AN ESSAY ON SALESFORCE AGILITY: IS THE CONCEPT WORTHY OF STUDY?

by

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DISSERTATION

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DEDICATION

This dissertation is dedicated to my parents, Mr. Gias Pervez and Mrs. Amanat Newaz Pervez;

For their never-ending love, support and encouragement.

This dissertation is also dedicated to my wife, Fahmida;

whose love, patience and support over the past four years were unmeasurably appreciated.

ABSTRACT

AN ESSAY ON SALESFORCE AGILITY: IS THE CONCEPT WORTHY OF STUDY?

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Sales force agility has been identified as an important issue for contemporary professional selling and sales management (Jones et al. 2005). However, up until now, marketing scholars have sparingly paid attention to the concept of sales agility. Marketers as well as salespeople are not quite informed about the term "salesperson agility" even though they sense the need for agility in order to deal with the changing business environment and customer requirements. Therefore, this dissertation explores sales agility in detail. First, in this dissertation, an extensive literature review is conducted to conceptually ascertain how agility might be different than adaptive selling, flexibility, diligence - metrics that contain some measure of adaptive behavior. Once this conceptual distinction is made, this research seeks to begin the journey toward the development of a salesperson agility scale based on the agility foundation of Kidd (1999) and Chonko and Jones (2005) agility selling. In examining the wisdom of developing an agility metric, this dissertation presented preliminary empirical examination of the construct and its relationship to other "adaptation" metrics including the adaptive selling approach. The work presented provide a starting point into the investigation of salesperson agility as a variable worthy of study in salesforce research. The question was posed

as to whether or not salesperson agility provides any marginal contribution to knowledge of sales outcomes beyond that provided by adaptability. The answer based on the preliminary research presented is “yes”. Finally, a preliminary test of a proposed model in which the salesperson’s intrinsic motivation, customer orientation, and learning orientation are viewed as antecedents to salesperson agility which in turn impacts salesperson’s outcome performance, job satisfaction, and customer’s satisfaction with the salesperson has been conducted.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS ……..	ii
DEDICATION ……	iii
ABSTRACT ……..	iv
CHAPTER I: INTRODUCTION ……	1
Purpose Scope of the Research ……..	4
Rationale for Research ……..	6
Organization of Dissertation ……..	6
CHAPTER II: LITERATURE REVIEW ……	7
Origins of the Agility Construct ……..	7
Three Levels of Agility ……	11
Organizational Agility ……	11
Organizational Agility as Organizational Internal Capabilities ……..……	11
Organizational Agility as Organizational External Capabilities …….	16
Workforce Agility …….	18
Agile Workforce – Essential Component of Organizational Agility ……	18
Types of Agility – Related Behavior in Workforce …….	21
Empirical Research on Workforce Agility ……	26
Salesforce Agility ……..	30
Sales Agility Model …….	30
Is Agility Different than Other Concept that Assess Ability to Adapt …….	34
Adaptive Selling ……	34

Empirical Research on Adaptability …… 35

Summary of Key Facets of Adaptability …… 37

Agility Selling versus Adaptive Selling …… 41

Diligence …… 43

Agility versus Diligence ……. 46

Flexibility ……. 46

Types of Flexibility …… 48

Flexibility and Response to Change …… 51

Summary of Key Facets of Flexibility …… 54

Agility versus Flexibility ……. 54

Measuring Agility: Sifting Through the Work …… 55

Definition of Salesforce Agility …….. 62

Knowledge Management – An Enabler of Salesperson Agility ……. 63

Knowledge Components …… 64

Knowledge Dissemination …… 65

Knowledge Portfolio …….. 66

Knowledge Generation ……. 66

Knowledge of Customer Relationships …… 67

Knowledge of Sales Process Innovation …… 67

Assessing Salesperson Knowledge of Agility Drivers …… 68

Marketplace …….. 68

Competition ……. 68

Customer Requirements …….. 68

Technology …….. 69

Social Factors …… 69

Identifying Salesperson's Agility Needs …….. 6

The Salesperson …… 70

Time …… 70

Ease …… 71

Range ……. 71

Change Proficiency – An Enabler of Salesperson Agility …… 71

CHAPTER III: HYPOTHESES AND MODEL DEVELOPMENT …… 76

Intrinsic Motivation …….. 78

Customer Orientation ……. 79

Learning Orientation …… 81

Salesperson's Outcome Performance …….. 84

Job Satisfaction …… 84

Customer's Satisfaction with the Salesperson …… 86

Summary …… 87

CHAPTER IV: RESEARCH DESIGN AND METHODOLOGY ……. 89

Preliminary Inquiry ……. 89

Insights from the Preliminary Inquiry …….. 92

Quantitative Analysis ……. 93

Study 1 …….. 94

Measures ……. 94

Analysis and Results ……. 94

2X2 Analysis for High/Low Agility versus High/Low Adaptability …… 96

Salesperson's Outcome Performance …….. 96

Regression Analysis – Adaptability and Agility versus Outcome Performance.. 97

Summary …… 98

Study 2 …… 98

Preliminary Responses Concerning Agility and Adaptability …….. 99

Reliability and Validity Assessment ……. 101

Exploring the Salesforce Agility Scale …….. 102

2X2 ANOVA Analysis – Outcome Variables …….. 113

Salesperson's Outcome Performance ……. 114

Job Satisfaction …….. 115

Customer's Satisfaction with the Salesperson ……. 116

Change Proficiency …… 117

2X2 ANOVA Analysis – Antecedent Variables …… 118

Salesperson's Intrinsic Motivation …….. 118

Salesperson's Learning Orientation …… 119

Salesperson's Customer Orientation …… 120

Regression Analysis – Antecedents …… 121

Effects of Intrinsic Motivation on Salesperson Agility …… 121

Effects of Customer Orientation on Salesperson Agility …… 122

Effects of Learning Motivation on Salesperson Agility …… 123

Regression Analysis – Outcomes …… 124

Effect of Salesperson Agility on Salesperson's Outcome Performance ….. 124

Effect of Salesperson Agility on Job Satisfaction ….. 126

Effect of Salesperson Agility on Customer's Satisfaction with the Salesperson 128

Summary of Results ……. 130

CHAPTER V: OVERVIEW, IMPLICATIONS, AND CONCLUSIONS ……. 131

Theoretical Implications …… 133

Limitations and Future Research ……. 136

LIST OF REFERENCES …….. 137

APPENDICES …… 162

A. Workforce Agility Scale ……. 163

B. Study Measures …… 165

C. Preliminary Survey Responses …… 168

D. Quantitative Survey Instruments ……. 176

Study 2 Correlation Matrix …….. 179

CHAPTER I

INTRODUCTION

A recent article published in Harvard Business Review by Rigby, Sutherland, and Takeuchi (2016) discussed the importance of the application of agility in all business sectors, mentioning that "now agile methodologies- which involve new values, principles, practices, and benefits and are a radical alternative to command-and-control-style management- are spreading across a broad range of industries and functions and even into the C-suite" (p.42). As further evidence of the importance of agility, many business are now promoting their agile nature in advertising. Agility is about being innovative in businesses, such as software, in which change is continuous. However, it is a viable skill for all business functions. As Rigby et al. (2016) assert, "…the greatest impediment is not the need for better methodologies, empirical evidence of significant benefits, or proof that agile can work outside IT. It is the behavior of executives. Those who learn to lead agile's extension into a broader range of business activities will accelerate profitable growth" (p. 50).

As change is constant in today's increasingly turbulent business environment (Jaramillo et al. 2012), this dissertation asks if successful salespeople should evolve their sales approach to one incorporating "agility selling" – a strategy that demands that salespeople anticipate customer's changing need, wants, and preferences and that they are ready to quickly offer total value solutions to the customer (Chonko and Jones 2005). In other words, is there traction to the assertion that agile salespeople are more successful than salespeople who are not agile? Sales force agility has been identified as an important issue for contemporary professional selling and sales management (Jones et al. 2005). Sales agility is purported to enable a sales force to respond

in a timely and effective manner to market volatility and other uncertainties, thereby allowing the salesperson to establish a superior competitive position (Swafford et al. 2006). Jones et al. (2005) state that increasing external marketplace turbulence and competition as well as the nature of the internal organizational environment challenge both salespeople's and sales managers' ability to adapt and perform to meet the current customer's expectations. Sales agility has been asserted to impact both how salespeople perform their regular sales responsibilities and how they anticipate the customer, market trends and change complexity (Jones et al. 2012).

This dissertation explores sales agility in detail. Up until now, marketing scholars have sparingly paid attention to the concept of sales agility (Chonko and Jones 2012; Chonko and Jones 2005, Jones et al. 2005). However, agility has a long history research in a number of disciplines, such as manufacturing (Goldman et al. 1995; Kidd 1994; Kumar and Motwani 1995; Dove 1994; Dove 1995; Yusuf et al. 1999; Quinn et al. 1997; Zhang and Sharifi 2000), logistics and supply chain management (Li et al. 2009; Swafford et al. 2006; Naylor et al. 1999; Van Hoek et al. 2001), knowledge management (Dove 1999; Holsapple and Jones 2005), information systems (Sambamurthy et al. 2003, Morgan 2004), and workforce management (Sherehiy et al. 2007; Gunasekaran 1999; Plonka 1997; Dyer and Shafer 2003; Breu et al. 2002). Since "the principles of agility can equally apply to other functions of a business and to service industries" (Katayama and Bennett 1999, p. 44), agility applications soon broadened into the wider business contexts such as the notion of 'the agile competitor' (Goldman et al. 1995), 'agile business relationships' (Preiss et al. 1996), 'agile supply chains' (Christopher 2000), 'agile enterprises' (Goldman and Nagel 1993), 'agile decision support systems' (Huang 1999) and, most recently, the 'agile workforce' (Sherehiy et al. 2007). In professional selling and sales management, agility

selling has received attention by several researchers as change is the paramount rule of agile marketing (Accardi-Petersen 2011).

Most of the scholarly work done on sales force agility, thus far, has been conceptual in nature (Chonko and Jones 2005; Chonko and Jones 2012). Despite the increasing recognition that workforce agility is critical to achieve competitiveness, the concept of workforce agility, in general, and sales force agility, in particular, has not yet been systematically studied (Chonko and Jones 2012). Research on workforce agility has largely given attention to production personnel (Gunasekaran 1999) while studies on how demand for increased agility impact sales force personnel are still lacking (Chonko and Jones 2012). According to Rigby, Sutherland, and Takeuchi (2016, p. 42), "when we ask executives what they know about agile, the response is usually an uneasy smile and a quip such as just enough to be dangerous". Marketers as well as salespeople are not quite informed about the term "salesperson agility" even though they sense the need for agility in order to deal with the changing business environment and customer requirements. Practitioners as well as academics suggest that the field needs a sound, empirically based, and generalizable salesperson's agility scale (Chonko and Jones 2005; 2012).

Agility is a broad and multidimensional concept (Gligor and Holcomb 2012a), the breadth of which has led to much confusion and ambiguity as there is no unified conceptualization of agility (Li et al. 2008) is available. Further the specifics of agility dimensionality are underexplored, especially in the areas of the workforce and salesforce field. The elements and linkages among agility elements are under developed such that it is uncommon for any two articles to adopt the same definition (Conboy 2009). One focus of this dissertation will be a thorough review of agility literature, the intent being to begin investigating the wisdom of studying agility and, subsequently, assessing the wisdom of crafting a validated scale to measure

salesperson agility so that researchers can begin to reliably test explanatory theories regarding causal links among capabilities, practices, and performance outcomes related to this phenomenon (Sherehiy et al. 2007; Li et al. 2009). As with any sales research, in the absence of a valid and reliable salesperson agility scale, the means of assessing effects of sales agility remain ambiguous at a practical level.

Further adding to the confusion, Sherehiy et al. (2007) noted that three concepts - adaptability, flexibility, and agility - all represent the idea that an organization is capable of adjusting or modifying its strategy quickly in response to marketplace change. Agility does overlap with constructs already existent in the literature - adaptive selling, proactive selling, flexibility and diligence constructs. In this dissertation, the assertion that sales agility with its emphasis on improved ability to "anticipate", differentiates it from these other constructs that seek to provide explanation for how salespeople can deviate from original plans as unexpected requests from customers occur (Chonko and Jones 2012). Only if sales agility includes a unique anticipatory component (Chonko and Jones 2012), or some other unique component not evident in other "adaptive-focused" metrics can it be deemed worthy of study.

PURPOSE AND SCOPE OF THE DISSERTATION

A particular challenge in embracing agility selling is that it requires fundamental changes in the salesperson's approach to customer relationships. According to Chonko and Jones (2012), there is a great potential for agility applications in the sales force since the long-standing practice of developing customer relationships is experiencing increased customer demands for more flexibility from sales organizations and their salespeople. Agile organizations are excellent at assessing environment, making sense of what they encounter, and quickly mobilizing and

redeploying assets to manage what they encounter (McCann and Sesky 2003). However, an agile sales organization is not possible without an agile salesforce (Chonko and Jones 2005).

The objectives of this research are twofold. First, the sales literature contains references to adaptive (not agile) selling behavior and sales scholars as well as practitioners have long recognized the importance of an adaptive (not agile) salesforce. However, it is quite surprising that, since the concept of sales force agility was introduced by Chonko and Jones in 2005, no empirical studies have been conducted on salesforce agility. Furthermore, there is no published scale available to measure salesperson agility in the business-to-business selling context. Before scale development can proceed, this dissertation presents an extensive literature review conducted to conceptually ascertain how agility might be different than adaptive selling, flexibility, diligence - metrics that contain some measure of adaptive behavior.

Only if this conceptual distinction is made, the second objective of this research be undertaken - to begin the journey toward the development of a salesperson agility scale. This developmental work will be based on the agility foundation of Kidd (1994) and Chonko and Jones (2005). In examining the wisdom of developing an agility metric, this dissertation will present preliminary empirical examination of the construct and its relationship to other "adaptation" metrics including the adaptive selling approach. The intention is to demonstrate empirically that agility and adaptability are different and have differential effects on sales outcomes. A preliminary finding of differential effects will provide evidence that agility is worth of study in salesforce research. The, a test of a proposed model in which the salesperson's intrinsic motivation, customer orientation, and learning orientation are viewed as antecedents to salesperson agility which in turn impacts salesperson's outcome performance, job satisfaction, and customer's satisfaction with the salesperson will be conducted.

RATIONALE FOR RESEARCH

A salesperson's ability to manage, analyze, and communicate information to customers is a basic requirement for survival (Chonko and Jones 2005). A salesperson's ability to manage and apply knowledge effectively helps the sales organization gain competitive advantage. According to Charbonnier-Voirin (2011), American firms such as IBM, Google and other large IT and telecom companies have adopted the concept of agility and relied on the agility models to increase their competitiveness. However, even though large industrial and service groups often use the terms "agile" or "agility" in their communication, there is rarely any consensus as to what the term actually means in concrete terms (Sherehiy et al. 2007). Chonko and Jones (2005) state that it is imperative for an organization to have agile workforce in order to achieve organizational agility. In business-to-business selling situation, an organization with an agile salesforce will be more capable of providing continuous value proposition improvement for customers. This dissertation examines the agility concept and provides preliminary assessment of whether or not the concept is worthy of study in salesforce research.

ORGANIZATION OF THE DISSERTATION

This dissertation is organized into the following chapters:

Chapter I Introduction and Overview of the Research

Chapter II Review of Literature

Chapter III Hypotheses and Model Development

Chapter IV Research Design, Methodology and Results

Chapter V Overview, Implication, and Conclusion

Chapter II

LITERATURE REVIEW

In this chapter, the literature on agility is reviewed with the objective of ascertaining if, conceptually, agility has traits different from other concepts that assess adaptation to marketplace conditions. The origins of agility are presented first. Then, a discussion of organizational agility, workforce agility, and salesforce agility is presented. Next, discussions of salesperson adaptability, diligence, and flexibility are presented with conclusions drawn about identified differences between these concepts and agility. Finally, a discussion of two key components of salesforce agility, knowledge and change proficiency, concludes the chapter.

ORIGINS OF THE AGILITY CONSTRUCT

Agility is still a relatively new concept in business workforce research, even though it has been an important component in many manufacturing, sports and military operations. The word "agility" was first originated by American Air Force strategists in early 1950. They defined agility "as the ability to change maneuver state, or, put another way, as the time derivate of maneuverability" (Richards 1996, p. 60). Subsequently, researchers, particularly from manufacturing and production, became interested in knowing how the concept of agility could be used in the business sector in order to gain competitive advantage. The concept of agile manufacturing was first introduced by Goldman, Preiss, Nagel, and Dove (1991) at the Iacocca Institute located at Lehigh University (Charbonnier-Voirin 2011). The introduction was the result of the Secretary of Defense funding a project at Lehigh University to identify the next manufacturing competitive focus beyond lean manufacturing. From this grant, the Agility Forum

was founded in 1992. It was formed on the premise that the pace of change is accelerating and already outpacing the abilities of many established organizations (Dove 1999).

Having understood that faster change is expected and unique skills and abilities are necessary to keep up with continuous and unexpected change, early researchers sought to identify the important factors and aspects of manufacturing and the importance of knowledge of environmental changes to organizations' success (Dove 1999; Hosein and Yousefi 2012). As a result, the Agility Forum offered its first attempt at defining agility as "the ability of an organization to thrive in a continuously changing, unpredictable business environment" (Dove 1999, p.2). Later, the agility concept was extended to the broader business context where it has been defined as an organization-wide capability of responding rapidly to marketplace changes and to cope flexibly to manage unexpected change in order to survive unprecedented threats from the business environment (Huang, 1999).

There are several definitions of agility that exist in the early extant literature. All imply that agility relies on a strong *knowledge component* in order to implement effective change. Agility has also been referred to as having four competitive capabilities - cost, quality, delivery, and flexibility (Burgess 1994; Fliender and Vokurka 1997; Yusuf et al. 1999). Hence, Narasimhan and Das (1999) address agility as a "multidimensional competence", combining knowledge of all four of those capabilities (Menor et al. 2001, p.274). Kidd (1994) had earlier included an *anticipatory component* defining agility as a rapid and proactive adaptation of enterprise elements to unexpected and unpredicted changes.

Yusuf et al. (1999) proposed that agility is the successful application of competitive bases such as speed, flexibility, innovation, and quality by means of integrating of reconfigurable resources and best practices in a knowledge rich environment to provide customer-driven

products and services in a fast changing environment. Sharifi and Zhang (2001) emphasized the anticipatory nature of agility describing it as the organization's ability to react quickly and effectively to anticipated and unexpected changes in the marketplace. Wadhwa and Rao (2003) suggest that agility focuses more on innovation response, as it addresses unpredictable changes. Sanchez and Nagi (2001) indicate that agility is an overall strategy focused on thriving in an unpredictable environment and a response towards the complexity which is brought by constant changes. Sambamurthy et al. (2003) refer to agility as the ability to detect and seize market opportunities with speed. Based on this review of the early literature on agility, Table 2-1 lists some of the identified traits of agility.

Table 2-1: Traits of Agility

Decision Domain	**Related Traits**
Integration	Concurrent execution of activities Enterprise integration Information accessible to employees
Competence	Multi-venturing capabilities Developed business practice difficult to copy
Team Building	Empowered individuals working in teams Cross functional teams Team across company borders Decentralized decision making
Technology	Technology awareness Leadership in the use of current technology Skill and knowledge enhancing technologies
Quality	Quality over product life Products with substantial value addition First time right design Short development cycle time
Change	Continuous improvement Culture of change
Partnership	Strategic relationship with customers Close relationship with suppliers
Market	Close relationship with suppliers New product introduction Customer driven innovations Customer satisfaction Response to market changes
Education	Learning organization Multi-skilled and flexible people Workforce skill upgrade Continuous training and development
Welfare	Employee satisfaction

*** Adapted from Sherehiy (2008) "Relationship between agility strategy, work organization and workforce agility".

As is evident, agility is a very broad concept and one that has been applied to various functions such as the idea of agile supply chains (Aitken et al. 2002; Christopher 2000), agile decision support systems (Huang 1999), and agile workforces (Van Oyen et al. 2001). However, available work on the conceptualization of workforce agility and even less empirical examination of workforce agility is available (Gunasekaran 1999; Van Oyen et al. 2001). Very little conceptual work and nothing empirical exists on sales force agility, although it is regarded by many as a key to organizational agility (e.g. Chonko and Jones 2005, Goldman and Nagel 1993; Goldman et al. 1995; Kidd 1994). Three types of agility are shown in figure 2.1. Each is discussed in the next part of the dissertation.

Figure 1.1: Agility Funnel

THREE LEVELS OF AGILITY

The concept of agility has been represented broadly as a total integration of business components (Kidd 1994). It has also been defined narrowly as the ability to accomplish rapid changeover from the assembly of one product to the assembly of a different product (Quinn et al., 1997). Most of the work on agility has been at the organizational level.

ORGANIZATIONAL AGILITY

The following definition captures the essence of organizational agility;"... successful exploitation of competitive bases (speed, flexibility, innovation, proactiveness, quality, and profitability) through the integration of reconfigurable resources and best practices in a knowledge-rich environment to provide customer-driven products and services in a fast changing market environment" (Yusuf et al., 1999, p. 37). Organizational agility is a firm's ability to adapt continuously to a complex, turbulent and uncertain environment (Charbonnier-Voirin 2011; Goldman et al. 1995; Jorroff et al. 2003; Shafer, 1997).

Organizational Agility as Organizational Internal Capabilities

Sherehiy et al. (2007) described two different ways in which researchers have explored the concept of organizational agility – internal and external capabilities. The group of researchers who have focused on internal firm capabilities is discussed first. This group asserts that the concept of unanticipated change can be translated into several achievable objectives such as speed, cost, quality, flexibility, innovation, proactivity. Organizational agility is enhanced by implementation of activities that focus on one or more of those dimensions (Sherehiy et al. 2007). Thus, to have agility, a firm must first identify its' critical agile strategies and then reconfigure or integrate existing resources and capabilities to engage in different activities to achieve such objectives, which ultimately provides the firm with competitive advantage (Yang

and Liu, 2012). For example, Goldman et al. (1995) indicates that a firm could enhance its enterprise agility by maintaining a perfect balance among the following internal strategic activities - enriching the customer, cooperating both internally and externally to enhance competitiveness, organizing to both adapt to and thrive on change and uncertainty, and leveraging the impact of people and information. Many others have provided thoughts on agility.

Dove (1999) conceptualized organizational agility in terms of four principal dimensions - cost, time, robustness, and scope and suggested that firms could operate with agility by focusing on these four elements. According to Dove (1999), an organization must score well on all four dimensions in order to be truly agile. For example, an organization can change virtually anything if cost is not an issue (Dove 1999). Like cost, the other three dimensions of time, quality and scope are equally important for an organization to be agile. Dove's perspective is also supported by Yusuf et al. (1999) who stated that agility refers to the successful exploration of competitive strategies including speed, quality, flexibility, innovation, proactivity, and profitability through the synthesized utilization and reconfiguration of extant resources and developed technologies.

Many others have addressed agility from the perspective of internal capabilities. Gunasekaran (1999) articulated that agile manufacturing is the capability of surviving and prospering in a competitive environment of continuous and unpredictable change by reacting quickly and effectively to changing markets, driven by customer defined products and services. Nelson and Harvey (1995) describe agility as an "organization's capacity to respond rapidly and effectively to unanticipated opportunities and to proactively develop solutions for potential needs". Tsourveloudis and Valavanis (2002) defined agility as the ability of enterprise to operate profitably in a rapidly changing and continuously fragmenting global market environment by producing high-quality, high-performance, and customer configured goods and services. In this

context, agility is regarded as a holistic strategy that employs extant capabilities of a lean or flexible strategy and then integrates parts of these capabilities into a new firm capability in order to adapt to unanticipated and sudden changes in the business environment (Yang and Liu, 2012). Table 1-2 summarizes various definitions of organizational agility that focus on agility as internal capabilities along with the essential characteristics embedded within those definitions. As a summary, it is evident from the key organizational literature that organizational agility is all about environment and market (Charbonnier-Voirin 2011) as well as organizational capability to cope with changing market condition and a chaotic environment (Barrand 2006; Joroff et al. 2003).

Table 2-2: Synthesis of the main contributions of the literature devoted to agility: definitions, and characteristics

Author	Definition	Conception and Characteristics of Agility
Iacocca/Lehigh (1991)	A system that shifts quickly among product models/lines, ideally in real time in order to respond to customer needs	Speed, responsiveness, flexibility, customer needs
Dove (1999, 2001)	Ability of an organization to respond efficiently and effectively to both proactive and reactive needs and opportunities on the face of an unpredictable and uncertain environment	Speed, cost, responsiveness, flexibility, quality and customer needs
Barrand (2006)	Organizational model allowing for increased reaction speed, flexibility, anticipation, and permanent innovation (p. 41-42)	Seven principles of agility which are anticipation, cooperation, innovation, customer orientation, culture of change, global offering, human dimension complexity
Breu, et al. (2001)	Organization-wide capability to respond rapidly to market changes and to cope flexibly with unexpected changes (p. 21)	Agility attributes: environmental scanning, responsiveness of change, skills assessment and development, employee empowerment and autonomy in decision making, information and knowledge access, collaboration and virtual organization, business process integration, information system (IS) integration and work flow, mobile technology
Goldman et al. (1995)	Ability to thrive and prosper in a competitive environment of continuous and unanticipated change and to respond quickly to rapidly changing markets driven by customer- based valuing of products and services (p. 8)	General characteristics: flat and cooperative structure, decentralization and employee empowerment, real time, flexible technologies, customer enrichment, innovation, continuous learning Four categories of agile practices: (1) enriching the customer, (2) cooperating to enhance competitiveness, (3) mastering change and

		uncertainty, and (4) leveraging people and information
Fliedner and Vokurka (1997)	Ability to market successfully low-cost, high- quality products with short lead times and in varying volumes that provide enhanced value to customers through customization	Responsiveness and time competence
Gunasekaran (1999)	Ability to survive and prosper in a competitive environment of continuous and unpredictable change by reacting quickly and effectively to changing markets (p.87)	Agility requires flexibility and responsiveness in four key dimensions: (1) Strategies (virtual enterprise, supply chain, concurrent engineering), (2) technologies (equipment, tools and IT), (3) people (knowledge workers, managerial support, employee empowerment, training), and (4) systems (of conception, control, production planning)
Kassim & Zain (2004)	Ability of a firm to face and adapt proficiently in a continuously changing and unpredictable business environment (p.174)	Four categories of agile practices adapted to information systems and technologies: (1) enriching customers, (2) mastering change, (3) cooperating to compete, and (4) leveraging resources, especially human resources
Lin, et al. (2006)	The agility supply chain focuses on promoting adaptability and flexibility, and has the ability to respond and react quickly and effectively to changing markets (p.286)	Four agility capabilities: responsiveness, competency, flexibility, and quickness Four agility enablers/pillars or main attributes: collaborative relationships (strategy), process integration (foundation), information integration (infrastructure), and customer/ marketing sensitivity (mechanism)
Shafer (1997)	Being infinitely adaptable without having to change (p. 1) Core competency of the organization which enables it to succeed in a dynamic environment	Three agile dimensions: reading the market, mobilizing rapid response, and embedding organizational learning Seven HR activities of the agile firm: development and training, performance management, rewards and recognition, work relationships, work design, staffing, employee communication, employee/labor relations
Sharifi et al. (2001)	Capacity to understand the environment and to be flexible, cost effective and productive with consistent high quality (p. 857)	Four agility capabilities are responsiveness, competency, quickness, and flexibility Five agility providers are organization, people, technology, information system, and innovation
Yusuf et al. (1999)	Ability of a business to grow in a competitive market of continuous and unanticipated change and to respond quickly to rapidly changing markets driven by customer based valuing of products and services (p. 36)	General characteristics: high-quality and highly customized products, products and services with high information and value-adding content, mobilization of core competencies, responsiveness to change, efficient use of technologies, response to change and uncertainty, cooperation and collaboration Six competitive bases: speed, flexibility, innovation, proactivity, quality and profitability Four core concepts: core competence management, virtual enterprise, knowledge driven enterprise, capability for reconfiguration
Zain et al. (2005)	Agility is a new way of doing business. It reflects a new mind-set on making, selling, and buying, an openness to new forms of commercial relationships, and	Perceived usefulness and perceived ease of use of IT influenced organizational agility indirectly through actual systems or technology use and attitudes towards using the technology. Central to

	new measures for assessing the performance of companies and people.	success is having accurate and timely information. Therefore, the acceptance (and effective use) of IT has become a key component of organizational agility and success.
Menor et al. (2001)	Agility is the ability to excel simultaneously on operations capabilities of quality, delivery, flexibility, and cost in a coordinated fashion.	Speed of new service development, brand management, leveraging service supply chains
Vazquez-Bustelo et al. (2007)	Agile manufacturing is identified with a global production model that is reflected in full integration of: highly trained, motivated and empowered employees working in teams; the use of advanced design, manufacturing and administrative technologies; internal integration of operations, with suppliers and customers; concurrent engineering; and knowledge management.	Other dimensions of the business environment could be included, such as diversity or complexity. Industry effects on the development of agile manufacturing and whether some combinations of agility practices are more effective than others.
Yang and Liu (2012)	A firm's agility is a high-order construct, determined by its ability to sense and respond to unpredicted changes related to customers, suppliers, and competitors.	Network structure mediates the effect of enterprise agility on firm performance.
Sambamurthy et al. (2003)	Ability of a firm to redesign their existing processes rapidly and create new processes in a timely fashion in order to be able to take advantage and thrive of the unpredictable and highly dynamic market conditions	Time, responsiveness, flexibility, customer needs
Mathiyakalan et al. (2005)	''Ability of an organization to detect changes (which can be opportunities or threats or a combination of both) in its business environment and hence providing focused and rapid responses to its customers and stakeholders by reconfiguring its resources, processes and strategies''	Speed, responsiveness, customer needs

*** Adopted and modified from Charbonnier-Voirin (2011), "The development and partial testing of the psychometric properties of a measurement scale of organizational agility"

One conclusion that can be drawn from the myriad of definitions of organizational agility is that measurement of the construct is difficult, at best. Dozens of traits are ascribed to agility in these definitions. Each trait, may indeed be measureable. However, if all these traits are true indicators of agility there is little hope that any single research undertaking can capture all of these traits. Therefore, it is necessary to ascertain which of these traits, if any, are indicative of agility and add marginal knowledge to our understanding of change in the marketplace.

Organizational Agility as Organizational External Capabilities

The second group of researchers identified by Sherihiy et al. (2007) focus on external capability and assert that organizational agility allows firms to first sense unanticipated changes and then prepare ahead to respond effectively to actual changes, seeking to manage uncertainty. This focus is supported by considerable academic literature and business practice (Goldman et al. 1995; Kidd 1994; Sharifi and Zhang 2001). According to Sharifi and Zhang (1999), responding to change in proper ways and exploiting changes are the two key agility factors. Dove (2001) referred to such marketplace responses as the ability to take physical action based on the results of a sensing component. An agile enterprise must have a strong ability to identify market needs and opportunities and then respond to them efficiently and effectively (Yang and Liu 2012). The ability to sense and respond is further elaborated on by Mathiyakalan et al. (2005) who defined organizational agility as a firm's ability to sense opportunities, threats, and changes embedded in its business environment and then provide a rapid response to them by reconfiguring its strategies and resources. Ashrafi et al. (2005) provided a similar definition in which agility is regarded as the ability to sense external unpredicted changes and respond to them effectively and efficiently. Overby et al. (2006) subsequently integrated this perspective asserting that sensing and responding are critical components of organizational agility.

In a recent empirical study, Yang and Liu (2012) reported that a firm's agility is significantly influenced by its ability to sense and respond to its customers, suppliers, and competitors, and firm performance is significantly increased by its enterprise agility which provides the resources and capabilities to deal with unexpected changes in the business environment. They also found that a firm could detect changes in customer preferences and then determine customer segment shifts through the sensing ability related to customers. The sensing

ability for competitors and suppliers also helps the firm to craft advantages by tracking its competitors' strategic actions. A firm's responding ability enables it to make a variety of responses to enrich customer value, satisfy customer desire, and enhance a firm's competitive advantage. Table 2-3 summarizes the characteristics of organizational agility viewed from an external perspective.

Table 2-3: Characteristics of Organizational Agility

Variables	Related studies
Speed/time	Iacocca /Lehigh (1991); Kumar and Motwani (1995); Cho et al. (1996); Fliedner and Vokurka (1997); Yusuf et al. (1999); Dove (1999. 2001); Menor et al. (2001); Sambamurthy et al. (2003); Ashrafi et al. 2005; Raschke and David (2005); Mathiyakalan et al. (2005)
Cost	Fliedner and Vokurka (1997); Yusuf et al. (1999); Dove (1999. 2001); Menor et al. (2001)
Responsiveness	Iacocca /Lehigh (1991); Goldman et al. (1995); Kumar and Motwani (1995); Cho et al. (1996); Yusuf et al. (1999); Dove (1999. 2001); Sambamurthy et al. (2003); Ashrafi et al. 2005; Raschke and David (2005); Mathiyakalan et al. (2005)
Flexibility	Iacocca /Lehigh (1991); Goldman et al. (1995); Vokurka and Fliedner (1998); Yusuf et al. (1999); Dove (1999. 2001); Menor et al. (2001); Sambamurthy et al. (2003); Zhang et al. (2003); Raschke and David (2005)
Quality	Fliedner and Vokurka (1997); Yusuf et al. (1999); Dove (1999. 2001); Menor et al. (2001);
Customer needs	Iacocca /Lehigh (1991); Goldman et al. (1995); Kumar and Motwani (1995); Cho et al. (1996); Fliedner and Vokurka (1997); Yusuf et al. (1999); Dove (1999. 2001); Sambamurthy et al. (2003); Ashrafi et al. 2005; Raschke and David (2005); Mathiyakalan et al. (2005)
Top management support, employee involvement and empowerment	Sharp et al. (1999), Sharifi and Zhang (1998, 2001, 1999), Zhang and Sharifi (2000), Gehani (1995), Sheridan (1996), Gunasekaran (1999a, 1998), Gunasekaran and Yusuf (2002), Forsythe (1997), Yusuf et al. (1999), Gehani (1995), Sahin (2000), Meredith and Francis (2000), Goldman and Nagel (1993) and Fliedner and Vokurka (1997)
Team working, self-directed teams, cross-functional teams	Sharp et al. (1999), Sharifi and Zhang (1998, 2001), Zhang and Sharifi (2000), Gehani (1995), Gunasekaran (1999a, 1998), Gunasekaran and Yusuf (2002), Yusuf et al. (1999), Gehani (1995), Sahin (2000), Jin-Hai et al. (2003), Meredith and Francis (2000), Goldman and Nagel (1993) and Fliedner and Vokurka (1997)
Job rotation, multifunctional workforce, job enrichment	Gehani (1995), Gunasekaran (1999a), Forsythe (1997), Sahin (2000) and Jin-Hai et al. (2003)
Training and education, skill levels, workforce skill upgrade, continuous training and development	Zhang and Sharifi (2000), Gunasekaran (1999a), Gunasekaran and Yusuf (2002), Yusuf et al. (1999), Sahin (2000), Jin-Hai et al. (2003), Goldman and Nagel (1993), Fliedner and Vokurka (1997), Hormozi (2001),
Knowledge workers, IT-skilled workers	Gunasekaran (1999a), Gunasekaran and Yusuf (2002), Yusuf et al. (1999), Jin-Hai et al. (2003) and Goldman and Nagel (1993)

*** Adopted and modified from Ganguly et al. (2008), "Evaluating agility in corporate enterprises"

In summary, themes that are prominent in the organizational agility literature include the importance of knowledge, speed of response, proactiveness, sensing (anticipation), and change capabilities.

WORKFORCE AGILITY

As the business environment increases in complexity and change becomes the normal concern for action for any business organization, workforce agility has been deemed as necessary to deal with the rapidly changing business environment. According to Youndt et al. (1996), computer-integrated manufacturing (CIM) can be used to achieve agility. Sherehiy et al. (2007) asserted that any manufacturing flexibility depends much more on people than on technologies because it is the humans only, not the machines that have the ability to anticipate future marketplace needs and market changes. In that respect, Upton (1995) states that operational flexibility is achievable through the plant operators using their communication skills. In an attempt to achieve manufacturing flexibility, Youndt et al. (1996) concluded that the achievement of manufacturing flexibility requires developing and maintaining a "highly skilled, technologically competent and adaptable workforce that can deal with non-routine and exceptional circumstances….." (p. 845). Hence, some work has been devoted to migrating organizational agility traits to workforces.

Agile Workforce –Essential Component of Organizational Agility

The literature suggests that agility cannot be achieved without leveraging employees' knowledge and skills (Sherehiy et al. 2007; Dove 1993; Forsythe 1997; Nagel and Dove 1991; Plonka 1997). Pinochet et al. (1996) stated that introduction of advanced manufacturing technologies can have several specific effects on the workforce. Based on this premise, many authors have addressed the idea of an agile workforce, focusing on characteristics necessary for

workforce agility. Following is a summary of the work concerning characteristics conducive to workforce agility.

Gunasekaran (1999) suggested that an agile workforce has certain unique characteristics such as IT skills, teamwork, good negotiation skills, capabilities in understanding advanced manufacturing strategies, willingness to empower employees, multi-functionality, multilingual, sound technological skills, self-directedness and motivation. The agile workforce expects to face uncertainty and, hence, they are also expected to provide fast response to unexpected events in the changing business environment (Plonka 1997). An agile workforce can work effectively in any collaborative environment (Forsythe 1997). They are proficient at working in cross-functional project teams, collaborative ventures with other companies, or virtual organizations (Van Oyen et al., 2001, Sherehiy et al. 2007). According to Sherehiy et al. (2007), workforces employed in an agile manufacturing environment utilize flexible technologies and infrastructure that support change and require higher cognitive thinking. In order to provide suggestions concerning improvements in controls and equipment, manufacturing employees must be familiar with the equipment and technology (Sherehiy et al. 2007). The workforce becomes more agile by acquiring new knowledge and engaging in accelerated learning as well as training in areas such as just-in-time delivery (Plonka 1997). Agile workforces use new information, communication, and mobile technologies to enhance their ability for speedy action and operational flexibility (Goldman and Nagel 1993; Yusuf al. 1999, Sherehiy et al. 2007).

According to Muduli (2013), an agile workforce is an organized and dynamic collection of talents that can quickly deliver the right skills and knowledge at the right time to meet business needs of problem solving. An agile workforce is a flexible well-trained workforce which can adapt quickly and easily offer solutions to take advantage of new opportunities and

market circumstances. An agile workforce can enhance an organization's ability to survive in a volatile global business environment (Katayama and Bennett 1999). Borrowing from the organization agility literature, workforce agility involves two main elements: the ability of the workforce to quickly respond to changes in proper ways and the ability of the workforce to exploit marketplace changes and take advantage of them as opportunities (Kidd 1994). Thus, an agile workforce comprises people with a broad vision and the capabilities to deal with marketplace turbulence through assessment of the advantageous side of such dynamic conditions, such as abrupt shifts in customer preferences and account structure (Zhang and Sharifi 2000).

Based on the review of the demands of agile and lean manufacturing, Plonka (1997) identified some important attributes of agile workforce including: (1) attitude toward learning and self-development; (2) problem-solving ability; (3) being comfortable with change, new ideas, and new technologies; (4) the ability to generate innovative ideas, and (5) accepting new responsibilities. In another review of the organizational agility literature, Breu et al. (2002) identified indicators of the workforce agility including responsiveness to external change, benchmarking for skill assessment, speed of skill development, speed of adaptation to new work environments, speed of information access, speed of IT change, use of mobile technologies, workplace independence, mobile information access, collaborative technologies, virtual team, knowledge sharing, and employee empowerment. This work is consistent with that of Sharifi and Zhang (1999), who asserted that agility is about responsiveness, competency, flexibility, and quickness. Based on their definition, they suggest that agile workers are (i) responsive, being able to sense, perceive, and anticipate changes; responding to the changes proactively and rapidly; and recovering from changes quickly; (ii) quick in operating; (iii) competent,

knowledgeable and empowered to be productive, efficient, and cost-effective; and (iv) flexible in processing different products and achieving different objectives (Qin and Nembhard 2015). In another review of agile organizations, Yusuf et al. (1999) discussed workforce agility from the following perspectives: (i) competence: workers have the right information and knowledge; (ii) flexibility: they are multi-skilled; (iii) teamwork. Team members are empowered to involve in decision-making and can take actions quickly; teams are cross-functional and cross-unit within the organization. Table 2-4 summarizes the literature that has focused on identifying characteristics of agile workforces.

Table 2-4: Characteristics of Agile Workforces

IT skilled worker	Gunasekaran (1999); Breu et al. (2002); Yusuf et al. (1999); Plonka (1997)
Teamwork	Gunesekaran (1999): Hopp and Oyen (2004); Breu et al. (2002)
Problem-solving ability	Plonka (1997), Breu et al. (2002); Sharifi and Zhang (1999)
Knowledge-sharing	Breu et al. (2002); Sharifi and Zhang (1999); Qin et al. (2015)
Responsiveness to external change	Breu et al. (2002); Yusuf et al. (1999); Dyer and Shafer (1999); Sherehiy et al. (2007); Plonka (1997)
Empowered employees	Kidd (1994); Yusuf et al. (1999); Gunasekaran (1999); Breu et al. (2002)
Multi-functional workforce	Hopp and Oyen (2004); Dyer and Shafer (1999); Plonka (1997), Gunasekaran (1999); Breu et al. (2002)
Collaborative technologies	Breu et al. (2002); Plonka (1997), Sherehiy et al. (2007)
Adaptability	Yusuf et al. (1999); Sharifi and Zhang (1999); Sherehiy et al. (2007); Dyer and Shafer (1999); Griffin & Hesketh (2003)
Resiliency	Griffin & Hesketh (2003); Sherehiy et al. (2007)

As a summary, knowledge sharing is specifically identified as a trait of an agile workforce. While anticipation and change proficiency are not specifically identified in those terms, agile workforces are characterized by problem solving ability. Change proficiency is about solving problems.

Types of Agility-Related Behavior in Workforce

Dyer and Shafer (1999) identified twenty personnel competencies and behaviors that are relevant to workforce agility, and grouped these into five characteristics of agile workers: (i)

taking the initiative to identify risks and opportunities in the marketplace, and deal with these by moving resources needed in a timely manner and to appropriate places; (ii) willingness to be rapidly redeployed whenever and to wherever they are needed; (iii) spontaneously collaborating to pool resources for quick results; (iv) innovation when old solutions do not work; and (v) learning rapidly and continuously (Qin and Nembhard 2015). Later, Dyer and Shafer (2003) extended their own work and stated that organizational agility requires mainly three kinds of workforce behaviors: proactive, adaptive and generative. Proactive behavior consists of two facets: initiation and improvisation. According to Pulakos et al (2000), proactivity occurs when a person initiates activities that have a positive effect on the changed environment such as creative problem-solving and dealing with crises. Dyer & Shafer (2003) add that proactivity involves active search for opportunities that contribute to organizational success and requires devising and implementing creative approaches to pursue opportunities and deal with threats. Sherehiy et al (2007) emphasize that proactive behavior requires a personal initiative to anticipate change-related problems, and to suggest suitable solutions. Proactive initiative involves active search for opportunities to contribute to organizational success and take the lead in pursuing those opportunities that appear promising. Proactive improvisation involves devising and implementing new and creative approaches to pursue opportunities and dealing with threats.

Adaptive behavior includes the assumption of multiple roles to enable performance in different capacities as projects often simultaneously move from one role to another very quickly. Agile employees simultaneously learn multiple competencies and educate themselves by actively sharing information and knowledge. According to Liebowitz (2008) adaptability is about the ability to adapt quickly to unanticipated changes, and learning to be responsive to new market demands. Hence, adaptability, as a workforce agility attribute, is based on changing or modifying

oneself or one's behavior to better fit in a new environment (Sherehiy et al, 2007) and transferring learning from one task to another as job demands vary (Allworth & Hesketh, 1999). It requires professional flexibility to work concurrently on different tasks in different teams (Sherehiy et al, 2007).

Generative behavior relates to learning and training themselves to be multi-skilled and competent in team-work (Sherehiy et al, 2007). Hopp and Van (2004) stated that the workers' cross-training is a powerful mechanism that can enhance workforce agility. They developed an agile workforce evaluation framework in which workforce agility consists of three basic elements: cross-training skill patterns, worker coordination policy, and team structure. They argue that workforce agility can be achieved via cross training because cross-trained workers represent a flexible capacity since workers can be shifted to where and when they are needed. According to them, cross training can increase the production flexibility of an organization. The workforce with a broader set of skills would perform a wider range of tasks efficiently and would provide task redundancy (Sherehiy et al. 2007) since number of workers are capable to perform the same tasks. This in turn allows team members to share their knowledge base with each other. Cross-training and greater task variety may also facilitate performance due to the experience of less fatigue, boredom or repetitive stress. However, it should be noted that there is no empirical research that has examined effect of cross-training on production agility and/or business performance (Sherehiy et al. 2007).

Griffin and Hesketh's (2003) framework describes adaptability at work consisting of three broad types of behavior: proactive, reactive, and tolerant which correspond to the three adjustment style dimensions from the Theory of Work Adjustment (TWA). According to them, tolerant behavior is evidenced by continued functioning despite the changing environment or

when proactive or reactive strategies may not be appropriate (Sherehiy et al, 2007). On the basis of the models of Griffin & Hesketh (2003), Dyer & Shafer (2003) and Sherehiy et al (2007), the attributes of the agile workforce have been grouped in three dimensions: proactivity, adaptability, and resiliency. Resiliency is another attribute of workforce agility that manifests itself in the ability to function efficiently under stress against a changing environment (Griffin & Hesketh, 2003; Sherehiy et al 2007). Resiliency implies that employees have a positive attitude to changes, new ideas, differences in opinions and approaches as well as possessing tolerance of uncertain and unexpected situations (Sherehiy et al 2007; Al Faouri et al. 2014).

In examining the literature based on theoretical developments for workforce agility, Qin and Nembhard (2015) developed a classification framework which characterizes workforce agility as a multi-dimensional construct, involving five attributes: responsiveness, quickness, competence, adaptability, and cooperativeness. According to them, the responsiveness of a workforce is implied by their attitude, capability, and behavior in reacting to unexpected changes in, for example, market, competition, consumers, workplace, products, roles, and tasks. Agile workforce have positive attitude and reactions to unexpected changes, higher capability of sensing future changes and better preparedness for change. Quickness is measured relative to the time dimension, wherein an agile workforce is able to adjust rapidly to a new or radically transformed set of conditions while maintaining a relatively high work pace. Competence is a measure of workers' abilities (cognitive and physical), which can be measured by their 1) comprehension of new ideas, knowledge, or technologies; 2) the degree of creativity and innovative in problem-solving; and 3) the level of skills or knowledge that they master; and their productivity. Cooperativeness is a measure of workforce collaboration including attitudes and abilities to work

on common goals. Table 2-5 summarizes the attributes of workforce agility including metrics proposed to assess workforce agility.

Table 2-5: Synthesis of Attributes and Metrics for Workforce Agility

Workforce Agility Attributes	Metrics	References
Responsiveness	Positive attitude and reactions to unexpected changes • Degree of self-motivation • Degree of autonomy in responding to changes	Yusuf et al. (1999), Sharifi and Zhang (1999), Dyer and Shafer (1999), Plonka (1997), Hosein and Yousefi (2012), Hopp and Oyen (2004), Sherehiy et al. (2007), Dyer and Shafer (2003), Harvey et al. (1999), Breu et al. (2002)
	Higher capability of sensing future change • Confidence level in forecasting change • Frequency of information update	Sharifi and Zhang (1999), Overby et al. (2006), Breu et al. (2002), Gunasekaran (1999)
	Better preparedness for change • Availability of quality workforce solutions to change issues • Frequency of learning	Sherehiy et al. (2007), Overby et al. (2006), Dyer and Shafer (1999), Dyer and Shafer (2003), Harvey et al. (1999), Griffin and Hesketh (2003), Gunasekaran (1999), Hopp and Oyen (2004)
Quickness	Shorter transition or recovery time • Time for learning/training on new skills and knowledge time • Redeployment or recovery time	Hopp and Oyen (2004), Sharifi and Zhang (1999), Dyer and Shafer (1999)
	Faster completion time • Products or services delivery speed • Problem-solving speed	Sharifi and Zhang (1999), Dyer and Shafer (1999), Gunasekaran (1999), Hopp and Oyen (2004)
Competence	Higher cost-effectiveness of workforce solutions • Labor costs • Breadth and level of worker knowledge/skills inventories • Degree of worker-task matching • Workforce utilization	Sharifi and Zhang (1999), Dyer and Shafer (1999),), Hopp and Oyen (2004), Qin et al. (2015)
	Greater workforce capability • Degree of comprehending new ideas/knowledge/technologies • Degree of creativity and innovation in problem-solving • Level of skills/knowledge/ expertise/information • Worker productivity	Yusuf et al. (1999), Sharifi and Zhang (1999), Dyer and Shafer (1999), Dyer and Shafer (2003), Plonka (1997), Harvey et al. (1999), Griffin and Hesketh (2003), Hopp and Oyen (2004), Qin et al. (2015)
Adaptability	Greater variety • Degree of multi-functionality, multi-skills, and multi-roles • Mix of multiple labor sources	Yusuf et al. (1999), Sharifi and Zhang (1999), Sherehiy et al. (2007), Hopp and Oyen (2004), Qin et al. (2015), Dyer and Shafer (2003),
	Greater flexibility to work conditions	Dyer and Shafer (2003), Qin et al. (2015)

	• Degree of working time flexibility • Degree of work location flexibility Adaptive behaviors • Degree of tolerance to unexpected working environments	Sherehiy et al. (2007), Harvey et al. (1999), Griffin and Hesketh (2003),
Cooperativeness	Positive attitude towards collaboration • Degree of tolerance to different or new opinions/approaches Cooperative behavior in collaborating working environments • Ease of communication • Degree of autonomy in collaboration Higher efficiency and effectiveness in collaboration • Degree of decentralization of decision-making • Ease of moving among projects/teams/tasks/roles • Improvement from collaborating across functions or disciplines	Plonka (1997), Harvey et al. (1999), Griffin and Hesketh (2003), Forsythe, 1997 Sherehiy et al. (2007), Dyer and Shafer (1999), Dyer and Shafer (2003), Hopp and Oyen (2004) Yusuf et al. (1999), Sherehiy et al. (2007), Hopp and Oyen (2004), Breu et al. (2002), Qin et al. (2015)
Proactive	Person initiate the activities that have positive effect on changed environment	Dyer and Shafer (2003); Sherehiy et al. (2007), Griffin and Hesketh (2003)
Reactive	Changing or modifying oneself to better fit to new environment	Dyer and Shafer (2003); Sherehiy et al. (2007), Griffin and Hesketh (2003)
Tolerant	Continuing functioning despite changing environment or when proactive or reactive strategies are not appropriate	Dyer and Shafer (2003); Sherehiy et al. (2007), Griffin and Hesketh (2003)
Resilient	Ability to function efficiently under the stress and despite changing environment or when applied strategies have not succeeded	Dyer and Shafer (2003); Sherehiy et al. (2007), Griffin and Hesketh (2003)
Generative	Employees have to simultaneously learn in multiple competencies areas and educate by actively sharing of information and knowledge.	Dyer and Shafer (2003)

*** Adapted and modified from Qin and Nembhard (2015), "Review Workforce agility in operations management"

In summary, some agility metrics do assess proactiveness as a key agility trait. Similarly, some agility metrics assess competence, a trait that implies the knowledge required to engage in strategies and tactics (some of which may involve change) that achieve success.

Empirical Research on Workforce Agility

Several empirical research efforts have been conducted on workforce agility for the purpose of developing scales to measure workforce agility and to examine antecedents of workforce agility. Sherehiy et al. (2007) and Breu et al. (2002) represent two efforts that were

undertaken to craft scales for measuring workforce agility. Indicators of workforce agility offered by Breu et al. (2002) are from an IT perspective while Sherehiy (2008) proposes a general scale for measuring workforce agility by utilizing work adjustment theory (Alavi and Wahab 2013). Table 2-6 summarizes the indicators of workforce agility provided by Breu et al. (2002). The workforce agility scale proposed by Sherehiy (2008) is listed in the Appendix A.

Based on a review of the organizational agility literature, Breu et al. (2002) classified initial attributes of the workforce agility in terms of two agility dimensions - speed, and flexibility (Sherehiy et al 2007). The result of their "factor analysis of determined agile workforce attributes revealed a single component that was recognized as a global indicator of the workforce agility" (Sherehiy et al. 2007, p.453). The analysis showed that, among ten components, the most important factors for workforce agility were speed of developing new skills, responsiveness to changes in customer needs and market conditions, and speed of acquiring the skills needed for business process change. Their ten identified workforce attributes were grouped into five higher level categories: intelligence, competencies, collaboration, culture, and information system. The grouping of the attributes into the categories is shown in Table 2-6. After further analysis, Breu et al. (2002) found that intelligence and competence are the most fundamental elements of workforce agility. They also suggest that the continual innovation of workforce's IT and software skills allow agile workforce to exploit opportunities in changing environments. Sherehiy and Karwowski (2014) also used a Workforce Agility Scale (WAS) based on Sherehiy (2008). The scale consisted of three subscales reflecting three workforce agility dimensions: proactivity, adaptivity, and resilience. The WAS scale is provided in the Appendix A. The main goal of their study was to explore the effect of agile strategies on work organization and employees' performance. The result of their study supported the fact that

workforce agility requires empowerment and autonomy in decision making and hence employee empowerment is one of the most important predictor of workforce agility.

Table 2-6: Capabilities for Workforce Agility

Capabilities for workforce agility (after Breu et al., 2002)
Intelligence
Responsiveness to changing customer needs
Responsiveness to changing market conditions
Competencies
Speed of developing new skills and competencies
Speed of acquiring the skills necessary for business process change
Speed of innovating management skills
Speed of acquiring new IT and software skills
Collaboration
Effectiveness of cooperating across functional boundaries
Ease of moving between the projects
Culture
Employee empowerment for independent decision making
Information System
Support of the IT infrastructure for the rapid introduction of new IS

**** Adopted from Sherehiy et al., 2007, "A review of enterprise agility: Concepts, frameworks, and attributes"

Sumukadas and Sawhney (2004) conducted an empirical assessment of a theoretical model of employee involvement (EI) to examine how workforce agility is affected by various workforce management practices. The effect of employee involvement (IE) practices such as: (1) information sharing; (2) training; (3) rewards; and (4) power sharing was investigated. Based on the previous research on the effects of IE practices on satisfaction and performance, Sumukadas and Sawhney (2004) assumed that power sharing may have a significant effect on the workforce agility. They demonstrated that power sharing practices positively influence the architecture for workforce agility, such as improving efficiencies of training, shifting workers between task types, multi-tasking, and collaboration (Hopp and Van Oyen 2004). Other EI practices have secondary effects, both directly and indirectly via power sharing, on workforce agility (Sherehiy et al 2007). Later Results from using structural equation modeling indicated that the power sharing techniques (job enrichment and enlargement, self-management teams, quality circles,

suggestions systems) had strong and significant effects on workforce agility (Sherehiy and Karwowski 2014). Their results are also consistent with the finding of Youndt et al. (1996) who reported that human-capital-enhancing practices improve manufacturing strategies and also consistent with the findings of Kathuria and Partovi (1999) that higher-order EI practices support plant flexibility. Bosco (2007) performed a study on workforce agility in the service sector, in this case US hospitals. The author identified a relationship between environmental turbulence, workforce agility and patient outcomes. The results of these studies are summarized in Table 2-7.

Table 2-7: Research on Workforce Agility

Reference	Predictors of Workforce Agility	Workforce Agility as	Workforce Agility scales
Sherehiy (2008)	Agility strategy (product; cooperation; organization; people) Work organization (job demand; job control; skill variety; job uncertainty; job complexity)	Dependent Variable	Proactivity; Adaptability; Resilience;
Sumukadas and Sawhney (2004)	Employee involvement Information sharing Training (multiple task skill, quality skill, group skill, leadership skill, business skill, team skill) Salary-skill-based pay improvement incentives non-monetary incentives team based production incentives	Dependent Variable	Multiple tasks
Bosco (2007)	Power sharing Turbulent environment	Mediator	Competency; collaboration; information system; intelligence; group culture;

*** Adopted and modified from Alavi and Wahab (2012), "A Review on Workforce Agility"

To summarize, some empirical work on workforce agility does include attention to competency, information sharing and proactivity, traits that suggest that knowledge and change proficiency are, potentially, key attributes of agility

SALESFORCE AGILITY

The subject of this dissertation concerns the efficacy of studying agility in the sales force. Chonko and Jones (2005, 2012) and Jones et al. (2005) asserted that agility research should be extended to the non-production personnel such as salesforce. They noted that existing agility research had mainly focused on speed and flexibility from an operations perspective (Goldman and Nagel 1993; Gunasekaran 1999), although it has been argued that strong attention should be given to agile workforce on the factory floor (Gunasekaran 1999) and supply chains (Van Hoek et al. 2001).

According to Chonko and Jones (2005), an agile salesperson is one who delivers value to customers, shortens time horizons, improves cycle time for customers, has knowledge of network roles – central connectors, boundary spanners, information brokers, peripheral specialists, and has high change proficiency. They have knowledge of procedures, people, practices, and processes. Agile salespeople implement rapid, low cost predictable changes. They have high knowledge management capabilities including tacit knowledge, use of multiple knowledge repositories, and knowledge of building relationships in the organization. They have an ability to acquire, transfer, and unlearn knowledge. Salesperson agility is characterized knowledge management and change proficiency as balanced salesperson competencies (Dove 1994).

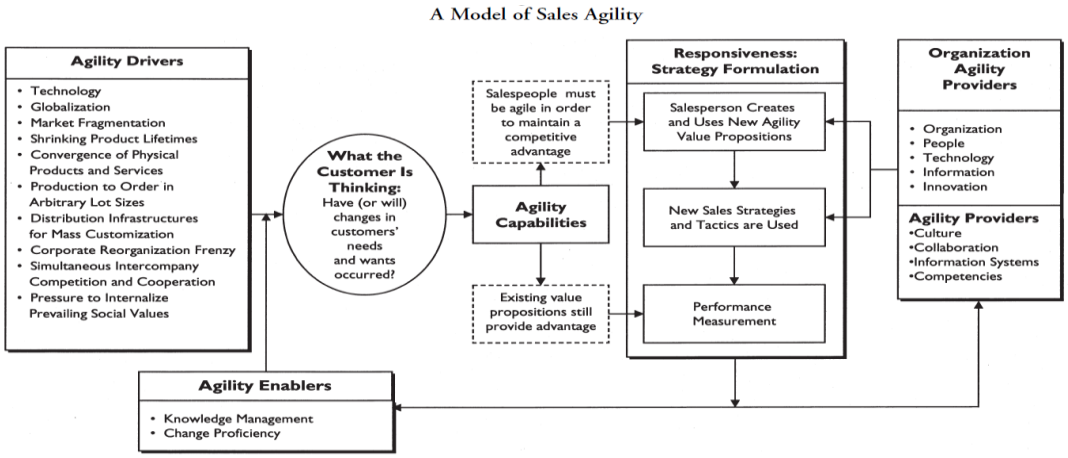
Sales Agility Model

Chonko and Jones (2005) developed a framework concerning why todays' salesforces need sales agility. Figure 2-2 presents their framework for "understanding the sales force's need for agility in the consideration of offering new value propositions that may break strategic precedent when salespeople confront new customer needs" (Chonko and Jones 2012, p.520).

Referring to Figure 2-2, salesperson agility includes five major components: agility drivers, what the customer is thinking, agility capabilities, market strategy formulation, agility providers.

Agility drivers are the changes/pressures from the business environment that require a company or salesperson to search for new ways of doing business in order to maintain competitive advantage (Sharifi and Zhang 2001). Changes in the business environment impose pressures on the sales activities of salespeople and are the drivers of the need for agility (Preiss 1997). Agility drivers urge salespeople to respond in appropriate ways to maintain advantage in the marketplace. Agility drivers demand that agile salespeople should be involved in various activities such as continuous learning, intelligence generation, knowledge collection, and continuous scanning of the external environment. These agility drivers can vary from one sales organization to the next or even one market to the next (Zhang and Sharifi 2000). In organizing business environmental knowledge to master change and uncertainty, an agile salesperson thrives on change and uncertainty because he/she is flexible enough to allow complete resource reconfiguration in efforts to serve customers (Chonko and Jones 2012).

Figure 2-2: Sales Agility Model (Chonko and Jones 2005)



Understanding w*hat the customer is thinking* is rooted in the wisdom of forming deep customer relationships. Uncertainties and pressures (agility drivers) may lead customers to change their ways of thinking (Chonko and Jones 2005). When customers change their thinking, the need for agility is invoked. Knowledge of agility drivers and what the customer is thinking informs salespeople of needed change. Thus knowledge is the first agility enabler (Chonko and Jones 2005, Dove 1999). The second agility enabler is change proficiency (Dove 1999), the ability to exploit knowledge and make change to take advantage marketplace changes as opportunity (Chonko and Jones 2005, Kidd 1994).

Agility capabilities are the essential capabilities that the company needs in order to positively respond to and take advantage of the changes (Sharifi and Zhang 2001). Agility capabilities include change and knowledge proficiency that represents the third component of the agility model. Reid et al. (1996) suggested a list of agility attributes including sensing and anticipating changes; adaptability; ability to recover from change; quickness; innovation; flexibility; and efficiency. Agility in the organization has been described as dynamic, context-specific, change-focused, and growth-oriented (Goldman et al. 1995). It is dynamic in that the way a salesperson demonstrates change proficiency today may not always be effective. It is context-specific as customers current needs/wants influence the level of needed agility. It is changed-focused as changes in what the customer is thinking require salespeople to use the agility response capabilities of knowledge and change proficiency. It is growth oriented in that in requires the salesperson to have ability to re-conceptualize his/her vision, strategies and techniques.

Market Strategy Formulation is the fourth component of the agility model. Strategy formulation involves salespeople using their agility capabilities (Chonko and Jones 2005).

Salespeople offer actual strategies and tactics using their capabilities that come from five major aspects of their organizations - the organization itself, its people, technology, information, and innovation - to solve customer problems or create customer opportunities.

Agility Providers, the fifth model component, includes a firm's resources, collaboration, culture, and firm capabilities. Kidd (1995) suggested that agility may be achieved through the integration of agility providers of people, organization and technology into a coordinated system. Gunasekaran (1999) considered agility practices and tools from four provider categories: technology, people, systems and strategies. According to Chonko and Jones (2005), agility selling includes capabilities and resources that a sales organization provides to their salespeople. They also state that agility selling is based on salespeople using each partner's resources. The degree of agility required by salespeople will differ depending on the situation (James-Moore 1996). An agile salesperson leverages agility providers' people and resources in entrepreneurial ways to provide mutual benefit for all, including their customers (Chonko and Jones 2012).

Agile salespeople view changes in agility drivers as opportunity (Chonko and Jones 2005). Therefore, they are always ready to cope with four types of change originating from agility drivers (Sharifi et al. 2001).

1. *Anticipated change*: Anticipated change is the expected change which can be practically well predicted. Salespeople do not usually face problems dealing with anticipated change as they have a contingency plan to manage anticipated change (Chonko and Jones 2012).

2. *Created change*: Created change is the organized change by initiated by salespeople. These are usually undertaken within the organization's capability to manage the change process (Chonko and Jones 2005). For example, a salesperson can create change by providing new information that might drive account penetration strategies.

3. *Unpredicted change*: Unpredicted change occurs "within normal expectations" of an agile salesperson's conceptualization of change (Chonko and Jones 2005,

p.374). Agile salespeople should respond effectively very quickly in order to handle these kinds of changes.

4. *Unprecedented change*: Unlike unpredicted change, unprecedented change lies outside the salesperson's "normal expectations" (Chonko and Jones 2005, p. 374), which demands more innovative coping strategies from agile salespeople.

Salespeople must use anticipatory skills when dealing with anticipated and created change in order to prepare for future actual change. Hence anticipatory skills might be termed as proactive agility. Sales opportunities and threats that deal more with unpredicted and unprecedented change might be called reactive agility (Chonko and Jones 2005). As a summary, the Chonko and Jones (2005) model emphasizes the importance of anticipation as critical to the agile capabilities of knowledge and change proficiency , two aspects of agility purported to make it unique from other concepts that deal with adaptation behavior.

IS AGILITY DIFFERENT THAN OTHER CONCEPTS THAT ASSESS ABILITY TO ADAPT?

Critical to the efficacy of salesforce agility research is the determination of unique aspects of agility vis-à-vis other concepts in the literature that deal with change. Three of these concepts – adaptability, diligence, and flexibility – are discussed next.

ADAPTIVE SELLING

It has long been recognized in the sales literature that there is a strong relationship between adaptive selling behavior and sales performance outcomes (Anglin et al. 1990; Giacobbe et al. 2006; Sujan et al., 1994; Marks et al. 1996; Weitz et al. 1986). Adaptive selling is defined as "altering of sales behavior during a customer interaction or across customer interactions based on perceived information about the nature of the selling situation" (Weitz et al.

1986, p.175). Through adaptive selling techniques, salespeople comfortably alter their sales message in order to seek a fit with individual customer's needs and preferences. Salespeople who engage in adaptive selling customize their sales strategy to fit the needs of each customer and sales situation and adapt their behaviors across customers, across time and within a customer interaction (Weitz 1978). Salespeople who are adaptive exploit the unique capability of personal selling compared with other one-way marketing communications (mass media, sales promotion) (Bradford and Weitz 2012). The adaptive selling scale used in this research is shown in Appendix B. Further, Appendix A provides a taxonomy of adaptability traits. In both cases, adaptability appears to include a salesperson that he/she can undertake different activities. However, there are no specific references to knowledge required to make change and change proficiency.

Empirical Research on Adaptability

Empirical research conducted in various contexts has confirmed that adaptive selling behavior improves salesperson performance regardless of the circumstances (Boorom et al. 1998; Franke and Park 2006; Jaramillo and Grisaffe 2009; Spiro and Weitz 1990; Weitz et al. 1986). Recent studies have concluded that adaptive selling enables salespeople to become more customer oriented (Franke and Park 2006) and mediates the effect of customer orientation on sales performance (Jaramillo and Grisaffe 2009). Giacobbe et al. (2006) empirically tested whether adaptive selling has different effects on sales performance based on adaptive condition versus non-adaptive condition. They found that a positive role of adaptive selling on sales performance under both adaptive and non-adaptive condition. In their review of the adaptive selling behavior literature, Giacobbe et al. (2006, p. 116) catalogued 27 studies of adaptive selling and characterized the findings from studies investigating the relationship of adaptive

selling with sales performance as mixed. According to Autry et al. (2013), a number of studies have found support for a positive relationship between adaptive selling and performance (e.g., Booram et al. 1998; Franke and Park 2006; Park and Holloway 2003; Siguaw 1993; Sujan et al. 1994) while others found either mixed results or non-support (e.g., Anglin et al. 1990; Blackshear and Plank 1994; Keillor et al. 2000; Marks et al. 1996). Hence, Giacobbe et al. (2006) and Porter et al. (2003) assert, based on the theoretical models of Sujan et al. (1988), that mixed findings concerning the adaptive selling and sales performance relationship are the result of differing situational effects (Autry et al. 2013).

In a meta-analysis, Franke and Park (2006) combine findings from 155 samples of more than 31,000 salespeople to test alternative models of antecedents and consequences of adaptive selling behavior and customer orientation. They conclude that adaptive selling behavior and selling experience increases self-rating, manager-ratings, and objective measures of performance (Valenzuela et al. 2014). Guenzi et al. (2007) examine the link between adaptive selling and the relational selling strategies and found that the organization's relational selling strategies is positively related to key account mangers' adaptive selling nature. Robinson et al. (2005) demonstrate that salespersons' intent to practice adaptive selling mediates the relationship between behavioral intentions to use technology and salesperson performance. Deeter-Schmelz and Sojka (2007) found that a significant relationship between self-monitoring and sales performance where high self-monitoring salespeople scored more highly on a self-rated measure of performance than low self-monitoring salespeople. Jaramillo et al. (2007) established that intrinsic motivation positively related to adaptive selling. Their empirical study also demonstrates that level of initiative positively moderates the effect of intrinsic motivation on adaptive selling.

Salespeople using adaptive selling adjust their approach by reacting to signals given by the buyer and/or the selling situation (Locander et al. 2014). Research has shown that effective salespeople are better at detecting cues, particularly nonverbal cues, than their less effective sales counterparts (Chang, 2006; Grikscheit, 1971; Sager et al. 2006). Likewise, research has linked adaptive selling to self-ratings and objective indicators of performance (e.g., Fang et al. 2004; Park & Deitz, 2006). Marks et al. (1996) demonstrates that the original adaptive selling scale developed by Spiro and Weitz (1990) is actually a combination of two dimensions: adaptive selling belief and adaptive selling behavior (Miao and Evans 2013). However, their results show that adaptive selling beliefs do not influence sales performance, but adaptive selling behaviors do have an impact on sales performance and hence are an immediate precursor of sales performance (Fang et al. 2004; Marks et al. 1996; Roman and Iacobucci 2010). Miao and Evans (2013) found a significant interaction effect of adaptive selling behavior and selling effort on outcome control and activity control. Activity control appears to be a double-edged sword in that it enhances the positive effect of outcome control on selling effort but at the same time dampens outcome control's positive effect on adaptive selling behavior. Rapp et al. (2006) demonstrate that empowerment enhances salespeople's likelihood of using adaptive selling techniques. In later study, Rapp et al (2008) further shows that CRM usage positively influence adaptive selling and adaptive selling positively influence sales performance. However, Valenzuela et al. (2014) found that the optimum level of customer lifetime value (CLV) orientation is not dependent on salesperson adaptive selling behavior.

Summary of key facets of Adaptability

Adaptability is a vital component to selling success. According to Locander et al. (2014, p. 390), "salespeople rely on adaptive capabilities as a means of selecting information cues to

make adjustments during presentations or other interactions with customers". Adaptability is necessarily the inherent ability to adjust according to demand and it is the defensive approach in response to marketplace changes (Katayama and Bennett 1999). Adaptability is positively related to sales experience, effort, functional flexibility, and sales performance (Siguaw 1993; Rapp et al. 2008; Robinson et al. 2002). Intrinsic motivation and learning orientation are also positively related to adaptability (Spiro and Weitz 1990; Jaramillo et al. 2007; Park and Holloway 2003). Table 2-8 provides a summary of research conducted on adaptive selling.

Table 2-8: Adaptive Selling Behavior: Measures and Summary of Findings

Authors	Context of the Study	ASB Measure	Relevant Findings
Spiro and Weitz (1990)	268 salespeople of a manufacturer of diagnostic equipment and supplies	Develops a 16-item ADAPTS scale to measure ASB and empirically test hypothesized relationships	Adaptive selling is correlated significantly with eight general measures of interpersonal flexibility. Adaptive selling is positively correlated to intrinsic motivation. Adaptive selling is not correlated to experience managerial style and management ratings of performance.
Anglin et al. (1990)	62 sales reps and field managers for an agricultural products firm.	Cognitive sales script elicitation	Mixed support for ASB leading to sales performance.
Weilbaker (1990a)	69 salespeople, managers, and buyers in the pharmaceutical industry.	Importance rankings of adaptive selling (as a selling skill) were measured.	In missionary sales contexts, all three stakeholder groups perceive ASB as being very important.
Goolsby et al. (1992)	106 female/71 male members of a professional sales association.	ADAPTS	Gender differences were significant in those regressions relating to three of the five dimensions of sales performance and total performance.
Vink and Verbeke (1993)	201 employees from 50 randomly selected companies.	Motivation to work, attributions for failures, reward orientations, and organizational characteristics.	ASB is not the same as just "working smarter." It is determined to be a more complex construct.
Bodkin and Stevenson (1993)	101 food distributors and wholesalers.	Sales call planning, customer information gathering, competitor information gathering, intention to adapt.	Adapters show the greatest difference from non-adapters in sales call planning. Sales position characteristics distinguish the two types of sellers across ASB measures. Sales experience findings were mixed.
Siguaw (1993)	306 personal sellers in the information and image management industry.	Role conflict, organizational commitment, functional flexibility	ASB is positively related to sales experience, effort, functional flexibility, and sales performance.

Sujan et al. (1994)	190 salespeople from different industries	16-item ADAPTS scale	Learning orientation positively influences working smart. Working smart positively influences sales performance.
Tanner (1994)	58 booth attendants from producers and distributors of networking products, services, and data.	Training level, booth experience, sales experience, and purpose	Booth attendants adapt to the type of customer. Experience was unrelated to ASB. Training being received by the observed attendants did not seem to affect ASB.
Predmore and Bonnice (1994)	50 sellers x 10 taped sales calls each in industrial trade magazine sales.	ASB and two measures of sales performance.	Telemarketers who adjust their communication style during the course of the sales exchange demonstrate higher sales performance.
Blackshear and Plank (1994)	118 sales reps who were also assessed by their managers.	Five ASB scales	Sellers' behavior have a positive impact on sales performance. ASB seems to be positively related to sales performance.
Levy and Sharma (1994)	201 retail salespeople from one major department store	16-item ADAPTS scale	Gender, age, experience and education are not linked to adaptive selling.
Siguaw and Honeycutt (1995)	268 salespeople from the Association for Information and Image Management	16-item ADAPTS scale	No gender differences were found for adaptive selling.
Grant and Cravens (1996)	146 field sales managers from different industries	four behavioral items adapted from the ADAPTS scale	Higher levels of behavior-based control system in terms of monitoring, rewarding and evaluating increase behavior performance (a construct that includes adapting selling).
Marks et al. (1996)	179 telecommunications equipment salespeople	Two dimensions from the ADAPS scale: Adaptive selling beliefs (four items), Adaptive selling behavior (seven items)	Adaptive selling beliefs do not influence sales performance, but behavior does.
Marks and Badovick (1997)	179 sellers from a major U.S. telecom equipment manufacturer.	ADAPTS	ASB and task-related sales behavior are related to goal commitment. However, there is no support that goal commitment influences sales performance or that ASB is related to task-relates sales behavior.
Dion et al. (1997)	124 sellers and purchasing agents, members of National Association of Purchasing Management	ADAPTS	Industrial buyers do not perceive female industrial salespeople as being any more or less adaptive than male industrial salespeople.
Boorom et al. (1998)	239 insurance salespeople	16-item ADAPTS scale	Interaction involvement is positively associated with adaptiveness in sales presentations
Eppler et al. (1998)	329 real estate sellers	ADAPTS	ASB is positively related to the sellers' self-monitoring trait and to their sales performance. Self-monitoring is not related to sales performance.

DelVecchio (1997)	155 business to business salespeople and their respective managers from different industries	16-item ADAPTS scale	Higher levels of salesperson-manager relationship quality are associated with higher levels of adaptive selling.
Piercy et al. (1998)	144 field sales managers from different industries	four behavioral items adapted from the ADAPTS scale	Higher levels of behavior-based control system in terms of monitoring, directing, rewarding and evaluating increase behavior performance (a construct that includes adapting selling).
Keillor et al. (2000)	126 members of a professional sales organization	ADAPTS, SOCO, and service orientation	ASB tends to be situation specific. Service orientation is difficult to assess in terms of its actual impact on sales performance.
Pettijohn et al. (2000)	62 sellers in a retail environment	ADAPTS	Higher ASB can bring higher closing ratio, but there is no support that higher ASB would provide higher sales volume. No clear relationship between ASB and sales performance.
Porter and Inks (2000)	161 industrial salespeople	16-item ADAPTS scale	Motivation/interest to understand behavior and introspection of behavior positively influence adaptive selling.
Bush et al. (2001)	122 marketing executives from several industries involved in the selling	ten (motivational, capability and behavioral) items from the ADAPTS scale	Intercultural disposition (a second-order construct composed of empathy, world mindedness, ethnocentrism, and attributional complexity) and adaptive selling were not positively related.
Shoemaker and Johlke (2002)	236 salespeople from five companies	6 (motivational and behavioral) items from the ADAPTS scale	Sales experience and sales training positively influence adaptive selling.
Robinson et al. (2002)	1,042 randomly selected salespeople.	ADAPTS – shorter version	ADAPTS-SV (short version) is significantly positively correlated with both sales experience measures and sales performance.
Park and Holloway (2003)	199 salespeople from a major automobile company	7 (motivational and behavioral) items from the ADAPTS scale	A learning orientation is positively related to adaptive selling.
Porter et al. (2003)	168 sales reps from two companies	ADAPTS	Selling environment does moderate the strength of relationship between ASB and the selling effectiveness outcomes. Suggests that ASB is important across different selling environments.
Verbeke et al. (2004)	93 sellers from insurance and financial products industries.	eight items from the ADAPTS scale	Pride facilitates goal striving in salespeople and his adaptive consequences. Pride had the highest positive effects on ASB and self-efficacy.
Fang et al. (2004)	290 salespeople from several industries (U.S.) and 247 salespeople from several industries (China)	five behavioral items from the ADAPTS scale	Goal difficulty has a negative relationship with adaptive selling behavior in the U.S. sample, but not in the Chinese sample. Goal specificity has a negative relationship with adaptive selling behavior in both samples.
Robinson et al. (2005)	118 field salespeople from a 500 Fortune firm	5-item Robinson et al.'s (2002) scale	Behavioral intentions to use technology are positively related to adaptive selling. Adaptive selling positively influences sales performance.

Giacobbe et al. (2006)	380 sales representatives and 50 regional sales managers	Sales managers -rated Self-rated	ASB is positively significant to sales performance under "adaptive condition".
Rapp et al. (2006)	Matched data from 175 female health care salespeople, their customers (a minimum of two customers per salesmen) and their sales managers	12 (motivational and behavioral) items from the ADAPTS scale	Knowledge and empowering leadership behaviors positively influence working smart. Experience does not have a significant influence on working smart. Experience does not moderate the effect of empowering leadership behaviors on working smart. Working smart positively influences sales performance.
Jaramillo et al. (2007)	400 salespeople from four banks	5-item Robinson et al.'s (2002) scale	Intrinsic motivation is positively related to adaptive selling. Level of initiative positively moderates the effect of intrinsic motivation on adaptive selling. Adaptive selling positively influences sales performance.
Guenzi et al. (2007)	130 key account managers from different industries	four items from Robinson et al.'s (2002) scale	The company's relational selling strategy is positively related to key account managers' adaptive selling.
Rapp et al. (2008)	662 health-care salespeople and 60 sales managers	four items from ADAPTS	CRM usage positively influences adaptive selling Adaptive selling positively influences sales performance.

*** Adapted and modified from Giacobbe et al. (2006), "A contingency approach to adaptive selling behavior and sales performance: Selling situations and salesperson characteristics" (p. 117)

Agility Selling Versus Adaptive Selling

Adaptive selling and agility selling can appear similar as both adaptability and agility involve salespeople adjusting in response to changing conditions (Weeks and Chonko, 2010). According to Chonko and Jones (2005), two key characteristics that distinguishes the agile salesperson from the adaptive salesperson are the development of knowledge and change proficiency - the knowledge that leads to understanding when to use conventional approaches, minor adaptations, and radical departures to offer new solutions that meet changes in customer requirements. Adaptability involves the effectiveness with which employees solve a typical, ill-defined, and complex problems that confront today's work situations and organizations (Hatano & Inagaki 1986; Holyoak 1991) whereas agility is more than reacting to events; it involves anticipating events (Chonko and Jones, 2005). Agility includes the ability to anticipate and quickly

perceive market opportunities and threats (Huumonen 2010), whereas adaptability is a reaction to marketplace opportunity or threat.

Research on adaptive selling includes an information processing approach through which the causal relationships between organizational traits, reward orientations, attributional styles, and salesperson motivation to work harder and smarter can be studied (Chonko and Jones 2005). According to Weitz et al. (1986), working smarter requires use of information to build knowledge structures, which allow salespeople to develop more selling situation categories. "Within the framework of these knowledge structures, the salesperson processes knowledge about customers (Szymanski 1988), but, as Weitz et al. (1986) suggest, the salesperson must be motivated to try new approaches (Chonko and Jones 2005, p. 372). Agile salespeople require a broad knowledge base, also characteristic of adaptive salespeople (Chonko and Jones 2005). The agile salesperson knowledge base has three distinct features: 1) improved organization and management practices, 2) human capabilities, skills, and motivations, and 3) appropriate sales technology (Chonko and Jones 2012). The combination of these knowledge components distinguishes agility from adaptive selling which tends to focus on the customer. Such a knowledge base is one of enablers of agility (Chonko and Jones 2005). However "agility specifically calls for change proficiency, including rapid response through reduced reaction time (Gutman and Graves 1995), improved ability to anticipate (Goldman et al. 1995), the integration and positioning of resources to effectively respond to change (Global Logistic research Team 1995), continuous market scanning (Van Oyen et al. 2001), autonomy in decision-making (Zhang and Sharifi 2000), and willingness and ability to make strategic commitments about positioning, competitive strategy, and sales strategy" (Chonko and Jones 2012, p. 521).

In summary, agility differs from adaptability in that, according to the literature agile salespeople require a deeper and broader knowledge base from which to operate. This knowledge base allows them to better anticipate events rather than waiting for events to occur. The literature also suggests that agile salespeople also have a change proficiency component that 1) is an indicator of their level ability to make successful change, 2) allows them to use knowledge effectively to meet changing or anticipate customer requirements and 3) assess more than just a perception that salesforce can engage in different behaviors.

DILIGENCE

According to the Oxford dictionary, diligence is defined as "careful and persistent work or effort". The origin of the word "diligence" is the Middle English in which the term diligence is referred to as "in the sense of close attention, caution" (http://www.oxforddictionaries.com/us/definition/american_english/diligence). Diligence is about working hard and performing one's responsibilities in the best possible ways. There has been considerable research on due diligence in the accounting, finance and real estate field, but very little research is available on diligence in the marketing and sales.

Diligence in the organization is often referred to as carefully and persistently fulfilling conventional job activities (Eisenberger et al. 1990). According to Eisenberger et al. (1990), diligence is about spontaneous problem solving during customer interaction. Eisenberger et al. (1990) found a significant relationship between perceived organizational support and measures of employee diligence, commitment, and innovation. They showed that perceived high organization support motivates employees to increase diligence in carrying out their job responsibilities and enhancing participation in extra-role citizenship behavior.

Salespeople engaging in B2B selling often maintain a direct contact with customers, and hence are involved in diligent service behavior. (Ahearne et al. 2007; Agnihotri et al. 2012). Ahearne et al. (2007) initially proposed the concept of sales service behaviors and conceptualized these behaviors as having five dimensions: diligence, information communication, inducements, empathy and sportsmanship. They define diligence as "a composite of two types of behavior: responsiveness and reliability" (Ahearne et al. 2007, p.605). Diligence is about salespeople being responsive and reliable in catering to customer needs and requests (Plouffe et al. 2009). Responsiveness specifically represents speed and timeliness of service delivery as well as the ability of the salesperson to respond promptly to customer service requests, whereas reliability represents performing service dependably, accurately, and on-time (Parasuraman, Zeithaml, and Berry 1988).

Ahearne et al. (2007) suggest that a salesperson who works closely and directly with customers in a B2B sales context finds that responsiveness and reliability "appear to be inextricably bound together" (Ahearne et al. 2007, p.605). This sort of behavior includes prompt responses from the salesperson as well as "following up on commitments, fulfilling customer requests, and remaining available when needed" (Ahearne et al 2007, p. 605). They found that salesperson diligence has a significant positive effect on overall satisfaction. Goad (2014) found that a high level of salesperson diligence strengthens the relationship between listening, responding and customer satisfaction. Also, Fournier et al. (2013) states that salesperson polychronic orientation – "an employee's preference for switching between multiple tasks within the same block of time" (p.197) helps them to be more diligent and hence allow them to engaging multitasking effectively, when needed. Stan et al. (2012) notice that an increased obligation to the employing organization allows employees to work diligently which in turn

leads to improve job performance. Ahearne's diligence scale is shown below. The scale contains no explicit measures of salesperson knowledge or change proficiency.

Diligence (Ahearne et al. 2007)

1. I am often too busy to respond promptly to customers' special requests.
2. I always make sure that I can be reached whenever a customer needs something important.
3. I return customers' calls promptly.
4. I provide the information customers request in a timely manner.
5. I always make sure that customers are able to see me as often as they need to.
6. I always make sure that customers can reach me within 24 h.
7. I always provide services to customers at the time I promise to do so.
8. I keep good records of my past interactions with customers.

Salesperson's diligence in relation to fulfilling customer requests is positively related to customer satisfaction, trust, and share of customer's wallet (Ahearne et al. 2007; Jaramillo et al. 2012). Salesperson diligence strengthens the relationship between listening and customer satisfaction (Goad 2014). In sum, salesperson diligence behavior is about being responsive and reliable in catering to customer needs and requests (Ahearne et al. 2007), which however does not require a salesperson to utilize anticipatory skills or change management skills. Table 2-9 summarizes the empirical research on diligence.

Table 2-9: Practical research on Diligence

Reference	Predictors of Diligence	Diligence as	Diligence scales
Eisenberger et al. (1990)	• Perceived organizational support	Dependent Variable	• Number of days absent • Number of periods absent • Performance.
Ahearne et al. (2007)	• Responsiveness • Reliability	Independent Variable	• Never too busy to respond promptly to my special requests. • Makes sure I can reach him/her when I need something important. • Returns calls promptly whenever he/she is unavailable. • Provides information I request in a timely manner. • Satisfies me with the volume and frequency of sample deliveries. • Makes sure that I can always reach him/her within 24 hours. • Provides his/her services at the time he/she promises to do so. • Keeps good records of our past interactions.
Goad (2014)	• Responsiveness • Reliability	Moderator	Diligence Scale (Ahearne et al. 2007)

Agility versus Diligence

While diligence particularly represents providing service in a timely manner, it does not include an anticipatory component. Like diligence, agile salespeople provide timely service as expected. However, they go beyond to their normal day-to-day job responsibilities and engage in extra-role activities by anticipating customer problems and opportunities. Jaramillo, Chonko and Weeks (2012) state that agility is similar to diligence in terms of employee's alertness and rapid response to customer demands. However, agility also includes 1) pro-activeness in anticipating customer problems and opportunities, and 2) using market knowledge to provide enhanced customer value. Agility is about economies of speed while diligence is economies of hard-working (Moon 2000). Therefore, the agile salesperson is more prepared to provide quick sales/service support utilizing their anticipatory skills whereas salesperson diligence is about commitment in providing responsive and reliable service when customer asked for the services.

FLEXIBILITY

According to the definition in the Oxford Dictionary, flexibility is either the "ability to bend" or the "ability to adapt". It is the latter part of this definition that has been the focus of academic discussion as it relates to organizations, in general, and manufacturing systems in particular (Holweg 2005, p.606). The management literature has considered flexibility as an adaptive response to environmental uncertainty (Gupta and Goyal 1989; Gerwin 1993). According to Holweg (2005), "the ability of a system to adapt to changing external and internal influences has been recognized as a source of competitive advantage (Zelenovich and Dragutin 1982; Hayes and Wheelwright 1984), and was widely promoted in the 1990s by Slack (1991) and Upton (1994, 1995)". Even though, flexible manufacturing systems (FMS) (Hill and Chambers 1991) have been at the center of debate, Holweg (2005) states that research on

flexibility should be broadened and, hence, should not be restricted to the manufacturing function.

According to Bernardes and Hanna (2009), several scholarly works can be credited for advancing our understanding of the topic flexibility, including seminal works proposing an initial domain (Gerwin 1987; D'Souza and Williams 2000; Das, 2001) to specific dimensions and flexibility drivers (Upton, 1997; Jack and Raturi 2002; Oke 2005; Karuppan and Kepes 2006) and their measures (van Hop 2004; Wahab 2005), enablers (Narasimhan and Das 2000; Zhang et al. 2006), application in the service industries (Aranda 2003), and, more recently, in the supply chain context (Stevenson and Spring 2007). "Flexibility" was identified as a key element of a sustainable commercial enterprise (Hart 1937).

The term 'flexibility' can be defined in many ways, depending on the discipline and the nature of the research (Alter 2004). Mandelbaum (1978) defines flexibility as "the ability to respond effectively to changing circumstances", and classified flexibility into two different forms: action flexibility and state flexibility. Action flexibility is defined as "the capacity for taking new action to meet new circumstances", whereas state flexibility is defined as "the capacity to continue functioning effectively despite changes in the environment" (p. 203). Buzacott (1982) defines flexibility as the ability of a system to process a wide variety of parts or assemblies, which essentially permits changes to the system without any outside intervention. According to Narain et al. (2000), this type of flexibility is similar to the concept of state flexibility originally proposed by Mandelbaum (1978). Table 2-10 provides a summary of the definitions of flexibility. These definitions do refer to quick response as a hallmark of flexibility, but there is no specific reference to anticipation of change. Nor are the concepts of knowledge and change proficiency referred to in these definitions.

Table 2-10: Definitions of Flexibility

Ability to respond effectively to changing circumstances	Gerwin (1987)
The quickness and ease with which plants can respond to changes in market conditions	Cox (1989)
The adaptability of a system to a wide range of possible environments that it may encounter	Sethi and Sethi (1990)
The ability of a manufacturing system to generate high net revenues consistently across all conceivable states of the nature in which it may be called to function	Ramesesh and Maliyakal (1991)
The ability to cope with changing circumstances or instability caused by the environment	Gupta and Somers (1992)
The ability of the system to quickly adjust to any change in relevant factors like product, process, loads, and machine failure	Nagarur (1992)
A response to external uncertainty	Newman et al. (1993)
A generic ability to adapt to internal and/or external influences	Holweg (2005)
The ability of a manufacturing system to change states across an increasing range of volume and/or variety, while adhering to stringent time and cost metrics	Upton (1994, 1995b)
The ability to respond quickly to changing customer needs at reasonable price	Small and Chen (1997)
The capability of an organization to move from one task to another quickly and as a routine procedure	Vokurka and fliedner (1998)
Ability of a manufacturing system to change states across an increasing range of volume and/or variety, while adhering to stringent time and cost metrics	Das (2001)
The organization's ability to meet an increasing variety of customer expectations without excessive costs, time, organizational disruptions, or performance losses	Zhang et al. (2003)

*** Adopted from Bernardes and Hanna (2009, p.34), "A theoretical review of flexibility, agility and responsiveness in the operations management literature"

Definitions of flexibility also contain many traits ascribed to flexibility. References can be found to "ability to respond" which does suggest some relation to change proficiency, but is not a measure of change proficiency. No specific references to the knowledge that is required to effectively respond are found in these definitions.

Types of Flexibility

Buzacott (1982) classified flexibility into two classes: job flexibility and machine flexibility. Job flexibility is the ability of the system to cope with changes in the jobs to be processed by the system, whereas machine flexibility is the ability of the system to cope with changes and disturbances at the machine and workstations. Job flexibility can be achieved either at the machine or at the system level. At the machine level job flexibility is achieved by increasing the capability of the machine by providing for numerical control, tool magazine and automatic tool changing, and the ability to change capability. At the system level, job flexibility is achieved by distributing the required capability among a variety of machines or workstations,

each of which would then be specialized to certain processing tasks (Buzacott 1982; Narain et al. 2000). On the other hand, Zelenovich (1982) proposed that the flexibility of a production system is a measure of its capacity to adapt to changing environmental conditions and process requirements (Narain et al. 2000). Zelenovich (1982) identifies two components of flexibility: design adequacy and adaptation flexibility. Design adequacy is related to Buzacott (1982) proposed concept of job flexibility whereas adaptation flexibility is related to the time required to change between job types (Narain et al. 2000).

Slack (1991) and Correa (1992) each published key papers that have discussed why companies engage in flexibility and types of benefits they usually obtain from operational flexibility (Holweg 2005). Their analysis showed that companies have different motives for increasing their operational flexibility. For example, Slack (1991) proposed a framework with four main types of flexibility and two dimensions – range and response. These four types of flexibility are product, mix, volume and delivery. He defined product flexibility as the ability to introduce novel products or to modify existing ones; mix flexibility as the ability to change the range of products made within a given time period; volume flexibility as the ability to change the level of aggregated output; and delivery flexibility as the ability to change planned or assumed delivery dates. Also, according to Slack (1983), the range dimension can be characterized as the total envelope of capability through which the production system achieves. The response dimension can be described as the cost and time within which changes can be made to the capability envelope (cited in Holweg 2005).

Some authors have made a distinction between internal and external flexibilities (Bernardes and Hanna 2009). Upton (1994) defines internal flexibility as an operations strategy including a set of capabilities that a firm can develop to respond to its environment. He defines

external flexibility as capabilities possessed by the firm that allows firm to achieve sources of variability in the time when the firm must respond. Referring to external flexibility, Hyun and Ahn (1992) discussed strategic flexibility which they defined as how well a firm addresses and adapts its strategic decisions to unexpected changes in competitive environment such as drastic changes in product demand, customer tastes, number of competitors and technologies employed (cited in Narain et al. 2000). They also proposed that flexibility be considered as both a reactive and proactive behavior. Gerwin (1993) also suggested two major strategies for using flexibility: adaptive and redefinition. The adaptive strategy refers to the defensive or reactive use of flexible competencies to accommodate unknown uncertainty, while the redefinition strategy refers to the proactive use of flexible competencies to raise customer expectations, increase uncertainty for rivals and gain competitive edge (Bernardes and Hanna, 2009).

Darnhofer et al. (2010) distinguish between operational and strategic flexibility. Operational flexibility is defined as the ability of a system to implement changes in the short term when facing surprises and strategic flexibility is defined as the long-term choices and relates to the capacity to change the structure, the resources, and the competences of the firm in anticipation of, or in reaction to, changes in the environment. Oke (2013) investigated the relationship between flexibility and product innovation performance with a primary focus on mix flexibility and labor flexibility. Mix flexibility has been defined as ‘‘the ability of the organization to produce different combinations of products economically and effectively given certain capacity’’ (Zhang et al., 2003, p. 177), Labor flexibility has been defined as ‘‘the ability of the workforce to perform a broad range of manufacturing tasks economically and effectively’’ (Zhang et al., 2003, p. 177). According to Oke (2013), the higher the labor flexibility, the higher the employees are cross-trained with a variety of skills which further allows them to exploit

opportunities and generate different ideas. Chonko and Jones (2005) states that agile salespeople need to be cross-trained and hence they will have higher degree of labor flexibility. Table 2-11 summarizes the classification of manufacturing flexibility.

Table 2-11: A Summary of Manufacturing Flexibility Classifications

- Machine flexibility – refers to the various types of operations that a machine can perform without requiring a prohibitive effort in switching from one operation to another.
- Job Flexibility – refers to the ability of the system to cope with changes in the jobs to be processed by the system.
- Material handling flexibility – is the ability of a material handling system to move different part types efficiently for proper positioning and processing through the manufacturing facility it serves.
- Operations flexibility - of a part refers to its ability to be produced in different ways with alternate process plans by either an interchange or a substitution of certain operations by others.
- Process flexibility - of a manufacturing system relates to the set of part types that the system can produce without major set-ups. (Another preferred term for it is mix flexibility).
- Product flexibility - is the ease with which new parts can be added or substituted for the existing parts. In other words product flexibility is the ease with which the part mix currently being produced can be changed inexpensively and rapidly.
- Mix Flexibility – refers to the ability to change the range of products made within a given time period.
- Routing flexibility - of a manufacturing system is its ability to produce a part by alternative routes through the system.
- Volume flexibility - of a manufacturing system is its ability to be operated profitably at different produce overall output levels.
- Expansion flexibility - of a manufacturing system is the ease with which its capacity and capability can be increased when needed.
- Program flexibility - is the ability of the system to run virtually untended for a long enough period.
- Production flexibility - is the universe of part types that the manufacturing system can produce without adding major capital equipment.
- Material flexibility – is the capability to make parts with alternative composition and dimensions of raw materials.
- Labor flexibility – is the ability to change number of workers, tasks performed by workers, and other worker responsibilities.
- Market flexibility - is the ease with which the manufacturing system can adapt to a changing market environment.
- Response – refers to the cost and time within which changes can be made to the capability envelope.
- Range – refers to the total envelope of capability through which the production system achieves.
- Internal – refers to an operations strategy including a set of capabilities that a firm can develop to respond to its environment.
- External – refers to as capabilities possessed by the firm that allows firm to achieve sources of variability in the time when the firm must respond.
- Delivery – refers to the ability to change planned or assumed delivery dates.
- Strategic flexibility – refers to how well a firm addresses and adapts its strategic decisions to unexpected changes in competitive environment.

Flexibility and Response to Change

Flexibility has long been considered an important research topic in the organizational change literature (Dunford et al. 2013). The Management literature has also addressed the

importance of change capabilities when faced with fluid market conditions (Lange 1944; Stigler 1939; Dunford et al. 2013). In that context, Gerwin (1987) defined flexibility as the ability to respond effectively to changing circumstances. Based on this definition, Bernardes and Hanna (2009), discussed flexibility is means of responding to changes. Flexibility also has been linked to environmental uncertainty (Narain et al. 2000). At the organization level, Evans (1991) describe flexibility as a composition of a number of "senses" that includes adaptability, agility, corrigibility, elasticity, hedging, liquidity, malleability, plasticity, resilience, robustness, and versatility. He argued that each of these organizational flexibilities can be invoked in response to some form of external environmental uncertainties or pressures. The type of reaction could be "offensive" or "defensive". These issues also come into play at the manufacturing flexibility level (Narain et al. 2000).

Furthermore, many authors (e.g. De Meyer et al. 1989; Suarez et al. 1996; Kathuria and Partovi 1999; Golden and Powell 2000; Urtasun-Alonso et al. 2014) consider flexibility as the building block of competitive advantage for firms in the twenty first century. In an empirical study, Swamidass and Newell (1987) found that environmental uncertainty influenced manufacturing flexibility, which in turn influenced business performance. Their results imply that manufacturing flexibility facilitates adaptation to uncertainty. Reix (1979) also related the concept of flexibility to adaptive capacity employing flexibility as one of the way to deal with uncertainty. Other researchers have provided theoretical support for the idea that flexibility increases as market uncertainties increases (Tombak and DeMeyer 1988; Chen, et al. 1992). The need for incorporating flexibility into the organization is the result of these internal and external uncertainties (Narain et al. 2000).

In a comprehensive review of forty two empirical papers on manufacturing flexibility, Mishra et al. (2014) asserted that variables related to manufacturing flexibility can be categorized into six broad groups: “environmental uncertainties”, “strategy”, “organizational attributes”, “manufacturing technology”, “innovation”, and “product types”. According to Mishra et al. (2014), environmental uncertainties were found to be most important in relation to flexibility. He and his colleagues also stated that environmental uncertainty leads to uncertainty about marketing and manufacturing functions. They describe strategy from the perspective of both the business strategy and competitive strategy of a firm. Also, they defined advance manufacturing technology as something that involves a flexible manufacturing system, group technology, and use of computer controlled systems for design and manufacturing etc. They further stated that, “organizational attributes entail structural, non-technological, behavioral factors and design characteristics of a firm such as process scale, technology age, workforce experience, multi skilled workforce, team building, employee empowerment, size of the organization, span of control etc. Innovation incorporates innovation related to product, process, business practices and product type includes products that require incremental or radical change, also known as incremental or radical products” (p.105). Table 2-12 summarizes the classification of manufacturing flexibility.

Table 2-12: Research Studies in terms of Variables

Variables	Related studies
Environmental uncertainties	Gerwin (1987); Swamidass and Newell (1987); Pagell and Krause (1999); Vokurka and O’Leary Kelly (2000); Chang et al. (2002); Pagell and Krause (2004); Kara and Kayis (2004); Boyle (2006); Sawhney (2006); Hutchison and Das (2007); Anand and Ward (2004); Patel (2011); Chang 2011; Singh et al.(2012); Fernandes et al. (2012); Goyal et al. (2012); Ojha et al. (2013)
Strategy	Ettlie and Penner-Hahn (1994); Gupta and Somers (1996); Vokurka and O’Leary-Kelly (2000); Chang et al. (2003); Hutchison and Das (2007); Ling-yee and Ogunmokun (2008); Fernandes et al.(2012)
Organizational attributes	Upton(1995); Suarez et al.(1996); Upton (1997); Boyer et al. (1997); Lau (1999); Vokurka and O’Leary-Kelly (2000); Chang et al. (2005); Hutchison and Das(2007); Ling-yee and Ogunmokun (2008); Ling–yee et al. (2008); Skipper and Hanna (2009); Urtasun-Alonsoa et al. (2012)

Manufacturing technology	Upton (1995); Suarez et al. (1996); Safizadeh et al. (1996); Upton (1997); Boyer et al. (1997); Lau (1999); Vokurka and O'Leary-Kelly (2000); Zhang et al. (2006); Hutchison and Das 2007; Theodorou and Florou (2008); Cordero et al. (2009)
Innovation	Menor et al. (2007); Xinhua et al. (2009); Camiso´n and Lo´pez (2010); Judi and Beach (2010);Oke (2011)
Product types	Larso et al. (2009)

*** Adapted from Mishra et al. (2014, p.106), "Manufacturing Flexibility Research: A Review of Literature and Agenda for Future Research"

Summary of Key Facets of Flexibility

Flexibility refers to the willingness and ability of the service worker to alter the nature of the service or product to meet the needs of the customer (Johnston 1997). Flexibility and agility have been used interchangeably in the literature (Agarwal et al. 2006). Employees are flexible when they are able to learn quickly to perform new tasks (Bhattacharya et al. 2005; Wright & Snell 1998). Rather than focusing on the current breadth of competences, skill flexibility refers to how easily and quickly employees assimilate new skills and abilities (Beltrán-Martín et al. 2008). Flexibility allows salespeople to avoid wasting resources on ineffective strategies and to quickly shifting to a new approach when an obstacle is encountered (Conner and Hoopes 1997). The Zhang, et al. (2003) flexibility scale is shown below as representative of the flexibility literature. No specific items refer to knowledge or change proficiency.

Flexibility (Zhang et al. (2003)

1. I can perform many types of operations effectively.
2. I can use many different tools effectively.
3. I am a cross-trained worker who can perform a broad range of manufacturing tasks effectively in the organization.
4. I can operate various types of machines.
5. I can be transferred easily between organizational units.

Agility versus Flexibility:

Agility is different from flexibility in that agility is a proactive adaptation whereas flexibility is a reactive adaptation (Gunasekaran et al. 2002). Agility also is described as a state of being ready for change rather than simply adapting to change (Golden and Powell 2000).

Primary characteristics of agility are speed and flexibility, effective response to change and uncertainty, as well as exploiting and taking advantages of changes (Sherehiy et al. 2007). Agile salespeople are multi-skilled and flexible (Breu et al. 2002), being less dependent on sales systems and more reliant on knowledge and the opportunities that come with building customer relationships (Chonko and Jones 2012). From an organization perspective, Agility has been characterized as a strategic ability of the whole organization to adapt to unpredicted and sudden change in the market whereas flexibility is a capacity of the whole factory to change from one task or production route to another (Tsourveloudis and Valavanis 2002). Organizational flexibility is more related to organization's capacity to adjust internal structures and processes in response to changes in the environment (Reed and Blunsdon 1998). In a word, flexibility is a prerequisite to achieve agility (Schulz and Fricke 1999).

MEASURING AGILITY; SIFTING THROUGH THE WORK

The agility literature offers many different frameworks and metrics for developing an agile model which can serve as foundation in the development of a salesperson agility scale. As inferred from the literature review above, development of any agility metric is difficult due to the broadness of the domain of agility and the variations in definitions. The term agility is understood in a broader perspective and is influenced by many characteristics, as evident from the previous discussion. Thus there exists a widely diverse set of potential measurement criteria for agility construct. Many of the initial models developed were empirical in nature, but, these assessed a wide array of traits ascribed to agility. Later, more comprehensive and flexible models were developed seeking to integrate organization and workplace (Shaarabh et al. 2014). The sheer number of these works is at the root of an increasing number of studies proposing various

measures and techniques for assessing agility (Yauch 2011). Table 2-13 indicates attempts at measurement of the agility construct exist.

Table 2-13: Recent Work on Measurement of Agility

Authors	Description
Sherehiy et al. (2007)	The model's framework consists of –determining agility need, assessing current position, determining capabilities required for agility, and adopting relevant practices which could bring about the recognized capabilities.
Jackson and Johansson et al. (2003)	The model's a three step approach for evaluation- First is evaluating the market trends, second is the analysis of the strategic objectives to find out flexibility competency as a long term objective, the final part is finding out the capabilities that needs to be focused on.
Van Hoek et al. (2001)	The model accesses five characteristics for agility – customer sensitivity, virtual integration, process integration, network integration and measurement. The organization is marked based on these characteristics on 5 point Likert's scale and the overall agility is measured average of individual characteristics.
Ren et al. (2000)	The model uses Analytical hierarchy process (AHP) to determine agility capabilities which is used with the judgments of organization performance the agility index is calculated.
Yang and Li (2002)	The model is specific to mass customized manufacturing organization. The model utilizes multi grade fuzzy approach to calculate agility. A three grade evaluation index is used to measure agility which is orderly calculated as a weighted sum of companies rating against agility capabilities mentioned in the framework.
Arteta and Giachetti (2004)	The model determines complexity and consequently agility owing to the inverse relationship between them. It uses Petri Nets, which represents two elements needed to measure process complexity - resources in the process and the interconnection between those resources, to find the state space probabilities needed for the complexity measure.
Yauch (2011)	This model conceptualizes agility as performance outcome of an organization in turbulent environment. Turbulence score and organization success is calculated using empirical correlation which in turn is used to calculate agility.
Tsourveloudis and Valavanis (2002)	This model combines all infrastructures -production, market, people, and information using the knowledge that is included in simple IF–THEN rules, as agile characteristics and their corresponding operational parameters. Based on company's performance overall agility is determined.
Lin et al. (2006)	The model introduces a fuzzy agility index (FAI) which is calculated as a weighted average of performance rating of various agility attributes and their relative importance. Fuzzy performance importance index (FPII) is used to identify attributes that need to ameliorate.
Jain et al. (2008)	The model proposed uses Fuzzy Association Rule Mining (FARM) .The model with the help of quantitative and qualitative relational databases derives association rules for evaluating agility.

*** Adapted from Shaarabh et al. (2014), "A Review on Measurement of Agility"

In addition to the agility metrics, a number of authors have provided frameworks that serve to guide organizations in assessment of their agility capabilities. Sherehiy et al. (2007) laid out a framework which consisted of various steps for assessing agility in different kinds of organizations. The first step consists of determining the nature of environment of the organization. The next step is the assessment of the current status of agility in the company. Next a gap analysis presents the plan of action. The last step examines the organization's agility providers those aspect of the organization through which agility capabilities of the organization can be achieved. A similar framework for agility assessment was developed by Jackson and Johansson (2003) where they specify a three step approach for evaluation. "First being evaluating the market trends, second being analysis of the strategic objectives in order to find out whether flexibility competency is a long term objective and the areas of potential development, the final part of the analysis is to find out the capabilities that needs to be focused on" (Shaarabh et al. 2014, p. 2).

Van Hoek (2001) also proposed an empirical model based on five characteristics of agility – customer sensitivity, virtual integration, process integration, network integration and measurement. "The managers rate their organization these characteristics using a 5 point Likert's scale with overall agility represented as the average of individual characteristics" (Shaarabh et al. 2014, p. 2). Ren et al. (2003) explored how agility traits influence the competitive basis of organization. In their study, the competitive bases such as cost, quality, speed, flexibility, innovation, and proactivity, were defined as dimensions that an organization's production system must possess in order to meet the demands of the target market (Sherehiy 2008). Yusuf and Adeleye (2002) also found that agile capabilities such as speed to market and dependability were significantly correlated with all performance measures such as sales turnover, market share,

percentage of turnover and customer loyalty (Sherehiy 2008). Lin at al. (2006) identified three main agility capabilities: organizational management agility, product design agility, product manufacturing agility.

Sanchez and Rakesh (2001) developed an agility metric to measure responsiveness of companies relative to product development cycle time (Shaarabh et al. 2014). Arteta and Giachetti (2004) used complexity as a surrogate measure for agility, stating that a less complex enterprise in terms of systems and processes is easier to change and hence more agile (Shaarabh et al. 2014). A different approach was proposed by Yauch (2011). "They proposed a quantitative index of agility, based on a conceptualization of agility as a performance outcome, which captures both the success of an organization and the turbulence of its business environment" (Shaarabh et al. 2014, p. 2). Tsourveloudis and Valavanis (2002) combines all infrastructures - production, market, people, and information as agile characteristics and their corresponding operational parameters where they use those knowledge in simple "if–then" rules in order to determine overall agility (Shaarabh et al. 2014).

Goldman et al. (1995) distinguished four main strategic dimensions that undergird the achievement of agile competitive capabilities: 1) enriching the customer; 2) cooperating to enhance competitiveness: 3) organizing to master changes; and 4) leveraging the impact of people and information (Sherehiy 2008). It is important to note that the fourth dimension of agility recognizes the importance of employees as a key asset for the firm. Hence, they suggest special emphasize be placed on workforce agility through education, teamwork, training, and empowerment. This point of view has opened another avenue of discussion concerning agile people since organizational agility requires an agile workforce (that is cross trained and is able to react and adapt to changes appropriately and in a timely manner as well as capability of taking

advantage of changes and turning them into benefits for the firm) (Chonko and Jones 2005). Furthermore, Yusuf et al. (1999) suggests the characteristic of agile people as knowledgeable and skilled workforce whereas Sharifi and Zhang (1999) define agile people as knowledgeable and multi-skilled people, which leads to knowledge and change proficiency of salesperson.

According to Dove (1999), the knowledge base is exploding and "the duration of value for any given piece of knowledge is shrinking as new knowledge makes old knowledge obsolete faster" (Dove 1999, p.16). Even when new knowledge is learned, the pressure for speed of deployment of that knowledge increases. If useful knowledge is not deployed quickly enough there is risk of obsolescence before it generates a return on investment (Dove 1999). "This also puts pressure on the speed of knowledge diffusion and a focus on the anticipation of new knowledge needs" (Dove 1999, p.16). As Jones et al. (2005) observed customer satisfaction ratings for many organizations have declined even though those organizations have improved customer relationship management technology. They observe that "customer expectations are increasing in relation to salesperson knowledge, speed of response, breadth and depth of communication, and customization of information and product/service offerings" (Jones et al. 2005, p. 106). Colletti and Chonko (1997) noted long ago, that customer expectations can change so fast that organizations, particularly salesforce organizations, often cannot effectively respond to those changes. Sales researchers have questioned whether the salesforce in an organization is becoming obsolete as those salesforces are no longer capable of adapting and responding to dynamic change effectively (Jones, Chonko and Roberts, 2004).

Agility selling requires fundamental changes in the salesperson's approach to customer relationships (Chonko and Jones 2005). Knowledge and learning are all at the heart of salesperson agility (Goldman and Nagel 1995; Dove 1999). A knowledge driven business is one

that recognizes that knowledge and information are key differentiators (Chonko and Jones 2012). However, the success of any organization ultimately relies on the ability of its workforce to convert collective knowledge and people skills into customer solutions (Kidd 1994). According to Chonko and Jones (2005), access to knowledge about customers and the business environment is a critical factor in developing agility because knowledge is the main "lifeblood of agility" (p.380). Furthermore, today's salesperson has to perform beyond the regular skills levels, ability to manage, analyze, and communicate information to customers. He/she should also be able to "reduce the time needed to proceed from observation of problem situations to orchestration of customer focused solutions" (Chonko and Jones 2005, p.380).

Anticipation is an essential component in the identification of customer needs. Previous research on service quality emphasized on the fact that frontline service workers should be responsive and be able to react to customer needs quickly in order to delivering a superior customer experience (Parasuraman, Zeithaml, and Berry 1988). However, this strategy in service delivery is reactive in nature and is based on addressing customers' raised concerns (Wilder et al. 2014). According to Wilder et al. (2014, p.3), "a more proactive stance involves anticipating and identifying customer needs before they are verbalized", would be better strategy rather than being only responsiveness. The ability to identify potential customer needs before they are articulated is an integral resource in determining when to adapt a service offering (Gwinner et al. 2005). Therefore, agility is more than reacting to events (Chonko and Jones 2005) and more on anticipating the possible future needs through knowledge management and change capability skills. Salesperson agility, hence, requires a balance of two agility enablers which are knowledge base and change proficiency. None of the similar constructs such as adaptability, flexibility and diligence specify the employees' requirement of anticipatory component. Salesperson agility is

both proactive and reactive behavior. Based on the above discussion, the development of salesperson agility construct will be explored in terms of salesperson knowledge and the ability to enact change quickly. As a summary, agility is a widely written about concept that has been described in many ways and having many components. Before proceeding, measurement of agility can only effective if there is strong agreement about what *exactly* is being measured. In examining agility, this dissertation seeks to follow the logic presented by Grisaffe et al. (2016) and Vanmeter et al. (2016) in their examination of the servant leadership phenomenon.

Churchill (1979) observed, "Marketers certainly need to pay more attention to metric development. Many measures with which marketers now work are woefully inadequate, as the many literature reviews suggest" (p. 72). Furthermore, Buckley and Chapman (1996) suggest that a solution for emerging fields of research might lie in the development of "...a set of core concepts which are analytically rigorous and tractable, yet remain flexible" (p. 244). There is a need to devote more attention to the content validity of agility measures rather than searching for a holistic perspective with broad explanation.

The existence of multiple agility definitions and metrics calls for coordinated and integrative efforts to increase precision of the domain of the agility phenomena. Which of the definitions of agility, if any, is an accurate reflection of the domain? And, which scale, then, accurately assesses that domain? With competing definitions and scales, the only conclusion that can be drawn is that some phenomenon relates to some other variables. There can be no expression of confidence in relationships as multiple definitions and scales imply different assumptions made by the crafters of those definitions and metrics.

To advance agility theory, researchers should rigorously adhere to the first step in Churchill's (1979) procedure — domain specification, the objective being to ascertain if any

specific conceptualization or measures of a construct already exist. The conceptual definition provided in this dissertation, along with the corresponding scale items offer researchers a starting point for catalyzing constructive dialogue, that hopefully will lead to the articulation of a conceptualization of agility that follows the imperative of Weick (1999) —the identification of core servant leadership concepts relating to behaviors and integrate them with constructs drawn from the other literature.

Agility must be subjected to gradually increasing confirmation for verification (Carnap 1953). Dialogue through journals would serve to provide synthesis as well as replication. Universal statements can never be verified as complete and definitive, but they can be confirmed by the accumulation of knowledge. Hunt (1976) concurs, asserting that the key element in scientific method is inter-subjective certification. Further, in Kuhn's view (1962) progression is equated with problem solving. The implications of Hunt's, Carnap's and Kuhn's theses for those who search for the "definitive" work are clear… there cannot be one definitive work on agility, there can only be good works that provide a foundation for *ongoing* agility theory development and scientific process. Thus, one aspect of the agility research process should be the evaluation of agility work from the perspective of its potential to stimulate dialogue and subsequent investigations.

DEFINITION OF SALESFORCE AGILITY

For purposes of this dissertation, salesforce agility is defined as the salesperson's effective use of knowledge in the process of implementing successful changes with customers. The two key components of the definition are knowledge management and change proficiency. Both of these are cited as key aspects of agility in the early literature (e.g. Dove 1994). Borrowing from ideas offered by Grisaffe, et al; (2016) and Vanmeter, et al. (2016) in their work

on servant leadership, it was decided to continue the investigation of the worthiness of agility by returning to its conceptual roots.

KNOWLEDGE MANAGEMENT - AN ENABLER OF SALESPERSON AGILITY

According to Dove (1999), agility is derived from both the ability to act (change proficiency) and the intellectual ability to find the right things to act on (knowledge management). Dove (1999) first identified the importance of knowledge as they defined agility as the ability to manage and apply knowledge effectively. In order to describe agility in relation to knowledge management, he uses cats as an analogy. "When we refer to a cat as being agile we are observing that it is both physically adept (change proficiency) at movement and also mentally adept at (knowledge proficiency) choosing useful movement appropriate for the situation. Agile carries with it the elements of timeliness and grace and purpose and benefit as well as nimbleness. A cat that simply has the ability to move quickly, but moves inappropriately and to no gain might be called reactionary, spastic, or confused, but never agile. Picture a cat on a hot tin roof. Conversely, a cat that knows what should be done but finds itself unable to move might be called afraid, catatonic, or paralyzed, but never agile. Like the cat that's got itself up a tree" (Dove 1999, p. 20).

In an agile organization knowledge management involves having the right knowledge in the right place at the right time (Dove 1999). According to Dove, some of the key knowledge management issues in the agile organization which can be equally applicable for the agile salespeople are as follows:

- What's new and necessary to know changes quickly?
- The value of what is already known changes quickly.
- Some of what is known is obsolete and toxic.
- Applying someone else's knowledge often has no glory.

- Knowledge is often not in the heads of the people who need it.
- Knowledge is understanding & appreciation, not data & procedure.
- Knowledge is learned, and there's no time-out for learning.
- Different people learn differently.
- Collaborative learning is best, but (usually) culturally unnatural.
- Knowledge is not naturally mobile within an organization.
- Large organizations are culturally diverse.
- Large organizations are geographically dispersed.
- Knowledge Management (KM) and collaborative web tools are in their infancy.
- What to know and when to know it is a vital strategic issue.

According to Dove (1999), having knowledge at the right time means it is available sufficiently in advance so that salespeople can use it instantly. Having the right knowledge means managing the salesperson knowledge portfolio to anticipate emerging marketplace needs, satisfy current needs, and unlearn obsolete knowledge (Dove 1999). For the agile salesperson, knowledge management is first about learning and then about change proficiency (Dove 1999). "Knowing what to change and managing the change successfully are two different skills" (Chonko and Jones 2005, p. 375). Salespeople should know the difference between the knowledge value growth versus knowledge value decay beyond selling "know-how" (Chonko and Jones 2005).

Knowledge Components

Almost three decades ago, Weitz, Sujan and Sujan (1986) emphasized on the salesperson's knowledge management structure. They used the analogy that "game playing involves anticipating and responding to an opponent's move, just as selling involves adapting to customers' needs and behaviors" (p.177). According to Weitz, Sujan and Sujan (1986), difference in knowledge structures is an important determinant of effective selling behavior just as they are important in problem solving or game playing. They suggest that "to practice adaptive selling effectively, salespeople need an elaborate knowledge structure of sales situations, sales

behaviors, and contingencies that link specific behaviors to situations. To utilize this knowledge, salespeople need to be skillful in collecting information about customers so that they can relate knowledge acquired in previous sales situations to the interaction in which they are currently engaged" (Weitz et al. 1986, p.176). Therefore, it is imperative to examine salesperson knowledge management competencies as it relates to "knowing how to acquire, transfer, and erase knowledge" (Chonko and Jones 2005, p. 377). The agility literature expands on the Knowledge management required of salespeople as a process that includes knowledge dissemination, knowledge portfolio, knowledge generation, knowledge of customer relationships and knowledge of sales process innovation (Chonko and Jones 2005; 2012) . These five aspects of knowledge management allow a sales representative to learn and reflect as well as unlearn and relearn, which are usually considered essential for the building, maintaining, and replenishing of sales core-competencies (Bhatt (2011).

Knowledge Dissemination: Knowledge workers carry out different kinds of knowledge related tasks, such as acquiring, storage, dissemination, and processing to produce new, more advanced knowledge (Mäki 2008). Knowledge dissemination had been already identified as a key aspect of knowledge management and is defined as the process and extent of technological information exchange with a given organization (adopted from Day 1994; Kohli and Jaworski 1990; Bij et al. 2003). Knowledge dissemination is important for the strategic planning of new product development because a higher levels of knowledge dissemination leads to a clear overview of market needs, technological developments, and competitors' actions within the organization (Bij et al. 2003). "Generally applicable agility issues include the breadth of dissemination throughout the organization; the accommodation of both improved understanding as well as substantive

changes in the message when appropriate; and the ability to bring new membership in the organization up to speed quickly" (Dove 1996, p.17).

Mäki (2008) stated that knowledge dissemination within a knowledge intensive organizational working environment is a critical factor for successful knowledge work. A knowledge sharing culture plays a vital role as it encourages employees to share their knowledge when needed. According to Dove (1999), employees embrace new concepts only if they are viewed as related to what they already know. Hence new knowledge that does not require unlearning of old knowledge is easily be accepted by employees in the organization.

Knowledge Portfolio: Knowledge portfolio is the identification of knowledge which is deemed critical to the business. According to Dove et al. (1996), "generic Agility issues include identifying the nature and location of core competency knowledge, identifying knowledge to drive market positioning and differentiation strategies, identifying knowledge to drive market entry and penetration strategies, developing a core competency management strategy, reevaluating values and leveraging techniques of intellectual property rights, and obtaining value from increasingly complex knowledge with decreasingly applicable lifetimes" (p.68). A salesperson who has a competency in knowledge portfolio creation is able to anticipate emerging needs and satisfy current needs as well as identifying obsolete needs.

Knowledge Generation: Knowledge generation is the creation of knowledge assets in product technology, production process, procedures, markets, and other areas not previously possessed by the organization through techniques such as acquisition, discovery and development (Dove et al. 1996). "Generic Agility issues include overcoming not-invented-here barriers, efficacious and predictable time and cost, applicability to current and future needs, and synergy with other knowledge" (Dove et al. 1996, p.71). Through knowledge

generation, salespeople can identify incremental market and sales opportunities and assess their existing knowledge base to ensure that it is current, relevant and comprehensive. Continuous learning enables salespeople to handle change on the job. It enables them to pursue incremental opportunities and, most importantly, it enables them to grow and become more valuable to the company (Dove et al. 1996).

Customer Relationships: Customer relationships are the inter-relationships that exist between an organization and their customers and determine value through compensating rewards and continued relationships (Dove et al. 1996). "Generic Agility issues include developing and sustaining loyal relationships across product technology cycles; ascertaining unarticulated needs, developing new relationships in new markets, exploiting emerging electronic commerce effectively, integrating intra-enterprise information systems, developing and employing a customer knowledge base, and developing more responsive and more robust logistic and distribution systems" (Dove et al. 1996, p.45).

Sales Process Innovation: Sales process innovation allows salespeople to create and leverage new sales concepts which are distinguished by their impact on existing markets or their creation of new markets. "Generic Agility issues include supporting the pursuit of innovative rather than incremental products, harnessing increased cross-discipline opportunity and complexity, adding research activity into the current concepts of integrated product and process development, increasing the economic lifetime of products that too quickly become obsolete, designing with reusable building blocks, and eliminating 'not invented here' impediments to useful idea acceptance" (Dove et al. 1996, p.56).

Assessing Salesperson Knowledge of Agility Drivers

Environmental turbulence, encapsulating continuous, uncertain and potentially disruptive changes in a variety of factors is the key driver for the development of agility (Vazquez-Bustelo et al. 2007). Agile salespeople always make an effective response to a distinct set of business environment realities, called agility drivers, which have been described as originating from five dimensions - marketplace, competition criterion, customer requirements, technology, and social factors (Zhang and Sharifi 2000, 2007). According to Chonko and Jones (2011), these agility drives require salespeople to have advanced knowledge management skills of the external business environments so that they can consider new ways to work with customers to maintain competitive advantage (Priess 1997). They represent another way of looking at the knowledge salespeople require in order to be agile in the marketplace.

Marketplace: As suggested by Zhang and Sharifi (2007), globalization has already brought significant changes to the marketplace in which the current businesses operate. As a result, today's salespeople must constantly deal with more competitors/players, more products, and more technology. They experience the growth of niche markets, the rapid change of product models in the marketplace, and the shrinkage of product lifetime (Zhang and Sharifi 2007).

Competition: Rapid change has had impact on ways in which companies compete Today's companies have to compete not only on cost and quality but also on technology, time and responsiveness, etc. (Zhang and Sharifi 2007; 2000).

Customer Requirements: Today's customers are empowered due to the availability of information, Customers can learn much about suppliers' offerings long before they come in contact with a salesperson. Empowered customers demand individualized products and services, quicker delivery time and time to market, higher quality, and after sale services.

Therefore, salespeople must have the ability to learn and unlearn (Chonko and Jones 2005). They must learn new products, new sales techniques and sales strategies and unlearn the old ones which are no longer viable.

Technology: Threats to businesses also come from the rapid pace of technological development, the availability and wide accessibility of new product technology, new manufacturing processes, and new information technology which impacts the way businesses operate (Zhang and Sharifi 2007). Faster pace of technology change and its' direct/indirect impact on salespeople often drive salesperson agility (Kidd 1995; Zhang and Sharifi 2007).

Social Factors: Changes in "social factors," or pressures from environmental issues, the workforce, legal/political systems, culture issues, are also important salesperson agility drivers (Sharifi and Zhang 1999; 2001).

Identifying Salesperson's Agility Needs:

Still another way of assessing current agility knowledge needs includes an assessment of four elements which are 1) the salesperson, 2) time, 3) ease, and 4) range (Chonko and Jones 2012). According to them, the effectiveness of today's salesperson is asserted to be based on:

- *His/her own sales ability*: Salesperson's ability to proactively capture anticipate the marketplace and customer needs as well his/her capability to change accordingly and quickly.
- *Time*: At any time within the life cycle of the selling process, the salesperson must be alert for changes in what the customer is thinking that can lead to any future change of customer requirements.
- *Range*: Agile salesperson has to create and implement different strategies to build and maintain different customer relationships which range from single transaction to partnering solutions. In doing so, agile salesperson requires broad knowledge in order to focus on understanding of the customer and current industry issues and trends.
- *Ease*: Salespeople need to develop agility skills as they operate within a "mosaic of relationship" ranging from transactional relationships to collaborative relationships. The relationship mosaic reflects the strategies to be pursued across the set of relationships, the agile salesperson electing to span the mosaic rather than treating all customers alike or having a narrow range of relationship types (p.527).

Based on these factors, the salesperson who uses these factors wisely has a greater ability to anticipate, respond and implement change as quickly as possible (Zsiflovits and Engelhardt-Nowitzki 2007). Alternatively Dove (1996) suggested four change-proficiency metrics for agility: cost, time, robustness, and scope. He stated that with higher agility, the effort to change decreases and an organization reach "an ideal point where it takes no time, incurs no cost, has immediate and robust results and is not an inhibiting factor on the latitude of opportunity and innovation" (Zsiflovits and Engelhardt-Nowitzki 2007, p.92). According to Chonko and Jones (2005), effectiveness as agile salespeople need to determine if customer's needs/wants have changed due to agility driver, therefore, changes drive salesperson to identify new value propositions, use new sales strategies and tactics, and assess performance. In the next section, the concepts of salesperson, time, range, and ease are elaborated upon.

The Salesperson: Weitz, Sujan and Sujan (1986) suggest that salespeople should learn from their successes and failures in past sales encounters. Therefore, a salesperson's ability to cope with changes in the business environment and his/her ability to proactively identify customer needs as well as his/her capability to convert unexpected change into an opportunity leads to the discussion of salesperson current agility level (Chonko and Jones 2011). No change is possible if salesperson him/herself is not ready to accept that change.

Time: Time is how long it takes to effect a needed change (Zsiflovits and Engelhardt-Nowitzki 2007). Anticipating the change and responding effectively to that change in a timely manner is critical for salesperson agility. The salesperson must be alert for marketplace changes as well as customer preference changes at any time within the life cycle of the selling process (Chonko and Jones 2012).

Ease: Ease measures the level of effort involved in effecting change (Zsiflovits and Engelhardt-Nowitzki 2007). John Oleson, author of *Pathways to Agility*, stated that agility involves something unexpected being anticipated and having the capability to respond with ease (Oleson 1998). Agile salespeople pursue different sales strategies based on their relationship with the customers. They do not treat all customers alike or maintain a narrow range of relationship types. Agile salespeople can implement different strategies based on the current change situation with relative ease.

Range: Range means expanding the breadth and complexity of changes an organization can handle. In other word, range is the number of options the salesperson is prepared to offer if needed (Dove 1996). Agile salespeople create and implement strategies to build and maintain different relationships when relationships evolve from single transactions towards partnering solutions. Creating models for specific customers requires broad knowledge (range) that focuses on understanding of the customer and of current industry issues and trends (Chonko and Jones 2012).

CHANGE PROFICIENCY - AN ENABLER OF SALESPERSON AGILITY

The second agility enabler is the change proficiency of the salesperson. Change proficiency is a competency that involves both initiating and dealing with change (Dove, Hartman and Benson 1996). Change proficiency allows salespeople to manage and apply knowledge effectively (Dove 1999b). According to Dove (1994), change proficiency can be both reactive and proactive. Dove, Hartman and Benson (1996) provide a five-stage change proficiency maturity framework which can be used as a tool to assess salespersons' competency at change proficiency. As salesperson progresses through change proficiency stages, they gradually advance

their change competency which includes anticipatory skills, a necessary component of salesperson agility. The five stages of change competency are presented below:

1. *Accidental Stage*: There is no change-process recognition in the accidental stage. Having no change-process knowledge, salespeople manage change in an ad hoc basis: typically exhibiting false starts and retries, surprising results and side effects, overtime, downsizing (Dove, Hartman and Benson 1996). Speed is not critical in this stage (Chonko and Jones 2012).

2. *Repeatable Stage*: The repeatable stage, typically, is based on anecdotal "lessons learned" from past change activities (Dove, Hartman and Benson 1996,, p.4). Change proficiency for salespeople in this stage comes from prior successes and abilities to repeat these successes in relatively quick time frames.

3. *Defined Stage*: In the defined stage, formal change processes are recognized (Dove, Hartman and Benson 1996). "The field of successful practitioners of change is broadened as process rather than as anecdotal talent as in the repeatable stage" (Chonko and Jones 2005, p.375). Rigid change procedures based on studied experience and analysis, are seen in this stage.

4. *Managed Stage*: In the managed change stage, change process objectives are clarified and refined, Salespeople at this stage have an evolving knowledge base of change process fundamentals and guiding principles, which loosen rigid adherence to sales procedures, and predictability of outcomes becomes the norm (Dove, Hartman and Benson 1996).

5. *Mastered Stage*: Salespeople in the mastered change stage is characterized by a principle-based deep appreciation of adaptability (Dove, Hartman and Benson 1996). The salesperson considers change as a regular event and therefore consciously develops and manipulates business models. Like a flock of birds swooping and turning as a unit (Dove, Hartman and Benson 1999), change takes on a fluid motion for the agile salesperson (Chonko and Jones 2005).

Dove (1999) states when sound change proficiency capabilities are understood and managed, salespeople, like organizations, can gain competitive advantage by broadening their range of product/service applications. The change proficiency maturity framework shown in the accompanying table 2-14 provides a basis for development of a metric for measuring a company's proficiency on the two axes of interest: proactive and reactive change proficiency (Dove, Hartman and Benson, 1996). Key change issues for each business practice are developed

using response ability analysis, which refers to a collection of analytical methods based on ten change domains, five in the proactive realm and five in the reactive realm. Proactive response-needs can be classified as “creation, “improvement”, “migration” and “modification” whereas reactive response-needs can be classified as “correction”, “variation”, expansion” and “reconfiguration”.

Table 2-14: Summary of Five Stages of Change Proficiencies

Figure 2.3 Change Proficiency Maturity Framework				
	Stage	**Knowledge**	**Change Proficiency**	
			Proactive	**Reactive**
Pre-Aware	Accidental	Examples	Incompetent	Incompetent
Required	Repeatable	Concepts	Creation	Correction
	Defined	Metrics	Improvement	Variation
Advanced	Managed	Rules	Migration	Expansion
	Mastered	Principles	Modification	Reconfiguration

Source: Dove, Rick, Sue Hartman, and Steve Benson (1996), “An Agile Enterprise Reference Model with a Case Study of Remmele Engineering,” *Agility Forum Project*, AR96-04, December, p. 3.

Proactive changes are generally triggered internally by the application of new knowledge to generate new values (Dove 2005). The five categories of proactive change capabilities are discussed below:

1. *Incompetent:* Incompetent refers to lack of change capability where employees have no change-process knowledge and hence they manage change in an ad hoc basis.

2. *Creation*: Creation is the change capability which involves the development of something new, or the dissolution of something fundamental. Salesperson agility encompassing (Chonko and Jones 2005) creation include the development of a completely new market or customer group (perhaps upon entering a new market or securing a new major program contract), forming a new integrated development team with sales representation, or reaching a new sales target.

3. *Improvement*: Improvement is the change capability which involves continuous, incremental improvement of existing practices and relationships (Dove 2005). Improvement for the agile salesperson might come in the form of cost reductions

for a customer as a result of accepting the salesperson's value propositions" (Chonko and Jones 2005, p.375). Typical salesperson agility issues related to improvement are improving the ability of the salespeople to understand and implement the current customer needs and wants, implementing continuous improvement throughout all aspects of the sales unit.

4. *Migration*: Migration change capability is the foreseen, eventual, and fundamental change. Migration competency prepares a salesperson in advance so that he/she finds major transition as non-events. Change becomes a norm at the mastered change stage (Chonko and Jones 2005). It allows salespeople routinely anticipate and prepares for future knowledge requirements in several ways. In this stage, knowledge is frequently generated prior to an actual need and stored for future need/ application (Dove, Benson and Hartman, 1996). Migration change capability involves issues that arise as new information, technology or business practices replace older ones.

5. *Modification*: Modification change capabilities ensure that unique capabilities can be added or eliminated with relative ease. Issues related to modification change capability involve unique modifications to something that already exists, either in the adding of something unlike anything already available or in the complete elimination of something (Dove, Benson and Hartman, 1996). Typical salesperson modification agility examples might include integrating a new uniquely-qualified salespeople into an existing innovation team, or eliminating troublesome clauses from sales agreement. Salespersons' ability to anticipate customer/market need and to respond to this need in a proactive way with innovative products and solutions is representative of their mastery stage in the business practice (Dover, Hartman and Benson, 1996).

On the other-hand, reactive change is opportunistic, and involves responding to a situation that threatens or demands viability (Dove 1999). It is the opposite of proactive change which requires innovation. Reactive changes are generally triggered by events which require response. Reactive changes usually focus on problems that must be attended to or fixed. Any organization sufficiently proficient at reactive change to respond should use that competency proactively in order to achieve competitive advantage. According to Dove (1999, p.4), "those that are good at reactive change yet poor at proactive change are exhibiting symptoms of poor knowledge management". The five categories of reactive change capabilities are discussed below:

1. *Incompetent:* Incompetent refers to lack of change capability where employees have no change-process knowledge and hence they manage change in an ad hoc basis.

2. *Correction*: Correction change capability is about correcting mismatches or rectify a dysfunction. For example, fixing/replacing broken resources.

3. *Variation*: Variation is the real-time operating change within mission (e.g., accommodating customer preferences).

4. *Expansion*: Expansion change capability is about increase or decrease existing capacity. It *is the* competency that handles opportunities like production-rate doubling or necessities like staff reductions as painless events (Dove et al. 1996).

5. *Reconfiguration*: Reconfiguration change competency is a change relationships among modules. It allows to reassembles existing resources in such a way that a new productive configurations can easily be made.

The change proficiency taxonomy includes a hierarchy of competencies for relating to the ability of salespeople to be competitive in today's market. Agile salespeople improve their change proficiency in the more advanced stages where they develop preemptive capabilities (Chonko and Jones 2005). At migration and modification stage, salespeople sharpen their sales skill which allows salespeople to develop a strategic position in order to provide a superior value to customer (Chonko and Jones 2005). A salesperson with high change proficiency has proper knowledge about him/herself, the current marketplace, competition, current and forthcoming customer requirements, information technology and social and external factors that trigger changes in the business environment. High change proficiency implies that the salesperson can implement fast, low cost predictable solutions and in flexible doing so (Chonko and Jones 2005). The agile salesperson has a balanced response-change-capability which comes from the salesperson's change proficiency competencies – knowing how to acquire, transfer, and erase knowledge as well as knowledge management strategies – what knowledge to acquire, when to acquire it, why it is needed, and how to value it (Chonko and Jones 2005).

CHAPTER III

HYPOTHESES AND MODEL DEVELOPMENT

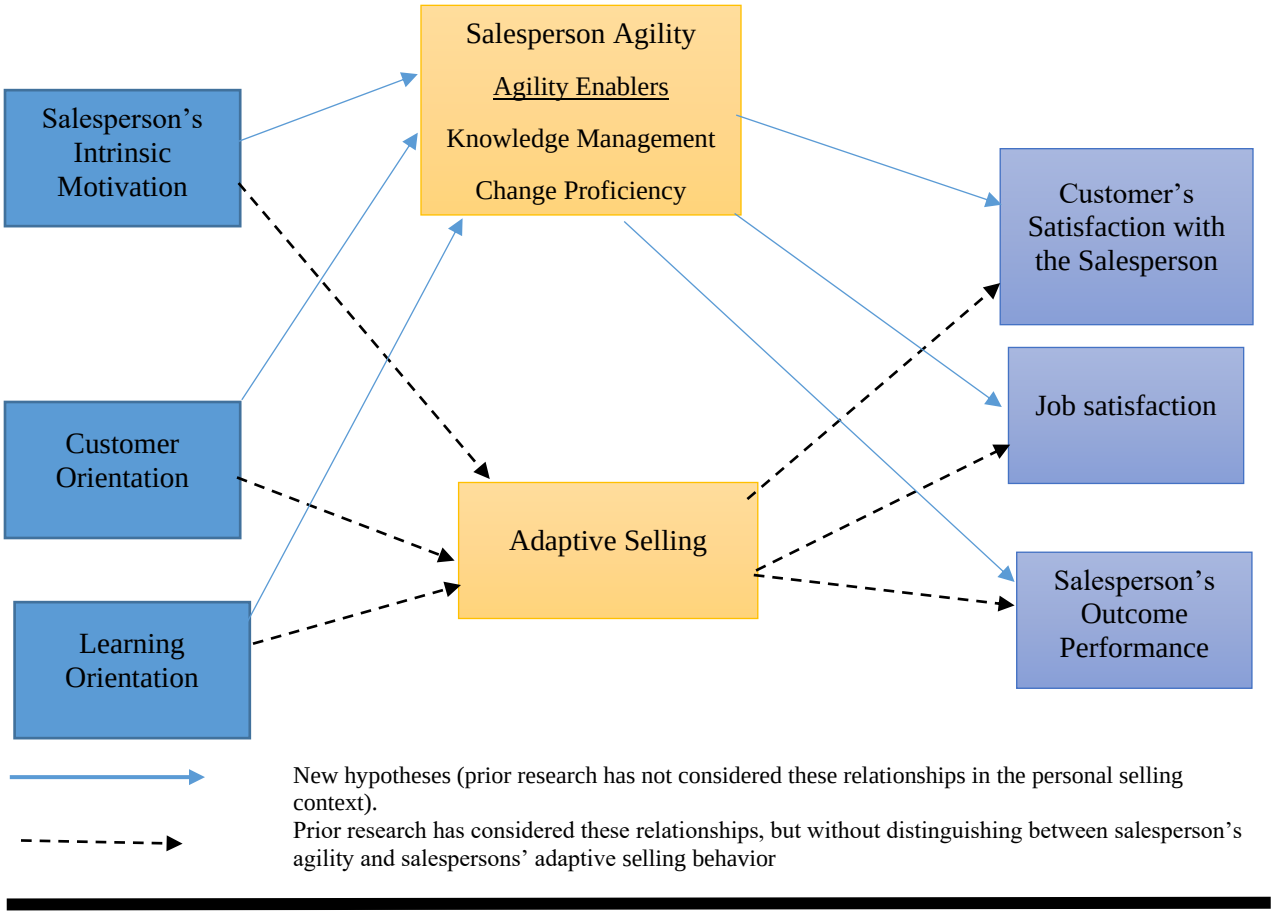
Ultimately, if agility is to be considered a viable construct for explaining sales force outcomes, it must be empirically examined in the context of existing sales force research. Further, its efficacy must be considered in comparison to other measures of adaptive behavior evident in the sales force literature. This chapter presents a conceptual model which includes antecedents to and outcomes of salesperson agility. The model also includes adaptive selling against which the explanatory power of agility can be compared (Figure 3-1). Hypotheses which represent the substantive theoretical relationships are also presented in the model.

Before discussing the model, the previous chapter concluded that, conceptually, agility is worthy of study in that it is a construct that possesses facets different from adaptability, diligence, and flexibility. Prior to empirically examining the model in this chapter, preliminary open-end interviews and quantitative work was undertaken to further pursue the worthiness of agility as a variable of study in the sales force literature. The information obtained in these efforts will be presented in Chapter 4.

The general purpose of this dissertation is the examination of agility in order to ascertain if it is a concept worthy of study in the sales literature. In this chapter, a framework is presented in which preliminary empirical examination of the salesperson agility construct and both its relationship to and uniqueness from the adaptive selling approach can be examined. Specifically, this chapter presents a framework in which researchers can begin to ascertain, empirically, if agility and adaptability are different and have differential effects on sales outcomes. In doing so, the proposed model assesses the salesperson's intrinsic motivation, customer orientation, and

learning orientation as antecedents to salesperson agility which, in turn, impacts salesperson's outcome performance, job satisfaction, and customer's satisfaction with the salesperson. The model consists of several antecedents and outcomes that have been examined in the sales literature (Román and Iacobucci 2010) without including the salesperson agility construct. In this chapter, the model to be examined will be described and hypotheses specified. Figure 3-1 depicts the model. Each of the variables in the model will be discussed next.

Figure: 3-1
A Model of the Impact of Antecedents of Sales Agility on Salesperson Agility and Outcomes of Salesperson Agility



INTRINSIC MOTIVATION

Intrinsic motivation refers to an individual's "feeling of challenge or competence derived from performing a job" (Keaveney, 1992, p. 151). Ryan and Deci (2000) define intrinsic motivation "as the doing of an activity for its inherent satisfactions rather than for some separable consequence" (p.56). According to them, an intrinsically motivated person is inspired to do something that offers fun and challenge from which they derive satisfaction of "innate psychological needs" from their works and effort (Ryan and Deci 2000). With respect to the salesforce, intrinsically motivated salespeople are more willing to provide outstanding sales and support services experiences and, thus, are more likely to search for creative solutions and engage in behavioral changes that help them achieve better results (Jaramillo et al. 2007; Pullins 2001; Weitz, Sujan, and Sujan 1986).

Deci (1972) was one of the first to make a distinction between intrinsic motivation and extrinsic motivation. According to him, a person is intrinsically motivated if he/she performs an activity for no apparent reward except the activity itself (Berlyne 1966; Hunt 1965). Extrinsic motivation refers to the performance of an activity because it leads to external rewards (e.g., status, approval, or passing grades). According to Oliver (1974), a salesperson's intrinsic motivation is about satisfying higher order needs. Jaramillo et al. (2007) identify why salespeople with equal intrinsic motivation may achieve different levels of performance. Their result shows that intrinsic motivation is a significant antecedent to adaptive selling. According to Jaramillo et al. (2007), intrinsic salespeople enjoy interactions with the customer, considering customer interaction as an opportunity for learning more about selling as well as anticipating the customer future needs and wants (Weitz et al.1986). Therefore, intrinsically motivated

salespeople are more likely to be closely involved with their customers in order to understand their constant changing needs (Jaramillo et al. 2007; Weitz, Sujan, and Sujan 1986).

Miao and Evans (2013) raised questions about the extent to which and how sales organizations can encourage salesperson's practices of adaptive selling even though intrinsic reward orientation has been found to have a significant relationship with adaptive selling (Weitz et al. 1986; Spiro and Weitz 1990; Goolsby et al. 1992). Researchers have not yet examined the relationship between salesperson's practice of agility selling and intrinsic motivation. Weitz et al. (1986) state that salespeople need to gather current marketplace knowledge for adaptiveness. Dove (1996) adds that that agility allows salesperson to be knowledge proficient. In chapter 2, knowledge management was described as one of the two key agility drivers for salespeople. Given that conclusion, and based on the research that demonstrates that intrinsic motivation is positively related to adaptive selling, it is proposed that agility will also have a strong positive relationship with intrinsic motivation. The following two hypotheses will be examined.

H1a: A salesperson's intrinsic motivation is positively related to agility selling capabilities.

H1b: A salesperson's intrinsic motivation is positively related to adaptive selling capabilities.

CUSTOMER ORIENTATION

Saxe and Weitz (1982) defined customer orientation as "the degree to which salespeople practice the marketing concept by trying to help their customers make purchase decisions that will satisfy customer needs" (p.344). According to them, the main objective of highly customer-oriented salespeople is to increase long-term customer satisfaction. Salespeople with higher

levels of customer orientation exhibit higher concern for their customer. Deshpandé et al. (1993, p. 27) refer to customer orientation "the set of beliefs that puts the customers' interest first, while not excluding other stakeholders such as owners, managers, and employees, in order to develop a long-term profitable enterprise." Furthermore, Narver and Slater (1990, p. 21) define customer and marketing orientation as "the sufficient understanding of one's target buyers to be able to create superior value for them continuously." In this regard, Narver and Slater (1990) placed special emphasis on the importance of organizational culture in promoting the salesperson's customer oriented behavior and continuous creation of customer value.

Day (1994) suggested that salespeople become more customer and market oriented when those salespeople and customers share their real needs, wants and abilities with each other. Salespeople who are customer oriented understand clearly the type of efforts that should be employed during their interactions with customers. Grawe et al. (2009) also point out organizational culture is reinforced by the continuously sharing of information and intelligence across the firm. In the business to business selling context, information sharing is extended to a firm's current and potential customer groups. In doing so, salespeople communicate with customers regularly and, hence, have greater opportunity to understand customer needs which enables them to provide better responses to customer needs (Flynn et al. 2010). Thus, interaction with customers can allow salespeople to observe customer cues regarding their changing needs and market expectations.

Roman and Iacobucci (2010) suggest that a salesperson's confidence regarding adaptive selling increases when they work in an organization which has a strong marketing and customer-oriented philosophy. Firms that are customer oriented encourage salespeople to take time to understand a customer's particular needs and eventually they are rewarded for their efforts.

Roman and Iacobucci (2010) found that the firm's customer orientation is positively related to adaptive selling confidence. Salespeople with high levels of customer orientation should be better positioned to anticipate changes in customer needs and develop new selling strategies to meet those needs (Day 1994). Therefore, a salesperson's adoption of customer orientation will improve his/her ability to adjust or modify selling strategy when the business environment, as well as customer needs, is changing. Franke and Park (2006) also noted customer orientation can influence adaptive selling behavior. As change proficiency was concluded to be a second component of agility in Chapter 2, and based on the above discussion of adaptability, it is proposed that customer orientation will strongly influence the salesperson's agility selling behavior too. This leads to the following hypothesis:

H2a: A salesperson's customer orientation has a positive relationship with agility selling capabilities.

H2b: A salesperson's customer orientation has a positive relationship with adaptive selling capabilities.

LEARNING ORIENTATION

Sujan et al. (1994) developed the concept of working smarter based on the earlier work by Weitz et al. (1986) and Spiro and Weitz (1990), which stated that salespersons' performance depends not only on hard work, but also on smart work. Specifically, sales performance was improved by (1) engaging in planning to determine the suitability of sales behaviors and activities, (2) possessing the confidence and capacity to engage in a wide range of selling behaviors and activities, and (3) altering sales behavior and activities on the basis of situational

considerations (Coad 1996). All these competencies are linked the concept of learning orientation.

Today's salespeople deal with endless information sources and must learn which information to use in their provision of excellent customer service (Park and Holloway 2003). Sujan et al. (1994) state that a learning goal orientation motivates salespeople to work both smart and hard. According to Park and Hollway (2003), a learning organization allows employees to share knowledge openly and systematically which, in turn, helps them to develop a deeper understanding of effective approaches to problem solving (Garvin 1993). Chonko and Jones (2005, p.373) noted that one enabler of agility is change proficiency which is about "the quick movement or change of the salesperson's strategies and tactics, using knowledge bases, to anticipate and respond successfully to changes occurring in the customer account. Being change proficient entails being open, learning oriented, and change ready". Agile salespeople are capable of providing quick service to their customer as well as exploiting market opportunities in order to provide excellent service (Chonko and Jones 2005). They are also proficient at knowing what to learn and what to unlearn (Chonko and Jones 2011). According to Calantone et al. (2002), learning orientation refers to organization-wide activities of creating and using knowledge to enhance competitive advantage. This includes obtaining and sharing information about customer needs, market changes, and competitor actions, as well as development of new technologies to create new products that are superior to those of competitors (Hurley and Hult 1998).

Sinkula et al. (1997) conceptualized learning orientation as a firm's values (i.e. commitment to learning, open-mindedness, and shared vision) that influence its propensity to create and use knowledge. Through such values, a firm is capable of acquiring diverse

information, developing common understanding of information acquired, and generating new knowledge or organizational insights (Wang 2008). According to Wang (2008, p.2), a learning organization shows "an explicit focus on the acquisition of knowledge that is potentially useful for the organization (Harrison and Leitch, 2005) in order to refine existing knowledge and routines (i.e. adaptive learning) or to question long-held assumptions and develop a new way of thinking (i.e. generative learning) (Slater and Narver, 1995)". Agile salespeople view all four components of learning orientation as important as they are committed to learning customer changing requirement, sharing their knowledge among other salespeople, open to learning and unlearning and preferring to communicate and learn from other departments of the organization. Park and Holloway (2003) stated that one of the primary antecedents of adaptive selling behavior is learning orientation. The literature has also showed that it has been an important characteristic of successful salespeople (Brett and VandeWalle 1999; VandeWalle et al. 2001). Sujan et al. (1994) results confirm that a learning orientation increases a salesperson's willingness to change sales strategy and to practice adaptive sales (Park and Holloway 2003). Furthermore, recent studies suggest that learning orientation is even more important in the development of effective sales behavior than performance orientation (Brett and VandeWalle 1999; VandeWalle et al. 2001). Park and Holloway (2003) also confirm, empirically, that learning orientation is significantly related to the practice of salesperson's adaptive selling behavior. Based on the above discussion, the following hypotheses are proposed:

H3a: A salesperson's learning orientation is positively related to a salesperson's agile selling behavior.

H3b: A salesperson's learning orientation is positively related to a salesperson's adaptive selling behavior.

SALESPERSON'S OUTCOME PERFORMANCE

A salesperson's outcome performance is defined as the sales results that salespeople achieve thorough application of effort and skills (Anderson and Oliver 1987). According to Roman and Iacobucci (2010), the literature on the effect of adaptive selling behavior on performance seems to present mixed results. They stated that researchers who have used ADAPTS scale, found that the scale is unable to predict sales performance consistently. However, most of the recent sales literature has reported significant support for the relationship of adaptive selling to sales performance based on the logic that adaptive behavior should yield optimal sales performance outcomes (Rapp et al. 2008; Robinson et al. 2005; Roman and Iacobucci 2010). Since the objective of this dissertation is to provide evidence that the impact of salesperson's agility selling would stronger than the adaptive selling, the following hypothesis is proposed:

H4a: Salesperson's agility positively influences salesperson's outcome performance.

H4b: Salesperson's adaptive positively influences salesperson's outcome performance.

H4c: Salesperson agility provides additional contribution to knowledge of salesperson's outcome performance beyond that of adaptive selling.

JOB SATISFACTION

Job satisfaction is one of the more widely studied variables in sales management research (Johnston and Marshall 2016). Job satisfaction is an indication of overall how employees feel about their respected job. According to Locke (1976, p. 1300), job satisfaction is "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences". Park and

Deitz (2006) conceptualizes salesperson job satisfaction as "involving overall satisfaction for the job itself as well as satisfaction with specific job conditions including payment, promotion, and security" (p.207). Previous research shows that job performance leads to job satisfaction. Vroom (1964) articulated this idea through the expectancy theory. According to Judge et al. (2001, p.378), "expectancy-based theories of motivation generally stipulate that satisfaction follows from the rewards produced by performance (Naylor, Pritchard, & Ilgen, 1980; Vroom, 1964)". According to Park and Holloway (2003), an adaptive salesperson is better able to manage ambiguity levels and exhibit a greater relational orientation—both leading to increased job satisfaction (Bejou, Wray, and Ingram 1996; Weitz 1978). Similarly, Deci and Ryan's (1985) self-determination theory also argues that satisfaction follows from the rewards that result from behavior.

As noted in this dissertation and in the literature, one of the dimension of sales agility is knowledge proficiency. In the adaptability literature, Sujan, Weitz, and Sujan (1988) suggest that a salesperson who shows interest in learning about customers and situations achieves higher task enjoyment and, "through adaptive selling, salespeople may increase their task enjoyment and ultimately job satisfaction" (Park and Holloway 2003, p.239). An agile salesperson is customer focused and also willing to learn and manage what they learn in such a way that allows him/her to fulfill customer expectations effectively when change occurs. Being agile is proposed to improve salesperson job performance which, in turn, allows that salesperson to derive higher job satisfaction. Further, Limbu et al. (2014, p. 1239) observe "salespeople who perceive a higher level of organizational ICT support tend to consider their job as more pleasant, to feel happier at work, and to be obligated to help the organization to meet its goals, and they may demonstrate a stronger commitment to use ICT tools for improved performance". Agile salespeople who

perceive higher level customer support via organization agility providers are postulated to be better able anticipate the future customer preferences and requirements leading them to consider their job as more pleasant and derive more job satisfaction. Having understood that salespeople will be generally more satisfied with their job when they can practice adaptive selling, the following hypotheses are proposed:

H5a: Salesperson's agility selling positively influences salesperson's job satisfaction.

H5b: Salesperson's adaptive selling positively influences salesperson's job satisfaction.

H5c: Salesperson agility provides additional contribution to knowledge of salesperson's job satisfaction beyond that of adaptive selling.

Customer's Satisfaction with the Salesperson

The actions and behaviors of salespeople can influence customer satisfaction with the salesperson (Oliver and Swan, 1989b). According to Goff et al. (1997), a customer-oriented salesperson is more likely to identify customer needs and match his/her presentation to those requirements which in turn increase overall customer satisfaction (Dunlap, Dotson, and Chambers, 1988). Customer satisfaction with the salesperson is an emotional state which occurs in response to an evaluation of the interaction experience that the customer has with the salesperson (Crosby et al. 1990). According to Román and Iacobucci (2010, p. 371), "adaptive selling activities increase customer satisfaction with the salesperson because adaptive selling behavior not only entails adapting the content of the presentation, but also the sales tactics to the buyer's communication style". Hence, the adaptive salesperson places greater emphasis on the interaction aspects when dealing with an "interaction oriented" buyer (McFarland et al. 2006) which, in turn, enhances the salesperson's interpersonal attractiveness.

An agile salesperson maintains a constant close relationship with prospects in order to anticipate future changes in customer requirements. Being able to anticipate allows agile salespeople to help buyers understand their changing needs and reduce the likelihood of negative disconfirmation and its accompanying dissatisfactions (Grewal and Sharma, 1991). Changes based on anticipations of salespeople enhance communication between the salesperson and customers, which facilitates and speeds up problem solving. Consequently customer satisfaction is increased (Román and Iacobucci 2010). Based on these discussion, the following hypothesis is proposed:

H6a: Salesperson's agility positively related to customer satisfaction with the salesperson.

H6b: Salesperson's adaptive selling positively related to customer satisfaction with the salesperson.

H6c: Salesperson agility provides additional contribution to knowledge of customer satisfaction with the salesperson beyond that of adaptive selling.

SUMMARY

Chapter III presented a model in which the salesperson's intrinsic motivation, customer orientation, and learning orientation are viewed as antecedents to salesperson agility. In addition, agility is postulated to impact a salesperson's outcome performance, job satisfaction, and customer's satisfaction with the salesperson (Figure3-1). This chapter presents hypotheses representing the relationships pictured in the model (Figure3-1). These hypotheses are based on the theoretical and empirical foundations of adaptive selling techniques, sales strategy, motivation and satisfaction. Salesperson's intrinsic motivation, customer orientation, and

learning orientation are proposed to positively impact the both salesperson agility selling and adaptive selling. In turn, both salesperson agility selling and adaptive selling are postulated to positively relate to sales performance outcome, job satisfaction and customer satisfaction with the salesperson. The focal point of the model test is the determination of any marginal contribution of salesperson agility beyond the contribution to knowledge of the adaptive selling in explaining sales outcomes. Chapter IV outlines the research design and methodology which will be used to examine the relationships represented by the model and the above hypotheses.

CHAPTER IV

RESEARCH DESIGN AND METHODOLOGY

The first three chapters of this dissertation established the conceptual groundwork for the study of salesforce agility and introduced the research hypotheses offered as preliminary tests of the worthiness of agility a construct of interest for sales researchers. Chapter IV discusses the data collection methodologies employed in the study of salesforce. The measures for each of the model constructs are provided in the Appendix B.

In continuing the pursuit of evidence to provide guidance on the worthiness of agility as a focal topic for sales force research, this chapter provides three empirical undertakings. The first is preliminary open-end research conducted to ascertain if respondents can provide insights concerning their ability to differentiate agility and adaptability. The second is an empirical test of the model presented in Chapter 3, using an existing, but untested, agility measure. The third is another model test using another measure of agility, the items of which were developed from some of the original conceptualizations of the agility concept, as noted in Chapter 2.

PRELIMINARY INQUIRY

Preliminary inquiry was conducted to determine if customers viewed agility as different from adaptability in any way. The inquiry was conducted with open ended survey questions in which respondents were asked to "think and loud" (Hayes 2012) and express extensively their understanding of salesperson agility in order to assess (1) what they think about agility, and (2) what agile selling behavior means to them. To address these issues an open-ended survey was

administered to forty four student customers from the University of Texas at Arlington. Participants were asked to describe agile salespeople in one word. They were also asked to describe a recent experience in which they felt a salesperson demonstrated agile selling behavior. Responses were tabulated and three researchers with knowledge of the relevant literature (e.g., agility, adaptive selling) performed the response coding process independently (Ahearne et al. 2007). Table 4-1 listed the words used to describe salesperson agility. Table 4-2 organizes those words in a more systematic way.

Participants described in great detail their "recent experience in which they felt that the salesperson serving them demonstrated agile selling behavior". They described agile selling behavior as exhibiting one of features: 1) "quick to respond/ identify the need fast", 2) "unplanned behavior", 3) "adaptive selling", and 4) "knowledgeable". The first two focus on salespeople anticipating customer-oriented requests, the latter two reveal a need for the salesperson to adjust, based on the current knowledge or situation. For example: one participant highlighted the importance of pro-activeness along with anticipatory skills:

> "The salesperson was quick to respond to my question when I asked him what products would suit my needs. His response and suggestion were spot on, and made the exchange very swift."

Table: 4-1: Text Response: In your opinion, what is one word that describes "Agile Salesperson"?
Accommodating
Adapting
Adaptive
Adaptive
Adaptive
Aggressive
Aggressive
Aggressive
Aggressive
Annoying
A salesperson who can persuade
A salesperson who can sale you anything.
A sales person who gets the sale done fast. Making at least 15-20 sales a day
Capable
Commission
Committed
Confident
Confident
Convincing
Crafty
Crafty
Creative
Creative
Determined
Determined
Diverse
Diverse
Don't know what the means
Enthusiastic
Fast
Flexible
Focused
Good
Helping a salesperson learn
Initiator
Intuitive
Motivated
One who can make a quick sale
Overachiever
Person with great amount of experience that can sell inventories at faster pace as well as make it ways while doing so.
Persuasive
Persuasive
Productive
Quick
Quick
Quick

Quick
Quick
Quick
Quick
Quick-witted
Quick whetted sales person.
Ready
Salesperson who can adapt to any new sales techniques or products
Sharp
Smart
Smart
Smart
Smooth
Smooth
Someone who can influence a potential buyer in a prompt and meaningful way.
Successful
Swift
Swindler
The ability to sell to multiple clientele

Table 4-2: –Agile Salespeople	
Quick/ Fast	14
Adjusting/ Adaptive	6
Persuasive	5
Initiator	2
Spontaneous	3
Capable	2
Cooperative	2
Committed	2
Creative	2
Determined	2
Diverse	2
Passionate	2

Insights from the preliminary inquiry

First, not surprisingly, many of the items in Tables 4-1 and 4-2 suggest there is overlap between the concepts of agility and adaptability. In general, the results provide some confirmation of the work of Rigby, Sutherland, and Takeuchi (2016), cited in Chapter 1, that there is confusion about the meaning of agility. However, participants did offer some comments that seem to distinguish between adaptive selling and agility selling. Often they saw agile selling behavior

as related to quickness in thinking or identifying customer needs. Second, participants characterized agile selling behavior as a unique capability of salesperson to serve their customer quickly. Participants emphasized the fact that salespeople should be able to detect customers' changing needs quickly, and hence they alluded to the skills that allow salespeople to anticipate the customer undisclosed needs and requirements. The findings from the preliminary open-end inquiry suggested that further study is called for in order to improve understanding of the concept of sales agility, how it is different from the adaptive selling, and whether or not agility makes a contribution to knowledge beyond that offered by studies of adaptability.

Subsequently, 25 additional students were interviewed to gain their perspective on salesperson agility as well as their recent experience with a salesperson. From these students it was found that the most relevant two categories of salesperson agility are quick to respond and knowledgeable, which are not essentially captured in the adaptive selling, flexibility or diligence scales. Participants again characterized agile selling behavior as a unique capability of salesperson to serve their customer quickly. Even though, they emphasized the fact that salespeople should be able to detect customer changing need quickly, they made no reference to the agility salespeople's anticipatory skills. In total, 69 respondents participated in the two rounds of open-ended survey sessions to generate better subjective understanding on salesperson agility (Ahearne et al. 2007). Survey questions along with the respondent's answers are listed in Appendix C.

QUANTITATIVE ANALYSIS

One objective of this study revolves around the wisdom of working to develop a scale to measure sales force agility. This objective can only be pursued if evidence suggests that

salesperson agility is different from the salespersons' adaptive selling behavior. In the pursuit of this quest, two rounds of data collection were undertaken.

STUDY 1

The conclusions drawn from the literature and the results of the preliminary open-end analysis provided some evidence that further confirmation that agility is different than adaptability is needed. Two studies were conducted with the purpose of providing some empirical insights into this issue. In this first study, an initial set of data was collected through the research experience program (REP) at the University of Texas at Arlington. A total of 129 student participants were randomly selected to participate in the survey that was designed to examine if agility is different than other similar constructs - adaptability, diligence and flexibility. Further, some preliminary assessment of whether sales agility explains more variability in outcome performance than adaptive selling was undertaken.

Measures

Existing scales for adaptive selling (Robinson et al. 2002), diligence (Ahearne et al. 2007), flexibility (Zhang et al.2003) and outcome performance (Evans et al. 2007) were employed (Appendix B). Also, adapted agility scale items from Jaramillo, Chonko and Weeks (working paper) were used, with permission to examine the initial proposed relationships. Specifically, three items (also in Appendix B) from the original eight were employed. These items were chosen as they represent the salesperson's anticipatory skills.

Analysis and Results

Correlation analysis (Table 4-3) indicates that relationships exists among those variables. This should not be surprising since the constructs assessed all are concerned with some measure of adaptability. The adaptive selling-outcome performance correlation is .615, with 37.8% of the

variability in outcome performance explained. Approximately 62% of the variability of outcome performance is left unexplained suggesting that other factors can add knowledge to the adaptability-outcome performance relationship. Chonko and Jones (2005) indicated that both agility and adaptability require that salespeople make changes in response to changing marketplace conditions. However, salespeople's' ability to anticipate the change quickly is asserted to distinguish the concept of agile selling from the adaptive selling. According to Chonko and Jones (2005, pg. 373), "the key for agility is to mix adaptive approaches with minor adaptations and more radical changes as needed". This interconnecting relationship of course implies that the amount of variance explained by agility selling might not necessarily be large, yet it may still be a distinctive element. The unexplained variance between adaptability and performance leaves room for discussion of sales agility with respect to the opportunity to make additional contribution to the sales knowledge.

Table 4-3: Correlation Matrix

		Agility	Adaptive Selling	Diligence	Flexibility	Outcome Performanc e
Agility	Pearson	1	.468**	.605**	.452**	.396**
	Correlation		R^2 = 21.9%	R^2 =36.6%	R^2 = 20.4%	R^2 = 15.7%
Adaptive Selling	Pearson	.468**	1	.522**	.592**	.615**
	Correlation			R^2 = 27.2%	R^2 = 35%	R^2 = 37.8%
Diligence	Pearson	.605**	.522**	1	.501**	.549**
	Correlation				R^2 = 25.1%	R^2 = 30.1%
Flexibility	Pearson Correlation	.452**	.592**	.501**	1	.523** R^2 = 27.3%
Outcome Performanc	Pearson Correlation	.396**	.615**	.549**	.523**	1

** Significant at p<.001

2X2 Analysis for High/Low Agility versus High/Low Adaptability:

The main objective of this analysis is to further examine whether agility is a worthy concept for sales force research. To that end, it is useful to assess if any significant differences exist in salesperson's outcome performance when salesperson's adaptability and agility are assessed simultaneously. Hence, a 2 X 2 ANOVA was conducted with respondents being assigned high or low adaptability and high or low agility. High and low groups were created by performing a mean split on both the adaptive selling scale and the agility scale in order to create four groups: 1) high adaptability-high agility, 2) high adaptability-low agility, 3) low adaptability-high agility, and 4) low adaptability-low agility.

Salesperson's Outcome Performance:

The analysis was conducted on salesperson's outcome performance. Table 4-4 shows the mean values for outcome performance four each of the four groups of respondents, high/low adaptability and high/low agility. A quick look at Table 4-4 indicates that the mean values for high adaptable/high agile group are greater than for the other three groups. Values are marked on bold display the high/high and low/low group means. Differences among the mean values are all significant at .05 level. Highly adaptable and agile salespeople reported better sales outcome performance than salespeople in the other three adaptability/agility groups. The data suggest that salespeople with proficiency in both agility and adaptability perform better than their counterparts with high levels of agility or adaptability.

Table: 4-4 Descriptive Statistics

Dependent Variable: Salesperson's Outcome Performance							Contrast	
	Hi/Hi	Hi/Lo	Lo/Hi	Lo/Lo	F-test	Sig.	F (A)	F (SA)
Adaptability vs. Knowledge Dissemination	5.65	5.33	4.49	4.36	14.48	.000*	33.64*	1.50

***HI=High; Lo=Low; F (A)=Contrast F-test for Adaptability; F (SA)=Contrast F-test for Salesperson Agility Variables (Knowledge Dissemination, Knowledge Portfolio, Knowledge Generation, Knowledge of Customer Relationships, and Knowledge of Sales Process Innovation), Sig.=Significant

Regression Analysis - Adaptability and Agility versus Outcome Performance:

Next, regression analysis was conducted in order to find out whether salesperson agility adds explanatory power beyond that offered by adaptability regarding salesperson outcomes. It was found that about 37% of the variance in the salesperson outcome performance was explained when adaptive selling is considered alone in the model. Salesperson agility, alone explains approximately 16% variance in salesperson outcome performance. Furthermore, when adaptive selling and salesperson agility are considered jointly in the model, the two variables combine to explain approximately 40% variance of the salesperson outcome performance. It is also found from the analysis that including four variables -salesperson agility, adaptive selling, flexibility and diligence - do not improve the overall model. Both agility and adaptive selling remained significant while flexibility and diligence were found non-significant. When the three items (anticipatory items) representing agility are included in analysis of sales force outcomes, agility adds some explanatory power beyond that which was obtained when assessing the impact of variables like adaptability, diligence, and flexibility. These results were not considered to be strong, but they are in the hypothesized direction, providing weak evidence that agility is a concept worthy of study. Table 4-5 provides more detailed information.

Table 4-5: Regression Dependent Variable – Outcome Performance

Predictor Variable	B	SE	t-stat	Sig.	R	R^2	F	N
Adaptive Selling	.744	.085	8.79	.000	.615	.373	77.30	129
Constant	1.06	.462	2.29	.024				

Predictor Variable	B	SE	t-stat	Sig.	R	R^2	F	N
Agility	.539	.111	4.86	.000	.396	.150	23.65	129
Constant	2.15	.607	3.54	.001				

Predictor Variables	B	SE	t-stat	Sig.	R	R^2	F	N
Adaptive Selling	.665	.095	7.01	.000	.627	.384	40.86	129
Agility	.189	.107	1.77	.079				
Constant	.458	.570	.804	.423				

Explanation: B = Regression Coefficient; SE = Standard Error; t-stat = T-Statistic; Sig. = Significance; R= Correlation Coefficient; R^2 = Adjusted Coefficient of Determination; Significant at .05 level

Summary

These preliminary results, while not as strong as hoped, do suggest that agility is different than adaptability and, therefore, has potential to add knowledge value regarding key salesforce outcomes beyond the impact of other similar variables like adaptability, diligence, and flexibility. The results provide some evidence that the study salesperson agility is worthy of pursuit in salesforce research.

STUDY 2

In further pursuing the ultimate objective of this research - the evaluation of the worthiness of agility as a construct of interest for sales researchers' agility second study was conducted. For study 2, the following process was used: (1) specify the domain and dimensionality of an agility metric; (2) generate a preliminary sample of items; and (3) assess content validity of these items (i.e. the extent to which scale items appear to be consistent with the theoretical domain/dimensionality of the construct (Churchill, 1979; Cronbach and Thorndike 1971).

The sample used in this study is a crowdsourcing internet marketplace, Amazon Mechanical Turk (MTurk). MTurk provides an online pool of respondents that enables "researchers" to hire respondents ("workers") for a small stipend. Respondents perform what are designated as human intelligence tasks (HITs) of various types, including responding to surveys (see www.mturk.com/mturk/welcome). This method of data collection has become a valuable

tool for researchers and has largely replaced college student subjects as traditional experimental participants in psychology and other social sciences—with online respondents (Buhrmester, Kwang and Gosling 2011; Mason and Suri 2011). Researchers can seek participants for nearly any task that can be done on a computer (i.e., surveys, experiments, writing, translation, etc.) using simple templates, technical scripts or linking workers to external online survey tools (e.g., Qualtrics) (Langenderfer, Kopp and Akiyeva 2014). In this study, a special programming protocol was used that allowed only "Masters Workers" - Professional Salespeople - to participate. A total of 256 salespeople participated in the study. Of these, 207 completed the full questionnaire. Having understood the limitations of the MTurk online survey method, the survey instrument purposefully included eight (8) attention check questions (e. g. please select disagree to this question) in order to improve the ability to obtain valid responses. Those respondents who did not pass the attention check questions were eliminated from the further analysis. A total of forty- nine respondents were eliminated from the final sample for not fulfilling the attention check question requirements. All questionnaires were visually inspected for missing or non-useable and haphazard answers as the data was recorded. None of the remaining surveys were deemed unusable. Most of the participants reported having over 5 years of sales/ service experience. Participants came from a diverse industry background including call centers, automobile, telecommunication, media management, retailing, non-profit organization, and industrial products. The characteristics of the respondents are provided in Appendix C.

Preliminary Responses Concerning Agility and Adaptability

In order to begin investigation of the domain of salesperson agility, an extensive literature review described in chapter 2 represented a first step for determining the central dimensions of the agility construct. An observation driving from this literature review is that there are many

conceptualizations of agility leading to confusion about the nature of agility as evidenced by the existence of many diverse conceptual foci measurement scales. There does not appear to be an agreed upon measurement strategy for agility. The confusion is an unintended consequence resulting from the legitimate endeavors of many independent researchers seeking to investigate agility. Nevertheless, the present confusion in the conceptualization and measurement of agility limits the potential consistency and impact of this leadership style in marketing and sales.

With the number of agility scales available and the dozens of dimensions ascribed to agility, the only viable conclusion concerning agility research is the following: various measures of agility do correlate with other important antecedent, outcome, moderator, and mediator variables. So, too, do various other adaptive metrics, but, as yet, no comparisons of these two constructs has been undertaken. Regarding agility, no conclusions can be proffered concerning the relative effects of agility vis-à-vis other adaptive styles. This conclusion is valid for other adaptive styles, as well, as few efforts have undertaken to simultaneously multiple "adaptation" effects in the same venue. In this dissertation an effort is undertaken to catalyze future agility research with more theoretical integration by providing an initial comparison agility with other measures of adaptability. Ultimately, a precise specification of salesforce agility is required. In this dissertation domain elements from early works on agility are employed in an effort to provide a conceptually *distinct* approach to the study of agility that can serve as foundation for future measurement efforts concerning the construct.

The process of seeking to identify differentiators of agility and adaptability agility items was rooted in the work of Dove (1994; 1999) and Chonko and Jones (2005) in which knowledge management and change capability are proffered as two key components of agility. The items used in study 2 were generated from this literature. The pool of items was slightly modified for

the purpose of the present study as these items were largely derived from the organizational agility literature. The wording of the items was kept consistent with the literature where possible, adjustments being made to reflect individual salesperson agility vs. company agility, the dominant focal unit of analysis in agility research. Based on the literature and dimensions identified, a preliminary set of 104 survey items were generated for measuring salesperson agility, shown in Appendix D. These items are designed to represent the three sets of knowledge components of agility described in Chapter 2.

Reliability and Validity Assessment

Validity and reliability are two fundamental elements in the evaluation of a measurement instrument. Validity is concerned with the extent to which an instrument measures what it is intended to measure. Reliability is concerned with the ability of an instrument to measure the same phenomenon consistently. Internal consistency describes the extent to which all the items in a scale measure the same concept and hence it is connected to the inter-relatedness of the items within the test. Internal consistency should be determined before any tests are conducted in conjunction with other measures to ensure validity (Tavakol et al. 2011). Internal consistency was assessed using Cronbach's alpha (Cronbach 1951) and average inter-item correlation. Nunnally and Bernstein (1994) state that .70 is an acceptable minimum for a scale that is newly developed. Maindal et al. (2012) suggested that an average inter-item correlation in the moderate range of at least 0.30 as good. Cortina (1993) suggests that coefficient alpha is problematic for scales with more than 40 items. In such cases, the coefficient alpha value may be driven more by the number of items than the magnitude of the correlations among items. The result can be a high internal consistency estimate for a test with items that may correlate rather poorly with one another. Having said this, the small number of items comprising the agility factors explored in

this study limits their influence on the value of coefficient alpha. Thus, alpha will, in this case, be driven more by the magnitudes of the inter-item correlations and is arguably an adequate and more straightforward indicator of internal consistency (Zumbo and Chan 2014). The corrected item-to-total correlations of the individual items were evaluated in accordance to the .35 cutoff suggested by Saxe and Weitz (1982). Items below this cutoff were kept if the overall alpha was not lowered, in the interest of maintaining the integrity of the scales (Loe 1996). Alpha coefficients for the agility measures used in this study are reported throughout the next section of this dissertation.

Exploring the Salesforce Agility Scale

In this study, a metric of salesforce agility focused on the two major components of agility – knowledge and change proficiency, called the agility enablers. First, the development of a metric to assess the knowledge components of agility will be discussed. As discussed in chapter two, the knowledge management component includes five knowledge dimensions, knowledge of agility drivers, and need for agility. Correlation coefficients for all variables measured in study 2 are shown in Appendix E.

Five Knowledge Dimensions*:*

- **Knowledge Dissemination**: The initial knowledge dissemination measure contained four items. Cronbach's Alpha for the scale is .80, well above the .70 suggested by Nunnally (1978). Exploratory factor analysis was utilized in order to explore the theoretical structure of this phenomenon. A principal component extraction with a varimax rotation was used and, as expected, a one factor solution was retained with an eigenvalue greater than 1, representing 63.2% of the variance of the four knowledge dissemination items. All of the items were retained after assessing the results which are presented in Table 4-6.

The factor loadings ranged from .71 to .85 with item-to-total correlations ranging from .52 to .67. The summated scores of the 4 item measure were used to derive a global measure.

Table 4-6
Factor and Reliability Analysis for Knowledge Dissemination

n = 207; Variance Explained = 63.2%

Scale Items	Factors 1	Item-to-Total Correlation
1. I regularly seek knowledge that helps me identify…..	.85	.69
2. I continually update my knowledge base.	.83	.67
3. I organize new knowledge prior to the actual need…	.78	.60
4. I have developed a strong competency ……...	.72	.53
Eigenvalue	2.53	

Scale alpha = .80

- **Knowledge Portfolio**: The initial knowledge portfolio measure contained four items. For the knowledge portfolio measure, a Cronbach's Alpha of .81 was obtained. Exploratory factor analysis was utilized in order to explore the theoretical structure of this phenomenon. A principal component extraction with a varimax rotation was used and, as expected, a one factor solution was retained with an eigenvalue greater than 1, representing 63.9% of the variance of the four items. All of the items were retained after assessing the results, which are presented in Table 4-7. The factor loadings ranged from .74 to .83 with item-to-total correlations ranging from .56 to .69. The summated scores of the 4 item measure were used to derive a global measure.

Table 4-7
Factor and Reliability Analysis for Knowledge Portfolio

n = 207; Variance Explained = 63.9%

Scale Items	Factors 1	Item-to-Total Correlation
1. I seek knowledge that helps me identify new……	.83	.67
2. I seek on knowledge that goes beyond sales…….	.82	.56
3. I anticipate the need for knowledge prior…….	.80	.66
4. I have developed a strong competency in developing …	.75	.63
Eigenvalue	2.55	

Scale alpha = .81

- **Knowledge Generation**: The initial knowledge generation measure contained four items. For the knowledge generation measure, a Cronbach's Alpha of .78 was obtained. Exploratory factor analysis was utilized in order to explore the theoretical structure of this phenomenon. A principal component extraction with a varimax rotation was used and, as expected, a one factor solution was retained with an eigenvalue greater than 1, representing 61.3% of the variance of the four items. All of the items were retained after assessing the results which are presented in Table 4-8. The factor loadings ranged from .73 to .82 with item-to-total correlations ranging from .54 to .64. The summated scores of the 4 item measure were used to derive a global measure.

Table 4-8
Factor and Reliability Analysis for Knowledge Generation

n = 207; Variance Explained = 61.3%

Scale Items	Factors 1	Item-to-Total Correlation
1. I have created a knowledge library that enables me ……	.82	.61
2. I continuously look for the opportunity to improve my…	.80	.58
3. I apply knowledge to current and future customer…….	.78	.64
4. I have developed a strong competency in collaborative…	.73	.54
Eigenvalue	2.45	

Scale alpha = .78

- **Customer Relationships**: The initial customer relationship measure contained four items. For the customer relationship measure, a Cronbach's Alpha of .80 was obtained. Exploratory factor analysis was utilized in order to explore the theoretical structure of this phenomenon. A principal component extraction with a varimax rotation was used and, as expected, a one factor solution was retained with an eigenvalue greater than 1, representing 64.3% of the variance of the four items. All of the items were retained after assessing the results which are presented in Table 4-9. The factor loadings ranged from

.76 to .84 with item-to-total correlations ranging from .58 to .68. The summated scores of the 4 item measure were used to derive a global measure.

Table 4-9
Factor and Reliability Analysis for Customer Relationship

n = 207; Variance Explained = 64.3%

Scale Items	Factors 1	Item-to-Total Correlation
1. I regularly develop new customer relationships ……	.84	.62
2. I am committed to continuous improvement in the …	.81	.64
3. I have developed many loyal customer relationships.	.79	.68
4. I can identify unarticulated customer needs.	.76	.58
Eigenvalue	2.57	

Scale alpha = .80

- **Sales Process Innovation**: The initial customer relationship measure contained four items. For the sales process innovation measure, a Cronbach's Alpha of .82 was obtained. Exploratory factor analysis was utilized in order to explore the theoretical structure of this phenomenon. A principal component extraction with a varimax rotation was used and, as expected, a one factor solution was retained with an eigenvalue greater than 1, representing 64.8% of the variance of the four variables. All of the items were retained after assessing the results which are presented in Table 4-10. The factor loadings ranged from .76 to .83 with item-to-total correlations ranging from .59 to .67. The summated scores of the 4 item measure were used to derive a global measure.

Table 4-10
Factor and Reliability Analysis for Sales Process Innovation

n = 207; Variance Explained = 64.8%

Scale Items	Factors 1	Item-to-Total Correlation
1. I have developed a strong competency in anticipating…	.83	.65
2. I regularly eliminate non-value-added aspects of my…	.81	.59
3. I regularly evaluate industry practices to discover…..	.81	.65
4. I can modify my presentation practices in real-time...	.76	.67
Eigenvalue	2.59	

Scale alpha = .82

As noted in chapter 2, two other sets of knowledge components of agility are evidenced in the literature – knowledge of agility drivers and knowledge of agility needs. . These are discussed next.

Knowledge of Agility Drivers:

- **Marketplace**: The initial marketplace measure contained contains nine items. A Cronbach's Alpha of .90 was obtained after dropping one item (MKTP6-reverse coded item). Exploratory factor analysis was utilized in order to explore the theoretical structure of this phenomenon. A principal component extraction with a varimax rotation was used and as expected, a one factor solution was retained with an eigenvalue greater than 1, representing 59.7% of the variance of the eight variables. Eight items were retained after assessing the results which are presented in Table 4-11. The factor loadings ranged from .65 to .85 with item-to-total correlations ranging from .55 to .77. The summated scores of the 8 item measure were used to derive a global measure.

Table 4-11
Factor and Reliability Analysis for Marketplace

n = 207; Variance Explained = 59.7%

Scale Items	Factors 1	Item-to-Total Correlation
1. My firm's management is sensitive to local customs…	.85	.55
2. My firm's management knows the markets that we…	.84	.68
3. My firm's management is aware of emerging markets…	.82	.76
4. My firm's management knows how to quickly identify…	.79	.77
5. My firm's management has a history of creating new…	.77	.73
7. My firm's management continuously scans the ……	.77	.75
8. My firm's management dominates the markets it serves...	.68	.69
9. My firm's management knows the markets that…….	.65	.59
Eiegenvalue	4.78	

Scale alpha = .90

- **Competition**: The initial competition measure contained six items. Overall, a Cronbach's Alpha for those six items scale was .75. Based on the reliability analysis, two items (Comp5 & Comp6) was dropped from the analysis which increased the overall

Cronbach's Alpha to .91 Exploratory factor analysis was utilized in order to explore the theoretical structure of this phenomenon. A principal component extraction with a varimax rotation was used and as expected, a one factor solution was retained with an eigenvalue greater than 1, representing 78.1% of the variance of the four variables. Four items were retained after assessing the results which are presented in Table 4-12. The factor loadings ranged from .83 to .92 with item-to-total correlations ranging from .72 to .85. The summated scores of the 4 item measure were used to derive a global measure.

Table 4-12
Factor and Reliability Analysis for Competition

n = 207; Variance Explained = 78.1%

Scale Items	Factors 1	Item-to-Total Correlation
1. My firm's management identifies, collects, and assesse…	.92	.79
2. My firm's management knows our industry and our …	.89	.72
3. My firm's management constantly monitors the …	.88	.85
4. My firm's management constantly monitors other …	.84	.80
Eiegenvalue	3.124	

Scale alpha = .91

- **Customer Requirement**: The initial customer requirement measure contained eight items and a Cronbach's Alpha of is .91 was obtained. Exploratory factor analysis was utilized in order to explore the theoretical structure of this phenomenon. A principal component extraction with a varimax rotation was used and as expected, a one factor solution was retained with an eigenvalue greater than 1, representing 62.4% of the variance of the eight variables. All of the items were retained after assessing the results which are presented in Table 4-13. The factor loadings ranged from .74 to .84 with item-to-total correlations ranging from .65 to .77. The summated scores of the 8 item measure were used to derive a global measure.

Table 4-13
Factor and Reliability Analysis for Customer Requirement

n = 207; Variance Explained = 62.4%

Scale Items	Factors 1	Item-to-Total Correlation
1. My firm's management knows who our customers are.	.84	.69
2. My firm's management knows who our potential…..	.83	.65
3. My firm's management observes, analyzes, and….	.83	.76
4. My firm's management views customer complains as…	.79	.67
5. My firm's management constantly searches for new….	.78	.69
6. My firm's management values customer retention and...	.76	.76
7. My firm's management listens to our customers.	.74	.78
8. My firm's management understands that to be industry...	.74	.72
Eiegenvalue	4.99	

Scale alpha = .91

- **Technology**: The initial technology measure contained five items with an overall Cronbach's Alpha for those items being .73. Based on the reliability analysis, one item (tech3) was dropped from the analysis which increases the overall Cronbach's Alpha to .90 from the previous value of .73. Exploratory factor analysis was utilized in order to explore the theoretical structure of this phenomenon. A principal component extraction with a varimax rotation was used and as expected, a one factor solution was retained with an eigenvalue greater than 1, representing 77.1% of the variance of the four variables. Only four items were retained after assessing the results which are presented in Table 4-14. The summated scores of the 4 item measure were used to derive a global measure.

Table 4-14
Factor and Reliability Analysis for Technology

n = 207; Variance Explained = 77.1%

Scale Items	Factors 1	Item-to-Total Correlation
1. My firm's management constantly invests new ways…	.92	.83
2. My firm's management constantly invests new ways...	.91	.84
4. My firm's management has information technologies....	.89	.79
5. My firm's management values information as….	.79	.66
Eiegenvalue	3.08	

Scale alpha = .90

- **Social Factors**: The initial social factors measure contained six items with a Cronbach's Alpha of .89. Exploratory factor analysis was utilized in order to explore the theoretical structure of this phenomenon. A principal component extraction with a varimax rotation was used and as expected, a one factor solution was retained with an eigenvalue greater than 1, representing 65.9% of the variance of the six variables. All of the items were retained after assessing the results which are presented in Table 4-15. The factor loadings ranged from .73 to .86 with item-to-total correlations ranging from .62 to .78. The summated scores of the 6 item measure were used to derive a global measure.

Table 4-15
Factor and Reliability Analysis for Social Factors

n = 207; Variance Explained = 65.9%

Scale Items	Factors 1	Item-to-Total Correlation
1. My firm's management is capable of anticipating...	.86	.75
2. My firm's management is capable of anticipating…..	.84	.78
3. My firm's management is capable of anticipating….	.83	.69
4. My firm's management is capable of anticipating…	.81	.63
5. My firm's management is capable of anticipating ….	.80	.71
6. My firm's management can anticipate changing...	.73	.74
Eiegenvalue	3.96	

Scale alpha = .89

Identify Salesperson's Agility Needs:

- **The Salesperson**: The initial salesperson measure contained twenty four items with an overall Cronbach's Alpha for those twenty four items of .93. Based on the reliability analysis, seven items (sp1, sp2, sp3, sp4, sp7, sp10, and sp23) were dropped from the analysis which increased the overall Cronbach's Alpha to .95. Exploratory factor analysis was utilized in order to explore the theoretical structure of this phenomenon. A principal component extraction with a varimax rotation was used and as expected, a one factor solution was retained with an eigenvalue greater than 1, representing 55.1% of the

variance of the seventeen items which were all which were retained after assessing the results which are presented in Table 4-16. The factor loadings ranged from .83 to .92 with item-to-total correlations ranging from .58 to .79. The summated scores of the 17 item measure were used to derive a global measure.

Table 4-16
Factor and Reliability Analysis for Salesperson

n = 207; Variance Explained = 55.1%

Scale Items	Factors 1	Item-to-Total Correlation
5. I often design value propositions based on changing…	.83	.61
6. I continuously seek opportunities that can add value…	.83	.79
8. I am prepared to reconfigure my sales strategies …	.82	.79
9. I develop strong relationships with supply-chain…	.82	.66
11. I am proficient at develop analyzing customers…	.79	.68
12. I have a strong understanding marketplace dynamics….	.78	.75
13. I continuously strive to build long-term relationships...	.76	.68
14. I anticipate changes in the competitive customer……	.74	.79
15. I think and act in entrepreneurial ways.	.73	.59
16. I continuously seek to improve my ability to create…	.73	.64
17. I place a high value on the coaching, advice…..	.73	.69
18. I place a high value on the coaching, advice, and…	.71	.71
19. I continuously monitor and adjust my activities…..	.69	.79
20. I often use business intelligence and analytics to….	.69	.75
21. I effectively manage limited resources in order to…	.66	.70
22. I am actively involved in continuous product/service…	.65	.63
24. I am good at anticipating changes in what my ……	.63	.66
Eigenvalue	9.37	

Scale alpha = .95

- **Time**: The initial time measure contained ten items with an overall Cronbach's Alpha for those ten items of .84. Based on the reliability analysis, six items (t5, t6, t7, t8, t9, and t10) were dropped from the analysis which increased the overall Cronbach's Alpha to .87. Exploratory factor analysis was utilized in order to explore the theoretical structure of this phenomenon. A principal component extraction with a varimax rotation was used and as expected, a one factor solution was retained with an eigenvalue greater than 1, representing 72.7% of the variance of the four items. All of the items were retained after assessing the results which are presented in Table 4-17. The factor loadings ranged from

.83 to .88 with item-to-total correlations ranging from .70 to .77. The summated scores of the 4 item measure were used to derive a global measure.

Table 4-17
Factor and Reliability Analysis for Time

n = 207; Variance Explained = 72.7%

Scale Items	Factors 1	Item-to-Total Correlation
1. It takes me a long time to identify change.	.88	.71
2. It takes me a long time to evaluate change.	.85	.78
3. It takes me a long time to react to change.	.84	.71
4. It takes me a long time to promote changes to my…	.84	.73
Eigenvalue	2.91	

Scale alpha = .87

- **Ease**: The initial ease measure contained nine items with an overall Cronbach's Alpha for those nine items being .88. Based on the reliability analysis, five items (ease5, ease6, ease7, ease8, & ease9) were dropped from the analysis which increased the overall Cronbach's Alpha to .91. Exploratory factor analysis was utilized in order to explore the theoretical structure of this phenomenon. A principal component extraction with a varimax rotation was used and as expected, a one factor solution was retained with an eigenvalue greater than 1, representing 78.3% of the variance of the four items. Only four items were retained after assessing the results which are presented in Table 4-18. The factor loadings ranged from .82 to .91 with item-to-total correlations ranging from .71 to .84. The summated scores of the 4 item measure were used to derive a global measure.

Table 4-18
Factor and Reliability Analysis for Ease

n = 207; Variance Explained = 78.3%

Scale Items	Factors 1	Item-to-Total Correlation
1. It is difficult for me to enact change.	.92	.71
2. It is difficult for me to convince customers of needed…	.89	.81
3. It is difficult for me to convince suppliers of needed….	.89	.84
4. It is difficult for me to convince other company…	.83	.80
Eigenvalue	3.13	

Scale alpha = .91

- **Range**: The initial range measure contained six items with a Cronbach's Alpha of .89. Exploratory factor analysis was utilized in order to explore the theoretical structure of this phenomenon. A principal component extraction with a varimax rotation was used and as expected, a one factor solution was retained with an eigenvalue greater than 1, representing 64.4% of the variance of the six items. All of the items were retained after assessing the results which are presented in Table 4-19. The factor loadings ranged from .72 to .85 with item-to-total correlations ranging from .62 to .76. The summated scores of the 6 item measure were used to derive a global measure.

Table 4-19
Factor and Reliability Analysis for Range

n = 207; Variance Explained = 64.4%

Scale Items	Factors 1	Item-to-Total Correlation
1. I am capable of effecting many types of change…	.85	.62
2. I am capable of adjusting to varying customer buying…	.84	.75
3. I have the ability to maintain productivity during low…	.84	.65
4. I have the ability to offer a wide range of cost effective...	.79	.75
5. I have the ability to modify value propositions when…	.75	.76
6. I have the ability to suggest product configurations….	.73	.69
Eiegenvalue	3.87	

Scale alpha = .89

Next, the change component of agility is discussed. The second agility enabler is the change proficiency of the salesperson. Change proficiency is a competency that involves both initiating and dealing with change (Dove, Hartman and Benson 1996). As discussed in chapter two, change component includes five stages of change competency.

Five stages of Change Proficiency:

Five stages of change proficiency have been identified in the early agility literature (e.g. Dove et al.1996). These are:

- Accidental Stage: There is no change-process recognition in the accidental stage.

- Repeatable Stage: The repeatable stage, typically, is based on anecdotal "lessons learned" from past change activities.
- Defined Stage: In the defined stage, formal change processes are recognized.
- Managed Stage: In the managed change stage, change process objectives are clarified and refined.
- Mastered Stage: Salespeople in the mastered change stage is characterized by a principle-based deep appreciation of adaptability.

From these descriptions, the following scale was created to assess the level of change proficiency of salespeople:

i. I work overtime, make many solution attempts, operate according to the fad-of-the-day, fight many fires, and expedite.
ii. I typically work on the existing knowledge that is subjective and lessons learned from past change activities.
iii. I use formal change processes with procedures documented to be successful by my organization.
iv. I have an evolving knowledge base of change strategies and tactics and have a strong appreciation for the insights provided by others.
v. I understand that knowledge of strategies and tactics alone is not sufficient and so I need a principle-based change.

Table 4-20
Descriptive Statistics – Change Proficiency

	N	Range	Minimum	Maximum	Mean	Std. Deviation
5 Levels of Change Proficiency	207	4	1	5	3.12	1.19

2X2 ANOVA Analysis – Outcome Variables

As a further test of the worthiness of agility as a variable of interest to salesforce researchers, a series of 2x2 ANOVAs was conducted to examine whether there is any significant differences in outcome variables of salesperson's outcome performance, job satisfaction, and

customer's satisfaction with the salesperson when salesperson's adaptability and agility variables varies in respect to both high and low group.

The 2 X 2 ANOVAs were conducted with respondents being assigned to high or low adaptability levels and high or low agility levels for each of the salespersons. High and low groups were created by performing a mean split on adaptive selling scale and the agility scales. The same procedure was applied to each of the agility variables (knowledge components and change proficiency) in order to create four groups: 1) high adaptability-high agility, 2) high adaptability-low agility, 3) low adaptability-high agility, and 4) low adaptability-low agility.

Salesperson's Outcome Performance

The first analysis was conducted on salesperson's outcome performance. Table 4-21 shows the mean values for outcome performance for each of the four groups of respondents, high low adaptability with respectively, knowledge dissemination (high vs low), knowledge portfolio (high vs low), knowledge generation (high vs low), customer relationship (high vs low), and sales-process innovation (high vs low) with respect to dependent variable salesperson outcome performance.

A quick look on both Table 4-21 indicates that the mean values for high adaptable and high agile group are always greater than the low adaptable and low agile group. Values are marked on bold display the high/high and low/low group means. Difference among the mean values are all significant at .05 level. Further, the high-high group means are greater than the high-low group means suggesting that the combination of high levels of agility and adaptability are valuable in explain performance beyond that when only agility or adaptability are high. The implication is that salespeople who have high adaptive and high agile skills perform better than

salespeople in the other three groups, indicating that agility appears to be conducive to improved performance.

Table: 4-21 Descriptive Statistics

Dependent Variable: Salesperson's Outcome Performance							Contrast	
	Hi/Hi	Hi/Lo	Lo/Hi	Lo/Lo	F-test	Sig.	F (A)	F (SA)
Adaptability vs. Knowledge Dissemination	36.93	33.73	33.52	28.11	51.93	.000*	38.52*	35.03*
Adaptability vs. Knowledge Portfolio	37.61	32.91	33.58	28.01	63.97	.000*	45.49*	60.20*
Adaptability vs. Knowledge Generation	37.33	33.19	32.54	28.36	51.41	.000*	46.61*	34.83*
Adaptability vs. Knowledge of Customer Relationships	37.82	33.12	34.50	28.23	65.91	.000*	35.49*	63.15*
Adaptability vs. Knowledge of Sales Process Innovation	37.67	33.18	33.95	28.21	61.70	.000*	40.02*	55.26*

***HI=High; Lo=Low; F (A)=Contrast F-test for Adaptability; F (SA)=Contrast F-test for Salesperson Agility Variables (Knowledge Dissemination, Knowledge Portfolio, Knowledge Generation, Knowledge of Customer Relationships, and Knowledge of Sales Process Innovation), Sig.=Significance at p<.05

Job Satisfaction

The second analysis was conducted on the job satisfaction outcome variable. Table 4-22 shows the respective mean values job satisfaction for combinations of high and low adaptability and high and low levels of the knowledge variables The analysis indicates that the mean job satisfaction difference is significant at .05 level only for the high/low knowledge portfolio variable in relation to high/low adaptability. Table 4-22 indicates that the mean job satisfaction values for high adaptable and high agile groups are always greater than the low adaptable and low agile groups, suggesting that the combination of high levels of agility and adaptability are valuable in explain job satisfaction beyond that when only agility or adaptability are high. The implication is that salespeople who have high adaptive and high agile skills are more satisfied than salespeople in the other three groups, indicating that agility appears to be conducive to improved satisfaction. Values are marked in bold to display the group with high/high and group with low/low. Only mean values for adaptability (high/low) and knowledge portfolio (high/low) are significant at .05 level.

Table: 4-22 Descriptive Statistics

Dependent Variable: Job Satisfaction							Contrast	
	Hi/Hi	Hi/Lo	Lo/Hi	Lo/Lo	F-test	Sig.	F (A)	F (SA)
Adaptability vs. Knowledge Dissemination	40.05	38.00	39.30	34.38	8.15	.000*	3.26	8.32*
Adaptability vs. Knowledge Portfolio	40.03	38.52	39.58	34.21	8.59	.000*	4.27*	8.89*
Adaptability vs. Knowledge Generation	40.57	36.97	40.25	33.99	11.64	.000*	2.08	18.62*
Adaptability vs. Knowledge of Customer Relationships	40.66	37.54	38.95	34.78	8.10	.000*	3.40	9.03*
Adaptability vs. Knowledge of Sales Process Innovation	40.20	38.29	40.15	34.35	8.94	.000*	2.86	10.63*

***HI=High; Lo=Low; F (A)=Contrast F-test for Adaptability; F (SA)=Contrast F-test for Salesperson Agility Variables (Knowledge Dissemination, Knowledge Portfolio, Knowledge Generation, Knowledge of Customer Relationships, and Knowledge of Sales Process Innovation), Sig.=Significance at p<.05

Customer's Satisfaction with the Salesperson

The final analysis was conducted using customer's satisfaction with the salesperson as a dependent measure. Table 4-23 shows the respective mean values for high-low adaptability with high vs low knowledge and five levels of change proficiency. A quick look at Table 4-23 indicates that the mean values for high adaptable and high agile group are always greater than the low adaptable and low agile group, suggesting that the combination of high levels of agility and adaptability are valuable in explain customer satisfaction with the salesperson beyond that when only agility or adaptability are high. The implication is that salespeople who have high adaptive and high agile skills have higher customer satisfaction than salespeople in the other three groups, indicating that agility appears to be conducive to improved customer satisfaction. Values are marked in bold display the group with high/high and group with low/low. All mean values are significant at .05 level.

Table: 4-23 Descriptive Statistics

Dependent Variable: Customer Satisfaction with the Salespeople							Contrast	
	Hi/Hi	Hi/Lo	Lo/Hi	Lo/Lo	F-test	Sig.	F (A)	F (SA)
Adaptability vs. Knowledge Dissemination	19.12	17.80	18.30	16.67	19.18	.000*	8.59*	19.48*
Adaptability vs. Knowledge Portfolio	19.40	17.50	18.75	16.49	30.13	.000*	7.53*	47.46*
Adaptability vs. Knowledge Generation	19.28	17.61	17.91	16.77	19.63	.000*	11.66*	18.97*
Adaptability vs. Knowledge of Customer Relationships	19.51	17.53	18.94	16.62	30.20	.000*	5.46*	45.98*
Adaptability vs. Knowledge of Sales Process Innovation	19.28	17.89	18.65	16.64	22.36	.000*	8.47*	27.62*

***HI=High; Lo=Low; F (A)=Contrast F-test for Adaptability; F (SA)=Contrast F-test for Salesperson Agility Variables (Knowledge Dissemination, Knowledge Portfolio, Knowledge Generation, Knowledge of Customer Relationships, and Knowledge of Sales Process Innovation), Sig.=Significance

Change Proficiency

Finally, analysis was conducted to examine the high/low adaptability and the high/low knowledge components in assessing change proficiency for each combination. Table 4-24 demonstrated that the high adaptable and high agile groups reported higher levels of change competencies - proficient at managed and mastered levels - than the low adaptable and low agile group. The implication is that salespeople who have high adaptive and high agile skills have better change proficiency better than salespeople in the other three groups, indicating that agility appears to be conducive to improved change proficiency.

Table: 4-24: Change Proficiency

Adaptability	**Change Proficiency**				
	Accidental	**Repeatable**	**Defined**	**Managed**	**Mastered**
High	16	29	8	51	8
Low	6	27	11	45	6
Knowledge Dissemination					
High	13	24	7	55	10
Low	9	32	12	41	4
Knowledge Portfolio					
High	15	20	8	50	9
Low	7	36	11	46	5
Knowledge Generation					
High	15	22	7	56	5
Low	7	34	12	40	9
Customer Relationship					
High	13	17	5	48	8
Low	9	39	14	48	6

Sales Process Innovation					
High	15	18	7	50	5
Low	7	38	12	46	9

2X2 ANOVA Analysis - Antecedent Variables

Next, analysis was conducted to ascertain whether there is any significant differences in antecedent variables such as salesperson's intrinsic motivation, learning orientation, and customer orientation when salespeople are classified as high or low on adaptability and agility.

Hence, a 2 X 2 ANOVA analysis was conducted with respondents being assigned high or low adaptability and high or low agility for each of the salesperson's agility variables. High and low groups were created by performing a mean split on adaptive selling scale. The same procedure applied to each of the agility variables in order to create four groups: 1) high adaptability-high agility, 2) high adaptability-low agility, 3) low adaptability-high agility, and 4) low adaptability-low agility.

Salesperson's Intrinsic Motivation

The first analysis was conducted on salespersons' intrinsic motivation. Table 4-25 shows the mean values for intrinsic motivation for each of the four groups of respondents, high low adaptability with, respectively, knowledge dissemination (high vs low), knowledge portfolio (high vs low), knowledge generation (high vs low), customer relationship (high vs low), and sales-process innovation (high vs low), with respect to dependent variable salesperson intrinsic motivation.

A quick look on both Table 4-25 indicates that the mean values for high adaptable and high agile group are always greater than the low adaptable and low agile group. Values are marked on bold display the high/high and low/low group means. Difference among the mean values are all significant at .05 level. Further, the high-high group mean are greater than the

high-low group means, suggesting that salespeople higher in intrinsic motivation have higher levels of agility and adaptability than salespeople who have only high agility or high.

Table: 4-25 Descriptive Statistics

Dependent Variable: Intrinsic Motivation							Contrast	
	Hi/Hi	Hi/Lo	Lo/Hi	Lo/Lo	F-test	Sig.	F (A)	F (SA)
Adaptability vs. Knowledge Dissemination	30.41	27.08	26.86	23.41	15.93	.000*	12.01*	10.67*
Adaptability vs. Knowledge Portfolio	31.10	26.26	27.50	23.15	20.97	.000*	12.15*	22.73*
Adaptability vs. Knowledge Generation	31.25	5.42	26.83	23.38	21.93	.000*	11.08*	22.92*
Adaptability vs. Knowledge of Customer Relationships	31.63	25.89	27.38	23.52	22.86	.000*	10.96*	23.06*
Adaptability vs. Knowledge of Sales Process Innovation	30.83	27.21	27.25	23.45	17.19	.000*	13.14*	13.38*

***HI=High; Lo=Low; F (A)=Contrast F-test for Adaptability; F (SA)=Contrast F-test for Salesperson Agility Variables (Knowledge Dissemination, Knowledge Portfolio, Knowledge Generation, Knowledge of Customer Relationships, and Knowledge of Sales Process Innovation), Sig.=Significance

Salesperson's Learning Orientation

The second analysis was conducted on salespersons' learning orientation. Table 4-26 shows the respective mean values salespersons' learning orientation for combinations of high and low adaptability and high and low levels of the knowledge variables. A quick look on both Table 4-26 indicates that the mean values for high adaptable and high agile group are always greater than the low adaptable and low agile group, suggesting that salespeople with higher learning orientations possess higher levels of agility and adaptability than salespeople who have only high agility or high adaptability. Values are marked on bold display the high/high and low/low group means. Difference among the mean values are all significant at .05 level.

Table: 4-26 Descriptive Statistics

Dependent Variable: Learning Orientation							Contrast	
	Hi/Hi	Hi/Lo	Lo/Hi	Lo/Lo	F-test	Sig.	F (A)	F (SA)
Adaptability vs. Knowledge Dissemination	37.84	34.46	35.78	32.15	28.19	.000*	11.63*	29.97*
Adaptability vs. Knowledge Portfolio	38.14	34.55	36.16	31.97	33.50	.000*	14.71*	42.75*
Adaptability vs. Knowledge Generation	38.17	34.12	34.20	32.63	26.78	.000*	19.21*	20.34*
Adaptability vs. Knowledge of	38.51	34.33	35.50	32.45	32.09	.000*	15.11*	32.99*

Customer Relationships								
Adaptability vs. Knowledge of Sales Process Innovation	37.96	35.21	35.45	32.38	24.54	.000*	17.36*	20.53*

***HI=High; Lo=Low; F (A)=Contrast F-test for Adaptability; F (SA)=Contrast F-test for Salesperson Agility Variables (Knowledge Dissemination, Knowledge Portfolio, Knowledge Generation, Knowledge of Customer Relationships, and Knowledge of Sales Process Innovation), Sig.=Significance

Salesperson's Customer Orientation

The final analysis was conducted on salespersons' customer orientation. Table 4-27 shows the respective mean values salespersons' customer orientation for combinations of high and low adaptability and high and low levels of the knowledge variables. A quick look on both Table 4-27 indicates that the mean values for high adaptable and high agile group are always greater than the low adaptable and low agile group, suggesting that salespeople with higher customer orientation exhibit higher levels of agility and adaptability than those salespeople who exhibit only high agility or high adaptability. Values are marked on bold display the high/high and low/low group means. Difference among the mean values are all significant at .05 level.

Table: 4-27 Descriptive Statistics

Dependent Variable: Customer Orientation							Contrast	
	Hi/Hi	Hi/Lo	Lo/Hi	Lo/Lo	F-test	Sig.	F (A)	F (SA)
Adaptability vs. Knowledge Dissemination	38.87	35.81	38.09	34.00	17.83	.000*	3.36	25.58*
Adaptability vs. Knowledge Portfolio	39.00	36.24	39.13	33.59	23.93	.000*	3.73	40.46*
Adaptability vs. Knowledge Generation	39.01	35.71	36.91	34.33	15.59	.000*	6.59*	18.57*
Adaptability vs. Knowledge of Customer Relationships	39.63	35.41	39.28	33.99	27.46	.000*	1.75	50.13*
Adaptability vs. Knowledge of Sales Process Innovation	39.09	36.27	38.45	34.07	18.34	.000*	4.23*	27.07*

***HI=High; Lo=Low; F (A)=Contrast F-test for Adaptability; F (SA)=Contrast F-test for Salesperson Agility Variables (Knowledge Dissemination, Knowledge Portfolio, Knowledge Generation, Knowledge of Customer Relationships, and Knowledge of Sales Process Innovation), Sig.=Significance

REGRESSION ANALYSIS - ANTECEDENTS

Hypotheses proposing the relationships between constructs were tested using simple regression analysis and least squares estimation (Pedhazur 1982). Regression analysis attempts to analyze the variability of a dependent variable by "resorting to information available on one or more independent variables" (Pedhazur 1982, p. 5). The first part of the current investigation focuses on the relationship between independent variables (intrinsic motivation, customer orientation, and learning orientation) and two dependent variables (salesperson agility [knowledge dissemination, knowledge portfolio, knowledge generation, customer relationship, and sales process innovation] and adaptive selling). This study seeks to provide a preliminary answer to the question of the strength of the association between salesperson agility and intrinsic motivation, customer orientation, and learning orientation. Hair et al. (2010) indicate this type of research question may be addressed through the use of least squares regression analysis.

The Effects of Intrinsic Motivation on Salesperson Agility

Hypothesis 1 deals with the relationship of intrinsic motivation with salesperson agility variables – knowledge dissemination, knowledge portfolio, knowledge generation, customer relationship, sales process innovation, and change proficiency. Results from the analysis indicate a positive and significant relationship between intrinsic motivation and knowledge dissemination (20% variance explained), knowledge portfolio (27%), knowledge generation (28%), customer relationship (26%), and sales process innovation (26%).The relationship with change proficiency was non-significant. Results from the analysis also show a positive and significant relationship between intrinsic motivation and adaptive selling where intrinsic motivation explains 25% of the variation in adaptive selling. The results from this analysis are provided in Table 4-28. The

expected relationship was supported by the regression results, thus providing support for H1a and H1b.

Table 4-28 Regression Effects of Intrinsic Motivation on Salesperson Agility

Regression Results for Intrinsic Motivation (Hypothesis H1a)

Dependent Variable	B	SE	t-stat	Sig.	R	R^2	F	N
Knowledge Dissemination	.201	.028	7.105	.000*	.45	.19	50.48	207
Constant	17.83	.792	22.51	.000*				
Knowledge Portfolio	.243	.028	8.751	.000*	.52	.27	76.58	207
Constant	16.45	.779	21.12	.000*				
Knowledge Generation	.226	.026	8.848	.000*	.53	.27	78.29	207
Constant	17.16	.717	23.91	.000*				
Customer Relationships	.234	.027	8.550	.000*	.51	.26	73.11	207
Constant	16.61	.768	21.62	.000*				
Sales Process Innovation	.264	.031	8.461	.000*	.51	.26	71.58	207
Constant	14.75	.877	16.83	.000*				
Change Proficiency	.003	.012	.266	.790	.02	.01	.071	207
Constant	3.202	.334	9.580	.000*				

Regression Results for Intrinsic Motivation (Hypothesis H1b)

Dependent Variable	B	SE	t-stat	Sig.	R	R^2	F	N
Adaptive Selling	.381	.046	8.329	.000	.50	.25	69.37	207
Constant	16.99	1.283	13.24	.000				

Explanation: B = Regression Coefficient; SE = Standard Error; t-stat = T-Statistic; Sig. = Significance; R= Correlation Coefficient; R^2 = Adjusted Coefficient of Determination; Significant at .05 level

The Effects of Customer Orientation on Salesperson Agility

Customer orientation was hypothesized (H2a and H2b) to have a positive relationship with the salesperson agility variables and adaptive selling. The regression analysis indicated support for H2a and H2b. Customer orientation was significantly and positively related to knowledge dissemination, knowledge portfolio, knowledge generation, customer relationship,

sales process innovation, and change proficiency. Results from the analysis indicate a positive and significant relationship between customer orientation and adaptive selling. Tables 4-29 presents the results from these analyses.

Table 4-29 Regression Effects of Customer Orientation on Salesperson Agility

Regression Results for Customer Orientation (Hypothesis H2a)

Dependent Variable	B	SE	t-stat	Sig.	R	R^2	F	N
Knowledge Dissemination	.316	.040	7.862	.000	.48	.23	61.81	207
Constant	11.70	1.486	7.874	.000				
Knowledge Portfolio	.377	.039	9.595	.000	.56	.31	92.07	207
Constant	9.22	1.453	6.345	.000				
Knowledge Generation	.334	.037	9.028	.000	.53	.28	81.51	207
Constant	11.07	1.37	8.093	.000				
Customer Relationships	.433	.035	12.34	.000	.65	.42	152.33	207
Constant	7.08	1.29	5.47	.000				
Sales Process Innovation	.370	.046	8.064	.000	.49	.24	65.02	207
Constant	8.34	1.70	4.904	.000				
Change Proficiency	.036	.017	2.092	.038	.15	.02	4.38	207
Constant	1.800	.634	2.839	.005				

Regression Results for Customer Orientation (Hypothesis H2b)

Dependent Variable	B	SE	t-stat	Sig.	R	R^2	F	N
Adaptive Selling	.561	.066	8.475	.000	.51	.26	71.83	207
Constant	6.76	2.45	2.762	.006				

Explanation: B = Regression Coefficient; SE = Standard Error; t-stat = T-Statistic; Sig. = Significance; R= Correlation Coefficient; R^2 = Adjusted Coefficient of Determination; Significant at .05 level

The Effects of Learning Orientation on Salesperson Agility

Hypothesis 3a and 3b suggest that learning orientation is positively related to salesperson agility variables and adaptive selling. The expected relationship emerged in the regression analysis. Learning orientation was found to be significantly positively related to knowledge

dissemination, knowledge portfolio, knowledge generation, customer relationship, sales process innovation, change proficiency, and adaptive selling. The results are provided in Tables 4-30 Hypothesis 3a and 3b are supported.

Table 4-30 Regression Effects of Learning Orientation on Salesperson Agility

Regression Results for Learning Orientation (Hypothesis H3a)

Dependent Variable	B	SE	t-stat	Sig.	R	R^2	F	N
Knowledge Dissemination	.397	.039	10.180	.000	.58	33	103.64	207
Constant	9.32	1.38	6.741	.000				
Knowledge Portfolio	.429	.039	10.955	.000	.61	.37	120.01	207
Constant	7.93	1.391	5.708	.000				
Knowledge Generation	.381	.037	10.297	.000	.58	.34	106.04	207
Constant	9.89	1.31	7.530	.000				
Customer Relationships	.449	.037	12.202	.000	.65	.42	148.89	207
Constant	7.164	1.307	5.481	.000				
Sales Process Innovation	.425	.046	9.161	.000	.54	.29	83.92	207
Constant	6.99	1.65	4.245	.000				
Change Proficiency	.041	.018	2.290	.023	.16	.02	5.24	207
Constant	1.678	.633	2.648	.009				

Regression Results for Learning Orientation (Hypothesis H3b)

Dependent Variable	B	SE	t-stat	Sig.	R	R^2	F	N
Adaptive Selling	.645	.066	9.718	.000	.56	.31	94.44	207
Constant	4.63	2.36	1.964					

Explanation: B = Regression Coefficient; SE = Standard Error; t-stat = T-Statistic; Sig. = Significance; R= Correlation Coefficient; R^2 = Adjusted Coefficient of Determination; Significant at .05 level

REGRESSION ANALYSIS - OUTCOMES

The Effects of Salesperson Agility on Salesperson's Outcome Performance

The second focus of the analysis was the examination of the relationship of agility to various sales outcome variables. Hypothesis 4 deals with the relationship of salesperson agility -

knowledge dissemination, knowledge portfolio, knowledge generation, customer relationship, sales process innovation, and change proficiency with salesperson's outcome performance. Results from the analysis indicated a positive and significant relationship between knowledge dissemination, knowledge portfolio, knowledge generation, customer relationship, sales process innovation, and adaptive selling with salesperson's outcome performance. Change proficiency was not significant. Results are presented in Tables 4-31.

Table 4-31 Regression Effects of Salesperson Agility on Salesperson's Outcome Performance

Regression Results for Salesperson Agility (Hypothesis H4a)

Dependent Variable	Predictor	B	SE	t-stat	Sig.	R	R^2	F	N
Salesperson's Performance Outcome	KD	1.275	.094	13.548	.000	.69	.47	183.54	207
	Constant	3.387	2.212	1.531	.127				
	KP	1.298	.087	14.926	.000	.72	.52	222.79	207
	Constant	3.176	2.023	1.569	.118				
	KG	1.406	.094	14.976	.000	.72	.52	224.30	207
	Constant	.299	2.207	.135	.892				
	CR	1.351	.087	15.599	.000	.74	.54	243.33	207
	Constant	2.040	2.009	1.016	.311				
	SPI	1.132	.080	14.13	.000	.70	.49	199.56	207
	Constant	8.251	1.782	4.63	.000				
	CP	.310	.342	.907	.365	.06	-.00	.823	207
	Constant	32.12	1.14	28.13	.000				

Regression Results for Salesperson Agility (Hypothesis H4b)

Dependent Variable	Predictor	B	SE	t-stat	Sig.	R	R^2	F	N
Salesperson's Performance Outcome	AS	.762	.056	13.606	.000	.69	.47	185.11	207
	Constant	12.26	1.56	7.867	.000				

Explanation: KD = Knowledge Dissemination; KP = Knowledge Portfolio; KG = Knowledge Generation; CR = Knowledge Customer Relationships; SPI = Knowledge of Sales Process Innovation; CP = Change Proficiency; AS = Adaptive Selling; B = Regression Coefficient; SE = Standard Error; t-stat = T-Statistic; Sig. = Significance; R= Correlation Coefficient; R^2 = Adjusted Coefficient of Determination; Significant at .05 level

Hierarchical multiple regression was conducted in order to ascertain if any marginal contribution is made by the addition of salesperson agility beyond the contribution to knowledge of adaptive selling in explaining salesperson's outcome performance. The main purpose of the hierarchical multiple regression is to see whether the additional variable can be found to be associated with some predictive capacity at predicting dependent variable above and beyond one or more other variables. Salesperson agility was found to be a unique incremental predictor of the salesperson's outcome performance based on F-change, which is statistically significant, and the beta weight which is also statistically significant. The results from this analysis are provided in Tables 4-32. The expected relationship emerged in the regression analysis, agility provided additional contribution to outcomes variance explained, thus providing support for H4a, H4b, and H4c.

Table 4-32 Regression Marginal Contribution of Salesperson Agility on Salesperson's Outcome Performance

Regression Results for Marginal Contribution of Salesperson Agility (Hypothesis H4c)

Dependent Variable	Predictors	R	R^2	SE	R^2 Change	F Ch.	Std. B	N
Salesperson's	AS	.689	.472	4.26	.475	185.11*	.424	207
Performance Outcome	KD	.762	.576	3.81	.106	51.28*	.419	207
	AS	.689	.472	4.26	.475	185.11*	.400	207
	KP	.790	.620	3.61	.149	80.66*	.482	207
	AS	.689	.472	4.26	.475	185.11*	.394	207
	KG	.787	.616	3.63	.145	77.62*	.482	207
	AS	.689	.472	4.26	.475	185.11*	.352	207
	CR	.781	.606	3.67	.136	70.95*	.499	207
	AS	.689	.472	4.26	.475	185.11*	.414	207
	SPI	.775	.596	3.72	.126	64.26*	.449	207
	AS	.689	.472	4.26	.475	185.11*	.688	207
	CP	.690	.471	3.26	.002	.764	.044	207

*** Significant at p<.05

The Effects of Salesperson Agility on Job Satisfaction

Salesperson agility variables and adaptive selling were hypothesized (H5a and H5b) to have a positive relationship with job satisfaction. The regression analysis indicated support for H5a and H5b. Results from the analysis indicated a positive and significant relationship between knowledge dissemination, knowledge portfolio, knowledge generation, customer relationship, sales process innovation, and adaptive selling with job satisfaction. Results are presented in Tables 4-33).

***Table 4-33 Regression Effects of Salesperson Agility on* Job Satisfaction**

Regression Results for Salesperson Agility (Hypothesis H5a)

Dependent Variable	Predictor	B	SE	t-stat	Sig.	R	R^2	F	N
Job Satisfaction	KD	.819	.162	5.07	.000	.33	.11	25.66	207
	Constant	18.65	3.80	4.91	.000				
	KP	.890	.154	5.77	.000	.37	.14	33.25	207
	Constant	17.24	3.59	4.80	.000				
	KG	1.098	.163	6.75	.000	.43	.18	45.55	207
	Constant	12.13	3.83	3.17	.002				
	CR	.94	.16	6.00	.000	.39	.15	36.00	207
	Constant	16.17	3.63	4.46	.000				
	SPI	.72	.14	5.09	.000	.34	.11	25.92	207
	Constant	22.05	3.12	7.06	.000				
	CP	.005	.454	.010	.992	.00	-.00	.823	207
	Constant	37.72	1.51	24.91	.000				

Regression Results for Salesperson Agility (Hypothesis H5b)

Dependent Variable	Predictor	B	SE	t-stat	Sig.	R	R^2	F	N
Job Satisfaction	AS	.513	.096	5.36	.000	.35	.12	28.71	207
	Constant	23.71	2.67	8.89	.000				

Explanation: KD = Knowledge Dissemination; KP = Knowledge Portfolio; KG = Knowledge Generation; CR = Knowledge Customer Relationships; SPI = Knowledge of Sales Process Innovation; CP = Change Proficiency; AS = Adaptive Selling; B = Regression Coefficient; SE = Standard Error; t-stat = T-Statistic; Sig. = Significance; R= Correlation Coefficient; R^2 = Adjusted Coefficient of Determination; Significant at .05 level

Additionally, hierarchical multiple regression was conducted to examine whether salesperson agility variables add knowledge to our understanding of satisfaction above and beyond that of the adaptive selling. It was found that salesperson agility adds unique incremental contribution to job satisfaction based on statistical significance of F-change and beta value. The results from this analysis are provided in Tables 4-34. The expected relationship emerged in the regression analysis, agility adds unique incremental value beyond that of adaptability, thus providing support for H5a, H5b, and H5c.

Table 4-34 Regression Marginal Contribution of Salesperson Agility on Job Satisfaction

Regression Results for Marginal Contribution of Salesperson Agility (Hypothesis H5c)

Dependent Variable	Predictors	R	R^2	SE	R^2 Change	F Ch.	Std. B	N
Job Satisfaction	AS	.350	.119	7.28	.123	28.71*	.233	207
	KD	.379	.135	7.21	.021	4.972*	.186	207
	AS	.350	.119	7.28	.123	28.71*	.198	207
	KP	.406	.156	7.12	.042	10.02*	.255	207
	AS	.350	.119	7.28	.123	28.71*	.143	207
	KG	.441	.187	6.99	.072	18.16*	.339	207
	AS	.350	.119	7.28	.123	28.71*	.165	207
	CR	.405	.156	7.12	.041	10.08*	.275	207
	AS	.350	.119	7.28	.123	28.71*	.233	207
	SPI	.382	.138	7.20	.023	5.538*	.193	207
	AS	.350	.119	7.28	.123	28.71*	.351	207
	CP	.351	.114	7.29	.000	.019	-.009	207

*** Significant at p<.05

The Effects of Salesperson Agility on Customer Satisfaction with the Salesperson

Hypothesis 6a and 6b suggest that both salesperson agility and adaptive selling are positively related to customer satisfaction with the salesperson. The expected relationship emerged in the regression analysis, results being shown in Table 4-35.

Table 4-35 Regression Effects of Salesperson Agility on Customer Satisfaction with the Salesperson

Regression Results for Salesperson Agility (Hypothesis H6a)

Dependent Variable	Predictor	B	SE	t-stat	Sig.	R	R^2	F	N
CSS	KD	.399	.043	9.36	.000	.55	.30	87.66	207
	Constant	8.731	1.00	8.73	.000				
	KP	.440	.039	11.40	.000	.62	.39	130.02	207
	Constant	7.88	.898	8.778	.000				
	KG	.447	.043	10.33	.000	.59	.40	106.70	207
	Constant	7.59	3.83	1.017	.000				
	CR	.504	.036	14.02	.000	.70	.49	196.50	207
	Constant	6.443	.833	7.730	.000				
	SPI	.345	.037	9.32	.000	.55	.29	86.93	207
	Constant	10.44	.823	12.68	.000				
	CP	.159	.134	1.186	.237	.08	.00	1.407	207
	Constant	17.52	.447	39.16	.000				

Regression Results for Salesperson Agility (Hypothesis H6b)

Dependent Variable	B	SE	t-stat	Sig.	R	R^2	F	N
Adaptive Selling	.222	.026	8.547	.000	.51	.26	73.05	207
Constant	11.93	.725	16.464	.000				

Explanation: CSS= Customer Satisfaction with the Salesperson; KD = Knowledge Dissemination; KP = Knowledge Portfolio; KG = Knowledge Generation; CR = Knowledge Customer Relationships; SPI = Knowledge of Sales Process Innovation; CP = Change Proficiency; AS = Adaptive Selling; B = Regression Coefficient; SE = Standard Error; t-stat = T-Statistic; Sig. = Significance; R= Correlation Coefficient; R^2 = Adjusted Coefficient of Determination; Significant at .05 level

Hierarchical multiple regression results shows that salesperson agility does, in fact make a unique incremental contribution to customer satisfaction with the salesperson based on statistical significance of F-change and beta value. The results from this analysis are provided in Tables 4-36. The expected relationship emerged in the regression analysis, thus providing support for H6a, H6b, and H6c.

***Table 4-36 Regression Marginal Contribution of Salesperson Agility on* Customer Satisfaction with the Salesperson**

Regression Results for Marginal Contribution of Salesperson Agility (Hypothesis H5c)

Dependent Variable	Predictors	R	R^2	SE	R^2 Change	F Ch.	Std. B	N
CSS	AS	.513	.259	1.98	.263	73.05*	.277	207
	KD	.588	.339	1.87	.083	25.87*	.372	207
	AS	.513	.259	1.98	.263	73.05*	.217	207
	KP	.647	.413	1.76	.156	54.60*	.493	207
	AS	.513	.259	1.98	.263	73.05*	.247	207
	KG	.617	.374	1.82	.118	38.72*	.434	207
	AS	.513	.259	1.98	.263	73.05*	.074	207
	CR	.702	.487	1.65	.230	92.26*	.650	207
	AS	.513	.259	1.98	.263	73.05*	.285	207
	SPI	.591	.342	1.86	.086	26.93*	.371	207
	AS	.513	.259	1.98	.263	73.05*	.511	207
	CP	.517	.260	1.98	.005	1.305	.068	207

*** Significant at p<.05

Summary of Results

The hypotheses set forth in this research were supported. The expected positive effect of the antecedent variables on salesperson agility and adaptive selling was confirmed through the analysis. Each of the regression equations revealed a significant relationship between both salesperson agility and adaptive selling and the other constructs under examination. Salesperson agility was found to add marginal contribution to the relationship between sales adaptability and salesperson' outcome performance, job satisfaction and customer satisfaction with the salesperson.

CHAPTER V

OVERVIEW, IMPLICATIONS, AND CONCLUSIONS

The importance of 'agility' as a salesperson skill has been overlooked in previous literature. Given the attention paid to agility in the organizational and workforce literature as well as by organizations, the primary objective of this research was to examine the agility concept and to provide preliminary assessment of whether or not the concept is worthy of study in salesforce research. In doing so, the first objective of this dissertation was to establish a conceptual distinction between agility and any metrics that might contain some measure of adaptive behavior. A second objective was to explore the core concepts of sales force agility based on the agility foundation of Dove (1994, 1999) and Chonko and Jones (2005) and to initiate the preliminary work on the development of salesperson agility scale. The third objective was to engage in preliminary empirical testing to determine if agility and adaptability are different and have differential effects on sales outcomes. Finally the fourth objective was to test a proposed model in which the salesperson's intrinsic motivation, customer orientation, and learning orientation are viewed as antecedents to salesperson agility which in turn impacts salesperson's outcome performance, job satisfaction, and customer's satisfaction with the salesperson.

Recently, Fayezi et al. (2016) undertook a similar examination rooted in the supply chain literature. They provided evidence that agility is "a 'macro' externally directed response, while flexibility concentrates on the 'micro' elements concerning organizational operations (p. 23)". They go on to say that agility includes proactiveness, responsiveness, information system technology, quickness, adaptiveness, flexibility and cooperation both within and between supply chain participants. They further describe flexibility as an internal process triggered by some

stimulus. They go on to say further that the concepts are used interchangeably and incorrectly by academics (Fayezi et al 2015) suggesting that both constructs require further examination for the purpose of discovering uniqueness as well as redundancies of those constructs.

Definitional misapplications are important. Examining the agility definitions in Chapter 2, marketing and sales scholars must ultimately determine if the multitude of traits asserted to describe the agility phenomenon are unique to agility, and if they distinguish it from other adaptability constructs. Primarily, definitions of agility have been based on intuitive feelings regarding what agility is and have largely departed from the original conceptualizations of Dove (1996). For an operational definition to exist, consensus must exist on the answer to the question, "To what are people referring when they use the term salesforce agility?" Examination of agility definitions reveals considerable divergence among the traits evident in the definitions. All or none of the traits may potentially impact define agility upon rigorous empirical examination. If the conceptual meaning of agility is not connected with empirically-observed, distinct manifestations, no precision in meaning is possible. Regarding agility, a salesperson's reaction is determined by the origin of the need for change (the agility drivers). Strategic response is required. Proffering the wrong response inhibits the salesperson's and the sales organization's ability to remain competitive.

The work presented in this dissertation provides a starting point into the investigation of salesperson agility as a variable worthy of study in salesforce research. The question was posed as to whether or not salesperson agility provides any marginal contribution to knowledge of sales outcomes beyond that provided by adaptability. The answer based on the preliminary research presented is "yes". Thus, the knowledge component of salesperson agility along with change proficiency purported to allow salespeople to "implement fast, low-cost predictable solution in a

more flexible way" (Chonko and Jones, 2012, pg. 529) appear to hold some promise. The Professional Selling and Sales Management literature has long recognized the crucial role of the adaptability in selling settings. However studies of agility and its contribution to knowledge of sales force phenomena have been non-existent in the extant literature. The research presented sheds some preliminary light on the potential importance of salesperson agility and its implications for sales and marketing.

THEORETICAL IMPLICATIONS:

The main theoretical contribution in this dissertation was the examination of underlying agility concepts and worthiness of salesperson agility as a construct important to sales research. The research presented provided support for the importance of salesperson agility to professional selling and sales management. This research provides a first attempt at empirically establishing the salesperson agility construct in the sales literature. A good concept or theory should cumulatively build on existing research (Dubin 1978) so the empirical findings presented in this dissertation, while offering promise, should not be considered definitive.

Another theoretical contribution is initiation of the quest for the clarification of the salesperson agility construct. There has been a lack of consensus on the dimensionality of agility in previous studies (Yauch 2011; Giachetti et al. 2003; Sherehiy et al. 2007). According to Boehm and Turner (2003), care must be taken to avoid falling prey to the notion that agile methods are revolutionary when developing an agility metric. If agility is to have traction as a valid construct for sales, it must be differentiated from other constructs. Further validated metrics must be constructed to insure that agility can be compared in sound scientific ways to other constructs and methods. In this dissertation, an extensive literature review was conducted across

various disciplines the purpose being to provide a solid overview of organization agility, workforce agility and sales force agility as well as how salesperson agility is different from the similar constructs such as adaptive selling, flexibility and diligence construct. Evidence provided in this dissertation suggests that two components of agility – knowledge and change proficiency – appear to differentiate agility from other adaptive metrics. Again, the preliminary evidence offers promise, but cannot be considered definitive.

This dissertation mainly follows the advice of Jarvis et al. (2003) concerning model specification, errors in which may occur "… from the fact that many marketing researchers do not think of measurement model relationships as hypotheses to be tested with differing theoretical implications" (p.213). Therefore, this paper attempt at a starting point for item specification is consistent with notions from the work of Cialdini (2001) who introduced the term, "full-cycle psychology" to describe a research program as a process of "…continual interplay between a) field observation of interesting phenomena, b) theorizing about the causes of the phenomena, and c) experimental test of the theorizing" (p.32). This approach places a high priority on internal validity, but also places strong emphasis on external validity and dialogue. Full cycle research centers on two approaches to developing insight into a phenomenon: 1) knowledge based on exploring, observing, and assessing phenomena as they exist, and 2) knowledge based on empirical assessment of the phenomena. Further, Cialdini (1995) observed "natural observation should not be restricted to the beginnings of the research venture; it should also be used to complete the final arc in the circle. That is, naturally occurring instances should be employed not only to identify effects suitable for experimental work but also to check on the validity of the findings of the experimentation" (p.70). In looking at the different domain elements that have been ascribed to agility, this conceptual analysis shows that salesperson

knowledge components and change proficiency are the two key agility enablers (Chonko and Jones 2005) which differentiates salesperson agility from other types of adaptive focused metrics.

If agility is to flourish as a construct in sales research, an operational definition is required. This dissertation suggested utilizing Dove's (1996) original work as a starting point and have offered a conceptual definition based on his work. However, the conceptual view of salesforce agility must be empirically translated to prediction. Only when predictions are possible, and agility is empirically shown to contain invariants that consistently relate to outcomes, can assertions concerning "what is agility" be realized. Agility has been prolifically researched, so there exists some measurement foundation. However, since multiple metrics exist, and no agreed upon operational definition exists, reliance on any results is tenuous at best. Sales researchers can utilize this work as a starting point in further developing agility theory and scale development. This study provided three empirical analyses designed to seek evidence concerning the worthiness of agility as a construct of interest. Preliminary open-end research results showed that respondents can distinguish between agility selling and adaptive selling as they characterized agile selling behavior as a unique capability of salesperson to serve their customer quickly. The research presented in Study 1 and Study 2 provided evidence that the further study salesperson agility is warranted since agility provides significant marginal contribution to understanding of sales outcomes. Evidence was found to support the key role knowledge management plays in creating salesperson agility metrics. Specifically, knowledge portfolio, knowledge generation, and customer relationships were the key three knowledge dimensions which provided marginal contribution to knowledge of sales outcomes beyond that of the adaptive selling.

LIMITATIONS AND FUTURE RESEARCH:

Several factors related to this research must be taken into consideration when drawing conclusions from the findings. First, this study included data from crowdsourcing internet marketplace, Amazon Mechanical Turk (MTurk), which may affects the reliability of the findings. Studies in organizations in different industries, different regions of the country, or of different size may not yield the same results. Another possible limitation lies in the possibility of socially-desirable responses which may be present when respondents are asked for their views concerning sensitive subjects, such as sales performance. Significant effort, both written and verbal, was made to assure respondents of anonymity.

This is one of the first attempts to assess the impact of salesperson agility on sales outcomes. It is suggested that, beyond the primary dimensions of sales force agility, antecedents, outcome and moderating variables be considered as the agility framework is studied, refined and reassessed.

References

Accardi-Petersen, Michelle (2011), Agile Marketing, Apress.

Agarwal, Ashish, Ravi Shankar, and M. K. Tiwari (2006), "Modeling the metrics of lean, agile and leagile supply chain: An ANP-based approach." *European Journal of Operational Research*, 173 (1), 211-225.

Agnihotri, Raj, Prabakar Kothandaraman, Rajiv Kashyap, and Ramendra Singh (2012), "Bringing "social" into sales: the impact of salespeople's social media use on service behaviors and value creation," *Journal of Personal Selling & Sales Management*, 32 (3), 333-348.

Ahearne, Michael, Ronald Jelinek, and Eli Jones (2007), "Examining the effect of salesperson service behavior in a competitive context," *Journal of the Academy of Marketing Science*, 35 (4), 603-616.

Aitken, James, Martin Christopher, and Denis Towill (2002), "Understanding, Implementing and Exploiting Agility and Leanness," *International Journal of Logistics*, 5 (1), 59-74.

Alavi, Somaieh, and Dzuraidah Abd Wahab (2013), "A review on workforce agility" Research *Journal of Applied Sciences, Engineering and Technology*, 5 (16), 4195-4199.

Al-Faouri, Abeer Hmoud, Marwan Mohammed Al-Nsour, and Mohammed Mufaddy Al-Kasasbeh (2014), "The impact of workforce agility on organizational memory." *Knowledge Management Research & Practice*, 12 (4), 432-442.

Allworth, E., & Hesketh, B. (1999), "Construct-oriented biodata: Capturing change-related and contextually relevant future performance," *International Journal of Selection and Assessment*, 7(2), 97-111.

Alter, Michael J. (2004), *Science of flexibility*. Human Kinetics.

Anderson, Erin, and Richard L. Oliver (1987), "Perspectives on behavior-based versus outcome-based salesforce control systems," *Journal of Marketing*, 51 (4), 76-88.

Anglin, Kenneth A., Jeffrey J. Stoltman, and James W. Gentry (1990), "The Congruence of Manager Perception of Salesperson Performance and Knowledge-Based Measures of Adaptive Selling," *Journal of Personal Selling& Sales Management*, 10, 4 (Fall), 8 1-90.

Aranda, A. (2003), "Service operations strategy, flexibility and performance in engineering consultants' firms", *International Journal of Operations & Production Management*, 23 (12), 1401-21.

Arteta, B. M., and R. E. Giachetti (2004), "A measure of agility as the complexity of the enterprise system," *Robotics and Computer-Integrated Manufacturing*, 20 (6), 495-503.

Ashrafi, Noushin, Peng Xu, Mathiyalakan Sathasivam, Jean-pierre Kuilboer, William Koelher, David Heimann, and Frenck Waage (2005), "A Framework for Implementing Business Agility through Knowledge Management Systems," In *Seventh IEEE International Conference on E-Commerce Technology Workshops*, 116-121.

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), 165-184.

Barrand, J. (2006), Le Manager agile, Vers un nouveau management pour affronter la turbulence, Dunod, Paris.

Bejou, David, Barry Wray, and Thomas N. Ingram (1996), "Determinants of relationship quality: an artificial neural network analysis." *Journal of Business Research*, 36 (2), 137-143.

Berlyne, D. (1966), "Notes on intrinsic motivation and intrinsic reward in relation to instruction," *Learning about learning*, 105-110.

Bernardes, Ednilson Santos, and Mark D. Hanna (2009), "A theoretical review of flexibility, agility and responsiveness in the operations management literature: Toward a conceptual definition of customer responsiveness," *International Journal of Operations & Production Management*, 29 (1), 30-53.

Beltrán-Martín, Inmaculada, Vicente Roca-Puig, Ana Escrig-Tena, and Juan Carlos Bou-Llusar (2008), "Human resource flexibility as a mediating variable between high performance work systems and performance," *Journal of Management*, 34 (5), 1009-1044.

Bhatt, Ramesh S., and Paul C. Quinn (2011), "How does learning impact development in infancy? The case of perceptual organization." *Infancy*, 16 (1), 2-38.

Bhattacharya, Mousumi, Donald E. Gibson, and D. Harold Doty (2005), "The effects of flexibility in employee skills, employee behaviors, and human resource practices on firm performance." *Journal of Management*, 31 (4), 622-640.

Blackshear, Thomas and Richard E. Plank (1994), “The Impact of Adaptive Selling on Selling Effectiveness Within the Pharmaceutical Industry,” *Journal of Marketing Theory and Practice,* 2 (3), 107–125.

Bodkin, Charles D., and Thomas H. Stevenson (1993), "Adaptive Behavior in Selling: A Discriminant Analysis of the Effects of Situational Variables," *Journal of Marketing Management*, 3(Fall-Winter), 25 -35.

Boorom, Michael L., Jerry R. Goolsby, and Rosemary P. Ramsey (1998), "Relational communication traits and their effect on adaptiveness and sales performance," *Journal of the Academy of Marketing Science*, 26 (1), 16-30.

Bosco, Carol Lynn (2007), "*The relationship between environmental turbulence, workforce agility and patient outcomes*," Ph.D. Dissertation, ProQuest.

Bradford, Kevin, and Barton A. Weitz (2012), "23 Salesperson effectiveness: a behavioral perspective," *Handbook on Business to Business Marketing*, 417.

Brett, Joan F., and Don VandeWalle (1999), "Goal orientation and goal content as predictors of performance in a training program." *Journal of Applied Psychology*, 84 (6), 863-873.

Breu, Karin, Christopher J. Hemingway, Mark Strathern, and David Bridger (2002), "Workforce Agility: The New Employee Strategy for the Knowledge Economy," *Journal of Information Technology*, 77 (1), 21-31.

Buckley, Peter J., and Malcolm Chapman (1996), "Theory and method in international business research." *International Business Review*, 5 (3), 233-245.

Buhrmester, Michael, Tracy Kwang, and Samuel D. Gosling (2011), "Amazon's Mechanical Turk a new source of inexpensive, yet high-quality, data?," *Perspectives on psychological science*, 6 (1), 3-5.

Burgess, Thomas F. (1994), "Making the Leap to Agility: Defining and Achieving Agile Manufacturing through Business Process Redesign and Business Network Redesign." *International Journal of Operations & Production Management*, 14 (11), 23-34.

Bush, Victoria D., Gregory M. Rose, Faye Gilbert, and Thomas N. Ingram (2001), "Managing Culturally Diverse Buyer- Seller Relationships: The Role of Intercultural Disposition and Adaptive Selling in Developing Intercultural Communication Competence," *Journal of the Academy of Marketing Science*, 29 (4), 391-404.

Buzacott, John A. (1982), "The fundamental principles of flexibility in manufacturing systems." In *Proceedings of the 1st International Conference on Flexible Manufacturing Systems*, pp. 13-22. North Holland Publishing Co.

Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002), "Learning orientation, firm innovation, and firm performance. *Industrial Marketing Management*," 31(6), 515– 524.

Carnap, Rudolf (1953), "Formal and factual science," *Readings in the Philosophy of Science*, 123-128.

Chang, Janet, Bin-Tsann Yang, and Chia-Gan Yu (2006), "The moderating effect of salespersons' selling behaviour on shopping motivation and satisfaction: Taiwan tourists in China," *Tourism Management*, 27 (5), 934-942.

Charbonnier-Voirin, Audrey (2011), "The Development and Partial Testing of the Psychometric Properties of a Measurement Scale of Organizational Agility," *M@n@gement*, 14 (2), 119-156.

Chen, I.J., Calantone, R.J., Chung, C.H. (1992), "The marketing-manufacturing interface and manufacturing flexibility," *OMEGA International Journal of Management Science*, 20 (4), 431-443.

Cho, H., Jung, M., Kim, M. (1996), "Enabling technologies of agile manufacturing and its related activities in Korea," *Computers and Industrial Engineering*, 30 (3), 323–334.

Chonko, Lawrence B., and Eli Jones (2012), "Sales Force Agility, Strategic Thinking, and Value Propositions," *The Oxford Handbook of Strategic Sales and Sales Management,* Oxford University Press: Oxford University.

_____, and Eli Jones (2005), "The Need for Speed: Agility Selling," *Journal of Personal Selling & Sales Management*, 25, 4 (Fall), 371-382.

Christopher, Martin (2000), "The Agile Supply Chain: Competing in Volatile Markets," *Industrial marketing management* 29 (1), 37-44.

Churchill Jr, Gilbert A. (1979), "A paradigm for developing better measures of marketing constructs," *Journal of marketing research*, 16 (1), 64-73.

Cialdini, Robert B. (2001), "Harnessing the science of persuasion." *Harvard Business Review*, 79 (9), 72-81.

Coad, Alan (1996), "Smart work and hard work: explicating a learning orientation in strategic management accounting," *Management Accounting Research*, 7 (4), 387-408.

Colletti, Jerome A., and Lawrence B. Chonko (1997), "Change management initiatives: moving sales organizations from obsolescence to high performance," *Journal of Personal Selling & Sales Management*, 17 (2), 1-30.

Conboy, Kieran (2009), "Agility from First Principles: Reconstructing the Concept of Agility in Information Systems Development." *Information Systems Research*, 20 (3), 329-354.

Conner, Daryl R., and Linda L. Hoopes (1997), "Elements of human due diligence: Supporting the nimble organization." *Consulting Psychology Journal: Practice and Research*, 49 (1), 17-24.

Correa, H.L. (1992), "*The links between uncertainty, variability of outputs and flexibility in manufacturing systems*", unpublished PhD thesis, Warwick Business School, University of Warwick, Coventry.

Cortina, Jose M. (1993), "What is coefficient alpha? An examination of theory and applications," *Journal of applied psychology*, 78 (1), 98-104.

Cox, J.T. (1989), "Towards the measurement of manufacturing flexibility", *Production & Inventory Management Journal*, 30 (1), 68-72.

Cronbach, Lee J., and Robert L. Thorndike (1971), "Educational measurement." *Test validation*. 443-507.

Crosby, Lawrence A., Kenneth R. Evans, and Deborah Cowles (1990), "Relationship quality in services selling: an interpersonal influence perspective," *Journal of marketing*, 54 (3), 68-81.

Darnhofer, Ika, Stéphane Bellon, Benoît Dedieu, and Rebecka Milestad (2010), "Adaptiveness to enhance the sustainability of farming systems. A review," *Agronomy for sustainable development*, 30 (3), 545-555.

Das, Ajay (2001), "Towards theory building in manufacturing flexibility", *International Journal of Production Research*, 39 (18), 4153-4177.

Day, George S. (1994), "The capabilities of market-driven organizations," *Journal of Marketing*, 58 (4), 37-52.

Deci, Edward L., and Richard M. Ryan (1985), "The general causality orientations scale: Self-determination in personality." *Journal of research in personality*, 19 (2), 109-134.

_____ (1972), "The effects of contingent and noncontingent rewards and controls on intrinsic motivation," *Organizational behavior and human performance*, 8 (2), 217-229.

Deeter-Schmelz, Dawn R., and Jane Z. Sojka (2007), "Personality traits and sales performance: Exploring differential effects of need for cognition and self-monitoring," *Journal of Marketing Theory and Practice*, 15 (2), 145-157.

De Meyer, Arnoud, Jinichiro Nakane, Jeffrey G. Miller, and Kasra Ferdows (1989), "Flexibility: the next competitive battle the manufacturing futures survey." *Strategic Management Journal*, 10 (2), 135-144.

DelVecchio, Susan K., and Janet E. Oglethorpe (1997), "ADAPTS Scale Dimensions: A Lack of Confirmation," in *Enriching Marketing Practice and Education,* Einora W. Stuart and Ellen M. Moore, eds., Atlanta: Southern Marketing Association, 239-243.

Deshpandé Rohit, Farley John U, Webster Jr Federick E. (1993), "Corporate culture, customer orientation, and innovativeness in Japanese firms: a quadrad analysis," *Journal of Marketing*, 57, 23–7.

Diligence. (2016). In *Oxford English dictionary online*. Retrieved from http://www.oxforddictionaries.com/us/definition/american_english/diligence

Dion, Paul A., Debbie Easterling, and Raj Javalgi (1997), "Women in the Business-to-Business Salesforce: Some Differences in Performance Factors," *Industrial Marketing Management*, 26, 5 (September), 447-457.

Dove, Rick (2005), "Fundamental Principles for Agile Systems Engineering," Conference on *Systems Engineering Research (CSER),* Stevens Institute of Technology, Hoboken, NJ, March 2005.

_____ (2001), *Response Ability: The Language, Structure, and Culture of the Agile Enterprise,* New York: Wiley.

_____ (1999), "Knowledge Management, Response Ability, and the Agile Enterprise," *Journal of Knowledge Management,* 3 (1), 18-35.

_____, Sue Hartman, and Steve Benson (1996), "An Agile Enterprise Reference Model, With a Case Study of Remmele Engineering," *Agility Forum*, Bethlehem, PA.

_____, (1995), "Agile Cells and Agile Production," *Automotive Production,* 10, 16-18

_____, (1994), "The Meaning of Life and the Meaning of Agile," *Production Magazine*, Gardner Publications, 11, 23-26.

D'Souza, Derrick E., and Fredrik P. Williams (2000), "Toward a taxonomy of manufacturing flexibility dimensions", *Journal of Operations Management*, 18 (5), 577-593.

Dubin, R. 1978. *Theory Building*, Second ed. Free Press, New York.

Dunford, Richard, Suresh Cuganesan, David Grant, Ian Palmer, Rosie Beaumont, and Cara Steele (2013), "Flexibility" as the rationale for organizational change: a discourse perspective." *Journal of Organizational Change Management*, 26 (1), 83-97.

Dunlap, Bobbye J., Michael J. Dotson, and Terry M. Chambers (1988), "Perceptions of real-estate brokers and buyers: A sales-orientation, customer-orientation approach," *Journal of Business Research* 17 (2), 175-187.

Dyer, Lee, and Richard A. Shafer (2003), Dynamic Organizations: Achieving Marketplace and Organizational Agility with People, In R. S. Peterson & E. A. Mannix (Eds.), Leading and Managing People in the Dynamic Organization. Mahwah, NJ: Laurence Erlbaum Associates.

_____ and _____ (1999), "Creating organizational agility: implications for strategic human resource management." Research in *Personnel and Human Resource Management*, 4, 145-174.

Eisenberger, Robert, Peter Fasolo, and Valerie Davis-LaMastro (1990), "Perceived organizational support and employee diligence, commitment, and innovation," *Journal of applied psychology*, 75 (1), 51-59.

Eppler, Dianne B., Earl D. Honeycutt, John B. Ford, and Edward P. Markowski (1998), "The relationship of self-monitoring and adaptiveness to the performance of real estate sales professionals," *The Journal of Business and Economic Studies* 4, 2 (Fall), 37-51.

Evans, J. Stuart (1991), "Strategic flexibility for high technology manoeuvres: a conceptual framework." *Journal of management studies*, 28 (1), 69-89.

Fang, Eric, Robert W. Palmatier, and Kenneth R. Evans (2004), "Goal-Setting Paradoxes? Trade-Offs Between Working Hard and Working Smart: The United States Versus China," *Journal of the Academy of Marketing Science,* 32 (Spring), 188–202.

Fayezi, Sajad, Ambika Zutshi, and Andrew O'Laughlin (2016), "Understanding and Development of Supply Chain Agility and Flexibility: A Structured Review," *International Journal of Management Reviews*, 00, 1-30.

_____, Ambika Zutshi, and Andrew O'Laughlin (2015), "How Australian Firms Perceive and Understand the Concepts of Agility and Flexibility in the Supply Chain," *Supply Chain Management: An International Journal*, 35, 248-281.

Fliender, Gene, and Vokurka, Robert J. (1997), "Agility: the next competitive weapon," *APICS. The Performance Advantage*, 7 (1), 565-590.

Flynn, Barbara B., Baofeng Huo, and Xiande Zhao (2010), "The impact of supply chain integration on performance: A contingency and configuration approach," *Journal of operations management*, 28 (1), 58-71.

Forsythe, Chris (1997), "Human factors in agile manufacturing: a brief overview with emphasis on communications and information infrastructure." *Human Factors and Ergonomics in Manufacturing & Service Industries*, 7 (1), 3-10.

Fournier, Christophe, William A. Weeks, Christopher P. Blocker, and Lawrence B. Chonko (2013), "Polychronicity and scheduling's role in reducing role stress and enhancing sales performance" *Journal of Personal Selling & Sales Management*, 33 (2), 197-209.

Franke, George R., and Jeong-Eun Park (2006), "Salesperson adaptive selling behavior and customer orientation: a meta-analysis," *Journal of Marketing Research*, 43 (4), 693-702.

Garvin, David A. (1993), "Manufacturing strategic planning," *California Management Review*, 35 (4), 85-106.

Gehani, R. Ray (1995), "Time-based management of technology: a taxonomic integration of tactical and strategic roles." *International Journal of Operations & Production Management*, 15 (2), 19-35.

Gerwin, Donald (1993), "Manufacturing flexibility – a strategic perspective", *Management Science*, 39 (4), 395-409.
_____ (1987), "An agenda for research on the flexibility of manufacturing processes", *International Journal of Operations & Production Management*, 7 (1), 38-49.

Giachetti, Ronald E., Luis D. Martinez, Oscar A. Sáenz, and Chin-Sheng Chen (2003), "Analysis of the structural measures of flexibility and agility using a measurement theoretical framework." *International journal of production economics*, 86 (1), 47-62.

Giacobbe, Ralph W., Donald W. Jackson Jr, Lawrence A. Crosby, and Claudia M. Bridges (2006), "A contingency approach to adaptive selling behavior and sales performance: Selling situations and salesperson characteristics," *Journal of Personal Selling & Sales Management*, 26 (2), 115-142.

Gligor, David M., and Mary C. Holcomb (2012), "Antecedents and Consequences of Supply Chain Agility: Establishing the Link to Firm Performance." *Journal of Business Logistics*, 33 (4), 295-308.

Global Logistics Research Team (1995), Michigan State University. "World class logistics: the challenge of managing continuous change." *Council of Logistics Management, Oak Brook, IL*, 183-215.

Goad, Emily A. (2014), *The Impact of Salesperson Listening: A Multi-faceted Research Approach* (Doctoral dissertation), Retrieved from http://hdl.handle.net/10106/24469.

Goff, Brent G., James S. Boles, Danny N. Bellenger, and Carrie Stojack (1997), "The influence of salesperson selling behaviors on customer satisfaction with products," *Journal of retailing*, 73 (2), 171-183.

Goldman, Steven L., Roger N. Nagel, and Kenneth Preiss (1995), "Agile Competitors and Virtual Organizations: Strategies for Enriching the Customer", Van Nostrand Reinhold: New York.

_____, and Roger N. NageL (1993), "Management, Technology and Agility: The Emergence of a New Era in Manufacturing." *International Journal of Technology Management*, 8 (1-2), 18-38.

_____, Kenneth Preiss, Roger N. Nagel, and Rick Dove (1991), *21st Century Manufacturing Enterprise Strategy: An Industry-Led View*, Iacocca Institute, Lehigh University, Bethlehem, PA, 2, 1-106.

Golden, W. and Powell, P. (2000), “Towards a definition of flexibility: in search of the Holy Grail?,” *Omega*, 28, 373–384.

Goolsby, Jerry R., Rosemary R. Lagace, and Michael L. Boorom (1992), "Psychological Adaptiveness and Sales Performance," *Journal of Personal Selling & Sales Management*, 12, 2 (Spring), 51-66.

Grant, Ken, and David W. Cravens (1996), "Examining sales force performance in organizations that use behavior-based sales management processes, " *Industrial Marketing Management*, 25 (5), 361-371.

Grawe, Scott J. (2009), "Logistics innovation: a literature-based conceptual framework." *The International Journal of Logistics Management*, 20 (3), 360-377.

Grewal, Dhruv, and Arun Sharma (1991), "The effect of salesforce behavior on customer satisfaction: an interactive framework." *Journal of Personal Selling & Sales Management*, 11 (3), 13-23.

Griffin, B., & Hesketh, B. (2003), “Adaptable behaviours for successful work and career adjustment,” *Australian Journal of Psychology*, 55(2), 65-73.

Grikscheit, Gary M. 1971. “*An Investigation of the Ability of Salesmen to Monitor Feedback*.” Ph.D. dissertation, Michigan State University.

Grisaffe, Douglas B., Rebecca VanMeter, and Lawrence B. Chonko (2016), "Serving first for the benefit of others: preliminary evidence for a hierarchical conceptualization of servant leadership," *Journal of Personal Selling & Sales Management*, 36 (1), 40-58.

Guenzi, P., Pardo, C., & Georges, L. (2007). Relational selling strategy and key account managers' relational behaviors: An exploratory study. *Industrial Marketing Management*, 36(1), 121−133.

Gunasekaran, Angappa, and Y. Y. Yusuf (2002), "Agile manufacturing: a taxonomy of strategic and technological imperatives," *International Journal of Production Research*, 40 (6), 1357-1385.

_____ (1999), “Agile manufacturing: A framework for Research and Development,” *International Journal of Production Economics*, 62 (1), 87-105.

Gupta, Yash P., and Toni M. Somers (1992), "The measurement of manufacturing flexibility," *European Journal of Operational Research*, 60 (2), 166-182.

_____, and Sameer Goyal (1989), “Flexibility of manufacturing systems: concepts and measurements”, *European Journal of Operational Research*, 43 (2), 119-135.

Gutman, R., and Robert Graves (19950, "The agile manufacturing enterprise-both a new paradigm and a logical extension of flexible and lean," *EAMRI Report ER95-10, Rensselaer Polytechnic Institute, Troy, NY*.

Gwinner, Kevin P., Mary Jo Bitner, Stephen W. Brown, and Ajith Kumar (2005), "Service customization through employee adaptiveness," *Journal of Service Research*, 8 (2), 131-148.

Hair, Joseph F. (2010), *Multivariate data analysis*, Pearson College Division.

Hakuta (Ed.), *Child development and education in Japan,* New York: Freeman, 262-272.

Hart, Albert Gailord (1937), "Anticipations, business planning, and the cycle." *The Quarterly Journal of Economics*, 51, 2 (February), 273-297.

Hatano, Giyoo, and Kayoko Inagaki (1986), *Two courses of expertise*, In H.A.H. Stevenson & K.

Harrison, Richard T., and Claire M. Leitch (2005), "Entrepreneurial learning: researching the interface between learning and the entrepreneurial context," *Entrepreneurship Theory and Practice*, 29 (4), 351-371.

Harvey, Craig M., R. J. Koubek, and L. Chin (1999), "Toward a model of workforce agility." *International Journal of Agile Manufacturing*, 2 (2), 203-218.

Hayes, Robert H., and Steven C. (1984), *Restoring Our Competitive Edge: competing through manufacturing*, Wiley, New York, NY.

Hayes, Steven C. (2012), "Humanistic psychology and contextual behavioral perspectives," *Psychotherapy* 49 (4), 455-460.

Hill, Terry, and Stuart Chambers (1991), "Flexibility-A manufacturing conundrum," *International Journal of Operations & Production Management*, 11 (2), 5-13.

Holsapple, Clyde, and Kiku Jones, "Exploring Secondary Activities of the Knowledge Chain," *Knowledge and Process Management*, 12 (1), 3.

Holweg, Matthias, and Frits K. Pil (2005), "Flexibility first: keeping the automotive supply chain responsive through build-to-order." *Industrial Engineer*, 37 (6), 46-52.

Holyoak, Keith J. (1991), "12 Symbolic connectionism: toward third-generation theories of expertise." *Toward a general theory of expertise: Prospects and limits*, 301.

Hopp, Wallace J., Eylem Tekin, and Mark P. Van Oyen (2004), "Benefits of skill chaining in serial production lines with cross-trained workers." *Management Science*, 50 (1), 83-98.

_____, and Mark P. Oyen (2004), "Agile workforce evaluation: a framework for cross-training and coordination," *IIE Transactions*, 36 (10), 919-940.

Hormozi, Amir M (2001), "Agile manufacturing: the next logical step." *Benchmarking: An International Journal*, 8 (2), 132-143.

Hosein, Zare Zardeini, and Ahmad Yousefi (2012), "The Role of Emotional Intelligence on Workforce Agility in the Workplace." *International Journal of Psychological Studies*, 4 (3), 48-61.

Huang, Chun-Che (1999), "An agile Approach to Logical Network Analysis in Decision Support Systems." *Decision Support Systems* 25 (1), 53-70.

Huumonen, Juha (2010), "Conceptualizing agility of enterprises," *Human Factors and Ergonomics in Manufacturing & Service Industries*, 21 (2), 132-146.

Hunt, Joseph M. (1965), "Intrinsic motivation and its role in psychological development." In *Nebraska symposium on motivation*, 13, 189-282.

Hurley, Robert F., and G. Tomas M. Hult (1998), "Innovation, market orientation, and organizational learning: an integration and empirical examination," *Journal of Marketing*, 62 (3), 42-54.

Hyun, J. and Ahn, B.H. (1992), "A unifying framework for manufacturing flexibility", *Manufacturing Review*, 5 (4), 251-260.

Iacocca lnstitute. (1991), *21st Century Manufacturing Enterprise Strategy*. Unpublished Manuscript, Bethlehem, PA.

Jack, Eric P., and Amitabh Raturi (2002), "Sources of volume flexibility and their impact on performance", *Journal of Operations Management*, 20 (5), 519-548.

James-Moore, S. M. R. (1997), "Agility is easy, but effective agile manufacturing is not." In *Agile Manufacturing* (Digest No. 1997/386), IEE Colloquium on IET, 4-1.

Jaramillo, Fernando, Jay P. Mulki, Vincent Onyemah, and Martha R. Pesquera (2012), "Salesperson resistance to change: an empirical investigation of antecedents and outcomes," *International Journal of Bank Marketing*, 30 (7), 548-566.

_____, Douglas B. Grisaffe, Lawrence B. Chonko, and James A. Roberts (2009), "Examining the impact of servant leadership on salesperson's turnover intention." *Journal of Personal Selling & Sales Management*, 29 (4), 351-365.

_____, William B. Locander, Paul E. Spector, and Eric G. Harris (2007), "Getting the job done: The moderating role of initiative on the relationship between intrinsic motivation and adaptive selling," *Journal of Personal Selling & Sales Management*, 27 (1), 59-74.

Jarvis, Cheryl Burke, Scott B. MacKenzie, and Philip M. Podsakoff (2003), "A critical review of construct indicators and measurement model misspecification in marketing and consumer research," *Journal of consumer research*, 30 (2), 199-218.

Jin-Hai, Li, Alistair R. Anderson, and Richard T. Harrison (2003), "The evolution of agile manufacturing," *Business Process Management Journal*, 9 (2), 170-189.

Johnston, Mark W., and Greg W. Marshall (2016), *Sales force management: Leadership, innovation, technology*. Routledge.

Johnston, Robert (1997), "Identifying the critical determinants of service quality in retail banking: importance and effect." *International Journal of bank marketing*, 15 (4), 111-116.

Jones, Eli, Steven P. Brown, Andris A. Zoltners, and Barton A. Weitz (2005), "The Changing Environment of Selling and Sales Management." *Journal of Personal Selling & Sales Management*, 25 (2), 105- 111.

———, Larry Chonko, Fern Jones, and Carl Stevens (2005), *Selling ASAP: Art, Science, Agility, Performance*, Louisiana State University Press: Baton Rouge.

Joroff, Michael L., William L. Porter, Barbara Feinberg, and Chuck Kukla (2003), "The agile workplace." *Journal of Corporate Real Estate*, 5 (4), 293-311.

Judge, Timothy A., Carl J. Thoresen, Joyce E. Bono, and Gregory K. Patton (2001), "The job satisfaction–job performance relationship: A qualitative and quantitative review." *Psychological bulletin*, 127 (3): 376-407.

Kassim, Norizan M., and Mohamed Zain (2004), "Assessing the measurement of Organizational Agility," *The Journal of American Academy of Business*, 4(1), 174-177.

Karuppan, C.M. and Kepes, S. (2006), "The strategic pursuit of mix flexibility through operators' involvement in decision making", *International Journal of Operations & Production Management*, 26 (9), 1039-64.

Katayama, Hiroshi, and David Bennett (1999), "Agility, Adaptability and Leanness: A Comparison of Concepts and a Study of Practice." *International Journal of Production Economics* 60, 43-51.

Kathuria, R., & Partovi, F. Y. (1999), "Work force management practices for manufacturing flexibility," *Journal of Operations Management*, 18(1), 21-39.

Keaveney, Susan M. (1992), "An empirical investigation of dysfunctional organizational turnover among chain and non-chain retail store buyers." *Journal of Retailing*, 68 (2), 145.

Keillor, Bruce D., R. Stephen Parker, and Charles E. Pettijohn (2000), “Relationship-Oriented Characteristics and Individual Salesperson Performance,” *Journal of Business & Industrial Marketing,* 15 (1), 7–22.

Kidd, P. T. (1994), *Agile Manufacturing: Forging New Frontiers*. Reading, MA: Addison-Wesley.

Kohli, Ajay K., and Bernard J. Jaworski (1990), "Market orientation: the construct, research propositions, and managerial implications," *Journal of Marketing*, 54 (2), 1-18.

Kuhn, Thomas S. (1962), “The structure of scientific revolutions,” *International Encyclopedia of Unified Science*, II (2).

Kumar, Ashok, and Jaideep Motwani (1995), "A Methodology for Assessing Time-Based Competitive Advantage of Manufacturing Firms," *International Journal of Operations & Production Management*, 15 (2), 36-53.

Lange, Oskar (1944), *Price flexibility and employment*. Bloomington: Principia Press.

Langenderfer, Jeff, Steven W. Kopp, and Alla Akiyeva (2014), “Internet Panel Response Quality: An Online Replication of a Federal Trade Commission Deceptive Advertising Mall Intercept Study,” In *Proceedings of the Society for Marketing Advances Conference*, 27.

Levy, Michael, and Arun Sharma (1994), "Adaptive selling: the role of gender, age, sales experience, and education," *Journal of Business Research*, 31 (1), 39-47.

Li, Xun, Thomas J. Goldsby, and Clyde W. Holsapple. "Supply Chain Agility: Scale Development." *The International Journal of Logistics Management*, 20 (3), 408-424.

_____, Chen Chung, Thomas J. Goldsby, and Clyde W. Holsapple (2008), "A Unified Model of Supply Chain Agility: The Work-Design Perspective." *The International Journal of Logistics Management* 19 (3), 408-435.

Liebowitz, Jay (2008), *Knowledge retention: strategies and solutions*. CRC Press.

Limbu, Yam B., C. Jayachandran, and Barry J. Babin (2014), "Does information and communication technology improve job satisfaction? The moderating role of sales technology orientation." *Industrial Marketing Management*, 43 (7), 1236-1245.

Lin, Ching-Torng, Hero Chiu, and Po-Young Chu (2006), "Agility Index in the Supply Chain," *International Journal of Production Economics*, 100 (2), 285-299.

Locander, David A., Jay P. Mulki, and Frankie J. Weinberg (2014), "How do salespeople make decisions? The role of emotions and deliberation on adaptive selling, and the moderating role of intuition," *Psychology & Marketing*, 31 (6), 387-403.

Locke, Edwin A. (1976), "The nature and causes of job satisfaction." *Handbook of industrial and organizational psychology*, 1, 1297-1343.

Loe, Terry Wayne (1996), "*The role of ethical climate in developing trust, market orientation, and commitment to quality*," Ph.D. Dissertation, University of Memphis.

Maindal, Helle Terkildsen, Ineta Sokolowski, and Peter Vedsted (2012), "Adaptation, data quality and confirmatory factor analysis of the Danish version of the PACIC questionnaire," *The European Journal of Public Health*, 22 (1), 31-36.

Maki, William S., and Erin Buchanan (2008), "Latent structure in measures of associative, semantic, and thematic knowledge." *Psychonomic Bulletin & Review*, 15 (3), 598-603.

Mandelbaum, Marvin (1978), "*Flexibility in decision making: an exploration and unification*." PhD dissertation, University of Toronto.

Marks, Ronald, and Gordon J. Badovick (1997), "The Relation-ship Between Adaptive Selling, Task-Related Sales Behavior and Commitment to Performance -Some Promising Results," *Developments In Marketing Science*, Elizabeth J. Wilson and Joseph F. Hair, eds., Coral Gables, FL: Academy of Marketing Science, 78-184.

_____, Douglas W. Vorhies, and Gordon J. Badovick (1996), "Methods in Sales Research: A Psychometric Evaluation of the ADAPTS Scale: A Critique and Recommendations," *Journal of Personal Selling & Sales Management* 16 (4), 53-65.

Mason, Winter A., and Siddharth Suri (2011), "How to use mechanical turk for cognitive science research." In *Proceedings of the 33rd annual conference of the cognitive science society*, 66-67.

Mathiyakalan, Sathasivam, Noushin Ashrafi, Wei Zhang, Frenck Waage, Jean-pierre Kuilboer, and David Heimann (2005), "Defining business agility: an exploratory study." In Proceedings of the *16th Information Resources Management Conference*, San Diego, CA, 15-18.

McCann, Joseph E., and John Selsky (2003), "Strategically Managing Organization Boundaries: Moving from Fragility to Resiliency," *MIT Sloan Management Review*.

McFarland, Richard G., Goutam N. Challagalla, and Tasadduq A. Shervani (2006), "Influence tactics for effective adaptive selling." *Journal of Marketing*, 70 (4), 103-117.

Menor, Larry J., Aleda V. Roth, and Charlotte H. Mason (2001), "Agility in Retail Banking: A numerical Taxonomy of Strategic Service Groups," *Manufacturing & Service Operations Management*, 3 (4), 273-292.

Meredith, Sandra, and David Francis (2000), "Journey towards agility: the agile wheel explored," *The TQM Magazine*, 12, 2, 137-143.

Miao, C. Fred, and Kenneth R. Evans (2013), "The Interactive Effects of Sales Control Systems on Salesperson Performance: A Job Demands–Resources Perspective," *Journal of the Academy of Marketing Science*, 41 (1), 73-90.

Mishra, Ruchi, Ashok K. Pundir, and L. Ganapathy (2014), "Manufacturing flexibility research: A review of literature and agenda for future research." *Global Journal of Flexible Systems Management*, 15 (2), 101-112.

Moon, Hwy-Chang (2014), "The ABCD Framework of K-Strategy - The Secret to Korea's Success," 1-48.

Morgan, Robert E. (2004), "Business Agility and Internal Marketing," *European Business Review*, 16 (5), 464-472.

Muduli, Ashutosh (2013), "Workforce Agility: A Review of Literature." *IUP Journal of Management Research*, 12 (3), 55-65.

Nagarur, Nagen (1992), "Some performance measures of flexible manufacturing systems." *International Journal of Production Research*, 30 (4), 799-809.

Nagel, Roger N., and Rick Dove. *21st century manufacturing enterprise strategy: An industry-led view*. Diane Publishing, 1991.

Narain, Rakesh, R. C. Yadav, Joseph Sarkis, and James J. Cordeiro (2000), "The strategic implications of flexibility in manufacturing systems." *International Journal of Agile Management Systems*, 2 (3), 202-213.

Narasimhan, Ram, and Ajay Das (2000), "An empirical examination of sourcing's role in developing manufacturing flexibilities", *International Journal of Production Research*, 38 (4), 875-93.

_____, and _____ (1999), "Manufacturing Agility and Supply Chain Management Practices." *Production and Inventory Management Journal*, 40 (1), 4-10.

Narver, John C., and Stanley F. Slater (1990), "The effect of a market orientation on business profitability." *Journal of marketing*, 54 (4), 20-35.

Naylor, Ben J., Mohamed M. Naim, and Danny Berry (1999), "Leagility: Integrating the Lean and Agile Manufacturing Paradigms in the Total Supply Chain," *International Journal of Production Economics*, 62 (1), 107-118.

Naylor, James C., Robert D. Pritchard, Daniel R. Ilgen (1980). *A Theory of Behavior in Organizations*, New York: Academic Press.

Nelson, Adam, and Francis A. Harvey (1995), "Technologies for Training and Supporting Your Agile Workforce," In Creating the Agile Organization: Models, Metrics and Pilots, Proceedings of the *4th Agility Forum Annual Conference*, Agility Forum, Bethlehem, PA.

Newman, W.R., Hanna, M., Maffei, M.J. (1993), "Dealing with the uncertainties of manufacturing: Flexibility, buffers and integration," *International Journal of Operations and Production Management*, 13 (1), 19-34.

Nunnally, Jum C., and I. H. Bernstein (1994), "The assessment of reliability." *Psychometric theory*, 3 (1), 248-292.

Oke, Adegoke (2005), "A framework for analyzing manufacturing flexibility", International *Journal of Operations & Production Management*, 25 (10), 973-996.

Oleson, John D. (1998), *Pathways to Agility: Mass Customization in Action*, New York: John Wiley and Sons, Inc.

Oliver, Richard L., and John E. Swan (1989), "Equity and disconfirmation perceptions as influences on merchant and product satisfaction." *Journal of consumer research*, 16 (3), 372-383.

_____ (1974), "Expectancy theory predictions of salesmen's performance." *Journal of Marketing Research*, 11 (3), 243-253.

Overby, Eric, Anandhi Bharadwaj, and Vallabh Sambamurthy (2006), "Enterprise Agility and the Enabling Role of Information Technology," *European Journal of Information Systems*, 15 (2), 120-131.

Parasuraman, Arun, Valarie A. Zeithaml, and Leonard L. Berry. "Servqual." *Journal of Retailing*, 64 (1), 12-40.

Park, Jeong-Eun, & Deitz, G. D. (2006). The effect of working relationship quality on salesperson performance and job satisfaction: adaptive selling behavior in Korean automobile sales representatives. *Journal of Business Research*, 59(2), 204−213.

_____, and Betsy B. Holloway (2003), "Adaptive Selling Behavior Revisited: An Empirical Examination of Learning Orientation, Sales Performance, and Job Satisfaction," *Journal of Personal Selling & Sales Management,* 23 (3), 239–251.

Pedhazur, Elazar J. (1982), "Multiple regression and behavioral science." *Explanation and Prediction*, 2.

Pettijohn, Charles E., Linda S. Pettijoh, AJ. Taylor, and Bruce D. Keillor (2000), "Adaptive Selling and Sales Performance: An Empirical Examination," *Journal of Applied Business Research*, 16 (Winter), 91-111.

Piercy, Nigel F., David W. Cravens, and Neil A. Morgan (1998), "Salesforce performance and behavior-based management processes in business-to-business sales organizations." *European Journal of Marketing*, 32 (½), 79-100.

Pinochet, A., Matsubara, Y., & Nagamachi, M. (1996), "Construction of a knowledge based system for diagnosing the sociotechnical integration in advanced manufacturing technologies," *The International Journal of Human Factors in Manufacturing*, 6(4), 323-349.

Plonka, Francis E. (1997), "Developing a Lean and Agile Work Force," *Human Factors and Ergonomics in Manufacturing*, 7(1), 11-20.

Plouffe, Christopher R., John Hulland, and Trent Wachner (2009), "Customer-directed selling behaviors and performance: a comparison of existing perspectives," *Journal of the Academy of Marketing Science* 37 (4), 422-439.

Porter, Stephen S., Joshua L. Wiener, and Gary L. Frankwick (2003), "The Moderating Effect of Selling Situation on the Adaptive Selling Strategy–Selling Effectiveness Relationship," *Journal of Business Research,* 56 (4), 275–281.

_____, and Lawrence W. Inks (2000), "Cognitive Complexity and Salesperson Adaptability: An Exploratory Investigation," *Journal of Personal Selling & Sales Management*, 20, 1 (Winter), 15-21.

Predmore, Carolyn E., and Joseph G. Bonnice (1994), "Sales Success as Predicted By a Process Measure of Adaptability," *Journal of Personal Selling & Sales Management*, 14, 4 (Fall), 55-66.

Preiss, Kevin (1997), "A Systems Perspective of Lean and Agile Manufacturing," *Agility and Global Competition,* 1 (1), 57–72.

Preiss, Kenneth, Steven L. Goldman, Roger N. Nagel (1996), Cooperate to Compete: Building Agile Business Relationships, Van Nostrand Reinhold, New York.

Pulakos, E. D., Arad, S., Donovan, M. A., & Plamondon, K. E. (2000), "Adaptability in the workplace: Development of a taxonomy of adaptive performance," *Journal of Applied Psychology*, 85(4), 612-624.

Pullins, Ellen Bolman (2001), "An exploratory investigation of the relationship of sales force compensation and intrinsic motivation," *Industrial Marketing Management*, 30 (5), 403-413.

Qin, Ruwen, and David A. Nembhard (2015), "Workforce agility in operations management." *Surveys in Operations Research and Management Science*, 20 (2), 55-69.

Quinn, Roger D., Greg C. Causey, Frank L. Merat, David M. Sargent, Nick A. Barendt, Wyatt S. Newman, Virgilio B. Velasco Jr et al. (1997), “An Agile Manufacturing Work Cell Design,” *IIE transactions*, 29 (10), 901-909.

Ramesesh, R.V. and Maliyakal, D.J. (1991), “Measurement of manufacturing flexibility: a value based approach”, *Journal of Operations Management*, 10 (4), 446-68.

Rapp, Adam, Raj Agnihotri, and Lukas P. Forbes (2008), "The Sales Force Technology–Performance Chain: The Role of Adaptive Selling and Effort," *Journal of Personal Selling & Sales Management*, 28 (4), 335-350.

_____, Michael Ahearne, John Mathieu, and Niels Schillewaert (2006), "The Impact of Knowledge and Empowerment on Working Smart and Working Hard: The Moderating Role of Experience," *International Journal of Research in Marketing*, 23 (3), 279-293.

Raschke, R., David, J.S. (2005), “Business process agility,” In: Proceedings of the 11th Americas Conference on *Information Systems*, Omaha, NE, August, 355–360.

Reed, Ken, and Betsy Blunsdon (1998), "Organizational flexibility in Australia." *International Journal of Human Resource Management*, 9 (3), 457-477.

Reid, R. Leigh, K. J. Rogers, Mary E. Johnson, and Donald H. Liles (1996), "Engineering the virtual enterprise." *Automation & Robotics Research Institute*, 485-490.

Reix, R. (1979), *La flexibilité de l’entreprise*, Paris: Editions Cujas.

Ren, J., Y. Y. Yusuf, and N. D. Burns (2000) "A prototype of measurement system for agile enterprise." In *The Third International Conference of Quality Reliability Maintenance*, 29-30.

Richards, Chester W. (1996), "Agile Manufacturing: Beyond Lean?," *Production and Inventory Management Journal*, 37 (2), 60-64.

Rigby, Darrell K., Jeff Sutherland, and Hirotaka Takeuchi (2016), "Embracing Agile." *Harvard Business Review*, 50 (May), 40-50.

Robinson Jr, Leroy, Greg W. Marshall, & S Miriam B. Stamps (2005), “An Empirical investigation of technology acceptance in a field sales force setting,” *Industrial Marketing Management*, 34(4), 407−415.

_____, _____, William C. Moncrief, and Felicia G. Lassk (2002), "Toward a shortened measure of adaptive selling." *Journal of Personal Selling & Sales Management*, 22 (2), 111-118.

Román, Sergio, and Dawn Iacobucci (2010), "Antecedents and Consequences of Adaptive Selling Confidence and Behavior: A Dyadic Analysis of Salespeople and Their Customers," *Journal of the Academy of Marketing Science*, 38 (3), 363-382.

Ryan, Richard M., and Edward L. Deci (2000a), "Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being." *American psychologist*, 55 (1), 68-78.

Ryan, Richard M., and Edward L. Deci (2000b), "Intrinsic and extrinsic motivations: Classic definitions and new directions," *Contemporary educational psychology*, 25 (1), 54-67.

Sager, J.K., H.D. Strutton, and D.A. Johnson (2006), "Core Self-Evaluations and Salespeople," *Psychology & Marketing,* 23 (February), 95–113.

Sahin, Funda (2000), "Manufacturing competitiveness: Different systems to achieve the same results." *Production and Inventory Management Journal*, 41 (1), 56.

Sambamurthy, Vallabh, Anandhi Bharadwaj, and Varun Grover (2003), "Shaping Agility through Digital Options: Reconceptualizing the role of Information Technology in Contemporary Firms," *MIS Quarterly*, 27, 2 (June), 237-263.

Sanchez, Luis M., and Rakesh Nagi, (2001), "A Review of Agile Manufacturing Systems." *International Journal of Production Research*, 39 (16), 3561-3600.

Saxe, Robert, and Barton A. Weitz (1982), "The SOCO scale: A measure of the customer orientation of salespeople," *Journal of marketing research*, 19 (3), 343-351.

Schulz, Armin P., and Ernst Fricke (1999), "Incorporating flexibility, agility, robustness, and adaptability within the design of integrated systems-key to success?," In *Digital Avionics Systems Conference, 1999. Proceedings. 18th*, 1 (1-A), IEEE.

Sethi, Andrea Krasa, and Suresh Pal Sethi (1990), "Flexibility in manufacturing: a survey." *International journal of flexible manufacturing systems*, 2 (4), 289-328.

Siguaw, Judy A., and Earl D. Honeycutt (1995), "An examination of gender differences in selling behaviors and job attitudes," *Industrial Marketing Management*, 24 (1), 45-52.

_____ (1993), "An Examination of Adaptive Selling Antecedents and Outcomes," in *Developments of Marketing Science: Proceedings of the Annual Conference of the Academy of Marketing Science,* vol. 16, Michael Levy and Dhrvu Grewal, eds., Miami: Academy of Marketing Science.

Shaarabh, Murarka, Gupta Rishi, and S. K. Sharma (2014), "A review on measurement of agility." *Industrial Engineering & Management*, 3 (1), 1-4.

Shafer, Richard Allen (1997), *Creating organizational agility: The human resource dimension* (Doctoral dissertation, Cornell University).

Sharifi, Hossein, G. Colquhoun, I. Barclay, and Z. Dann (2001), "Agile manufacturing: A management and operational framework. *Journal of Engineering Manufacture*, 215 (6), 857- 869.

_____, and Z. Zhang (2001), "Agile Manufacturing in Practice-Application of a Methodology," *International Journal of Operations & Production Management*, 21 (5/6), 772-794.

Sharp, J. M., Zahir Irani, and S. Desai (1999), "Working towards agile manufacturing in the UK industry," *International Journal of production economics*, 62 (1), 155-169.

Sherehiy, Bohdana, and Waldemar Karwowski (2014), "The relationship between work organization and workforce agility in small manufacturing enterprises," *International Journal of Industrial Ergonomics*, 44 (3), 466-473.

_____ (2008), *Relationships between Agility Strategy, Work organization and Workforce Agility*, ProQuest.

_____, Waldemar Karwowski, and John K. Layer (2007), "A Review of Enterprise Agility: Concepts, Frameworks, and Attributes," *International Journal of industrial Ergonomics*, 37 (5), 445-460.

Sheridan, John H. (1996), "Where's the Agility Game Plan?," Industry Week, 245(14), 14.

Shoemaker, Mary E., and Mark C. Johlke (2002), "An examination of the antecedents of a crucial selling skill: asking questions," *Journal of Managerial Issues*, 14, 1 (Spring), 118-131.

Sinkula, James M., William E. Baker, and Thomas Noordewier (1997), "A framework for market-based organizational learning: Linking values, knowledge, and behavior," *Journal of the academy of Marketing Science*, 25 (4), 305-318.

Slack, Nigel (1991), *The Manufacturing Advantage: achieving competitive manufacturing operations*, Mercury Books, London.

Slater, Stanley F., and John C. Narver (1995), "Market orientation and the learning organization," *Journal of marketing*, 59 (363-74.

Small, M. H., and I. J. Chen (1997), "Organizational development and time-based flexibility: an empirical analysis of AMT adoptions," *International journal of production research*, 35 (11), 3005-3022.

Spiro, Rosann L., and Barton A. Weitz (1990), "Adaptive selling: Conceptualization, measurement, and nomological validity," *Journal of marketing Research*, 27, 1 (February), 61-69.

Stan, Simona, Kenneth R. Evans, Todd J. Arnold, and Gregory T. McAmis (2012), "The Moderating influence of organizational support on the development of salesperson job performance: can an organization provide too much support?," *Journal of Personal Selling & Sales Management*, 32 (4), 405-419.

Stevenson, M. and Spring, M. (2007), "Flexibility from a supply chain perspective: definition and review," *International Journal of Operations & Production Management*, 27 (7), 685-713.

Stigler, George (1939), "Production and distribution in the short run," *The Journal of Political Economy*, 47 (3), 305-327.

Sujan, Harish, Barton A. Weitz, and Nirmalya Kumar (1994), "Learning Orientation, Working Smart, and Effective Selling," *Journal of Marketing*, 58 (July), 39-52.

———, ———, and Mita Sujan (1988), "Increasing Sales Productivity by Getting Salespeople to Work Smarter*," Journal of Personal Selling & Sales Management,* 8 (2), 9–20.

Sumukadas, Narendar, and Rajeev Sawhney (2004), "Workforce agility through employee involvement." *IIE Transactions*, 36 (10), 1011-1021.

Swafford, Patricia M., Ghosh, S. and Murthy, N. (2006), "The Antecedents of Supply Chain Agility of a Firm: Scale Development and Model Testing", *Journal of Operations Management*, 24 (2), 170-88.

Swamidass, Paul M., and William T. Newell (1987), "Manufacturing strategy, environmental uncertainty and performance: a path analytic model." *Management science*, 33 (4), 509-524.

Szymanski, David M. (1988), "Determinants of selling effectiveness: the importance of declarative knowledge to the personal selling concept," *Journal of Marketing*, 52, 1 (January), 64-77.

Tanner, John F. (1994), "Adaptive Selling at Trade Shows," *Journal of Personal Selling & Sales Management*, 14, 2 (Spring), 15-23.

Tavakol, Mohsen, and Reg Dennick (2011), "Making sense of Cronbach's alpha." *International journal of medical education*, 2, 53-55.

Tombak, Mihkel, and Arnoud De Meyer (1988), "Flexibility and FMS: an empirical analysis," *IEEE Transactions on Engineering Management*, 35 (2), 101-107.

Tsourveloudis, Nikos C., and Kimon P. Valavanis (2002), "On the measurement of enterprise agility," *Journal of Intelligent and Robotic Systems*, 33 (3), 329-342.

Upton, David M. (1997), “Process range in manufacturing: an empirical study of flexibility,” *Management Science*, 43 (8), 1079-93.

_____ (1995), “What really makes factories flexible?,” *Harvard Business Review*, 73 (4), 74-84.

_____ (1994), “The management of manufacturing flexibility”, *California Management Review*, 36 (2), 72.

Urtasun-Alonso, Ainhoa, Martin Larraza-Kintana, Carmen García-Olaverri & Emilio Huerta-Arribas (2014), “Manufacturing flexibility and advanced human resource management practices,” *Production Planning & Control*,” 25 (4), 303-317.

VandeWalle, Don, William L. Cron, and John W. Slocum Jr. (2001), "The role of goal orientation following performance feedback." *Journal of Applied Psychology*, 86 (4), 629-640.

Valenzuela, Leslier, Eduardo Torres, Pedro Hidalgo, and Pablo Farias (2014), "Salesperson CLV orientation's effect on performance," *Journal of Business Research* 67 (4), 550-557.

VanMeter, Rebecca, Lawrence B. Chonko, Douglas B. Grisaffe, and Emily A. Goad (2016), "In search of clarity on servant leadership: domain specification and reconceptualization," *AMS Review*, 6 (1), 59-78.

Van der Bij, Hans, X. Michael Song, and Mathieu Weggeman (2003), "An empirical investigation into the antecedents of knowledge dissemination at the strategic business unit level," *Journal of Product Innovation Management*, 20 (2), 163-179.

Van Hoek, Remko I., Alan Harrison, Martin Christopher (2001), "Measuring Agile Capabilities in the Supply Chain,” *International Journal of Operations & Production Management*, 21 (1/2), 126-148.

Van Hop, Nguyen (2004), "Approach to measure the mix response flexibility of manufacturing systems." *International journal of production research*, 42 (7), 1407-1418.

Van Oyen, Mark P., Esma GS Gel, and Wallace J. Hopp (2001), "Performance Opportunity for Workforce Agility in Collaborative and Noncollaborative Work Systems," *IIE Transactions*, 33 (9), 761-777.

Vazquez-Bustelo, Daniel, Lucía Avella, and Esteban Fernández (2007), "Agility Drivers, Enablers and Outcomes: Empirical Test of an Integrated Agile Manufacturing Model," *International Journal of Operations & Production Management*, 27 (12), 1303-1332.

Verbeke, Willem, Frank Belschak, and Richard P .Bagozzi (2004), "The Adaptive Consequences of Pride in Personal Selling," *Journal of the Academy of Marketing Science*, 32 (4), 386-402.

Vink, Japp, and Willem Verbeke (1993), "Adaptive Selling and Organizational Characteristics: Suggestions for Future Research," *Journal of Personal Selling& Sales Management*, 13, 1 (Winter), 15-23.

Vokurka, R.J. and Fliedner, G. (1998), "The journey toward agility", *Industrial Management & Data Systems*, 4, 165-171.

Vroom, V, H. (1962), "Ego-Involvement, Job Satisfaction, and Job Performance", *Personnel Psychology*, 15, 159-177.

Wadhawa, Sunil, and K. S. Rao. "Flexibility and Agility for Enterprise Synchronization: Knowledge and Innovation Management towards Flexibility," *Studies in Informatics and Control*, 12 (2), 111-128.

Wahab, M.I.M. (2005), "Measuring machine and product mix flexibilities of a manufacturing system", *International Journal of Production Research*, 43 (18), 3773-86.

Wang, Catherine L. (2008), "Entrepreneurial orientation, learning orientation, and firm performance." *Entrepreneurship theory and practice*, 32 (4), 635-657.

Weeks, William A., and Larry Chonko (2010), "Is Achieving Customer Satisfaction Enough?," *Keller Center Research Report*, Baylor University, 1-6.

Weick, Karl E. (1999), "Theory construction as disciplined reflexivity: Tradeoffs in the 90s," *Academy of Management Review*, 24 (4), 797-806.

Weilbaker, Dan C. (1990a), "The Identification of Selling Abilities Needed for Missionary Type Salespeople," *Journal of Personal Selling& Sales Management*, 10, 3 (Summer), 45-58.

Weitz, Barton A., Harish Sujan, and Mita Sujan (1986),"Knowledge, Motivation, and Adaptive Behavior: A Framework for Improving Selling Effectiveness," *Journal of Marketing*, 50 (October), 174-91.

_____ (1978), "Relationship between salesperson performance and understanding of customer decision making," *Journal of Marketing Research*, 15 (4), 501-516.

Wilder, Kelly M., Joel E. Collier, and Donald C. Barnes (2014), "Tailoring to customers' needs understanding how to promote an adaptive service experience with frontline employees," *Journal of Service Research*, 22 (July), 212-226.

Wright, Patrick M., and Scott A. Snell (1998), "Toward a unifying framework for exploring fit and flexibility in strategic human resource management." *Academy of management review*, 23 (4), 756-772.

Yang, Chyan, and Hsian-Ming Liu (2012), "Boosting Firm Performance via Enterprise Agility and Network Structure," *Management Decision*, 50 (6), 1022-1044.

Yang, S. L., and T. F. Li (2002), "Agility evaluation of mass customization product manufacturing." *Journal of Materials Processing Technology*, 129 (1), 640-644.

Yauch, Charlene A. (2011), "Measuring agility as a performance outcome." *Journal of Manufacturing Technology Management*, 22 (3), 384-404.

Youndt, M. A., Snell, S. A., Dean, J. W., & Lepak, D. P. (1996), "Human resource management, manufacturing strategy, and firm performance," *Academy of Management Review*, 39(A), 835-866.

Yusuf, Yahaya Y., and E. O. Adeleye (2002), "A comparative study of lean and agile manufacturing with a related survey of current practices in the UK." *International Journal of Production Research*, 40 (17), 4545-4562.

_____, Mansoor Sarhadi, and Angappa Gunasekaran (1999), "Agile Manufacturing: The Drivers, Concepts and Attributes," *International Journal of Production Economics*, 62 (1), 33-43.

Zain, Mohamed, Raduan Che Rose, Iskandar Abdullah, and Maslin Masrom (2005), "The Relationship between Information Technology Acceptance and Organizational Agility in Malaysia," *Information & Management*, 42 (6), 829-839.

Zelenovich, D. and Dragutin, M. (1982), "Flexibility – a condition for effective production systems", *International Journal of Production Research*, 20 (3), 319-337.

Zhang, Q., Vonderembse, M.A. and Cao, M. (2006), "Achieving flexible manufacturing competence", *International Journal of Operations & Production Management*, 26 (6), 580-99.

_____, _____, and Lim, J.S. (2003), "Manufacturing flexibility: defining and analyzing relationships among competence, capability and customer satisfaction", *Journal of Operations Management*, 21 (2), 173-91.

Zhang, Z., and Hossein Sharifi (2000), "A methodology for Achieving Agility in Manufacturing Organisations," *International Journal of Operations & Production Management*, 20 (4), 496-513.

Zsiflovits, H. E., and C. Engelhardt-Nowitzki (2007), "An analysis of frameworks for measuring supply chain agility." In *Agile Manufacturing, 2007. ICAM 2007. IET International Conference*, 87-95, IET.

Zumbo, Bruno D., and Eric KH Chan (2014), *Validity and validation in social, behavioral, and health sciences*. New York: Springer International Publishing.

APPENDICES

Appendix A: Workforce Agility Scale

Workforce Agility Scale (Sherehiy 2008)

Proactivity

1. I am able to predict the problems that might occur in my work
2. I am able to solve new and complex problems at work
3. I address difficulties in my tasks before they become major problems
4. I look for the opportunities to make improvements at work
5. When I see something that I don't like, I am trying to fix it
6. I am trying to find out more effective ways to perform my job
7. I design new procedures or processes for my work area
8. I let time take care of things that I have to do
9. At work, I stick to what I am told or required to do
10. I am trying to think "outside the box" in order to solve problems
11. I find new ways to obtain or utilize resources when resources are insufficient to do my job

Adaptability

How easy or difficult is it for you to handle the following situations?

1. Adapt my behavior to show respect for others' customs and values
2. Change my behavior to work more effectively with other people
3. Accept critical feedback
4. Communicate well with people of different backgrounds

How quickly or slowly do you learn new knowledge or skills needed in following situations?

5. Use new equipment at work
6. Keep up-to-date at work
7. Use new work methods
8. Perform new tasks at work

How easy or difficult is it for you to handle the following situations?

9. Adjust to the requirements of new equipment
10. Adjust to working with teams that have different customs
11. Work on multiple projects at the same time
12. Adjust to new work procedures
13. Have good relationships with people from different departments

How quickly or slowly do you adjust to following situations?

14. Switch from one project to another
15. Change your way of doing things to suit co-workers who have different ways of performing a job
16. Change plans when the necessary supplies or equipment are suddenly unavailable

Resilience

1. I am reluctant to accommodate and incorporate changes into my work
2. The changes at work frustrate me
3. I like to change old way of doing things
4. I am able to perform my job without knowing the total picture
5. I am tolerant to situations where things seems confusing
6. I am able to work out what to do when work instructions are unclear
7. I remain calm and composed when faced with difficult circumstances
8. I am able to perform my job efficiently in difficult or stressful situations
9. I am able to work well when faced with a demanding workload or schedule
10. When a difficult situation occurs, I complain about it
11. When a difficult situation occurs, I react by trying to manage the problem
12. I drop everything and take an alternate course of action to deal with an urgent problem

Appendix B: Description of Study Measures

Description of Study Measures

Salesperson's Intrinsic Motivation

1. When I perform well, I know it is because of my own desire to achieve.
2. I do not need a reason to sell; I sell because I want to.
3. Becoming successful in sales is something that I want to do for myself.
4. If I were independently wealthy, I would still sell for the challenge of it.
5. I wish I did not have to retire someday so I could always continue selling for the pleasure of it.
6. I sell because I cherish the feeling of performing a useful service.

Learning Orientation

1. Making a tough sale is very satisfying.
2. An important part of being a good salesperson is continually improving your sales skills.
3. Making mistakes when selling is just part of the learning process.
4. It is important for me to learn from each selling experience I have.
5. There really are not a lot of new things to learn about selling. (R)
6. I am always learning something new about my customers.
7. It is worth spending a great deal of time learning new approaches for dealing with customers.
8. Learning how to be a better salesperson is of fundamental importance to me.
9. P put in a great deal of effort sometimes in order to learn something new.

Customer Orientation

1. I try to help customers achieve their goals.
2. I try to achieve my goals by satisfying customers.
3. I try to get customers to discuss their needs with me.
4. I try to influence a customer by information rather than by pressure.
5. I offer the product of mine that is best suited to the customer's problem.
6. I answer a customer's questions about products as correctly as I can.

Salesperson Agility (Adopted 3 items from Jaramillo, Chonko and Weeks).

1. I effectively anticipate customer problems or opportunities.
2. I pro-actively anticipate and develop suggestions for future customer needs.
3. I am always alert to signals pertaining to changes in my account.

Adaptive Selling – Shortened

1. When I feel that my sales approach is not working, I can easily change to another approach.
2. I like to experiment with different sales approaches.
3. I am very flexible in the selling approach I use.
4. I can easily use a wide variety of selling approaches.
5. I try to understand how one customer differs from another.

Flexibility

1. I can perform many types of operations effectively.
2. I can use many different tools effectively.
3. I am a cross-trained worker who can perform a broad range of manufacturing tasks effectively in the organization.
4. I can operate various types of machines.
5. I can be transferred easily between organizational units.

Diligence

1. I am often too busy to respond promptly to customers' special requests.
2. I always make sure that I can be reached whenever a customer needs something important.
3. I return customers' calls promptly.
4. I provide the information customers request in a timely manner.
5. I always make sure that customers are able to see me as often as they need to.
6. I always make sure that customers can reach me within 24 h.
7. I always provide services to customers at the time I promise to do so.
8. I keep good records of my past interactions with customers.

Sales Outcome Performance

1. I am very effective when it comes to contributing to my company's market share.
2. I am very effective when it comes to marketing/sales of those products with the highest profit margins.
3. I am very effective when it comes to generating a high level dollar of sales.
4. I am very effective when it comes to quickly generating sales of my company's new products.
5. I am very effective when it comes to identifying major accounts in my territory and selling to them.
6. I am very effective when it comes to exceeding sales targets and objectives during the year.

Job Satisfaction

How satisfied are you with. .. (1 = very dissatisfied to 7 = very satisfied)

1. Overall job satisfaction.
2. My compensation.
3. Opportunities for advancement.
4. Job security.
5. Company policies.
6. My supervisor overall.
7. My colleague workers overall.

Customer satisfaction with the salesperson

1. My customers think that the amount of contact I have had with them was adequate.
2. My customers are satisfied with the level of service I have provided.
3. In general, my customers are pretty satisfied with their dealings with me.

Appendix C: Preliminary Survey Responses

Text Response: In your opinion, what is one word that describes “Agile Salesperson”?
Accommodating
adapting
adaptive
adaptive
Adaptive
aggressive
Aggressive
aggressive
aggressive
Annoying
a salesperson who can persuade
A salesperson who can sale you anything.
A sales person who gets the sale done fast. Making at least 15-20 sales a day
capable
Commission
Committed
Confident
Confident
Convincing
Crafty
crafty
creative
Creative
determined
determined
Diverse
diverse
don’t know what the means
Enthusiastic
fast
Flexible
Focused
good
Helping a salesperson learn
Initiator
intuitive
motivated
One who can make a quick sale
Overachiever
Person with great amount of experience that can sell inventories at faster pace as well as make it ways while doing so.
persuasive
Persuasive
productive
Quick
Quick
quick
Quick
quick
Quick
Quick
quick-witted
Quick whetted sales person
ready
salesperson who can adapt to any new sales techniques or products
Sharp
smart
Smart
smart
smooth
Smooth
Someone who can influence a potential buyer in a prompt and meaningful way.

successful
swift
Swindler
the ability to sell to multiple clientele

Text Response: Please provide a brief description of a recent experience in which you feel the salesperson serving you demonstrated agile selling behavior?
A best buy was going out of business and I got a video game that would have cost $30 for $1
A cashier at restaurant was **up-selling** deserts.
A sales person presented agile selling when selling me a car. He was **quick** about everything and **knew how to do his job**.
A salesperson **tried to sell** me meats at half price but had to pay extra fees.
A salesperson was making me **rush** through my purchase because they were getting paid based on commission and if I had bought that one item he would have completed his quota for the day.
A **salesperson would not leave me alone** until I bought his product. He had a lot of **determination** and he **knew** what he was talking about, so I bought it.
at a store where the salesperson was **following** me around the whole time to get a sale
At the mall there are stands in the middle between department stores and this man was trying to sell me a curling iron for my hair. He was very **confident** and **persistent** and **would not let me walk away from a demonstration** of the use of the iron.
At the Nike store. I went to buy shoes but also **got offered** shoes, apparel, and accessories.
Going into a makeup store and the salesperson demonstrates the product on you and makes sure you are **pleased** with the product and also **shows you more** if you would like to know about others.
I can't recall any recent experiences at the moment.
I can’t recall a situation at this time.
I currently work in the sale phone industry, so being an agile salesperson is key now more than ever with all the new and always changing offers. I have personally seen 3 different plans within an 8 month stretch and every time I have to learn **new selling techniques** in order to **adjust the way I sell**.
I had a waiter who **knew every detail of the menu** and the specials of the day, suggested an appetizer, and got the entire order right despite not writing any of it down.
I haven't had an experience like that recently.
I haven't had a recent experience with a salesperson, but an agile salesperson would be one who is very **attentive to the customer** throughout all aspects of the sale.
Unplanned demo
In a stand at the mall the salesperson of cosmetics **made me feel comfortable and they knew what they were talking about.**
I recently bought a new phone and the salesperson was very effective in **giving me information they perceived I would find useful.**
I recently was shopping for a new car and had my mind pretty much made up on what I wanted. The sales person gave me insight on some other things to look for in a new/used car. This has had me looking at more options and a different variety of cars. Now whether this benefits them in revenue or not, I am not sure. He was very **good at switching his strategy and changing my thoughts.** I have now been **exploring more options** than just the one color and model I had my mind set on.
I wanted to buy a pair of athletic shoes but couldn't find a particular pair I wanted but the salesperson was **quick** to suggest other pairs that would fulfill my needs.
I was at a clothing store and the salesperson was helping several customers **quickly** and **effectively**.
I was at a dealership and it was very busy and the man could not present what he was saying clearly because it was so busy and I believe this was an example of an agile selling behavior.
I was at a diamond store, and the sales person **quickly went onto the computer** and entered the database for all the stores to find the product I was looking for. She was **determined** to help me find the item I wanted.
I was at a restaurant and they forgot to bring out my food, so they **rushed** and brought it out with extra dessert for free
I was at a restaurant with a friend and they ordered a hamburger. Then, later on they wanted to change it to a different sandwich. The waiter was very **accommodating** of the change in order.
I was at a shoes store looking for a specific pair in order to play basketball with. I had no luck finding the pair I wanted but a salesperson **quickly** approached me when he saw that I was having trouble. I explained my situation to him and he was **quick to suggest** other shoes that were similar and fit my needs. Needless to say, I bought a new pair of basketball shoes thanks to the agile selling behavior of the salesperson.
I was at a shoe store looking for a particular pair but couldn't find them. A salesperson **promptly** came up and assisted me by suggested other pairs of shoes that were similar to the pair I wanted and fulfilled my needs. Needless to say I bought one of the suggested pairs due to the **quick thinking of the salesperson**.
I was buying a tablet, and he, he being the salesmen, **jumped from one product to the other**. Trying to get me to buy the most expensive.
I was dining in at an Italian restaurant, and a server was trying his best to **up-sell** me deserts and alcohol beverages.
I was meeting to set up premiums for life insurance and the salesman had a **quick answer for every question and was quick** to get my signature.
I was shopping in the mall, and a man from a kiosk came up to me and usually I stray away from these types of sales people but he caught me and **was very quick and he made me interested** in the product he had. He pitched it to me and then when I decided to stay and listen.
I went into a retail store and was extremely indecisive in what I wanted and the salesperson did a great job in **changing their sales approach each time to be able to continue to sell to me**

I went to go buy a phone and **I told the salesperson I wanted a cellphone case and before I knew she had found other accessories for me.**

I went to Nespresso to buy pods for my machine. While there, the salesperson came directly to me (instead of me seeking her out) and **immediately helped** me out in buying the pods I needed. While picking out pods, she **showed me to a number of things** I may be wanting to try out with my machine along with some new serving glasses. I really liked the look of the glasses she showed me and added them to the list. **She also reminded me that I hadn't** bought the Cozy pod in a while and reminded me I needed some. All in all, **she was quick to identify my wants and needs as a recurring customer while getting me in and out of the store in a quick time.**

I went to Nordstrom to buy a pair of shoes. The salesperson there showed me the shoes I wanted. He then started telling me about shirts that would go with the shoes. He then showed me some great shirts, and **convinced me to buy one**.

I went to Sephora to buy a birthday present for my friend. The salesperson provided me with a good product that suited my friend very well at a **very short period.**

Last time I was at a liquor store

Last week I went to buy a new car. The car salesman was trying to use his sales techniques **to try and get me to pay more money** for more functions for the car. Things such as a dvd player and different rim and what's not. Using everything he could to try to be smooth. He was good but did not convince me

Recently I bought a car and the salesperson was **good at offering me what I wanted** and endorsing the vehicle

Recently on a trip to an electronic store, I had in mind to only go inform myself about the new televisions out in the market, but was **persuaded** to the leave the store that day with a new 60 inch 3D television by an amazing sales person. He was **amazingly fast** at producing answers to all of my concerns about buying a television at that very moment. He made it seem as if I would lose money if I left that day without a television.

Salesperson **offered me product. It wasn't exactly** what I wanted. He listened to my wants and found a product that suited me well.

Someone tried to get me to sign up for an online fantasy football website and **each sales pitch he provided was from a different angle it felt like**. **If one tactic would not work he tried another** until he realized I really was not interested.

The AT&T sells person who goes door to door. I was going over their product and he was able to modify the product to suite what I was looking for. He was also able to throw in some incentives to try to get me to change over to AT&T.

the auto salesman at Auto flex leasing was **very diverse and able to adapt to my needs**

The sales person was able to help serve my girlfriend and I, as well as helping other guest in the store. He also had **cross-selling** by mentioning other items for the sale while he helped fit my girlfriend and me for jeans.

The salesperson was **quick to respond to my question** when I asked him what products would suit my needs. His response and suggestions were spot on, and made the exchange **very swift**.

They made an **impromptu demo**

They **understood the product completely and didn't need to resort to manipulation and quick talk.**

This person **never gave up** and **continued to maneuver** around my closed minded attitude.

When a gentleman came to my door and presented a product but **understood when I responded that I was not interested**

When a salesperson **tries to do the best they can to satisfy your particular needs**

When going to an auto shop, I was helped by a lady who **seemed confident and knowledgeable**. My initial intention was to get one new tire. After explaining to her that I needed a new tire **I notice she paid attention to my concerns**. She began to explain that it will be best to buy two tires instead of one; I had denied that option at another auto shop because the salesperson did not seem like he knew his stuff, so I wasn't sure. But after listening to her reasons why I should get another tire, the benefits it would bring, and the **confidence** she had when explaining I complied and agreed to buy a second tire.

When I recently purchased my car the salesperson showed agile selling behaver in a way that person **clearly described the method along with all benefits** I receive a lot more clearly and went out to find me the best deal possible for me and try to work everything with me financially. **It was done at rapid pace** because he went out and find the best deal possible as many other dealership tends to find you what's beneficial for them and bring back many counteroffers.

When I was buying a TV one time I had a **sales person describe to me why I should buy this TV and gave me pros and cons.**

When I was purchasing a vehicle, they wanted me to buy the first vehicle I drove

When I was purchasing my car, as soon as I stepped out of the current vehicle, there was **already someone there asking what we were interested in and what we needed help with?**

When I was shopping at Nordstrom I was going to buy some shoes. The salesperson then showed me some shirts and **convinced** me to buy one.

When I was trying to purchase perfume, the lady who was nearby ask if I needed help? I replied, I was looking for best possible deal that way I did not have to return to the mall. She **quickly presented me with a couple of different options** on how I was able to save money by purchasing a little more but as well getting higher quantity of the product.

When I went shopping for my winter clothes, I cannot find my size. However, **the sale person offers to find my size** in another store and ship it to my house

When I went to go up grade my cell phone the salesperson not only tried to get me to upgrade the one of the more expensive cellphone models, but he also **tried to push extra accessories** on me. Ones that I clearly did not need, he also tried to get me to sign up for extended warranties.

When I went to buy cologne the salesperson offered me their featured cologne, and when I did not care for it **they changed their sales strategy to fit what I was looking for** and the price range I was looking for. They introduced me to a cologne that I liked then told me of a sale they were having on another type of cologne that would be half off if I purchased this cologne. **I ended up buying two colognes I did not mean to buy** and spending more money than I expected.
When I went to upgrade my cell phone the sales person **tried to get me to buy many unnecessary features** such as upgraded insurance outside if the manufacture's coverage and several accessories that go only with the phone.
While at a department store, I was encouraged to buy two of a particular product because it was on buy one get one 50% off sale.
While searching for the perfect glass frames, **salesperson paid attention to the frame style** I was looking for. **She quickly picked** three different frames of the same style and asked me to try them on. While giving me her feedback on how each of the frames looked on me, **she heard me mention Coach and knew exactly what I wanted**. She held the perfect frames to me and I left the store very satisfied. Usually it takes a lot of time to pick out frames, **but with her ability to work quickly and effective, she had me out of the store in less than half an hour.**

Classification Purpose: Gender	Age	Identify the industry of setting in which the experience described in Q2 occurred?
Male	21	Best Buy
Female	21	Electronics
Male	29	Home
Female	22	Company setting
female	20	mall
female	25	clothing
male	23	car dealership
M	22	Residential
female	20	Mall
Male	21	Retail
male	25	Retail
Male	21	Shopping Malls
Female	21	Retail
Male	25	sales
male	23	Cologne store in the mall
Male	23	Fantasy Sports
Male	21	Kiosk
Female	20	technology
male	21	Best Buy retail store
male	21	Taco Bell
Male	21	Electronics Department Store
Female	25	Electronic store
Male	23	Retail
male	23	Dealership
female	22	Mall
m	37	sales
Male	29	Meat
Male	23	Cars
male	26	not sure
male	21	retail locations
male	21	cars
Female	20	Beauty
female	22	retail
female	18	electronic store
Male	24	Sprint Sales Rep
Male	30	Restaurant
Female	21	Automobile
Female	22	Mobile Service
Female	20	Pep Boys
Female	21	Retail
Male	20	Automobile industry
Male	21	Coffee Retail
Male	20	Service Industry
female	23	Mall
Male	20	Shoe industry
Male	20	Shoe Industry
Female	22	Electronics Sales
female	21	Retail
Male	22	Toyota Dealership
M	22	food
Male	20	Shoe Industry
Male	22	food
male	21	food service
Male	22	Electronics
Male	19	Retail
Male	20	Retail
Female	24	Vision Eye Frames

Male	21	Sales
Female	29	There was not one
Female	27	Retail
Male	22	Food industry
Male	20	Cellphone service
Male	22	Liquor store
Female	23	Business to Consumer or Sale and Customer Interface
Female	22	cosmetics

Characteristics of the Respondents

Female	24
Male	31
Age Range	18 - 37
Avg. Age	22
Industry	
Car Dealership	7
Retail	34
Service	9
Shoe	3

Appendix D: Quantitative Survey Instruments

Preliminary Survey Items

1. I regularly seek knowledge that helps me identify new opportunities with existing customers.
2. I continually update my knowledge base.
3. I organize new knowledge prior to the actual need for that knowledge.
4. I have developed a strong competency in communication strategy.
5. I seek knowledge that helps me identify new opportunities with new markets.
6. I seek on knowledge that goes beyond sales function knowledge.
7. I anticipate the need for knowledge prior to when it is needed.
8. I have developed a strong competency in developing customer relationships.
9. I have created a knowledge library that enables me to pursue new sales opportunities.
10. I continuously look for the opportunity to improve my work.
11. I apply knowledge to current and future customer needs.
12. I have developed a strong competency in collaborative learning.
13. I regularly develop new customer relationships in new markets.
14. I am committed to continuous improvement in the service I offer my customers.
15. I have developed many loyal customer relationships.
16. I can identify unarticulated customer needs.
17. I have developed a strong competency in anticipating the value in implementing new procedures to my customers.
18. I regularly eliminate non-value-added aspects of my presentations to customers.
19. I regularly evaluate industry practices to discover new strategies and tactics.
20. I can modify my presentation practices in real-time and communicate the changes to customers.
21. My firm's management is sensitive to local customs, preferences, and cultures of my customers.
22. My firm's management knows the markets that we serve very well.
23. My firm's management is aware of emerging markets we could serve in the future.
24. My firm's management knows how to quickly identify new markets for our products and services.
25. My firm's management has a history of creating new markets where none previously existed.
26. Our competitors often identify new markets before we have.
27. My firm's management continuously scans the marketplace for information about potential new opportunities and threats.
28. My firm's management dominates the markets it serves – it defines the marketplace and defines change.
29. My firm's management knows the markets that we do not serve well.
30. My firm's management identifies, collects, and assesses information about our competitors' strengths, weaknesses, opportunities that arise and threats they pose.
31. My firm's management knows our industry and our strategies that influence our competitive position.
32. My firm's management constantly monitors the industry and competitors.
33. My firm's management constantly monitors other industries and areas of potential competitive threat or opportunity.
34. My firm's management always seems to have competitors that we are not aware of.
35. My firm's management always experiences threats from competitors we viewed as non-threatening.
36. My firm's management knows who our customers are.
37. My firm's management knows who our potential customers are.
38. My firm's management observes, analyzes, and interprets the behavior of our customers.
39. My firm's management views customer complains as opportunities to learn and grow.
40. My firm's management constantly searches for new ways for customers to communicate with us.
41. My firm's management values customer retention and actively seeks new ways to attract and retain customers.
42. My firm's management listens to our customers.
43. My firm's management understands that to be industry leaders we must educate and lead our customers.
44. My firm's management constantly invests new ways to apply technology to develop new products.
45. My firm's management constantly invests new ways to apply technology to improve existing products, services, and information.
46. My firm's management uses information technology as a reaction to change, not a driver of change.
47. My firm's management has information technologies that are adaptable to changing marketplace conditions.
48. My firm's management values information as a source of sustainable advantage.
49. My firm's management is capable of anticipating the changes in social factors.
50. My firm's management is capable of anticipating the economic pressures.
51. My firm's management is capable of anticipating the technological pressures.
52. My firm's management is capable of anticipating the governmental pressures.
53. My firm's management is capable of anticipating the cultural pressures.
54. My firm's management can anticipate changing workforce expectations.
55. I continuously think and rethink my value propositions.
56. I am always be alert to blend old and new knowledge.
57. I have changed my view of my sales role in response to changes in the market in which I operate.

58. I have changed my view of my sales role in response to the competitive actions.
59. I often design value propositions based on changing customer needs and wants.
60. I continuously seek opportunities that can add value to customer relationships.
61. I continuously seek self-improvement.
62. I am prepared to reconfigure my sales strategies and tactics as needed.
63. I develop strong relationships with supply-chain members.
64. I am a master of managing my time.
65. I am proficient at develop analyzing customers problems and offering solutions.
66. I have a strong understanding marketplace dynamics and customer needs.
67. I continuously strive to build long-term relationships with customers.
68. I anticipate changes in the competitive customer marketplace and create sales strategies and tactics based on these changes.
69. I think and act in entrepreneurial ways.
70. I continuously seek to improve my ability to create, manage, and disseminate knowledge.
71. I place a high value on the coaching, advice, and information that can be received from others in the sales organization.
72. I place a high value on the coaching, advice, and information that can be received from my customers.
73. I continuously monitor and adjust my activities with customers to provide better value.
74. I often use business intelligence and analytics to respond to market changes.
75. I effectively manage limited resources in order to meet my customers' expectations.
76. I am actively involved in continuous product/service innovation processes.
77. I prefer to like standardize my business activities.
78. I am good at anticipating changes in what my customers need before they even ask.
79. It takes me a long time to identify change.
80. It takes me a long time to evaluate change.
81. It takes me a long time to react to change.
82. It takes me a long time to promote changes to my customers.
83. My ability to quickly respond to customer needs is always improving.
84. I operate with a sense of controlled urgency.
85. I have the ability to fast track the implementation customer solutions.
86. I handle identified opportunities as soon as possible.
87. I handle identified threats as soon as possible.
88. I immediately react to marketplace changes and put changes into practice as fast as possible.
89. It is difficult for me to enact change.
90. It is difficult for me to convince customers of needed change.
91. It is difficult for me to convince suppliers of needed change.
92. It is difficult for me to convince other company personnel of needed change.
93. I am capable of using appropriate technology as a differentiator.
94. I am capable of using information as a differentiator.
95. I am proficient at keeping up with changes in product life cycles.
96. I am proficient at managing products in different stages of the life cycle to maintain competitive advantage.
97. I have little difficulty maintaining competitive position among direct competitors.
98. I am capable of effecting many types of change successfully.
99. I am capable of adjusting to varying customer buying styles.
100. I have the ability to maintain productivity during low and high demand times.
101. I have the ability to offer a wide range of cost effective solutions to customers.
102. I have the ability to modify value propositions when offering customer solutions.
103. I have the ability to suggest product configurations to customers.
104. Which of the following statements best describes how you approach change?
    a. I work overtime, make many solution attempts, operate according to the fad-of-the-day, fight many fires, and expedite.
    b. I typically work on the existing knowledge that is subjective and lessons learned from past change activities.
    c. I use formal change processes with procedures documented to be successful by my organization.
    d. I have an evolving knowledge base of change strategies and tactics and have a strong appreciation for the insights provided by others.
    e. I understand that knowledge of strategies and tactics alone is not sufficient and so I need a principle-based change.

Appendix E: Study 2 Correlation Matrix

Correlations - Study 2

	KD	KP	KG	SPI	CR	5 Levels of Change Proficiency	AS	F	D	Salesperson's Performance Outcome	Job Satisfaction	Customer's Satisfaction of the Salesperson
	Pearson Correlation	Pearson Correlation	Pearson Correlation	Pearson Correlation	Pearson Correlation	Pearson Correlation	Pearson Correlation	Pearson Correlation	Pearson Correlation	Pearson Correlation	Pearson Correlation	Pearson Correlation
KD	1	.806**	.827**	.721**	.739**	.186**	.632**	.461**	.544**	.687**	.334**	.547**
KP	.806**	1	.814**	.773**	.753**	.181**	.599**	.590**	.618**	.722**	.374**	.623**
KG	.827**	.814**	1	.725**	.774**	.121	.613**	.547**	.595**	.723**	.426**	.585**
SPI	.721**	.773**	.725**	1	.746**	.127	.612**	.493**	.594**	.702**	.335**	.546**
CR	.739**	.753**	.774**	.746**	1	.136	.675**	.495**	.681**	.737**	.387**	.700**
5 Levels of Change Proficiency	.186**	.181**	.121	.127	.136	1	.028	.036	.161*	.063	.001	.083
AS	.632**	.599**	.613**	.612**	.675**	.028	1	.448**	.506**	.689**	.350**	.513**
F	.461**	.590**	.547**	.493**	.495**	.036	.448**	1	.296**	.515**	.265**	.440**
D	.544**	.618**	.595**	.594**	.681**	.161*	.506**	.296**	1	.585**	.369**	.645**
Salesperson's Performance Outcome	.687**	.722**	.723**	.702**	.737**	.063	.689**	.515**	.585**	1	.458**	.566**
Job Satisfaction	.334**	.374**	.426**	.335**	.387**	.001	.350**	.265**	.369**	.458**	1	.317**
Customer's Satisfaction of the Salesperson	.547**	.623**	.585**	.546**	.700**	.083	.513**	.440**	.645**	.566**	.317**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

***KD=KNOWLEDGE DISSEMINATION; KP=KNOWLEDGE PORTFOLIO; KG= KNOWLEDGE GENERATION; CR=CUSTOMER RELATIONSHIP; SPI=SALES PROCESS INNOVATION; AS=ADAPTIVE SELLING, F=FLEXIBILITY; D=DILIGENCE