DEVELOPING A VALID AND RELIABLE MEASUREMENT OF ATTITUDES TOWARD SALESPEOPLE

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The authors explain the need for a valid and reliable scale to measure attitude toward salespeople. Based on this need, a 24-item scale is developed in a step-by-step manner, following a process prescribed by marketing scholars. Three studies are conducted and reported in developing the scale. The first two studies use university students to develop the items, refine the measure, and begin the process of reliability and validity analysis in a consumer setting. The third study reports a further validation of the refined measure in an organizational setting (the electronics industry). Resulting is a valid and reliable scale made up of two dimensions: personal characteristics and social interaction characteristics of salespeople. This scale offers a tool that both scholars and practitioners can use confidently in assessing customer attitudes toward salespeople. Particularly valuable is the application of this measure to helping sales managers assess customer satisfaction.

INTRODUCTION

Of the promotional tools a marketer may use in this integrated marketing strategy, personal selling may be the most important. This importance is indicated by two factors. First, organizations spend more on personal selling than on any other of the promotional tools, including advertising (e.g., Johnston and Marshall 2010; Traynor and Traynor 1989). Second, an organization’s most significant, and sometimes only, contact with its customers is through the personal selling function as salespeople interact with the customers (e.g., Black and Peeples 2005; Johnson and Black 1996; Puccinelli 2006).

In addition to producing sales for an organization, a primary objective of personal selling is to create a predisposition on the part of customers to respond favorably to the salesperson, which in turn facilitates a favorable attitude toward the company represented by the salesperson (Brown 1995). In pursuit of these objectives, companies seek to influence customer attitudes toward their sales representatives. If this favorable attitude toward companies, following a positive attitude toward its salespeople, is achieved, a company’s customers are likely to act in ways that facilitate not only single transactions, but also maintain long-term relationships (Brown 1995). Companies are increasingly demonstrating the importance of the salesperson/customer interaction by including customer satisfaction in sales force compensation plans (Widmier 2002). Despite this importance, little effort has gone into developing any means to assess attitudes toward the salesperson.

As customers continue to expect increased customer orientation by salespeople (Widmier 2002), being able to assess customer attitudes toward salespeople will become even more important. Salespeople are boundary spanners who bridge the gap between a business and its customers. It is imperative that companies know as much about their customers as possible and their attitudes toward salespeople should be very important. Customer attitudes toward a company’s salespeople are often the most important factor when judging the company, regardless of the quality of its product or other
factors (Jones et al. 1998). In consideration of this ever-increasing importance of the personal selling function and salespeople in creating customer satisfaction and establishing a favorable reputation for a company, the purpose of this research is to develop a valid and reliable scale to measure customer attitude toward salespeople.

BACKGROUND

Young and Albaum (2003) developed a measure of trust in salesperson-customer relationships, successfully assessing a potentially important element of a customer’s attitude toward salespeople. However, this measurement falls short of being able to robustly assess overall attitudes toward salespeople.

Brown (1995) came closest to developing a scale to measure overall attitude towards salespeople. In his research, a five-item scale using the semantic-differential format (bad-good, ineffective-effective, not useful-useful, unpleasant-pleasant, and helpful-unhelpful) was used to measure attitude toward salespeople in a business-to-business setting. However, the scale was not developed using prescribed methods used in marketing and was simply one variable among many in this larger study to determine if attitudes toward salespeople impacted both the attitudes of salespeople and product attitudes. The scale proved to be reliable (Cronbach’s alpha = .91), but no validity was assessed. Thus, a void still remains where a valid and reliable measure of customers’ overall attitudes toward salespeople, using the steps suggested in the literature (e.g., Churchill 1979), has not been developed.

The theoretical foundations for developing the scale were derived directly from the work of Osgood et al. (1957). Accordingly, attitude is a learned predisposition to respond to an object in a consistently favorable or unfavorable manner. Further, this ability to measure bipolarity is essential in assessing attitudes. Also, some attitudes are held much more strongly than are other attitudes. Thus, to measure attitudes, bipolar items should be offered with more than two simple answer categories. Their resulting suggestion is the semantic-differential scale.

Guidelines for generating an appropriate pool of potential items were also provided by Osgood et al. (1957), as well as by Churchill (1979). The items should be relevant to the concepts being judged and they should exhibit a certain factorial composition. This suggests that more than one factor may exist in an attitude and items generated to measure that attitude should be related and grouped into distinct, unidimensional factors. Furthermore, Osgood et al. (1957) recommended that frequency of usage, as determined by free association, be used to generate scale items. This guideline suggests item-generation processes, such as free association, be used and those items that are frequently listed to describe the attitudes are the ones most salient in expressing those attitudes.

Churchill (1979) also recommends similar processes to generate items.

METHOD

Item Generation and List Refinement

The first step was to generate as many items as possible from a review of the relevant literature (Brown 1995; Comer and Jolson 1985; Gibson et al. 1980/1981; Hayes and Hartley 1989; Muehling and Weeks 1988; Simpson and Kahler 1980/1981; Swan and Oliver 1991). This resulted in a list of 60 items.

Research suggests the best salespeople have both feminine and masculine characteristics (e.g., Jones et al. 1998; Siguaw and Honeycutt 1995).
Thus, in an attempt to capture these dimensions, and to generate more items, we asked students in an undergraduate Sales Management class on the first day of class to generate two to five words or phrases that came to mind when they heard the word “salesman.” Two weeks later, we did the same for “saleswoman,” and two weeks after that, we asked them to accomplish the same task for “salesperson.”

We then held a focus group including eleven undergraduate students—six women and five men. The issue we wanted to explore in depth was the femininity/masculinity issue. By discussing specific products and situations, we found evidence from this focus group that gender stereotyping exists in people’s perceptions of salespeople. For example, before we revealed to the group that we were probing for discussion on femininity and masculinity, we asked them to describe a hypothetical situation where they were faced with a computer salesperson. Without exception, all the members of the focus group referred to the computer salesperson as a male. Also, in later discussion, we learned that without exception, people would be more comfortable having a female salesperson come to their home at night rather than a male. Further discussion suggested that focus group members were not so concerned about the actual gender of the salespeople, but rather were more interested in the masculine and feminine characteristics they perceived needed to be demonstrated by salespeople in the discussed situations. We then asked the group to perform word generation activities to produce more items. Combined with the items from the literature review and from the Sales Management class, we now had a pool of 214 words and phrases describing salespeople.

Many of these items could be paired with other items generated in this process to form semantic-differential pairings. For the items that could not be paired from the generated list, we paired them with words that intuitively seemed to be opposites. To begin reducing the number of items into a more usable subset, a panel of six business Ph.D. students was used. Each panel member was asked to independently evaluate the list of item pairs and eliminate ambiguous pairs and/or suggest another word or phrase that would be a suitable pairing for items. After this procedure, the list was given to two marketing professors who have extensive experience in developing scales. They were asked to do the same as the Ph.D. students and to make any other suggestions or additions to the list. In addition, while examining the items, both the Ph.D. students and the marketing professors were asked to give their opinions about whether these items would measure attitudes toward salespeople. They were unanimous in their affirmation, suggesting face validity.

Undergraduate Sales Management students were called upon again to evaluate each one of the 214 words or phrases and to rate them as feminine, masculine, or both. The resulting scale consisted of 91 items: 23 feminine items, 22 masculine salesperson items, and 46 items that could not be classified as either.

To achieve the parsimony recommended to measure an attitude, the number of items obviously had to be reduced. This task was accomplished by three data collections. This described procedure is common in marketing (e.g., Malhotra 1981).

**Data Collections 1 and 2**

In the first data collection, data were obtained from student subjects in various undergraduate business classes at a major western university. This sample resulted in 176 usable questionnaires. We did not disclose information
about the femininity/ masculinity of scale items; however, we did tell respondents we were collecting data on attitudes toward salespeople. To manipulate the frame of mind of the respondents and introduce the femininity/ masculinity issue, three versions of the instructions and introductory vignette were used: one version described a salesperson named Theresa, another version described a salesperson named Travis, and the final version did not give the described salesperson a name. Being otherwise identical, the vignettes described the salesperson selling coupon booklets to students in their dorms or apartments. In addition, six versions of the questionnaire itself were prepared; the only difference between these versions was the order of the items in an attempt to control for question order bias (Asher 1988; Kalton and Schuman 1982). Finally, some items were designed to be reverse-coded to attempt to control for subjects who responded to the questionnaire without reading the items.

The second data collection used similar procedures and employed the same disclosures and precautions. Data were collected from an additional 161 students. However, we wanted to increase the possibility of femininity/masculinity being significant, so we used names that were perceived by the respondents in the first data collective to be more masculine and feminine than the names we had previously used – Chuck and Heather. Again, a third version described a names salesperson. The vignettes were identical in all other aspects.

Because of the objectives of these first two data collections, student samples were deemed to be appropriate (Calder et al. 1981). The particular product selected, a coupon booklet, was intuitively thought to be familiar, relevant, and meaningful to students.

**Purifying the Instrument**

One objective was to reduce the initial set of 91 items to a smaller set of items to constitute the final scale with a minimal loss of ability to capture attitudes toward salespeople and to identify dimensions of these attitudes that might emerge. Toward these ends, three analytic procedures—exploratory factor analysis, confirmatory factor analysis, and reliability analysis—were employed so that multiple criteria could be adopted to select final scale items, as has been previously advocated (e.g., Churchill 1979; Gerbing and Anderson 1988; Nunnally 1967).

**Exploratory Factor Analysis**

The main purpose of exploratory factor analysis is data reduction. However, it can also be used for identifying dimensions or factors that may be related to the construct of interest. A statistical indication of the extent to which each item is correlated with each factor is given by the factor loading.

In analyzing the data from the first study, the first step, analyzing the scree plot, did not indicate a clear solution. Many of the factors had Eigenvalues over 2.0, the preferred cutoff value (Gerbing and Anderson 1988). The next step was to look at the varimax rotated factor matrix. Two things are accomplished in this step. First, those scale items that do not show factorial stability and those items with factor loadings lower than .50 were identified for elimination. In addition varimax rotation revealed that only the first four factors had item loadings greater than .50. A closer examination of these four factors was revealing. Fifteen items loading on the first factor can be described as personal characteristics of the salesperson (Eigenvalue = 24.82; explained variance = 27.3%). Eleven
items loading on the second factor can be described as social interaction traits of the salesperson (Eigenvalue = 11.96; explained variance = 13.1%). Items related to femininity/masculinity did not appear until the third and fourth factors. Four items loading on the third factor were all previously identified as masculine items (Eigenvalue = 2.72; explained variance = 3.0%). Finally, four items loading on the fourth factor were all previously identified as feminine items (Eigenvalue = 2.43; explained variance = 2.7%). The resulting scale consisted of 34 items.

Using the same procedures with the second set of data, only the first two factors had more than one item loading greater than .50. Fourteen items loading on the first factor again were related to the personal characteristics of the salesperson (Eigenvalue = 11.54; explained variance = 33.9%). Ten items loading on the second factor were also related and can again be described as social interaction traits of the salesperson (Eigenvalue = 6.15; explained variance = 18.1%). The two dimensions based on femininity and masculinity did not appear in any factor at all, despite our overt attempt to strengthen these factors.

It is important to assess the correlations between factors (p = 0.610), showing the two variables are significantly correlated, but also demonstrating they are different enough that both factors are not measuring the same dimension of attitude toward salespeople. The resulting scale consists of 24 items. See Tables 1 and 2 for a summary of these items.

Confirmatory Factor Analysis

In confirmatory factor analysis, the fit of the model is assessed in order to determine unidimensionality of the scale or of the various dimensions of the scale. The factors or dimensions that have been identified are analyzed to see if indeed they do fit with the appropriate items. The comparative fit index for the model resulting from the first data collection is .5745. This is not a good fit, according to the established guideline of .90 (Gerbing and Andersen 1988). In addition, the normalized estimate should be at least .70, but this analysis produced only a .287. The interpretation of these results is that the four dimensions identified are not unidimensional. As this analysis is not normally a data reduction measure, no items were eliminated in this step.

The comparative fit index for the model resulting from the second data collection is .8594. This is a better fit, despite the recommended level of .90 (Gerbing and Anderson 1988). In addition, the normalized estimate should be at least .70, but this analysis produced only a .404. This is an improvement from the previous version of the scale. The interpretation of these results is that the two dimensions or factors identified are reasonably unidimensional and seem to provide a fair fit, suggesting the scale is measuring a person’s attitude toward salespeople.

Reliability Analysis

After the number of items has been reduced and the unidimensionality of the scale is determined, its overall reliability and the reliability of its two dimensions should be assessed (Gerbing and Anderson 1988). After reducing the scale from the second data collection is reliable (Cronbach’s alpha = .92). The recommended minimum score for Cronbach’s alpha should be .70 (Nunnally 1967). It is also necessary to look at each of the dimensions separately. The dimension related to personal characteristics of a salesperson is also reliable (Cronbach’s alpha = .94), as is the dimension related to social interaction traits of a salesperson (Cronbach’s alpha = .89).
Third Data Collection: Establishing External Validity

To further validate this measurement, the 24-item scale resulting from the first two data collections was included in a larger study to assess various related phenomena in the electronics components industry (SIC 3679). Each of the firms in the chosen sample (electronic components manufacturers) was initially screened by telephone. During these telephone conversations, these manufacturers were asked to identify at least one major buyer firm and to give contact information for that key informant who should be most knowledgeable about the relationships and the issues being investigated (Anderson et al. 1994; Kumar et al. 1995).

Of the 1,062 original manufacturers, 768 provided the requested information. These 768 key informants were then contacted by telephone...
and asked to participate in our study. Subsequently, each company was sent a pre-notification letter, which explained the study, emphasized its importance, reminded the key informant that he or she agreed to participate, and further urged him or her to respond in a timely fashion. Several days later, the questionnaire package was mailed to the key informants in each organization, including the questionnaire, a cover letter explaining the study and assuring confidentiality, and a postage-paid return envelope.

The steps in the data collection procedure were expected to result in a respectable response rate. The response rate was expected to be equivalent to similar research. Acceptable rates run from 12% to 30% (e.g., Boyle et al. 1992). Of the 768 companies, 107 returned usable questionnaires, resulting in a response rate of 13.9%. The response rate was lower than expected, but was in the acceptable range for studies of this nature.

**Exploratory Factor Analysis**

Unlike the previous data collections, which were designed to purify the instrument, this collection’s purpose was to confirm, or validate, the two factors, using the same procedures as outlined previously. Table 3 shows the loadings.
of the 24 items on the two factors. A close assessment of these two factors indicates generally higher loadings on the factors than did the first two data collections. The same fourteen items loaded on the first factor (Eigenvalue = 16.12; explained variance = 39.8%). Also, the same ten items loaded on the second factor (Eigenvalue = 7.57; explained variance = 24.3%).

Reliability Analysis

Again, after the unidimensionality of the two dimensions of the scale is determined, the next step is to assess the scales overall reliability and the reliability of each dimension (Gerbing and Anderson 1988). The overall reduced scale (24 items) appears to be quite reliable (Cronbach’s alpha = .94). The dimension related to personal characteristics of a salesperson is also reliable (Cronbach’s alpha = .97), as is the dimension related to social interaction traits of a salesperson (Cronbach’s alpha = .91).

Nomological and Discriminant Validity

Nomological validity is known as the degree to which a construct behaves as it should within a system of related constructs. Discriminant validity is described as the distinct difference between a construct and other constructs in a study. A common method to assess these types
of validity is to include the measure in a theory-grounded empirical study that includes hypotheses relating this construct to others, and then examine the correlations between the construct of interest and other constructs included in the study (Churchill 1979; Peter 1981). Table 4 presents these correlations.

As can be seen, attitude toward salespeople (ATTSALES) is highly correlated (nomological validity), but not perfectly so (discriminant validity) to several of the other variables used in this study, including credibility trust (CTRUST) (p = .62), benevolent trust (BTRUST) (p = .72), and attitudinal commitment (ATTCOM) (p = .55), suggesting nomological validity. On the other hand, it fails to correlate highly with the other three variables in the study, including dispositional trust (DTRUST) (p = .05), calculative commitment (CALCOM) (p = .24), and decision-making uncertainty (DMUNC) (p = .23), suggesting discriminant validity.

**DISCUSSION AND CONCLUSION**

Regardless of the discovery that femininity- and masculinity-related factors are not important in the formation of attitudes toward salespeople, the primary purpose of this research was to develop a scale to measure customer attitudes toward the salesperson. Through the three data collections described, a valid and reliable scale to measure these attitudes has been successfully developed. The development process discovered two important dimensions or factors that make up attitudes toward salespeople – personal characteristic of the salesperson and their social interaction traits. In today’s world where customers expect salespeople to provide benefits to them personally (consumers) or to their organizations, an ability to interact favorably with customers is increasingly becoming a valued and necessary characteristic of the modern sales force.

A study by Anselmi and Zemanek (1997) supports these findings. The findings of a rigorous study of 450 industrial salespeople indicate the more a salesperson exhibits good interpersonal skills, the greater the level of buyer satisfaction. Other studies have confirmed the importance of both interpersonal skills (Chakrabarty et al. 2010; Reinhard et al. 2006) and personal characteristics of salespeople in customer satisfaction (e.g., Birt and Vigar 2002; Chimonas et al. 2007; Lan 2003; Reinhard et al. 2006; Zipkin and Steinman 2004), especially the trustworthiness of the salesperson and the

| TABLE 4. SUMMARY OF CORRELATION ANALYSIS TO ASSESS DISCRIMINANT AND NOMOLOGICAICAL VALIDITY |
|---------------------------------------------|---------------------------------------------|
| DTRUST | CTRUST | BTRUST | ATTSALES | DMUNC | CALCOM | ATTCOM |
| DTRUST | 1.00 | | | | | |
| CTRUST | .05 | 1.00 | | | | |
| BTRUST | .11 | .84 | 1.00 | | | |
| ATTSALES | .05 | .62 | .72 | 1.00 | | |
| DMUNC | .16 | .27 | .31 | .23 | 1.00 | |
| CALCOM | .01 | .13 | .05 | .24 | .03 | 1.00 |
| ATTCOM | .08 | .67 | .68 | .55 | .29 | .45 | 1.00 |
salesperson’s knowledge of the products being sold (e.g., Campbell et al. 2006; DeCarlo 2005; Tsai et al. 2010; Young and Albaum 2003).

The implications of this study are valuable and clear. There now exists a valid and reliable instrument to capture customer attitudes toward salespeople. For academicians, this scale can be widely applied to examine various phenomena in marketing.

Implications for practitioners are even more pronounced and numerous. Companies invest much time and money trying to establish and then assess customer satisfaction (Reichheld 2003). For the past 15-20 years, the trend toward including factors other than sales revenue in salespeople’s compensation plans makes the ability to assess customer attitudes toward salespeople crucial. Other than sales revenue, customer satisfaction is the most commonly used additional ingredient in a salesperson’s compensation (Journal of Accountancy 1995). Compensation for customer satisfaction is offered both as part of the salary of salespeople (Hauser et al. 1997) and non-salary incentives and bonuses (O’Connell and Marchese 1995; Widmier 2002). Customer satisfaction with salespeople is likely made up of several factors. A favorable attitude toward salespeople, as indicated by a measure based on a salesperson’s personal characteristic and his or her social interaction traits is likely to be important in customer satisfaction. Thus, the measure developed in this study is important in assessing customer satisfaction, and determining customer satisfaction is important since as much of 58% of organizations partially base their salespeople’s compensation (Journal of Accountancy 1995).

Favorable attitudes toward salespeople also have the potential to play a crucial role in customer retention, thus enabling the development of long-term relationships with customers. Every time a company needs to find new customers to replace lost ones, it costs the company resources in time, effort, and revenue (Johnston and Marshall 2010). Customers will not be likely to become loyal and offer opportunities for companies to establish these valuable long-term relationships if they are forced to interact with salespeople who are unpleasant either because of their social interaction skills or because of their personal characteristics. Customers will naturally seek out interactions and relationships that are more pleasant for them, especially when there are no major differences in the products being sold. Thus, salespeople who are able to generate these favorable attitudes toward themselves from their customers will provide a valuable competitive advantage for their employers.

Finally, this measurement identifies 14 personal characteristics and ten social interaction traits important in establishing positive attitudes toward salespeople. Since the scale was developed and validated in both the consumer and the organizational environments, companies should feel confident in using these characteristics as part of a screening process when recruiting salespeople. In addition, specific sales force training could be developed to help sales teams develop these important traits. Identifying the specific traits that make salespeople more successful and then implementing training to instill these traits into a sales force is becoming more crucial in the ever-increasing competitive environment faced in most industries (Reday et al. 2009).

The development of this scale has helped to identify several areas where additional research is needed. Factors, such as customer experience with salespeople (Bristow et al. 2006; Castleberry 1990; Honea et al. 2006), incidental similarity (shared birthdays, etc.) (Jiang et al. 2010), and customer moods and emotions (Dahl et al. 2005;
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