Relationship Between Personality Traits and Service Quality Perception of Logistics Personnel

Young-Yei Kim
Seoul Digital University, Republic of Korea

Simon W. Tai
KIMEP, Republic of Kazakhstan

Jung-Wan Lee
Kazakh-British Technical University, Republic of Kazakhstan

Abstract: The purpose of this study is to examine the relationship between personality traits and service quality perceptions of the employees of logistics organizations. The authors administered the Big-Five scale to derive measurements of personality traits and the SERVQUAL (RATER) scale to measure service quality perception. Data for this study were collected through an online (web-based) survey from personnel of many logistics organizations in South Korea. The results of this study confirm that correlations among these variables are statistically significance based on the hypothesis testing of the data. Results from regression analyses of the data provide additional insights about the relationship and applications of these variables. Recommendations are made for the effective integration of marketing and human resource strategies.

Keywords: Service marketing, Human resources, Logistics personnel, Employee personality, Service quality perception

1 Introduction

The business environment facing logistics organizations of high competition has changed substantially over the past decade. Customer oriented marketing has increased and competitive pressures within the sector have grown enormously. These changes make it imperative that human resources are deployed to maximum effect and that logistics organizations learn how to implement effective marketing strategies.

The topic of employees' customer orientation has recently received significant research attention. Results of many studies suggest that customer-oriented employees can deliver outstanding performance and services that should increase customer satisfaction (Periatt et al., 2007; Rothstein and Goffin, 2006; Stock and Hoyer, 2005; Susskind et al., 2003). Other researchers (Flint and Mentzer, 2000; Keller et al., 2006; Voss et al., 2004; Voss et al., 2005) have studied the effects of internal marketing of customer orientation in logistics organizations and found that customer orientation tends to have a significantly positive effect on distribution center service and supply chain performance.

In addition, findings from many empirical studies (for example, Myers et al., 2004: Periatt et al., 2007) supported that customer orientation had the highest positive correlation with the performance of logistics personnel who were able to help the customers. Therefore, Flint et al. (2005) claimed that hiring and training customer-oriented logistics personnel were necessary for logistics innovation. According to Mentzer et al. (2001a), the needs for customer-oriented personnel in logistics and in each level of the supply chain have become increasingly apparent. It is therefore to the benefit of logistics organizations to hire and to promote customer oriented employees. Logistics service employees, such as sales representatives, delivery service personnel, distribution center personnel, and customer service representatives, are frequently in direct contact with customers. The closer the logistics personnel to the bottom of his/her organizations, the more often and frequent they may be in contact with customers than the top manage-

ment. It follows that logistics personnel, especially those in key positions to serve customers, should be more customer-oriented.

If managers can identify and select employees with the personality traits that manifest in customer orientation such that logistics organizations are able to create a strong organizational culture in order to compete against other organizations. Moreover, managers can improve their service quality and organizational performance by developing better marketing strategies and by allocating competent service personnel if they understand the relationship between the personality of logistics personnel and their self-appraisal of the quality of those services they provide.

The purpose of this study, therefore, is to study the relationship between the personality of logistics personnel and their self-appraisal of service quality.

2   Literature Review and Hypothesis Formation

2.1   Personality Traits

Personality refers to the unique psychological characteristics that lead to relatively consistent and lasting responses to one's own environment. Different personality theories have been developed over the years to explain the structure, process and development of human behavior. Among these personality theories, the trait theory tends to place a great emphasis on exploring the basic structure of personality. Trait theory assumes that people possess broad predispositions that cause them to behave in a particular way. There has been growing agreement among personality researchers that there are five basic dimensions of personality.

These traits, known as the Big-Five (Costa and McCrae, 1987; 1992a; 1992b), are extroversion, agreeableness, conscientiousness, neuroticism, and openness to experience. Extraversion refers to the tendency to experience positive emotional states and feel good about oneself and the world around one. Agreeableness is the tendency to get along well with others. Conscientiousness is concerned with the extent to which a person is careful, scrupulous, and persevering. Neuroticism refers to the tendency to experience negative emotional states and view oneself and the world around one negatively. Openness to experience, the last of the Big-Five personality traits, refers to the extent to which an individual is original, open to a wide variety of stimuli, has broad interests and is willing to take risks.

2.2   Service Quality Perception

Service quality is mainly concerned with how to "meet customers' expectation." Parasuraman et al. (1985, 1988, 1991) have defined and conceptualized service quality as a form of attitude derived from a comparison of customers' expectations with perceptions of performance. They have developed and continued to revise the SERVEQUAL (Parasuraman et al., 1988, 1991, 1994) variable for the purpose of measuring service quality.

The SERVEQUAL scale is based on a gap model, that is, it measures the gap in the service quality between the expectations of customers and their perceptions of actual performance. It includes five constructs of tangibles, reliability, responsiveness, assurance, and empathy. "Tangibles" assess the extent of the appearance of a company's physical facilities, equipment and personnel. "Reliability" measures the ability to perform the promised service dependably and accurately. "Responsiveness" represents the willingness to help customers and to provide a prompt service. "Assurance" evaluates the knowledge and courtesy of employees and their ability to inspire confidence. Finally, "Empathy" determines the caring and individualized attention the firm provides to its customers.

It is well known that service personnel play an important role in customers' evaluation of the service quality of a business. In service businesses such as logistics, delivering high quality services that meet customers' needs is an important tactic to achieve competitiveness (Holmlund and Kock, 1996; Parasuraman et al., 1988). Stock and Hoyer (2005) claimed that salespersons' expertise, empathy, reliability, and restrictions in job autonomy moderated the relationship between customer-oriented attitudes as well as behaviors.

2.3 Personality Traits and Service Quality Perception

The measure of "personality" can be useful in analyzing logistics service personnel for their service quality performance. The relationship between service personnel's personality and customers' perceived service quality has empirically examined by several studies. For example, Lin et al. (2001) claimed that "openness" was positively related to "assurance"; "conscientiousness" was positively related to "reliability"; "extraversion" was positively related to "responsiveness"; and "agreeableness" was significantly correlated with both "empathy" and "assurance". Mentzer et al. (2001b) concluded that the contact quality of logistics personnel, as a dimension of logistics service quality, had a significantly positive effect on timeliness of orders and customer satisfaction (see also Murphy and Poist, 1998).

However, none of the past studies in logistics field has examined the relationship between service personnel's personality and their self-appraisal of the service quality they provide. The present study, therefore, aims to fill this research gap by examining the relationship between service personnel's characteristics and their self-appraisals of service quality. Therefore, the authors offer the following hypothesis:

> *Hypothesis*: *The constructs of the Big-Five personality measurements have significant associations with the logistics personnel' perception of service quality as measured by the SERVQUAL scale.*

3 Methodology

3.1 Survey and Sample Characteristics

The authors developed the questionnaire for collecting empirical measures of the Big-Five personality traits and SERVQUAL variables, and administered a Web-based survey to a target sample of 500 logistics personnel through the Internet during December 2007 in Korea. In total, 352 respondents completed the questionnaire, and all 352 were considered as useable. Of the 352 respondents, 72 percent were male and the mean age of these respondents was 35.5 years old. About 79 percent of these respondents have college or university education. More than 80 percent of them have worked longer than 2 years in the logistics industry either as a part-time or full-time employee. The average income per capita for these respondents is USD2,400 per month, which is relatively higher than the average income per capita of USD1,700 per month for Korean workers in 2007. The degree of work satisfaction among those employed in the logistics industry was 4.5 based on a 7-point scale, and the intention of these employees to continue their works in the logistics industry was 4.6 out of the 7-point scale.

3.2 Measurements

In this study, established scales were utilized or modified for use to measure constructs. The authors applied the Five-factor Inventory (NEO-FFI) scale developed by Costa and McCrae (1992a; 1992b) to collect personality information about the Neuroticism, Extraversion, Openness, etc. This original instrument had twelve items for each dimension of personality that add up to a total of 60 items. Since a Web-based survey questionnaire of 60 items would be too lengthy as well as too time-consuming to be completed by respondents, the authors utilized only 6 items for each dimension of personality for total 30 items instead. The seven-point Likert-type scale, that is, from 1 for strongly disagreed to 7 for strongly agreed answers, was the format of responses. Respondents were asked to indicate how much they possessed the personality traits described by each objective item.

To operationalize the service quality as perceived by logistics personnel, the authors applied a modified SERVQUAL scale consisting of 22 items for respondents to self-assessing each of the service quality dimensions. The response format for each of these items was a modified seven-point scale, that is, from 1 for the extremely low to 7 for the extremely high). To insure the minimization of idiomatic wording, all of the instruments were first translated into Korean, and then results were checked and translated back to English.

3.3 Reliability and Validity of Measurements

In conducting the regression analysis, the authors had to review a large number of potential predictors (for example, the variables required a total of 52 items) and to calculate the simple correlation coefficients among them in order to determine which sets of independent variable combinations can best explain or predict dependent variables. One problem in such an analysis is that the simple correlation coefficients among these variables were too large to derive precisely the exact pattern or patterns of relationships.

To solve the problem of over calculations, the authors applied the principal components analysis procedure to transform the 30 items of the Big-Five scale into fewer sets of linear combinations (Kaiser-Meyer-Olkin measure of sampling adequacy was 0.874 and Chi-square=3960.205, degree of freedom=276, and significance=0.000 by the Bartlett's Test of Sphericity). The authors utilized this variable reduction scheme to the Big-Five personality measurements to obtain a modified four-component model, in which each component is a linear combination of the survey items having the highest loadings (>0.500) with these components. The four components were named as "conscientiousness," "neuroticism," "agreeableness," and "extraversion and openness," respectively. Results from the above data analyses indicate that the sums of squared loadings from the modified four-component predictors have the cumulative value of 57.054% in explaining the total variance of the dependent variable.

The authors conducted a reliability analysis of the measurement scale and obtained the following results: the component of "conscientiousness" achieved the higher reliability coefficient and validity of Cronbach's Alpha=0.888 with 6 items; the component of "neuroticism" attained a reliability coefficient of Alpha equal to 0.864 with 5 items; the component of "agreeableness" had the Alpha value of 0.771 with 4 items; and the component of "extraversion and openness" obtained the Alpha value of 0.538 with 3 items, respectively.

Again, the principal components analysis procedure was applied to transform the 22 items of the SERVQUAL scale into new sets of linear combinations (Kaiser-Meyer-Olkin measure of sampling adequacy was 0.949 and Chi-square=5690.210, degree of freedom=231, and significance=0.000 by the Bartlett's Test of Sphericity). Applying this variable reduction scheme to the SERVQUAL dimensions, the authors were able to derive the modified four-component model from which each component is represented by a linear combination of the survey items having the highest loadings (>0.500) with these components. These four components were named as "assurance," "reliability," "responsiveness," and "tangible," respectively.

Results from the above analyses indicate that the sums of squared loadings from the modified four-component predictors have the cumulative value of 63.763% in explaining the total variance of the dependent variable. From a reliability analysis of the measurement scale, the component of "reliability" obtained the higher reliability coefficient and validity (Cronbach's Alpha=0.916 with 7 items); the component of "assurance" achieved a reliability coefficient of Alpha equal to 0.914 with 6 items; the component of "responsiveness" attained the Alpha value of 0.861 with 4 items; and the component of "tangible" obtained the Alpha value of 0.763 with 4 items, respectively.

3.4   Goodness-of-fit of Measurements and the Structural Model

After determining that the variance and covariance had satisfied the methodological assumptions and were of a form appropriate for validating causal relationships, the authors employ 352 full data samples as an input to construct a variance-covariance matrix. The Analysis of Moment Structures (AMOS: Arbuckle, 1994) was then conducted for an empirical testing of the model, and the Maximum Likelihood Estimation (MLE) was applied to estimate numerical values for the components in the model. In the application of MLE, the multivariate normality was assumed in order to derive the efficient and unbiased estimates. The authors applied the degree of freedom with large standard error and negative error variances to diagnose possible identification problems according to the suggestions of Bollen and Joreskog (1985). Then, more constraints are added gradually into the model until an identification problem is remedied through the procedures recommended by Hayduk (1987).

The criteria suggested by Bollen (1989, p. 275) were utilized to assess the overall goodness-of-fit of the structural equation model. To evaluate the overall goodness-of-fit of the proposed models and to contrast the competing models, the authors consider the following measures selectively: Chi-square statistic (CMIN), degrees of freedom (DF), CMIN divided by DF (CMIN/DF), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), root mean square residual (RMR), normed fit index (NFI), and root mean square of approximation (RMSEA). After evaluating the fitness of the overall model, the measurements of each construct are further evaluated for unidimensionality and reliability.

The Fornell and Larker (1981) guidelines, in which construct reliability and variance extracted measures should exceed 0.500 for a construct, were applied for ensuring validity. The confirmatory factor analysis used by the past marketing studies (Gerbing and Hamilton, 1996; Steenkamp and van Trijp, 1991) was employed for the measurement model to test the validation of the scales measuring specific constructs. The results of the data analysis generally achieved an appropriate fitness of the model, except the indices of GFI, AGFI, and NFI. Note that values of the GFI and AGFI can vary from 0 to 1, with values above 0.90 considered as good and values from 0.80 to 0.90 considered as moderate (Bentler and Bonett, 1980). For NFI, the closer its values to 1, the better are the fitness of the hypothesized model over the null model.

4   Results of the Data Analysis and Hypothesis Tests

"Null hypothesis: *the constructs of the Big-Five personality measurements have no significant associations with the logistics personnel' perception of service quality as measured by the SERVQUAL scale*" was empirically tested by the survey data. The results of data analysis show that associations between the conscientiousness, neuroticism, and extraversion-openness of the big five personality measurements and all of the SERVQUAL dimensions are statistically significant at the 5% confident level, see Table 1 for details. Consequently, the authors conclude that the conscientiousness, neuroticism, and extraversion-openness of the big five dimensions can be utilized to better select "service quality oriented" logistics personnel.

Table 1   Personality traits and service quality perceptions

| Regression Weights	Estimate	S.E.	Standardized Estimate	C.R.	P
Tangibles <-- Conscientiousness	0.539	0.070	0.417	7.736	0.000
Responsiveness <-- Conscientiousness	0.676	0.066	0.465	10.179	0.000
Reliability <-- Conscientiousness	0.852	0.063	0.609	13.568	0.000
Assurance <-- Conscientiousness	1		0.499		
Tangibles <-- Neuroticism	0.594	0.072	0.468	8.311	0.000
Responsiveness <-- Neuroticism	0.590	0.064	0.414	9.202	0.000
Reliability <-- Neuroticism	0.513	0.052	0.373	9.959	0.000
Assurance <-- Neuroticism	1		0.509		
Tangibles <-- Agreeableness	1.250	2.431	0.038	0.514	0.607
Responsiveness <-- Agreeableness	1.078	1.994	0.029	0.541	0.589
Reliability <-- Agreeableness	-1.805	4.203	-0.051	-0.429	0.668
Assurance <-- Agreeableness	1		0.020		
Tangibles <-- Extraversion-Openness	0.576	0.072	0.484	7.973	0.000
Responsiveness <- Extraversion-Openness	0.852	0.077	0.639	11.133	0.000
Reliability <-- Extraversion-Openness	0.814	0.068	0.633	11.999	0.000
Assurance <-- Extraversion-Openness	1		0.544		
Fitness Measures: Discrepancy (Chi-square)=2291.845, Degrees of freedom=617, Discrepancy / df =3.714, RMR=0.210, GFI=0.723, Adjusted GFI=0.684, NFI=0.735, RMSEA=0.088					
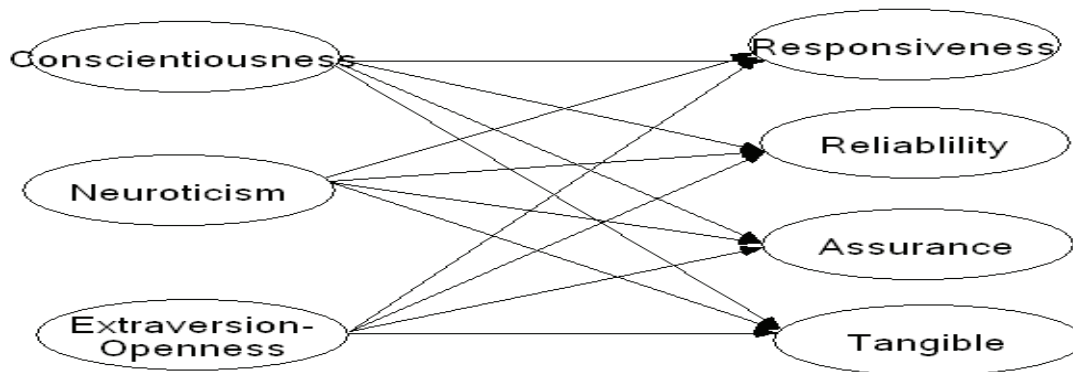
Figure 1   A structural model of the relationship between the Big-Five personality and the SERVQUAL measures

From the results of testing hypothesis against the surveyed data, the authors summarize the following conclusion: the conscientiousness and extraversion of the Big-Five personality dimensions have positive relationships with the responsiveness, reliability, and assurance of the SERVQUAL measurements, respectively, see Figure 1 for details.

5   Discussion and Implications

In today's service marketing, a customer's perception of service quality is considered as a crucial factor for success in service industry. Lin et al. (2001) claimed that the personality factors were correlated with service quality dimensions (SERVQUAL). For example, the 'openness' factor of the Big-Five personality dimensions has been a valid predictor of 'assurance' and the perceptions of service quality. Furthermore, 'extraversion' tends to be positively correlated with the 'responsiveness', and the 'agreeableness' is significantly correlated with both the 'assurance' and the 'empathy.' It is important, therefore, to conduct the self-appraisal of service quality by logistics personnel as their job performance.

The results of this study show that both the 'conscientiousness,' 'extraversion,' and 'neuroticism' of the Big-Five personality dimensions are significantly correlated with the 'responsiveness,' 'reliability,' 'assurance,' and 'tangibles' dimensions of the SERVQUAL. The extraversion factor of personality mainly assesses the intensity of interpersonal interaction, activity level and capacity to enjoy. Extraverts or persons who scored high on the extraversion scale tend to be sociable, affectionate and friendly. At work, extraverts are more likely to experience positive moods, to be satisfied with their jobs, and generally feel good about the organization and their customers. Since logistics personnel with a high score of extraversion are apt to deal with customers more affectionately and actively than others, the extraversion factor of personality explains why those of higher extraverts tend to achieve better job performance in the responsiveness, reliability, assurance, and tangibles dimensions of service quality.

Results of many studies (for example, Barrick and Mount, 1991; Gellatly, 1996; Lin et al., 2001) showed that 'conscientiousness' has been a valid predictor of job performance, this study further suggests that the more conscientious logistics personnel are likely to perform the promised services more reliably and accurately than others do. As such, 'conscientiousness' tends to be positively correlated with the reliability, assurance, responsiveness, and tangibles dimensions of service quality perceptions. Conscious individuals are more likely hardworking, achievement oriented, and persevering. Conscientiousness is important in many organizational situations, and it has been found to be a good predictor of performance in many jobs in a wide variety of organizations (Barrick and Mount, 1991). Nonetheless, employees must posses the capabilities or skills needed for the tasks in order for the 'conscientiousness' to result in high performance. For example, Witt and Ferris (2003) found that when job performance depends on being

effective interpersonally, 'conscientiousness' was only positively related to performance among those employees who had high social skills.

The results of this study show that the 'neuroticism' of the Big-Five personality dimensions is also significantly correlated with the 'responsiveness,' 'reliability,' 'assurance,' and 'tangibles' dimensions of the SERVQUAL. 'Neuroticism' reflects people's tendency to experience negative moods at work, feel stressed and generally view themselves negatively at work situation. Neuroticism, however, is a trait that all normal, psychologically healthy individuals possess to a certain degree. Individuals high on neuroticism tend to be sometimes more critical of themselves and their performance than are people low on neuroticism. That tendency may propel them to improve their performance at work. As a result, they may be particularly proficient in certain situations, such as ones that require a high degree of service quality control and evaluations.

As the responsibilities of logistics personnel are increasingly focused on service quality today, it is imperative for logistics organizations to hire more customer oriented employees because of the needs for self-managed process, on spot decision-making, and for continuous improvements in order to meet the ever changing customers' desires and needs. To help logistics personnel in achieving a higher-level customer satisfaction, logistics personnel must posses customer oriented frame of mind and work performance that make the commitment to a high level of service quality. In other word, if managers can make clear the relationship between personality and service quality, they can improve service quality performance by allocating service quality-oriented logistics personnel to serve specific needs of customers. Therefore, the authors strongly suggest that if managers allocate more conscientiousness and extraversion logistics personnel to those tasks that require high customer-oriented predisposition, such as customer service representatives, sales representatives, delivery personnel, and order management personnel, then these personnel can carry out their tasks at the highest levels to satisfy customers' needs by exercising better responsiveness, reliability, assurance, and tangibles of the services. This practice should perpetuate the service quality oriented climates of logistics organizations. Consequently, service quality oriented work performance of logistics personnel should create a source of competitive advantages for these logistics organizations.

The intent of this current study is to highlight the role of individual personality differences in predicting the level of service quality perceptions of logistics personnel. In conclusion, the big five personality factors can be applied to select and screen high service quality oriented personnel and allocate them to those units or departments of logistics organizations, where they are needed the most. On the other hand, a portion of the study results differs with the work of Lin et al. (2001). In particular, this study shows that 'consciousness,' 'extraversion,' and 'neuroticism' strongly motivate the responsiveness, reliability, assurance, and tangibles of service quality performance.

The results of this study further indicate that 'conscientiousness,' 'extraversion,' and 'neuroticism' possess the strongest power in predicting the high service quality oriented logistics personnel. Consequently, logistics organizations must focus on consciousness and extraversion traits of candidates at the time when hiring new employees by making good use of personality tests. In addition to personality testing, logistics organizations should consider other factors that would facilitate the development and maintenance of the customer orientation. For example, Stock and Hoyer (2005) concluded that salespersons' expertise, empathy, reliability and restrictions in job autonomy could moderate the relationship between customer-oriented attitudes and customer-oriented behaviors. In the area of marketing and sales, the customer orientation is paramount. The objective is to align the value chain to customer needs (Sheth and Parvatiyar, 1995).

In summary, applications of human resource management practices to identify and select employees with the personality traits that endure service quality perceptions, logistics organizations will be able to create strong organizational culture that facilitate the customer oriented and service quality oriented logistics organizations. It seems that, since marketing is particularly important in service industries, the strategic significance of marketing and human resource management has to be estimated and the potential advantages to be gained through integrating the marketing and human resource strategies have to be appreciated.

References

Arbuckle, J.L. (1994). 'AMOS-Analysis of Moment Structures', *Psychometrika* Vol. 59, No. 1, pp. 135-137.

Barrick, M.R. & Mount, M.K. (1991). 'The Big-Five personality dimensions and job performance: A meta-analysis', *Personal Psychology* Vol. 44, pp. 1-26.

Bentler, P.M. & Bonett, D.G. (1980). 'Significance tests and goodness of fit in the analysis of covariance structures', *Psychological Bulletin* Vol. 88, No. 3, pp. 588-606.

Bollen, K.A. (1989), 'Structural Equations with Latent Variables', New York, NY: Wiley.

Bollen, K.A. & Joreskog, K.J. (1985). 'Uniqueness does not imply identification', *Sociological Methods and Research* Vol. 14, No. 2, pp. 155-163.

Costa, P.T. & McCrae, R.R. (1987). 'Validation of the Five-factor model of personality across instruments and observers', *Journal of Personality and Social Psychology* Vol. 52, No. 1, pp. 81-90.

Costa, P.T. & McCrae, R.R. (1992a). 'Discriminant validity of NEO-PIR facet scales,' *Educational and Psychological Measurement* Vol. 52, pp. 229-237.

Costa, P.T. & McCrae, R.R. (1992b). 'NEO PI-R professional manual', Odessa, FL: Psychological Assessment Resources.

Flint, D.J. & Mentzer, J.T. (2000). 'Logisticians as marketers: Their role when customers' desired value changes', *Journal of Business Logistics* Vol. 21, No. 2, pp.19-45.

Flint, D.J., Larsson, E., Gammelgaard, B. & Mentzer, J.T. (2005). 'Logistics innovation: A customer value oriented social process', *Journal of Business Logistics* Vol. 26, No. 1, pp. 113-147.

Fornell, C. & Larker, D.F. (1981). 'Evaluating structural equation models with unobservable variables and measurement error', *Journal of Marketing Research* Vol. 18, No. 1, pp. 39-50.

Gellatly, I.R. (1996). 'Conscientiousness and task performance test of a cognitive process model', *Journal of Applied Psychology* Vol. 81, No. 5, pp. 474-482.

Gerbing, D.W. & Hamilton, J.G. (1996). 'Validity of exploratory factor analysis as a precursor to confirmatory factor analysis', *Structural Equation Modeling* Vol. 3, No. 1, pp. 62-72.

Hayduk, L.A. (1987). 'Structural Equation Modeling with LISREL: Essentials and Advances', Baltimore: Johns Hopkins University Press.

Holmlund, M. & Kock, S. (1996). 'Relationship marketing: the importance of customer perceived service quality in retail banking', *Service Industries Journal* Vol. 16, No. 3, pp. 287-304.

Keller, S.B., Lynch, D.F., Ellinger, A.E., Ozment, J. & Calantone, R. (2006). 'The impact of internal marketing efforts in distribution service operations', *Journal of Business Logistics* Vol. 27, No. 1, pp. 109-137.

Lin, N.P., Chiu, H.C. & Hsieh, Y.C. (2001). 'Investigating the relationship between service providers' personality and customers' perceptions of service quality across gender', *Total Quality Management* Vol. 12, No. 1, pp. 57-67.

Mentzer, J.T., DeWitt, W., Keebler, J.S., Min, S-H., Nix, N.W., Smith, C.D. & Zacharia, Z.G. (2001a). 'Defining supply chain management', *Journal of Business Logistics* Vol. 22, No. 2, pp. 1-25.

Mentzer, J.T., Flint, D.J. & Hult, G.T.M. (2001b). 'Logistics service quality as a segment-customized process', *Journal of Marketing* Vol. 65, No. 4, pp. 82-104.

Murphy, P.R. & Poist, R.F. (1998). 'Skill requirements of senior-level logisticians', *International Journal of Physical Distribution & Logistics Management* Vol. 28, No. 4, pp. 284-301.

Myers, M.B., Griffith, D.A., Daugherty, P.J. & Lusch, R.F. (2004). 'Maximizing the human capital equation in logistics: Education, experience, and skills', *Journal of Business Logistics* Vol. 25, No. 1, pp. 211-232.

Parasuraman, A., Berry, L.L. & Zeithaml, V.A. (1991). 'Refinement and reassessment of the SERVQUAL scale', *Journal of Retailing* Vol. 67, No. 4, pp. 420-450.

Parasuraman, A, Zeithaml, V.A. & Berry, L.L. (1985). 'A conceptual model of service quality and its implications for future research', *Journal of Marketing* Vol. 49, No. 4, pp. 41-50.

Parasuraman, A, Zeithaml, V.A. & Berry, L.L. (1988). 'SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality', *Journal of Retailing* Vol. 64, No. 1, pp. 12-40.

Parasuraman, A, Zeithaml, V.A. & Berry, L.L. (1994). 'Alternative scales for measuring service quality: a comparative assessment based on psychometric and diagnostic criteria', *Journal of Retailing* Vol. 70, No. 3, pp. 201-230.

Periatt, J.A., Chakrabarty, S. & Lemay, S.A. (2007). 'Using personality traits to select customer oriented logistics personnel', *Transportation Journal* Vol. 47, No. 1, pp. 22-37.

Rothstein, M.G. & Goffin, R.D. (2006). 'The use of personality measures in personnel selection: What does current research support?', *Human Resource Management Review* Vol. 16, No. 2, pp. 155-180.

Sheth, J.N. & Parvatiyar, A. (1995). 'Relationship marketing in consumer markets: Antecedents and consequences', *Journal of the Academy of Marketing Science* Vol. 23, No. 4, pp. 255-271.

Steenkamp, J.E.M. & van Trijp, H.C.M. (1991). 'The use of LISREL in validating marketing constructs', *International Journal of Research in Marketing* Vol. 8, No. 4, pp. 283-299.

Stock, R.M. & Hoyer, W.D. (2005). 'An attitude-behavior model of salespeople's customer orientation', *Journal of the Academy of Marketing Science* Vol. 33, No. 4, pp. 536-552.

Susskind, A.M., Kaemar, K.M. & Borchgrevink, C.P. (2003). 'Customer service providers' attitudes relating to customer service and customer satisfaction in the customer-service exchange', *Journal of Applied Psychology* Vol. 88, No. 1, pp. 179-187.

Voss, M.D., Calantone, R.J. & Scott, B.K. (2005). 'Internal service quality: Determinants of distribution center performance', *International Journal of Physical Distribution & Logistics Management* Vol. 35, No. 3, pp. 161-176.

Voss, M.D., Scott, B.K., Ellinger, A.E. & Ozment, J. (2004). 'Differentiating the suppliers of job products to union and non-union frontline distribution center employees', *Transportation Journal* Vol. 43, No. 2, pp. 37-58.

Witt, L.A. & Ferris, G.R. (2003). 'Social skills as moderator of the conscientiousness-performance relationship: Convergent results across four studies', *Journal of Applied Psychology* Vol. 88, No. 5, pp. 809-820.