

Does Empathy Improve Marketing Performance? The Role of Cognitive versus Emotional Empathy in High Autonomy Sales Environments

Increasingly companies empower salespeople with a high degree of autonomy in how they price and sell services. This practice is particularly prevalent in emerging economies, especially where companies such as Unilever attempt to reach remote rural markets through autonomous salespeople drawn from those communities. The performance of salespeople, however, varies greatly across individuals in these environments. Why do some salespeople in high autonomy environments perform better than others? The authors propose that a salesperson's ability to see the world from a customer's perspective (cognitive empathy) versus their ability to feel what a customer feels (emotional empathy) differentially influences pricing, volume, and service quality outcomes. The authors test their thesis on data from a high-autonomy salesforce in Bangladesh. To deal with the possibility of a potential omitted variable that simultaneously drives both cognitive empathy and sales performance, the authors use the ratio of the number of daughters relative to the number of children that salespeople have as an instrument for cognitive empathy. The results suggest that cognitive empathy increases salesperson prices, sales volume, and service quality outcomes, while emotional empathy increases sales volume but decreases prices and service quality outcomes.

Keywords: salesforce, empathy, autonomy, emerging markets

Consider the case of Project *Shakti*, a Unilever initiative, to reach 500,000 villages in India (Hindustan Unilever 2012). This initiative recruits salespeople in villages, provides them training in selling and book-keeping, and allows them to work on commission-only model in a highly autonomous manner. Using autonomous salespeople, Unilever has achieved great success in creating employment among "bottom of the pyramid" populations and solving its last mile problem by reaching 3 million rural households in 15 states of India (Hindustan

Unilever 2012; Prahalad 2004). Project *Shakti* is not an isolated case. Vast numbers of firms face an uphill battle in trying to solve the last mile problem of reaching remote rural areas (Accenture 2012). This problem is particularly pronounced in low-income markets of emerging economies where it is difficult to build viable distribution networks due to limited infrastructure and geographic spread (Accenture 2012). Firms attempt to solve this problem by empowering salespeople with a high degree of autonomy in setting volume targets, in pricing decisions, in servicing customers and working with them on commission-only models (Accenture 2012; Rangan and Rajan 2005; Nelson, Ishikawa, and Geaneotes 2009).

This trend towards greater salesperson autonomy is not observed only in low-income markets of emerging economies but is also gaining relevance in developed economies. The business press in developed economies is increasingly filled with directives for managers aspiring to work with Generation X or Millennials to “motivate through autonomy” (Forbes 2014) and build the “autonomous office” (Guardian 2014). An article in McKinsey Quarterly entitled “Freeing up the sales force for selling” describes the recent corporate push to increase sales representatives’ freedom to make pricing adjustments without bureaucratic sign offs. The motivation is simple: “their time is better used to sell” (McKinsey 2011). High individual discretion on pricing, sales volume, and client relations is already a feature of most consulting and law practices, where senior partners’ primary function is to land new sales on the terms of their choosing. Across emerging and developed economies, global sales revenues are increasingly driven by *high autonomy salesforces*, i.e., salesforces which are united by a common brand and value proposition but whose individual salespeople exercise considerable discretion on the price they charge and the quantity and quality of service they deliver to customers.

Growing autonomy in global salesforces raises new questions and challenges for marketing scholars. While considerable research has explored the role of structure and

financial incentives in performance *between* salesforces (Basu, Srinivasan, and Staelin 1985; Coughlan and Sen 1989; John and Weitz 1989; Krafft 1999), this research cannot fully explain the large differences in individual performance *within* a salesforce. Indeed, evidence from the corporate world suggests that “the performance of salespeople within a single company typically varies by a factor of three” (Economist 2011). This issue is even more pronounced in high-autonomy salesforce environments where the role of organizational control is reduced further, leaving performance largely in the hands of the individual. This paper therefore seeks to address the following research question: *Why do some salespeople in high autonomy salesforces perform better than others?*

Large meta-analyses of salesforce performance have long suggested that individual traits are a key factor in sales success (Churchill, Ford, Hartley and Walker 1985). In high-autonomy sales environments we argue that the importance of individual traits is amplified because the impacts of salesforce control and the power of organizational processes are reduced. This is particularly true of traits that mediate interactions with others such as clients, given that these interactions are fully in the hands of individual salespeople in high-autonomy environments. In a sales context where the salesperson has autonomy over price setting, for instance, they need to be able to assess what the client is willing and able to pay, in such circumstances empathy would be a major driver of this ability. In particular this paper studies the role that this key human interaction trait—empathy—plays in explaining performance in high autonomy environments. Empathy as a driver of sales performance has received some attention in prior research (Comer and Drollinger 1999; Dawson, Soper, and Pettijohn 1992; Galinsky et al. 2008; Homburg, Wieseke, and Bornemann 2009; McBane 1995). However extant research remains contentious, with studies employing different theoretical constructs and finding opposing effects. Indeed, Comer’s (1999, p. 20) criticism that “conflicting conceptual definitions, compounded by the use of invalid measuring instruments, have

resulted in inadequate understanding of empathy's true contribution to selling effectiveness” still holds true today (Delpechitre 2013; Wieseke, Geigenmuller, and Kraus 2012).

Drawing on evidence from neuroscience (Shamay-Tsoory, Aharon-Peretz, and Perry 2009), we argue that there are two distinct types of empathy: cognitive empathy and emotional empathy. Further, we argue that these two types of empathy have different effects on different dimensions of salesforce performance. We test this thesis in the empirical context of a highly autonomous emerging market salesforce and show that the two types of empathy have differing effects on prices, sales volume, and service quality outcomes. In doing so, we seek to make three contributions.

First, most past marketing research on empathy has typically focused on one or two aspects of salesforce performance, usually some variant of customer satisfaction, trust, or salesperson listening (Aggarwal et al. 2005; Ahearne, Jelinek, and Jones 2007; Wieseke, Geigenmuller, and Kraus 2012).¹ Some research has also explored hypothetical “willingness-to-pay” (Homburg, Wieseke, and Bornemann 2009). There are conceptual and empirical drawbacks, however, to looking at only one dimension of salesforce performance in isolation from others. In reality most salespeople are constantly balancing multiple objectives. Thus, looking at the impact of empathy on only customer satisfaction may highlight the “well-liked” salespeople, but miss the ones who relentlessly pursue new leads and generate the most sales for a company. Alternatively, looking only at the impact on prices may help identify hard-nosed negotiators who can drive up prices in individual transactions, but whose behaviors also drive down volume and perceived quality over time. To genuinely understand salesforce performance we need to examine the full-spectrum of outcomes salespeople have

¹Interestingly, two studies that are the main exceptions to this trend show the least impact of empathy on performance. Dawson & Pettijohn’s (1992) study on car salesmen examined the influence of empathy on volume, commission income, and closing ratios but found no effect. And Lamont & Lundstrom’s (1977) research into industrial salesmen’s empathy included managerial rankings, commissions, incentive earnings, sales quota, new business conversion, and call frequency, but also found no effects.

control over. We therefore develop a holistic view of performance to include pricing, volume, and service quality outcomes to better fit the reality of sales performance in high autonomy environments.

Second, we aim to help resolve the contradictory findings of existing research regarding the impact of empathy on salesforce performance. Past studies have variously shown empathy having no effect (Dawson, Soper, and Pettijohn 1992), weakly negative (Lamont and Lundstrom 1977; McBane 1995), weakly positive (Giacobbe et al. 2006; Pilling and Eroglu 1994) and strongly positive effects on sales performance (Aggarwal et al. 2005; Homburg, Wieseke, and Bornemann 2009). This is likely in part due to the fact that frameworks, definitions, and measures of empathy have varied between studies (Comer and Drollinger 1999; Delpechitre 2013). Together these issues have created a muddled view of what the impact of empathy may or may not be on actual sales performance. Drawing on a growing consensus in psychology and supported by new findings in neuroscience (Shamay-Tsoory, Aharon-Peretz, and Perry 2009), we develop a comprehensive yet parsimonious view of empathy and show that the two main types of empathy—cognitive and emotional—have differing effects on different dimensions of salesforce performance.

Third, we test our theory of empathy and salesforce performance on data from a “bottom of the pyramid” salesforce in an emerging market (Prahalad 2004). Emerging markets are an important and increasingly studied context, both for their growing global economic importance (Hammond et al. 2007; Prahalad and Mashelkar 2010) and for their potential to diversify and strengthen marketing theory and practice (Bertrand, Mullainathan, and Shafir 2006; Bruton 2010; Burgess and Steenkamp 2006; Sheth 2011). Nevertheless, despite calls for more such research from leading scholars, detailed empirical studies of emerging market contexts remain rare in the top marketing journals (Banerjee, Prabhu and

Chandy 2015). This is at least in part due to the logistical challenges of obtaining data from such contexts, particularly individual-level data that must be obtained through field studies and surveys. However, opportunities to explore these contexts offer marketing scholars potentially rich empirical and theoretical returns. We leverage a number of approaches including key informant interviews, management information systems (MIS) data, household surveys, and psychometric testing to construct a multi-dimensional view of salesforce interactions. In doing so, we collect detailed disaggregate data on salesperson performance over an 18-month period, including time series observations on individual salesperson pricing and volume outcomes as well as perceived service quality evaluations by customers. We are also the first paper to combine other-rated survey data with real world panel data to study the impact of salesforce empathy on performance. We believe that doing so not only offers novel insights into salesforce performance in emerging markets, but also offers implications for high autonomy salesforce environments in other parts of the world. Furthermore, we use an instrumental variable approach in our research design, and thus seek to address the issue of omitted variable that dogs much of the existing research on the link between empathy and sales performance. An instrumental variable is used to deal with the effect of potential omitted variables that simultaneously drive both independent (.i.e. empathy) and dependent (.i.e. sales performance) variables. A good instrument is correlated with independent variable but not with the dependent variable. In this study, we use the ratio of number of daughters to number of children of the salesperson as an instrument. This variable is a good instrument because it is correlated with the independent variable (.i.e. empathy) but not with the dependent variable (.i.e. sales performance). Using such an instrument allows us to alleviate the problem of biases caused by omitted variables which characterizes much research in the field.

Theory and Hypotheses

In this section we develop theory and generate hypotheses about why some salespeople in high autonomy environments perform better than others. Specifically we explore how a behavioral characteristic, empathy, drives performance when salespeople have a high degree of autonomy around key outcomes such as pricing, sales volume, and service quality. We begin by reviewing past research on salesforce performance and offer a multi-dimensional view of performance. Next we draw on neuroscience research to argue that cognitive and emotional empathy involve distinct neurological processes with different implications for different aspects of salesforce performance. Finally, we use this theory to generate six hypotheses about how cognitive versus emotional empathy drives pricing, sales volume and service quality outcomes.

Salesforce Performance in High Autonomy Environments

To date considerable research has focused on the role of financial incentives in driving salesforce performance. Scholars have drawn upon a number of theories such as agency theory (Basu, Srinivasan, and Staelin 1985; Coughlan and Sen 1989) or transaction cost analysis (Anderson and Oliver 1987; John and Weitz 1989) to explain why companies favor certain salary schemes over others. Krafft's comparative study (1999) concluded that many of these theories can successfully predict salary composition based on environmental, company, salesperson, and interaction effect variables.

Past research does not, however, fully explain the differences *between* the performances of individual salespeople under the same incentive conditions. Some scholars have therefore argued that it is equally, if not more, important to study individual differences in salesforce performance (Lamont and Lundstrom 1977). This is especially true in high autonomy environments because in such environments the power of organizational control and incentive mechanisms is greatly reduced. Beyond benefits like job satisfaction and

motivation (Katsikea et al. 2011; Miao and Evans 2014), greater autonomy brings with it greater responsibility for managing different and sometimes conflicting performance outcomes. Focusing on one outcome, such as volume, to the exclusion of the others, such as price or service quality, may lead to overall sales performance that is sub-optimal. We therefore argue that it is critical not to limit the study of the impact of individual characteristics to a single dimension of performance in isolation, but to extend this study across the spectrum of key dimensions of performance.

Drawing upon past research (Dawson, Soper, and Pettijohn 1992; Krafft 1999; Lamont and Lundstrom 1977) and our own interviews with practitioners, we view salesforce performance as consisting of multiple dimensions such as price, sales volume, and service quality. This view is widely applicable across many sales environments and is dependent on the characteristics of individual salespeople in high autonomy environments.

Empathy: Cognitive and Emotional Dimensions

Our study focuses on the individual characteristic of empathy, or “the ability to understand and share the feelings of another” (Oxford Dictionary 2015). Early marketing scholars viewed empathy largely as a uni-dimensional construct (Dawson, Soper, and Pettijohn 1992; Hogan 1969; Lamont and Lundstrom 1977). More recent work in psychology and marketing has explored empathy as a multi-dimensional construct. These dimensions include perspective taking (Barrett-Lennard 1981; Bernstein and Davis 1982; Galinsky et al. 2008; Pilling and Eroglu 1994), emotional contagion (Coke, Batson, and McDavis 1978; Hatfield, Cacioppo, and Rapson 1993), fantasy (Bernstein and Davis 1982), sympathetic tendency (Mehrabian and Epstein 1972), theory of mind (Preston and de Waal 2002), and others. Among recent marketing studies, perhaps the most influential view is McBane’s (1995) three dimensional framework of perspective taking, empathic concern, and emotional contagion (see Homburg, Wieseke, and Bornemann 2009; Wieseke, Geigenmuller, and Kraus 2012).

Perspective taking or “adopting the viewpoint of another” and empathic concern or “feelings of concern for the welfare of others” are drawn from Davis’s seminal paper (1980), while emotional contagion or “the emotion induced transfer” of emotion, such as the contagiousness of a smile or the irrational spread of anger through a mob, is drawn from Dillard & Hunter’s work (1986).

Thus there remains considerable debate among psychologists and marketers about where the lines are between ‘empathy’, perspective taking, empathic concern, emotional contagion, and related constructs (see Preston 2002 and Batson 2009 for independent reviews). As psychologist Daniel Batson notes: “Students of empathy can seem a cantankerous lot. Although they typically agree that empathy is important, they often disagree about why it is important, about what effects it has, about where it comes from, and even about what it is. The term empathy is currently applied to more than a half-dozen phenomena” (Batson 2009, p. 3).

Recent work in the field of neuroscience is shedding new light on this subject. Through the use of fMRI techniques and lesion studies, researchers have shown that the “cognitive” aspects of empathy such as perspective taking come from a distinctly different region of the brain compared to the affective or “emotional” aspects of empathy such as emotional contagion (Shamay-Tsoory, Aharon-Peretz, and Perry 2009). Leveraging a battery of empathy measures and tasks including Davis’s Interpersonal Reactivity Index (1983), emotion recognition photographs (Baron-Cohen et al. 2001), and perspective taking tasks (Stone, Baron-Cohen, and Knight 1998), research suggests that subjects with damaged ventromedial prefrontal cortex have impaired cognitive empathy while patients with damaged inferior frontal gyrus have impaired emotional empathy (see Figure 1). Supported by fMRI studies (Mitchell, Macrae, and Banaji 2006), these findings indicate that empathy is actually

two distinct and dissociated processes that occur in different parts of the brain and influence behavior differently.

In line with this research, we define these two processes as cognitive and emotional empathy. Specifically, we define cognitive empathy as the ability to take another person's viewpoint, i.e., to "put yourself in their shoes". And we define emotional empathy as the ability to feel another person's emotional state.

Cognitive empathy has four characteristics that distinguish it from emotional empathy. First, it largely occurs in the ventromedial prefrontal cortex (Figure 1). Second, it is a slow, deliberate, and reasoned process whereby someone intellectually imagines the mental state of someone else. Commonly cited theoretical dimension of cognitive empathy is perspective taking, or adopting the view of another person (Barrett-Lennard 1981; Davis 1980). Central to the understanding of cognitive empathy from a psychological standpoint is the ability to make inferences about other's mental states, and understand that they may be different to one's own mental state (Premack and Woodruff 1978). Doing so requires the cognitive capacity to separate the "self" from the "other". Third, cognitive empathy develops more slowly than emotional empathy does across childhood and adolescence. Studies suggest that theory of mind ability first appears at 18 months in infants and progressively matures to nuanced social comprehension by around 7 to 9 years (Stone, Baron-Cohen, and Knight 1998). Furthermore, the absence or impairment of this ability appears to be central to developmental disorders such as autism (Stone, Baron-Cohen, and Knight 1998). Finally, cognitive empathy appears to be a trait limited to higher order mammals. Work in primatology documents the appearance of cognitive empathy traits in great apes and other primates (de Waal 2008).

In contrast to cognitive empathy, emotional empathy largely occurs in the interior frontal gyrus (Figure 1). Second, it is a fast, automatic, and largely reflexive behavior. The

most commonly cited theoretical dimensions of emotional empathy are emotional contagion, or the tendency to “catch” or feel another person’s emotions (Coke, Batson, and McDavis 1978; Hatfield, Cacioppo, and Rapson 1993) and empathic concern, or feelings of concern for the welfare of others (Batson, Fultz, and Schoenrade 1987; Davis 1980). Examples include the instinctive urge to smile at another’s happiness or the spread of panic through a mob. These examples demonstrate the immediate, automatic, and reflex-like responses created in humans due to emotional empathy (Gallese 2003). Third, unlike cognitive empathy, emotional empathy appears to be present in humans from birth. For example, newborns will instinctively cry upon hearing another newborn cry, before they have the ability to separate another’s distress from their own (Singer 2006). Finally, emotional empathy appears to be present in lower order mammals, birds, and other species , suggesting it has older evolutionary origins and requires less cognitive processing (de Waal 2008).

Taken together these clear distinctions between cognitive and emotional empathy (see Table 1) have interesting implications for how we might predict empathy to function in the sales environment, especially across different performance outcomes. We now draw on the framework above to develop hypotheses linking cognitive and emotional empathy to the three key dimension of performance: pricing, sales volume and service quality.

The Influence of Cognitive and Emotional Empathy on Pricing

Salespeople in high autonomy environments will have considerable control over the price they are able to secure for the goods and services they offer. But in negotiating price, salespeople face a dilemma: on the one hand, price too low or under-negotiate and risk achieving sub-optimal returns; on the other, price too high or over-negotiate and risk alienating customers and losing sales. Getting this balance right requires an accurate judgment of a customer’s true “willingness-to-pay” (Homburg, Koschate, and Hoyer 2005).

We argue that salespeople with high cognitive empathy are more capable of deliberately viewing the world through their customer's eyes and imagining what prices would be acceptable to them. Higher cognitive empathy allows salespeople to separate their *own* thoughts about what a product or service is worth and consciously imagine the *customer's* thoughts and valuation of it in terms of their needs. Thus, by understanding the true extent of the customer's need for a product or service, salespeople with higher cognitive empathy can develop more accurate estimates of a customer's true willingness-to-pay than salespeople with lower cognitive empathy. For instance, Homburg, Wieseke, and Bornemann (2009) find that perspective taking strongly positively correlates with a salesperson's knowledge of their customer's needs. Deeper understanding of the customer's needs improves the ability of a salesperson to judge how much a good or service is worth to them financially.

In turn, better estimates of a customer's true willingness to pay enables salespeople to maximize price in high salesforce autonomy environments where they have more discretion on how much to charge for goods or services. An accurate estimate of the customer's true willingness to pay allows the salesperson to charge as much as possible without losing the sale by overreaching. For instance, laboratory studies have demonstrated that perspective taking increases the chance of successfully reaching deals in negotiations without getting stuck in a stalemate (Galinsky et al. 2008). These findings are consistent with the theory that cognitive empathy enables salespeople to better estimate the customer's true willingness to pay, and optimize their pricing in turn. Based on these arguments, we propose the following hypothesis:

H₁: Salespeople with higher cognitive empathy will charge higher prices than those with lower cognitive empathy will.

In terms of emotional empathy: on the one hand, salespeople with higher emotional empathy may be liked more and thus get away with charging higher prices. On the other hand, higher

emotional empathy makes people more susceptible to ‘feeling’ customers’ emotions themselves, whether these emotions are negative or positive (Gallese 2003; Preston and de Waal 2002). This will in turn influence salespersons’ price negotiation both in how they anticipate and how they respond to a customer’s reaction to a price offer. Specifically, positive emotions from a customer pleased with a price offer will positively influence the salesperson’s emotional state. The higher the salesperson’s emotional empathy, the stronger the resulting emotional reward. This reward can even come from something as simple as a genuine smile from a customer. Laboratory experiments have demonstrated that people with higher emotional empathy actually experience more pleasure and interest when exposed to smiles than their less emotionally empathic colleagues do (Surakka and Hietanen 1998). A customer’s pleased reaction to a—presumably lower—price offering therefore generates a stronger emotional “buzz” in more emotionally empathic salespeople. This process is fast, automatic, and largely unconscious. Furthermore, such emotional “buzz” will not only influence discussions after the original price offer, i.e., during negotiations, but also in how salespeople *anticipate* a customer’s reaction to the initial price offer. Thus, more emotionally empathic salespeople are rewarded both for offering lower prices at the outset and agreeing to lower prices during negotiations.

Similarly, emotionally empathic salespeople are also likely to feel the negative effects more strongly of a customer who is upset or disappointed by having to pay a high price. When customers are upset or “antagonized” (Rotemberg 2002) by higher prices, emotionally empathetic salespeople quite literally feel worse than their counterparts. The response doesn’t even need to be activated in person. For example, Kramer et al.’s (2013) Facebook experiments manipulated emotional content in newsfeeds and showed that emotional contagion spreads even through indirect contact on digital media. A satisfied or angry email from a customer could be enough to activate emotional contagion. More emotionally empathic

salespeople are more susceptible to these responses, and will thus be tempted to price lower to avoid this penalty. Again this mechanism likely includes both the anticipation of pricing reactions, and the reaction of customers to price offers, thus impacting subsequent bargaining. Based on this reasoning, we propose the following hypothesis:

H₂: Salespeople with higher emotional empathy will charge lower prices than those with lower emotional empathy will.

The Influence of Cognitive and Emotional Empathy on Sales Volume

One of the most universally important dimensions of salesforce performance is sales volume, sometimes studied as actual sales or new business conversion (Lamont and Lundstrom 1977). In high autonomy environments, individual characteristics will likely play a pivotal role in determining the varying ability of different salespeople to “close” sales.²

We argue that cognitive empathy allows salespeople to pitch products and services that more effectively meet customer’s stated and unstated needs. Specifically high cognitive empathy enables salespeople to visualize the sales approach from the customer’s perspective and thus close sales more effectively. This is particularly important for “on the fence” clients who are not certain sales leads but who could be converted with a well-positioned pitch. To maximize the impact of a sales pitch, salespeople require a sophisticated understanding of what is important to different clients (see Spiro and Weitz 1990) and which triggers will be most effective in moving from “maybe” to “yes”.

Therefore, salespeople with higher cognitive empathy are capable of developing a better understanding of their customer’s needs, and pitching products or services to these needs. Their ability to take the buyer’s point of view makes them especially adept at uncovering the unstated needs of consumers, giving them an advantage over less cognitively

² To our knowledge there is only one study to date that has explored the direct relationship between empathy and sales volume (Dawson 1992). Although the author found no direct impact of empathy on sales, the study used a unidimensional version of the Barret-Lennard Relationship Inventory (1981) and divided salespeople into tertiles of empathic ability. We predict that a multi-dimensional view of empathy with more robust measures is more likely to show a link between empathy and sales volume.

empathic colleagues in closing difficult sales. Accordingly, we propose the following hypothesis:

H₃: Salespeople with higher cognitive empathy will generate higher sales volumes than those with lower cognitive empathy will.

We argue that emotional empathy influences sales volume through a different route than cognitive empathy. Emotional contagion research posits that the emotions of others can be “caught” through an immediate, unconscious, and reflexive transfer of emotions from one person to another. The extent of this transfer is mediated by a person’s level of emotional empathy. Consistent with our theory, positive sales interactions between customers and salespeople will therefore give salespeople with higher emotional empathy a stronger emotional reward or “hit” than their less emotionally empathic colleagues. While there are certainly exceptions, in the vast majority of sales interactions a consumer’s decision to buy is an emotionally positive interaction both for the buyer and seller, especially in the moments right after the purchase (Gardner and Rook 1988). The consumer’s excitement at taking home a new car or signing a major deal will also be shared by the salesperson. Thus the more sales a salesperson secures, the more emotional rewards they generate.

Similarly, negative sales interactions will give salespeople with high emotional empathy a greater emotional “dip” or penalty. These negative interactions are more likely to accompany a stalled or unsuccessful sale, particularly when a customer is frustrated or disappointed during the sales interaction. More emotionally empathic salespeople feel the effects of these interactions more acutely and are thus incentivized to engage in successful rather than unsuccessful sales interactions—in other words, to try harder to make the sale work. Therefore, on average, emotionally empathic salespeople receive a greater emotional bonus for successful sales interactions, and a greater negative penalty for unsuccessful ones. Based on these arguments, we propose the following hypothesis:

H4: Salespeople with higher emotional empathy will generate higher sales volume than those with lower emotional empathy will.

The Influence of Cognitive and Emotional Empathy on Service Quality

Research has demonstrated that high perceived quality plays an important role in securing both present and future sales thus driving market share, productivity, and return on investment (Lucas et al. 1987; Phillips, Chang, and Buzzell 1983). Central to how customers perceive quality is the comparison between expectations and performance (Parasuraman, Zeithaml, and Berry 1985): does the salesperson's service meet, exceed, or fall short of the expectations established in the customer's mind?

We argue that higher cognitive empathy leads to higher service quality through two mechanisms. First, a salesperson's ability to take the customer's perspective enables the salesperson to provide objectively better tailored solutions to the customer's needs. In high autonomy sales environments, salespeople have a high level of discretion around the quality of service they provide to customers. Based on our theory, we argue that salespeople with higher cognitive empathy have a better understanding of the customer's needs and are more capable of "matching" their service and effort to those needs. Thus those services are objectively more likely to meet the expectations of customers, and in turn be viewed as high quality (Parasuraman, Zeithaml, and Berry 1985). Conversely, when salespeople are low in cognitive empathy, they are more likely to create a poor match between the customer's needs and their own service efforts, resulting in these efforts falling short of customer expectations.

Second, cognitive empathy not only positively improves the objective service quality, but it also improves the pure "perception" of service quality by customers. Specifically, salespeople with high cognitive empathy are more likely to communicate key indicators of quality more persuasively. Our theory suggests that during sales encounters the salesperson's ability to put themselves in the customer's shoes allows them to explain key service features from the customer's point of view, rather than their own. Thus salespeople with greater

cognitive empathy are capable of communicating the unique selling points of their offerings more effectively from the customer's perspective, leading to consumers perceiving the quality as higher even if "objectively" it isn't. Communicating the benefits of products and services well also reduces the risk of post purchase cognitive-dissonance which can lead to a buyer's remorse (Cummings and Venkatesan 1976). Based on these arguments, we propose the following hypothesis:

H₅: Salespeople with higher cognitive empathy deliver higher service quality than those with lower cognitive empathy do.

In terms of emotional empathy, on the one hand it seems plausible that higher emotional empathy leads to higher perceived quality. Salespeople with high emotional empathy are more likeable (Brave, Nass, and Hutchinson 2005), which could lead customers to rank their service more favorably. On the other hand, however, likeability alone does not translate into greater service quality. Indeed, although counterintuitive, it may generate exactly the opposite perception for two reasons. First, our theory suggests that higher emotional empathy does not lead to a better objective understanding of customer needs. If anything, high emotional empathy such as emotional contagion and reactivity may be a liability. For example, a salesperson who reacts emotionally to a customer's needs by losing their rational perspective is less capable of coolly assessing and responding to their needs. Meta-analyses in psychology have shown consistently positive correlations between emotional stability and job performance (Judge and Bono 2001). Thus a certain level of emotional detachment may be essential in providing the best quality service to customers. The services provided by highly emotionally empathic salespeople are objectively less likely to match customer needs and expectations, driving the service quality down.

Second, during sales interactions, high emotional empathy on the part of the salesperson may reduce the pure *perception* of quality on the part of the customer. A salesperson whose emotional state depends on the emotional state of their customer is

unlikely to inspire great confidence on the part of the buyer. An indecisive and flighty customer wants the salesperson to demonstrate certainty, not mirror their indecisiveness back at them. Similarly irate customers are rarely soothed by salespeople who in turn become angry and frustrated. Even positive and enthusiastic customers—while they certainly “like” positive and enthusiastic salespeople—may still want to see some level of professional detachment to instill confidence. Research has, for instance, demonstrated an inverse relationship between perceived likeability and perceived competence (Amabile 1983). Thus salespeople with less emotional empathy may actually appear as less likeable but more competent. Competence in turn signals to customers a higher quality product or service (Kennedy, Ferrell, and Leclair 2001). Based on these arguments, we propose the following hypothesis:

H₆: Salespeople with higher emotional empathy deliver lower service quality than those with lower emotional empathy do.

While evidence is mounting behind a two-dimensional theory of empathy (Mitchell, Macrae, and Banaji 2006; Shamay-Tsoory, Aharon-Peretz, and Perry 2009), no marketing research to our knowledge has explored this framework in the context of salesforce performance. Furthermore, while recent research has contributed valuable insights into the relationship between empathy and customer needs knowledge (Homburg, Wieseke, and Bornemann 2009) or customer-employee interactions (Wieseke, Geigenmuller, and Kraus 2012), it remains unclear what—if any—role empathy plays in determining performance outcomes over time. Therefore, an empirical test of the role of cognitive versus emotional empathy in high autonomy sales environments has much to contribute both to research and practice.

Method

Any empirical approach that aims to test our hypotheses would need to meet three important criteria. First, it would need to access a large sample of salespeople working in a high autonomy environment. Specifically, salespeople would need to have considerable-to-

complete discretion in determining the pricing, volume, and service quality they offer to their customers. Second, the empirical context would need to provide access to detailed data on actual salesperson decisions over time. Third, empirical approaches that leverage a single source for empathy measures and performance outcomes are likely to suffer from common methods biases (Podsakoff et al. 2003) along with other biases that arise from self-reported psychometric measures (Bloom 2014). A robust empirical test would tap into different sources of data for performance outcomes and salesperson characteristics, including other-rated psychometric scores.

The empirical approach we outline in this section meets each of these criteria. We study a salesforce in an emerging market that shares a common training, branding, and supervisor structure. However individual salespeople exercise nearly complete discretion over the pricing, volume, and quality of their services. Furthermore, salesperson records in this context are highly detailed, allowing us to control for potential omitted variable biases through time series observations. Finally we leverage multiple independent sources of data from salespeople, supervisors, clients, and objective performance records, to develop a comprehensive yet robust view of how empathy drives key sales outcomes.

Empirical Context

We use a high autonomy salesforce in Bangladesh as the empirical context for this study. With an open market, stable government, and strong economic growth averaging 6% a year over the past decade, Bangladesh is among the “Next Eleven” of Goldman Sachs’ index of rapidly growing economies (O’Neill, Wilson, and Stupnytska 2005; Wilson, Trivedi, Carlson and Ursua 2011). As such, it is representative of emerging markets worldwide (World Bank 2015). We study a salesforce of “land entrepreneurs” (LEs) who provide land surveys, legal advice, and human rights services in the north of Bangladesh. This salesforce is run by

BRAC, the world's largest NGO and social enterprise, widely credited in Bangladesh and beyond for its innovative programs in microfinance, healthcare, and agriculture (The Economist 2012).

With 70% of all court cases in Bangladesh driven by land conflicts (Barakat and Roy 2004), BRAC land entrepreneurs are trained to measure property borders and issue government-certified land ownership documents in addition to providing basic legal services. Through providing legal access to land rights, these services offer important social and economic benefits for clients. Land entrepreneurs apply to BRAC and are screened based on minimum educational qualifications and an interview at a local branch office. Once training is complete they are free to offer their services anywhere they would like, typically their home district. Thus the organization does not allocate the territories to the salespeople in a way that could correlate with empathy levels, avoiding potential endogeneity biases.

BRAC's land entrepreneur salesforce is an appropriate context for this study for three reasons. First, land entrepreneurs exhibit a high degree of autonomy but are still associated with a "firm" or shared organizational branding. Such high autonomy allows the land entrepreneurs full discretion on the price they charge for land surveys and the effort they put into driving sales volume and service quality. The salesforce is structured similarly to other high autonomy salesforces where loose partnerships of individuals both sell and perform the services they offer under a unified company brand. Salespeople are trained by BRAC, leverage organizational branding and materials, and meet with supervisors on a monthly basis. Second, this context is representative of salesforces in low-income markets of emerging economies (Bertrand, Mullainathan, and Shafir 2006; Bruton 2010; Sheth 2011). The salesforce compensation in the program happens on a "commission-only" basis which mirrors those of similar programs such as Unilever's Project *Shakti* and other such programs

across emerging markets in microfinance, health care and agricultural services (Rangan and Rajan 2005; Salesforce 2012).

Third, the nature of this work means that highly detailed records on individual actions and outcomes are available for study. Specifically, land entrepreneurs keep meticulous disaggregate data on pricing decisions, volume, service details, and client demographics. Coupled with supervisor and client surveys, these records provide a detailed view of individual performance over an extended period of time (18 months). Time series data provides both theoretical and empirical advantages in realistically modeling salesforce performance and addressing important methodological issues such as heterogeneity, endogeneity, and time-bound effects (Hsiao 2006). This allows us to avoid many of the pitfalls that traditional cross-sectional behavioral studies face in this important area of marketing research.

Data and sample

We collected data for this study from BRAC program records and through multiple rounds of field surveys (see Table 2). Given the understudied nature of this context, we began with qualitative research to develop early insights. Specifically, we conducted 25 focus groups with program managers, supervisors, salespeople, and their clients. These focus groups alerted us to the importance of empathy as a potential individual characteristic of interest and helped us develop our research instruments accordingly. To collect performance data we acquired and digitized the aggregate monthly records of 160 salespeople over an 18 month period. We then selected a random sub-sample of salespeople ($n = 34$) and took teams of enumerators into the field with laptops to digitize the individual salesperson logbooks where they stored detailed disaggregate data on each client transaction. Because this procedure was logistically intensive we only conducted it with 21% of our study cohort. Nevertheless, we

compared the sub-sample with the full sample in terms of demographics and aggregate performance and found no statistically significant differences between the two.³

To collect data on our independent and control variables we conducted three rounds of cross-sectional field surveys. Each survey was translated, back-translated, re-translated and validated with the assistance of research colleagues at the James P. Grant School of Public Health in Dhaka. In the first survey with the full sample of salespeople (N = 160) we collected data on key variables (e.g., empathy) through self-rated psychometric measurements along with demographic and socio-economic data. In a second survey, we collected similar data on salesperson characteristics from their supervisors (N=16), including other-rated psychometric evaluations for each salesperson under their management (N = 160). Finally we randomly selected a sample of clients (N = 213) and visited them to conduct a household survey. We designed this sample to ensure we had at least three client responses for each salesperson in our subsample. From the remaining 213 clients, we collected demographic data and evaluations of salesperson performance and service quality. We also gathered data later to back-check the accuracy of the management information system (MIS) data reported by salespeople. We did so by checking for the presence of land certificates and boundary markers. In line with supervisor expectations, the MIS data was 97.5-100% accurate in all cases. Finally, to avoid survival biases, we did not, however, filter data from salespeople who became less active or inactive (Brown et al. 1992). We now describe the conceptual variables and their measures.

Dependent variables

We focus on three dependent variables to measure salesforce performance: price, sales volume, and service quality. Together price and volume make up revenues, the key metric of

³ Comparisons not significant at $p < .05$

sales performance for many, if not most, firms. Similarly, service quality is a key performance indicator of high interest to many firms seeking to ensure customer satisfaction.

Price (PRICE). We measure sales price using the price in Bangladeshi Taka (BDT) that land entrepreneurs charge their clients for individual transactions. Due to the nature of our context all payments take place in cash. Since we are dealing with daily data, there are few days when there are complete transactions whereas there are several days when there is no transaction with a value of 0. We avoid dropping 0 values because that will skew our analysis. We log transform our data after adding a value of 1 to all the prices.

Volume (VOLUME). We measure sales volume using the number of sales of land services each land entrepreneur made per month. These sales were recorded in the land entrepreneur logbooks and back-checked during our surveys. To ensure that our results are not skewed by survival bias, we do not drop occasional zero value observations from low performing salespeople.

Service Quality (SERVQUAL): We measure service quality by asking clients in the household survey to respond to the following questions: “What do you think about the service quality provided by your land entrepreneur?” Clients rate the service on a 5 point scale from “Highly satisfied” to “Highly dissatisfied”. Pre-survey piloting revealed a lack of familiarity with Likert scales in this context, so all survey questions were accompanied by an adapted visual analogue scale (see Appendix 1) to help clients with their responses. In doing so, we follow the best practice adopted by other research in similar contexts (see Hjerstad et al. 2011; Ingenbleek, Tessema, and van Trijp 2013).

Independent variables

Empathy: Past research on empathy has typically drawn on measures from psychology such as those in the Relationship Inventory (Barrett-Lennard 1981) or has developed new scales

specifically suited to the sales environment (McBane 1995; Plank, Minton, and Reid 1996). A robust measure of empathy must, however, overcome two challenges.

First, while several empathy scales have been developed or used in marketing over the past few decades, the validity and reliability of many of these scales have been challenged (Comer and Drollinger 1999; Delpechitre 2013). To address these concerns we draw our items from widely tested measures used in past research (Bernstein and Davis 1982; McBane 1995) and subject our scale to thorough robustness checks (see Homburg, Wieseke, and Bornemann 2009; Wieseke, Geigenmuller, and Kraus 2012). Confirmatory factor analysis loads empathy on two dimensions consistent with our theory: cognitive empathy (COGNITIVE EMPATHY) and emotional empathy (EMOTIONAL EMPATHY). The appendix contains a complete list of measures used in our study in both Bengali and translated formats, and Table 3 displays the psychometric properties of our scale. Specifically the Cronbach's alpha and composite reliability of other-rated empathy scales surpass all recommended thresholds (Nunnally and Bernstein 1994), including the discriminant validity thresholds proposed by Fornell and Larcker (1981). Together these properties reinforce our view that a parsimonious measure of cognitive and emotional dimensions captures the essence of empathy. Nevertheless, to check for robustness, we also re-run our analyses using the McBane empathy scale and find that the main effects hold.

Second, there is growing debate about whether self-rated or other-rated scales are more accurate in capturing a person's "true" level of empathy. While self-rated scales are more common in the literature (e.g. Dawson, Soper, and Pettijohn 1992; Lamont and Lundstrom 1977; McBane 1995), some researchers argue that such measures are vulnerable to social-desirability and other biases (see Bloom 2014). Further, Park and Raile (2009) find weak correlations between self-rated and other-rated empathy scores, suggesting that individuals are not as adept at assessing their own levels of empathy as they might believe.

To address these concerns we collect other-rated scores on the salespeople from their branch managers during the supervisor survey. We find other-rated scores demonstrate both greater robustness and predictive power than self-rated items for both existing scales, e.g. McBane, and our new Cognitive-Emotional scale, suggesting concerns over self-assessment may be valid. We therefore report other-rated scores in the main results.

Instrumental variable for cognitive empathy: To deal with the possibility of a potential omitted variable that simultaneously drives both cognitive empathy and salesforce performance (price, volume and service quality), we use an instrumental variable approach. To estimate cognitive empathy, we use ratio of daughters to number of children of the salesperson (DGTRATIO) as an instrument. Following past research (see Germann, Ebbes and Grewal 2015), we argue that this measure is a good instrument because it is correlated with cognitive empathy but not with the dependent variables price, volume and service quality. For this instrument to be valid it has to satisfy the conditions of as if random assignment and only through.

In a perfect study, one would randomly assign one-half of the salespeople to high cognitive empathy scores and the other-half to low cognitive empathy scores. We will argue that the gender of a child arriving in the salesperson's household is an exogenous event. Our instrument satisfies the as if random condition for two reasons. First, nature randomly assigns the child's gender (Washington 2008; Oswald and Powdthavee 2008). Second, the probability of the having a girl or boy child is .5, thus our instrument provides a near perfect random assignment.

The only through (or exclusion restriction) implied by our instrument is that the ratio of daughters to number of children of the salesperson has no effect on salesforce performance (price, volume and service quality) except through their influence on cognitive empathy of the salesperson. While one can never definitely 'prove' that an exclusion restriction holds, we

provide two arguments in favor of the exclusion restriction of our instrument. First, past literature has shown that when men have daughters they are more inclined to have political views which are favorable to women like affirmative action, community safety and reproductive rights for women (Washington 2008; Oswald and Powdthavee 2008). Being favorable to such causes may not benefit men in general. and men with daughters in particular. But fathers put themselves in the shoes of their daughter and are able to foresee the struggles that their daughters would face (Oswald and Powdthavee 2008). Drawing from past literature we argue that men with daughters are better at cognitive empathy because they learn to take the perspective of the opposite gender from their daughters. Second, the cognitive empathy of men with daughters are even more pronounced in conservative patriarchal societies like Bangladesh. In such societies, men while growing up rarely interact with women, usually interaction with women starts after marriage. But men are not expected to take the perspective of wife in a patriarchal society. Past research has shown that fathers' connection with their daughters undermines patriarchy (Warner and Steel 1999, Oswald and Powdthavee 2008). Using this finding, we argue that while having a wife may not undermine patriarchy in societies like Bangladesh, but having a daughter forces fathers to take the daughters perspective into account thereby improving their own cognitive empathy.

Control variables

There are several other individual-level and transaction-level factors that could drive salesperson performance. We control for these by adding salesperson demographics, sales transaction data, and relevant lag variables to our model.

Age (AGE): A salesperson's age relative to the customer may influence their decisions during a sales interaction (Homburg, Wieseke, and Bornemann 2009). Bangladesh has a strongly community-focused culture, and our qualitative interviews highlighted the role that age-

related social capital could play in influencing sales interactions. We therefore include the salesperson's age as a control in our analysis.

Education (EDUC): The level of education achieved may be an important proxy for the intelligence, motivation, and background of the salesperson. Research consistently supports a link between education and sales volume for frontline salespeople (Lamont and Lundstrom 1977). To control for this possible effect we include the number of years of education past primary school for each salesperson in our analysis.

Competition (COMP): Once they have graduated from the training program, land entrepreneurs are free to sell their services where they wish and potentially compete with other surveyors trained by BRAC or other organizations. To account for potential competitive effects we control for the number of land surveyors actively operating in their area.

Supervisor (SUPERVISOR): We control for the potential effects of supervisor by including a dummy variable for the sixteen different supervisors covered by this study. Each branch office has one supervisor. So, supervisor dummy also controls for performance differences driven by heterogeneity in geographic difference in wealth or differences in the managerial ability of different supervisors.

Volume lag (VLAG): While price and volume are measured at different points and with different levels of aggregation, it is possible that past volume can influence current pricing decisions in the salesperson's mind. For example, during a high volume month a salesperson may charge higher prices with less concern about losing a sale. To account for this, we include a volume lag variable with a running sales total from the previous 30 days period. Changing the period length to being longer or shorter does not significantly change our results or improve model fit.

Price lag (PLAG): Conversely, past pricing may influence current volume. For example, if a salesperson consistently prices low they may find their sales volume increases as consumers

proactively seek them out from word-of-mouth recommendations. To account for this, we include a price lag with a running average price variable from the previous 30 days period. Changing the period length does not significantly change our results or improve model fit.

Model

We test our hypotheses using panel data estimation. The panel estimation allows us to control for potential omitted variables not included in our model. In particular our approach enables us to control for interaction- and time-specific heterogeneity, two common sources of bias due to unobserved heterogeneity. The model also controls for time-invariant factors such as location and time-variant factors such as behavior in previous periods and reputation effects.

Our measures of emotional and cognitive empathy are other rated by supervisors. Before we use these other rated scores, we need to tease the effect of supervisor biases from these scores. These biases can occur because some supervisors are lenient and some are strict in providing scores. These biases can be teased from the scores by estimating the following two equations on the daily data of price and service quality, and the monthly data of volume. The equations are as follows:

$$\text{EMOTIONAL EMPATHY}_{it} = \alpha_0 + \alpha_1 \text{SUPERVISOR}_{it} + \varepsilon_{it} + \eta_i \dots\dots(1)$$

$$\text{COGNITIVE EMPATHY}_{it} = \theta_0 + \theta_1 \text{SUPERVISOR}_{it} + \mu_{it} + \lambda_i \dots\dots\dots(2)$$

where i denotes the salesperson; t is the subscript for time (individual sales transactions).

The residues from equation (1) and (2) provide the other rated scores unaffected by supervisor biases. Then we use our instrument DGTRATIO, to predict the residues from equation (2), in equation (3).

$$\text{Residuals COGNITIVE EMPATHY}_{it} = \omega_0 + \omega_1 \text{DGTRATIO}_{it} + \omega_2 \text{AGE}_{it} + \omega_3 \text{EDUC}_{it} + \omega_4 \text{COMP}_{it} + \zeta_{it} + v_i \dots\dots\dots(3)$$

Using the predicted values from Equation (3) we estimate the sales performance in terms of price, volume and service quality in equations (4), (5) and (6). The dependent variable in Equation (3) is continuous, so we use a generalized estimation equation with panel estimation (Sood and Tellis 2009).

$$\text{PRICE}_{it} = \beta_0 + \beta_1 \text{ Predicted COGNITIVE EMPATHY}_{it} + \beta_2 \text{ Residuals EMOTIONAL EMPATHY}_{it} + \beta_3 \text{ AGE}_{it} + \beta_4 \text{ EDUC}_{it} + \beta_5 \text{ COMP}_{it} + \beta_6 \text{ VLAG}_{it} + \beta_8 \text{ GENCOMM}_{it} + \beta_9 \text{ SUPERVISOR}_{it} \varphi_{it} + \chi_i \dots\dots(4)$$

where i denotes firm i; t is the daily subscript.

We model sales volume as non-negative count data. We find that the underlying assumption in a Poisson model that the conditional variance does not exceed the mean is violated in both panels (Wuyts, Dutta, and Stremersch 2004). We therefore estimate a time series negative binomial maximum likelihood regression which is the appropriate specification to deal with overdispersion (Hilbe 2011). We present incidence rate ratio (IRR) for volume model in the results below.

Similarly, we estimate the volume equation as:

$$\text{VOLUME}_{it} = \rho_0 + \rho_1 \text{ Predicted COGNITIVE EMPATHY}_{it} + \rho_2 \text{ Residuals EMOTIONAL EMPATHY}_{it} + \rho_3 \text{ AGE}_{it} + \rho_4 \text{ EDUC}_{it} + \rho_5 \text{ COMP}_{it} + \rho_6 \text{ PLAG}_i + \rho_7 \text{ GENCOMM}_{it} + \vartheta_{it} + \delta_i \dots\dots(5)$$

where i denotes firm i; t is the subscript for the month.

We measure service quality using a five point ordinal scale from 1 (“highly dissatisfied”) to 5 (“highly satisfied”). Therefore a time series ordered probit or logit is the appropriate specification (Greene 1993). We estimate the equation as an ordered logit and present odds-ratios (ORs) in the results below. Specifically, we model:

$$\begin{aligned} \text{SERVQUAL}_{it} = & \psi_0 + \psi_1 \text{ Predicted COGNITIVE EMPATHY}_{it} + \psi_2 \text{ Residuals} \\ & \text{EMOTIONAL EMPATHY}_{it} + \psi_3 \text{ AGE}_{it} + \psi_4 \text{ EDUC}_{it} + \psi_5 \text{ COMP}_{it} + \psi_6 \text{ VLAG}_{it} + \\ & \psi_8 \text{ GENCOMM}_{it} + v_{it} + \xi_i \dots\dots\dots(6) \end{aligned}$$

where *i* is the subscript for the salesperson; *t* is the subscript for the sales interaction; SERVQUAL is the customer’s evaluation of service quality; and the remaining variables are the same as in equations 4 and 5 above.

Our model specifications have several important advantages over approaches used in past research. First, by combining both inter-individual differences and intra-individual sales dynamics, our panel data is capable of testing more complex behavioral hypotheses via sequential observations. More accurate model parameters, degrees of freedom, and sample variability improve the efficiency of econometric estimates (Hsiao 2006).

Second, by obtaining dependent and independent variable data from multiple different sources (program data, salespeople, supervisors, and customers) we not only create a more robust “360 degree view” of empathy, but also reduce the risk of common methods biases (Podsakoff et al. 2003). These biases are a concern with past cross-sectional studies of empathy which typically utilize one source of data to measure both dependent and independent variables.

Finally, we avoid dropping zero value sales volume observations that occur in our panel, preventing possible survival biases (Brown et al. 1992) in modeling data that naturally includes both high and low-performing salespeople.

Results

We present descriptive statistics for the dependent and independent variables of interest in Table 4. Standard deviations show a wide bell curve of performance consistent with our expectations for a high autonomy environment. Further analysis of the program’s management information system (MIS) data suggests that this salesforce has a similar

performance distribution to other organizations: approximately 20% of the high performing land entrepreneurs account for about 70% of key performance outcomes such as sales volume and total land measured. To test for multicollinearity we run variance inflation factors (VIFs) for all independent variables. VIF values suggest that multicollinearity is not a problem in our data.

Tests of Hypotheses

We present the results of the panel models for price, sales volume, and service quality in Table 5. For price and volume models we report the panel estimation results of random-effects negative binomial regressions. The time-invariant nature of independent variables such as education render beta coefficients generated by fixed-effects models invalid; however, we test both fixed and random-effects models and see no changes in the direction or significance of our results. A Breusch-Pagan Lagrange Multiplier test shows that random-effects panel estimation is the appropriate specification for our data ($p < .05$).

Empathy and Price Setting. H_1 predicts that salespeople with higher cognitive empathy will charge higher prices than those with lower cognitive empathy. In support of H_1 , Table 5 shows that the coefficient of cognitive empathy is positive and significant ($\beta_1 = .10, p < .01$). Further, every point increase in the cognitive empathy score on the 5-point scale increases price by 11% (IRR = 1.11). In contrast, H_2 predicts that salespeople with higher emotional empathy will charge lower prices. In support of H_2 , Table 5 shows that the coefficient of emotional empathy is negative and significant ($\beta_2 = -.13, p < .01$). Further, every point increase in the emotional empathy score on the 5-point scale decreases price by 13% (IRR = .87). Together these results suggest that cognitive and emotional empathy both drive price, but in opposite directions.

Empathy and Sales Volume. H_3 predicts that salespeople with higher cognitive empathy will generate higher sales volume than those with lower cognitive empathy. In support of H_3 ,

Table 5 shows that the coefficient of cognitive empathy is positive and significant ($\beta_1 = .13, p < .01$) and that every point increase in the cognitive empathy score increases sales volume by 13% (IRR = 1.13). Similarly H₄ predicts that salespeople with higher emotional empathy will generate higher sales volume than those with lower emotional empathy. In support of H₄, Table 5 shows that the coefficient of emotional empathy is positive and significant ($\beta_2 = .10, p < .01$), and that every point increase in the emotional empathy score increases sales volume by 10% (IRR = 1.10). Together these results support our argument that cognitive and emotional empathy both help salespeople achieve greater sales volume.

Empathy and Service Quality. H₅ predicts that salespeople with higher cognitive empathy will deliver higher service quality than those with lower cognitive empathy. In support of H₅, Table 5 shows that the coefficient of cognitive empathy is positive and significant ($\beta_1 = .26, p < .01$). Further, every point increase in cognitive empathy improves service quality by 30% (OR = 1.30). Conversely H₆ predicts that salespeople with higher emotional empathy will deliver lower service quality than those with lower emotional empathy. In support of H₆, Table 5 shows that the coefficient of emotional empathy is negative and significant ($\beta_2 = -.24, p < .05$) and that every point increase in emotional empathy decreases service quality by 22% (OR = .78). These results suggest that higher cognitive empathy improves a salesperson's perceived service quality while higher emotional empathy actually worsens it.

Control Variables and Performance Outcomes. Salesperson age positively influences both price ($\beta_3 = .04, p < .01$) and volume ($\beta_3 = .02, p < .01$). As suggested by our qualitative interviews, more senior salespeople can leverage their age-related social capital to charge more for surveys and achieve higher sales volume. Education increases prices ($\beta_4 = .098, p < 0.01$), suggesting that salespeople with more education charge more for their services. Unsurprisingly, the larger the area of land surveyed, the higher the price charged ($\beta_7 = .01, p < .01$) as these land surveys typically involve more work. Past sales volume, specifically the

number of land surveys conducted in the past 30 days, drives up prices ($\beta_8 = 0.01, p < 0.01$). Salespeople experiencing busy sales periods charge more for their services than their less busy counterparts. Conversely past pricing, specifically the average price charged in the past 30 days, has a small effect on monthly volume ($\beta_8 = .01, p < 0.01$). Salespeople who charged more in past periods are in higher demand than their lower pricing counterparts, possibly—as suggested by our interviews—due to clients associating price with superior quality.

Additional Analyses and Robustness Checks

Do cognitive and emotional empathy interact? Our theory argues that cognitive and emotional empathy are separate, disassociated processes within the brain. Thus we would not expect interaction effects between cognitive and emotional empathy in their impact on performance outcomes. To test if this is true we create an interaction effect variable COGNITIVE X EMOTIONAL and rerun our analysis. We find no interaction effects in our pricing ($\beta = .005, p > .1$), volume ($\beta = .009, p > .1$), or service quality ($\beta = .027, p > .1$) models. Together these results provide some support for our theory that cognitive and emotional are indeed distinct processes that influence salesperson performance through different channels.

Are our models robust to other specifications? Due to the cash-based nature of transactions in this market, we see spikes in our pricing data around common bill denominations (e.g. 20, 50, 100 BDT). This violates the assumptions of most linear models, making count models without variance assumptions the most appropriate models. However, to ensure our model is robust to other specifications we also segment price data into quintiles and rerun our model as an ordered logit. Both the direction and significance of the main effects of cognitive ($\beta_1 = .31, p < .01$) and emotional empathy ($\beta_2 = -.24, p < .01$) remain unchanged from our main results in Table 5. These main effects also hold with ordered probit models, as well as with substituting price quartiles and deciles for the dependent variable. For the sales volume

models, we additionally test Poisson and ordered logit specifications, but find no change in the direction or significance of the effects. For the service quality models, we test both ordered probit and linear models, but find no change to the direction or significance of the effects. These results suggest our pricing and sales volume models are robust to different estimation methods.

Are empathy effects really driven by adaptive selling behaviors? Adaptive selling behavior theory (Franke and Park 2006; Spiro and Weitz 1990) posits that a key driver of performance is the ability of salespeople to alter their sales presentation during customer interactions in response to the perceived nature of the situation. Empathy is one of nine theoretical drivers suggested in the original adaptive selling model (Spiro and Weitz 1990). Meta-analyses also suggest that on average adaptive selling behavior is a predictor of salesforce performance (Franke and Park 2006). Adaptive selling behavior theory defines empathy as “the reaction of individuals to the observed experiences of other individuals” (Spiro and Weitz 1990, p.63). However this definition suffers from the same limitation of being a uni-dimensional view of empathy that we describe above. Similarly, a close examination of the ADAPTS scale used in these studies reveals no empathy items comparable with the newer empathy scales that we draw on. Furthermore, more recent empirical studies do not find support for empathic ability as a predictor of the intention to practice adaptive selling behaviors (Giacobbe et al. 2006).

Nevertheless, we run two tests to check that the impact of empathy in our study is distinct from adaptive selling behaviors. Adaptive selling theory posits that salespeople strategically change their behaviors (such as pricing) in response to different sales situations (such as male vs. female clients). We test the former by creating a proxy for adaptive selling behavior using the average standard deviation in pricing per salesperson as an independent variable in our models. Our proxy positively correlates with higher prices ($\beta = .005, p < .01$) but not with volume or quality ($p > .1$), and does not change the significance or direction of

the effects of empathy across all three models. We test the latter by rerunning price and quality estimations with client gender and income as recorded in the sales logs as control variables. We find salesperson pricing correlates positively with income ($\beta = .343, p < .01$) and negatively with gender ($\beta = -.318, p < .01$), but again our main results remain unchanged. Multicollinearity between adaptive selling behavior proxies and empathy is absent across both sets of robustness checks (VIFs < 4.38). Together these results indicate that adaptive selling may indeed impact performance, but this influence does not affect our empirical results.

Do price and volume affect each other simultaneously? Theoretically price and volume outcomes occur at different points in time, i.e., price is decided during an individual sales interaction, while volume is the aggregation of successful sales interaction across monthly time periods. Therefore we model these events separately, adding volume and price lag variables respectively to capture potential interactions between time periods.⁴ Nevertheless, in practice, it is possible that a salesperson may consider past volume when making current pricing decisions and vice versa. For example, during a real-life sales interaction a salesperson could switch between thinking about what price they will offer and thinking about current or anticipated volume. Therefore, to test if price and volume influence each other simultaneously, we aggregate individual sales across a month to generate an average price (AVGPRICE) in our volume panel. We then simultaneously estimate VOLUME and AVGPRICE via a two stage least squares regression using the point of price negotiation (before, during, or after the land survey) as the instrument in our price equation. The main effects of cognitive and emotional empathy remain unchanged. These results suggest that the impact of cognitive and emotional empathy is the same whether modeled sequentially or simultaneously.

⁴ For a proof on why a single time period lag is adequate to capture all past lagged effects in a model, see Prabhu, Chandy, and Ellis (2005)

Is empathy time invariant? In line with other marketing research on empathy to date, we theoretically and empirically treat empathy as a time invariant characteristic of salespeople (Aggarwal et al. 2005; McBane 1995; Spiro and Weitz 1990; Wieseke, Geigenmuller, and Kraus 2012). Nevertheless some studies from medical research suggest that intense and prolonged experiences may change people's base levels of empathy. For example, medical doctors during their intensive three year residency report a small but significant decline in emotional empathy ($p < .05$), while cognitive empathy remains unaffected (Bellini and Shea 2005). These findings raise the important question: can sales experience change a salesperson's levels of empathy?

To explore this we re-measured cognitive and emotional empathy twenty months after the original measurement in the disaggregate sub-sample of land entrepreneurs (N=45). We did this using both self-reported and supervisor-reported scales. Paired t-tests show no significant differences between cognitive empathy in either the self-reported or supervisor-reported scales, and no difference between emotional empathy in the self-reported scales. However we do see a small but significant increase in mean emotional empathy scores (M = 7.09 to 8.83, $p < .05$) in the supervisor reported measures.

We explore the intriguing possibility that empathy levels can change through experience or training in the discussion section below. However, to ensure that potential time-variance effects don't influence our main findings, we rerun our analyses with a subsample of salespeople (N=25) who experience no changes in cognitive or emotional empathy across the twenty month period. Our main results hold across all models. Together these results suggest that the possible time-variance in empathy does not change our main findings.

Summary and Discussion

Marketing scholars have been interested in the links between empathy and salesforce performance for decades (Webster 1968). However research to date has yielded decidedly “mixed results” (Homburg, Wieseke, and Bornemann 2009, p. 76) and robust conclusions remain elusive. The growing global importance of high autonomy sales environments adds fresh urgency to the need to understand how individual behavioral characteristics drive performance. From high-tech clusters to Bangladeshi slums, individual performance in interpersonal interactions is likely to become a key competitive differentiator in the “flatter” world of the 21st century (Friedman 2005). Firms that can harness the intrinsic strengths of individuals will possess an important advantage in the global economy. We contribute to the marketing literature by proposing a new approach to understanding one of these intrinsic strengths, empathy, and testing our framework in the environment of a high autonomy salesforce. To the best of our knowledge, this is the first paper to combine multi-respondent ratings data with real world panel data to study the impact of empathy on performance. Furthermore we show nuanced findings with opposing effects both between and within key metrics of performance. These results offer several potentially important implications for research and practice.

Implications for Research

This article offers several implications for research. Conceptually we show the importance of taking a multidimensional view of salesforce performance over time. While it may be tempting to examine performance outcomes in isolation, consistent success in sales requires balancing multiple objectives simultaneously. Indeed our results show that these objectives are often competing, for example choosing to prioritize price versus volume. This is especially true in the context of high autonomy environments where salespeople have more leeway in determining outcomes over extended periods of time. Despite calls for more longitudinal research (Franke and Park 2006), multidimensional views of salesforce

performance over time remain underexplored in marketing. Future research should ensure that it takes such a comprehensive view of salesforce performance. Failing this, findings (and recommendations based on them) are likely to be incomplete and misleading.

Conceptually we also show the importance of taking a parsimonious but nuanced view of empathy that recognizes both its emotional and cognitive aspects. Past research has offered contradictory and conflicting views on what empathy is, and its role in influencing marketing decisions and outcomes (Comer and Drollinger 1999; Homburg, Wieseke, and Bornemann 2009). Empathy has variously been theorized as having anywhere between one (Ahearne, Jelinek, and Jones 2007) and eight different dimensions (Batson 2009). To resolve this tension we draw on multiple disciplines, particularly neuroscience, to offer a parsimonious two-dimensional framework. We show that these dimensions sometimes drive outcomes in opposite directions, and that only considering empathy's cognitive or emotional dimensions in isolation will lead to inconsistent findings. Thus we show that the contradictory results of past research could very well be in part due to conflating the effects of what are actually two distinct aspects of empathy.

Finally, methodologically we show the importance of using multiple types of data to test hypotheses about salesperson traits and performance. Specifically we highlight the value of compiling both different types of data (survey vs. real-world, time-series data) and different sources of data (self-report vs. other-report) that are appropriate to the independent and dependent variables in question. For instance, responding to calls for improved survey tools in emerging markets (Ingenbleek, Tessema, and van Trijp 2013), we extend prior work with visual Likert scales (Hjermstad et al. 2011) to develop intuitive scoring tools for respondents with limited literacy and experience with survey instruments. We also collect these measures separately from both salespeople and their supervisors. To our knowledge this is the first marketing paper to employ both self- and other-rated scales to measure empathy.

We overlay this cross-sectional data with time-series observations on actual performance data over an 18 month period. Our results suggest that combining the cross-sectional field surveys typically employed by development economists (Ashraf, Bandiera, and Lee 2013; Banerjee and Duflo 2007) with disaggregate panel data on sales performance overcomes the limitations of using either type of data and offers promising returns for future marketing research.

Implications for Practice

This article has several implications for practice. First, our findings suggest that salesperson selection around individual traits may be a critical—yet underutilized—lever in driving sales results. Specifically, we find that empathy is a stronger predictor of performance than age, education, competition, location or supervisor. On average, salespeople with high cognitive empathy closed nearly three times as many sales per month as their less cognitively empathic colleagues did. The perceived “softness” of traits like empathy may incline managers to recruit on more easily measureable, “hard” variables like education and past experience. However selecting salespeople capable of independently evaluating and delivering value to customers is increasingly essential for contemporary organizations, from the top sales executives down to the junior frontline sales staff. The Apple store training handbook famously reads: “Your job is to understand all of your customers' needs—some of which they may not even realize they have” (Forbes 2012). Empathy gives salespeople the tools to understand those needs, both stated and unstated. Nor is empathy as difficult to measure as many perceive. Psychometrics are a well-established tool in recruiting and, as we demonstrate, even relatively short scales can capture multi-dimensional traits such as empathy. The challenge may be therefore more in wading through the numerous options and widely-debated frameworks to choose the “right” trait, and in turn the appropriate tools to measure it. We believe this paper brings more clarity to conceptualizing and measuring one such trait—empathy—with particular importance to the marketing field.

Second, our research suggests that not all empathy is created equal. In particular, our findings indicate that high levels of emotional empathy may actually be a negative trait in salespeople. While sharing your customer’s emotions during a sales interaction may be useful in some cases, at other times it can be counterproductive. The strongest salespeople may be those who can maintain emotional stability regardless of their customer’s state: calm in the face of anger, confident in the face of uncertainty, and enthusiastic in the face of apathy. Thus some “professional distance” may be essential, especially where salespeople have full discretion on price, volume, and service quality. In contrast, we find that cognitive empathy is generally a good thing. Regardless of the emotion in a sales interaction, broadly speaking, the ability to imagine yourself in your customer’s shoes seems less likely to lead you far astray. The challenge is ensuring that this cognitive process occurs during each sales interaction. Amazon CEO Jeff Bezos reportedly insists that at every meeting a chair be left empty to represent the most important person in the room—the customer. This is no doubt intended to ensure that Amazon’s employees are minded to take the perspective of customers at all times.

Third, our findings suggest that different empathy profiles are suited to different sales tasks. The direction of effects and the effects sizes changed depending on whether the performance outcome was price, volume, or service quality. Ultimately successful sales recruiting is about matching the right personality to the right role. Low emotional and high cognitive empathy may be essential for sales executives managing high pressure contracts or negotiating an acquisition. The opposite profile may make for a successful volume driver pushing products on a store floor, particularly if they have no discretion on price setting. This research offers several practical insights for managers not only about *which* dimensions of empathy are important for salespeople, but also *when* they are important.

Limitations and Further Research

This article has limitations that offers opportunities for further research. First, following in the footsteps of past research we treat empathy as an intrinsic, time-invariant characteristic. However, as we discuss in the robustness checks section, a small but growing body of research from other fields suggests that certain kinds of empathy may change in response to experience. This raises an important question for managers: can empathy be trained? To date experiments giving “perspective taking training” to salespeople have shown no effects (Homburg, Wieseke, and Bornemann 2009). However it is possible that one-off training may be inadequate to shift a deeply-rooted trait such as empathy. For example, Bellini and Shea (2005) found that during the three years of medical residency students’ emotional empathy declines slightly, possibly due to the “intensity” and “chronic partial sleep loss” experienced during the period. Other experiments by Kidd and Castano (2013) have shown that reading literary fiction can improve a person’s Theory of Mind (cognitive empathy). Interestingly both popular fiction and non-fiction have no effects. Thus, there may be something about the type or intensity of training which is necessary to influence a person’s empathy levels. Future researchers could provide valuable insights by exploring the degree to which empathy is truly time-invariant, and study if it is possible to develop or weaken it. This stream of research would have important implications for managers as well, shining light on whether empathy can increase with training or can only be selected for during recruiting.

Second, we only explore empathy’s impact in a services context. While it seems likely that empathy may have similar effects on for product sales, future research could test whether this is indeed the case. Service-dominant logic (Vargo and Lusch 2004) argues that even in product sales, goods are simply intermediates in the value-creation exchange that occurs through a customer-salesperson interaction. If this is the case then empathy may play an important role in optimizing those exchanges too, especially for achieving sales outcomes such as volume and service quality. Future researchers could also explore other non-product

contexts where the objective “quality” of a service itself may be influenced by empathy. Land measurements are an inherently technical exercise, and thus by nature their quality is unlikely to be influenced by a salesperson’s level of empathy. However, there are numerous services where empathy may play a concrete role in the objective quality of that service. For example, legal services, counseling, teaching, consulting, and many others are all likely to benefit from service providers being able to more effectively place themselves in their client’s shoes. Even doctors’ ability to diagnose patients is a combination of their technical acumen alongside their ability to truly understand what a patient is saying to them. Indeed, clinical competence scores show strong correlations with physician empathy (Hojat et al. 2004). Empathy could make the difference between life-saving care and a missed diagnosis.

Third, our study focus is restricted to high-autonomy environments. We argue that these environments are increasingly characteristic of salesforces in both developed and emerging countries. This paper does not, however, address empathy’s potential impact in low-autonomy environments where salespeople may have limited control over price, volume, or service quality. It is unclear whether empathy is much help to telemarketers following a sales script over a phone line, or for low-level sales representatives in deeply hierarchical organizations. Similarly, it does not address empathy’s potential impact in “full” autonomy environments such as entrepreneurship. In settings where people work for themselves empathy may have an especially important impact in securing clients and delivering services as well as recruiting talent or building key supplier relationships. Future research could explore if cognitive and emotional empathy have similar or opposing effects on a range of outcomes beyond those explored in this study.

References

- Aggarwal, Praveen, Stephen Castleberry, Rick Ridnour, and David Shepherd (2005), "Salesperson empathy and listening: Impact on relationship outcomes," *Journal of Marketing Theory and Practice*, 13 (3), 16–31.
- Ahearne, Michael, Ronald Jelinek, and Eli Jones (2007), "Examining the effect of salesperson service behavior in a competitive context," *Journal of the Academy of Marketing Science*, 35 (4), 603–16.
- Amabile, Teresa (1983), "Brilliant but cruel: Perceptions of negative evaluators," *Journal of Experimental Social Psychology*, 19 (2), 146–56.
- Anderson, Erin and Richard Oliver (1987), "Perspectives on Behavior-Based versus Outcome-Based Salesforce Control Systems," *Journal of Marketing*, 51 (4), 76–88.
- Ashraf, Nava, Oriana Bandiera, and Scott Lee (2013), "Awards Unbundled: Evidence from a Natural Field Experiment," *Working paper*, 1–41.
- Banerjee, Abhijit and Esther Duflo (2007), "The Economic Lives of the Poor," *The Journal of Economic Perspectives*, 21 (1), 141–67.
- "Bangladesh and development" (2012), *The Economist*.
- "Bangladesh: Bolstering Economic Growth to Reduce Poverty" (2015), *World Bank*, (accessed May 1, 2015), [available at Bangladesh: Bolstering Economic Growth to Reduce Poverty].
- Barakat, Abul and Prasanta Roy (2004), *Political Economy of land Litigation in Bangladesh: A Case of Colossal National Wastage*, Dhaka: ALRD.
- Baron-Cohen, Simon, Sally Wheelwright, Jacqueline Hill, Yogini Raste, and Ian Plumb (2001), "The 'Reading the Mind in the Eyes' Test Revised Version: A Study with Normal Adults, and Adults with Asperger Syndrome or High-functioning Autism," *Journal of Child Psychology and Psychiatry*, 42 (2), 241–51.
- Barrett-Lennard, Godfrey T. (1981), "The empathy cycle: Refinement of a nuclear concept," *Journal of Counseling Psychology*.
- Basu, Amiya K, Lal V. Srinivasan, and Richard Staelin (1985), "Salesforce Compensation Plan: An Agency Theoretic Perspective," *Marketing Science*, 4 (4), 267–91.
- Batson, Daniel (2009), "These things called empathy: eight related but distinct phenomena," in *The Social Neuroscience of Empathy*, 3–15.
- , J. Fultz, and P.A. Schoenrade (1987), "Distress and empathy: two qualitatively distinct vicarious emotions with different motivational consequences.," *Journal of personality*, 55 (1), 19–39.
- Bellini, Lisa and Judy Shea (2005), "Mood Change and Empathy Decline Persist During Three Years of Internal Medicine Training," *Academic Medicine*, 80 (2), 164–67.
- Bernstein, William and Mark Davis (1982), "Perspective-Taking, Self-Consciousness, and Accuracy in Person Perception," *Basic and Applied Social Psychology*.
- Bertrand, Marianne, Sendhil Mullainathan, and Eldar Shafir (2006), "Behavioral Economics and Marketing in Aid of Decision Making Among the Poor," *Journal of Public Policy Marketing*, 25 (1), 8–23.
- Bloom, Paul (2014), "Against Empathy," *Boston Review*.
- Brown, Stephen, William Goetzmann, Roger Ibbotson, and Stephen Ross (1992), "Survivorship bias in performance studies," *Review of Financial Studies*, 5 (4), 553–80.
- Bruton, Garry (2010), "Business and the World's Poorest Billion – The Need for an Expanded Examination by Management Scholars," *Academy of Management Perspectives*, 24 (3), 5–9.
- Burgess, Steven Michael and Jan Benedict Steenkamp (2006), "Marketing renaissance: How research in emerging markets advances marketing science and practice," *International*

- Journal of Research in Marketing*, 23 (4), 337–56.
- Coke, Jay, Daniel Batson, and Katherine McDavis (1978), “Empathic mediation of helping: A two-stage model,” *Journal of Personality and Social Psychology*.
- Comer, L.B. and Tanya Drollinger (1999), “Active empathetic listening and selling success: A conceptual framework,” *Journal of Personal Selling & Sales ...*, XDC (1), 16–29.
- Coughlan, Anne and Subrata Sen (1989), “Salesforce compensation: Theory and managerial implications,” *Marketing Science*, 8 (4), 324–42.
- Cummings, William and M. Venkatesan (1976), “Cognitive Dissonance and Consumer Behavior: A Review of the Evidence,” *Journal of Marketing Research*, 13 (3), 303–8.
- Davis, Mark (1980), “A Multidimensional Approach to Individual Differences in Empathy,” *JSAS Catalog of Selected Documents in Psychology*, 10 (4), 85.
- Dawson, Lyndon, Barlow Soper, and Charles Pettijohn (1992), “The Effects of Empathy on Salesperson Effectiveness,” *Psychology & Marketing*, 9 (August 1992), 297–310.
- Delpechitre, Duleep (2013), “Review and assessment of past empathy scales to measure salesperson’s empathy,” *Journal of Management & Marketing Research*, 1–17.
- Denning, Steve (2012), “Apple’s Retail Success Is More Than Magic,” *Forbes*.
- Economist (2011), “The Art of Selling,” *The Economist*.
- Forbes (2014), “Gen X is from Mars, Gen Y is from Venus: A primer on how to motivate a millennial,” *Forbes*.
- Churchill, Gilbert , Neil Ford, Steven Hartley, Orville Walker (1985), "The determinants of salesperson performance: A meta-analysis." *Journal of Marketing Research* , 103-118.
- Fornell, Claes and David Larcker (1981), “Evaluating Structural Equation Models with Unobservable Variables and Measurement Error.,” *Journal of Marketing Research (JMR)*. Feb1981, 18 (1), 39–50. 12p. 1 Diagram.
- Franke, George and Jeong-Eun Park (2006), “Salesperson Adaptive Selling Behavior and Customer Orientation: A Meta-Analysis,” *Journal of Marketing Research*, 43 (4), 693–702.
- Friedman, Thomas (2005), “Its a Flat World, After All,” *New York Times*, 1–10.
- Galinsky, Adam, William Maddux, Debra Gilin, and Judith White (2008), “Why It Pays to Get Inside the Head of Your Opponent: The Differential Effects of Perspective Taking and Empathy in Negotiations,” *Psychological Science*, 19 (4), 378–84.
- Gallese, Vittorio (2003), “The Roots of Empathy: The Shared Manifold Hypothesis and the Neural Basis of Intersubjectivity,” *Psychopathology*, 36 (4), 171–80.
- Gardner, Meryl Paula and Dennis Rook (1988), “Effects of Impulse Purchases on Consumer’s Affective States,” *Advances in Consumer Research*, 15 (1), 127–30.
- Giacobbe, Ralph, Donald Jackson, Lawrence Crosby, and Claudia Bridges (2006), “A Contingency Approach To Adaptive Selling Behavior and Sales Performance: Selling Situations and Salesperson Characteristics,” *Journal of Personal Selling and Sales Management*, 26 (2), 115–42.
- Gitomer, Jeffrey H. (2004), *The Little Red Book of Selling*, Austin, Texas: Bard Press.
- Greene, William H (1993), *Econometric Analysis*, New York, NY: Macmillan.
- Guardian (2014), “The autonomous office: how to empower your team,” *The Guardian*.
- Hammond, Allen, William Kramer, Robert Katz, Julia Tran, and Courtland Walker (2007), “The Next 4 Billion,” *Innovations*:
- Hatfield, Elaine, John Cacioppo, and Richard Rapson (1993), “Emotional Contagion,” *Current Directions in Psychological Science*.
- Hilbe, Joseph (2011), *Negative Binomial Regression*, Cambridge University Press.
- Hjermstad, Marianne, Peter Fayers, Dagny Haugen, Augusto Caraceni, Geoffrey Hanks, Jon H Loge, Robin Fainsinger, Nina Aass, and Stein Kaasa (2011), “Studies comparing Numerical Rating Scales, Verbal Rating Scales, and Visual Analogue Scales for

- assessment of pain intensity in adults: a systematic literature review.,” *Journal of pain and symptom management*, 41 (6), 1073–93.
- Hogan, R (1969), “Development of an empathy scale,” *Journal of consulting and clinical psychology*, 33 (3), 307–16.
- Hojat, Mohammadreza, Salvatore Mangione, Thomas Nasca, Susan Rattner, James Erdmann, Joseph S Gonnella, and Mike Magee (2004), “An Empirical Study of Decline in Empathy in Medical School,” *Medical Education*, 38 (9), 934–41.
- Homburg, Christian, Nicole Koschate, and Wayne Hoyer (2005), “Do Satisfied Customers Really Pay More? A Study of the Relationship Between Customer Satisfaction and Willingness to Pay,” *Journal of Marketing*, 69 (April), 84–96.
- , Jan Wieseke, and Torsten Bornemann (2009), “Implementing the Marketing Concept at the Employee-Customer Interface: The Role of Customer Need Knowledge,” *Journal of Marketing*, 73 (July), 64–81.
- Hsiao, Cheng (2006), “Panel data analysis—advantages and challenges,” *IEPR Working Paper 06.49*, (May).
- Ingenbleek, Paul T M, Workneh Kassa Tessema, and Hans C M van Trijp (2013), “Conducting field research in subsistence markets, with an application to market orientation in the context of Ethiopian pastoralists,” *International Journal of Research in Marketing*, 30 (1), 83–97.
- John, George and Barton Weitz (1989), “Salesforce compensation: an empirical investigation of factors related to use of salary versus incentive compensation,” *Journal of Marketing Research*, 26 (1), 1–14.
- Judge, Timothy and Joyce Bono (2001), “Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: a meta-analysis.,” *The Journal of Applied Psychology*, 86 (1), 80–92.
- Katsikea, Evangelia, Marios Theodosiou, Nick Perdakis, and John Kehagias (2011), “The effects of organizational structure and job characteristics on export sales managers’ job satisfaction and organizational commitment,” *Journal of World Business*, 46 (2), 221–33.
- Kennedy, Mary, Linda Ferrell, and Debbie Leclair (2001), “Consumers’ trust of salesperson and manufacturer: An empirical study,” *Journal of Business Research*, 51 (1), 73–86.
- Kidd, David Comer and Emanuele Castano (2013), “Reading literary fiction improves theory of mind,” *Science (New York, N.Y.)*, 342 (6156), 377–80.
- Krafft, Manfred (1999), “An Empirical Investigation of the Antecedents of Salesforce Control Systems,” *Journal of Marketing*, 63 (3).
- Lamont, Lawrence and William Lundstrom (1977), “Identifying Successful Industrial Salesmen by Personality and Personal Characteristics,” *Journal of Marketing Research*, 14 (4), 517–29.
- Lucas, George, A. Parasuraman, Robert Davis, and Ben Enis (1987), “An Empirical Study of Salesforce Turnover,” *Journal of Marketing*, 51 (3), 34.
- McBane, Donald (1995), “Empathy and the Salesperson: A Multidimensional Perspective,” *Psychology & Marketing*, 12 (July 1995), 349–70.
- McKinsey (2011), “Freeing up the salesforce for selling,” *McKinsey Quarterly*.
- Mehrabian, A. and N. Epstein (1972), “A measure of emotional empathy,” *Journal of personality*, 40 (4), 525–43.
- Miao, C. Fred and Kenneth Evans (2014), “Motivating industrial salesforce with sales control systems: An interactive perspective,” *Journal of Business Research*, 67 (6), 1233–42.
- Mitchell, Jason, C. Neil Macrae, and Mahzarin Banaji (2006), “Dissociable Medial Prefrontal Contributions to Judgments of Similar and Dissimilar Others,” *Neuron*, 50 (4), 655–63.

- Nelson, Jane, Eriko Ishikawa, and Alexis Geaneotes (2009), "Developing Inclusive Business Models: A review of Coca-Cola's manual distribution centers in Ethiopia and Tanzania," *Women's health (London, England)*.
- Nunnally, J.C. and Ira Bernstein (1994), *Psychometric Theory*.
- O'Neill, Jim, Dominic Wilson, and Anna Stupnytska (2005), "How Solid are the BRICs?," *Global Economics Paper No. 134*, (December).
- Parasuraman, A., Valerie Zeithaml, and Leonard Berry (1985), "A Conceptual Model of Service Quality and Its Implications for Future Research," *Journal of Marketing*, 49 (Fall), 41–50.
- Park, Hee Sun and Amber Raile (2009), "Perspective Taking and Communication Satisfaction in Coworker Dyads," *Journal of Business and Psychology*, 25 (4), 569–81.
- Phillips, Lynn, Dae Chang, and Robert Buzzell (1983), "Product Quality, Cost Position and Business Performance: A Test of Some Key Hypotheses," *Journal of Marketing*, 47 (2), 26–43.
- Pilling, Bruce and Sevo Eroglu (1994), "An Empirical Examination of the Impact of Salesperson Empathy and Professionalism and Merchandise Salability on Retail Buyers' Evaluations," *Journal of Personal Selling Sales Management*, 14 (1), 45–58.
- Pink, Daniel (2012), *To Sell is Human*, New York, NY: Riverhead Books.
- Plank, Richard, Ann Minton, and David Reid (1996), "A short measure of perceived empathy," *Psychological reports*, 79 (3f), 1219–26.
- Podsakoff, Philip, Scott MacKenzie, Jeong-Yeon Lee, and Nathan Podsakoff (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies.," *The Journal of Applied Psychology*, 88 (5), 879–903.
- Prahalad, C.K. and R.A. Mashelkar (2010), "Innovation's holy grail," *Harvard Business Review*, 88 (August), 132–41.
- Premack, David and Guy Woodruff (1978), "Does the chimpanzee have a theory of mind?," *Behavioral and brain sciences*, 1 (4), 515–26.
- Preston, Stephanie and Frans de Waal (2002), "Empathy: Its Ultimate and Proximate Bases," *Behavioral and Brain Sciences*, 25, 1–47.
- Rangan, V.K. and Rohithari Rajan (2005), "Unilever in India: Hindustan Lever's Project ShaktiV—Marketing FMCG to the Rural Consumer," *Harvard Business Case*, (9-505), 1–56.
- Rizzolatti, Giacomo and Laila Craighero (2004), "The mirror-neuron system," *Annual review of neuroscience*, 27, 169–92.
- Rotemberg, Julio (2002), "Customer Anger at Price Increases, Time Variation in the Frequency of Price Changes and Monetary Policy," *National Bureau of Economic Research Working Paper Series*, No. 9320.
- SalesForce (2012), "Commission Only Salespeople – Winners or Losers?," *SalesForce: Training and consulting*.
- Shamay-Tsoory, Simone, Judith Aharon-Peretz, and Daniella Perry (2009), "Two systems for empathy: a double dissociation between emotional and cognitive empathy in inferior frontal gyrus versus ventromedial prefrontal lesions," *Brain: A Journal of Neurology*, 132 (Pt 3), 617–27.
- Sheth, Jagdish (2011), "Impact of emerging markets on marketing: Rethinking existing perspectives and practices," *Journal of Marketing*, 75 (July), 166–82.
- Singer, Tania (2006), "The neuronal basis and ontogeny of empathy and mind reading: review of literature and implications for future research," *Neuroscience and biobehavioral reviews*, 30 (6), 855–63.
- Speier, Cehri and Viswanath Venkatesh (2002), "The hidden minefields in the adoption of sales force automation technologies," *Journal of Marketing*, 66 (3), 98-111.

- Spiro, Rosann and Barton Weitz (1990), "Adaptive selling: Conceptualization, measurement, and nomological validity," *Journal of Marketing*, 61–69.
- Stone, Valerie, Simon Baron-Cohen, and Robert Knight (1998), "Frontal Lobe Contributions To Theory of Mind," *Journal of Cognitive Neuroscience*, 10 (5), 640–56.
- Stuart, Alix (2014), "How Many Salespeople Do You Really Need?," *Inc.*
- Surakka, Veikko and Jari Hietanen (1998), "Facial and emotional reactions to Duchenne and non-Duchenne smiles," *International Journal of Psychophysiology*, 29 (1), 23–33.
- Vargo, Stephen and Robert Lusch (2004), "Evolving to a New Dominant Logic for Marketing," *Journal of Marketing*, 68 (1), 1–17.
- de Waal, Frans (2008), "Putting the altruism back into altruism: the evolution of empathy," *Annual review of psychology*, 59, 279–300.
- Webster, Frederick (1968), "Interpersonal Communication and Salesman Effectiveness," *Journal of Marketing*, 32 (3), 7–13.
- Wieseke, Jan, Anja Geigenmuller, and Florian Kraus (2012), "On the Role of Empathy in Customer-Employee Interactions," *Journal of Service Research*, 15 (3), 316–31.
- Wuyts, Stefan, Shantanu Dutta, and Stefan Stremersch (2004), "Portfolios of Interfirm Agreements in Technology-Intensive Markets: Consequences for Innovation and Profitability," *Journal of Marketing*.

Table 1: Summary of Cognitive and Emotional Empathy

Cognitive Empathy	Emotional Empathy
Neuroanatomy: Ventromedial pre-frontal cortex	Neuroanatomy: interior frontal gyrus
Commonly-cited components: Perspective taking (Barret-Lennard 1981, Davis 1980), Fantasy (Davis 1980), Theory of Mind (Stone 1998)	Commonly-cited components: Emotional contagion (Hatfield 1993), Empathic Concern (Batson 1987, Davis 1980), Personal Distress (Davis 1980), Emotion recognition (Baron-Cohen 2001)
Function: Driven by higher cognitive function and flexibility (Decety 2004), requires ‘Theory of Mind’ separation of self from others (Gallagher & Frith)	Function: Driven by the mirror neuron system (Gallese 2007), more instinctive and automatic response (Singer 2006, Dapretto 2006, Schulte-Ruther 2007)
Development: First appears during childhood and early adolescence (Preston 2002, Gallese 2003, Decety 2004)	Development: Present from birth, babies are capable of showing an empathic response to others distress without being able to cognitively separate themselves from the other (Singer 2006)
Evolution: Present in more ‘advanced’ animals such as great apes (de Waal 2008)	Evolution: Present in birds and rodents (de Waal 2008)
Summary of commonly-cited theoretical components in empathy, neurological function, neurological development, and evolutionary presence in other species (see Shamay-Tsoory 2009)	

Table 2: Summary of Measures and Data Sources

Conceptual Variables	Measure	Data Source
<i>Dependent Variables</i>		
Price	Land survey price in Bangladesh Taka	Daily personal logs of salespeople (N=45, Observations=2,321)
Volume	Number of surveys per month	Monthly aggregated MIS data (N=190, Observation=2,489)
Customer satisfaction	5-point scale from highly “satisfied” to “dissatisfied”	Household survey with clients (N=278)
<i>Independent Variables</i>		
Cognitive empathy	3-item scale	3-item scale, McBane scale (1995) from Davis (1980)
Emotional empathy	3-item scale	3-item scale, modified McBane scale (1995) from Davis (1980) and Dillard (1986)
<i>Control Variables</i>		
Age	Age in years	Land Entrepreneur Survey
Education	Level of formal education	Land Entrepreneur Survey
Competition	Number of other LEs operating in area	Land Entrepreneur Survey
Branch Office	Dummy variable for branch office	Programme MIS data
Land size	Size of land per survey in decimals	Daily sales logs
Volume lag	Running sales volume for past 30 days	Daily sales logs
Price lag	Running average price for past 30 days	Daily sales logs

Table 3: Psychometric Properties of Measures

Independent Variables	M	SD	α	CR	AVE
Cognitive empathy (Other-rated)	9.95	1.83	0.83	0.83	0.62
Emotional empathy (Other-rated)	8.83	2.02	0.69	0.70	0.45
Cognitive empathy (Self-rated)	8.96	1.88	0.35	0.64	0.58
Emotional empathy (Self-rated)	7.18	2.43	0.51	0.54	0.28

Table 4: Descriptive Statistics and Correlation Matrix

Variable	M	SD	Min	Max	1	2	3	4	5	6	7	8	9	10	11
1. Cognitive Empathy	9.04	2.34	1	12	1.00										
2. Emotional Empathy	7.19	2.16	1	12	.62*	1.00									
3. Age	36.07	5.95	26	51	.15*	.12	1.00								
4. Education (years)	3.38	1.15	1	6	.03	.07	-.13	1.00							
5. Competition	0.78	1.16	0	7	-.08	.01	.11	.03	1.00						
6. Land size	40.95	57.24	0.1	810	.03	.02	.01	-.00	.02	1.00					
7. Volume	4.54	6.30	0	75	.35*	.24*	.27*	-.04*	-.04*		1.00				
8. Volume lag	10.48	7.46	0	30	.04*	.10*	.36*	-.39*	-.30*	.01		1.00			
9. Price	274.61	198.58	0	1500	.24*	-.01	.26*	-.05*	.12*	.26*			1.00		
10. Price lag	240.03	149.22	5	1500	.10*	.06*	.20*	.02	.13*	.04*			.32*	1.00	
11. Service Quality	4.12	0.74	2	5	-.00	-.02	-.03	.12*	-.05	.06			-.00	-.03	1.00

* $p < .05$

NB: As detailed in our methods section, variables exist across two different panels and variables 1-5 are time invariate. Therefore we have calculated time independent IVs from aggregated dataset [yellow] to ensure one observation per salesperson. We have calculated correlations for time-varying daily IVs from daily panel [green] and time-varying monthly IVs from month panel [blue]. Where two IVs exist in different panels (e.g. price and volume) we have highlighted them in red.

Table 5: Impact of Empathy on Price, Volume, and Service Quality

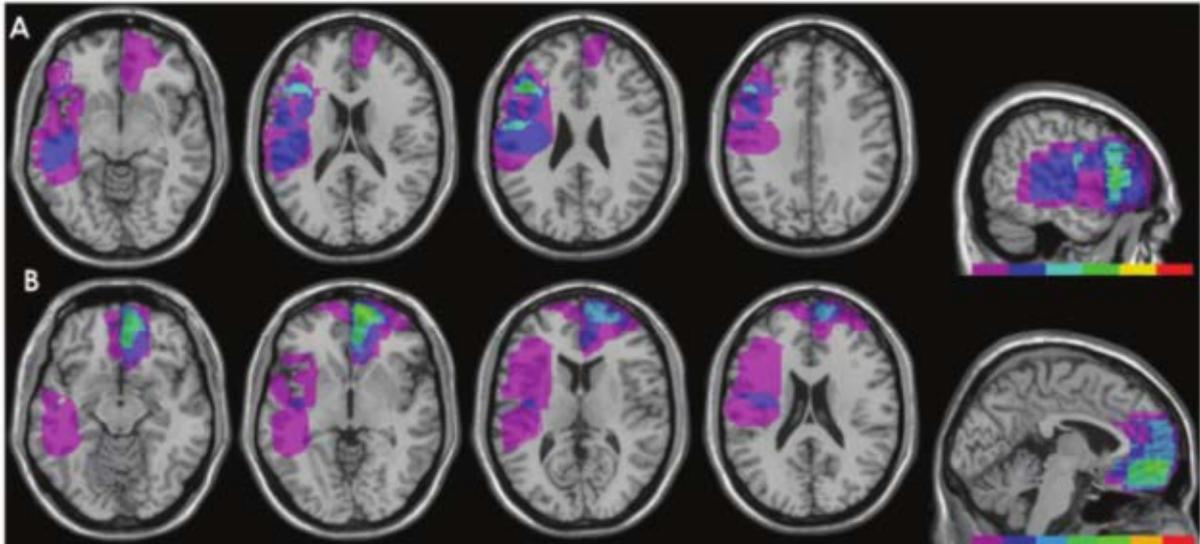
Variable	Price	Volume	Service Quality
Cognitive Empathy	.106*** (.023)	.130*** (.038)	.262*** (.088)
Emotional Empathy	-.135*** (.030)	.103*** (.038)	-.246** (.116)
Age	.047*** (.005)	.024*** (.007)	-.004 (.021)
Education	.098*** (.034)	-.016 (.037)	.132 (.126)
Competition	.021 (.0262)	-.001 (.044)	-.060 (.102)
Branch Office	-	-	-
Land size	.002*** (.000)		.003 (.002)
Volume lag	.010*** (.003)		.019 (.025)
Price			-.000 (.000)
Price lag		.008*** (.000)	-.000 (.000)
Fit	Wald χ^2 (13): 505.26 $p < .01$	Wald χ^2 (21): 165.74 $p < .01$	Wald χ^2 (14): 38.17 $p < .01$
Observations	2315	1590	278

Notes: Standard errors are in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Figures

Figure 1: Location of empathy in the brain (Shamay-Tsoory et al. 2009)



Recent neuroscience research indicates that emotional empathy occurs in the interior frontal gyrus [A] while cognitive empathy occurs in the ventromedial prefrontal cortex [B].

Appendices

Appendix 1: Translated empathy scales with items, sources, and visual guide

Cognitive Empathy	
Source	Items
McBane (1995) Homburg (2009) Davis (1980)	কোন সর্দিধান্ত নেওয়ার আগে আপনি কি সবার মতামত নেয়ার চেষ্টা করেন I try to look at everybody's side of disagreement before I make a decision
McBane (1995) Homburg (2009) Davis (1980)	কেউ আপনাকে কষ্ট দিলে বা কারও ব্যাপারে হতাশ হলে, আপনি কি তার কষ্ট দেয়ার কারনটা বুঝার চেষ্টা করেন When I'm upset at someone I usually try to "put myself in their shoes"
McBane (1995) Homburg (2009) Davis (1980)	আপনি কি প্রত্যেকটা ব্যাপারে ভাল-মন্দ দুটো দিকই দেখার চেষ্টা করেন I believe that there are two sides to every question and try to look at them both

Emotional Empathy	
Source	Items
McBane (1995) Homburg (2009) Davis (1980)	অন্য লোকের সমস্যা নিয়ে কি আপনি সাধারণত খুব একটা মাথা ঘামান Other people's misfortunes usually disturb me a great deal
McBane (1995) Homburg (2009) Davis (1980)	আপনার চেয়ে আরও খারাপ অবস্থানে যারা আছে, তাদের দখে কি আপনার মায়া হয় I often have tender, concerned feelings for people less fortunate than me
McBane (1995) Homburg (2009)	আপনার আশে পাশে সবাই যদি কোন কারণে চিন্তিত হয়ে যায়, তাহলে কি আপনিও চিন্তিত হয়ে যান I become nervous if others around me are nervous

