CUSTOMERS BEHAVING BADLY: COMPLIANCE, RETENTION, AND REVENUE CONSEQUENCES OF PROBLEM CUSTOMERS AND FRONTLINE EMPLOYEE PROBLEM SOLVING

Dissertation

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While an impressive body of work on service recovery and customer retention through problem solving exists, organizations often face situations that involve customers behaving badly—that is, customers who behave in a way that is problematic and violates the exchange contract between the firm and the customer. The premise is that customers who behave badly are not necessarily non-profitable. Rather, frontline employee efforts to solve customer problems can yield profitable returns. This dissertation (1) proposes a process-based construct of problem solving derived from multidisciplinary research in education, marketing, economics, and psychology; (2) a model of problem solving processes for capturing the dynamics of frontline employee problem solving and its consequences for customer compliance, retention, and revenue, and (3) explicitly accounts for FLEs’ dispositional tendencies, and the cognitive and emotive problem solving strategies utilized in problem solving. Using data from 54 front line employees and 810 episodes of customers behaving badly, we test the posited hypotheses in a financial services setting. Our results provide support for the influence of FLE problem solving orientations on dynamics of exchanges in problematic episodes, and the effect that exchange dynamics have on customer level compliance and modeled loyalty metrics.
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CHAPTER I

Introduction

Concomitantly with the impressive body of work on customer problem solving through service recovery and retention efforts, there has been a slow but sustained growth in studies describing the phenomenon of problem customers—customers who engage in behaviors problematic for the provider firm ranging from loan nonpayment/delinquencies to unauthorized file-sharing/copying (e.g., Bitner, Booms, and Mohr, 1994; McCarthy and Fram, 2000)—and the use of marketing instruments to curtail and contain such problematic behaviors—penalties and punishments, including late fees/finance charges and fines/sanctions (e.g., McCarthy and Fram, 2000). Bitner and Booms (1994) noted that such problematic customer behaviors involve an implicit or explicit contract violation of exchange obligations with the provider firm. This dissertation focuses on explicit contract violations by customers. For example, in the financial services industry, banks and credit card companies face problematic customer behaviors in the form of late payments and bill delinquencies. Recent data shows that the number of delinquent credit card accounts ($\geq$ 30 days overdue) is at 5 percent, amounting to $380$ billion in receivables, while the total chargeoffs constitute about 7 percent, costing the industry (and society) almost $3$ billion (American Banker, 2003).Instances of personal bankruptcy have increased over 200 percent in the past two decades, and with it a growing concern that the system is rife with problem customers (Snyder, 2005). In support of the credit card industry, the Bankruptcy Abuse Prevention and Consumer Protection Act of
2005 was passed recently to increase customer liability for contract violations.\(^1\)

Clearly, the *problem* of problem customers poses a major challenge that has cost-of-business implications for the entire industry and society.

From the *firm’s* perspective, not all customers who display problematic behaviors at a given time contribute negative lifetime value or equity to the bottom line. In fact, some problem customers can be highly profitable if they ultimately comply with their contract obligations. For instance, in the financial services example, because problem customers carry interest charges, pay late fees, and reimburse the firm for additional expenses through penalties, compliance with contract obligations at a later date makes a positive contribution. Moreover, if in working through the problematic behaviors customers build a stronger relationship with the firm, additional contributions may accrue due to enhanced relational trust and commitment following contract compliance. Industry experts note that about 30 percent of problem customers contribute significantly to firm profits, while about 20 percent account for significant erosion in firm profits (Kadanoff, 2004). Retaining the potentially profitable problem customers while transitioning those that are not is a major challenge for most managers.

From the *customers’* perspective, much rides on how organizations sort them into desirable and undesirable segments, motivate compliance, and work with them to

\(^1\) In 2004 alone, approximately 1.6 million households filed for bankruptcy. Currently, credit card debt is unsecured debt (not backed by property) that may be discharged when the customer files for Chapter 7 bankruptcy (a process that costs $200 and takes 12 weeks). Under the new law, problem customers who are capable of paying their debt will be denied access to Chapter 7 and can only file for Chapter 13, where they cannot discharge their unsecured debts, are required to undertake credit counseling, and have to pay off credit card debt within an agreed time limit (Snyder, 2005).
problem-solving. Problem solving usually occurs in organizational frontlines, where frontline employees (henceforth referred to as FLEs) interact with problem customers to secure compliance while building trust with those who are likely to be profitable in the long run. Studies in management have examined bill collectors and the strategies such frontline employees use to win customer compliance (e.g., good cop–bad cop; Rafaeli and Sutton 1989). However, little if any marketing knowledge exists on the cognitive and emotive dynamics of FLE problem solving of problem customers, and its consequences for customer compliance and firm revenue.

This dissertation aims to fill the preceding gaps in the literature by juxtaposing the firm’s and customers’ perspectives within a single framework. Drawing from multidisciplinary perspectives, this study focuses on conceptualizing and operationalizing the FLE problem-solving construct in the context of problem customers, as well as investigating its consequences for customer compliance and firm revenue. The specific goals of this research are to (1) understand the conceptual content of FLE problem solving, and to develop its multidimensional operationalization in the context of problem customers; (2) develop a model for capturing the dynamics of FLE problem solving and its consequences for customer compliance, retention, and revenue; (3) test the proposed model using multi-source data obtained from the financial services industry including FLE data, audio records of problem-solving interactions, customer behavior data, and archival data on financial transactions; and (4) discuss the implications of the results, its contributions, and limitations, on the development of theory and managerial practice.
Despite its growing relevance and importance, little research attention has been directed at studying adverse behaviors where the customer does not perform or under performs his/her contractual role in the relationship and thus creates problems that the organizational representative (FLE) has to solve. The usual definitions of problem solving are less relevant in the case of an FLE solving the problem of problem customers. This is because; problem solving involving problem customers involves three unique characteristics:

- **goal conflict** - typically in solving problems for oneself, the problem solver has specific goals/needs that direct the problem solving process (e.g. I am cold - let me wear a jacket to get warm). However, in problem situations involving problem customers, the needs/goals of the problem customer could be different from those of the FLE. For example, the FLE’s goal may be to “get the problem customer to pay the full financial penalty of $25.00 upon initial contact”, whereas the customer’s goal may be to “to get the FLE to reduce the penalty for non-compliance to zero”.

- **solution ambiguity and negotiation** - typically problems are solved by choosing one solution from a set of probable solutions after risk-benefit evaluations (e.g. it may get warmer later, let me dress in layers). In the case of problem customers, situations may arise when there may not be even one common option between the solution sets of the FLE and the problem customer involved. Thus, the lack of a clear solution acceptable to both parties will tend to lead to negotiations and joint decision making if not a stalemate or problem escalation.
• *problem escalation following failed negotiations* – joint problem solving through negotiations involve distributive issues, create value and have the potential, when successful, to make both the FLE’s firm and customer better off. However, problem solving following failed negotiations (e.g. where the customer and FLE cannot find common ground on solution elements) gets complicated since the problem is further escalated bringing in multiple layers of problem solvers (e.g. manager, supervisor etc.). As such, the study of problem solving in such customer service settings poses unique challenges.

For the purposes of this study, we define problem customers as those who violate contractual obligations by not complying with firm policies and/or fail to fulfill exchange expectations (e.g. delinquencies in payments). Problem customers are not to be confused with irate customers e.g., those who tend to behave in ways that disrupt the organization’s capabilities in delivering services. It has been suggested that “in every … customer service department in America, there is a secret list … of problem customers … that is passed from one generation of customer service representatives to the next” (pp. 92, McClure 2000). A problem customer has traditionally been described as an problem customer for the organization (e.g. Kelly, Donnelly and Skinner 1990, Bitner and Boom 1994), and the consequences of such non-compliance to the organization have been defined as – ‘the irrevocable revenue loss and/or significant additional transactional costs suffered by the organization’ (McCarthy and Fram, 2000). Past examples of such consequences of non-compliance
include costs of uncancelled dinner reservations, restocking costs of returned goods, loss due to early withdrawal of certificates of deposit (McCarthy and Fram, 2000). Industries (e.g. airlines, healthcare, financial services) that continue to suffer from adverse behaviors and their consequences have imposed penalties on problem customers in the form of late fees, cancellation charges, restocking fees, etc. Most practitioner strategies or tactics involved in managing the behaviors of problem customers have generally evolved within the realm of ‘the customer is king’ (forgive, ignore or condone the behavior) on one extreme and ‘dump’ on the other (e.g. refuse to serve the customer thus forcing customer exit)(Thomsen 2002). The health care industry has only recently suggested implementing behavioral contracts that would enforce a required change of behavior or attitude in a direct and structured format through contractual restrictions (Liberman and Rotarius 1999).

Thus far, little attention has been paid to understanding the process and components of solving the problem of problem customers. Instead past literature has attempted to describe problem customers either by identifying (1) the kinds of problem behaviors (e.g. Bitner and Booms 1994), (2) the kinds of negative consequences resulting from these behaviors (e.g. Hwang and Green 1999), and/or (3) the affective and behavioral reactions of these customers to fees and penalties levied as punishments for bad behavior (e.g. McCarthy and Fram 2000). Further, though customer adversity has been studied in many industries (financial services, airline industry, retail, health services), the role of the FLE has been rarely explored. Instead, the focus of the studies has largely been on the effects that imposed penalties have on
consumer satisfaction and loyalty behaviors (e.g. Woodyard 1997, Berry 1995, Bitner 1995).

Consequently, fundamental gaps remain in literature about (1) what factors would aid(deter) effective FLE problem solving, and (2) what process mechanisms and strategies would improve (deplete) the impact of FLE-customer problem solving interactions. The purpose of this dissertation is to fill the aforementioned gaps in literature by (1) identifying specific FLE problem solving dispositional tendencies and FLE problem solving strategies, and (2) specifying how FLE dispositions and contextual influences regulate the problem solving process through the mechanism of FLE strategies, and (3) understanding the impact of FLE strategies on customer compliance, retention, revenue, and share of category use. The study is expected to provide useful insights into (1) the critical role that front line employees play in problem solving customer adversity, (2) the different contextual strategic choices FLEs face, choose and employ within this domain of problem solving, (3) impact on desired business goals critical to the firm, and (4) managerial implications for regulating the process of problem solving in order to maintain the pursuit of both service and financial goals.

This dissertation is organized into the following chapters: (1) chapter II reviews the multi-disciplinary problem solving literature and develops this construct for the context of front line employees (FLEs) problem solving within the domain of customer service settings, (3) chapter III develops a conceptual model of FLE
problem solving for problem customers with its relevant antecedents, consequences, significant mediators and moderators, (3) chapter IV provides the research design and method of analysis, (4) chapter V provides the results after testing the conceptual model using both qualitative and quantitative data, and (5) chapter VI concludes with a discussion of the results, the contributions to theory and practice, the limitations of the dissertation, and directions for future research.
CHAPTER II

Problem Solving: A Multi-disciplinary Literature Review and Construct Specification for Studying Problem Customers

Understanding how FLEs solve customer adversity problems presumes a thorough understanding of the problem solving construct. This chapter provides a review and conceptualization of the problem solving construct based on its roots in different disciplinary literatures. Based on this review we will elaborate on the constructs of problem solving orientations and process oriented problem solving contextual strategies in order to examine the linkages between them (in Chapter III). This chapter is divided into two sections.

- **Section 1** provides a multi-disciplinary review of the construct of problem solving. This section will draw upon past research from marketing and other disciplines such as organizational behavior, mathematics, education etc., in order to provide a comprehensive analysis of the various definitions, dimensions, process elements, and theories of problem solving.

- **Section 2** will narrow the focus to the realm of problem solving in marketing, particularly to customer service situations. This section will identify existing gaps, define the construct of problem solving, and discuss its significant process dimensions. We will start with Section 1.

**Section 1: Problem Solving – A Multi-disciplinary Perspective**
Defining problem solving - In general, problem solving is triggered when individuals or groups experiencing the problem will recognize that their state of affairs has been ‘disrupted by the intrusion of an uncertainty or barrier to goal attainment’ (Tallman et. al. 1993). The individual experiencing this altered state of affairs will then himself/herself undertake specific activities (such as completing some task, circumventing or removing the obstacle, restoring order to a chaotic situation, restoring previously established routes to goal attainment) in order to problem solve. Such problem solving may or may not involve interactions with others who may hold the resources and/or the wherewithal to facilitate problem solving. Nevertheless, much focus of problem solving literature is uniquely individual, with the problem experiencer as the locus of analysis. Definitions for problem solving vary based on the particular focus and orientation of the definer and purpose of the definition. For example, education theorists like Gagne (1964) have defined problem solving as “an inferred change in human capability that results in the acquisition of a generalizable rule which is novel to the individual, which cannot have been established by direct recall, and which can manifest itself in applicability to the solution of a class of problems” (pp. 132). Marketing theorists like (Alderson and Green, 1964) have defined it as an activity conducted for the purpose of generating answers to questions (of marketing policy or strategy) where the answers are not precise like in mathematics but only probable with levels of confidence (pp. 58-59). A simple comparison of just the two definitions above reveals important differences such as (1) problem solving is both capability (Gagne, 1964) and the resulting activity (Alderson and Green, 1964), (2) results in a solution rule applicable to many
questions (Gagne, 1964) and a probable solution to answer just the question on hand (Alderson and Green, 1964).

Given these diverse definitions, to identify a single definition that fits all the current and past thinking without sacrificing significant elements appears futile. Therefore current researchers like Huitt (1992) have produced working definitions that try to capture specific problem solving elements important to specific research domains in more encompassing forms, using terms such as ‘process of perception and resolution’ (indicates the presence of both human ability and activity) and ‘gap between a present situation and a desired goal’ (goal could be either a specific solution or a generalizable rule). In the words of Newell (1966) “the exact formulation of the definition of large umbrella terms like problem solving is one of the last things that happens in a science” (pp. 172). However, since it has been acknowledged that the problem solving phenomenon can be empirically observed, inferred, and measured, Newell suggests that significant elements of problem solving can serve as desiderata for developing a specific conceptualization and hypothesize the inference of problem solving for a class of problems (in this case, FLEs solving the problem of problem customers).

In order to provide the foundation for understanding problem solving in customer service settings, it is therefore useful to discuss the different elements of problem solving, and how they are unique relative to other constructs. To do so, we explore three aspects that are germane to our discussion: (1) process versus state
approaches to problem solving, (2) individual versus organizational locus of problem solving, and (3) problem solving versus other related constructs.

**Nature of problem solving**

Two parallel and important research streams on problem solving view it either as a process of tackling problems or as state of the individual in terms of cognitive skill, style, or ability that is relevant to problem solving. Process/phase models consider problem solving as a series of interrelated and usually sequential steps where the importance of cognitive activity in each phase of the model is highly emphasized (e.g. Alderson and Green 1964, Simon 1977, Mintzberg et. al. 1976). Typically these models include the following steps: problem definition - situation analysis - idea generation - analysis of ideas - decision making - implementation - evaluation of results (e.g. Bransford and Stein, 1984). The models suggest temporal/sequential structures to the different steps problem solvers undertake in order to solve problems at either the group level or the personal level, often with the level of analysis unspecified. The cognitive orientation to problem solving process begins with the presumption that problem solving (1) involves a set of cognitive skills that can be taught (e.g. Maier 1969, Woods et. al. 1997), learned in the abstract (e.g. Alderson and Green 1964), transferred to any context (e.g. Gagne 1964), and imbibed into tacit knowledge structures (Sternberg 1999); (2) is similar to decision making (e.g. Alderson and Green 1964, Kharbanda and Stallworthy 1990) and thereby lends itself to decision theory (e.g. Bayesian decision theory), formalized routines and scientific tools (e.g. regression analysis, modeling, simulation, decision trees); (3) involves cognitive processes and cognitive shortcuts (e.g. recall, knowledge structures,
heuristics) in information processing and problem formulation (e.g. Smith 1992); and
(4) failure to solve the problem lies either in the model/tool chosen or some step in
the process and rarely in the variables excluded (e.g. individual cognitive skills or
ability). In other words, while process models do not deny the presence of cognitive
skills and abilities of individuals, they simply attach relatively lower significance to
the role of state variables. Support for this view of problem solving has been
provided by theories such as Bayesian decision theory which uses probabilities and
decision trees to arrive at solutions under uncertainty (Von Neumann and
Morgenstern 1944). Other theories provide explanations for ‘cognitive deficits’, for
example, Simon’s (1957) theory of bounded rationality suggests that ‘the capacity of
the human mind for formulating and objectively solving complex problems is very
small compared to the size of the problem’ (pp. 198) thereby limiting the extent of
cognitive processing available to the problem solver. However, the process
orientation has intuitive and prescriptive appeal in solving practical problems, and
therefore has been adopted in many disciplines - physical sciences, mathematics, and
education. For instance, Mayer (1983) defined problem solving as a cognitive
multiple step process where the problem solver must find relationships between past
experiences and the problem at hand and then act upon a solution. Garofalo and
Lester (1985, p. 169) adopted a more skill based view and defined it as including
“visualization, association, abstraction, comprehension, manipulation, reasoning,
analysis, synthesis, generalization – each needing to be ‘managed’ and
‘coordinated’”.
Overall, research on problem solving suggests that it is an activity that requires a methodical, disciplined, and sustained cognitive effort (Couger 1995; Gilbert et. al. 1990). The outgrowth of such research has been the advancement of several problem solving frameworks that describe it in a systematic fashion (Amabile 1983, VanGundy 1988). Common to most of these models is the belief that the problem solving process can be broken down into distinct behavioral stages (Baer 1998). Many temporal de-contextualized process models of problem solving are still used in academic and corporate training settings (e.g. Bransford’s IDEAL, Bransford and Stein 1984). Typically these models comprise problem recognition – generation of solution alternatives – evaluation of the alternatives – implementation of chosen solution – evaluation of results. Different variations to this theme are offered by Runyon and Stewart (1987), Engel and Blackwell (1982), Mintzberg et. al. (1973), Gick (1986), Newell and Simon (1972), Tallman et. al. (1993), and Alderson and Green (1964). For instance the classic problem solving paradigm (Runyon and Stewart, 1987) deals with consumer choice i.e. information search (Biehal, 1983; Freiden and Goldsmith, 1988; Murray, 1991), alternative evaluation (Moriarty and Bateson, 1982), and post-purchase evaluation - particularly the assessment of service quality (Bitner, 1990; Bolton and Drew, 1991, Boulding et al., 1993; Parasuraman et al., 1988).

The parallel perspective, while acknowledging the contribution and importance of cognitive processes in problem solving, focuses specifically on individual state variables that may impact different aspects of the problem solving
process (e.g. cognitive skill/style employed, cognitive interference). For example, researchers like McCaulley (1987) have investigated the relationship between individual differences in personality type (as measured by MBTI, Myers-Briggs, 1979) on the preference for cognitive style used in problem solving. Individuals differ from each other across introversion/extroversion, sensing/intuiting, thinking/feeling, and judging/perceiving dimensions. Briefly, introverted problem solvers (unlike extroverted) will clarify ideas before talking and will not seek feedback from the environment about the viability of their ideas. Sensing problem solvers (unlike intuitive) are detail oriented and will tend to select standard solutions and not new/original ones. Thinkers will tend to use logic, be objective in finding solutions while feelers subjectively tend to consider how their solutions will affect other people. Finally, judgers would prefer structure and closure to the problem solving process while perceivers are more likely to be flexible and find solutions adaptable to unexpected changes in the future. A further development shows that thinkers and their thinking styles affect problem approach and problem solving - pragmatic thinkers generally approach problems one step at a time and problem solve based on immediate personal experience and idealists tend to approach problems and solve them by assimilating comprehensive information (Bramson and Harrison, 1982).

Interactions between Jungian personality types and attitudes toward problem solving have been shown to affect problem conceptualization (defining the problem) where for instance individuals who formed narrow initial conceptualizations showed a tendency to seek additional information that was consistent with their prior
definitions and were less responsive to contradictory information (Herden and Lyles, 1981). The problem solver’s motivation and beliefs become relevant in problem perception when the individual will perceive and construe the problem based on his/her own beliefs and values (Smith 1992). Other researchers suggest that an individual’s risk handling characteristics (risk preference/perception/propensity) in problem solving involving risk will influence problem solving approach and the solution (e.g. solving the problem of maintaining meaningful market place differentiation was a function of individual risk taking, Andrews and Smith 1996). Individual differences that are independent of problem solving capability have been repeatedly demonstrated to impact effective problem solving. Culturally or biologically determined dispositions have been shown to make individuals favor certain solutions over others. If the solution is in direct conflict to the disposition then the problem becomes more difficult to solve and the problem solver has to actively inhibit the disposition in order to arrive at the solution (Maier and Burke, 1967). Similarly, native endowments and previous experiences can radically change the behavior repertoire of the individual and influence both the level of problem solving difficulty and the quality of the solution (Maier and Burke, 1967). Learned helplessness that occurs when individuals are subjected to events that are uncontrollable- i.e. when the probability of an outcome is the same irrespective of the response and the individual problem solver develops expectations of non-contingency between response and outcome - has been shown to result in motivational and cognitive deficits (Hayes 1992).
Although the preceding work on individual state variables related to problem solving appear to be focusing on the antecedents of problem solving rather than directly conceptualizing problem solving as a state variable, an important conceptual contribution by Kirton’s adaption-innovation theory addresses this concern (KAI, Kirton 1976, 1977). KAI theory is based on the premise that individuals can be placed on a personality continuum of cognitive style of problem solving (preferred mode to problem solve) ranging from high adaption to high innovation. Following the observation that problem solvers characteristically produce qualitatively different solutions to seemingly similar problems, the KAI inventory distinguishing adaptors from innovators was constructed. “Adaptors tend to cognitively problem solve within the confines of the appropriate and consensually accepted paradigm within which the problem is generally initially perceived. By contrast, innovators are more liable to treat both formally or intuitively the enveloping paradigm as part of the problem. Following this, different solutions may emerge to the seemingly similar problem” (Kirton 1980, pp. 213). Cognitive style of problem solving has been shown to have stable characteristics and construct validity has been repeatedly demonstrated through many studies, in many contexts, and in different countries (e.g. Goldsmith 1985). That the AI measure is significantly positively correlated with relevant personality dimensions such as risk taking (Goldsmith 1985), negatively correlated to dimensions such as intolerance to ambiguity (Keller and Holland, 1978), and uncorrelated to irrelevant dimensions such as neuroticism (Goldsmith et. al. 1986) provides convergent validity. Discriminant validity studies demonstrate statistical independence between the AI cognitive style of problem solving and scores on
aptitude, achievement, and cognitive complexity (e.g. Kirton 1987). Thus the AI theory unequivocally distinguishes cognitive style of problem solving from ability to problem solve.

Problem Solving and Related Constructs

Problem Solving and Decision Making - Problem Solving has often been confused with decision making since it has been variedly described in literature as both an element of the decision making process (e.g. Bransford and Stein 1984), and as including decision making (e.g. Kharbanda and Stallworthy 1990). It is however important to note that current thought on problem solving indicates an agreement that problem solving is more comprehensive than decision making, since it includes situations where solutions from the past are not readily known and also those where specific solutions from previous experiences are accessible. This is in contrast to the current understanding of decision making as just a selection process where one of two or more readily available solutions has to be chosen to reach the desired goal (Huitt 1992). Further thought reasons that problem solving is not the same as decision making, since decision making is only concerned in deciding between different existing ideas while problem solving includes the actual formation of those ideas.

Problem Solving and Creativity – Even though problem solving and creativity have never been considered to be synonyms of each other, they have been considered together in the past since the end result (not the process) of the problem solving process has often been examined for evidence of creativity (e.g. Maier 1969). Solutions to problems could or not be creative (synonyms used in literature are novel,
innovative, unusual, different). Studies of problem solving and creativity have suggested that people who can solve objectively more complex problems are also subjectively more creative (tend to produce more innovative solutions). Since ‘creative’ does not necessarily mean superior, for an evaluation of creative and superior, the solution has to be both innovative and must conform to objective realities. Although a review of past research shows many critical elements that solutions have to possess to be judged creative (e.g. integration of conflicting information) however, despite the best efforts to be objective, critics have long held the position that any classification of solutions as creative will be subjective and arbitrary. More recently, researchers have provided evidence that problem solving and creativity are different by showing how training programs in each specifically affected performance only on related measures (Blisset and McGrath 1996).

Section 2: Defining Problem Solving in Customer Service Settings

In this section, we will review the relevant literature in marketing on problem solving, identify existing gaps, and define the construct of problem solving in customer service settings.

FLE Problem Solving in Current Marketing Literature and Existing Gaps

A preliminary search in marketing yielded 286 scholarly and 1688 practitioner articles related to some aspect of problem solving. A closer examination of the literature revealed that typically, the role of FLEs in problem solving has been recognized largely in problem recovery situations (i.e. recovery of complaining consumers following transfer of problem to FLE). Research in customer
satisfaction/dissatisfaction (CS&D) spanning several decades provides substantial evidence highlighting the significance of FLE problem solving efforts in problem recovery situations (e.g. Richins 1983, Fornell and Wernerfelt 1988, Goodman 1988, Oliver and Swan 1989, Anderson and Sullivan 1993, Mohr and Bitner 1991, Smith and Bolton 1998, Sengupta et. al 2000). From past research we know that consumers complain to providers following dissatisfaction with product/service acquisition-use-disposal experiences (Consumer Satisfaction/Dissatisfaction literature spanning over four decades). We are aware of the mechanisms involved in problem communication\(^2\) (e.g. expectancy values, Singh and Wilkes 1996), mode of problem communication (from Singh’s taxonomy of voice, private and third party actions, 1990), both individual (e.g. attitude towards complaining, Bearden and Mason 1984) and situational (e.g. attribution of blame, Folkes 1984) antecedents to such communications. In the recent past customer relationship management (CRM) proponents (e.g. Sheth 2000) have equivocally enumerated the benefits of defensive marketing (keeping existing customers satisfied vs. acquiring new customers as in offensive marketing). Positive significant relationships have been shown to exist between satisfaction with problem recovery and consumer trust and commitment (Tax et.al. 1998, Sirdeshmukh et.al. 2002). Effective recovery from and resolution of consumer problems can have a significant impact on customer retention rates, deflect the spread of negative word of mouth, and improve revenue (e.g. Fornell and Wernerfelt 1987, Kelley et. al. 1993, McCollough and Bharadwaj 1992, Achrol

\(^2\) Problem Communication indicates all customer voice communication including complaints to FLEs/organization and has been suggested in literature as the logical first step towards problem recovery.
A survey by DDB Needham/Harris has reported that both executives and consumers rated problem handling as one of the five leading factors with significant influence on consumers (1995). Morgan and Hunt (1994) encourage further research on complaint handling as a means to better understanding relationship marketing and its link to revenue. The common theme evident in the approaches of many past researchers and industry experts to CRM is the desire to ‘effectively problem solve’. Berry et. al. (1991) maintain that investigating these ‘moments of truth’ (problem solving experiences) is critical since more than half of customers feel negative about an organization after they have gone through the complaint-resolution process (Hart, Heskett, and Sasser, 1990). Kelley and Davis (1994) observe that there is a ‘dearth of empirical research’ on problem solving and whatever research exists is confined to only ‘anecdotal reports’ (pp. 52).

The term problem solving however has been used by CS&D researchers synonymously with problem recovery so often that, readers may have been led to believe that an FLE’s problem solving efforts usually are localized to only customer recovery situations and not elsewhere in the purchase–use–disposal experience (for example, in Bitner 1990, FLE problem solving responses are considered only after a failure in service delivery). Consumers on the other hand have been known to face and create many problems that need FLE problem solving intervention throughout the experience. Bowman and Narayandas (2001, pp. 282) state that most consumer-FLE problem solving interactions ‘originate for other reasons (not problem recovery)’. Goodman et. al. (1995) found that FLE responses to all problem solving situations
An FLE’s problem solving role can be thus initiated/triggered by customers either through customer request (product/service search, e.g. Hayes-Roth 1977; service delivery dissatisfaction, e.g. Smith and Bolton 1998; special assistance in use/disposal, e.g. Bitner et. al. 1994), or through customer behaviors (adverse actions and non-compliance to terms, e.g. early withdrawal of certificates of deposit, Shure 1996; changing flight plans on discounted tickets, Keates 1998). A few researchers have therefore suggested using a broader view of an FLE’s problem solving efforts. For instance, Shostack (1984, 85) describes FLE-customer problem solving interactions in a service to span ‘a period of time during which a consumer directly interacts with the service’ and Peter and Olson (1993) suggest a blanket term for the larger problem solving role that FLEs perform as ‘FLE assisted goal-directed problem solving’ Therefore it is imperative that any definition of problem solving should allow consideration of the diverse nature of problems handled during FLE-customer interactions and not restrict it only to recovery situations.

Further, very few operationalizations of the problem solving construct exist in customer service literature to date. Though the largest impact of existing research has been on the consequences of problem solving such as consumer satisfaction (Smith et. al. 1999); customer trust (Sirdeshmukh et. al. 2002); and consumer evaluations (Goodwin and Ross 1992), measures of problem solving however, have been largely
substituted by measures of critical elements of the solution (e.g. justice dimensions, Tax et al. 1998). The major assumptions being, (1) many problem solving behaviors (e.g. FLE searching company database) may not be easily visible to consumers, hence consumers tend to base their evaluations (of what may have happened) on the solution offered, and (2) consumer evaluations of solution elements provide valid evidence of FLE behaviors that facilitated problem solving. A notable exception to this gap is a recent contribution by Sirdeshmukh and colleagues (2002) who have utilized a multi-level orientation based conceptualization of problem solving and related it to customer trust. Defined as ‘the consumer’s evaluation of FLE/management motivations to satisfactorily resolve problems that may arise during and after a service exchange’, the operationalization of the construct is based on consumer evaluations of specific problem solving behaviors of FLEs and practices of management (e.g. go out of their way to ensure that passengers have a comfortable flight). The reason this is plausible is due to the nature of the exchange examined. Relational exchanges provide consumers with the information to assume the assumption identified. While this is a reasonable starting point, further refinement is needed since (1) it does not include problem customers specifically, (2) it is highly industry specific, and (3) does not provide information about discrete construct dimensions.

Given the above background, what do we know about the problem solving construct in the marketing context? (1) problem solving has multiple definitions (2) application of problem solving to our specific problem solving customer service
setting will require significant redefining. We will address these two related issues simultaneously. Though attitudinal and dispositional treatments of problem solving are present in literature (e.g. Shapiro and Watson 2000, Zorn and Rosenfield 2002), marketing literature in particular has been partial towards developing a behavioral orientation to the problem solving in customer service settings construct. Support for such a behavioral orientation has been derived from role theory and has been used by many researchers in the analysis of service encounters (e.g. Bitner et. al. 1994).

Customer service settings offer a unique setting where problem solving service encounters including problem customer interactions are behavior and goal oriented (Solomon et. al. 1985). Each party (customer and FLE) to the interaction applies ‘a set of behaviors that are appropriate for the (problem) situation’ and will increase the probability of problem resolution (Solomon et. al. 1985, pp.101). Further, it has been found that consumer evaluations and perceptions of customer service efforts are affected by FLE problem solving behaviors (Goodwin and Ross 1992, Sirdeshmukh et. al. 2002). Therefore in keeping with tradition, we adopt a behavioral focus in defining the problem solving construct.

In drawing from the process versus state approaches to problem solving, the specific insight motivating our definition is that the state and process approaches do not stand in competition for explaining the problem solving phenomenon; rather they are intimately embedded in each other and function cooperatively. That is, while an individual’s state—that is, skills, abilities and dispositions, are critical to problem solving, it is recognized that problem solving is itself a multi-step, multi-task
phenomenon ranging from problem sensing to solution implementation. Our insight
flows from the notion that different individual skills/dispositions may be relevant for
different steps and tasks of the problem solving process. Thus, a “good” problem
solver is not just more skilled or more positively disposed along a single dimension
(e.g., problem sensing). Instead, it is likely that effective problem solving requires
competence and dispositions along multiple dimensions (e.g., problem sensing and
solution implementation). In this sense, the state approach is embedded within a
process approach to problem solving. We build and elaborate this notion further in
the discussion that follows. In terms of the customer versus organizational locus of
problem solving, our inclination is to focus on the FLE locus of problem solving.
FLEs work in the front lines of the organization and represent the organizational face
to customers when solving problems. Although we recognize that problem solving is
an interactional process involving customers and FLEs, for our initial study and
construct development, it appears prudent to align with a singular locus while
retaining the complexity of problem solving dimensions. The FLE locus has some
theoretical and managerial advantages in that FLEs are usually the “solvers” of
problems, and can be trained by managers to enhance the effectiveness of an
organization’s response to problem customers.

A thorough analysis of the varied definitions, descriptions, and models of
problem solving in customer service settings has yielded two distinct process
dimensions, each with two distinct sets of FLE behaviors: (1) sensing, and (2)
solving. The process of sensing includes behaviors involving (i) problem sensing, and
(ii) information search and processing while, the solving process includes behaviors relating to (i) solution generation and negotiation, and (ii) solution evaluation. In the words of Newell (1966, p. 172), “the exact formulation of the definition of large umbrella terms like problem solving is one of the last things that happens in a science”. Even so, it does not seem unreasonable to conclude that FLE problem solving is a construct in which these two process dimensions are operationally manifest. Therefore, in an attempt at defining the construct of problem solving in customer service settings we will (1) attempt to clarify in detail the specific FLE behaviors involved in each of the above two dimensions that constitute the construct’s domain, and (2) offer a more precise definition further enabling theory development, construct measurement, and hypothesis testing.

**FLE Behaviors of the Sensing Dimension of the Problem Solving Construct**

(i) **Problem Sensing**: “Although behavior that solves problems need not always be preceded by problem-sensing behavior (March and Olsen 1976), intentional problem solving depends on some awareness of the problem to be solved” (Kiesler and Sproull 1982, pp. 548). Traditional descriptions of this core theme involve awareness of problem (e.g. Tallman et. al. 1993) or problem identification (e.g. Engel and Blackwell 1982) and further allow for the problem experiencer to either choose to solve the problem or not. However in customer service settings, when the customer has created problems through his/her behaviors, the FLE, in all good faith, is expected to see the problem solving process through to its logical conclusion i.e. find an acceptable solution. This highlights the FLE’s need to engage
in certain problem sensing behaviors that will help the FLE obtain an accurate and complete sense of the problem. Such problem sensing has been described in the past to include macro level activities of noticing, incorporating and interpreting stimuli and have been described as necessary and prior conditions for problem solving to occur (Keisler and Sproull 1982). Fornell and Wernerfelt (1988) however, caution that since each individual consumer has principal control over the problem content, format, and presentation, problem sensing puts the interpretive skills of the receiver (FLE) ‘to a difficult test’.

Various theories from behavioral and cognition literature such as social perception, and social motivation lend support to the need for and mechanisms involved in problem sensing. Social perception theories suggest that problem solvers (FLEs) make sense and construct the problem reality by performing cognitive activities on cues derived from the environment (Kelley 1973). Such reality construction may involve an understanding of cause-effect relations between the causal agents to the problem (e.g. late installment payment) and their consequences (e.g. financial risk to organization) (Major 1980) or a sensing of problem details (e.g. amount of financial loss to organization) (Gibson 1979). The problem sensing activities or cognitive behaviors include perceiving, encoding, storing, retrieving, and inferring of cues and it is further suggested by motivation theories that these behaviors lie along a continuum of effort and engagement (Kahneman 1973, Norman 1976). Theories of social cognition suggest that problem sensing behaviors vary with learning capabilities, and with the technical limitations of cue search (Hambrick
Researchers also note that problem sensing could either be directed (intentional) and/or automatic (unintentional). In directed problem sensing, the FLE exerts effort, engages in active sensing, improves sensing behaviors with practice, and his/her sensing behaviors deteriorate under conditions of stress and burnout (Hasher and Zacks, 1979). In automatic problem sensing, the FLE is not aware of a perceptual/sensing process that is continuously noticing features of problem situations such as the frequency of events, spatial characteristics of physical/social settings, and time (Newtson 1980). However, it has been noted that automatically sensed data will influence inferential thinking (Hasher et. al. 1977).

Following problems, solutions would involve the exchange of both utilitarian (e.g. money) and/or psycho-social (e.g. promises) resources. Since various researchers (e.g. Bagozzi 1975, Smith and Bolton 1998) following the traditions of social exchange and equity theorists (e.g. Homans 1961, Walster et. al. 1978) have suggested that solution elements (e.g. monetary exchanges, apology) have to address both problem nature and the magnitude of the loss, identifying the nature and the extent of the problem becomes very critical in problem sensing. Research on decision making in behavioral sciences and substantiated in marketing (Cialdini 1987, Chaiken et. al. 1989, Hoyer and Brown 1990, Olshavsky and Granbois 1979) has shown that individuals prefer to avoid cognitive effort and find simple rules and mental shortcuts to make quick but efficient judgments. It has been suggested that FLEs use simple heuristics (e.g. verbal cues, body language, Gibbs 1996) and props from established procedures (e.g. complaint forms, return receipts) to do their problem sensing.
People have largely been known to communicate their problem solving goals (desired consequences or values in a means-end chain) in functional terms (e.g. full payment with a penalty) while their higher order problem solving goals (e.g. exchange of assurances that such behaviors will not be repeated) are often left to the sensing and interpretive skills of the problem solvers (Kowalski 1996). Sivakumar and Singh (1998) have suggested that FLEs have to appropriately sense and address both the lower and superordinate goals in order to effectively problem solve. This is similar to the idea of a market orientated business satisfying both expressed and latent needs in terms of product and service offers (Narver and Slater 1990, Kohli and Jaworski 1990). Problem solving goals have been known to provide focus for the problem solving process. Based on Action-Identification Theory (Vallacher and Wegner, 1987), sensing of problem solving goals has been expressed as an important step in later identifying specific FLE problem solving actions to be undertaken and potential resources to be consumed in the service of the goals. Sensing problem nature and problem solving goals are not independent of each other since identifying the nature of the problem has been shown to facilitate interpreting the exchange goals for problem solving (Smith and Bolton 1998, Kowalaski 1996). Based on the above mentioned behavioral and motivational aspects of problem sensing, we define this aspect of FLE problem solving in customer service settings as “a behavioral orientation of the FLE to engage in activities that facilitate accurate and complete sensing of problems.” Further, such accurate and complete sensing of the problem in
customer service settings would include an understanding of the (a) nature of the problem, (b) extent of the problem, and (c) goals for problem solving.

(ii) Information Search and Processing: Obtaining relevant information about customer/problem specifics and processing them for further action is another aspect of the sensing dimension of the problem solving construct. Information search and processing theories based on social cognition emphasize cognitive behaviors such as encoding, organization of encoded data in memory, and subsequent retrieval (Nisbett and Ross 1980) in problem solving. Bounded rationality (Simon 1957) suggests that problem solvers have limited capacity to deal with all the information available in the environment and therefore have to effortfully choose, attend to, and encode only salient material (Xu and Kaye 2002). Information search and processing models based on learning theories, suggest that knowledge of prior behaviors are organized in abstract structures called schemas or stereotypes (Bower et. al. 1979, Fiske and Linville 1980). These knowledge structures then serve as the background against which new information is tested for salience.

Information processing theories based on motivation suggest that problem solvers (FLEs) have their own goals for problem solving, and therefore, the cognitive behaviors they adopt in this dimension, will primarily function in order to obtain information and process it with reference to their own goals (Staw and Ross 1978). Such goals have in the past been noted to include adherence to policies and procedures, and desire to maintain consistency of self image (Swann 1984). Agency
theory\(^3\) (Ross 1973), suggests that coaligning the preferences of the agent with those of the principal is critical to work outcome. The theory further suggests that within the dimension of information search and processing, investments in information search mechanisms (e.g. customer databases), and continuous monitoring of FLE’s information search and processing efforts (e.g. electronic monitoring of FLE communications with customers by layers of management) help reduce agency problems of moral hazard (lack of information search and processing effort from FLE), reduce the motivation based biases of this dimension (such as goal conflict), and make the cognitive information processing behaviors of the FLEs more visible (Eisenhardt 1988).

Information can be sought through a variety of formal (e.g. databases) as well as informal sources (talks with customer) and can include searching for both primary (e.g. a problem specific) as well as secondary data (e.g. customer profile). Information sources have also been categorized in literature as external (e.g. consumer) and internal (e.g. organizational database) (Keegan 1974) and as human and organizational sources (Jones and McLeod 1986). Research findings demonstrate how problem characteristics can influence the choice of sources for information acquisition (Connolly and Wholey 1988). For example, the customer is more likely to be consulted with than an internal database, when problem solving involves

\(^3\) Agency theory has been applied by marketing researchers (e.g. Basu et. al. 1985, Singh and Sirdeshmukh 2000) in the past to describe relationships in which one party (the principal, customer) transfers work (problem solving) to another party (agent, FLE) who is then expected to perform the work (problem solve) to conclusion.
extensive negotiation with the customer (Nisbett and Ross 1980, Saunders and Jones, 2000).

Examples of FLE cognitive behaviors employed in information search include discussions with the customer, other employees, vendors, and referring to customer data bases, product/service databases, purchase histories, marketing and sales reports, warranty information, etc. Interestingly, the secondary information from formal sources sought by the FLE is provided by different departments within the organization – marketing, sales, R&D, engineering, legal etc. Evidence exists to suggest that information provided by disparate sources needs to be consolidated in order to achieve effective problem solving (e.g. Schenk et. al. 1998).

Effective problem solving requires more than a well developed information source base and sourcing skills. Cognitive processes in the information processing domain are required to select, initiate, coordinate, and monitor the storage and retrieval of relevant information (Sampson et. al. 1989). Such cognitive processes include memory, use and regulation of strategies in information processing (Peterson et. al. 1991). Individual difference factors (e.g. knowledge, experience) and organizational variables (e.g. level of integration) are thought to affect the quality of information processing and problem solving effectiveness (deGroot 1966, Chi 1981, Schenk et. al. 1998). Past literature in education and management enumerate many information processing techniques (e.g. Ready made solution, Mintzberg et al. 1976; Nominal Group technique, Delbecq and Van de Ven 1974) available to the FLE.
However, an investigation of the more favored information processing techniques used in several business problem situations indicates a preference for tools that are less complex, easier to use, do not involve experts, and less expensive (Hartman and White, 2001).

Based on the above mentioned behavioral and motivational aspects of information search and processing, we define this aspect of FLE problem solving in customer service settings as “a behavioral orientation of the FLE to effortfully engage in activities that facilitate accurate and complete search for and processing of information related to problems.” Such accurate and complete information has been described in the past to be more than just verbalized needs and problem details and to include both sources of information search and types of information gained from each source. Folger and LeBlanc (1995) suggest that relevant information should include possible cause(s) that are fueling the problem. Osborn (1963) states that information acquisition will help better understand the problem itself. Success at this stage requires a working knowledge of what information to gather, how to gather it, and from what sources.

**FLE Behaviors of the Solving Dimension of the Problem Solving Construct**

*(i) Solution Generation and Negotiation:* Research activity in cognitive and behavioral psychology has provided theories regarding solution generation behaviors following information search and processing. Based on Simon’s satisficing theory, Janis and Mann (1977) suggest that problem solvers will stop their information search
and processing as soon as they find a solution option that is not necessarily the best serving but just satisfies the problem solving goals. However, Tversky and Kahneman (1981) adopt the view that solution generation depends on a host of factors including problem solver’s motivation, the stakes involved, and how the problem is perceived/framed. For instance, if the FLE suspects that on his/her adopting a satisficing stance to solution generation, it might result in high cost of failing problem solving (e.g. the customer might indulge in damaging negative word of mouth) then he/she will be motivated to seek the ‘best solution’. This is also in line with other work (e.g. Gray and Tallman, 1987) where problem solvers are more motivated by the ‘rewards forgone’ heuristic than the ‘rewards sought’ in generating solution alternatives.

Negotiation theories have generally been either outcome based (e.g. Nash’s equilibrium, 1950) or process based (e.g. Bartos’s model of negotiation, 1977). Both these approaches assume that concern for the other’s payoffs extends only as far as the strategic need to keep the other party interested in negotiating. The drawback in applying any of these theoretical positions to negotiations in problem solving in customer service settings is the explicit lack of concern for the others’ payoff. Though negotiation in problem solving has been treated in a variety of ways in past literature, the basic premise has been that negotiators (FLE and customer) take each others’ payoffs into account in evaluating the different solution alternatives (Loewenstein et. al. 1989). Relative payoff models (Corfman and Lehmann 1993) based on the primary social motives of cooperation (maximize joint gain), equity (maintain ratio of inputs
to outputs), and equalitarianism (minimize the difference between the payoffs) have been offered as more applicable to continual situations (long-term provider-customer relationship) as opposed to self-interest (maximize self gain) or aggression (minimize other’s gain) in one-off situations (one time only transactions). As fallout of this premise, many studies have shown that negotiated solution alternatives are influenced not only by the value of the outcomes, but by relationship and individual factors as well (e.g. interpersonal trust, Zaheer et. al. 2000, Sirdeshmukh et. al. 2002). Further, motivation to negotiate an acceptable solution has been described in the past to include behaviors oriented towards cooperation, integration, and exchange (Pruitt 1981) and has been described as cooperative orientation (Rubin and Brown 1975), representation bargaining (Angelmar and Stern 1978), and integrative bargaining (Walton and McKersie 1965). Such motivation has been identified often with a willingness to make concessions, and adapt these concessions to the needs of the parties to the negotiation (Graham et. al. 1994).

Druckman (1977) offers further insight into the behaviors that facilitate successful negotiations by describing the negotiator’s role as either that of a bargainer or a representative. As a bargainer, the negotiator’s role would imply self-interest/aggression motives (FLE maximizing the firm’s payoffs) while as a representative, the FLE would attempt to co-operatively build a solution package that is acceptable to both the firm and the customer. Boundary role conflicts and problem escalation are generally said to arise when both the FLE and the customer assume bargainer roles or when they assume opposing roles (e.g. FLE as representative and
customer as bargainer). Generally, effective negotiation leading to an implementable solution alternative has been considered very important since the costs of problem escalation (e.g. negative word of mouth, customer exit, legal costs) could easily outweigh the benefits (e.g. avoiding costs of setting precedent) of being in battle (Richins 1983, Roberts 1996).

Drawing from the above cognitive, behavioral and motivational theories of solution generation and negotiation, we define this aspect of FLE problem solving in customer service settings as “a behavioral orientation of the FLE to effortfully engage in adaptive or innovative activities that facilitate generation of an acceptable solution(s), and to when further needed, engage in actions that facilitate successful negotiation of a mutually acceptable solution(s) to problems.”

Evaluation: A problem has not been solved until the solution has been implemented (Couger 1995, Levitt 1986). The solution contains elements that reflect the preferences of both the negotiators, but does not imply consequent behavior. To do so, would be as unjustified as assuming isomorphism between attitudes and behavior (Petty and Cacioppo, 1981, 1983). Often organizational structure that is conducive to solution generation (low formalization, low centralization, high empowerment) has been cited as defacilitating solution implementation (Duncan 1976). Further, though solution generation is likely to be accomplished by one individual FLE in customer service settings, implementation is often carried out by the joint and separate actions of various work groups/individuals affected by the
solution. These concerns necessitate continuous monitoring and evaluation of implementation results against all relevant problem solving goals, learn from the evaluations, and improve problem solving efficacy. Such learning and learning capabilities have been described in the past as enabling people to consistently enhance their capacity to produce results that are truly important (Senge 1999).

Organizational and pedagogical learning theories in general offer different explanations of how organizational actors (such as an FLE) use various learning frameworks in order to continuously evaluate their own performance against results and improve. Decontextualized behavioral theories of adaptive learning pay attention to whether or when learning occurs following certain behaviors (Levitt and March 1988), while cognitive adaptive learning theories focus on the kinds of learning that results from such behavioral processes (Argyris and Schon 1978). A situated theory of adaptive learning on the other hand suggests that problem solvers use many aspects of their physical contexts to learn from and improve their problem solving efficacy (Tyre and von Hippel, 1997). A developmental perspective of learning implies that FLEs have a capacity for self-reflection, learning, and improvement (Ellstrom 1997). Such self-reflections have been known to include either reflect in action (Schon 1983, notion of reflective practitioners) or reflect on action (Raelin 2001), and to include behaviors such as the use of various organizational learning tools (e.g. the ladder of inference, system archetypes), candid conversations, story-telling, and questioning of self beliefs and assumptions (Ayas and Zenuik 2001).
Drawing from the above mentioned behavioral nature of reflection, evaluation and improvement of performance, we define the evaluative nature of this aspect as “a behavioral orientation of the FLE to effortfully engage in reflection following problem solving efforts as a way to monitor, evaluate and improve one’s problem solving efficacy.” It has been suggested that such reflections not only include the evaluation of results against goals, but an evaluation of all stages of the problem solving process (White et. al. 1980). Significant insights gleaned through such reflection and evaluation activities not only help in recovering immediately from implementation failures, but the learning gained and institutionalized has been found in the past to be instrumental in improving the problem solving process.

On the basis of the common themes evident in the above discussion, we have developed a comprehensive process oriented definition of problem solving. Problem solving in customer service settings is thus defined as an overall process involving sensing behaviors of (i) problem sensing and (ii) searching for and processing information; and solving behaviors of (i) generation of solution alternatives and negotiating a mutually acceptable solution option, and (ii) evaluation of problem solving efforts. Following other process models of problem solving, each dimension/behavioral step is necessarily a pre-requisite for the next, though feed back loops from the current activity engaged in, can permit the problem solver to revisit an earlier stage. For instance, negotiating a solution alternative could reveal an imbalance in information between the customer and FLE, thereby permitting the FLE to go back to an earlier stage and collect the relevant information.
We thus view problem solving as a process that can be understood by examining the following specific constructs: (1) enduring dispositions of people when they perform sensing and solving problems. These enduring dispositions generally do not vary for a person from problem to problem; (2) the cognitive and emotional strategies utilized for problem sensing including searching for and processing information, and for problem solving including generation of solutions and negotiating a mutually acceptable solution, that could vary from problem to problem; and (3) the evaluation of problem solving efforts as an outcome that is separate and distinct from the problem solving process. In the next chapter, we will discuss the nomological model guiding our research and related hypotheses.
Chapter III

Model Development and Hypotheses

Figure 1 displays the proposed theoretical model. Five aspects of the model are worth mention before we discuss the mechanisms involved. First, we draw from problem solving and social exchange theories rooted in both marketing and social psychology in order to identify multiple FLE problem solving dispositions – FLE orientations towards solutions to problems (e.g. Kirton 1976), their goals for problem solving (e.g. Dweck 1986, Button et. al. 1996), and blame attributions FLEs make about problem source (e.g. Weiner 1986) – as representing FLE dispositions in solving problems of customer adversity. Second, our dependent variables focus on judging problem solving success by including indicators of both customer compliance and customer loyalty (customer retention, revenue, and share of category use). Third, based on process theories of problem solving and emotional labor, we propose a mediating process of situated FLE strategies as linking FLE dispositions to customer compliance and loyalty outcomes. As depicted in the second box, FLE cognitive and emotional strategies are used to model the mediating process. Social interactions involve collaboration, negotiation, and regulated displays of positive/negative emotions (e.g. Hochschild 1983, Tallman et. al. 1993) and the constructs of cognitive and emotional strategies represent these important antecedents which have been shown to influence the interactions and related outcomes (Sutton and Rafaeli 1988, 1991). Fourth, the model allows for dispositional variables to be at the FLE level of analysis, the mediating and outcome variables to be at the individual customer level of analysis. As there are several problem customers who interact with a single FLE,
allowing the customer level of analysis to be nested within the FLE level is useful in examining how problem solving strategies driven by enduring dispositions of the FLE consistently impact behaviors across customers. **Fifth and finally,** customer dependency on the focal service provider and level of customer adversity have been included as a moderating variables to rule out confounding effects. We will now discuss the constructs and develop hypotheses for empirical testing.

[Figure 1 about here]

**FLE Problem Solving Dispositions and FLE-Customer Exchange Strategies**

**Enduring FLE Problem Solving Dispositions.** We conceptualize FLE-customer interactions to include both cognitive and emotional strategies that FLEs employ during problem solving interactions with customers. Though organizations routinely provide procedural guidelines for the cognitive strategies to be employed, and rules for emotion displays when problem solving, FLE problem solvers have enduring dispositions towards problem solving that impact the use of both cognitive and emotional strategies in distinct ways. We conceptualize these enduring dispositions towards different aspects of the problem solving work to include – FLE approach to the problem and its solution (*solution orientation*), FLE goals for problem solving (*goal orientation*), and FLE tendency to make blame attributions for the problem (*attribution orientation*). Following research on personality dispositions (Amabile 1983, Mischel and Shoda 1998), this conceptualization views these dispositions to be consistent across several problem solving interventions of an FLE. We discuss each in turn.
Solution Orientation. FLEs consistently approach and solve problems either adaptively or innovatively. For this study, we explicitly consider FLE solution orientation. The literature on adaption-innovation (e.g. Kirton’s Adaption-Innovation Theory, KAI, 1976) argues that individuals have a distinct enduring cognitive style – adaptive or innovative – of problem solving (Kirton 1976). According to KAI, though both adaptive and innovative problem solvers are capable of producing solutions to the problem at hand, they will systematically adopt different cognitive strategies and processes in arriving at solutions. For example, adaptors tend to cognitively deal with problem details one at a time, while innovators consider multiple stimuli simultaneously. This predisposition has been shown to have stable characteristics that are distinct from the ability to solve problems. Evidence for such discriminant validity (low correlations, r<.20) ability has been demonstrated by the statistical independence between the adaption-innovation cognitive style and scores on aptitude, achievement, cognitive complexity and involvement (Chan 1996, Kirton 1976, Goldsmith 1985, Bagozzi and Foxall 1996).

Goal Orientation. FLEs could be performance or learning goal oriented when problem solving. For this study, we explicitly consider FLE goal orientation – a construct that captures an FLE’s enduring dispositions towards the goals for problem solving. Consistent with dispositional goal orientation literature (Dweck 1986, Button et. al. 1996), a performance goal oriented problem solver is focused on demonstrating problem solving skills compared to others, and a learning goal oriented is focused on

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4 Not to be confused with a solutions orientation (Graham 1976) that describes the relative ease that problems solvers have in suggesting solutions when compared to identifying or framing the problem.
competency building and improving problem solving skills. A performance orientation stems from an extrinsic interest in one’s work – the desire to use work performance to achieve valued external ends (e.g. positive peer/superior reviews) and a learning goal orientation stems from an intrinsic interest in one’s work – a preference for challenging work that permits one to gain task mastery (Meece et. al. 1988, Sujan et. al. 1994). Ames and Archer (1988) found that goal orientations affected problem solving as under a learning orientation, individuals were not bothered by mistakes committed on the task, while performance oriented problem solvers tried to increase their productivity in solving more problems and avoided challenging problems that could slow them down or make them commit mistakes.

**Attribution Orientation.** Finally, FLEs are predisposed to either blame the problem customer or the customer’s environment for the problem. In this study, we explicitly consider FLE attribution orientation – a construct that captures the FLE’s blame attributions. Attributions for behavior in social interactions have been known to have systematic biases (Ichheiser 1949) wherein people have the tendency to consistently interpret adverse behaviors of other people in terms of either specific personality characteristics or in terms of specific situational characteristics. These inferences have been explained in terms of a gestalt perceptual process (Heider 1958) and in terms of judgmental heuristics (Ross 1977). For example, attribution theory (Heider 1958) suggests that people are ‘naïve scientists’ and are predisposed to form consistent hypotheses for others’ adverse behaviors. These attributions tend to either blame the person or the person’s environment for the person’s adverse behaviors. A
disposition to blame the person signifies the general belief that adverse situations are controllable by the person, while a disposition to blame the environment suggest that the adverse situation was beyond the control of the person.

Each of the preceding dispositional characteristic is posited to influence the cognitive and emotional strategies that FLEs use to solve the problems of problem customers. Before developing the logic and support for these hypotheses, the specific strategies utilized in this study are introduced and defined.

**FLE-Customer Interaction Strategies.** We propose that in line with the disposition approach of this study and cognitive-emotive process models (e.g. Stephens and Gwinner 1998) FLEs employ contextually sensitive cognitive and emotive problem solving strategies. More importantly, these problem solving strategies are defined at the level of individual FLE-customer interaction. It is to be noted that *first*, in accord with the sensing-solving process of problem solving (chapter 2), cognitive strategies enable FLEs to make sense of the problem and to solve for solutions; and *second*, emotional strategies enable FLEs to manage the display of emotions during the problem solving interaction. We will address each in order.

Specifically, our conceptualization proposes that cognitive strategies pertain to (i) FLE sense making of the nature of the problem either by *confirming* or through *probing*, and (ii) FLE problem solving by either *communication* of the solution to the
problem customer or jointly *negotiating* for solutions with the customer. Past research has identified two cognitive information-gathering strategies for sense making—a confirmation and a diagnostic strategy (Hodgins and Zuckerman 1993, Trope and Bassok 1982, 1983, Snyder 1981). In his discussion of a confirmatory strategy for problem sensing and information gathering, Snyder (1981) suggested that confirming involves asking questions that are consistent with features believed to be associated with the problem. For instance, subjects in his study of social information gathering asked people known to be extroverts, confirmatory questions about the number of friends that they had, and different ways they knew to liven up a party. On the other hand, Trope, Bassok and Alon (1984) define probing or diagnostic questions as those that have the potential to provide answers that are capable of providing alternative hypotheses. Extending this to our situation where the problem customer fails to make a payment, if sense making through confirming is initiated by the FLE, customer responses would mostly be acquired to confirm existing information (such as in a database). A typical question would confirm income of the customer while in contrast, when the FLE asks the problem customer probing questions, these questions have the potential to permit the greatest distinction between existing and new sense making information. For instance, even if the customer’s income might be confirmed to be the same as before, the FLE might ask if anything has transpired that prevents the customer from using the income and might come up with the new significant information that the customer was recently divorced and has more expenses.
Further, based on models of emotional labor (Hochschild 1990, Ashforth and Humphrey 1995), FLE emotional strategies enable the FLE to socially construct and regulate the display of emotions within the interaction. Past research in marketing and organization behavior has identified two emotional strategies as tools of social influence – a dominant and a regulated emotion strategy (e.g. Bass 1981, Conger et. al. 1988, Rafaeli and Sutton 1991). Our conceptualization proposes that emotional strategies pertain to (i) FLE construction of the dominant nature of emotion intensity (i.e. interaction is either positively or negatively valenced), and (ii) FLE regulation of FLE emotions displayed within an interaction i.e. FLE regulates the intensity and display of his/her positive/negative emotions in response to displayed consumer emotions. Consistent with self-regulation theory, FLEs regulate their own emotion displays as a strategy to manage the level of discrepancy of displayed emotions between the FLE and the problem customer within an interaction. Research indicates that in problem solving situations, a dominant nature is often established through displays of dominantly valenced emotions. For instance, Rafaeli and Sutton found that bill collectors used successive or simultaneous displays of negative emotions such as anger, irritation, and disapproval when interacting with debtors, 1991). In the literature, regulation has often involved alternating displays of positive and negative emotions. Kamisar, 1980 found that criminal investigators alternate the use of opposing emotions such as kindness and anger with suspects -- good cop/bad cop routine.

**Impact of FLE Dispositions on FLE Strategies: Theory and Hypotheses**
Solution Orientation and FLE strategies. An adaption-innovation orientation is expected to influence problem sensing and problem solving cognitive strategies in systematic ways. The literature on adaption-innovation (Kirton 1976) argues that when solving problems, adaptor FLEs would tend to make sense of and solve problems with set, circumscribed patterns of behavior. They are more likely to work within organizationally established parameters, tend to take the problem as already defined, prefer structure in their problem situations and generate/choose a few relevant solutions that they think are sufficient. This tendency to consider the problem structure as constant enables the adaptor FLEs to make sense of the problem by adopting cognitive strategies that reduce the level of discrepancy between existing and new information. Innovator FLEs, by contrast, tend to redefine the problem, are less likely to be limited by established parameters, more ready to accept and accommodate changes in problem structure, show a higher propensity towards exploring for information, and produce a pool of numerous solutions to the problem (Goldsmith 1985). For instance, adaptors, when faced with the problem of making choices, were concerned about the accuracy of details within their frame of reference and sought such resolution with discipline and efficiency. By contrast, innovators when faced with the same choices actively probed for more information even when it conflicted with their current usage patterns (Foxall and Bhate 1993). Based on the preceding discussion we propose that, FLEs would employ the sense making cognitive strategies of probing and confirming in ways that are consistent with their adaption or innovation orientation. For instance, adaptors are more likely to accurately update existing information categories in the firm database, a sense making
strategy that is consistent with their tendency to work within established parameters. On the other hand, consistent with their innovation orientation, innovator FLEs would also probe for new information outside of established database categories. This leads us to hypothesize that,

\[ H1a: \text{FLEs with an adaption solution orientation are more likely to use confirming cognitive strategies than probing cognitive strategies} \]

\[ H1b: \text{FLEs with an innovation solution orientation are more likely to use probing cognitive strategies than confirming cognitive strategies} \]

Further, consistent with literature on adaption-innovation, adaptor FLEs are more likely to use cognitive strategies for solutions that conform to rules, appear prudent, and have well established network of roles and expectations. Innovator FLEs are more likely to challenge established hierarchies, role expectations, and work with solutions that might seem to be riskier (Foxall and Hackett 1992, Foxall and Bhate 1993). Problem customer behaviors (e.g. non-payment of credit card balances) pose problems that often imply failure in customer’s contractual obligations. Backed by contractual rules and regulations, an adaptor FLE may solve the problem by imposing penalties (e.g. late fees) on the erring customer (McCarthy and Fram 2000).

Consistent with adaption-innovation literature, the adaptor FLE is more likely to use the cognitive strategy of only communicating his/her rule backed solution (generally penalties) to the offending customer. By contrast, the innovator FLE is more likely to respond to the specifics of the customer’s situation and invite more customer participation in negotiating customer’s own penalties. While, it is true that the employment of either cognitive strategy could produce identical solutions (e.g. late fee of $xx.xx), the above discussion is primarily to point out that adaptive and
innovation orientations are more likely to result in the use of the different FLE cognitive strategies for producing and delivering such solutions. Therefore we hypothesize that:

\[ H1c: \text{FLEs with an adaption solution orientation are more likely to use communication of rather than negotiation for solutions cognitive strategies} \]

\[ H1d: \text{FLEs with an innovation solution orientation are more likely to use negotiation for rather than communication of solution cognitive strategies} \]

The literature on adaption-innovation conceptualizes the focal orientation as a personality disposition that is an ‘enduring cognitive style of problem solving’ (Kirton 1976) and a personality dimension that is relevant only to cognitive analysis (Chan 1996), thus suggesting that it pertains only to cognitions and not emotions. As the conceptualization of adaption-innovation does not entertain a link between such a cognitive disposition and emotional responses, we posit that adaption-innovation solution orientation is unlikely to enhance/detract the use of emotional strategies and hypothesize that:

\[ H2: \text{FLE solution orientation will have no significant effect in use of different emotional strategies} \]

**Goal Orientation and FLE Strategies.** Performance and learning goal orientations impact cognitive reactions to task environments in distinct ways (Button et. al. 1996). For example, under a performance orientation, FLEs who faced failure made negative evaluations of their abilities, withdrew from the activity and/or avoided challenging situations. Conversely, under a learning orientation, FLEs were favorable to new work approaches, not unduly bothered by mistakes, and maintained effort under difficult conditions (Sujan et. al. 1994). Consistent with this, in problem
solving situations, FLEs with a performance orientation are more likely to use cognitive strategies in ways that would reduce the chances of performance failure. Confirming the nature of the problem compared to probing for problem details reduces the risk of introducing ambiguity and incorporating new information into the problem solving task. Further, negotiation with an adverse partner who may have different motives for problem solving comes with its own associated risks and uncertainties (e.g. de Dreu et. al. 2000). As such, performance oriented FLEs are more likely to communicate solutions to the problem customer than face the uncertainty in negotiating a solution in a situation of adversity. Organizations generally provide structures for problem solving that performance oriented FLEs are likely to rely heavily on. The risk of problem solving failure is not likely to deter learning oriented FLEs from either probing or negotiating, as they are unlikely to consider failures negatively and instead use these failure episodes as opportunities to learn from and improve (Elliott and Dweck 1988). Subsequently, in problem solving situations involving adverse partners with different problem solving goals, learning oriented individuals are likely to be more inclined to share information and negotiate with the adverse partner (O’Connor and Arnold 2001). Therefore learning oriented FLEs are less likely to refrain from the cognitive effort needed for probing for problem nature and incorporating new information into the problem structure. As, learning oriented FLEs are less constrained by organizational structure for problem solving, they would be more likely to take up the risks involved in negotiating solution terms with the problem customer. We thus posit that:

\[ H3a: \text{ FLEs with a performance goal orientation are more likely to use confirming cognitive strategies than probing cognitive strategies} \]
H3b: FLEs with a learning goal orientation are more likely to use probing cognitive strategies than confirming cognitive strategies.

H3c: FLEs with a performance goal orientation are more likely to use communication of than negotiation for solutions cognitive strategies.

H3d: FLEs with a learning goal orientation are more likely to use negotiation for than communication of solutions cognitive strategies.

FLEs with a performance orientation who seek positive management evaluation for the work they do, would tend to avoid failures and more likely to use the structured emotional strategies provided by the organizational systems that have worked in the past in order to problem solve successfully. In other words they would be disinclined to experiment with untried and untested emotional strategies that could jeopardize successful problem solving outcomes and a favorable evaluation of their ability (Bempechat et. al. 1991). Evidence suggests that in situations where individuals have more power than those whose behaviors they are trying to influence, an intense negative emotion has been managerially endorsed and widely used by organization members (e.g. Kipnis 1984, Sutton 1991) For example, in the banking industry, bill collectors who were solving the problem of customer delinquencies, primarily used the negative emotions of disgust, disapproval and anger in order to collect (Rafaeli and Sutton 1992). Thus, FLEs who are performance oriented would be more inclined to maintain a dominant negative emotion in their interactions with problem customers. Conversely, learning goal oriented FLEs are more inclined to search for new ways to problem solve and therefore would be less inclined to constantly exhibiting the same pattern of emotions as a strategy in all customer interactions. Further, as learning goal oriented FLEs are “constructing” solutions by incorporating situational information from customers, and exhibiting more sensitivity
to customer concerns, they are less likely to depend only on intense negative emotions in their problem solving interactions. Therefore we hypothesize that:

\[ H4a: \text{FLE performance goal orientation is likely to result in the use of negative emotions} \]
\[ H4b: \text{FLE learning goal orientation will have no effect on emotion valence} \]

Further, performance oriented individuals are known to believe that their abilities are fixed and elements of their task environment are uncontrollable. Alternatively, learning oriented individuals believe that ability can be increased and task elements are capable of manipulation (Dweck and Leggett 1988). In customer adversity situations this manifests as beliefs in the controllability of outcomes by regulation of interaction elements such as the emotion displays of the FLE and problem customer. Emotion regulation involves increasing or decreasing the intensity of and alternating positive/negative emotions in response to customer emotions during the problem solving interaction. Manipulating the emotional climate carries a risk of failure, and is likely to result in the performance oriented FLE not wanting to regulate their emotions (Nicholls 1984). By contrast, learning oriented FLEs do not have such vulnerabilities and would be more likely to meet the increased regulatory demands in order to manage the emotional climate and learn from it. This leads us to posit that:

\[ H4c: \text{Performance orientation will be negatively related to emotion regulation} \]
\[ H4d: \text{Learning orientation will be positively related to emotion regulation} \]

Attribution Orientation and FLE Strategies. FLEs tend to assign blame for problem customer behaviors either to the customer or to the customer’s environment. Two closely related theories offer explanations for the different cognitive strategies
that FLEs use under the two attributions. Covariation theory about testing of hypotheses (Kelley 1973) suggests that people tend to obtain and use information in ways consistent with their attributions. For example, evidence from the legal system suggests that, when jurors who were charged with the duty of judging criminal acts such as embezzlement and auto theft made personality focused attributions, it led to a more limited information search and preference for confirmatory evidence (Pfeiffer and Ogloff 1991, Jones and Kaplan 2003). This is because when guilt is expected due to personality focused attributions, confirmatory evidence (customer’s recent divorce) from a information search is less likely to unearth new information leading to the alternate hypothesis (e.g. the customer’s environment is to blame), and therefore more likely to provide quick closure. A customer-focused attribution (e.g. customer has not managed his/her finances responsibly) should similarly promote a confirmatory strategy and more constrained information search and consideration. Conversely, when the FLE entertains an environment-focused attribution, a probing strategy is favored and increases the utility of diagnostic evidence in testing the alternative hypothesis (e.g. the customer’s recent divorce is to blame). Closely related to the above discussion is the notion of dissonance theory which suggests that people seek and use information that supports a preferred alternative. Thus, if a customer-focused attribution is the preferred alternative, then a confirming problem sensing strategy will more likely provide the FLE with the needed confirmatory evidence (e.g. customer defaulted on payment in the past too). But, if an environment-focused attribution is preferred, then the FLE is more likely to find closure with a more
expanded probing strategy in order to provide the required evidence (e.g. spouse of
customer recently lost job). Our preceding discussion leads us to posit that:

$H5a$: **FLEs with customer focused attributive orientation are more likely to use confirming cognitive strategies than probing cognitive strategies**

$H5b$: **FLEs with environment focused attributive orientation are more likely to use probing cognitive strategies than confirming cognitive strategies**

Further, similarities between FLEs dealing with customer adverse actions and
law enforcement personnel dealing with citizen adverse action has been drawn in
research (e.g. Rafaeli and Sutton 1991, Kamisar 1980, good-cop, bad-cop routine).
Consequently, in the judicial literature where an adverse action (crime) is committed,
and guilt has to be ascertained, punishment (penalties) have to be imposed; it has also
been found that when personality focused attributions for the crime committed were
made, jury deliberations and sentencing were accomplished in less time (e.g.
deliberation time for jurors to reach a verdict, Gordon 1990), than when environment
focused attributions were made, as the jurors merely had to communicate their
judgment for sentencing and did not have to effortfully deliberate on other alternative
hypotheses in order to ascertain guilt. FLEs often act in the position of a judge/jury
member of evaluating adverse action in order to ascertain guilt and thus extending the
above argument, if a customer-focused attribution is made, FLEs would be more
likely to communicate relevant solutions (their verdict and sentence) to the customer
and less likely to invest the resources needed to negotiate a solution with the ‘guilty’
customer. On the other hand, FLEs who tend to blame the environment, would
consider expending greater time and effort taking into account the circumstances of
the ‘not guilty’ customer and negotiating a solution with the customer. This preceding discussion leads us to hypothesize,

\[ H5c: \text{FLEs with customer focused attributive orientation are more likely to use the cognitive strategy of communicating rather than negotiating for solutions} \]
\[ H5d: \text{FLEs with environment focused attributive orientation are more likely to use the cognitive strategy of negotiating for rather than communicating solutions} \]

Stephens and Gwinner (1998) proposed a cognitive-emotive process (CEP) model of behaviors and emotions in response to failures. The model builds on previous work in social psychology and proposes that individuals display differently valenced emotions according to the different blame attributions they make. For example, evidence from their and other work (e.g. Izard 1993, Russell and McAuley 1986) suggests that when blame is placed on the individual for the adverse behavior, then the dominant emotions are anger, disgust, contempt, and a generalized negative affect. Also, in a study of product failure, Folkes (1984) found that personality focused attributions about controllability influenced anger and the desire to harm. On the other hand when blame was placed on situational forces, the emotions were more positively valenced and included empathy and forgiveness (Izard 1993). In a study of the judicial process (Tsoudis and Smith-Lovin 1998), it was found that when the adverse behavior was not attributed to the central identity of the perpetrator, anger towards the offending individual was reduced significantly, positive emotions of sympathy arose, the adverse individual was considered fit for help (e.g. counseling) and also received less severe punishments (e.g. shorter prison terms, guilty verdicts to lowered counts). Extending the above discussion, when FLE attributions tend to be customer focused, the emotion can be expected to be more negative valenced as
opposed to more positive when the FLE thinks that the environment is to blame for the adverse behaviors. Further, affect control theory (Heise, 1979; Smith-Lovin & Heise 1988, Robinson et. al. 1994) suggests that when customer focused attributions for norm violations are made, then the object of the adverse behavior (i.e. FLE) will more likely react with unregulated negative emotions since the customer who occupies a negative identity in the eyes of the customer is ‘deserving of the nasty treatment’. However, in environment based attributions, the problem customer continues to occupy a positive identity in the eyes of the FLE and therefore the FLE’s emotional displays will more likely be muted through active regulation. This leads us to hypothesize that:

\[ H6a: \text{FLE customer-focused attribution is likely to result in the use of negatively valenced emotions} \]
\[ H6b: \text{FLE environment-focused attributions is likely to result in the use of positively valenced emotions} \]
\[ H6c: \text{FLE customer-focused attribution will be negatively related to emotion regulation} \]
\[ H6d: \text{FLE environment-focused attribution will be positively related to emotion regulation} \]

**Modeling the Impact of FLE Cognitive and Emotional Strategies on Customer Compliance**

Compliance in literature has generally been defined in behavioral terms as an individual’s execution of actions that are consistent with a normative, desired or negotiated pattern of action. Compliance behaviors have been discussed in the past where the compliance performers, for example, have been followers of a leader (Barbuto 2000), patients in a health care facility (e.g. Shaffer and Simoneau 2001), customers (Dellande and Gilly 1998), taxpayers (e.g. Davis et. al. 2003), and health
care workers (e.g. Stephens and Ludwig 2002). Customer compliance in particular, has been explored in situations such as adherence to smoke-free dining rules in restaurants (Miller et. al. 2002), bad debt collections (Rafaeli and Sutton, 1989), and patient compliance with drug therapy (Wosinska 2005).

While compliance behaviors (e.g. payments) from problem customers (e.g. payment defaulters) is desired, evidence from the market place suggests that extracting compliance from problem customers is fraught with problems (Cleaver 2002). For instance, problem customer compliance does not come without associated costs (e.g. loyalty issues of exit, negative word of mouth, reduced patronage) or failure (failure to achieve desired levels of compliance). However, such problems have been overcome/managed by managing the strategies (emotions and cognitions) employed in the compliance inducing process. Brehm 1999 argues that emotions are functionally identical to motivational states and that the key to an emotion’s motivational power is that it changes the significance of a person’s many goals. People have many important goals and infinite number of possible things to do, and it has been shown that display of differently valenced emotions (both positive and/or negative) in interpersonal interactions is a means of monopolizing behavior and thus its priority over other signals (Tomkins 1962). Emotions motivate behavior by making the person care about certain events (Silvia and Brehm 2001). For example, FLEs have been known to manage displayed emotion valence (i.e. both positive and/or negative emotions) when trying to influence compliance behavior (e.g. Conger et. al. 1988, Kipnis 1984). Cialdini (1984) found that people are inclined to comply to a kind person’s requests (positive emotions), while O’Keefe (1990) found that
compliance requests made by the upbeat frontline person are credible. Rafaeli and Sutton (1991) have suggested that the common theme in using positive emotions as a strategy of social influence tool is that, since interactions with an upbeat person are positively reinforcing, ‘targets comply with the upbeat person’s wishes’ (pp. 750). Similarly, social influence theories and related studies have shown that a dominant negative nature of displayed emotions is also used as a tool of influencing compliance. For example, Kipnis and Schmidt (1983) studied the use of hostility and irritation to achieve target compliance. CEOs of large Fortune 500 companies used fear and intimidation to extract compliant behaviors from their subordinates. Further, in his study of negative emotions used by bill collectors, Sutton (1991) describes highly intense negative emotions such as anger, irritation, and disapproval as the FLE strategies that are used to get debtors to pay immediately. The problem customers responded to the negative emotions and Rafaeli and Sutton (1991) suggest that ‘negative feelings induce anxiety in debtors’ (pp. 750), leading the debtors to comply with the demands of the bill collectors in order to escape from this anxiety. This is also consistent with models of anxiety reduction and/or avoidance (Higbee 1969) and escape conditioning (Cecil, Weiss and Feinberg 1978). Thus the preceding discussion suggests that both positive and negative displayed emotions are in and of themselves functionally capable of motivating compliance behaviors and we therefore posit that:

\[ H7: \text{Greater intensity of either positively or negatively valenced emotions will be related to increased customer compliance} \]

Interpersonal emotion management refers to the attempts that individuals make to regulate the display of emotions in interpersonal interactions (Francis 1994, Van Maanen and Kunda 1989, Thoits 1993). FLEs regulate the display of their own
emotions in response to consumer emotions during their interactions with consumers (e.g. flight attendants typically managed their emotions in their interactions with passengers, Hoschschild 1983; and paralegals were responsible for regulating their own emotions in response to the emotions of their attorneys, Pierce 1995). While FLEs regulate their emotions primarily as an attempt to influence consumer behaviors (Gibson and Schroeder 2002), regulation of emotional displays in adversity situations, especially between dyads of different power levels, is associated with both productive and counter-productive outcomes (e.g. compliance and aggression) in distinct ways (Ayoko, Callan, and Hartel 2003). For example, low FLE emotion regulation leading to high discrepancies between emotions expressed by the FLE and the problem customer is likely to be followed by tension, negativity, lack of cooperation, and non-conforming behaviors (Cote and Moscowitz 2002). One would think that positive FLE emotions without regulation would be the most effective in promoting customer compliance, but regulation of displayed emotions communicates the ‘motive readiness’ of service providers (Jones and Rittman 2002). Thus if the customer is displaying negative emotions in the interaction, a consistent display of positive emotions by the FLE in fact signals a lack of cooperation/sensitivity from the FLE and tends to make the customer even more adversarial and bound by the need to win by not acceding to the demands of the FLE. On the other hand, high emotion regulation by the FLE is more likely to result in increased behavioral flexibility and a spirit of cooperation and conformance (Hertel and Fiedler 1994), as the problem customer is likely to respond positively to the willingness of the regulating FLE to ‘adjust and work with the customer’. This leads us to hypothesize that:
**H8:** Regulation of displayed emotions of the FLE is positively related to customer compliance

“The most important contribution to compliance is (a common) understanding” (Baker 1973, pp. 252) highlights the underlying theme of all past research describing the relationship between sense making and compliance. Generally, different sense making cognitive strategies -- confirming and probing -- result in different levels of a common understanding (e.g. Jones and Kaplan 2003); and increasing levels of a common comprehension result in greater degrees of compliance (e.g. Conzola and Wogalter 2001 found that increased employee/employer common comprehension resulted in higher compliance to work safety rules). Though both confirming and probing strategies are meant to enhance FLE knowledge about the problem situation, a diagnostic probing strategy results in a greater common understanding of the problem as compared to a limited confirmatory information search as it allows the FLE to incorporate both new information and changes in existing information (Trope and Bassok 1984, Hodgins and Zuckerman 1993). Confirming involves asking questions that are consistent with features believed to be associated with the problem and the customer responses would merely confirm existing information categories such as those in the firm data base. When the FLE uses a probing cognitive strategy, the problem customer is likely to perceive it as an effortful attempt by the FLE to give importance to the customer/problem, and genuine intention to provide problem solving service (Dibben and Lean 2003). This is likely to reduce the compliance threshold of the problem customer and lead to compliance. Thus we hypothesize:
H9: The cognitive FLE strategy of probing for information is more positively related to customer compliance than confirming existing information

Further, increased levels of shared expectations through negotiations is more likely to increase compliance. This is because, when the FLE negotiates the terms of the solution with the problem customer, there is greater satisfaction with the substance of the solution than one that has been handed down from the FLE to the customer, as the customer has had the opportunity to participate in and influence the design of the solution. For example, May and Wood’s (2003) study on regulatory compliance suggests that interactions between inspectors and regulatees that led to a consistent set of negotiated expectations resulted in greater compliance. On the other hand, rules and solutions were found to be overbearing, and front line regulators to be excessively picky when solutions were formally communicated to the regulatees (May and Winter 1999), resulting in decreased compliance. Evidence from distribution channels in marketing has found that coercive strategies are likely to be viewed by vendors as exploitive (Frazier and Summers 1984). It was also found that channel members facing coercion were likely to become more rigid in their views, lose hope of eliminating the problem, and were more likely to terminate the relationship. In contrast, when retailers used strategies that included negotiations and dialogue, the vendor was more likely to view the retailer as being accommodative, responsive to its concerns, and was more willing to remain in a long term relationship. Thus we posit:

H10: The cognitive FLE strategy of negotiating a solution(s) will be more positively related to customer compliance than the strategy of communicating a solution(s).
The Moderating Role of Customer Adversity. We propose that the impact of FLE contextual problem solving strategies on compliance could be moderated by the degree of customer adversity. Since, not all problem customers exhibit the same level of adversity (e.g. habitually delinquent vs. occasionally delinquent), we reason that the construct of customer adversity captures the contextual nature of variations in the adverseness of customers (definition and operationalization provided in next chapter), and is likely to influence the impact that the particular FLE problem solving strategies have on customer compliance. Further, we do not propose specific hypotheses and intend to address this question empirically.

Modeling the Impact of Customer Compliance on Loyalty Metrics

Most definitions of customer loyalty in prior literature have been either based on customer attitudes (e.g. Dick and Basu 1994), intentions to behave (e.g. Sirdeshmukh and colleagues 2002), and/or behaviors (e.g. Reinartz and Kumar 2000). Despite the focus, four common themes that run through most descriptions are: (1) loyal customers are less likely to defect (on an average US companies churn 50% of their customer base every five years, Reichheld 1996), (2) loyal customers are more revenable (“as a customer's relationship with the company lengthens, revens rise”, Reichheld and Sasser, 1990, pp. 105; “a five percent increase in customer loyalty increases revens by 25-95%”, et. al. 2003, pp. 1), (3) loyal customers offer a higher share of category wallet to the preferred service provider (“behavioral loyalty … helps in the explanation of the market share phenomenon”, Smith and Basu 2002, pp. 20, O'Brien and Jones 1995), and (4) loyal customers market the service provider (“word of mouth marketing is very effective … and many companies justify their
investments in loyalty programs by seeking … the new customers that the loyal ones bring in”, Reinartz and Kumar 2002, pp. 89).

Researchers have assessed the extent of customer loyalty using both customer retention metrics and customer development metrics. Customer retention metrics help in assessing the degree to which the service provider is successful in reducing customer turnover (increasing longevity of the customer), while customer development metrics examine the degree to which the service provider is successful in developing the relationship with its customers (increasing the lifetime value of the customer) (Verhoef 2003). Our focus in measuring the retention and development metrics of customer loyalty is on the change (∆) in the measures observed between two time periods (T₀ and T₁)⁵. This longitudinal focus is especially important in light of the difficulties that researchers have faced with cross-sectional data such as overestimation of the associations, leading researchers such as Verhoef (2003) to comment that “cross-sectional data (unlike longitudinal data) cannot establish a causal relationship between loyalty metrics and its antecedents” (pp. 30, italics added for emphasis). In particular, our customer retention metric includes Retention which describes the nature of customer behaviors to stay in a relationship with the firm (and not exit). And our customer development variables include Revenue which pertains to the nature of customer behaviors that generate revenues for the firm, and Share of Category Use which pertains to customer behaviors that impact the firm’s category market share relative to competition.

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⁵ T₀ is the FLE-customer compliance intervention and T₁ is a period 12 weeks later.
Customer Retention Metric. Compliance has been suggested in past literature (Dillard 1990, Arthur and Rafael 2003) as the obligatory passage point before customers make decisions about the attractiveness of being loyal or defecting. Compliance in customer adversity situations implies payment of late fees, and other financial penalties (e.g. increase in interest rates, fines) which increases the customer’s costs of being in business with the service provider. Customers have been known to factor in costs (e.g. search costs) when assessing the financial implications of exiting a firm (e.g. Arthur and Rafael, 2003). It can thus be expected, that for a problem customer who has recently performed a compliance action such as, pay a financial penalty in order to retain his/her contractual privileges, compliance may serve as a cost deterrent to exiting the firm. The problem customer who has now increased his/her cost of being in business with the firm will be inclined to continue the relationship since it is in his/her best interest to do so and reap the benefits of the additional costs incurred. Theoretical support is lent by Becker’s side-bet approach (1960) which focuses on the accumulated investments that an individual stands to lose when leaving an organization. Similar to this approach is the notion of sunk costs from economic theory, which suggests that customer churn is lower in industries/firms which exhibit higher sunk costs (e.g. Lambson 1991, 1992). Further, implicit in empirical evidence from psychology is the notion that people, having just performed an act of compliance, tend not to exit the cause of the compliance enforcer. For instance, FITD\(^6\) procedures (Freedman and Fraser 1966, Msweli-Mbang and Lin, 2003) found a reasonable correlation of $r=\cdot.44$ between compliance and retention

\(^6\) Foot-in-the-door technique from social compliance literature
measure of loyalty amongst employees. Evidence also exists to suggest the reverse relationship i.e. if the customer declines to comply, then it leads to less loyal behaviors including exit (e.g. Dillard 1990, Burger and Petty 1981). When the problem customer refuses to perform the compliance behaviors, the consequences most often tend to restrict the customer’s privileges (as in limiting credit lines, increase in interest rates and finance charges, reporting defaults to the credit bureau, initiating collection action). The problem customer who can no longer rely on the service provider for critical services will most likely exit the provider in favor of a competitor (balance transfers of outstanding balances by problem customers to competitor service providers tends to be 6-7% of the total credit card industry, American Banker 2002). (note: however, exiting the service provider is not always a viable option since the lead time/costs in finding a comparable service provider could be restrictive). The above discussion leads us to hypothesize that:

\[ H11: \text{Customer compliance is positively related to customer retention} \]

**Customer Development Metrics.**

Though not explicit, past research suggests a positive relationship between compliance behaviors and development indicators of customer loyalty. Psychological theories -- self perception and behavioral consistency – offer explanations for customer development following compliance behaviors. Self-perception theory (Bem 1972) posits that people infer their attitudes by examining their own behavior. Bem argued that people are said to change their attitudes and future behaviors as a result of seeing themselves do a prior behavior. According to the explanation, problem customers after performing the initial compliance behaviors, see themselves as the
type of person who would want to stay in a relationship with the firm and do other pro-firm behaviors. Very similar to the predictions from self-perception theory, research based on behavioral consistency needs (Festinger 1957, Heider 1958, Berkowitz 1989) also suggest a positive relationship between compliance and customer development. In general, the theory maintains that people have a need to view their behaviors as consistent. Specifically, problem customers who have performed the pro-firm compliance behaviors will be motivated to behave in a consistent manner in the future too. For our purposes, it is not necessary to disentangle which part of the effect on customer development is due to what theoretical explanation, but our position is that all processes may contribute to the overall positive effect. Possible explanations for predominance of a positive effect of compliance as seen in past literature could include focus on just retention as the loyalty indicator, using attitudinal or intentional data as proxies for actual loyalty behaviors, and/or using cross-sectional data.

Even as a majority of the work suggests that there is a positive relationship between compliance and loyalty per se, there is however, a modest body of empirical work that suggests that compliance does not always lead to customer development behaviors in the future, in other words, the relationship between compliance and loyalty metrics are mixed. Evidence points out that compliance may have differential effects on retention and development measures of loyalty. For example, in medical research on various types of addiction, compliant participation and completion of (retention indicator) detoxification programs did not lead to future abstinence (development indicator) as more than 70% of participants relapsed (e.g. Grella et. al
Further, a negative relationship has been explicitly suggested in organization behavior research on compliance gained through fear and intimidation and future loyalty behaviors of employees. This is because in such situations, compliance puts the target in an undesirable subordinate position and the target tries to reduce future subordination as much as possible. For example, in a study describing the relationship between compliance and employee development measures, Maccoby, Gittell and Ledeen (2004) suggest that ‘this approach tends to backfire as people find ways to get back” (pp. 15). Very often in problem customer situations, penalties serve the same purpose as fear and intimidation in motivating compliance behaviors, and results from the above research points out the potential negative impact of compliance on customer development loyalty metrics.

Although the empirical results are mixed, drawing from the discussed theoretical bases, we hypothesize the following and proceed to address the mixed findings next:

\[ H12: \text{Compliance will be associated with increased revenue and increased share of use.} \]

*The Moderating Role of Dependency.* It is possible that the contradictory findings about compliance-loyalty relationship are due to the influence of an important moderating variable – dependency – defined as the extent to which the problem customer relies on the focal provider for service. i.e. the greater (lesser) the number of service providers the problem customer actively uses, the lesser (greater) the dependency. In general, if a person gets pushed to comply, he/she tends to not develop the relationship further. However, if the person has nowhere else to go, it leaves him/her with no alternative but to stay and continue to acquire more such
services. Credit card users have been said to hold a minimum of 3 and a maximum of 8.5 active credit cards (American Banker 2002). It has generally been suggested that the greater the number of active credit cards, the lesser the customer will have to depend on the compliance inducer’s services (Mansfield, Pinto, and Parente, 2003). Mansfield and colleagues also found that problem customers (with unpaid balances) owned more active cards than other customers. However, the greater the dependency, the consumer would be forced to offer his/her business to the compliance inducer.

Therefore we hypothesize:

\[ H_{13}: \text{The higher the dependency, the stronger the positive effect of compliance on revenue and share of use.} \]

**Modeling the Impact of FLE Emotional Strategies on Customer Loyalty Metrics**

Prior research suggests that FLE problem solving strategies influence customer loyalty metrics (Verma 2003). Specifically, results indicate that customers react to three strategic nodes of the problem solving interaction (i) voice – customer ability to control different aspects of information to be included in FLE sensing the problem, (ii) choice – customer ability to participate in forming the solution, and (iii) nature (positive/negative) of interpersonal treatment received by the customer during the problem solving process (Folger and Cropanzano 1998). Research, however has largely favored the examination of cognitive strategies (e.g. Chan 2000) with results showing that increasing(decreasing) customer voice and choice enhances(detracts) retention and development (e.g. Bowman and Narayandas 2001). In our model too, by definition, FLE cognitive strategy of probing(confirming) enhances(inhibits) customer voice; and the cognitive strategy of negotiating (communicating) enhances (inhibits) customer choice. We however posit that, while it is true that cognitive
strategies impact customer retention and development as suggested by past research, (1) a significant part of the impact on loyalty will be captured by the use of emotional strategies; and that (2) there are several interesting insights to be gained from examining the nature of the impact that emotional strategies are expected to have on the loyalty metrics. This is because focusing on cognitive strategies alone limits our attention to a customer’s cognitive assessments (e.g. sunk and exit costs) while making retention and other calculated commitment decisions. Instead, drawing parallels from extant research on commitment we suggest that both retention and development represent increasingly greater levels of a customer’s emotional attachment to and identification with the firm. Literature on commitment-trust and relationship marketing (e.g. Dwyer et. al. 1987, Morgan and Hunt 1994) has argued that customer loyalty metrics reflect affective commitment that is indicative of a customer’s emotional attachment. This suggests that emotional strategies are likely to have a significant influence on customer loyalty. This proposition is further supported by empirical evidence from research on relationship strength and loyalty behaviors which suggests that cognitive antecedents do not significantly impact affective behavioral reactions (retention and development) as much as emotional strategies do (Bhattacharya et. al. 1995, Sheth and Parvatiyar 1995, Summer and Acito 2000). For example, in a study of membership loyalty, Summer and Acito (2000) found that only emotional strategies (e.g. recognition) and not cognitive strategies (e.g. increased communication) positively impacted increased levels of use of services such as membership co-production and participation.
Credit card issuers are constantly in a state of recycling each others’ problem customers since defaulting customers generally exit one issuer after receiving penalties, in favor of another issuer (often at unfavorable terms to the customer though). Since there are over 6000 issuers in the United States alone (American Banker 2003), customers have a wide range of providers. However, credit card issuers have of late realized that recycling problem customers only rewards defaulting customers and encourages these behaviors. So, many issuers (e.g. Citibank) have established customer adversity departments that are specifically designed to identify problem customers and solve the problem of their problem behaviors with a hands on approach and individualized problem solving. Common themes around theories of social exchange (Homans 1961, Blau 1964), justice (Leventhal 1976, Lerner 1977, Thibaut and Walker 1975), and fairness (Folger 1977, Folger and Cropanzano, 1998) suggest that problem customers would react to the emotional strategies used by FLEs during such problem solving interactions in distinct ways. Communicating with a customer, and discussing his/her problem actions that renege on his/her obligations to the firm is inherently negative in nature and puts the customer in a subordinate and a defensive position making it essential for the emotional nature of the interaction to be positive. Though results from Rafaeli and Sutton’s work (1991, 1992) suggest that positive (e.g. kindness, encouragement) and negative emotions (e.g. anger, displeasure) are both capable of eliciting immediate customer compliance, evidence from various settings (managerial, educational, and organizational) suggests that people react more positively (e.g. have greater fairness perceptions, Tyler et. al. 1997) to strategies that offer them positive interpersonal treatment in problem solving.
interventions. On the other hand, strategies that impose negative interpersonal treatment may bring about immediate compliant actions from the customers, but are associated with negative consequences such as high turnover and less commitment (Cropanzano and Greenberg 1998). It has been suggested in the past that effortful regulation of emotional displays which involve contrasting positive and negative emotions may be capable of wielding a strong influence over compliance (e.g. good cop-bad cop routine in criminal investigations, Kamisar 1980) and also trust and commitment (Rafaeli and Sutton 1991). The theory of perpetual contrast (Manis 1967) suggests that when FLE adjusts and regulates the displays of both negative and positive emotions in interactions, two related mechanisms are at work which might explain the possible effects. First, in the short term, the customer may experience accentuated anxiety in response to the negative emotions and accentuated relief in response to the positive emotions when there is a contrast. Thus problem customers, who are already feeling guilty about their adverse behaviors, would try to escape from the anxiety they feel during the bad cop routine by complying with the good cop part of the interaction. Second, in the long term, the customer might also trust the FLE to be kind and helpful during the good cop routine, and this along with the accentuated feeling of relief attached to the positive parts of the interaction, may lead the customer to believe that the FLE is truly concerned with the well-being of the customer and respond to this by staying with the firm and doing more loyalty behaviors. Thus we hypothesize that:

$H14a/b$: Negative(positive) nature of displayed emotions is negatively (positively) related to Retention, Revenue, and Share of Use

$H15a/b$: Regulation of FLE displayed emotions is positively related to Retention, Revenue, and Share of Use
Chapter IV
Research Design and Methodology

Research Design

*Overall Considerations and Setting.* We utilized a mix of quantitative and qualitative approaches for data collection. The units of analysis for the quantitative data collection are at the individual FLE and customers and involve FLE self-reports, and archival customer data base of the focal firm. The unit of analysis for the qualitative data collection is the individual customer/FLE dyad and involves audio recordings of customer-FLE exchanges. The dissertation focuses on a credit card issuer in the US as the setting for research for several reasons. *First*, the financial industry in the United States, especially credit card companies, operates in a competitive environment characterized by high rates of customer attrition (credit card usage is declining, Euromonitor 2004), balance transfers, and problem customer behaviors (late payments and delinquencies) (Hamilton and Howcraft 1995). Recent data (American Banker 2003, pp.18) shows that the number of delinquent credit card accounts is at 5% ($380 billion in receivables, delinquency is defined as accounts that are 30 days or more overdue) while the total chargeoffs (organization forced to absorb the loss as the card holder is bankrupt) rose to almost 7% industry wide. *Second*, as part of the services economy, credit card companies represent an important section where more research is needed. Unanswered questions remain about how they should respond to problem customer behaviors, and achieve both their economic and frontline service goals when problem solving. Currently, the industry has been described as individual firms recycling each other’s problem customers at best (there
are just over 6000 credit card issuers, and problem customers transfer balances from one firm to another) and taking a beating at worst (absorbing the financial loss).

*Third,* credit card firms are generally structured with specific departments that perform the function of identifying problem customers and addressing their problem behaviors on the front line. In this regard the firms are aided by codified rules (e.g. customer contracts), and industry practices (e.g. penalties, grace periods, hurdle payments). Thus, credit card companies lend themselves as appropriate settings.

One credit card company in the eastern US was selected to participate in the study. Specifically, it has the following characteristics (1) its customer base of over 30 million is distributed throughout the country, (2) about 10% of its customer base performs adverse behaviors, (3) it explicitly hires and trains front line employees to problem solve adverse behaviors through telephone interactions with the customers, (4) FLEs come from different parts of the country and are not locally hired (5) it is functionally capable of recording and tracking frontline problem solving effectiveness on a longitudinal basis, and (6) has one of the larger market shares in the credit card business (revenues about $70 billion, 2004).

**Data Sources and Sampling.** Data on the independent, mediating and moderating variables came from three sources: (a) FLE survey, (b) audio recordings of customer-FLE exchanges, and (c) archival data regarding financials. The appropriate source for frontline employee orientations was the unit front line employees who self reported on their dispositions. By contrast, the appropriate source of data for FLE-customer exchanges was the actual interactions with each customer as recorded by audio monitoring devices. Financial data on problem solving
effectiveness was collected from the credit card firm’s customer database. Each is discussed in turn.

*Customer database:* Since we were interested in obtaining data on changes in financial outcomes (i.e. retention, revenue and share of use), longitudinal data was more appropriate and was secured for the dependent variables. Specifically, financial performance was obtained for each billing period for a 6 month span (about 12 weeks before and 12 weeks after FLE-customer problem solving interaction). Having a reasonable window before and after the date of obtaining interaction and FLE survey data ensured that, the effect of FLE problem solving performance could be captured and the resulting impact on financial performance could be precisely ascertained. For the dependent variables (compliance, retention, revenue, and share of use), customer level financial data from the customer data base was collected. Specifically such data included (a) customer payment activity such as payments towards outstanding balances, (b) balance transfers to competitors (customer exits in favor of competitor who then pays off the current outstanding balance), (c) new delinquencies, (d) purchases, loans, and transaction activity on the focal and other credit cards (including competition) that the customer owned and used. Criteria that guided our collection efforts included: (1) data was organized at the customer level, (2) was available for the period indicated, (3) was capable of being matched exactly to the audio recording data being used, and (4) was capable of yielding the details needed for ascertaining effectiveness of FLE problem solving.

*Survey:* For the self-report data on problem solving orientations, all FLEs in the department dedicated to customer adversity were selected for inclusion in the
survey (69 FLEs). Each employee was provided a questionnaire packet that included: (1) letter from the researchers describing the purpose of the study, (2) a two page questionnaire (Appendix 1), and (3) a return post-paid envelope with a voluntary request from FLE if interested in the results after completion of study. All FLEs were promised confidentiality so that they would be comfortable in providing frank responses. In order to capture the highest possible response rate, an incentive was provided and follows up were implemented using a second distribution of the survey to all the FLEs. The response rate was 78% (54 completed and usable responses were received).

**Recordings:** For the customer level interaction data, a random sample of taped audio conversations between FLEs and individual customers was obtained and transcribed. We reasoned that since FLEs interacted with multiple customers in a single day of work, complete transcripts of the actual interactions would serve our goals better than FLE recall of specific problem characteristics or usage of problem solving strategies. Criteria that guided our collection efforts included: (1) a sample of audio recordings was automatically generated by the firm for quality control purposes using a proprietary recording algorithm (algorithm specifically addresses time of day, day of the week, and FLE involved). A population set of approximately 180 numerically identified calls was generated by the algorithm for each individual FLE within one billing period. A table of random numbers was used to select a random

---

7 Table of random numbers consists columns and rows of integers made up of the digits 0 to 9, each occurring with approximately the same frequency but in no systematic pattern. Most statistical computer packages have routines for generating random numbers.
sample of 30 three digit numbers for each FLE which were the numerical ids of the calls to be included in the final sample for that FLE. It was prudent to use 30 numbers as some calls would not be an interaction (e.g. could simply be messages left by the FLE on the customer’s answering machine), (2) only the first 15 complete calls for each FLE were used, (3) were matched to the FLEs who responded to the survey data, and (4) recordings were within one billing period to rule out time based confounds (e.g. fluctuating interest rates, employee turnover) (a more detailed discussion follows)

**Matching Data Sources.** In order to harvest the potential benefits of a longitudinal study, survey data at the FLE level was matched with FLE-customer level audio recordings and customer level financial data (i.e. survey data collected from FLE #1 was matched to data pertaining to FLE #1’s interactions with customer #1 and with Customer #1’s financial data). Wherever a perfect match was not available (due to database errors), those data units were proposed to be dropped from the study (however, there were no such data units and none were needed to be dropped from the study). As such, each FLE interacted with multiple customers, thus making the customer level data nested within the FLE level data.

**Measurements and Operationalization**

**Problem Solving Orientations.** FLEs reported on the orientations that guided their problem solving efforts when interacting with problem customers. Measurement items were used to measure FLE solution orientation. Respondents were asked to describe their problem solving orientations by indicating their agreement or

---

8 Certain numbers selected may have to be discarded because they may be too high for the purpose or because they could have come up earlier.
disagreement with different aspects of approaching problems either adaptively or innovatively such as (a) preference for protection of precise instructions when problem solving, (b) preference for conforming to company policies and rules, (c) being comfortable with varying set routines to situations, and (d) having a fresh perspective to common problems. A five-point Likert type scale ranging from “strongly disagree” to “strongly agree” was used. The items are adapted from and Bagozzi and Foxall’s measure of KAI (1996). Likewise, FLE goal orientation were operationalized by asking respondents to describe their goals for problem solving by indicating their agreement or disagreement with various aspects relating to performance or learning goals such as: (a) opinions of supervisors and peers matters (b) positive self assessments when problem solving performance is better than others, (c) beliefs in continually learning new things and extending range of abilities, (d) beliefs that mistakes are part of the learning process. A five-point Likert-type scale ranging from “strongly disagree” to “strongly agree” parallel to the solution emphasis was used. The items are adapted from Sujan et.al. (1996) inventory for performance and learning goal orientations. Finally, respondents were asked to describe their orientations for blame attributions by indicating their agreement or disagreement with different aspects of attributing blame for problems to individual customers or customer environments as in: (a) believing that the customer lacks financial responsibility, (b) believing that adverse situations and problem elements are controllable by customers, and (c) believing that bad things happen to the customers. A five-point Likert-type scale ranging from “strongly disagree” to “strongly agree”
was used. Item measures are adapted from Folkes’ (1984) conceptualization of ‘controllability of failure’ and its operationalization with open ended questions.

**FLE-Customer Exchange Factors.** We utilized FLE-customer interactions to capture the cognitive and emotional strategies that FLEs use across customers. This involved four steps.

In *Step 1* we used a pretest sample of audio recordings (not to be used in further analysis) in order to identify a list of categories of phrases or statements that pertain to cognitive or emotional problem solving strategies. Based on this list, simple and concise definitions and directions for the classification involved in *Step 2* were derived. Two experts with familiarity with the study were asked to review the list, the definitions, and classification directions and necessary adjustments were made. See Appendix 2 for the definitions and classification/rating directions finally used.

*Step 2* involved transcribing the audio recordings and isolating the statements that pertained to problem solving strategies. Each statement was numbered and also coded to identify the exact FLE and the interaction it was extracted from. For example, i.d. # 531204 indicated, FLE #53, interaction #12 (out of 15 relating to FLE #53), and statement # 04 (out of 99, since pretests indicated that total number of phrases/statements did not exceed 60 for an interaction).

In *Step 3*, the statements, definitions, and classification directions were presented to three judges. The judges classified each statement into one of the following five categories, (1) FLE confirming, (2) FLE probing, (3) FLE solution communication, (4) FLE solution negotiation, and (5) FLE emotion. Further, if the classification choice was FLE emotion, then the judges were directed to classify the
emotion as either positive or negative, and also rate the degree of deviation from a neutral position ‘0’ (zero) on a scale of 1 to 3. Appendix 2 also provides the form that was used by the judges for their classifying and rating task. (a more detailed discussion on the qualitative analysis section will follow)

Finally in Step 4, the measures of emotional strategy dimensions – valence (positive and negative) and regulation – were calculated using the following formula:

\[
Valence \ (positive \ and \ negative) = \sum_{j=1}^{n} |e_j|
\]

Where, for each interaction, \( e \) is the FLE’s displayed emotions and \( n \) is the total number of positive or negative FLE emotions in the interaction.

\[
Regulation = \sum_{j=1}^{n} |e_{j+1} - e_j| / n
\]

Where, for each interaction, \( e \) is the FLE’s displayed emotions, and \( n \) is the total number of FLE emotions in the interaction.

**Customer Compliance.** Customer compliance was calculated as a ratio of the actual payment made by the customer to the amount agreed upon by the customer during the FLE-customer interaction on or before the date agreed upon for payment.

(1) \[Compliance = \frac{\text{\$ actual payment}}{\text{\$ agreed upon payment}}\]

**Retention.** This was calculated as a ratio of customer card use after FLE-customer interaction (sum of 3 time periods) to card use before the interaction (sum of 3 time periods). Card usage (purchases made by customer using the firm’s credit card) in US$ was provided by the firm for each of the time periods under consideration.

(2) \[Retention = \frac{\sum_{t=1}^{3} \text{purchases}_t}{\sum_{t=1}^{3} \text{purchases}_t}\]
**Customer Development.** Two measures of customer development—revenue and share of use—were utilized based on longitudinal customer-level monthly archival data provided by the firm for the period August 2005 to February 2006. Revenue \((\text{revenue})\) was computed as the sum of interest income and late fees income from the customer (>99% of firm revenue comes from these two sources of revenue and is consistent with industry experience, see Forletti 2003) for each of the time periods in the study. The firm provided archival data on all relevant time periods.

\[
\text{revenue} = (\text{interest} + \text{late fees})_t \quad (\text{where } t = -3 \text{ to } 3)
\]

In addition, a measure of share of use \((\text{shareofuse})\) was computed as a ratio of customer’s use of the firm’s card/total use of all cards owned by the customer for each time period (3) before and after the interaction (this also is consistent with firm knowledge and ideas from past research, see Verhoef 2003). Total card use was obtained from archival credit bureau reports for the same time periods and as provided by the firm.

\[
\text{shareofuse} = (\text{purchases on firm card/purchases on all cards})_t \quad (\text{where } t = -3 \text{ to } 3)
\]

**Moderator Variables.** Customer Adversity which pertained to the nature of customer problem behaviors that signaled adversity to the firm was used as a moderator. Following the firm’s definition of a problem customer, this variable was operationalized as the ratio of total revolving debt (outstanding debit balances on all credit cards owned by the customer) to total revolving limit (credit limit available to the customer on all the cards). This information was obtained from the firm’s data bases. Our reasoning in including this variable as a moderator is that it might tend to
influence the nature of the FLE interactions with the customer and the specific FLE strategies used.

Dependency was operationalized as the total number of credit cards (store and bank cards) owned by the problem customer during that time period and was obtained from credit reports and also maintained in the company data base.

**Control Variables.** Many FLE demographic control variables were included in this study in order to increase the validity of the results to be obtained. Given previous research (e.g. Mansfield et. al. 2003, Jinkook and Kyoung-Nan 2002), FLE level control variables included gender, age, and total work experience in order to control for systematic differences due to the variables. Customer level demographic control variables included age and gender (Dellande et. al. 2004).
Chapter V
Method of Analysis

As displayed below, our analytical approach involved three stages: (1) measurement analysis, (2) econometric analysis, and (3) multi-level analysis. The measurement analysis stage itself included analysis of both FLE self report quantitative data and FLE-customer interaction qualitative data, while the multi-level analysis stage also included moderator analyses.

**Figure 2 - Overview of the Method of Analysis**

<table>
<thead>
<tr>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>STAGE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement Analysis</td>
<td>Econometric Analysis</td>
<td>Multi-level analysis</td>
</tr>
<tr>
<td>1. FLE self-report quantitative data on FLE Problem Solving Orientations</td>
<td>1. Econometric analysis of long term financial data from customer data base on revenue and share of use.</td>
<td>1. Multi-level analysis of the hypothesized model for coefficient estimation, including control and moderator analysis to rule out confounding variables and alternate explanations</td>
</tr>
<tr>
<td>2. FLE-customer interaction qualitative data on FLE Problem Solving Strategies</td>
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**Stage 1: Measurement Analysis**

The first stage involved determining the psychometric properties of both the quantitative and qualitative measures in order to ensure evidence of reliability and validity.

*FLE self report quantitative data:* Since measures of FLE self-report problem solving orientations are adapted from extant research (Bagozzi and Foxall 1996, Sujan et. al. 1996, 1996, Folkes 1984, 1987), in order to extend the work to problem solving adverse customer situations, a set of 85 operational items assessed by a 5-point Likert-type scale (strongly disagree/strongly agree) had been generated and
retained for pretesting. These items were pretested with 3 judges familiar with the constructs for their wording and meaning and consistency with corresponding definitions of the orientations. Based on feedback, items were either be dropped or modified and the revised instrument (Appendix 1) included 77 items. A combination of exploratory and confirmatory factor analyses was utilized to assess the reliability, convergent and discriminant validity of the measures. First, exploratory factor analysis (EFA) was utilized to analyze the items, identify problem items, if any, and purify the proposed scales. Thereafter, the purified measures were subjected to confirmatory factor analysis (CFA) wherein the items were hypothesized to load only on their corresponding factor. We hypothesized that reliability and validity of the measurement scales can be established if (a) the measurement model produces acceptable fit statistics ($\chi^2$, CFI, NFI, NNFI, RMSEA), (b) factor loadings are significantly large, (c) factor reliabilities are large (Cronbach’s $\alpha > .7$), (d) variance extracted by the factor solution is > .5, and (e) the correlation between the factors and the shared variance are low. It should however, be noted that, (i) as $\chi^2$ is sensitive to sample size, we would rely on the incremental (e.g. NFI and CFI) and absolute goodness of fit indicators (e.g. RMSEA) to evaluate model fit; (ii) since factor reliabilities varies with scale length and our scale is short with 4-6 items for each first order construct, it may appear to be less reliable. If needed, then we would account for this and report reliabilities based on a fixed length of scale items using transformational formulas (Nunnally 1978).

**FLE-customer interaction qualitative data:** As mentioned earlier, judges classified and rated problem solving strategy related statements. Four important
features of this classification and rating procedure were designed to ensure the quality of the resulting data. (1) our judges were college and graduate students who were not connected to the research project, (2) the judges were provided with identical, detailed, written instructions, and descriptive definitions to aid them in their classification and rating task (Appendix 2), (3) all statements were classified by at least three judges and further, all inconsistencies and resolutions were reviewed by the principal researcher, and (4) though reliability of the classification was assessed using measures of consistency commonly employed in content analyses such as percent agreement and correlation coefficient between the classification of the judges (reliability criterion being >=.7 for both measures), alternate and more adequate test proposed by Rust and Cooil (1994) was also used to ascertain reliability. This measure of reliability has four desirable properties. First, in contrast to percent agreement, it adjusts for chance agreements which can occur even when the classifications are unrelated. Second, it accounts for the nominal character of the data developed from qualitative judgments. Third, it takes into account the number of categories the classification task involves, finally it takes into account the number of judges involved.

**Stage 2: Econometric Analysis of Customer Revenue and Share of Use**

In order to operationalize the level of customer revenue and share of category use 12 weeks (3 billing periods) before and after the FLE intervention, we had to control for unobservable and confounding variables. Jacobson (1990) suggested that accounting for autocorrelation patterns in financial performance serves to control for
the effect of unobservable variables that might contemporaneously affect both performance and its drivers.

Accordingly, in this study, the level of customer revenue was derived from the longitudinal financial data after accounting for autocorrelation effects, outstanding balance in the customer account, and interest rate for each customer (which could vary by the level of customer delinquency); the level of customer share of category use was derived from the company database after accounting for autocorrelation effects and interest rate for each customer. The model estimated thus accounts for the prior history of the customer including prior interactions of the customer and the firm which allows controlling for confounding factors that might have existed before the focal interaction with the FLE. The levels of customer revenue and share of use were based on the residuals from the estimation of the following models for each customer:

\[
REVEN_i = \beta_0 + \rho_1 REVEN_{(t-1)} + \beta_1 Balance_t + \beta_2 Balance_{(t-1)} + \beta_3 Interest_t + \beta_4 Interest_{(t-1)} + \varepsilon_t
\]

\[
SHUSE_t = \gamma_0 + \rho_0 SHUSE_{(t-1)} + \gamma_1 Interest_t + \gamma_2 Interest_{(t-1)} + \xi_t,
\]

where \( t \) represents time and ranges from 1 to 6 billing periods; \( i \) represents the \( ith \) customer and ranges from 1 to 810; \( REVEN \) and \( SHUSE \) represent customer revenue and share of category use as calculated earlier; \( Balance \) represents customer’s outstanding balance with the firm at time \( t \), \( Interest \) represents the rate of interest specified in the customer’s contract; and \( \varepsilon_t \) and \( \xi_t \) represent the residuals of the two models. To obtain the level of revenue for each customer for the next stage of analysis, involving the cross-sectional test of the structural model, we calculated the
means of $\varepsilon_t$ and $\xi_t$, for each customer $i$, for the three months after the problem-solving incident ($t = 4, 5$ and 6) to represent the resulting customer revenue and share of use:

$$REVEN = \frac{1}{3}\sum_{t=4}^{6} \varepsilon_t$$
$$SHUSE = \frac{1}{3}\sum_{t=4}^{6} \xi_t$$

**Stage 3: Multi-level analysis**

_Multi-level analysis:_ To test the proposed hypotheses, we utilized a hierarchical linear modeling approach (HLM: Bryk & Raudenbush, 1992). This approach allows for simultaneous modeling of interactions among variables at different levels of analysis while accounting for their different sources of variance. The standard HLM approach is to test a series of models for hypotheses that relate to different levels. At the customer level, or Level 1 analysis, a regression equation is estimated for each individual relating FLE-customer exchange dynamics (cognitive and emotional strategies) to a specific customer level outcome (customer compliance, retention, revenue, and share of use). Further, interactions between FLE-customer exchange dynamics and customer adversity are included in Level 1 analysis. The mean customer effects from Level 1 are then used as dependent variables at the FLE level, or Level 2 analysis. In Level 2 analysis, FLE level predictors are systematically included relating to FLE problem solving orientations.

First, an empty HLM model (one-way ANOVA) is run for each customer level outcome variable. This model does not include any predictor variables and is used to estimate preliminary information on intraclass correlation coefficients (ICC)
as an indication of how much variation in each outcome lies within FLE (customer level).

Such an empty model with no predictor variables at both levels, estimates the following equations:

Level-1: $DV_{ij} = \beta_{0j} + r_{ij}$

Level-2: $\beta_{0j} = \gamma_{00} + u_{0j}$

where:

$DV = \text{revenue, share of use, retention, compliance}$

$\beta_{0j} = \text{mean DV for group } j$

$\gamma_{00} = \text{grand mean DV}$

$r_{ij} = \text{within FLE variance in DV}$

$u_{0j} = \text{between FLE variance in DV}$

$i = 1 \text{ to } 15j \text{ customers for each FLE } j,$

$j = 1 \text{ to } 54 \text{ FLEs}$

Thus the combined model (with fixed effect $\gamma_{00}$ and random effects $u_{0j}$ and $r_{ij}$) run at this stage is of the form:

(1) $Y_{ij} = \gamma_{00} + u_{0j} + r_{ij}$ ($i = 1 \text{ to } 15j \text{ customers for each FLE } j, j = 1 \text{ to } 54 \text{ FLEs}$).

Since the Level-1 equation does not include an independent variable, the regression equation therefore includes only an intercept estimate. The Level-2 model regresses each FLE’s mean dependent variable ($\beta_{0j}$) onto a constant. This results in a $\gamma_{00}$ parameter that is equal to the grand mean of the dependent variable.

The one-way ANOVA provides information regarding the amount of variance in the DVs that is within and between the FLEs. Using the information estimated in the combined model (equation 1), the ICC can be calculated as $u_{0j} / (u_{0j} + r_{ij})$. The ICC represents the amount of variance that could potentially be explained by the
Level-2 predictors. It is not necessary to correct the ICCs for unequal group sizes since in our data; an equal number of customers (i.e. 15) is nested between each FLE.

Second, an unconditional model is run that includes Level 1 predictors but no Level 2 predictors. Level 1 predictor variables are specified as random effects, and associated variance components are used to test whether the mean customer effects vary significantly. Reliability estimates for the random effects represent the proportion of variance in that effect that is parameter rather than error variance. Though it has been suggested that a random effect that accounts for less than 10% of parameter variance is considered unsatisfactory (Bryk and Raudenbush, 1992) and only if a random effect is significant and has satisfactory reliability, is it appropriate to test whether Level 2 predictors can explain some of the variance in Level 1 effects we however we propose to examine all level 2 predictors. This model includes the FLE level variables and tests the main effect relationships for all predictors. Fixed effect coefficients are used to test these effects.

When predictor variables are entered into a HLM model, the decrements in magnitudes of variance components are analogous to effect sizes and parallel the use of R² in linear regression. The main difference between linear regression and HLM is that multiple R² are relevant in HLM corresponding to different variance components. The intraclass correlation coefficient separates the total variability into customer-level and FLE-level variance. The FLE-level variability is further partitioned into variance components for each random effect. The customer-level variability is further partitioned into variance components for each random effect. This information can
help determine the degree to which the customer- and FLE-level variance around each parameter is accounted for by the Level-1 and Level-2 predictors.

**Model Specification:** The hypotheses involved two sets of customer level variables (i) FLE-customer exchange dynamics variables—confirming, probing, communication, negotiation, positive valence, negative valence, regulation, and their interactions with customer adversity—and (ii) four customer level customer development variables—revenue, share of use, retention, and compliance—and each model specification involve both Level-1 and Level-2 predictors and controls.

(i) **Model specification for FLE-customer exchange dynamics.**

The models at the two different levels were specified as follows:

Level-1

(2) \[ DV_{ij} = \beta_{0j} + r_{ij} \]

where:

- **DV** = confirming, probing, communication, negotiation, positive valence, negative valence, and regulation
- \( \beta_{0j} \) = intercept, FLE mean outcome
- \( r_{ij} \) = Level-1 residual variance after controlling for all predictors included in the model, is normally distributed with a mean of zero and constant level-1 variance \( i = 1 \) to 15 \( j \) customers for each FLE \( j \), \( j = 1 \) to 54 FLEs

(3) \[ \beta_{0j} = \gamma_{00} + \gamma_{01}(adp)_j + \gamma_{02}(inn)_j + \gamma_{03}(pfm)_j + \gamma_{04}(lrn)_j + \gamma_{05}(cf)_j + \gamma_{06}(ef)_j + u_{0j} \]

where:

- \( \gamma_{00} \) = overall intercept, average of FLE means on DV across population of FLEs
- \( \gamma_{01} \) to \( \gamma_{06} \) = main effect regression slopes for all Level-2 predictors included in the model
- \( adp \) = adaption
- \( inn \) = innovation
- \( pfm \) = performance
- \( lrn \) = learning
- \( cf \) = customer focus
- \( ef \) = environment focus
$u_{0j}$ = unique increment to the intercept associated with FLE $j$, is multivariate normally distributed with a mean of zero

$j = 1$ to 54 FLEs

(ii) **Model specification for FLE-customer exchange dynamics.**

The models of *compliance*, *retention*, *revenabilit*, and *share of use* at the two different levels were specified as follows:

**Level-1**

(4) $cmp_{ij} = \beta_{0j} + \beta_{1j}*pva + \beta_{2j}*nva + \beta_{3j}*reg + \beta_{4j}*cnf + \beta_{5j}*prb + \beta_{6j}*com + \beta_{7j}*neg + \beta_{8j}*(dep) + \beta_{9j}*(adv) + \beta_{10j}*(cnf*adv) + \beta_{11j}*(prb*adv) + \beta_{12j}*(pva*adv) + \beta_{13j}*(nva*adv) + \beta_{14j}*(reg*adv) + \beta_{15j}*(com*adv) + \beta_{16j}*(neg*adv) + r_{ij}$

(5) $ret_{ij} = \beta_{0j} + \beta_{1j}*pva + \beta_{2j}*nva + \beta_{3j}*reg + \beta_{4j}*cnf + \beta_{5j}*prb + \beta_{6j}*com + \beta_{7j}*neg + \beta_{8j}*(cmp) + \beta_{9j}*(dep) + \beta_{10j}*(adv) + \beta_{11j}*(cmp*dep) + \beta_{12j}*(cnf*adv) + \beta_{13j}*(prb*adv) + \beta_{14j}*(pva*adv) + \beta_{15j}*(nva*adv) + \beta_{16j}*(reg*adv) + \beta_{17j}*(com*adv) + \beta_{18j}*(neg*adv) + r_{ij}$

(6) $revn_{ij} = \beta_{0j} + \beta_{1j}*pva + \beta_{2j}*nva + \beta_{3j}*reg + \beta_{4j}*cnf + \beta_{5j}*prb + \beta_{6j}*com + \beta_{7j}*neg + \beta_{8j}*(cmp) + \beta_{9j}*(ret) + \beta_{10j}*(dep) + \beta_{11j}*(adv) + \beta_{12j}*(cmp*dep) + \beta_{13j}*(cnf*adv) + \beta_{14j}*(prb*adv) + \beta_{15j}*(pva*adv) + \beta_{16j}*(nva*adv) + \beta_{17j}*(reg*adv) + \beta_{18j}*(com*adv) + \beta_{19j}*(neg*adv) + r_{ij}$

(7) $shuse_{ij} = \beta_{0j} + \beta_{1j}*pva + \beta_{2j}*nva + \beta_{3j}*reg + \beta_{4j}*cnf + \beta_{5j}*prb + \beta_{6j}*com + \beta_{7j}*neg + \beta_{8j}*(cmp) + \beta_{9j}*(ret) + \beta_{10j}*(dep) + \beta_{11j}*(adv) + \beta_{12j}*(cmp*dep) + \beta_{13j}*(cnf*adv) + \beta_{14j}*(prb*adv) + \beta_{15j}*(pva*adv) + \beta_{16j}*(nva*adv) + \beta_{17j}*(reg*adv) + \beta_{18j}*(com*adv) + \beta_{19j}*(neg*adv) + r_{ij}$

where:

$\beta_{0j}$ = intercept, FLE mean outcome

$\beta_{ij}$ to $\beta_{8j}$ = regression slopes for all predictors included in the model

*revn* = revenue

*shuse* = share of use

*cmp* = compliance

*ret* = retention

*pva* = positive valence

*nva* = negative valence

*reg* = regulation

*cnf* = confirmation

*prb* = probing

*com* = communication

*neg* = negotiation
$cmp = $compliance
$ret = retention
$dep = dependence
$adv = adversity
$cmp*dep = interaction between compliance and dependence
$cnf*adv = interaction between confirming and adversity
$prb*adv = interaction between probing and adversity
$com*adv = interaction between communication and adversity
$neg*adv = interaction between negotiation and adversity
$pva*adv = interaction between positive valence and adversity
$nva*adv = interaction between negative valence and adversity
$reg*adv = interaction between regulation and adversity
$rij = Level-1 residual variance after controlling for all predictors included in the model, is normally distributed with a mean of zero and constant level-1 variance
$i = 1$ to $15_j$ customers for each FLE $j$,
$j = 1$ to $54$ FLEs

Level-2

\[(8) \quad \beta_{0j} = \gamma_{00} + \gamma_{01}*(adp)_j + \gamma_{02}*(inn)_j + \gamma_{03}*(pfm)_j + \gamma_{04}*(lrn)_j + \gamma_{05}*(cf)_j + \gamma_{06}*(ef)_j + u_{0j} \]

where:

$\gamma_{00} = overall intercept, average of FLE means on revenue across population of FLEs$
$\gamma_{01}$ to $\gamma_{06} = main effect regression slopes for all Level-2 predictors included in the model
$adp = adaption$
$inn = innovation$
$pfm = performance$
$lrn = learning$
$cf = customer focus$
$ef = environment focus$
$u_{0j} = unique increment to the intercept associated with FLE j, is multivariate normally distributed with a mean of zero$
$j = 1$ to $54$ FLEs

\[(9)$ to $(17) \quad \beta_{kj} = \gamma_{k0} + \gamma_{k1}*(adp) + \gamma_{k2}*(inn) + \gamma_{k3}*(pfm) + \gamma_{k4}*(lrn) + \gamma_{k5}*(cf) + \gamma_{k6}*(ef) + u_{kj} \]

where:

$\gamma_{k1}$ to $\gamma_{k6} = cross level interactions for all predictors included in the model
$adp = adaption$
$inn = innovation$
$pfm = performance
\( \text{lrn} = \) learning
\( \text{ef} = \) customer focus
\( \text{ef} = \) environment focus
\( u_{0j} = \) unique increment to the intercept associated with FLE j, is multivariate normally distributed with a mean of zero
\( j = 1 \) to 54 FLEs
Chapter VI

RESULTS

**Measurement Analysis:** Prior to analysis, all the variables from the FLE survey instrument were screened and examined through various SPSS procedures for accuracy of data entry, missing values, and fit between their distributions and the assumptions of multivariate analysis. The variables and important statistics related to them are provided in Table 1. First, exploratory factor analysis (EFA) was conducted to analyze items and it yielded a six-factor solution. However, the results showed that 3 of 26 items were inadequate with factor loadings of <.5 and multiple cross loadings of >.25 with spreads very close to .2 between the cross loadings. These three items were deleted and EFA on 23 items produced six factors which together accounted for 82.69% of the variance extracted, corresponding closely with the hypothesized problem solving orientation factors of adaption and innovation, problem solving goal orientations of performance and learning, and finally problem attribution factors of customer and environment focus. Second, we estimated a confirmatory factor analysis (CFA) model wherein the items were allowed to load on their hypothesized factor and the factors were allowed to correlate freely. It is reasoned that the hypotheses for the validity of the FLE problem solving factors would be supported if (1) the measurement model fitted the data reasonably well, (2) the loadings on hypothesized factors were significant and large, (3) each factor yielded composite reliabilities exceeding .70 (based on Fornell and Larcker, 1981), (4) the correlation among the factors produced evidence of discriminant validity, (5) a more
conservative test of discriminant validity where the variance extracted by each pair of factors was greater than the variance shared between them (Singh 1991).

This measurement model (displayed in Figure 1) produced the following fit statistics: $\chi^2 = 314.71$, degrees of freedom (d.f.) = 215 ($p<.0001$), comparative fit index (CFI) = .941, normed fit index (NFI) = .891, nonnormed fit index (NNFI) = .919, root mean square residual (RMSR) = .068, and root mean square error of approximation (RMSEA) = .074 (90% confidence interval [CI] of .070 to .114). With small sample sizes (54 in this case), the computed $\chi^2$ may not be distributed as $\chi^2$, leading to inaccurate probability levels (Tabachnik & Fidell, 2005). Bentler (1995) and Tabachnik and Fidell (2005) have suggested that ‘one rule of thumb’ directly related to the $\chi^2$ value, that is a good-fitting model may be indicated when the ratio of the $\chi^2$ to the degrees of freedom is less than 2 (which is so in our model). Because of such problems with small sample sizes, numerous other measures of model fit, mostly comparative fit indices have been proposed in literature. Fit indices that employ a comparative fit approach place the estimated model somewhere along the continuum between an independence model (with d.f. = data points, and unrelated variables) and a fully saturated model (d.f. = 0). The NFI evaluates the estimated model by comparing the chi. sq. value of the estimated model to the $\chi^2$ value of the independence model. High values (> .90) are generally indicative of a good fitting model, but unfortunately, the NFI is prone to underestimating the fit of a good fitting model with small sample sizes (Bearden, Sharma and Teel, 1982). An adjustment to the NFI yields the non-normed fit index (NNFI) which in our model indicates a reasonably good fit (.919). Similarly other comparative fit indices like the CFI (.941)
also provide evidence of a reasonably good fit. The root mean square error of approximation (RMSEA) which estimates the lack of fit in a model compared to a saturated model is .07 (>.10 are indicative of poor fitting models, Hu & Benter 1999). Further, the 90% confidence interval of RMSEA is narrowly bound between .070 and .114. The root mean-square residual (RMR) which is an index based on residuals also provides us evidence of a good fit (.068, less than a cut-off value of .08). Finally the goodness-of-fit index (GFI) can be adjusted to take into account the degree of parsimony in the model. PGFI\(^9\) is generally a smaller value than most indices with the cutoff being >.3 and the PGFI obtained for our model after taking into account the total number of data points and the parameters to be estimated is .491 (> .3) and we conclude that we have obtained a good and parsimonious model.

The loadings of the hypothesized factors are significant and substantively large (see Table 2) and range between .968 and .667. The Cronbach reliabilities for the factors are 0.93 (adaption), 0.90 (performance), 0.86 (innovation), 0.93 (customer focus), 0.81 (learning), and 0.89 (environment focus). The correlations between the factors range from .69 to .21, while a more conservative test to establish discriminant validity by Singh (1991) suggests that a high correlation between two factors even if statistically different from 1, could be so high that we cannot say for sure if the factors are indeed different from one another. If variance extracted is greater than variance shared, then the two factors are different. As it can be seen in Table 1c, variance extracted for all pairs of factors is always greater than the variance shared (both highest variance shared and average variance shared). Thus we can conclude

\(^9\) PGFI = \([1-(number\ of\ estimated\ parameters/number\ of\ data\ points)]GFI\) (Mulaik et al. 1989)
that our hypothesized model fits the data reasonably well, and the posited factors evidence acceptable reliability, and convergent and discriminant validity.

**Qualitative Analysis: The Setting:** The customer credit management department of CreditBank\(^{10}\) has 69 FLEs. The department was set up less than two years prior to data collection for this study and all the FLEs currently working in the department were all trained at the same time. Initially 74 FLEs were trained, but 5 left the firm for employment with other firms and 69 FLEs remained in the department. The department works all 7 days rotating 2 off days per week between the FLEs and operates between the hours of 7 a.m. and 7 p.m. with each FLE working only an 8 hour shift. Thus, the department attempts to interact with customers living in different US time zones and talk to the customers when they are available. All the FLEs work full time (36-40 hours per week) and primarily are responsible for talking to customers and problem solving. The calls are initiated by the FLEs (99% of calls are outbound) and always relate to CreditBank credit cards that the customers have been issued and currently use. The FLEs have been with the firm for an average of 5.6 years and have been promoted to this department. Their average tenure in the department is 1.7 years. Women constituted 68.1% of the FLEs while men constituted the remaining 31.9%. This gender ratio is fairly typical of departments such as these where FLEs are interacting with customers over the phone (Sirdeshmukh et. al. 2002). The FLEs are all from the same culture (US born and raised). The FLEs are not always on the telephone (unlike traditional call centers where FLEs have been known to field at least 40 calls per day, Callaghan & Thompson 2002), but alternate

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\(^{10}\) Name changed to provide anonymity
between conversations with customers, updating customer files after the interaction has taken place to indicate details of the conversation, and making preparations before the call by reading the customer file and familiarizing themselves with customer details. They are in departmental meetings once a month for an hour and meet with their supervisor on an as needed basis. They sit in cubicles making their calls, with access to a telephone, a computer, and other office equipment. Their cubicles have their names on it and the FLEs have personalized their work space with pictures of their family, pets, or vacations taken.

Typical FLE call work: The FLEs make around 20 calls a day, during an 8 hour day, and a 5 day work week. On an average just over 2 hours of their work day is spent on the telephone talking to customers. Each FLE is given a list containing the name of the customer, the customer ID, and telephone numbers (home number and day-time work number and/or cell number) on the morning of every work day. The list has 25 names on it and the FLE is expected to contact as many as possible. If the FLE has not completed contacted all the names on the list by the end of the work day, he/she is permitted to carry the remaining names over to the next work day. FLEs obtain a new list when they have completed calling all the customers on the previous one. Each FLE calls customers in an order (top down) making remarks against each name for his/her own purpose. The remarks generally indicate simple details such as BAD# (bad telephone number), RPC (Right Person Contact made and conversation completed), LM (left message). These comments allow the FLE to remember to call a customer later if they could not reach the customer the first time. Incoming calls are very few (only 1-2 calls in a day are incoming calls), the rest are outgoing calls.
98.9% of the FLEs indicated that they work with outgoing calls. On an average, FLEs made contact with the customer (RPC) in about 75% of the cases every day.

All FLEs receive training before they start work in the department. Their two-week long training relates to the data bases (firm and credit bureau) and the different screens, navigating through them, making sense of the information, and editing the firm database. Training relating to customer interactions pertain to basic guidelines for engaging with a customer (such as not using impolite language, not talking to anybody other than the card holder, leaving contact information if necessary), and does not in particular focus on conflict management, anger management, or non-confronting approaches to interacting with customers. The researcher has read the training manual used in training (technical in nature with many data screens) and has also looked at power point slides (more data screens) of the training that the FLEs go through. It is evident from both, that the FLEs relate with customers based on existing cultural norms for exchange. The firm has no system in place yet for rewarding or punishing FLEs for the nature/result of their customer interactions as the department is in its beginning stages.

Before the Interaction: Once the FLE picks up his/her call list from the floor supervisor, the FLE chooses the first name on the list, opens the customer account from the CreditBank database by typing in the unique customer ID. The FLE then familiarizes him/herself with the necessary details (outstanding balance, delinquencies if any, late payments, credit reports from the reporting agency, activity on other cards the customer owns either with CreditBank or with other firms), before making the call. In order to achieve complete understanding of the customer’s current
credit status, the FLE accesses a second database, the database of the credit bureau that the firm contracts with (there are three major credit bureaus in the US – Equifax, TransUnion, and Experian). Accessing the credit bureau database is a dial-in process and each FLE has to be ‘cleared’ through a screening process by the credit bureau to access it. They cannot access this database through any computer (such as their personal computer at home) but can do so only through the CreditBank computers. This access procedure includes an ID and a password (picked by the FLE) and once within the database, each customer account is accessed by entering the Government issued unique Social Security number of the customer. If there are two card holders on the account (e.g. the husband as the primary and the wife as the secondary), the primary card holder’s social security number has to be entered. The credit bureau database maintains a record of all the credit card transactions of the customer organized by credit card. A customer might own many credit cards that are currently active, and may have closed many cards in the past. The database that the FLE accesses goes back 3 years in time. The FLE accesses information from the past 3 billing cycles in general. The information on the database includes the card ID# (16 digits as in most credit cards), the name of the issuing bank/agency/store (e.g. Citibank or Sears), the credit limit (the maximum credit access the customer has on the card), the outstanding balance (access already utilized), delinquencies on the card (non-payments), late payments (payments made after the due date), status of the card (active, closed)\(^\text{11}\). Since most Americans hold 4-5 active cards in their wallet (Harper

\(^{11}\) Information accessed however does not include other secured loans such as mortgages, car loans; and also does not include apartment rent, alimony, or child support payments. Information accessed by FLE is generally restricted to only activity on unsecured loans – i.e. credit card and debit card debt.
2005), reading this information takes the FLE about 10 minutes since the data is not organized necessarily in the order in which the cards are active in the customer’s wallet. The data is organized in chronological order of the cards being issued to the customer with the latest card being the first.

**The Interaction:** The FLE activates the telephone by entering a firm issued numerical ID and the self selected password, and dials the number (usually the day time telephone number) and tries to make contact with the customer. The FLE has a headset and a mouthpiece and does not have to hold the telephone receiver by hand. If the FLE makes contact with the customer, the FLE navigates between the two databases (firm data base and credit bureau data base) in order to talk to the customer. The FLE introduces him/herself by first name, the firm he/she is calling from and asks to speak with the primary customer on the card by first and last name with the preferred prefix (Mr., Mrs., Ms., or Dr.). Either the person on the line will ask the FLE to wait while they get the customer or will identify themselves as the customer (in either case once the FLE talks to the customer, it is considered an RPC). The FLE identifies the purpose of the call to be “would like to talk to you about your MasterCard/Visa\(^{12}\) account with our firm”. The interaction then proceeds between the customer and the FLE. The average call time (RPCs only) is about 4.5 minutes.

**Post-interaction:** On completing the interaction, the FLE opens necessary folder(s) in the database to input (mostly financial in nature, e.g. how much money of the outstanding balance has the customer agreed to pay and by what date) information

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\(^{12}\) Visa™ and MasterCard™ are payment processors and are part of the credit card firm. They are a contracted intermediary who assure the firm and the customer that the transaction will be approved, carried out, and the vendor paid on time. They receive a fee from both the credit card firm and the vendor for their services.
that was exchanged during the interaction. The save feature of the database simultaneously saves this new information that is entered in the database that the FLE is using and in other management controlled databases. This whole process takes about 8-10 minutes. The FLE in the meanwhile is reviewing the call list, or checking email. While the FLE can make changes directly to the firm database, the credit bureau data base is strictly for reference only. In other words, if all calls turned out to be RPCs for an FLE, then in an 8 hour day the FLE can make only 19 calls and will still have 6 customer names left over on the list to contact on the next work day. Since about 25% of the customer names on the list are either BAD#s or LMs, the FLEs tend to complete their lists before the end of the work day.

**Audio-recording:** CreditBank has a quality control system that digitally captures (records the audio) in whole a sample of calls that an FLE makes. The proprietary algorithm for capturing calls allows the firm to record a sample of 180 calls for each FLE for each 4 week billing period (each FLE makes about 500 calls in every billing period). The algorithm records time of day, day of the week, and FLE involved. The FLE is not aware which particular call is being recorded, but is aware that every call has an equal probability of being recorded for quality assurance purposes. We are sure that the call identified as originating from a said FLE is his/hers because (1) each FLE calls from a dedicated extension that is built into the recording algorithm, (2) the ID is easily retrievable in order to access any calls made by a particular FLE and (3) each FLE has a unique self selected password that he/she need to use to activate the telephone and is also part of the algorithm thereby adding an extra level of assurance and reducing the chances of accidental mixing up of the
calls and the FLEs. The calls so recorded include RPCs, messages on machines, and bad numbers. In other words, RPCs will amount to about 135 calls, the rest of the 45 being non-usable calls for our purposes because they do not contain the interaction element. A table of random numbers\textsuperscript{13} was used to select a random sample of 30 three digit numbers for each FLE which then was the numerical ids\textsuperscript{14} of the calls to be included in the final sample for that FLE. We felt it was prudent to use 30 numbers as some calls may not be an interaction. Out of this bank of 30 calls, only the first 15 complete interactions for each FLE were manually recorded onto audio tapes and used in the analysis. Though labor intensive, this process was highly simplified by the infrastructural setup available at the firm. The researcher was responsible for checking whether the call (from the randomly selected 30 calls) was an interaction before transferring the recording to an audio tape. Once 15 complete calls were transferred onto audio tape, the rest of the calls were discarded. Each audio tape contained 15 complete RPCs for each FLE. Each one of the 69 FLEs was given a unique ID by the researcher which has been used throughout the analysis. Three copies of each audio tape were made which served two purposes (1) as backup, and (2) to be handed to the coders/judges for the coding procedure.

\textbf{Coding procedure}: Each of the audio tapes was transcribed with utmost care given to the unique identity of the transcription (each transcription was identified so it

\textsuperscript{13} Table of random numbers consists columns and rows of integers made up of the digits 0 to 9, each occurring with approximately the same frequency but in no systematic pattern. Most statistical computer packages have routines for generating random numbers. The table we used was obtained from \textit{A Million Random Digits with 100,000 Normal Deviates}, and contains random numbers based on Monte Carlo methods which have become a standard reference in engineering and econometrics textbooks and have been widely used in gaming and simulations. It is also available as a free download from http://www.rand.org/pubs/monograph_reports/MR1418/

\textsuperscript{14} Certain numbers selected may have to be discarded because they may be too high (>180) for the purpose or because they could have come up earlier.
could be traced back to the particular interaction between the FLE-customer it represented). The transcription included the FLE statements and the customer statements in the same order in which it occurred during the interaction. The FLE statements were italicized since only those statements were to be coded. In about 20 tapes, personal identifying information such as credit card numbers, telephone numbers were exchanged, which necessitated digitally deleting part of the number so that the judges could not have access to sensitive information. This deletion, we posit does not interfere with our task since (1) the entire number was not deleted (a part of it was retained) so as to keep the statement in which it was embedded meaningful, and (2) the deletions occurred solely in statements originating from the customer which the judges did not code. In order to assist the judges in coding, the FLE statements were transferred onto a coding sheet (tabular form) in the same order as on the transcript (see appendix 1). Since we had 1035 (69 x 15) interactions to code, we recruited the services of 15 judges with each statement being coded by 3 judges.

The judges came from a pool of graduates, graduate, and undergraduate students of two schools located in Virginia. The researcher approached professors who worked in the schools and asked for permission to speak to some smart, conscientious students (current and former) of theirs. Based on the names and numbers provided, the researcher contacted these individuals, communicated the nature of the task, the time involvement and detail oriented nature of the assignment. Individuals that were interested were then recruited for the coding assignment. Judges were in general enthusiastic, interested in the assignment, and seemed to appreciate the experience. Judges were between the ages of 21 and 35. Each of them owned at
least one active credit card, and had some work experience related to customer
service interactions. They were briefed about the nature of the assignment and were
given identical written coding instructions (see appendix 2). Each judge was
responsible for coding 14 tapes. Each of the judges were given unique IDs and utmost
care was taken to ensure that each tape was coded by exactly three different judges;
and that the tape, the coding of each judge, and the transcript could be traced back to
the exact FLE-customer interaction they related to. The judges turned the tape on,
read the transcript along, and coded the statements on the attached table. If needed,
they were instructed to pause, forward, and rewind the tape. The firm lent the
researcher the tape recorders needed for the coding assignment. Judges took about 2
weeks to complete their coding assignment. A total of 7,149 FLE statements were
coded (an average of 12 FLE statements per interaction) in all. The judges were
thanked and debriefed after the coding assignment. However, after the FLEs
responded to the survey, it was found that we had only 54 usable surveys, and
therefore the codes relating to the 15 non-responding FLEs were eliminated from
further analysis. Since this drop out rate is quite high, we will examine the
means/averages of the codes of the dropped FLE interactions with the retained
interactions to see if there are any systematic differences between the two sets of
interactions in order to rule out selection bias. The researchers found that two out of
the FLEs who did not respond had obtained other jobs (for personal reasons) and
were leaving the firm within the month. 13 of the remaining FLEs were voluntarily
moving to other departments that also mostly involved customer interactions but
offered better work timing for the FLEs (here they worked weekends and from 7 a.m.
or to 7 p.m.). Further, according to management, the performance of these FLEs was not qualitatively different from the 54 FLEs, and management confirmed that the move was initiated by the employees for personal reasons. Management was looking to hire more FLEs to take the positions soon to become vacant.

**Development of Coding Categories and the Coding task:** We recorded a random sample of 40 pre-trial interactions (not used in final analysis) from more than 20 FLEs which were then transcribed by the researcher. Preliminary coding categories based on relevant literature review and theories of social interaction combined with our review of the taped conversations were produced. These included the 5 categories of *confirming, probing, communication, negotiation, and emotion* statements. Further, it was decided to include emotion scales (rating of emotion statements into positive and negative and the intensity of emotion valence) to the coding task. However, one researcher on listening to the tapes and reading the transcripts identified a few statements that could not be categorized under any category without some difficulty or ambiguity. On close inspection of these statements (e.g. How are you doing today?) it was evident that while these statements could be coded under the probing category, they still did not mean the same thing to the customer as a true probing question (e.g. one that probed the customer about their financial status). Therefore, it was decided to add a sixth category called *pleasantry*. Initially only transcripts were to be employed for the coding task, but the same researcher (who is an expert in qualitative research), suggested that it was more prudent, given the nature of the interactions, to allow the judges to actually hear the taped interaction while equipped with the transcript to code the statements in order to
not lose the information available in verbal cues and other voice inflections. Therefore the coding task was modified to include the extra dimension of audio along with written transcripts.

**Converting Codes into model variables:** The codes of the three judges were examined for matches. There was an exact match (all three judges agreeing with each other) in 7,097 of the 7,149 statements that were coded (preliminary interjudge agreement was 99.3%). In 48 statements, 2 out of three judges matched each other. Examples of statements that one of the three judges did not agree on include “could you please hold while I check for it?” (2 judges coded it as a *pleasantry* while the third judge coded it as *negotiation*); and “I am sorry that took so long” (2 judges coded it as a *pleasantry* while the third judge coded it as a *negative emotion*). In these 2-way agreements, the majority was chosen as the final code for further analysis. The rating of emotional statements was the average of the three judges’ ratings. There were no 2-way disagreements in the emotion statements – the coding or the valence.

In only 4 of the 7,149 statements was there no agreement between the three judges (<.0005% disagreement). These four statements\(^\text{15}\) are very similar and always happened at the end of the interaction and generally after the closing pleasantry. After the interaction ends, the customer requests to pay-by-phone (immediate compliance)

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\(^{15}\) The 4 statements are similar to each other and are as follows:
- “I can’t do that, but I can transfer you the right department if you can wait” (coded as negotiation, communication, and pleasantry)
- “I’d be glad to transfer you, m’am, please hold” (coded as positive emotion, communication, and pleasantry)
- “I am sorry, I am unable to help you in that regard and will have to transfer you, please hold” (coded as negative emotion, communication, and pleasantry)
- “If you can wait, I will transfer you to the right department since we are not equipped to handle these transactions in this department” (communication, negotiation, and pleasantry)
which necessitates transferring the customer to another department. We posit that since the problem solving interaction has concluded, and the customer is planning on demonstrating immediately the compliance that was sought during the interaction anyways, deleting these 4 statements from the analysis should not bias the findings, and have therefore been dropped from further analysis.

Following are examples of typical statements that relate to each of the six categories.

<table>
<thead>
<tr>
<th>Pleasantry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good morning m’am, how are you doing today?</td>
</tr>
<tr>
<td>Thank you for your time, Sir.</td>
</tr>
<tr>
<td>This is Rhonda(^{16}) from CreditBank Sir, how are you doing today?</td>
</tr>
<tr>
<td>Have a good day, Ms. Smith.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Confirming</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you still at 56 Hayden Street?</td>
</tr>
<tr>
<td>Is your household income still $70,000?</td>
</tr>
<tr>
<td>Is your home number still 888-555-5555?</td>
</tr>
<tr>
<td>We show your address as 4444 Brickbrack Avenue, is that still correct?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Probing</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your total annual household income, Sir?</td>
</tr>
<tr>
<td>Has anything recently changed in your personal or financial situation that I should be aware of before we discuss further details?</td>
</tr>
<tr>
<td>In what way do you think has your recent job change affected your finances, Sir?</td>
</tr>
<tr>
<td>How many earning members do you have in your family now, Ms. Smith?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your credit limit will be decreased from $14,000 to $3,600 effective December 19(^{th}) this year.</td>
</tr>
<tr>
<td>You must pay $ 1,200 within 30 days from today to protect your credit limit.</td>
</tr>
<tr>
<td>We are reducing your credit limit to $3,400</td>
</tr>
<tr>
<td>We are changing your credit limit to just $300 over to your outstanding balance, Sir.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Negotiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>You could probably pay us about 15% of your outstanding balance before the 9(^{th}) of January to keep your credit limit intact</td>
</tr>
<tr>
<td>Maybe you could pay us some more money next month over and above what is due on your statement.</td>
</tr>
<tr>
<td>How much do you think you could pay us over your minimum amount due this month?</td>
</tr>
<tr>
<td>Do you think you could pay us $300 more than your balance?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emotion</th>
</tr>
</thead>
</table>

\(^{16}\) Fictitious name to provide anonymity to FLE
Positive
I am glad that this payment plan is going to work for you.
I am very happy that you have found a position that suits you after such a long search.
We are very glad that you can make the extra payment to us this month.
I truly appreciate you working with us and making that extra little payment to us, Sir.

Negative
We are very uncomfortable lending you any more money, Sir.
We at CreditBank are very concerned about your consistent late payments to us, M’am.
We are very concerned with the high balances you owe us, M’am.
We are highly concerned that you might not be able to meet your financial obligations to us in the future.

Reliability Measure of the judging task: As indicated earlier in our discussion in chapter IV, it is not sufficient to just provide percentage agreement or Cohen’s Alpha as a measure of interrater reliability. While Leigh and Perreault’s measure would have worked since it adjusts for chance agreements and the number of coding categories, it is still inappropriate since it assumes that there are only two judges. However, Rust and Cooil17 (1994) have extended Leigh and Perreault’s index to accommodate two or more judges and two or more categories. Their measure has been judged the best available by many researchers (Lombard et. al. 2005) because their approach explicitly models the importance of both internal consistency and interjudge agreement. Rust and Cooil have also suggested that essentially Leigh and Perreault’s index is the same as theirs “and will result in the same reliability index if there are only two judges” (pp. 17). Based on their tables, for 3 judges, and 6 categories, we achieved .99 interrater reliability (greater than the acceptable norm of .90, Leigh and Perreault, 1989) and proceeded use the variables for further analysis.

Measurement of Model Constructs: The frequencies of statements relating to confirming, probing, communication, and negotiation for each FLE-customer interaction were summed to derive the preliminary data needed for these four

17 I thank Dr. Rust and Dr. Cooil for providing guidance and providing the tables for calculating the measure of reliability for this project.
variables. Since, each interaction could include a different number of statements; a ratio of statement frequency to the total number of interaction statements is used. In other words,

\[ \text{Confirming} = \frac{\text{frequency of confirming statements}_j}{n} \] (where for each interaction \( j \), \( n \) is the total number of statements)

\[ \text{Probing} = \frac{\text{frequency of probing statements}_j}{n} \] (where for each interaction \( j \), \( n \) is the total number of statements)

\[ \text{Communication} = \frac{\text{frequency of communication statements}_j}{n} \] (where for each interaction \( j \), \( n \) is the total number of statements)

\[ \text{Negotiation} = \frac{\text{frequency of negotiation statements}_j}{n} \] (where for each interaction \( j \), \( n \) is the total number of statements)

The measures of emotional strategy dimensions – valence (+/-) and regulation – will be calculated using the following formula: \( \text{Valence (positive and negative)} = \sum_{j=1}^{n} |e_j| \), where, for each interaction, \( e \) is the FLE’s displayed emotions during the interaction, \( n \) is the total number of FLE emotion statements; and \( \text{Regulation} = \sum_{j=1}^{n} |e_{j+1} - e_j| / n \), where, for each interaction, \( e \) is the FLE’s displayed emotions, and \( n \) is the total number of FLE emotion statements in the interaction. The measure of valence has been used by researchers in the past (e.g. Cole 2004, Barnett, 1998). However, one of the most difficult issues in the literature on emotion regulation revolves around determining when emotion regulation is actually occurring. Research in the field of psychology suggests that for emotion regulation to occur there must be a change in emotion valence or intensity (e.g. Gross 1998). In Gross’ work (1998),
following experiments conducted to elicit emotion regulation, judges rated temporal emotional responses (through video recordings of subjects’ facial expressions) to film based stimuli in order to measure the nature and extent of emotion regulation. In particular judges coded the facial expressions across ranges (1-8) of positive and negative emotions. Similarly, Mauss et. al. (2005) argue that in order to ascertain the extent of emotion regulation, it is necessary to have a moment-by-moment construction of emotions displayed in a situation (video/audio). In their experiment, judges assessed the facial expressions of positive and negative emotions and independently rated the temporal intensities of the different emotions. In particular, the past measures of emotion regulation have five distinct features – expression of different emotions, changes in emotions across time within a situation, capturing the emotions in some permanent format (video) instead of relying on aggregation or reconstruction through memory, using judges to code the emotions and the changes over time, using these codes in the extraction of the regulation measure. Our measure too is based on similar principles (audio instead of video) and follows a similar argument, allowing for capturing of (1) importance of sequence in the temporal displays of emotion regulation; and (2) importance of valence and intensity of emotions. Further, recently researchers in Marketing, have also suggested the use of coding both the valence and intensity of emotions in measuring emotional regulation (e.g. Grandey 2003). Finally, though our measure has not been used exactly in the past, the similarities are overwhelming and is thus being suggested as a reliable operationalization of emotion regulation. Discussion on validation follows.
Validation of the FLE-Customer Interaction Measures: In order to examine the discriminant validity of cognitive interaction strategies, we calculated the correlations between the following pairs of cognitive strategies: confirming and probing; communication and negotiation. The correlations have been calculated for each FLE (all 15 interactions) between confirming and probing; and communication and negotiation pairs only as they are logically considered to be related but distinct. The highest correlation between confirming and probing is .52 (lowest is .17) and highest correlation between communication and negotiation is .51 (lowest is .21). The average correlation is .37 and .38. Figures 1 and 2 provide the frequency distribution of the correlations for all 54 FLEs for each of the pairs.

Figure 1: Pattern of Correlations among Confirming and Probing Cognitive Strategies across FLEs.

![Figure 1](image1)

Note. Each point is based on 15 observations.

Figure 2: Pattern of Correlations among Communicating and Negotiating Cognitive Strategies across FLEs.

![Figure 2](image2)
Based on the correlations (all <.70) we posit that we have obtained discriminant validity and further, we also surmise that nomological validity after testing the final model will further bolster our claim to measurement validation at a later stage.

In order to validate the *emotional interaction strategies*, we followed a two pronged approach: (1) to provide evidence of both convergent and discriminant validity following a multitrait-multimethod approach (Campbell and Fiske 1959) where the two methods would be FLE self-reports and codes obtained from the coding task, and the traits would the model constructs of FLE valence (positive and negative) and regulation strategies; and (2) to identify eight FLEs with high scores and eight FLEs with low scores on regulation strategies (based on coding) in order to ascertain if there is any discernable pattern in the sequence of statements made by them in their 15 interactions. The underlying argument is that this additional check by the researcher will confirm that indeed regulation does take place and vary amongst the FLEs, but it has no consistent observable pattern.

**Multitrait-Multimethod Matrix**
First, Campbell and Fiske (1959) have suggested that in order to support **convergent validity**, (1) the estimates of reliability in the reliability diagonal (shaded) should be the highest in the matrix; and (2) correlations in the validity diagonal (in bold typeface) should be high. The correlations thus obtained indicate a fairly high level of convergent validity of the measure. We reason that the evidence is sufficient as the survey measure is a self-report measure about emotions and the second measure is an unrestrained measure of actual behavior coded by judges. This pattern of correlations is well within the range that has been obtained by other researchers who have investigated the accuracy of self-reports when compared to actual behaviors (for e.g. Warshaw et. al., 1986 found a correlation of .63 between self-reports and actual records of blood donation, which the authors say is “strong correlation”, pp. 741). Given this, the correlations achieved are quite high and acceptable evidence of convergent validity of the measure.

In order to support existence of **discriminant validity**, the authors have suggested that, (1) the validity diagonal (bold typeface) correlations should be higher than other values in its column and row in the same heterotrait-heteromethod triangle,
this criterion in our case is met; (2) the validity diagonal correlations should be higher than all other correlations in the monomethod-heterotrait triangles, as is in our case; and (3) the same general pattern of trait interrelationships should be seen in all the monomethod-heterotrait triangles, note that in our case +ve valence is higher correlated with –ve valence than with regulation. Based on the above evidence, we can conclude that we have achieved both discriminant and convergent validity for our FLE emotional strategy measures.

Second, on examining the highest and lowest eight scorers (FLEs) on regulation closely (see Figure 3), it was ascertained that while it was evident that they switched between positive and negative emotions within an interaction, there were no distinct patterns of emotional strategies that any FLE consistently used within the 15 interactions. We further posit that using 8 FLEs each (at the tail ends) constitutes about 32% of the FLEs and these FLEs are most likely to exhibit patterns (if any). In Figure 3, space constraints allow us to only present only 3 interactions for four FLEs in the high and low scoring ends. Therefore in order to present Figure 3, we used a random draw (every alternate FLE from the top and bottom 8 scorers) and every 5th interaction from each FLE’s 15 interactions.
Figure 3

Notes: From Left to Right are the randomly drawn FLEs 1,3,5,7. The 3 interactions are presented in the three colored lines. The scaled line (X-axis) represents the number of statements in the interaction and intersects the Y-axis (rating of the emotion statements) at 0 – not shown. Points below the scaled line represent negative emotions and points above represent positive emotions.

High Scoring FLEs (on Regulation)

Low Scoring FLEs (on Regulation)
**Multi-level analysis**: Tables 1a and 1b provide the means, standard deviations, and intercorrelations for the study constructs at the customer and FLE levels. We estimated the ICCs for each of the four dependent variables—revenue, share of use, retention, and compliance. We did not have to correct the ICCs for unequal group sizes (Bliese and Haverson, 1998 recommend correction if the groups are unequal in size) and the ICCs are .34, .18, .19, and .29 respectively in absolute value. At the customer level, the correlations range from .38 to .57 indicating that these constructs are distinct and share up to less than 32% of their variance.

*** Tables 1a and 1b around here ***

Table 2 shows the results of an unconditional model for each customer level FLE-customer exchange variable (confirming, probing, communication, negotiation, positive valence, negative valence, and regulation). In support of H1a, an adaption solution orientation is a significant and positive predictor of confirming strategies (0.228, p<.01) while its effect on probing strategies is in the negative direction (-0.144, p<.01). A comparison of the 95% confidence intervals (co-efficient +- 1.96*std. error) obtained for confirming (0.302, .149) with that for probing strategies (-0.124, -0.164) lends further support to the hypothesis that adaption solution orientated FLEs are more likely to use confirming cognitive strategies than probing strategies. Next in support of H1b, an innovation solution orientation of the FLE is a significant and positive predictor of probing strategies (0.236, p<.01) while its effect on confirming strategies is in the negative direction (-.122, p<.01). Confidence interval comparison for confirming (-0.028,-0.224) with that for probing strategies (0.256, 0.216) lends further support to the hypothesis that innovation solution orientated FLEs are more likely to use probing cognitive strategies than confirming strategies for problem solving.
H1c and H1d also derive full support as an adaption solution orientation is a significant and positive predictor of communication strategies (0.126, p<.01) while its effect on negotiation strategies is in the negative direction (-0.218, p<.01); and an innovation solution orientation of the FLE is a significant and positive predictor of negotiation strategies (0.125, p<.01) while its effect on communication strategies is in the negative direction (-0.122, p<.01). A comparison of confidence intervals obtained for communication (0.165, 0.086) with that for negotiation strategies (-0.139 -0.102) lends further support to the hypothesis that adaption solution orientated FLEs are more likely to use communication cognitive strategies than negotiation strategies and similarly, Confidence interval comparison for communication (-0.103,-0.142) with that for negotiation strategies (0.223, 0.027) lends further support to the hypothesis that innovation solution orientated FLEs are more likely to use probing cognitive strategies than confirming strategies for problem solving. However, H2 is not supported as it was found that FLE solution orientation (both adaption and innovation) have significant effects (cf. Table 3, p<.05) on both +/-valence and regulation FLE emotion strategies. In support of H3a, a performance goal orientation is a significant and positive predictor of confirming strategies (0.241, p<.01) while its effect on probing strategies is in the negative direction (-0.159 p<.01). A comparison of confidence intervals obtained for confirming (0.358, 0.123) with that for probing strategies (-0.139 -0.178) lends further support to the hypothesis that performance goal orientated FLEs are more likely to use confirming cognitive strategies than probing strategies. Next in support of H3b, a learning goal orientation is a significant and positive predictor of probing cognitive strategies (0.155, p<.01) while its effect on confirming strategies is in the negative direction (-.132, p<.01). Confidence interval comparison for confirming (-0.014,-0.249) with that for probing
strategies (0.175, 0.135) lends further support to the hypothesis that learning goal orientated FLEs are more likely to use probing cognitive strategies than confirming strategies for problem solving. H3c and H3d also derive full support as a performance orientation is a significant and positive predictor of communication strategies (0.235, p<.01) while its effect on negotiation strategies is in the negative direction (-0.390, p<.01); and a learning goal orientation is a significant and positive predictor of negotiation strategies (0.132, p<.01) while its effect on communication strategies is in the negative direction (-0.317, p<.01). A comparison of confidence intervals obtained for communication (0.254, 0.215) with that for negotiation strategies (-0.331, -0.448) lends further support to the hypothesis (H3c) that performance goal orientated FLEs are more likely to use communication cognitive strategies than negotiation strategies. A similar comparison for communication (-0.297, -0.336) with that for negotiation strategies (0.210, 0.053) lends further support to the hypothesis (H3d) that learning goal orientated FLEs are more likely to use negotiation cognitive strategies than communication strategies for problem solving. H4a is supported as it was found that FLE performance goal orientation has a significant effect on negatively valenced emotions (0.167, p<.01) while H4b is not supported as it was found that FLE learning goal orientation has a significant effect (cf. Table 3, p<.05) on positively valenced emotions. On the other hand, H4c and H4d derive full support as a performance goal orientation is a significant and negative predictor (-0.170, p<.01), and a learning goal orientation is a significant and positive predictor of emotion regulation strategies (0.162, p<.01). In partial support of H5a, a customer focused attributive orientation is a significant and positive predictor of confirming strategies (0.116, p<.05) while its effect on probing strategies though in the negative direction is non significant. Next in support of H5b, an environment focused attributive
orientation of the FLE is a significant and negative predictor of probing strategies (-0.114, p<.05) while its effect on confirming strategies is in the positive direction (.033, p<.05). A comparison of confidence intervals obtained for confirming (-0.055, -0.173) with that for probing strategies (0.092, 0.017) lends further support to the hypothesis that environment focused FLEs are more likely to use probing strategies than confirming cognitive strategies.

H5c is not supported while there is partial support for H5d an environment focused attributive orientation is a significant and positive predictor of negotiation strategies (0.114, p<.05) while its effect on communication strategies is not significant. H6a, H6b, and H6c are not supported while there is full support for H6d where FLE environment focused attributive orientation is a positive predictor of FLE emotion regulation strategies (.107, p<.05).

Table 3 shows the results of an unconditional model for each customer level variable (revenue, share of use, retention, and compliance). In full accord with H7, intensity of positive and negative emotion is a significant and positive predictor of customer compliance (0.094 and 0.083 respectively, p<.05) while H8 was not supported as the hypothesized relationship between regulation of emotion and compliance was not significant. Both H9 and H10 were fully supported as probing and negotiation strategies were found to be significant and positive predictors of compliance (.117, .178; p<.05). H11 and H12 were fully supported as compliance is a significant and positive predictor of customer retention, revenue, and share of use (.142, .184, .127; p<.05). However, as hypothesized in H13 the interaction between dependence and compliance does not have a significant effect on revenue while it does on share on use (.094, p<.05) and thus attained partial support. Although we had not proposed specific hypotheses for negotiation, and probing cognitive strategies, we found weak but significant positive effects for them on revenue. H14 and H15 are not supported as
emotional strategies were not found to be significant predictors of revenue, share of use, and retention. Further, the effect of the control variables at the FLE level (gender, age, education, work experience) and customer level (gender), and the interaction between FLE and customer gender on FLE strategies were found to be non significant. In the interest of brevity in providing the tables, these non significant results have not been displayed. To summarize, the following is the nature of support obtained for all proposed hypotheses.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Description</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>FLEs with an adaption solution orientation are more likely to use confirming cognitive strategies than probing cognitive strategies</td>
<td>Supported</td>
</tr>
<tr>
<td>H1b</td>
<td>FLEs with an innovation solution orientation are more likely to use probing cognitive strategies than confirming cognitive strategies</td>
<td>Supported</td>
</tr>
<tr>
<td>H1c</td>
<td>FLEs with an adaption solution orientation are more likely to use communication of rather than negotiation for solutions cognitive strategies</td>
<td>Supported</td>
</tr>
<tr>
<td>H1d</td>
<td>FLEs with an innovation solution orientation are more likely to use negotiation for rather than communication of solution cognitive strategies</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>FLE solution orientation will have no significant effect in use of different emotional strategies</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3a</td>
<td>FLEs with a performance goal orientation are more likely to use confirming cognitive strategies than probing cognitive strategies</td>
<td>Supported</td>
</tr>
<tr>
<td>H3b</td>
<td>FLEs with a learning goal orientation are more likely to use probing cognitive strategies than confirming cognitive strategies</td>
<td>Supported</td>
</tr>
<tr>
<td>H3c</td>
<td>FLEs with a performance goal orientation are more likely to use communication of than negotiation for solutions cognitive strategies</td>
<td>Supported</td>
</tr>
<tr>
<td>H3d</td>
<td>FLEs with a learning goal orientation are more likely to use negotiation for than communication of solutions cognitive strategies</td>
<td>Supported</td>
</tr>
<tr>
<td>H4a</td>
<td>FLE performance goal orientation is likely to result in the use of negatively valenced emotions</td>
<td>Supported</td>
</tr>
<tr>
<td>H4b</td>
<td>FLE learning goal orientation will have no effect on emotion valence</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4c</td>
<td>Performance orientation will be negatively related to emotion regulation</td>
<td>Supported</td>
</tr>
<tr>
<td>H4d</td>
<td>Learning orientation will be positively related to emotion regulation</td>
<td>Supported</td>
</tr>
<tr>
<td>H5a</td>
<td>FLEs with customer focused attributive orientation are more likely to use confirming cognitive strategies than probing cognitive strategies</td>
<td>Partially Supported</td>
</tr>
<tr>
<td>H5b:</td>
<td>FLEs with environment focused attributive orientation are more likely to use probing cognitive strategies than confirming cognitive strategies</td>
<td>Supported</td>
</tr>
<tr>
<td>H5c:</td>
<td>FLEs with customer focused attributive orientation are more likely to use the cognitive strategy of communicating rather than negotiating for solutions</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H5d:</td>
<td>FLEs with environment focused attributive orientation are more likely to use the cognitive strategy of negotiating for rather than communicating solutions</td>
<td>Partially Supported</td>
</tr>
<tr>
<td>H6a:</td>
<td>FLE customer-focused attribution is likely to result in the use of negatively valenced emotions</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H6b:</td>
<td>FLE environment-focused attributions is likely to result in the use of positively valenced emotions</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H6c:</td>
<td>FLE customer-focused attribution will be negatively related to emotion regulation</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H6d:</td>
<td>FLE environment-focused attribution will be positively related to emotion regulation</td>
<td>Supported</td>
</tr>
<tr>
<td>H7:</td>
<td>Greater intensity of either positively or negatively valenced emotions will be positively related to increased customer compliance</td>
<td>Supported</td>
</tr>
<tr>
<td>H8:</td>
<td>Regulation of displayed emotions of the FLE is positively related to customer compliance</td>
<td>Supported</td>
</tr>
<tr>
<td>H9:</td>
<td>The cognitive FLE strategy of probing for information is more positively related to customer compliance than confirming existing information</td>
<td>Supported</td>
</tr>
<tr>
<td>H10:</td>
<td>The cognitive FLE strategy of negotiating a solution(s) will be more positively related to customer compliance than the strategy of communicating a solution(s).</td>
<td>Supported</td>
</tr>
<tr>
<td>H11:</td>
<td>Customer compliance is positively related to customer retention</td>
<td>Supported</td>
</tr>
<tr>
<td>H12:</td>
<td>Compliance will be associated with increased revenue and increased share of use</td>
<td>Supported</td>
</tr>
<tr>
<td>H13:</td>
<td>The higher the dependency, the stronger the positive effect of compliance on revenue and share of use.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H14a/b:</td>
<td>Negative (positive) nature of displayed emotions is negatively (positively) related to Retention, Revenue, and Share of Use</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H15a/b:</td>
<td>Regulation of FLE displayed emotions is positively related to Retention, Revenue, and Share of Use</td>
<td>Not Supported</td>
</tr>
</tbody>
</table>

Tables 4 and 5 summarize the results from the conditional model. The results following inclusion of Level 2 predictors are in Table 5. Though, some FLE orientations, (for example, FLE performance orientation and FLE environment focused attribution orientation) exert a significant effect in shaping customer revenue (the revenue intercept is significantly negatively influenced, albeit weakly, by FLE performance orientation .103, p<.1) these
assessments however, do not alter the link between FLE exchange dynamics and customer development. This being the first of other studies planned for the future, we have not posited grounded hypotheses with respect to these influences and will therefore proceed with a discussion of relevant results in the next chapter.
Chapter VII

DISCUSSION: CONTRIBUTIONS, FUTURE RESEARCH and LIMITATIONS

The contributions of this dissertation can be aligned across two main areas: (1) contribution to marketing practice and (2) contribution to literature.

Contribution to Marketing Practice: Overall, the results of this dissertation provide value to managers who are interested in understanding the drivers of compliance, retention, revenue, and share of use of problem customers. This research provides clear insights into the role of FLE problem solving as drivers of customer level economic results. By employing a multi-dimensional operationalization of FLE problem solving, this research provides diagnostic insights into the process of problem solving. Further, it is anticipated that these insights would allow for proper interventions that can assist managers in problem solving activities and identify their relative costs and payoffs. Ultimately the results of this research are positioned to better inform managers regarding factors that characterize FLE problem solving strategies, FLE dispositions that affect these strategies, and key outcomes of problem solving strategies. The following specific questions of managerial value are answered. (1) what are the components of FLE problem solving?, (2) what are the useful front line problem solving strategies?, (3) what are the specific strategies that drive different business goals of retention, revenue, and share of use?, and (4) to what extent is customer compliance sensitive to the problem solving strategies employed by the FLEs?.

In particular, three key findings of our work highlight the role of the FLE problem solving in customer service situations. First, at the individual FLE level, FLEs’ orientations (solution, goal, and attribution) exert a significant influence on the employment of FLE problem solving cognitive and emotional strategies. Specifically, adaption, performance, and
customer focused orientations regulate FLE effort in problem solving (cf. Table 2, e.g. communicating a solution vs. engaging the customer in negotiating solution terms), just as innovation, learning, and environment focused attributions extract different problem solving strategies. That is, increased FLE scores on the latter set of orientations results in significant increments in those problem solving strategies that are beneficial to long term organizational customer level goals (i.e. revenue and share of use). Taken together, these individual level mechanisms illuminate the power of FLE problem solving orientations, and could be a useful finding with managerial implications for hiring and training FLEs.

Second, our results confirm that at the customer level, the strategies employed by the FLEs during problem solving interactions exert a significant effect on customer compliance, retention, revenue, and share of use. The most compelling evidence involves the effect of cognitive strategies (cf. Table 3) on the desired customer level outcomes. This evidence has both theoretical and managerial implications. As Verhoef (2003) suggested, customer retention, customer revenue, and share of use are different and distinct from each other and are affected by different mechanisms. As clearly seen by the pattern of our results, FLE strategies that significantly affect one does not influence the other. For example, probing strategies have a positive effect on revenue (.16, p<.05) while they do not significantly influence share of use or customer retention. On the other hand there exists a significant moderating effect of dependence on the influence of compliance on share of use (.09, p<.05) and not on revenue. These findings have implications for managers engaged in the pursuit of multiple albeit important organizational goals.

Finally, at both levels, though we had not made any hypotheses about the direct effects of Level 2 variables, we will briefly discuss without going into detail, if only to
reiterate the point that customer retention and customer development goals are distinct and pursuit of them may require different strategies and trade-offs. For example (cf. Table 5), some FLE orientations (FLE performance and environment focused orientations) exert a significant effect in shaping customer revenue but not retention or share of use. (Note that this does not alter the link between FLE exchange dynamics and customer level firm goals). These assessments though managerially relevant, however need systematic study firmly grounded in theory and therefore cannot be interpreted any further.

Our results thus are clear, compelling and yield insights into the role of FLE problem solving orientations and FLE-customer interaction dynamics play in obtaining customer level organizational goals.

**Contribution to Literature:** Overall, this dissertation contributes to extant literature in several aspects: (1) it addresses an important gap in the academic marketing literature by proposing an initial understanding of the problem solving construct. The grounded, context specific, development of the problem solving construct has the potential to make significant contribution to future research, and also lay the foundation for further research into the role of FLE problem solving in obtaining customer level economic results, (2) the notion of enduring FLE orientations, though domain specific, lends itself easily to further adaptation on order to extend to other problem solving situations or industries, (3) the use of longitudinal data in the measurement of customer revenue and share of use provides a more credible yardstick in determining the impact of the problem solving intervention as opposed to a static measure of immediate compliance alone, and (4) by addressing the need to understand the nature of problem solving from a contextually placed front line dispositional and strategic perspective, this dissertation supplements traditional understanding of problem
solving which has been criticized for being irrelevant to the unique setting of problem solving problem customers.

In particular, several findings point to the validity and usefulness of the problem solving construct for examining FLE orientations for problem solving in customer service situations. First, the problem solving construct is rooted in strong theoretical foundation comprised of adaption-innovation, goal, and attribution theories. By rooting our work in these literatures and theories, we focus on three FLE orientations that serve as critical drivers of FLE problem solving strategies. Sufficient literature exists to indicate that adaption-innovation, performance and learning goals, and customer-environment focused attributions are important signals of FLE problem solving orientations and influence their problem solving strategies. Second, the FLE problem solving construct involves fine-grained measurement with multiple dimensions of analysis. By modeling three different orientations—solution, goal, and attribution—the construct highlights that any orientation may service to enhance cognitive and emotional strategies employed by the FLE in problem solving. Further, our measure of enduring FLE orientations, though domain specific, lends itself easily to further adaptation in order to extend to other problem solving situations or industries. Third, the FLE problem solving orientation factors achieve a high level of measurement fidelity and this implies that FLE respondents can meaningfully report on the FLE problem solving orientations. Fourth, although the orientation components are positively correlated, the correlations are not high to threaten discriminant validity as they range from .68 to .14. As such, these orientations share just over one-third of their variance. This suggests that while regulating the three orientations may yield synergistic effects (hence, a positive correlation), this synergy is not automatic, and the risk of conflict is
significant. Fifth, the FLE problem solving orientations relate to FLE problem solving strategies in predictable and systematic patterns. As discussed earlier, our results provide clear evidence of the relationship between the FLE problem solving orientations and the problem solving cognitive and emotional strategies. Together, we have sufficient evidence to conclude that the FLE problem solving construct is theoretically and psychometrically sound, yields useful insights into an FLE’s problem solving efforts, and warrants further attention. Nevertheless, our study should not be taken to imply that future development, refinement and extension of the construct is not necessary. Important advances can be made by addressing the recognized limitations of the construct including replicating in other problem solving service contexts within/out the industry, consideration of additional orientations, and accounting for other customer level organizational goals. The FLE problem solving construct is a reasonable starting point for such pursuits.

In the services literature, studies tend to largely rely on static data in order to make inferences about the future. However, researchers lately have suggested (e.g. Verhoef, 2003) that longitudinal measures may have more meaningful implications for researchers and practitioners. Our results help further this debate. Specifically, (cf. Table 3) it can be seen that compliance which is closer to the FLE-customer interaction on the time line is significantly influenced by valenced FLE emotions while though hypothesized; such influence is not seen on retention, revenue, or share of use. While the explanations for this pattern could be multiple, we tentatively suggest that, based on theories of emotion self regulation (Baumeister et. al. 1993), it could be partly because emotion hangovers do not last, and over a period of time tend to fade away when they do not receive jolts to memory from time to time. These ideas however, are at best conjectural, and need systematic examination.
Limitations

Though the dissertation has aimed to make significant contributions to the study of customer compliance and FLE problem solving, it is prudent to discuss the contributions in light of the limitations of the study. The **first** limitation involves the measurement of a limited set of front line employee problem solving orientations with a restricted set of operational items. Although the measurement scales provided us acceptable evidence of reliability, convergent and discriminant validity, we realize that FLE problem solving orientations is a multi-dimensional construct and therefore our proposed set of orientations is by no means exhaustive. This goes to emphasize that the intention of our study is not to provide a comprehensive study of FLE problem solving dispositions, but instead to provide focused evidence of the potential in considering a dispositional approach for studying FLE problem solving process. Our hope is that despite this limitation, based on our compelling results, this study might promote a thorough and systematic investigation of FLE dispositions and could also serve as a starting point for further conceptualization of the problem solving construct. **Second**, our study may have limited generalizability due to the limited industry context (financial services) utilized. We recognize though the size of the financial industry in the United States is substantial and the implications of this study could be significant for management practice, however including more industry contexts where customer adversity is prevalent would enhance the generalizability of the suggested model. **Third**, we recognize that the hypothesized multilevel model does not include other FLE and customer level predictors of compliance, retention and development metrics (e.g. customer orientations, competitor activity) and thus our proposed framework is open to further extensions and validations. **Finally**, our study does not take into account customer orientations or customer
emotions and the interplay between FLE and customer emotions. This might be one of the major limitations that might explain why some of our hypotheses that were related to FLE emotions were not supported since they represent only one aspect of the emotional nature of the interaction and thus may need further examination.

CONCLUDING NOTES

At least for service organizations, to assume that FLE problem solving is an automatic process that requires FLE interaction with the customer along firm rules and routines appears faulty at best. Instead, our findings suggest that managers in service organizations will need to actively hire and train FLEs and regulate their interactions with problem customers in order to sustain pursuit of many intertwined and interrelated but not necessarily congruent goals. To facilitate this, our study has provided an initial understanding of FLE problem solving in adverse customer situations. Researchers and practitioners can use these ideas to further develop the problem solving construct, to pose and test new and interesting questions about FLE problem solving effectiveness, and to obtain fine-grained diagnostic insights into the links between FLE orientations and customer level outcomes.
### Table 1a
**Descriptive Statistics and Inter-Correlations for Customer Level Data**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Confirming</th>
<th>Probing</th>
<th>Communication</th>
<th>Negotiation</th>
<th>+Val</th>
<th>-Val</th>
<th>Regulation</th>
<th>Adversity</th>
<th>Dependence</th>
<th>Complaince</th>
<th>Retention</th>
<th>Revenue</th>
<th>Sh.of use</th>
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*p<.01

### Table 1b
**Descriptive Statistics and Inter-Correlations for FLE Level Data**

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<th>Variable</th>
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<th>Performance</th>
<th>Innovation</th>
<th>Customer Focus</th>
<th>Learning</th>
<th>Environment Focus</th>
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<td>.22*</td>
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<td>Std. Deviation</td>
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**p<.01, *p<.05**
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<tr>
<th>Factor/Item</th>
<th>Factor Loading (t-value)</th>
<th>Variance Extracted</th>
<th>Highest R²</th>
<th>Average R²</th>
<th>Factor Composite Reliability</th>
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<td><strong>Adaption</strong></td>
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<td>Find solutions conforming to policies</td>
<td>.968 (9.53)</td>
<td>.47</td>
<td>.17</td>
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<tr>
<td>Act within authority</td>
<td>.919 (8.69)</td>
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<tr>
<td>Non deviation from mgmt. guidelines</td>
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<td>Work within company policies</td>
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<td>.17</td>
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<tr>
<td>Creative in problem solving</td>
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<tr>
<td>Use fresh perspectives</td>
<td>.849 (7.13)</td>
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<tr>
<td>Find solutions suited to customers</td>
<td>.762 (6.18)</td>
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<tr>
<td><strong>Performance</strong></td>
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<td>.31</td>
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<td>Supervisor sees FLE as good problem solver</td>
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<td>Best problem solver amongst coworkers</td>
<td>.935 (8.86)</td>
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<tr>
<td>Feels good when FLE outperforms coworkers</td>
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<tr>
<td>Communicate problem solving successes to supervisor</td>
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<tr>
<td>Evaluate self based on supervisor’s criteria</td>
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<td><strong>Learning</strong></td>
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<td>Important to continually improve problem solving skills</td>
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<td>Important to learn from each problem solving experience</td>
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<td>Spend time to learn new approaches to problem solving</td>
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<td>Learn how to be a better problem solver</td>
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<td><strong>Customer Focus</strong></td>
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<td>.36</td>
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<td>Customer lacks financial responsibility</td>
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<tr>
<td>Customers should blame themselves for their problems</td>
<td>.924 (8.72)</td>
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<tr>
<td>Customers lack control over spending</td>
<td>.910 (8.50)</td>
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<tr>
<td>behaviors</td>
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<tr>
<td>Defaulting customers deserve the penalties they get</td>
<td>.870 (7.89)</td>
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<td><strong>Environment Focus</strong></td>
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<td>0.23</td>
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<td>Customers inadvertently get into situations where they have no control</td>
<td>.872 (7.73)</td>
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<td>Financial hardships that customers face are no fault of theirs</td>
<td>.874 (7.71)</td>
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<tr>
<td>Penalties should be adjusted to accommodate extenuating circumstances</td>
<td>.778 (6.82)</td>
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Notes: Loading = standardized coefficient estimate by the elliptical reweighted least squares method using EQS software. The t-values greater than 1.645 indicate significant effects at p=.05 for a one-tailed test. Variance extracted is based on Fornell and Larcker’s (1981) formula. Highest R² is the highest variance shared between this construct and any other construct in the model; it is computed as the square of the highest R (correlation). Average R² is the average variance shared between this construct and all other constructs; it is computed as the mean of squared correlations. Composite reliability is based on Fornell and Larcker’s formula.
### Table 2
Unconditional Model Fixed Effects

<table>
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<tr>
<th>IVs ↓</th>
<th>Confirming</th>
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<th>Negotiation</th>
<th>Pos. Valence</th>
<th>Neg. Valence</th>
<th>Regulation</th>
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<td>Intercept</td>
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<td>0.218** (.01)</td>
<td>0.208** (.01)</td>
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<td>0.236** (.01)</td>
<td>-0.122** (.01)</td>
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**p<.01, * p<.05

### Table 3
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**p<.01, * p<.05, †p<.10**
A Model of Problem Solving ‘Adverse Customers’, FLE Orientations, Exchange Factors, Customer Compliance and Customer Loyalty Metrics

Figure 1

Unit of Analysis: FLE Level

.goods

Enduring FLE Problem Solving Orientations

- Solution Orientation (Adaption/Innovation)
- PS Goal Orientation (Performance/Learning)
- Attribution Orientation (Customer Focused/Environment Focused)

FLE-Customer Exchange Dynamics

- Cognitive Strategies (Confirming/Probing) (Communication/Negotiation)
- Emotional Strategies (+/-Valence/Regulation)

Customer Adversity

Dependency

Customer Compliance

Customer Loyalty Metrics

- Customer Retention
- Revenue
- Share of Use

Unit of Analysis: Individual Customer Level

Moderated Effects

• Retention
Appendix 1
Operational Measures of Enduring FLE Problem Solving Orientations
(strongly disagree – strongly agree 5 point scale)

Solution Orientation
Adaption
1. I try to solve customer problems in a way that conforms to company policies
2. I act within my assigned authority to find solutions
3. I find solutions without deviating from management guidelines
4. I usually work within the company’s policies to solve customer problems
Innovation
5. I do not hesitate to go beyond company policies to handle customer concerns, when needed
6. I try to be creative in solving customer problems
7. I use fresh perspectives to solve customers’ problems
8. I work hard to find solutions suited to individual customers

PS Goal Orientation
Performance
9. It is important to me that my supervisor sees me as a good problem solver
10. I strive to be the best problem solver amongst my coworkers
11. I feel good when I know that I have performed better than my coworkers
12. I communicate my successes at problem solving to my supervisor
13. I evaluate myself using my supervisor’s criteria for good problem solving
Learning
14. I believe it is important to continually improve my skills in problem solving
15. I don’t mind making errors in problem solving as it is part of the learning process
16. It is important for me to learn from each problem solving experience
17. Spending time to learn new approaches for problem solving matters to me
18. Learning how to be a better problem solver is important to me

Attribution Orientation
Customer Focused
19. I believe customers often lack personal financial responsibility
20. I believe that customers have only themselves to blame for getting into financial problems
21. I believe customers usually lack control over their spending behaviors
22. I believe defaulting customers deserve the extent of penalties they get
Environment Focused
23. I believe that unfortunate situations result in financial burdens for customers
24. I believe that customers inadvertently get into situations that offer them little control over their spending behaviors
25. I believe that customers face financial hardships for no fault of theirs
26. I believe penalties should be adjusted to accommodate customers’ extenuating circumstances
Appendix 2

Compliance Project
Qualitative Data Classification and Rating Protocol

Given below are front line employee statements from different telephone conversations. The employee is interacting with the customer to discuss the customer’s credit card account and credit limit. The statements are from different conversations, and originate from different employees.

Your assignment is as follows:

1. Read the definitions for classification thoroughly
2. Read and follow the instructions for classification (Task A)
3. Read and follow the instructions for rating (Task B)
4. Indicate your classification choice and rating with a pencil
5. If you should have to change your mind about a classification or rating, please erase your choice thoroughly before indicating your final choice

I. Classification Definitions

1. Employee Pleasantries: This pertains to opening or closing statements that the employee expresses in order to start or end the conversation with the customer

   Pleasantries would include phrases or words like “good morning, Ms./Mr….. how are you Ma’am?, thank you very much for your time, you have a good day”.

2. Employee Confirming: This pertains to employee statements that confirm customer details or problem specifics that the employee already has prior information on.

   Confirming statements would have words like ‘I am currently showing…., let me verify…., let me update existing information…’.
   Example of such statements could be “I am showing that your total household income is $xx,xxx.xx”. Is that correct?”

3. Employee Probing: This pertains to employee statements that probe and explore for new customer details or problem specifics that the employee does not have prior information on.

   Probing statements would have words like ‘what happened…., why do you think…., what plans do you have…., could you tell me how…., is there anything else I should know…’.
Example of such statements could be “Do you have any plan of how you are going meet your payment obligations”

4. **Employee Solution Communication:** *This pertains to employee statements that communicate to the customer any actions/practices that the employee/firm/consumer should or could undertake in order to solve the problem.*

Solution communication statements would have words like ‘you have to…, you should, we expect you to…, according to the contract you signed with us…, our company policy indicates’. Example of such statements could be “you have to pay 20% of your balance with us in order to maintain your credit line”

5. **Employee Solution Negotiation:** *This pertains to employee statements that negotiate with the customer actions/practices that the employee/firm/consumer should or could undertake in order to solve the problem.*

Solution negotiation statements would have words like ‘would you be able to…, is this okay with you…, what do you think…, maybe you could…, maybe we could…, can we try…, you have the option’. Example of such statements could be “maybe you could try to pay us $500 within 30 days in order to maintain your credit line”

6. **Employee Emotion:** *This pertains to both positive and negative emotions expressed by the employee in the statement*

Positive emotions expressed may include emotions like joy, admiration, happiness, excitement, gratitude, and commendation. Example of such emotions in statements could be “I am really happy that your husband has found a new job, Ms. Smith”.

Negative emotions expressed may include emotions like anger, irritation, condescension, sadness, disappointment, sympathy, embarrassment, and apology. Example of such emotions in statements could be “We have already accommodated you more than we should have, Mr. Smith…, we are very uncomfortable with lending you any more money, Ms. Smith…”
II. **Task A – Classifying the Statements**

**Classification Steps**

1. Read each statement
2. Select **one** classification that you think fits the statement the best. In other words, the statement can belong only to one out of the above **six** classifications.
3. Indicate classification in the appropriate column using ‘X’ mark
4. If your classification of the statement is ‘Employee Emotion’, go to Task B.

III. **Task B– Rating the Strength of Employee Emotions in Statements**

**Rating Steps** (to be followed *if and only if* the statement contains Employee Emotions)

1. Review the statement and classify the emotion as either **positive** or **negative** by circling either ‘pos’ or ‘neg’. (circle only one)
2. Regardless of whether you marked **positive** or **negative**, now rate the **strength** of the emotion from 0 to 3, based on how much you think it deviates from a neutral position of “0” (zero, little or no strength) with:
   - 1 = somewhat strong,
   - 2 = strong, and
   - 3 = very strong
   In other words, 3 would be a stronger emotion than 2 and 1, and 2 would be stronger than 1.
3. Indicate your rating choice by circling the appropriate number under the ‘Rating’ column (circle only one)
## Classification and Rating Form

**Judge #_______**

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**Indicate ONE choice with X mark**

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