulhus 2002; Tourangeau and Yan 2007). Such socially desirable responding (Steenkamp, de Jong, and Baumgartner 2010) is "one of the most pervasive response biases" in surveys (Mick 1996, p. 106), and it compromises the validity of survey data in marketing research (Steenkamp et al. 2010). Thus,

such overreporting from self-ratings could appear as a systematic bias. Further, as presented earlier, salespeople may assess economic outcomes quite different from assessments derived from company records (Jaramillo et al. 2005). Consequently, researchers should avoid using salespeople's self-ratings of measures that have equivalent objective measures in company records when possible.

### **Sales managers' ratings**

Sales managers are the second-most-used respondents in sales research (Williams and Plouffe 2007). Sales managers have deep insights into their firms' sales strategies and into the outcomes that are most desired from their salesforce. As such, sales managers' ratings may be influenced by a broader definition of sales performance outcomes than salespeople have (Rich et al. 1999) which could strengthen the construct validity from the assessments. Managers are also in an appropriate position to compare and assess relative outcomes among their subordinates (Jaramillo et al. 2005).

Similar to salespeople, the meta-analysis by Jaramillo et al. (2005) reveals that sales managers provide different ratings of objective sales performance outcomes than those objective measures derived from company records. Thus, researchers should avoid assessing economic outcomes using sales managers' ratings but should instead use measures from company records. However, sales managers' ratings are able to explain almost twice as much variance in objective sales performance outcomes compared to salespeople (Jaramillo et al. 2005).

## **Customers' ratings**

Customers are the third-most-used respondents in sales research (Williams and Plouffe 2007). Two strong arguments favor using customers' ratings to assess sales performance outcomes. First, customers are naturally in the best position to provide the most reliable and valid evaluations of sales people (Lambert, Sharma, and Levy 1997) expressed by outcomes like gaining trust and providing advice and customer service. For example, sales managers' assessment of salespeople's customer interactions may easily suffer from weak reliability and validity (Cannon and Spiro 1991). Second, successful customer interactions are critical outcomes to ensure long-term performance in business relationships (Ittner and Larcker 2003) and should, therefore, be assessed by the most reliable respondents.

## Methods

### Research design

We answer the first research question about the appropriateness of the methods used to assess B2B sales performance outcomes using a descriptive research design with a systematic literature review. We conduct this review by the guidelines suggested by Palmatier et al. (2018) and the following six main steps of systematic literature reviews suggested by Littell et al. (2008). First, we set a clear objective for the review by formulating specific research questions to be investigated. Second, we specify the construct, problems, sampling unit, and inclusion criteria for the studies to be reviewed. Third, we collect the studies measuring B2B sales performance outcomes and meeting all inclusion criteria. Fourth, we extract the data of interest from the studies and record the data into an evaluative framework to ensure the data are handled in a consistent manner (Boot, Sutton, and Papaioannou 2016). Fifth, we describe and examine the data with proper data analysis. Sixth, we present the results using tables and figures, followed by an interpretation and discussion of the methods' ability to provide reliable and valid assessed outcomes. This discussion leads to suggestions of the unique insights' implications to research, managerial practice, and future research.

The second research question about which methods are used in studies published in different journals is answered using cluster and correspondence analyses that compare methods published across journals.

## **Construct, sampling unit, and inclusion criteria**

This study investigates methods used to assess B2B sales performance outcomes. The sampling unit is quantitative empirical studies that use such outcomes as dependent variables and were published in scientific journals between 2001 and 2015. Surrogates for “sales” and “performance” were accepted for inclusion, such as “salesperson” or “salesforce” and “productivity” or “effectiveness,” respectively. The included studies focus solely on B2B selling because it is different from and more complex than business-to-consumer (B2C) selling (Dawes, Lee, and Dowling 1998). Further, meta-analyses and literature reviews are excluded from the review.

## **Collecting studies**

We began by searching journals that publish the most sales research, as indicated in Asare et al.’s (2012) overview of sales research from 1980 to 2008, issue by issue beginning with 2001 and ending with 2015: *Journal of Personal Selling and Sales Management*, *Industrial Marketing Management*, *Journal of Marketing* (\*), *Journal of the Academy of Marketing Science* (\*), *Journal of Business and Industrial Marketing*, and *Journal of Business Research*. We searched the journals with lower sales research publishing rates in Asare et al.’s (2012) overview with an online keyword search on the journals’ websites: *Journal of Marketing Theory and Practice*, *International Journal of Research in Marketing* (\*), *Journal of Marketing Research* (\*), *European Journal of Marketing*, *Journal of Applied Psychology*, *Marketing Intelligence & Planning*, *Journal of Business-to-Business Marketing*, *Journal of International Marketing*, *Marketing Science* (\*), *Psychology & Marketing*, and *Women in Management*

*Review.* Journals marked with (\*) are all ABS-4 journals. The final sample includes 139 studies published in 17 journals. The far-right column in Table 3 shows the number of studies extracted from each journal. The first and second columns show the journals and abbreviations of the journals used throughout this paper.

## **Extracting, recording, and analyzing data**

We extracted information about the three key methodological issues from the reviewed studies and stored it in an evaluative framework to ensure we handled the information consistently (Boot et al. 2016). We adopted this framework during the review process to ensure we included all types of methodological variants used in the reviewed studies.

In the first step of data analysis, we made three cross-tabulations for the three key methodological issues and the 17 journals. This step generated three tables with frequency counts and row profiles that express the counts relative to their respective row totals, called row profiles. Thus, row profiles—in this case, journal profiles—show journals' relative frequency across the variables describing the three key methodological issues.

In the next step, we performed three cluster analyses to group journals with similar row profiles. The clustering algorithm uses the same distance measure between the row profiles—the chi-square distance—as the distance measure used in the correspondence analyses (see below), which we performed to visualize the tables (Greenacre 2016, chap. 4). This distance function compensates for the inherently different variances between rarely and frequently occurring categories. The specific algorithm is Ward clustering (Ward 1963), which naturally complements the correspondence analysis



framework by maximizing between-cluster chi-square distance variance while simultaneously minimizing within-cluster chi-square distance variance (Greenacre 2016, chap.15).

Finally, we conducted three correspondence analyses to visualize the row profiles in correspondence analysis maps (CA-maps) (Greenacre 2016). By visualizing the most important patterns, CA-maps aid in data interpretation (Hair et al. 2010). There are various possible scalings of the final display of CA-maps. In the present study, we generally use the version called the contribution biplot (Greenacre 2013), in which arrows represent the categories of the studies, with longer arrows implying that the corresponding categories are more important to the interpretation of the CA-map. As in any biplot for correspondence analysis, the arrows indicate directions of increasing values of the journal profiles (Greenacre 2010) indicating the methods published in each journal.

To avoid instability in the solution due to journals with very low numbers of studies, we built up each correspondence analysis from the clusters of journals as so-called active points that determine the map. All individual journals are displayed in the map as supplementary, or passive, points (Greenacre 2016). Passive points do not directly enter into the computation of the map as if they have zero weight in the analysis. The total variance in the table, measured by the total inertia, which is related to the chi-square statistic, is decomposed along the dimensions of the analysis. The parts of this total inertia are expressed as percentages, with an interpretation as a percentage of explained variance similar to an  $R^2$  in regression.

Furthermore, we conducted a permutation test based on the chi-square statistic using the function `chisq_test` in the `coin` package (Hothorn et al. 2008) in R (R core team 2017) to evaluate the statistical significance of the differences

among the groups of journals in each of the tables. This permutation test is applicable to tables with low expected frequencies, as in the present case, whereas a regular chi-square test is not.

Journals located close to the center in our CA-maps publish studies with methods close to the average for all the reviewed studies. A location away from the center and in the direction toward a specific type of method shows that a journal publishes studies that use this particular type of method to a larger degree than average for the reviewed journals. Journals located close to one another publish studies using similar methods. Journals in the same cluster have the same color, and because journals in the same cluster publish studies with similar methods, the journals in each cluster are located relatively close to each other.

### **Evaluation criteria for the methods' appropriateness**

To evaluate the appropriateness of the methods used in the reviewed studies to assess the outcomes, we examined two primary issues for research quality—reliability and validity. The reliability of quantitative assessments refers to the extent to which the measures are stable across repetitive assessments (Groves et al. 2009; Ghauri and Grønhaug 2002). The reliability of quantitative assessments is threatened by systematic bias and random error (Ghauri and Grønhaug 2002) associated with, for example, subjective measures. Systematic bias can occur from respondents' stable underreporting and overreporting (Groves et al. 2009), for example, self-ratings that tend to overreport personal achievements (Paulhus 2002; Tourangeau and Yan 2007). Random error can occur from personal and situational factors (Groves et al. 2009), for example, ratings influenced by positive or negative incidents close to the survey.

Quantitative research can apply statistical tests to examine the reliability and validity of assessments (Ghauri and Grønhaug 2002).

The validity of quantitative assessments is one primary issue for research quality (e.g., Seale 2009; McGivern 2013). Validity refers to the degree research designs, measures, and methods deliver accurate and unambiguous assessments (McGivern 2013) and that the reported results are true (Seale 2009). Further, validity refers to the degree to which research measures what it intends to measure (e.g., McGivern 2013). Construct validity is the most crucial form of validity for an abstract construct that cannot be directly observed because of its multiple components (Ghauri and Grønhaug 2002; Groves et al. 2009). Outcomes from B2B selling is such an abstract construct, containing multiple types of outcomes. Construct validity of such abstract construct refers to the extent to which measures reflect the components (types of outcomes) constituting the construct (Groves et al. 2009; Ghauri and Grønhaug 2002). Thus, multiple types of outcomes require multiple measures (Baumgartner and Homburg 1996) to ensure construct validity. The evaluation of construct validity can be conducted by determining how well the measures reflect sales research's outline of the outcomes desired from B2B selling (Seale 2009).

## **Results and discussion**

The first research question regarding the appropriateness of the methods researchers use to assess B2B sales performance outcomes can be answered by evaluating the methods shown in the bottom-row profiles in Table 1–3. These bottom-row profiles show the average methods used by the reviewed studies.

The second research question regarding the methods used in studies published in different journals can be answered by evaluating the rows of journals in Table 1–3. The rows show clusters of journals that publish studies using similar methods. The journals in each cluster has the same color in the respective CA-maps. Each row in the tables shows the methods published in each journal, and the row profiles show the differences and similarities in methods published among journals. The tables show that eight journals contribute three or fewer studies to our review, and nine journals contribute four to 30 studies. The journals contributing few studies have row profiles that are very high or very low and are thus not representative of the methods used in their published studies. Our evaluation of methods thus highlights journals that contribute four or more studies to our review. The CA-maps in Figures 1–3 show the results from the correspondence analyses and visualize the differences and similarities in methods published in the journals. The following three subsections present the results from the analyses.

### **Number of measures**

The reviewed studies use from one to 30 measures to assess B2B sales performance outcomes, with an average of 5.4 measures per study. For

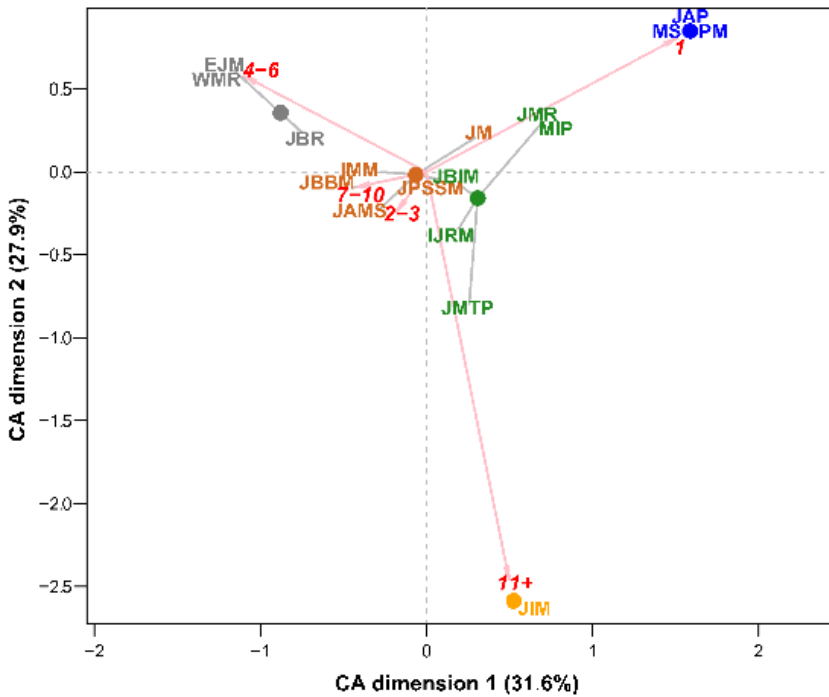
interpretation purposes, we split this range of measures into five categories—one measure, two to three measures, four to six measures, seven to 10 measures, and 11 or more measures—as shown in the columns in Table 1. The rows show the number of measures used in the studies published in each journal expressed in numbers, row profiles, and clusters of journals with a homogeneous number of measures. The three columns to the right in Table 1 show the number of reviewed studies from each journal, the total number of measures used by the studies in each journal, and the average number of measures per study in each journal.

The row profiles at the bottom of Table 1 show that 23% of the studies use one measure, 22% use two to three measures, 26% use four to six measures, 18% use seven to 10 measures, and 11% use 11 or more measures to assess the outcomes. It is surprising to see the widespread use of very few measures to assess B2B sales performance outcomes as 45% (23% + 22%) of the reviewed studies use from one to three measures to assess the outcomes. Among the journals that publish four or more studies in this review, *JMTP* publishes studies that use the highest average number of measures to assess the outcomes (7.4) and *JMR* publishes studies that use the lowest average number of measures (1.8).

**Table 1** Number of measures

		Categories of number of measures					Total number of studies	Total number of measures	Measures per study (avg.)
		1	2-3	4-6	7-10	11 +			
<i>International Journal of Research in Marketing</i>	(IJRM)	1 25 %	1 25 %	1 25 %	0 0 %	1 25 %	4 100 %	23	5.8
<i>Journal of Business and Industrial Marketing</i>	(JBIM)	4 29 %	4 29 %	3 21 %	1 7 %	2 14 %	14 100 %	74	5.3
<i>Journal of Marketing Theory and Practice</i>	(JMTP)	1 20 %	1 20 %	1 20 %	0 0 %	2 40 %	5 100 %	37	7.4
<i>Marketing Intelligence &amp; Planning</i>	(MIP)	1 50 %	1 50 %	0 0 %	0 0 %	0 0 %	2 100 %	3	1.5
<i>Journal of Marketing Research</i>	(JMR)	2 50 %	2 50 %	0 0 %	0 0 %	0 0 %	4 100 %	7	1.8
<b>Sum Cluster 1</b>		9 31 %	9 31 %	5 17 %	1 3 %	5 17 %	29 100 %	144	5.0
<i>Journal of International Marketing</i>	(JIM)	0 0 %	0 0 %	0 0 %	0 0 %	1 100 %	1 100 %	19	19.0
<b>Sum Cluster 2</b>		0 0 %	0 0 %	0 0 %	0 0 %	1 100 %	1 100 %	19	19.0
<i>Journal of the Academy of Marketing Science</i>	(JAMS)	1 7 %	5 33 %	4 27 %	3 20 %	2 13 %	15 100 %	100	6.7
<i>Industrial Marketing Management</i>	(IMM)	4 14 %	4 14 %	10 34 %	8 28 %	3 10 %	29 100 %	199	6.9
<i>Journal of Business-to-Business Marketing</i>	(JBBM)	0 0 %	0 0 %	0 0 %	1 100 %	0 0 %	1 100 %	7	7.0
<i>Journal of Marketing</i>	(JM)	6 38 %	3 19 %	3 4 %	3 19 %	1 6 %	16 100 %	67	4.2
<i>Journal of Personal Selling and Sales Management</i>	(JPSSM)	7 23 %	7 23 %	5 17 %	8 27 %	3 10 %	30 100 %	154	5.1
<b>Sum Cluster 3</b>		18 20 %	19 21 %	22 24 %	23 25 %	9 10 %	91 100 %	527	5.8
<i>Women in Management Review</i>	(WMR)	0 0 %	0 0 %	1 100 %	0 0 %	0 0 %	1 100 %	4	4.0
<i>European Journal of Marketing</i>	(EJM)	0 0 %	0 0 %	3 100 %	0 0 %	0 0 %	3 100 %	14	4.7
<i>Journal of Business Research</i>	(JBR)	0 0 %	3 33 %	5 56 %	1 11 %	0 0 %	9 100 %	39	4.3
<b>Sum Cluster 4</b>		0 0 %	3 23 %	9 69 %	1 8 %	0 0 %	13 100 %	57	4.4
<i>Marketing Science</i>	(MS)	1 100 %	0 0 %	0 0 %	0 0 %	0 0 %	1 100 %	1	1.0
<i>Journal of Applied Psychology</i>	(JAP)	3 100 %	0 0 %	0 0 %	0 0 %	0 0 %	3 100 %	3	1.0
<i>Psychology &amp; Marketing</i>	(PM)	1 100 %	0 0 %	0 0 %	0 0 %	0 0 %	1 100 %	1	1.0
<b>Sum Cluster 5</b>		5 100 %	0 0 %	0 0 %	0 0 %	0 0 %	5 100 %	5	1.0
<b>Total</b>		32 23 %	31 22 %	36 26 %	25 18 %	15 11 %	139 100 %	752	5.4

The two-dimensional CA-map in Figure 1 visualizes the relationships between the journals and the number of measures. In this application, the two dimensions explain 59.5% of the total inertia, or 31.6% and 27.9%, respectively.



**Fig. 1** Number of measures versus journals

The CA-map in Figure 1 and Table 1 reveal interesting findings among the highest-ranked journals. *JMR*'s location in direction to "1" in Figure 1 shows that *JMR* publishes studies using a very low average number of measures (1.8) to assess the outcomes. Further, the location of *JM* in the map reflects that 57% of the reviewed studies from *JM* use only one to three measures to assess the outcomes, as shown in Table 1. Furthermore, the journals in Cluster 5 in Table 1 (i.e., *MS*, *JAP*, and *PM*), which are colored blue in Figure 1, are located close to "1" as their studies use only one measure to assess the outcomes. Among the highest-ranked marketing journals, *JAMS* differs from this practice by publishing studies with among the highest number of measures (6.7) used to assess the outcomes.

Among the journals dedicated to sales and B2B marketing, *IMM* publishes studies that use a considerably higher number of measures (7.0) than the average of the reviewed studies. Further, *JPSSM*'s and *JBIM*'s locations close to the center of the CA-map, shows that these two sales and B2B marketing journals publish studies using numbers of measures close to the average of the reviewed studies.

The widespread use of few measures among studies published in the highest-ranked journals is an unexpected finding because one could expect such high-ranked research to use measures in accordance with theory. Researchers and journals may have a legitimate focus on economic outcomes and thus find few measures to be sufficient to assess the outcomes. However, using such few measures disregards the various types of outcomes from B2B selling suggested in the sales literature and the multiple measures required to assess such multiple types of outcomes (Martinez-Martin 2010). Further, it is surprising that studies published in *JPSSM* and *JBIM* use a number of measures similar to the average of the reviewed studies. One could expect that research in journals dedicated to sales and B2B marketing would show greater concern for the multiple types of outcomes from B2B selling.

There are at least two possible explanations for this divergence between the sales literature and the number of measures researchers use. First, the literature lacks guidance on which methods to use to assess sales performance outcomes, and second, there is no theoretical framework suggesting which measures to use to assess outcomes from B2B selling. This finding calls for researchers to reevaluate the number of measures they use to assess outcomes from B2B selling, including researchers publishing in the highest-ranked marketing journals and journals dedicated to sales and B2B marketing.



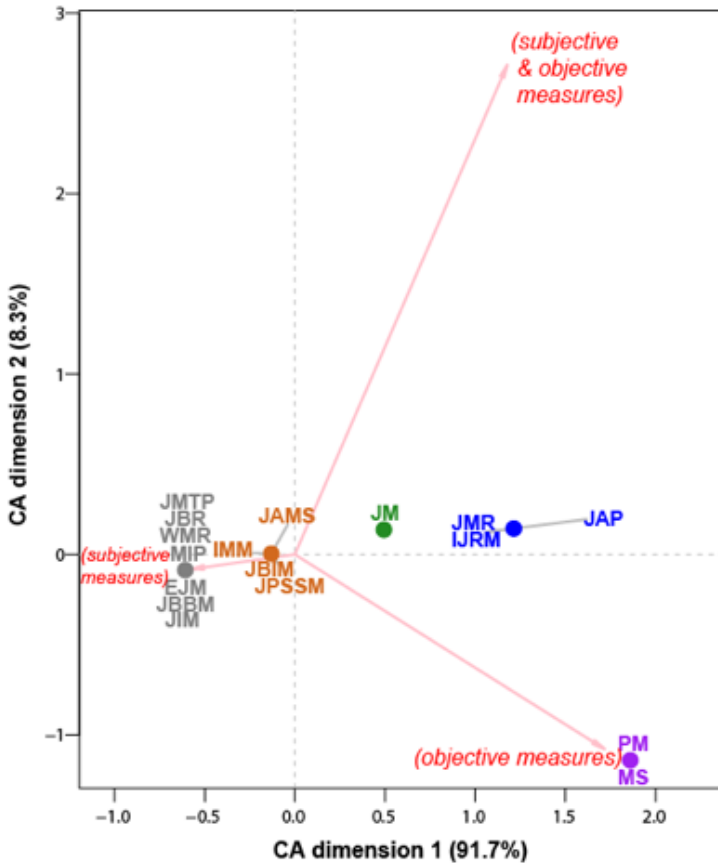
## **Types of measures**

The measures used to assess the outcomes are categorized into three types, as shown in the columns in Table 2: subjective measures, objective measures, and a combination of subjective and objective measures. The rows show the types of measures used in the studies published in each journal, expressed in numbers, row profiles, and clusters of journals publishing similar types of measures. The row profiles at the bottom of Table 2 show that subjective measures are the largest type of measures, used in 73% of the studies. Objective measures are used in 18% of the studies, and 9% of the studies combine subjective and objective measures to assess the outcomes.

**Table 2** Types of measures

		Subjective measures	Objective measures	Subjective & objective measures	Total
<i>Journal of Marketing Research</i>	(JMR)	1 25 %	2 50 %	1 25 %	4 100 %
<i>International Journal of Research in Marketing</i>	(IJRM)	1 25 %	2 50 %	1 25 %	4 100 %
<i>Journal of Applied Psychology</i>	(JAP)	0 0 %	2 67 %	1 33 %	3 100 %
<b>Sum Cluster 1</b>		2 18 %	6 55 %	3 27 %	11 100 %
<i>Psychology &amp; Marketing</i>	(PM)	0 0 %	1 100 %	0 0 %	1 100 %
<i>Marketing Science</i>	(MS)	0 0 %	1 100 %	0 0 %	1 100 %
<b>Sum Cluster 2</b>		0 0 %	2 100 %	0 0 %	2 100 %
<i>Journal of Marketing</i>	(JM)	8 50 %	5 31 %	3 19 %	16 100 %
<b>Sum Cluster 3</b>		8 50 %	5 31 %	3 19 %	16 100 %
<i>Journal of Business and Industrial Marketing</i>	(JBIM)	11 79 %	2 14 %	1 7 %	14 100 %
<i>Journal of Personal Selling and Sales Management</i>	(JPSSM)	23 77 %	5 17 %	2 7 %	30 100 %
<i>Industrial Marketing Management</i>	(IMM)	24 83 %	3 10 %	2 7 %	29 100 %
<i>Journal of the Academy of Marketing Science</i>	(JAMS)	11 73 %	2 13 %	2 13 %	15 100 %
<b>Sum Cluster 4</b>		69 78 %	12 14 %	7 8 %	88 100 %
<i>Journal of Marketing Theory and Practice</i>	(JMTP)	5 100 %	0 0 %	0 0 %	5 100 %
<i>Journal of Business Research</i>	(JBR)	9 100 %	0 0 %	0 0 %	9 100 %
<i>European Journal of Marketing</i>	(EJM)	3 100 %	0 0 %	0 0 %	3 100 %
<i>Marketing Intelligence &amp; Planning</i>	(MIP)	2 100 %	0 0 %	0 0 %	2 100 %
<i>Journal of Business-to-Business Marketing</i>	(JBBM)	1 100 %	0 0 %	0 0 %	1 100 %
<i>Journal of International Marketing</i>	(JIM)	1 100 %	0 0 %	0 0 %	1 100 %
<i>Women in Management Review</i>	(WMR)	1 100 %	0 0 %	0 0 %	1 100 %
<b>Sum Cluster 5</b>		22 100 %	0 0 %	0 0 %	22 100 %
<b>Total</b>		101 73 %	25 18 %	13 9 %	139 100 %

The two-dimensional CA map in Figure 2 visualizes the relationships between the journals and the use of subjective and objective measures. In this application, the two dimensions explain 100% of the total inertia, or 91.7% and 8.3%, respectively.



**Fig. 2** Types of measures versus journals

The cluster analysis regarding the types of measures provide new sets of clusters of journals than provided from the cluster analysis regarding the number of measures used. The cluster analysis regarding types of measures provide Cluster 5 which include journals that are colored grey in Figure 2 (*JMTP, JBR, EJM, MIP, JBBM, JIM, and WMR*). These journals are located close to “subjective measures” as their studies use solely subjective measures to assess the outcomes. Likewise, the journals in Cluster 2 (*PM and MS*), are

colored purple in the CA-map and are located close to “objective measures” as their studies use solely objective measures.

It is interesting to see the locations of the highest-ranked journals in Cluster 3 (Green: *JM*) and Cluster 1 (Blue: *JMR*, *IJRM*, and *JAP*) in the CA-map. These journals are located between “objective measures” and “subjective & objective measures,” showing that the journals use objective measures and a combination of objective and subjective measures to a larger degree than the average of the reviewed studies. Of the studies published by *JM*, 31% use objective measures, and 19% combine subjective and objective measures, as shown in Table 2. Of the studies published by *JMR*, *IJRM*, and *JAP*, 55% use objective measures, and 27% combine subjective and objective measures. This finding indicates that these highest-ranked journals publish studies that conduct more reliable and valid assessments by using objective measures (Jaramillo et al. 2005; Rich et al. 1999; Dess and Robinson 1984) and combining subjective and objective measures (Bagozzi et al. 2003).

The journals dedicated to sales and B2B marketing in Cluster 4 (*JPSSM*, *IMM*, and *JBIM*) are colored brown and are located close to the center in the CA-map. This location shows that studies published in these journals use subjective and objective measures close to the average of the reviewed studies. This average use of measures indicates that studies published in journals dedicated to sales and B2B marketing have not taken any extra considerations regarding the benefits of combining subjective and objective measures to assess outcomes from B2B selling.

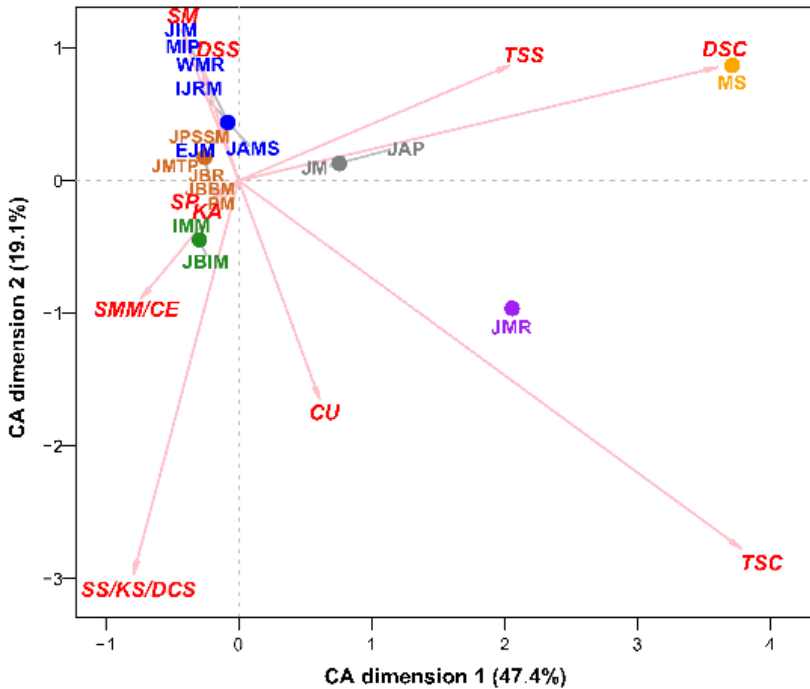
## Types of respondents

The reviewed studies use 13 types of respondents or combinations of respondent types to assess the outcomes, as shown in the columns in Table 3. The table also shows the abbreviations of respondent types used in the CA-map. These 13 types of respondents include the use of one (single), two (dyadic), or three (triadic) respondent types in each study, as shown in the columns from left to right. The rows show the respondent types used in studies published in each journal, expressed in numbers, row profiles, and clusters of journals with homogeneous respondents. The row profiles at the bottom of Table 3 show that the three most common respondent types are single samples of salespeople (50%), dyads of salespeople and sales managers (17%), and single samples of sales managers (12%). Adding the row profiles at the bottom of the table shows that a single type of respondent is used by 76% of the reviewed studies, dyads are used by 22%, and triads are used by only 2%.

**Table 3** Types of respondents

Number of respondent types		Single								Dyadic			Triadic		Total
Respondent types		Sales-people	Key account managers & relationship-managers	Key account managers & sales managers	Sales managers	Sales & marketing managers	CEOs, presidents, & owners	Customers & territories	Dyad with sales-people & sales managers	Dyad with sales-people & customers	Dyad with customers & sales leads	Triad with sales-people, route supervisors, & sales managers	Triad with sales-people, sales managers, & customers		
		(SP)	(SM)	(KA)	(KS)	(SS)	(SMM)	(CE)	(CU)	(DSS)	(DSC)	(DCS)	(TSS)	(TSC)	
		<i>Marketing Science</i> (MS)		0	0	0	0	0	0	0	0	0	1	0	0
		0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%
<b>Sum Cluster 1</b>		0	0	0	0	0	0	0	0	0	1	0	0	0	1
		0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%
<i>Journal of Marketing Research</i> (JMR)		1	0	0	0	0	0	0	1	0	1	0	0	0	1
		25%	0%	0%	0%	0%	0%	0%	25%	0%	25%	0%	0%	25%	100%
<b>Sum Cluster 2</b>		1	0	0	0	0	0	0	1	0	1	0	0	0	1
		25%	0%	0%	0%	0%	0%	0%	25%	0%	25%	0%	0%	25%	100%
<i>Journal of Applied Psychology</i> (JAP)		2	0	0	0	0	0	0	0	0	1	0	0	0	3
		67%	0%	0%	0%	0%	0%	0%	0%	0%	33%	0%	0%	0%	100%
<i>Journal of Marketing</i> (JM)		8	0	1	0	1	0	0	0	2	2	0	1	1	16
		50%	0%	6%	0%	6%	0%	0%	0%	13%	13%	0%	6%	6%	100%
<b>Sum Cluster 3</b>		10	0	1	0	1	0	0	0	2	3	0	1	1	19
		53%	0%	5%	0%	5%	0%	0%	0%	11%	16%	0%	5%	5%	100%
<i>Psychology &amp; Marketing</i> (PM)		1	0	0	0	0	0	0	0	0	0	0	0	0	1
		100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
<i>Journal of Business-to-Business Marketing</i> (JBBM)		1	0	0	0	0	0	0	0	0	0	0	0	0	1
		100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
<i>Journal of Marketing Theory and Practice</i> (JMTP)		4	0	0	0	1	0	0	0	0	0	0	0	0	5
		80%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%	100%
<i>Journal of Personal Selling and Sales Management</i> (JPSSM)		18	0	1	0	6	1	0	0	4	0	0	0	0	30
		60%	0%	3%	0%	20%	3%	0%	0%	13%	0%	0%	0%	0%	100%
<i>Journal of Business Research</i> (JBR)		4	0	0	0	2	0	1	1	1	1	0	0	0	9
		44%	0%	0%	0%	22%	0%	11%	11%	11%	11%	0%	0%	0%	100%
<b>Sum Cluster 4</b>		28	0	1	0	9	1	1	1	5	0	0	0	0	46
		61%	0%	2%	0%	20%	2%	2%	2%	11%	0%	0%	0%	0%	100%
<i>Marketing Intelligence &amp; Planning</i> (MIP)		0	0	0	0	1	0	0	0	1	0	0	0	0	2
		0%	0%	0%	0%	50%	0%	0%	0%	50%	0%	0%	0%	0%	100%
<i>International Journal of Research in Marketing</i> (IJRM)		1	0	0	0	1	0	0	0	2	0	0	0	0	4
		25%	0%	0%	0%	25%	0%	0%	0%	50%	0%	0%	0%	0%	100%
<i>Women in Management Review</i> (WMR)		0	0	0	0	0	0	0	0	1	0	0	0	0	1
		0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%
<i>Journal of International Marketing</i> (JIM)		0	0	0	0	1	0	0	0	0	0	0	0	0	1
		0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
<i>European Journal of Marketing</i> (EJM)		1	0	1	0	0	0	0	0	1	0	0	0	0	3
		33%	0%	33%	0%	0%	0%	0%	0%	33%	0%	0%	0%	0%	100%
<i>Journal of the Academy of Marketing Science</i> (JAMS)		6	0	1	0	1	0	0	1	5	1	0	0	0	15
		40%	0%	7%	0%	7%	0%	0%	7%	33%	7%	0%	0%	0%	100%
<b>Sum Cluster 5</b>		8	0	2	0	4	0	0	1	10	1	0	0	0	26
		31%	0%	8%	0%	15%	0%	0%	4%	38%	4%	0%	0%	0%	100%
<i>Journal of Business and Industrial Marketing</i> (JBIM)		9	1	1	1	1	0	0	1	0	0	0	0	0	14
		64%	7%	7%	7%	7%	0%	0%	7%	0%	0%	0%	0%	0%	100%
<i>Industrial Marketing Management</i> (IMM)		13	1	2	2	1	1	1	1	6	0	1	0	0	29
		45%	3%	7%	7%	3%	3%	3%	3%	21%	0%	3%	0%	0%	100%
<b>Sum Cluster 6</b>		22	2	3	3	2	1	1	2	6	0	1	0	0	43
		51%	5%	7%	7%	5%	2%	2%	5%	14%	0%	2%	0%	0%	100%
<b>Total</b>		69	2	7	3	16	2	2	5	23	6	1	1	2	139
		50%	1%	5%	2%	12%	1%	1%	4%	17%	4%	1%	1%	1%	100%

The two-dimensional CA-map in Figure 3 visualizes the respondent types used in the studies published across the journals. In this application, the two dimensions explain 66.5% of the total inertia, or 47.4% and 19.1%, respectively.



**Fig. 3** Types of respondents versus journals

It is interesting to see the locations in the CA-map and the row profiles in Table 3 of the highest-ranked journals: *JM*, *JAMS*, *JMR*, *IJRM*, *JAP*, and *MS*. The locations and row profiles show that these journals publish studies that use dyadic and triadic respondents to a much larger degree than the average of the reviewed studies. The most frequent use of dyadic respondents is in studies published by *IJRM* (50%), *JAMS* (40%), and *JM* (26%). Triadic respondents are only used in studies published in *JMR* (25%) and *JM* (12%).

The B2B marketing journal *IMM* publishes several studies (24%) using dyadic respondents, indicating that this journal attracts and favors research using more sophisticated respondent types. Of the studies published by the sales journal *JPSSM*, 13% use dyadic respondents, which is close to the average

of the reviewed studies. *IMM* and *JPSSM* contribute no studies to this review that use triadic respondents.

This frequent use of dyadic and triadic respondents among the highest-ranked journals shows that these journals attract and favor studies that combine ratings from multiple respondent types. Such use of multiple respondent types is strongly recommended to attenuate or eliminate method biases (Hulland et al. 2018). Further, the use of dyadic respondents, such as salespeople and customers, ensures a richer and more accurate assessment of, for example, buyer-seller relationships (Hughes et al. 2013).



## Conclusions and implications

This study investigates three key methodological issues vital to assessing B2B sales performance outcomes. Our systematic review reveals the widespread usage of methods criticized in the literature for not providing the most reliable and valid assessments. Further, cluster and correspondence analyses reveal substantial differences in methods published in different journals.

### Number of measures

The review reveals a surprising finding regarding the number of measures used to assess B2B sales performance outcomes—namely, that one-quarter of the reviewed studies use only one measure to assess the outcomes, and nearly half of the studies use three or fewer measures. Such few measures can only partly assess the multiple types of outcomes desired from B2B selling (Cuevas 2018) and, consequently, lead to weak construct validity.

It is surprising that the three highest-ranked journals—JMR, JAP, and JM—publish studies that use very few measures to assess the outcomes. Further, it is noteworthy that journals dedicated to sales and B2B marketing—JPSSM and JBIM—publish studies using a number of measures to assess the outcomes similar to the average of the reviewed studies. One could expect studies published in the highest-ranked journals and journals dedicated to sales and B2B marketing to show greater concern for the multiplicity of outcomes suggested in the literature.

## **Types of measures**

The large use of subjective measures in the reviewed studies raises concerns regarding response biases associated with subjective measures (Shore et al. 1992) and their weaker ability to provide reliable and valid assessments of objective economic outcomes (Jaramillo et al. 2005; Rich et al. 1999). The studies published in journals dedicated to sales and B2B marketing—JPSSM, IMM, and JBIM—use subjective measures similar to the average of the reviewed studies indicating no extra considerations regarding the likely lower reliability and validity of subjective measures.

Objective measures are modestly used among the reviewed studies even though objective measures can provide the most reliable and valid assessments of economic outcomes (Jaramillo et al. 2005). The journals dedicated to sales and B2B marketing—JPSSM, IMM, and JBIM—publish studies using objective measures similar to the reviewed studies' average. However, the highest-ranked marketing journals—JMR, IJRM, and JM—publish studies that use objective measures to a larger degree than average.

Combinations of subjective and objective measures are used in only a minor part of the reviewed studies, although such combinations are highly recommended for capture both soft and hard outcomes from selling (Bagozzi et al. 2003). The journals dedicated to sales and B2B marketing—JPSSM, IMM, and JBIM—publish only very few studies combining subjective and objective measures. However, the highest-ranked journals—JM, JAP, JMR, IJRM, and JAMS—publish studies that combine subjective and objective measures to a larger degree than average among the reviewed studies. These findings address researchers to learn from the highest-ranked journals to increase their use of subjective and objective measures.

## **Types of respondents**

The reviewed studies use 13 types of respondents or combinations of respondents. A single sample of salespeople is the most frequent respondent type despite the probable lower reliability and validity compared to objective measures (Jaramillo et al. 2005; Rich et al. 1999) and sales managers' ratings (Jaramillo et al. 2005). Dedicated sales and B2B marketing journals—*JPSSM* and *JBIM*—are among the journals that publish the most studies using salespeople as respondents.

Dyads of salespeople and sales managers are the second-most-used respondents, and *IJRM*, *JAMS*, and *IMM* publish the most studies combining such respondents. The frequent use of such dyads indicates that these journals attract and favor studies using more sophisticated respondent types to provide more reliable and valid assessments of the outcomes (Hulland et al. 2018).

Customers are used as respondents in only a few reviewed studies even though customers can provide the most reliable and valid assessments of the most critical outcomes from B2B selling related to salespeople's customer interactions (Cannon and Spiro 1991). This rare use of customers as respondents indicates an ignorance of the importance of accurate assessments of successful customer interactions in the context of B2B selling.

Regarding the number of respondent types used in each study, the use of a single type of respondent dominates among the reviewed studies. Dyadic respondents are used by 22% of the studies, and triadic respondents are used by only 2% even though using dyadic and triadic respondents can reduce or eliminate respondent biases (Hulland et al. 2018; Schmitz et al. 2014). It is interesting to see how ABS-4 journals attract and favor studies using multiple types of respondents. The ABS-4 journals publish studies that use dyadic respondents to a much larger degree than average among the reviewed

studies. Triadic respondents are identified in only ABS-4 journals—namely, JM and JMR. Among journals dedicated to sales and B2B marketing, IMM frequently publishes studies using dyadic respondents, while JPSSM mostly publishes studies using a single type of respondent. The more sophisticated use of multiple types of respondents in studies published in the highest-ranked journals provides valuable guidance to improve the assessed outcomes' reliability and validity.

### **Implications for researchers**

Researchers should recognize the various levels of sophistication of the methods used to assess outcomes from B2B selling and the widespread use of methods criticized in the literature. By identifying and explaining these probable methodological weaknesses, this study pinpoints advancements in methods that could improve the assessed outcomes' validity and reliability. The summary of guidelines presented in Table 4 provides recommendations to advance these methods, and the main takeaways we outline below should be noted.

First, the widespread practice among researchers of using relatively few measures to assess the outcomes from B2B selling indicates the need for sales researchers to scrutinize the multiple types of outcomes desired from B2B selling. Few measures are capable of only partially assessing the outcomes, and a single measure is only capable of assessing a certain type of outcome. Thus, researchers should recognize the need for using multiple measures to accomplish a satisfying construct validity of the assessed outcomes from B2B selling.

Second, the extensive use of subjective measures should raise methodological concerns among researchers. These concerns include subjective measures' limitations to reliably and validly assess economic outcomes, which are the most critical outcomes from selling. Researchers should particularly recognize respondent biases associated with salespeople's self-ratings (Jaramillo et al. 2005) and preferably avoid using such ratings to assess economic outcomes. Such outcomes should be assessed using objective measures from company records.

Third, researchers should utilize the complementary benefits of assessing hard economic outcomes with objective measures from company records and assessing soft outcomes with respondents' subjective ratings. Only a few of the reviewed studies use such a combination of measures. Thus, in our opinion, one of the most important steps for sales researchers to improve the reliability and validity of the assessed outcomes is to combine subjective and objective measures.

Fourth, researchers should recognize the widespread use of a single type of respondents and acknowledge the respondent biases associated with such single types of respondents (Hulland et al. 2018). Thus, researchers should strive to use several types of respondents in the same study when possible (Schmitz et al. 2014). Fifth, researchers should learn from the methods used in studies published in the highest-ranked journals, especially the combining of objective and subjective measures and the use of dyadic and triadic respondents.

**Table 4** Guidelines on methods for assessing B2B sales performance outcomes

Key issue	Guidelines
Number of measures	<ul style="list-style-type: none"><li>• A complete assessment of the multiple types of outcomes from B2B selling requires multiple measures.</li><li>• A partial assessment of the multiple types of outcomes from B2B selling can be conducted with few measures.</li><li>• An assessment of a certain type of outcome from B2B selling can be conducted with a single measure.</li></ul>
Type of measures	<ul style="list-style-type: none"><li>• When possible, combine subjective and objective measures to assess both soft and hard outcomes.</li><li>• When accessible, use objective measures from company records to assess hard economic outcomes.</li><li>• Use subjective measures to assess soft outcomes, such as customer satisfaction and salesperson sales efforts.</li><li>• Create, collect, and interpret subjective measures with caution to reduce potential respondent biases.</li></ul>
Type(s) of respondent(s)	<ul style="list-style-type: none"><li>• When possible, use dyadic and triadic respondents to strengthen the validity and reliability of the measures.</li><li>• Select respondents based on their position, knowledge, and ability to provide valid and reliable ratings of specific types of outcomes:<ul style="list-style-type: none"><li>• Use <i>customers</i> to rate important and reliable assessments of customer satisfaction, such as perceived quality, offer value, repurchase intentions, and relationships.</li><li>• When objective measures of hard economic outcomes are not accessible, favor sales managers' ratings over salespeople's ratings of such outcomes.</li></ul></li><li>• Use <i>salespeople</i> to rate their individual knowledge and sales efforts.</li><li>• Create, collect, and interpret salespeople's self-ratings with caution to reduce potential respondent biases.</li></ul>

## Implications for managers

Managers should recognize the methods criticized in research and apply the methods suggested to provide the most reliable and valid assessments of the outcomes. Managers should use the guidelines presented in Table 4 to advance their methods to assess the outcomes from B2B selling. Again, we highlight a few central takeaways below.

Managers should recognize the widespread practice among researchers of using relatively few measures to assess the outcomes and acknowledge the serious consequences of overlooking assessing important outcomes. In the practical world of B2B selling, managers are responsible for getting their salespeople to produce multiple types of outcomes (Cuevas 2018) for obtaining sufficient returns from the high costs associated with selling (Mantrala et al. 2008). Consequently, managers must monitor multiple types of outcomes, which requires a sufficient number of measures to be assessed. The number and types of measures to use in such assessments should be determined based on firm goals and strategies regarding desired outcomes from the salesforce.

The present study suggests several types of reliable and valid sources and respondents to assess the outcomes from B2B selling. First, managers have easy access to reliable objective measures from company records and should use such measures to assess economic outcomes. Second, managers should supplement objective measures with subjective measures of salespeople's customer interactions rated by various respondent types. Sales managers' ratings are valuable because they can be assessed in relation to the outcomes most desired from the firm's salesforce. Further, sales managers have the necessary outlook to compare outcomes among salespeople and can adjust their ratings in relation to market conditions that make selling difficult or easy. Managers should use salespeople to rate outcomes related to sales activities and customer relationships as sales managers with multiple salespeople may have limited ability to rate such specific and individual outcomes. Finally, any manager in B2B selling needs to monitor customers' well-being, such as offer value, customer satisfaction, customer relationships, and customer repurchase intentions. Such essential outcomes should preferably be rated by customers themselves.

## **Limitations and future research**

This study reviews solely research on B2B selling because of the differences between B2B and B2C selling. Using a larger research frame that also includes studies on B2C selling will provide a larger sample of studies that may perhaps validate our findings.

Moreover, our study reveals the widespread use of methods that are criticized in research. This inconsistency between the research and the

methods that many researchers use should inspire researchers to refine methods and best practices to assess sales performance outcomes.

An important area for future research is to scrutinize the consequences stemming from the widespread practice of using very few measures to assess the outcomes from B2B selling when it is widely recognized in the literature that B2B selling should produce multiple types of outcomes. To help resolve this gap between the literature and research, future research should try to develop valid sets of measures that cover each of the multiple types of outcomes desired from B2B selling.

Additional research should also investigate the consequences of respondent biases from the widespread use of salespeople's self-ratings. Such research should try to define which respondents (salespeople, sales managers, or customers) are able to provide reliable and valid ratings of the various types of outcomes.

Finally, the use of a single type of respondent is common among the reviewed studies despite the associated problem with respondent biases. Thus, future research should investigate best practices of using combinations of respondent types, together with objective measures from company records, to assess various types of outcomes reliably and validly.



## References

- Asare, A. K., Yang, J., & Alejandro, T. G. B. (2012). The state of research methods in personal selling and sales management literature. *Journal of Personal Selling and Sales Management, 32*(4), 473-489
- Baumgartner, H., & Homburg, C. (1996). Applications of structural equation modeling in marketing and consumer research: A review. *International Journal of Research in Marketing, 13*(2), 139-161.
- Bagozzi, R. P., Verbeke, W., & Gavino J. C. Jr. (2003). Culture moderates the self-regulation of shame and its effects on performance: The case of salespersons in the Netherlands and the Philippines. *Journal of Applied Psychology, 88*(2), 219-322.
- Behrman, D. N., & Perreault, W. D. Jr. (1982). Measuring the performance of industrial salespersons. *Journal of Business Research, 10*(3), 355-370.
- Boot, A., Sutton, A., & Papaioannou, D. (2016). *Systematic approaches to a successful literature review*. London: SAGE Publications.
- Bush, A. J., & Grant, E. S. (1994). Analyzing the content of marketing journals to assess trends in sales force research: 1980-1992. *Journal of Personal Selling and Sales Management, 14*(3), 57-68.
- Cannon, J. P., & Spiro, R. (1991). The measurement of salesperson performance: Comparing self-evaluations with customer evaluations, In Mary Gilly et al., (Eds.), *Enhancing knowledge development in marketing. Summer educators' proceedings* (pp 1-10). Chicago, IL: American Marketing Association.
- Churchill, G. A. Jr., Ford, N. M., Hartley, S. W., & Walker, O. C. Jr. (1985). The drivers of salesperson performance: A meta-analysis. *Journal of Marketing Research, 22*(2), 103-118.
- Cron, W. L., Baldauf, A., Leigh, T. W., & Grossenbacher, S. (2014). The strategic role of the sales force: Perceptions of senior sales executives. *Journal of the Academy of Marketing Science, 42*(5), 471-489.
- Cuevas, J. M. (2018). The transformation of professional selling: Implications for leading the modern sales organization. *Industrial Marketing Management 69*(February),198-208.

- Dawes, P. L., Lee, D. Y., & Dowling, G. R. (1998). Information control and influence in emergent buying centers. *Journal of Marketing*, 62(3), 55-68.
- Dess, G. G., & Robinson, R. B. Jr. (1984). Measuring organizational performance in the absence of objective measures: The case of the privately-held firm and conglomerate business unit. *Strategic Management Journal*, 5(3), 265-273.
- D'Haen, J., & Van den Poel, D. (2013). Model-supported business-to-business prospect prediction based on an iterative customer acquisition framework. *Industrial Marketing Management*, 42(4), 544-551.
- Farris, P. W., Bendle, N. T., Pfeifer, P. E., & Reibstein, D. J. (2006). *Marketing metrics: 50+ metrics every executive should master*. Upper Saddle River, NJ: Pearson Education.
- Ghuri, P., & Grønhaug, K. (2002). *Research methods in business studies*. Harlow, UK: Pearson Education Limited.
- Greenacre, M. (2010). *Biplots in practice*. Bilbao: BBVA Foundation. Free download from [www.multivariatestatistics.org](http://www.multivariatestatistics.org).
- Greenacre, M. (2013). Contribution biplots. *Journal of Computational and Graphical Statistics*, 22(1), 107-122.
- Greenacre, M. (2016). *Correspondence analysis in practice*. Third Edition. Florida: Chapman & Hall / CRC Press.
- Groves, R. M., Fowler, F. J. Jr., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2009). *Survey methodology*. Hoboken, New Jersey: John Wiley & Sons, Inc.
- Hair, J. F. Jr., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice-Hall.
- Hothorn, T., Hornik, K., van de Wiel, M. A., & Zeileis, A. (2008). Implementing a class of permutation tests: The coin package. *Journal of Statistical Software*, 28(8), 1-23. URL <http://www.jstatsoft.org/v28/i08/>.
- Hughes, D. E., Le Bon, J., & Rapp, A. (2013). Gaining and leveraging customer-based competitive intelligence: The pivotal role of social capital and salesperson adaptive selling skills. *Journal of The Academy of Marketing Science*, 41(1), 91-110.
- Hulland, J., Baumgartner, H., & Smith, K. M. (2018). Marketing survey research best practices: Evidence and recommendations from a review of JAMS articles. *Journal of the Academy of Marketing Science*, 46(1), 92-108.

- Hult, G. T. M., Ketchen, D. J. Jr., Griffith, D. A., Chabowski, B. R., Hamman, M. K., Dykes, B. J., Pollitte, W. A., & Cavusgil, S. T. (2008). An assessment of the measurement of performance in international business research. *Journal of International Business Studies*, 39(6), 1064-1080.
- Ittner, C. D. & Larcker, D. F. (2003). Coming up short on no financial performance measurement. *Harvard Business Review*, 81(11), 88-95.
- Jap, S. D., & Anderson, E. (2004). Challenges and advances in marketing strategy field research. In C. Moorman, & D. R. Lehmann (Eds.), *Assessing marketing strategy performance* (pp 269–292). Cambridge, MA: Marketing Science Institute.
- Jaramillo, F., Carrillat, F. A., & Locander, W. B. (2005). A meta-analytic comparison of managerial ratings and self-ratings. *Journal of Personal Selling and Sales Management*, 25(4), 315-328.
- Katsikeas, C. S., Morgan, N. A., Leonidou, L. C., & Hult, G. T. M. (2016). Assessing performance outcomes in marketing. *Journal of Marketing*, 80(2), 1-20.
- Lambert, D. M., Sharma, A., & Levy, M. (1997). What information can relationship marketers obtain from customer evaluations of salespeople? *Industrial Marketing Management*, 26(2), 177-187.
- Littell, J. H., Corcoran, J., & Pillai, V. (2008). *Systematic reviews and meta-analysis*. New York: Oxford University Press.
- Mantrala, M. K., Alberts, S., Gopalakrishna, S., & Joseph, K. (2008). Introduction: special issue on enhancing sales force productivity. *Journal of Personal Selling and Sales Management*, 18(2), 109-113.
- March, J. G., & Sutton, R. I. (1997). Organizational performance as a dependent variable. *Organization Science*, 8(6), 698-706.
- Martinez-Martin, P. (2010). Composite rating scales. *Journal of the Neurological Sciences*, 289(1-2), 7-11.
- McGivern, Y. (2013). *The practice of market research: An introduction*. Harlow, UK: Pearson Education Limited.
- Mick, D. G. (1996). Are studies of dark side variables confounded by socially desirable responding? The case of materialism. *Journal of Consumer Research*, 23(2), 106-119.

- Mullins, R. R., Ahearne, M., Lam, S. K., Hall, Z. R., & Boichuk, J. P. (2014). Know your customer: How salesperson perceptions of customer relationship quality form and influence account profitability. *Journal of Marketing*, 78(6), 38-58.
- Palmatier, R. W., Houston, M. B., & Hulland, J. (2018). Review articles: purpose, process, and structure. *Journal of the Academy of Marketing Science*, 46(1), 1-5.
- Paulhus, D. L. (2002). Socially desirable responding: The evolution of a construct. In H. I. Braun, D. N. Jackson, & D. E. Wiley (Eds.), *The role of constructs in psychological and educational measurement* (pp 49-69). Mahwah, NJ: Lawrence Erlbaum Associates.
- R Core Team (2017). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing, Vienna, Austria: URL <https://www.R-project.org/>.
- Rich, G. A., Bommer, W. H., MacKenzie, S. B., Podsakoff, P. M., & Johnson, J. L. (1999). Methods in sales research: Apples and apples or apples and oranges? A meta-analysis of objective and subjective measures of salesperson performance. *Journal of Personal Selling and Sales Management*, 19(4), 41-52.
- Rossiter, J. R. (2002). The C-OAR-SE procedure for scale development in marketing. *International Journal of Research in Marketing*, 19(4), 305-335.
- Schmitz, C., Lee, Y.-C., & Lilien, G. L. (2014). Cross-selling performance in complex selling contexts: An examination of supervisory- and compensation-based controls. *Journal of Marketing*, 78(3), 1-19.
- Seale, C. (2009). Validity, reliability and the quality of research. In Seale, C. (Eds.). *Researching society and culture* (pp 71-83). London: SAGE Publication Ltd.
- Shore, T. H., Shore, L. M., & Thornton, G. C. III. (1992). Construct validity of self- and peer ratings of performance dimensions in an assessment center. *Journal of Applied Psychology*, 77(1), 42-54.
- Steenkamp, J.-B. E. M., de Jong, M. G., & Baumgartner, H. (2010). Socially desirable response tendencies in survey research. *Journal of Marketing Research*, 47(2), 199-214.
- Tourangeau, R., & Yan, T. (2007). Sensitive questions in surveys. *Psychological Bulletin*, 133(5), 859-883.

- Töytäri, P., & Rajala, R. (2015). Value-based selling: An organizational capability perspective. *Industrial Marketing Management*, 45(February), 101-112.
- Verbeke, W., Frank, D. B., Bakker, A. B., & Dietz, B. (2008). When intelligence is (dys)functional for achieving sales performance. *Journal of Marketing*, 72(4), 44-57.
- Verbeke, W., Dietz, B., & Verwaal, E. (2011). Drivers of sales performance: a contemporary meta-analysis. Have salespeople become knowledge brokers? *Journal of the Academy of Marketing Science*, 39(3), 407-428.
- Wang, C., Hoegg, J., & Dahl, D. W. (2018). The impact of a sales team's perceived entitativity on customer satisfaction, *Journal of the Academy of Marketing Science*, 46(3), 190-211.
- Ward, J. H. (1963). Hierarchical grouping to optimize an objective function. *Journal of the American Statistical Association*, 58(301), 236-244.
- Weitz, B. A., & Bradford, K. D. (1999). Personal selling and sales management: A relationship marketing perspective. *Journal of the Academy of Marketing Science*, 27(2), 241-255.
- Williams, B. C., & Plouffe, C. R. (2007). Assessing the evolution of sales knowledge: A 20-year content analysis. *Industrial Marketing Management*, 36(4), 408-419.
- Zalocco, R., Pullins, E. B., & Mallin, M. L. (2009). A re-examination of B2B sales performance. *Journal of Business and Industrial Marketing*, 24(8), 598-610.

## **Paper 4:**

### **Data sources to assess sales performance outcomes**

Per Ivar Seljeseth

#### **Abstract**

Sales performance outcomes have a critical role as dependent variables in sales research, and salespeople are expected to produce multiple types of outcomes. To assess these outcomes, researchers use measures from four data sources: company records, sales managers, salespeople, and customers. These data sources have different abilities to assess the various outcomes reliably and validly. However, researchers have no consistent use of the best data sources to assess the various outcomes. To help improve the data sources in sales research, this study provides a systematic literature review of the data sources researchers use to assess outcomes from B2B selling. The examination reveals widespread use of data sources that do not provide the most reliable and valid assessments of the measured outcomes. Thus, to improve such assessments and future research quality, this study proposes guidelines on which data sources to use to assess the various outcomes from B2B selling. Implications and further research are suggested.

**Keywords:** data sources, measures, sales performance outcomes, B2B selling, systematic review.

Corresponding author: Per Ivar Seljeseth

Phone: + 47 909 58246. Mailing address: Nord University Business School, Post Box 1490, 8048 Bodø, Norway. E-mail address: per.i.seljeseth@nord.no

## Introduction

Sales performance outcomes describe what salespeople produce (Verbeke, Dietz, and Verwaal 2011), and business-to-business (B2B) selling are required to produce multiple types of outcomes (Zallocco, Pullins, and Mallin 2009; Davie, Stephenson, and Valdivieso De Uster 2010). These outcomes have a critical role as dependent variables in the extensive research on antecedents that can improve selling (Limbu et al. 2016; Verbeke et al. 2011). Thus, reliable and valid assessments of these outcomes are essential to identify dependable antecedents and knowledge building in sales research (e.g., Katsikeas et al. 2016; Rapp, Gabler, and Ogilvie 2020).

The multiple types of outcomes from B2B selling require multiple measures to be assessed (e.g., Richard et al. 2009; Henard and Szymanski 2001). These measures can be collected from four main data sources: company records, sales managers, salespeople, and customers. Previous research reveals a substantial difference in these data sources' ability to provide reliable and valid measures of certain types of outcomes from selling (e.g., Jaramillo, Carrillat, and Locander 2005; Schmitz, Lee, and Lilien 2014; Hughes, Le Bon, and Rapp 2013). For example, company records can provide the most reliable and valid measures of sales revenue (Jaramillo et al. 2005; Rich et al. 1999), while customers can provide the most reliable and valid measures of sales people's customer interactions (Cannon and Spiro 1991; Lambert, Sharma, and Levy 1997).

Despite these substantial differences in the data sources' ability to provide reliable and valid measures, there is a dominant use of sales people and sales managers in empirical sales research (Williams and Plouffe 2007). Previous research provides little guidance on which data sources provide the

most reliable and valid assessments of the various outcomes. The lack of such guidance may cause researchers to not use the data sources with the most robust reliability and validity, threatening theory testing and knowledge building in research (Hult et al. 2008; Richard et al. 2009; Katsikeas et al. 2016).

This study aims to improve future sales research by helping researchers select the most valid and reliable data sources to assess the various outcomes from B2B selling. To contribute to such improvements, this study examines and evaluates researchers' use of data sources to measure these outcomes by addressing the following two research questions: which data sources do researchers use to assess the various outcomes from B2B selling, and do researchers use the most valid data sources to assess the various outcomes?

The research questions are answered through four research steps: First, with a systematic literature review of the data sources and measures used to assess outcomes from B2B selling in 139 published studies. Second, by organizing the measures based on the data sources from which they were collected. Third, by evaluating each data source's reliability and validity to assess the respective outcomes. Last, by reorganizing the measured outcomes in accordance with previous research to provide recommendations on the most valid data sources to assess the various outcomes from B2B selling.

The present study provides three contributions. First, it provides a reliable representation of the data sources researchers use to assess the various types of outcomes from B2B selling. Second, this study provides an evaluation of the data sources' validity and reliability to assess various types of outcomes. This evaluation reveals a widespread practice among researchers of using data sources that do not provide the most reliable and valid assessments of the measured outcomes. This revealed mismatch between researchers use of data sources and the assessed outcomes indicates a clear need for



researchers to reevaluate the data sources they use to assess outcomes from B2B selling. Third, the present study provides guidelines for researchers and managers regarding which data sources are most valid to assess the various types of outcomes from B2B selling. These guidelines also outline the various types of outcomes that each data source can validly assess. In turn, the improved reliability and validity of the assessed outcomes will contribute to improving knowledge building in sales research.

The following sections present the theory and methods for the study followed by the results, discussion, conclusions, and implications for researchers, managers, and further research.

## **Theory**

This section discusses theoretical considerations regarding appropriate data sources and respondents to assess various types of outcomes from B2B selling. First, this section introduces which data sources that provide objective and subjective measures followed by theoretical considerations regarding company records, sales managers, salespeople, and customers.

### **Data sources providing objective and subjective measures**

The four data sources used to assess outcomes from B2B selling can be categorized based on the objective and subjective measures they provide. More specifically, company records provide objective measures, which are usually used to assess “hard” economic outcomes, such as sales revenue and profits (Churchill, Ford, Hartley, and Walker 1985). Sales managers, salespeople, and customers, on the other hand, are typically used as respondents to provide subjective measures, which are essential to assess “soft” outcomes, such as customer satisfaction and customer relationships.

### **Company records**

Company records are able to provide more reliable assessments of economic outcomes than subjective ratings from respondents for two reasons. First, company records are subject to detailed government regulations regarding accounting, auditing, and reporting. Such regulations require economic data, such as sales revenues and costs, to be recorded precisely. Second, two meta-analyses reveal that ratings from respondents, such as sales

managers and salespeople, often have limited ability to reliably assess economic outcomes from selling. Rich et al. (1999) found a shared variance of only 20% between subjective ratings and objective measures of sales performance outcomes. Jaramillo et al. (2005) confirmed this finding after comparing objective measures with subjective ratings by managers and salespeople.

However, despite their solid reliability, company records may have limited ability to assess outcomes associated with salespeople's customer interactions, customer satisfaction, and customer relationships. Further, company records may not always provide accurate assessments. They can potentially contain incorrect information by accident, for example, if sales revenue and costs are recorded in the wrong accounting period. Furthermore, sales reports can be purposefully manipulated by salespeople who are addicted to incentives, particularly when those reports are not integrated into the company's accounting system (Zoltners, Sinha, and Lorimer 2012).

## **Sales managers**

Sales managers are in an advantageous position to rate sales performance outcomes for several reasons. First, sales managers may be highly knowledgeable as they have relatively easy access to all data sources with information about sales performance outcomes—company records, salespeople, and customers. Second, sales managers normally have a broader definition of sales performance outcomes and expect a wider variety of outcomes compared to salespeople (Rich et al. 1999). As a result, sales managers may provide assessments with better coverage of the multiple types of desired outcomes from B2B selling compared to salespeople. Third, sales

managers normally have the outlook required to compare outcomes across salespeople. Finally, sales managers can rate the outcomes their sales teams actually produce in relation to the outcomes their companies most desire from salespeople (Jaramillo et al. 2005).

Although sales managers are in this advantageous position, there are two types of outcomes they may have problems reliably assessing. First, sales managers may have problems reliably assessing objective outcomes, such as economic outcomes. Indeed, Jaramillo et al. (2005) discovered this divergence in their meta-analysis, revealing a shared variance of only 19.4% between sales managers' ratings and objective measures. However, sales managers' ratings of objective sales performance outcomes are twice as reliable as those of salespeople (Jaramillo et al. 2005), thus making sales managers' ratings preferable over salespeople's ratings to assess such outcomes.

Second, sales managers may have limited ability to provide reliable ratings of outcomes from salespeople's interactions with customers, such as trustworthiness, technical knowledge, product knowledge, and availability. Sales managers tend to assess such outcomes differently from customers as managers' ratings explain only 16% of the variation in customers' ratings of these outcomes (Cannon and Spiro 1991).

## **Salespeople**

Salespeople are naturally in the position to provide the most accurate information about their own behavior and are able to capture conditions within their firms with a high degree of detail and specificity (Lyon, Lumpkin, and Dess 2000). Thus, salespeople are valid respondents to rate specific outcomes associated with sales behavior and customer interactions.

However, there are several risks associated with ratings from salespeople. First, salespeople's ratings are typically "self-ratings" as they are often asked to rate their own outcomes. Self-ratings are associated with respondent biases because such ratings are highly influenced by individual's thoughts about their own personal characteristics (Shore, Shore, and Thornton 1992). Further, respondent biases can arise due to socially desirable responding (Steenkamp, de Jong, and Baumgartner 2010)—that is, when salespeople provide ratings that make themselves look good (Paulhus 2002; Tourangeau and Yan 2007).

Second, even though salespeople's ratings and objective measures may be significantly correlated (Sharma, Rich, and Levy 2004), Jaramillo et al.'s (2005) meta-analysis found a shared variance of only 11.6% between salespeople's self-ratings and objective measures. This low shared variance indicates that salespeople tend to rate outcomes quite different from objective measures and that salespeople may have problems reliably assessing objective outcomes, such as economic outcomes.

Third, salespeople tend to have a narrower definition of sales performance outcomes and expect fewer types of outcomes compared to sales managers (Rich et al. 1999). These narrow expectations may cause salespeople to value the multiple types of desired outcomes from B2B selling less compared to sales managers.

## **Customers**

Because one of the main tasks for salespeople is to satisfy customer needs, customers may naturally be the best source of information to evaluate salespeople (Lambert et al. 1997). Further, customers are in the best position

to rate outcomes from salespeople's customer interactions, such as gaining trust and providing advice and customer service (Cannon and Spiro 1991).

Consequently, customers appear as the most reliable data sources to assess outcomes that are found to be critical in B2B selling, for example, offer value (Blocker et al. 2012; Mizik and Jacobsen 2003; Vargo and Lusch 2004), customer satisfaction (Rust, Zeithaml, and Lemon 2000; Adkins 1979; Wang, Hoegg, and Dahl 2018; Wang, Dou, and Zhou 2012), customer loyalty (Lam et al. 2004; Wang et al. 2018; Ittner and Larcker 2003; Reichheld 1996), and customer relationships (Weitz and Bradford 1999; Williams and Attaway 1996; Verbeke et al. 2008).

In summary, the importance of valuable customer interactions and high customer satisfaction for success in B2B selling and customers' unique position to reliably assess such outcomes make customers the most favored data source to assess such outcomes.

## **Methods**

### **Research design and procedure**

This study used a descriptive research design to answer the two research questions: which data sources do researchers use to assess the various types of outcomes from B2B selling, and which data sources are appropriate to assess the various types of outcomes? This study answered these research questions through four research steps. First, by conducting a systematic review of the data sources and measures used to assess outcomes from B2B selling in published research. Second, by organizing the measures based on the data sources from which they were collected (i.e., company records, sales managers, salespeople, and customers). Third, by evaluating each data source ability to assess the outcomes they are applied to assess in the reviewed studies. Fourth, by suggesting the most reliable and valid data sources to assess the various types of outcomes from B2B selling.

### **Search for studies**

The search for studies that measure sales performance outcomes was based on Asare, Yang, and Alejandro's (2012) outline of journals that publish sales research. The six journals that publish the most sales research studies were examined issue by issue and then explored the rest of the journals using a keyword search on the journals' websites. The keywords used in the search were "sales performance" and surrogates for "sales" and "performance."

## Criteria for inclusion

The following inclusion criteria were used to determine which studies to include in the review. First, the studies must assess sales performance outcomes as dependent variables. Surrogates for “sales,” “performance,” and “outcomes” were accepted as sales researchers use various labels for sales performance outcomes. Second, the studies must investigate B2B selling solely because of the difference between B2B selling and business-to-consumer (B2C) selling (Dawes, Lee, and Dowling 1998). Third, included studies must be empirical, quantitative, and published during the 2001–2015 period.

After these inclusion criteria were applied, the search uncovered 139 studies published in the following 17 journals (the number of studies each journal contributes to the present review are in parenthesis): *Journal of Personal Selling & Sales Management* (30), *Industrial Marketing Management* (29), *Journal of Marketing* (16), *Journal of the Academy of Marketing Science* (15), *Journal of Business & Industrial Marketing* (14), *Journal of Business Research* (9), *Journal of Marketing Theory and Practice* (5), *International Journal of Research in Marketing* (4), *Journal of Marketing Research* (4), *European Journal of Marketing* (3), *Journal of Applied Psychology* (3), *Marketing Intelligence & Planning* (2), *Journal of Business-to-Business Marketing* (1), *Journal of International Marketing* (1), *Marketing Science* (1), *Psychology & Marketing* (1), and *Women in Management Review* (1). An outline of the reviewed studies can be provided upon request.



## Evaluative framework and coding

The extracted measures were categorized in an evaluative framework, and during the review process, new measures required new coding classes. Thus, the number of various measures in the evaluative framework grew throughout the review process. The initial evaluative framework included four data sources under which the measures could be categorized (i.e., company records, sales managers, salespeople, and customers).

The “company records” data source is usually termed company records or company files by the reviewed studies. The “sales managers” data source includes respondents who the studies term sales managers, sales directors, senior sales executives, field sales managers, sales and marketing managers, key account managers, account executives, relationship managers, CEOs, presidents, and owners. The “salespeople” data source includes respondents termed salespeople and sales representatives by the studies, and the “customers” data source includes respondents who the studies term customers and key accounts.

The review revealed several studies combining different types of respondents. Thus, two new categories of data sources were added to the evaluative framework. First, a data source category was added for the many studies combining sales managers and salespeople as respondents, and second, a data source category was added for the studies combining sales managers, salespeople, and customers as respondents. The final framework includes six data source categories used to assess outcomes from B2B selling, as shown in Table 1.

## **Data analysis**

The measured outcomes were classified in accordance to the data sources used to assess the respective outcomes. Then, the measured outcomes were summarized and ranked based on how frequently each outcome is assessed by the respective data source. Further, these frequencies were calculated as percentages of the number of studies using each data source. To focus on relatively frequent measures, a cut-off level for the analysis was set at the 20 most frequently measured outcomes by each data source.

## **Results and discussion**

This section presents and discusses the results from the review and analysis of the data sources used to assess outcomes from B2B selling. First, this section presents the data sources used to assess the various types of outcomes followed by evaluations of each data source's reliability and validity to assess the respective outcomes. Then, this section discusses the general value of and recommendations on data sources to assess the outcomes. Finally, this section outlines recommended data sources to assess specific types of outcomes from B2B selling.

### **Data sources used to assess various types of outcomes**

The most frequently used data sources to assess outcomes from B2B selling are salespeople (50%), company records (25%), sales managers (22%), and a combination of sales managers and salespeople (19%), as expressed in percentages in the top line in Table 1. Relatively few studies combine sales managers, salespeople, and customers (6%), and even fewer studies use solely customers as the data source (4%). Because several studies combine measures from company records (25%) with measures rated by respondents, there is an overlap in the use of data sources that results in a summary of the data sources' frequencies of 125%.

**Table 1. Data sources and assessed outcomes from B2B selling**

Salespeople (50%)		Company records (25%)		Sales managers (22%)	
Sales vs. quota	51 %	Sales vs. quota	37 %	Sales revenue	57 %
Sales revenue	41 %	Sales revenue	34 %	Profit/margins/contributions	40 %
Market share	32 %	Sales growth	14 %	Market share	37 %
Sales of new products	26 %	Number of sales in units/orders	9 %	Customer satisfaction	30 %
Sales of high-profit products	26 %	Number of won/lost sales opportunities	6 %	Sales vs. quota	30 %
Sales to major customers	20 %	Profits/profit margin	6 %	Actual customer loyalty	23 %
Understanding customer needs/customer orientation	16 %	Number of sales calls	3 %	Sales of new products	20 %
Creating solutions to fulfill requirements	16 %	Sales of a specific brand	3 %	Sales growth	17 %
Overall sales performance outcomes	14 %	Return on sales	3 %	Sales of high-profit products	17 %
Built customers business	12 %	Number of contacts per purchase	3 %	Overall sales performance outcomes	17 %
Customer relationships—established	12 %	Earnings before interest and taxes/EBIT	3 %	Customer relationships—established	13 %
Assisting supervisor in achieving his/her goals	10 %			Sales to major customers	13 %
Profit/margins/contributions	10 %			Return on investment/Efficiency	13 %
Effective sales presentations	9 %			Effective sales presentations	10 %
Providing information to customers	9 %			Customer relationships—effort	10 %
Convincing customers that problems are understood	7 %			Customer relationships—maintenance/improvement	10 %
Knowing applications and functions	7 %			New customers—acquired	10 %
Sales of long-term contracts	7 %			Share of customer's wallet	10 %
Cost	7 %			Sales of long-term contracts	10 %
Paperwork is accurate and complete	6 %			Cross-selling	10 %
Sales managers & salespeople (19%)		Sales managers, salespeople, & customers (6%)		Customers (4%)	
Sales revenue	50 %	Offer value—price/quality ratio	50 %	The product is included in our consideration set	33 %
Sales vs. quota	38 %	Understanding customer needs/customer orientation	25 %	Offer value—price/quality ratio	33 %
Market share	35 %	Customers' willingness to pay a price premium	25 %	The product is chosen	33 %
Sales to major customers	31 %	Customer satisfaction	25 %	The product is evaluated	17 %
Sales of high-profit products	27 %	Intentional customer loyalty	25 %	Easily accessible salesperson	17 %
Profit/margins/contributions	19 %	Creating solutions to fulfill requirements	13 %	Individual attention	17 %
Quickly generating sales	15 %	Offer quality compared to competitors	13 %	Technical assistance	17 %
Effective sales presentations	12 %	Customer's satisfaction/relationship with salesperson	13 %	Customer satisfaction	17 %
Developing new accounts from established contacts	12 %	Customer relationships—established	13 %	Purchase volume	17 %
Convincing customers that problems are understood	12 %	Customer relationships—maintenance/improvement	13 %		
Creating solutions to fulfill requirements	12 %	Pleasant/enjoyable collaboration	13 %		
Customer satisfaction	12 %	Positive opinion of the salesperson	13 %		
Sales growth	12 %	Recommending likelihood	13 %		
Sales of new products	12 %	Share of customer's wallet	13 %		
Overall sales performance outcomes	12 %	Sales revenue	13 %		
Sales expertise and skills	8 %	Sales in orders	13 %		
Sales activities—quantity/quality	8 %	Sales growth	13 %		
Assisting supervisor in achieving his/her goals	8 %	Cross-selling	13 %		
Understanding customer needs/customer orientation	8 %	Return on investment/Efficiency	13 %		
Additional products sold	8 %	Profit/margins/contributions	13 %		

The dominant use of salespeople and sales managers may partly stem from researchers' easier access to such respondents compared to company records and customer files. Further, salespeople and sales managers are often necessary to assess antecedents in research models as such respondents can provide detailed information on the practice of selling, which company records and customers have difficulty providing. Thus, the convenience of using the same data source to assess both antecedents and outcomes may contribute to the frequent use of salespeople and sales managers in sales research.

Table 1 shows the data sources used to assess various outcomes from B2B selling, or vice versa, the outcomes that are assessed by each data source.

The table can be read as follows: among the studies using salespeople as their data source, 51% assess the outcome “sales vs. quota.” The following paragraphs present and discuss the findings from Table 1 regarding the outcomes assessed by each data source.

### **Salespeople**

The most frequently rated outcomes by salespeople are economic outcomes—sales vs. quota, sales revenue, market share, sales of new products, sales of high-profit products, and sales to major customers. Using salespeople to assess economic outcomes raises reliability concerns as salespeople have problems providing reliable ratings of objective sales performance outcomes (Jaramillo et al. 2005; Rich et al. 1999). Further, salespeople’s self-ratings may be biased from socially desirable responding (Steenkamp et al. 2010)—that is, they may rate economic outcomes better than they actually are (Tourangeau and Yan 2007; Paulhus 2002). Economic outcomes should preferably be assessed using numbers from company records when available (Jaramillo et al. 2005; Rich et al. 1999).

Salespeople also frequently rate outcomes regarding their customer interactions—understanding customer needs/customer orientation, creating solutions to fulfill requirements, building customer business, establishing customer relationships, providing information to customers, and convincing customers that problems are understood. Similar to economic outcomes, salespeople’s ratings of outcomes related to customer interactions may also be biased from socially desirable responding (Steenkamp et al. 2010) and may thus be higher than the actual outcomes warrant (Tourangeau and Yan 2007; Paulhus 2002). Therefore, researchers should use customers to obtain the most

reliable assessments of customer interactions (Lambert et al. 1997; Cannon and Spiro 1991).

Further, do salespeople often rate three outcomes that sales managers may be in a better position to rate—overall sales performance outcomes, assistance provided to supervisors to achieve their goals, and completion and accuracy of paperwork. Among the 20 most frequent outcomes rated by salespeople, there are only four outcomes salespeople are evidently qualified to reliably assess—customer relationships, effective sales presentations, providing information to customers, and knowledge of product applications and functions.

### **Company records**

Company records are used to assess 10 different economic outcomes, with the most frequently assessed outcomes being sales vs. quota, sales revenue, sales growth, and the number of sales in units/orders. These economic outcomes are the most important outcomes from selling and should therefore be assessed using company records, which are considered the most reliable data source to assess such outcomes (Jaramillo et al. 2005; Rich et al. 1999).

However, the reviewed studies that use company records as a data source overlook other important outcomes that can be assessed using company records, for example, actual customer loyalty, cost/efficiency of salespeople, market share, and the share of customers' wallets.

### **Sales managers**

Among the 10 most frequently rated outcomes by sales managers, eight are economic outcomes—sales revenue, profit/margins/contributions, market

share, sales vs. quota, actual customer loyalty, sales of new products, sales growth, and sales of high-profit products. Using sales managers to assess economic outcomes leads to similar concerns as those for salespeople—sales managers also have problems providing reliable ratings of economic outcomes, so such outcomes should preferably be assessed with data from company records when available (Jaramillo et al. 2005; Rich et al. 1999).

Among the 20 most frequently rated outcomes by sales managers, there are several outcomes associated with customer interactions—customer satisfaction, maintaining/improving customer relationships, and share of customers' wallets. In fact, 30% of the studies using sales managers as a data source ask sales managers to rate outcomes related to salespeople's customer interactions. However, customers typically provide the most reliable assessments of salespeople's customer interactions (Lambert et al. 1997; Cannon and Spiro 1991), and sales managers tend to assess such outcomes quite differently than customers (Cannon and Spiro 1991).

Among the outcomes rated by sales managers, sales managers are qualified to validly rate only four outcomes—overall sales performance outcomes, established customer relationships, effective sales presentations, and efforts to establish customer relationships.

### **Sales managers and salespeople**

The seven most assessed outcomes in studies that combine sales managers and salespeople as respondents are economic outcomes—sales revenue, sales vs. quota, market share, sales to major customers, sales of high-profit products, profit/margin/contributions, and quickly generating sales. Further, these respondents rate several outcomes from customer interactions, such as convincing customers that problems are understood, creating solutions

to fulfill requirements, achieving customer satisfaction, and understanding customer needs/customer orientation.

Consequently, the outcomes rated in studies that combine sales managers and salespeople as respondents have similar issues as those rated solely by salespeople or solely by sales managers. These respondents may have problems providing reliable assessments of economic outcomes (Jaramillo et al. 2005; Rich et al. 1999) and outcomes from salespeople's customer interactions (Lambert et al. 1997; Cannon and Spiro 1991).

### **Sales managers, salespeople, and customers**

Among the 20 most frequently assessed outcomes in studies combining sales managers, salespeople, and customers as respondents, six are economic outcomes— sales revenue, sales in orders, sales growth, cross-selling, ROI/efficiency, and profit/margins/contributions. These assessments of economic outcomes raise concerns regarding the reliability of the ratings from salespeople and sales managers (Jaramillo et al. 2005; Rich et al. 1999).

These studies also assess outcomes associated with customer interactions and customer satisfaction, such as customer value, understanding customer needs/customer orientation, customers' willingness to pay a price premium, customer satisfaction, and intentional loyalty. By including customers, this combination of respondents may be able to provide reliable and valid assessments of such outcomes.

### **Customers**

Studies using solely customers as respondents assess nine outcomes. Two of these outcomes are related to customers' buying process (the product is included in our consideration set and the product is evaluated), and two



outcomes are associated with sales revenue (the product is chosen and purchase volume). Thus, these four outcomes are oriented toward the selling firm's (short-term) sales goals and, only to a small degree, toward customer satisfaction. However, five of the nine outcomes assessed by customers are related to customer interactions and customer satisfaction—customer value, easily accessible salesperson, individual attention, technical assistance, and customer satisfaction. These are outcomes that customers provide the most reliable and valid assessments of (Lambert et al. 1997; Cannon and Spiro 1991).

It is noteworthy that the reviewed studies using solely customers as respondents do not assess several types of outcomes that customers can provide the most reliable and valid assessments of. Specifically, customers are in the best position to evaluate salespeople's customer interactions, such as understanding customer needs, creating solutions to fulfill requirements, providing offer quality, building customer business, forming customer relationships, and triggering repurchase intentions. Failing to have customers assess these outcomes indicates that these studies do not utilize the full potential of customer respondents to provide reliable assessments of critical outcomes from salespeople's customer interactions in B2B selling.

### **General recommendations on data sources to assess outcomes from B2B selling**

Selecting data sources to assess the outcomes from B2B selling can be quite different for managers and researchers. Managers have relatively easy access to all data sources appropriately to assess the various types of outcomes. Researchers, on the other hand, need managers' permission to gain access to these data sources but may have difficulties obtaining such access for

several reasons. First, managers may not perceive any benefits from participating in research and may view a survey as too time-consuming for themselves and their subordinates. Second, managers may be particularly unwilling to share customer files and account data with anybody outside their firms. Last, managers may fear that sales managers and salespeople will share information with competitive value, for example, sales tactics, sales propositions, and quality systems.

Researchers and managers may view certain types of outcomes more appropriate to measure and may deem specific data sources more appropriate to assess those outcomes. However, to develop the literature on data sources for sales surveys, it could be beneficial to scrutinize and discuss a general ranking of data sources to assess outcomes from selling. Based on the present evaluations of the reviewed data sources, the following suggestions on a general ranking of data sources may contribute to such scrutinizing.

For researchers who want to use only one data source to assess outcomes from B2B selling, two substantial arguments favor company records. First, company records provide by far the most reliable assessments of economic outcomes, which are the most important outcomes from selling. Second, company records can provide data on B2B customers' repurchase patterns and actual loyalty, which can in turn give valuable indications of, for example, offer value and customer satisfaction. Thus, company records can provide indicators of the quality of firms' customer interactions, which represents critical outcomes from B2B selling.

For researchers who want to use two data sources to assess outcomes from B2B selling, several arguments favor supplementing company records with ratings from customers. First, customers are naturally in the best position to provide the most reliable ratings of salespeople's customer interactions and

customer satisfaction (Lambert et al. 1997; Cannon and Spiro 1991). Due to the critical importance of such outcomes in B2B selling, researchers are well advised to use this reliable data source. Further, customers are preferable over salespeople to rate customer interactions and customer satisfaction because salespeople's self-ratings may suffer from respondent biases (Steenkamp et al. 2010) and may be overly positive (Tourangeau and Yan 2007).

Researchers who want to use three or four data sources should supplement company records and customer ratings with ratings from sales managers and salespeople. Sales managers and salespeople both have detailed insights into sales operations. Salespeople are naturally in the best position to provide the most detailed and accurate information about their individual sales behavior and interactions with specific customers (Lyon et al. 2000). However, three arguments favor sales managers over salespeople as respondents. First, sales managers normally have a broader overview of and expectations for outcomes from selling compared to salespeople (Rich et al. 1999), which may help sales managers rate multiple types of outcomes. Second, sales managers who work closely with salespeople and customers may have detailed insights into sales operations and salespeople's customer interactions. Last, salespeople's self-ratings can be more biased from socially desirable responding compared to sales managers (Shore et al. 1992; Steenkamp et al. 2010; Paulhus 2002; Tourangeau and Yan 2007).

### **Specific data sources recommended to assess various types of outcomes from B2B selling**

This section provides recommendations on specific data sources valid to assess various types of outcomes. These recommendations are created by

recategorizing the 20 most frequently measured outcomes in each of the six categories of data sources presented in Table 1. The measured outcomes are recategorized under four data sources (company records, customers, sales managers, and salespeople), as shown in Table 2. The following criteria are used to recategorize the measured outcomes.

First, company records should be used to assess economic outcomes and outcomes regarding customers’ repurchase patterns and actual loyalty. Second, customers should be used to assess outcomes associated with salespeople’s customer interactions and customer satisfaction. Third, sales managers and salespeople should both be used to assess outcomes associated with sales operations. However, because of sales managers’ broader definition of sales performance outcomes, sales managers should be used to assess overall sales performance outcomes. Further, should sales managers be used to assess salespeople’s ability to assist them in achieving their goals and keeping the paperwork accurate. In addition to many of the same outcomes that sales managers are appropriate to assess, salespeople should be used to assess outcomes that require detailed insights into individual sales efforts, such as the number of sales calls salespeople make.

**Table 2. Recommended data sources to assess various types of outcomes from B2B selling**

Company records	Customers	Sales managers	Salespeople
Sales revenue Sales vs. quota Sales growth Profit/margins/contributions Market share Sales of high-profit products Sales of new products Actual customer loyalty Sales to major customers Quickly generating sales Return on investment/Efficiency Sales in orders New customers—acquired Sales of long-term contracts Cross-selling Number of sales in units/orders Additional products sold Cost Sales of a specific brand Return on sales Earnings before interest and taxes/EBIT	Offer value—price/quality ratio The product is included in our consideration set The product is chosen Customer satisfaction Understanding customer needs/customer orientation Customers’ willingness to pay a price premium Intentional customer loyalty The product is evaluated Easily accessible salesperson Individual attention Technical assistance Purchase volume Creating solutions to fulfill requirements Offer quality compared to competitors Customers’ satisfaction/relationship with salesperson Pleasant/enjoyable collaboration Positive opinion of the salesperson Recommending likelihood Share of customer’s wallet Built customer’s business Share of customer’s wallet Providing information to customers Convincing customers that problems are understood	Customer relationships—established Customer relationships—maintenance/improvement Effective sales presentations Develop new accounts from established contacts Customer relationships—effort Sales expertise and skills Sales activities—quantity/quality Knowing applications and functions Number of won/lost sales opportunities Number of contacts per purchase Overall sales performance outcomes Assisting supervisor in achieving his/her goals Paperwork is accurate and complete	Customer relationships—established Customer relationships—maintenance/improvement Effective sales presentations Develop new accounts from established contacts Customer relationships—effort Sales expertise and skills Sales activities—quantity/quality Knowing applications and functions Number of won/lost sales opportunities Number of contacts per purchase Number of sales calls Providing information to customers

Table 2 shows the data sources recommended to assess the various types of outcomes from B2B selling and, vice versa, the outcomes that can be validly assessed using each data source. The ordering of the outcomes is based on the frequency with which the outcomes are assessed in the reviewed studies and, thus, indicates the value and relevance researchers view each outcome to have.

Table 2 reveals two major recategorizations of the outcomes and two key recommendations regarding valid data sources to assess the outcomes. First, many of the outcomes assessed by sales managers and salespeople are economic outcomes and outcomes associated with customer interactions. These outcomes are recategorized under company records and customers, respectively. The recategorization reveals that company records and customers are valid for assessing multiple types of outcomes.

Second, multiple types of outcomes assessed by various data sources are associated with sales operations and salespeople's customer interactions. Both sales managers and salespeople have detailed insights to assess such outcomes. Thus, the first 11 outcomes suggested to be assessed by sales managers and salespeople are similar, as shown in Table 2.

## **Conclusions and implications**

This study investigated the data sources researchers use to assess various outcomes from B2B selling in 139 published studies. Further, this study evaluated the reliability and validity of these data sources and provided recommendations on appropriate data sources to assess various outcomes. Conclusions from the review, evaluation, and recommendations are presented in the following paragraphs.

### **Data sources used to assess outcomes from B2B selling**

The first research question asks which data sources researchers use to assess the various outcomes from B2B selling. The answer to this question is presented in the results and discussion section and summarized in Table 1. The second research question asks if researchers use the most valid data sources to assess the various outcomes. The present evaluation reveals a widespread practice among researchers of using data sources that do not provide the most reliable and valid assessments of the measured outcomes. The following paragraphs conclude the answers to the two research questions.

By far, salespeople and sales managers are the most frequent data sources used in the reviewed studies. Salespeople and sales managers are frequently used to rate economic outcomes, despite such respondents' weaker ability to provide reliable and valid assessments of such outcomes compared to company records (Jaramillo et al. 2005; Rich et al. 1999). Further, do salespeople and sales managers frequently rate outcomes associated with salespeople's customer interactions, despite their weaker ability to provide reliable and valid assessments of such outcomes compared to customers (Lambert et al. 1997; Cannon and Spiro 1991).

Company records are used to assess mostly economic outcomes in the reviewed studies and are the most reliable data sources to assess such outcomes. However, company records are used to assess only a narrow set of outcomes. Thus, researchers do not harness the full potential of the variety of important outcomes that company records can reliably and validly assess, for example, customers' actual loyalty, cost/efficiency of salespeople, market share, and the share of customers' wallets. Customers are used as a data source by only a few of the reviewed studies. This rare use indicates ignorance of customers as a valuable data source despite that customers can provide the most reliable assessment of critical outcomes from B2B selling, such as customer interactions and customer satisfaction (Lambert et al. 1997; Cannon and Spiro 1991). Further, customers do assess only a narrow set of outcomes associated with salespeople's customer interactions and customer satisfaction. Thus, researchers do not harness the full potential of the variety of critical outcomes customers should assess.

### **Recommended data sources to assess outcomes from B2B selling**

The present evaluation of data sources guided a general ranking of data sources that favors company records and customers. These data sources are favored because they can provide the most reliable assessments of two critical types of outcomes from B2B selling—economic outcomes and outcomes from salespeople's customer interactions. Further, sales managers and salespeople are recommended to provide detailed and accurate information about outcomes associated with sales behavior, sales operations, and sales tactics.

Based on previous sales research and the present evaluations, the outcomes assessed in the reviewed studies are recategorized in accordance with the data sources most appropriate to assess the respective outcomes. This

recategorization represents recommendations on valid data sources to assess various types of outcomes from B2B selling, as presented in Table 2. The table shows that company records and customers are recommended to assess multiple types of outcomes. Further, the table shows that sales managers and salespeople are recommended to assess many similar outcomes.

## **Implications for researchers**

The present study extends research on valid data sources for surveys to the domain of valid data sources for assessing outcomes from B2B selling. This specific extension provides sales researchers with valuable recommendations on the most reliable and valid data sources to assess various types of outcomes.

The review reveals several concerns regarding the reliability of the data sources researchers use to assess the outcomes. These concerns question the reliability of the assessments, and thus the quality of theory testing and knowledge building in research. Consequently, these findings address sales researchers to reevaluate the data sources used to assess the outcomes. Researchers should recognize the following findings and concerns.

Salespeople and sales managers are dominating data sources in the reviewed studies, which shows that such respondents have large impacts on assessments and knowledge building in sales research. Thus, researchers should acknowledge the problems with respondent biases from such respondents, and particularly those associated with salespeople's self-ratings. These probable biases address researchers to carefully select which outcomes salespeople should assess.



The review reveals that sales managers and salespeople are frequently assessing economic outcomes and outcomes associated with salespeople's customer interactions. These are outcomes where company records and customer, respectively, could have provided much more reliable assessments. This mismatch between data sources and outcomes address researchers to adjust the outcomes assessed by sales managers and salespeople. Further, the large emphasis on economic outcomes and outcomes from customer interactions addresses researchers to strive to overcome the difficulties obtaining access to company records and customer files and increase the use of such data sources.

The review also reveals that customers are used in only a few studies despite that customers can provide reliable assessments of critical outcomes from B2B selling. This rare use addresses researchers to increase their use of customers to assess the outcomes. Further, researchers should recognize that only a few of the outcomes customers normally assess actually involve the quality of customer interactions and customer satisfaction. Thus, researchers using customers as respondents should expand the variety of outcomes assessed to fully realize customers' unique position, insights, and reliability as respondents.

Researchers should use Table 2 as guidance to select appropriate data sources to assess the different types of outcomes from B2B selling. Further, the table provides concrete recommendations on outcomes that are appropriate to assess using each data source. By following this guidance, researchers will contribute to improving the reliability of assessments and the quality of future sales research.

## Implications for managers

This study investigates researchers' use of data sources to assess outcomes from B2B selling but does not indicate the data sources managers use. However, managers in selling generally use the same data sources as researchers to assess outcomes from selling; thus, this study provides valuable guidance to managers as well. Further, different from researchers, managers are fortunate to have relatively easy access to all data sources valid to assess the outcomes. The present examination explains the probable weaknesses of using sales managers and salespeople to rate economic outcomes and outcomes associated with salespeople's customer interactions and customer satisfaction. Thus, managers should use company records and customers, respectively, for collecting the most reliable assessments of such critical outcomes from B2B selling.

Managers should use salespeople to rate outcomes related to salespeople's sales operations and interactions with departments and colleagues within their own firms. However, managers should acknowledge the probable respondent biases associated with salespeople's self-ratings and conduct and interpret such assessments with caution. Table 2 provides valuable suggestions on outcomes that are appropriate for salespeople to assess. Selecting reliable and valid data sources is fundamental for effective sales management as sales managers are responsible for monitoring and producing multiple types of outcomes. Table 2 provides managers with actionable recommendations on valid data sources to assess various types of outcomes as well as which outcomes can be assessed by each data source.

## Limitations and further research

This study does solely investigate researchers' use of data sources to assess outcomes from B2B selling. A valuable extension of this examination would be to investigate managers' use of data sources to assess the outcomes. A comparison of researchers' and managers' use of data sources to assess various types of outcomes may provide valuable contributions to researchers and practitioners. Such a comparison may help researchers adapt their use of data sources to the practical world of selling and may improve managers' use of data sources by helping them adopt methods from researchers.

The review reveals that company records are used to assess relatively few outcomes, and this study contributes by suggesting a large variety of outcomes appropriate for company records to assess. Further research should investigate company records' ability to provide reliable assessments of these outcomes, and particularly how company records can be used to assess non-economic outcomes, for example, outcomes regarding customer interactions, customer loyalty, and customer satisfaction.

Previous research has investigated the relationship between managers' and customers' ratings of outcomes associated with salespeople's customer interactions. As salespeople are frequently used to assess such outcomes in the reviewed studies, further research should examine the relationship between salespeople's and customers' ratings of such outcomes. Such an investigation could provide detailed insights into, for example, respondent biases associated with salespeople's self-ratings of specific types of outcomes associated with customer interactions and how to handle this issue.

## References

- Adkins, R. T. (1979). Evaluating and comparing salesmen's performance. *Industrial Marketing Management, 8*(3), 207-212.
- Asare, A. K., Yang, J., & Alejandro, T. G. B. (2012). The state of research methods in personal selling and sales management literature. *Journal of Personal Selling & Sales Management, 32*(4), 473-489
- Blocker, C. P., Cannon, J. P., Panagopoulos, N. G., & Sager, J. K. (2012). The role of the sales force in value creation and appropriation: New directions for research. *Journal of Personal Selling & Sales Management, 32*(1), 15-27.
- Cannon, J. P., & Spiro, R. (1991). The measurement of salesperson performance: Comparing self-evaluations with customer evaluations. In Gilly M. et al., (Eds.), *Enhancing knowledge development in marketing. Summer educators' proceedings* (pp 1-10). Chicago, IL: American Marketing Association.
- Churchill, G. A. Jr., Ford, N. M., Hartley, S. W., & Walker, O. C. Jr. (1985). The drivers of salesperson performance: A meta-analysis. *Journal of Marketing Research, 22*(2), 103-118.
- Davie, C., Stephenson, T., & Valdivieso De Uster, M. (2010). Three trends in business-to-business sales. *McKinsey Quarterly, 19*(May), 1-4.
- Dawes, P. L., Lee, D. Y., & Dowling, G. R. (1998). Information control and influence in emergent buying centers. *Journal of Marketing, 62*(3), 55-68.
- Henard, D. H., & Szymanski, D. M. (2001). Why some new products are more successful than others. *Journal of Marketing Research, 38*(3), 362-375.
- Hughes, D. E., Le Bon, J., & Rapp, A. (2013). Gaining and leveraging customer-based competitive intelligence: The pivotal role of social capital and salesperson adaptive selling skills. *Journal of The Academy of Marketing Science, 41*(1), 91-110.
- Hult, G. T. M., Ketchen, D. J. Jr., Griffith, D. A., Chabowski, B. R., Hamman, M. K., Dykes, B. J., Pollitte, W. A., & Cavusgil, S. T. (2008). An assessment of the measurement of performance in international business research. *Journal of International Business Studies, 39*(6), 1064-1080.
- Ittner, C. D., & Larcker, D. F. (2003). Coming up short on no financial performance measurement. *Harvard Business Review, 81*(11), 88-95.

- Jaramillo, F., Carrillat, F. A., & Locander, W. B. (2005). A meta-analytic comparison of managerial ratings and self-ratings. *Journal of Personal Selling & Sales Management*, 25(4), 315-328.
- Katsikeas, C. S., Morgan, N. A., Leonidou, L. C., & Hult, G. T. M. (2016). Assessing performance outcomes in marketing. *Journal of Marketing*, 80(2), 1-20.
- Lam, S. Y., Shankar, V., Erramilli, M. K., & Murthy, B. (2004). Customer value, satisfaction, loyalty, and switching cost: An illustration from business-to-business service context. *Journal of the Academy of Marketing Science*, 32(3), 293-311.
- Lambert, D. M., Sharma, A., & Levy, M. (1997). What information can relationship marketers obtain from customer evaluations of salespeople? *Industrial Marketing Management*, 26(2), 177-187.
- Limbu, Y. B., Jayachandran, C. N., Babin, B. J., & Peterson, R. T. (2016). Empathy, nonverbal immediacy, and salesperson performance: The mediating role of adaptive selling behavior. *Journal of Business & Industrial Marketing*, 31(5), 654-667.
- Lyon, D. W., Lumpkin, G. T., & Dess, G. G. (2000). Enhancing entrepreneurial orientation research: Operationalizing and measuring a key strategic decision making process. *Journal of Management*, 26(5), 1055–1085.
- Mizik, N., & Jacobsen, R. (2003). Trading off between value creation and value appropriation: The financial implications of shifts in strategic emphasis. *Journal of Marketing*, 67(1), 63-76.
- Paulhus, D. L. (2002). Socially desirable responding: The evolution of a construct. In Braun, H. I., Jackson, D. N., & Wiley, D. E. (Eds.), *The role of constructs in psychological and educational measurement* (pp 49-69). Mahwah, NJ: Lawrence Erlbaum Associates.
- Rapp, A., Gabler, C., & Ogilvie, J. (2020). A holistic perspective of sales research: Areas of consideration to develop more comprehensive conceptual and empirical frameworks. *Journal of Personal Selling & Sales Management*, 40(4), 227-233.
- Reichheld, F. F. (1996). *The loyalty effect*. Boston, MA: Harvard Business School.

- Rich, G. A., Bommer, W. H., MacKenzie, S. B., Podsakoff, P. M., & Johnson, J. L. (1999). Methods in sales research: Apples and apples or apples and oranges? A meta-analysis of objective and subjective measures of salesperson performance. *Journal of Personal Selling & Sales Management, 19*(4), 41-52.
- Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2009). Measuring organizational performance: Towards methodological best practice. *Journal of Management, 35*(3), 718-804.
- Rust, R. T., Zeithaml, V. A., & Lemon, K. N. (2000). *Driving customer equity: How customer lifetime value is reshaping corporate strategy*. New York: The Free Press.
- Schmitz, C., Lee, Y.-C., & Lilien, G. L. (2014). Cross-selling performance in complex selling contexts: An examination of supervisory- and compensation-based controls. *Journal of Marketing, 78*(3), 1-19.
- Sharma, A., Rich, G. A., & Levy, M. (2013). Comment: Starting to solve the method puzzle in salesperson self-report evaluations. *Journal of Personal Selling & Sales Management, 24*(2), 135-139.
- Shore, T. H., Shore, L. M., & Thornton, G. C. III. (1992). Construct validity of self- and peer ratings of performance dimensions in an assessment center. *Journal of Applied Psychology, 77*(1), 42-54.
- Steenkamp, J.-B. E. M., de Jong, M. G., & Baumgartner, H. (2010). Socially desirable response tendencies in survey research. *Journal of Marketing Research, 47*(2), 199-214.
- Tourangeau, R., & Yan, T. (2007). Sensitive questions in surveys. *Psychological Bulletin, 133*(5), 859-883.
- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing, 68*(1), 1-17.
- Verbeke, W., Frank, D. B., Bakker, A. B., & Dietz, B. (2008). When intelligence is (dys)functional for achieving sales performance. *Journal of Marketing, 72*(4), 44-57.
- Verbeke, W., Dietz, B., & Verwaal, E. (2011). Drivers of sales performance: a contemporary meta-analysis. Have salespeople become knowledge brokers? *Journal of the Academy of Marketing Science, 39*(3), 407-428.

- Wang, G., Dou, W., & Zhou, N. (2012). The interactive effects of sales force controls on salespeople behaviors and customer outcomes. *Journal of Personal Selling & Sales Management*, 32(2), 225-243.
- Wang, C., Hoegg, J., & Dahl, D. W. (2018). The impact of a sales team's perceived entitativity on customer satisfaction. *Journal of the Academy of Marketing Science*, 46(3), 190-211.
- Weitz, B. A., & Bradford, K. D. (1999). Personal selling and sales management: A relationship marketing perspective. *Journal of the Academy of Marketing Science*, 27(2), 241-255.
- Williams, B. C., & Plouffe, C. R. (2007). Assessing the evolution of sales knowledge: A 20-year content analysis. *Industrial Marketing Management*, 36(4), 408-419.
- Williams, M., & Attaway, J. S. (1996). Exploring salespersons' customer orientation as a mediator of organizational culture's influence of buyer-seller relationships. *Journal of Personal Selling & Sales Management*, 16(4), 33-52.
- Zallocco, R., Pullins, E. B., & Mallin, M. L. (2009). A re-examination of B2B sales performance. *Journal of Business & Industrial Marketing*, 24(8), 598-610.
- Zoltners, A. A., Sinha, P., & Lorimer, S. E. (2012). Breaking the sales force incentive addiction: A balanced approach to sales force effectiveness. *Journal of Personal Selling & Sales Management*, 32(2), 171-186.

## Utgitt i ph.d. serie ved Handelshøgskolen:

- Nr. 1 – 2003      Lars Øystein Widding  
Bygging av kunnskapsreservoarer i teknologibaserte nyetableringer
- Nr. 2 – 2005      Pawan Adhikari  
Government Accounting in Nepal: Tracing the Past and the Present
- Nr. 3 – 2005      Tor Korneliussen  
The Relationship between Initiation, Barriers, Product Quality and Internationalization
- Nr. 4 – 2005      Bjørn Willy Åmo  
Employee innovation behavior
- Nr. 5 – 2005      Odd Birger Hansen  
Regnskap og entreprenørskap. En fortolkende studie av hvordan to entreprenører bruker regnskap
- Nr. 6 – 2006      Espen John Isaksen  
Early Business Performance  
- Initial factors effecting new business outcomes
- Nr. 7 – 2006      Konstantin Timoshenko  
Russian Government Accounting:  
Changes at the Central level and at a University
- Nr. 8 – 2006      Einar Rasmussen  
Facilitating university spin-off ventures  
-an entrepreneurship process perspective
- Nr. 9 – 2007      Gry Agnete Alsos  
Portfolio Entrepreneurship - general and farm contexts
- Nr. 10 – 2007     Elsa Solstad  
Tre sykehus - to verdener - en fusjon.  
En studie av reorganisering i et helseforetak
- Nr. 11 – 2007     Levi Gårseth-Nesbakk  
Experimentation with accrual accounting at the central government level in Norway - how a global phenomenon becomes a local practice
- Nr. 12 – 2007     Tatiana Iakovleva  
Factors Associated with new venture performance:  
The context of St. Petersburg



- Nr. 13 – 2007 Einar Lier Madsen  
Utvikling av dynamiske kapabiliteter i små og mellomstore bedrifter
- Nr. 14 – 2008 Anne Haugen Gausdal  
'Network Reflection' – a road to regional learning, trust and innovation
- Nr. 15 – 2008 Lars Rønning  
Social capital in farm-based entrepreneurship and rural development
- Nr. 16 – 2008 Terje Andreas Mathisen  
Public Passenger Transport in Norway – Regulation, Operators' Cost Structure and Passengers' Travel Costs
- Nr. 17 – 2008 Evgueni Vinogradov  
Immigrant Entrepreneurship in Norway
- Nr. 18 – 2008 Elin Oftedal  
Legitimacy of Creative Destruction
- Nr. 19 – 2009 Frode Kjærland  
Valuation of Generation Assets – a Real Option Approach
- Nr. 20 – 2009 Tatiana Maximova-Mentzoni  
Marketization of the Russian University: Origins, Features and Outcomes
- Nr. 21– 2009 Hugo Skålsvik  
Studies of Market led Processes influencing Service Performance:  
-Case Studies on the Norwegian Coastal Voyage
- Nr. 22– 2009 Svein Oskar Lauvsnes  
Determinants of a shifting effective demand equilibrium.  
An explorative investigation of the interaction between  
psychological, financial and real factors
- Nr. 23– 2010 Frode Fjelldal-Soelberg  
Entreprenøriell markedsføring. En studie av entreprenørskap og markeds-  
føring som overlappende fenomen
- Nr. 24– 2010 Heidi Rapp Nilsen  
From Weak to Strong Sustainable Development  
An analysis of Norwegian economic policy tools in mitigating climate  
change

- Nr. 25– 2010      Gowindage Chamara Jayanath Kuruppu  
Development of Central Government Accounting in Sri Lanka:  
Three perspectives on the accounting changes
- Nr. 26– 2010      Marina Z. Solesvik  
Interfirm collaboration: The context of shipbuilding.
- Nr. 27– 2010      Jan Terje Henriksen  
Planning, Action and Outcome  
- Evaluation of the Norwegian Petroleum System:  
A Structuration Approach to Ripple Effect Studies
- Nr. 28– 2010      May Kristin Vespestad  
Empowered by Natures – Nature-based High North Tourism Experiences  
in an International Context
- Nr. 29– 2011      Andrei Mineev  
How has the petroleum supply industry developed in The Russian Barents  
Sea Region? Institutional and managerial aspects
- Nr. 30– 2011      Jorunn Grande  
Entrepreneurship in small rural firms - the case of agriculture
- Nr. 31– 2011      Thomas Johansen  
Paradigms in Environmental Management Research:  
Outline of an Ecosophical-Hermeneutic Alternative
- Nr. 32– 2011      Elena Dybtsyna  
Accountant in Russia: changing times, changing roles.
- Nr. 33– 2012      Harald Fardal  
Information Systems Strategy in Practice  
A Social Process Perspective
- Nr. 34– 2012      Kristin Haugland Smith  
Hva er bedrifters samfunnsansvar?  
- En empirisk tilnærming av bedrifters ansvar overfor samfunnet
- Nr. 35– 2012      Are Branstad  
The management of entrepreneurship support  
– Organisation and learning in corporate incubation, technology transfer  
and venture capital
- Nr. 36– 2012      Victoria Konovalenko  
A “coordination kaleidoscope”:  
The role of a “Corporate University” as a coordinator of knowledge flows  
in a Russian transnational corporation

- Nr. 37– 2012 Thor-Erik Sandberg Hanssen  
Essays in Transport Economics with application to Transport Policy
- Nr. 38– 2013 Are Severin Ingulfsvann  
Verdiforskryvning i friluftslivet i lys av økologisk økonomi
- Nr. 39– 2013 Natalia Andreassen  
Sustainability Reporting in a Large Russian Oil Corporation.  
Production Safety Issues
- Nr. 40– 2013 Elena Panteleeva  
Contemporary Management Accounting Practices in Russia:  
The Case of a Subsidiary in a Russian Oil Company
- Nr. 41– 2013 Thusitha S.L.W.Gunawardana  
Impact of Power Sources on Channel Members' Performance
- Nr. 42– 2013 Nadezda Nazarova  
Mastering Nature and Managing Frictions: Institutional Work and Supply  
Chain Management in the High North
- Nr. 43– 2013 Inge Hermanrud  
Managed Networks of Competence in Distributed Organizations  
- The role of ICT and Identity Construction in Knowledge Sharing
- Nr. 44– 2013 Kari Djupdal  
Sustainable entrepreneurship:  
outcomes associated with an environmental certification resource
- Nr. 45– 2013 Imtiaz Badshah  
Federal government accounting in The Islamic Republic of Pakistan
- Nr. 46– 2014 Muhammad Arif  
Inter-organizational Exchange Relationships  
– Exchange Relationships between Local Service Suppliers and Tour  
Operators in the Tourism Distribution Channel
- Nr. 47– 2014 Wondwesen Tafesse  
The Marketing Functions of the Trade Show System
- Nr. 48– 2014 Fritz J. Nilssen  
Erfaringsutveksling som grunnlag for mestring og livskvalitet  
Diagnoseoverskridende samtalegrupper for familier med barn som har  
nedsatt funksjonsevne og eller kronisk sykdom.

- Nr. 49– 2014 Ingebjørg Vestrum  
The Resource Mobilisation Process of Community Ventures  
-The Case of Cultural Events in Rural Communities
- Nr. 50– 2014 Ragnhild Johnson  
The Practice of Project Management  
- A qualitative analysis of complex project-based organizations
- Nr. 51– 2014 Ann Heidi Hansen  
Memorable moments  
Consumer immersion in nature-based tourist experiences
- Nr. 52– 2014 June Borge Doornich  
Entry modes and organizational learning during internationalization  
An analysis of Norwegian supply companies' entering and expanding in  
the Russian oil and gas sector
- Nr. 53– 2014 Kjersti Karijord Smørvik  
Opplevelsesskaping i dynamiske opplevelsesrom:  
En studie av turistenes opplevelser på Hurtigruten
- Nr. 54– 2015 Marianne Terese Steinmo  
How Firms use University-Industry Collaboration to Innovate:  
The role and Development of Social Capital and Proximity Dimensions
- Nr. 55– 2015 Eva J.B. Jørgensen  
Border Firms: Norway and Russia
- Nr. 56– 2015 Krister Salamonsen  
Exogenous Shocks as Drivers of Growth in Peripheral Regions.  
- A Multilevel Approach to Regional Development
- Nr. 57– 2015 Hindertje Hoarau Heemstra  
Practicing open innovation in experience-based tourism:  
the roles of knowledge, values and reflexivity
- Nr. 58– 2015 Elena Zhurova  
Environmental Performance Reporting of Russian Oil and Gas Companies
- Nr. 59– 2016 Siri Jakobsen  
Environmental innovation cooperation:  
The development of cooperative relationships between Norwegian firms
- Nr. 60– 2016 Antonina Tsvetkova  
Supply Chain Management in the Russian Arctic:  
An institutional perspective

- Nr. 61– 2017 Kjersti Granås Bardal  
Impact of Adverse Weather on Road Transport:  
Implications for Cost-Benefit Analysis
- Nr. 62– 2017 Kristian Støre  
Methodological contributions and applications in real options analysis
- Nr. 63– 2017 Thomas André Lauvås  
The dynamics of university-industry collaboration:  
A longitudinal case study of research centers
- Nr. 64– 2017 Sølvi Solvoll  
Development of effectual and casual behaviors:  
Exploring new venture creation in the tourism industry
- Nr. 65– 2017 Evgenii Aleksandrov  
The changing role of accounting from reformees' perspective:  
A study of public sector reforms in Russia
- Nr. 66– 2017 Igor Khodachek  
Budget, Strategy and Accounting.  
Managing institutional change in Russia's governments
- Nr. 67– 2018 Vivi Marie Lademo Storsletten  
Quality as flourishing  
A study of quality based upon leadership in kindergartens with  
implications for Ecological Economics
- Nr. 68– 2018 Olga Iermolenko  
The human side of accounting:  
The bonds between human agency and management accounting  
practices' changes in the transitional economy
- Nr. 69– 2018 Karin Wigger  
Mobilization of Collective Resources for Entrepreneurship:  
Case Studies in Nordic Peripheries
- Nr. 70 – 2018 Andreas Mikkelsen  
Trading fast and slow: algorithmic trading in the Nordic region
- Nr. 71 – 2018 Asbjørn Veidal  
Strategic entrepreneurship in farm businesses
- Nr. 72 – 2018 Are Jensen  
Early imprints in and on new technology-based firms

- Nr. 73 – 2018 Marianne Arntzen-Nordqvist  
The financing process of new technology-based firms  
- The entrepreneur's perspective
- Nr. 74 – 2019 Irina Nikolskaja Roddvik  
Deprivation of control: A driving force to gain influence during  
the internationalization process of MNC
- Nr. 75 – 2019 Petter Gullmark  
Unraveling the Building Blocks of Local Government Organizations'  
Innovativeness: Insights from a Dynamic Capabilities Perspective
- Nr. 76 – 2019 Hanne Stokvik  
Knowledge for Innovation
- Nr. 77 – 2019 Anastasiya Henk  
Between the Devil and the Deep Blue Sea: Managing Business Processes  
in Turbulent Environments
- Nr. 78 – 2019 Tadeu Fernando Nogueira  
Entrepreneurial Learning: An Exploration of the Learning of  
New Venture Founders
- Nr. 79 – 2020 Veronika Vakulenko  
Public Sector Reforms in Ukraine: Roles Played by Global and Local  
Agents in Implementing Converging and Diverging Changes
- Nr. 80 – 2020 Lars Hovdan Molden  
Adapting to Change - On the Mechanisms of Dynamic Capabilities
- Nr. 81 – 2020 Sudip Kranti Tiwari  
Navigating International Entrepreneurship in a Developing Economy Con-  
text: Lessons from Nepal
- Nr. 82 – 2020 Vu Le Tran  
Expected Returns: An Empirical Asset Pricing Study
- Nr. 83 – 2020 Marit Breivik-Meyer  
It takes two to tango:  
The role of incubators in the early development of start-ups
- Nr. 84 – 2021 Per Ivar Seljeseth  
Assessing Outcomes from Business-to-Business Selling

This thesis investigates the assessment of sales performance outcomes in business-to-business (B2B) sales research. These outcomes range from economic outcomes, such as sales revenue, to outcomes associated with salespeople's customer interactions, such as customer satisfaction. Sales researchers frequently use these outcomes as dependent variables to identify antecedents to improved selling, and sales managers have an intense focus on optimizing these outcomes.

This thesis investigates the conceptualization, operationalization, data sources, and respondents used to assess the outcomes. A systematic literature review of 139 studies generated data to investigate these methodological issues in four research papers.

The first paper investigates the measures used to assess the outcomes, and the second paper develops a theoretical framework that conceptualizes outcomes from B2B selling. The third paper investigates the number of measures, the use of objective and subjective measures, and the respondent types used to assess the outcomes. Finally, the fourth paper investigates the data sources used to assess various outcomes.

In summary, this thesis reveals the large variety of quality and sophistication in the methods researchers used to assess outcomes from B2B selling. Moreover, this thesis reveals the widespread use of methods that, according to previous research, do not provide the most reliable and valid assessments—for example, the use of few revenue-focused measures, subjective measures, self-ratings, and single-source measures as well as a mismatch between data sources and collected measures. This finding should encourage many sales researchers to reevaluate their methods used to assess these outcomes. This thesis suggests theoretical frameworks, guidelines, and future research to help researchers and managers improve their assessments of outcomes from B2B selling.