THE LAHORE JOURNAL
OF
BUSINESS

Lahore School of Economics

THE LAHORE JOURNAL
OF
BUSINESS

Correspondence relating to subscriptions and changes of address should be sent to *The Lahore Journal of Business*, Intersection Main Boulevard Phase VI DHA and Burki Road, Burki Lahore - 53200 – Pakistan.

Instructions to authors can be found at the end of this issue. No responsibility for the views expressed by authors and reviewers in *The Lahore Journal of Business* assumed by the Editors and the Publisher.

05 2017

THE LAHORE JOURNAL OF BUSINESS

Contents   Vol. 05, No.2, 2017

Consumer Perceptions of Private Label Brands in Pakistan

Sana Azar,[*] Samra Chaudary[**] and Ansa Mehmood[***]

Abstract

As the world market share of private label brands (PLBs) increases, so does the importance of and need for research in this field. Given the growing presence of PLBs in Pakistan, this study aims to examine the effects of service quality on PLB image, which we hypothesize affects purchase intention and brand loyalty. We also measure the mediating effect of perceived risk on the relationship between PLB image and purchase intention. Based on a sample of 348 respondents, we apply a structural equation model and find that (i) service quality has a positive effect on PLB image, (ii) PLB image has a positive effect on purchase intention, (iii) PLB image has a positive relationship with perceived risk, although this does not mediate the relationship between PLB image and purchase intention, and (iv) purchase intention translates positively into brand loyalty.

Keywords: private label brand image, service quality, purchase intention, brand loyalty, perceived risk.

JEL classification: M370.

1.   Introduction

Private label brands (PLBs) – goods produced and sold by retailers – have become increasingly popular, given that consumers tend to be more loyal to stores than to brands (Ahmad, Noor & Wel, 2014). Their performance varies by category and country (Nielsen, 2014). Globally, they generate about 15 percent of retail revenue in fast-moving consumer goods (Nielsen, 2011). Developing a PLB has become an important strategy for increasing profits (Richardson, Jain & Dick, 1996). PLBs prove especially popular during an economic downturn, when consumer incomes fall. Such brands have an advantage in competing with national brands in terms of value for money.

---

[*] Assistant professor, Lahore School of Economics.
[**] Senior teaching fellow, Lahore School of Economics.
[***] Research fellow, Lahore School of Economics.

PLBs are sold only by the retailer that carries those brands rather than by a national manufacturer (Burton et al., 1998). This enables retailers to create an image for their store, one that differentiates them from their competitors (Pepe, Abratt & Dion, 2012; Hoch & Lodish, 1998). Retailers can thus drive customer traffic in their store and create loyal customers by providing a wide product range at lower prices (Dunne & Narasimhan, 1999). PLBs allow retailers to increase their profit margins (Ailawadi, Pauwels & Steenkamp, 2008) by taking advantage of the built-in lower variable cost structure and higher gross margins (Pepe et al., 2012). According to Farris et al. (2006), "margins represent a key factor behind many of the most fundamental business considerations". These margins motivate retailers to add PLBs to their portfolio (Pepe et al., 2012; Ailawadi et al., 2008).

PLBs have experienced remarkable growth worldwide, growing faster than national and manufacturers' brands (Kumar & Steenkamp, 2007). Academic research on PLBs has also grown significantly, given practitioners' increasing interest in the topic (Sethuraman, 2009). The Private Label Manufacturers Association, for instance, reports that North American consumers have welcomed the wide range of PLBs available in grocery stores and are willing to purchase these brands.[1]

The concept of private label branding has also increased in Pakistan, with many retailers offering products under their own names. Many small and medium manufacturers and retailers now produce specific product lines and specialize in producing store brands. Some Pakistani exporters also produce commodities for PLBs. For certain product classifications, e.g., basmati rice, a large share of Pakistan's exports to the EU consist of private label manufactures. Several large manufacturers produce for PLBs along with their own brands. Pakola, for instance, manufactures for itself as well as for Coca Cola in Pakistan (Ashraf, 2011).[2]

Private label branding is still a relatively new concept in Asia. While some studies have investigated consumer purchase intentions in the context of Asian markets (see Dutta & Singh, 2014; Gupta, Jain & Parmal,

---

[1] See www.plma.com

[2] Manufacturers of private label products fall into three general categories, according to the Trade Development Authority of Pakistan: (i) large manufacturers that produce both their own brands and private label products; (ii) small and medium manufacturers that specialize in particular product lines (Pakistani exporters usually fall into this category); and (iii) major retailers and wholesalers that operate their own manufacturing plants and provide private label products for their own stores (for example, Reem Rice's basmati rice processing facilities in Pakistan).

2014; Ahmad et al., 2014), the bulk of the literature looks at US markets. That said, a key insight it offers is that both customers and retailers can benefit from PLBs (Koschate-Fischer, Cramer & Hoyer, 2014).

This study contributes to the literature by extending the analysis to an emerging economy and using a structural equation model (SEM), which can test complex hypotheses. We take into account PLB image as a factor that drives the purchasing process (see Richardson, Dick & Jain, 1994), which is rarely discussed with respect to developing economies during an economic downturn (see Semeijn, van Riel & Ambrosini, 2004). When consumers are unfamiliar with a store brand, they employ its (perceived) image as a signal or sign in deciding whether to purchase that brand (Collins-Dodd & Lindley, 2003; Vahie & Paswan, 2006). Accordingly, our findings support the argument that PLB image is relevant to a developing country such as Pakistan. Moreover, Ailawadi and Keller (2004) emphasize that improving the quality of service, store atmosphere and shopping experience helps improve PLB image. Given the dearth of research on the effect of brand image and service quality in this context, we aim to link consumers' perception of quality with image development, arguing that PLB image can be improved by refining service quality.

Specifically, we ask the following questions: Does service quality affect the image of PLBs for consumers? How does PLB image affect purchase intention and, in turn, brand loyalty? Does perceived risk play a key role in mediating the impact of PLB image on purchase intention? Finally, how does purchase intention with respect to a PLB affect brand loyalty?

2. Literature Review

Service quality reflects a consumer's evaluation of different attributes of quality, including interaction, physical environment and outcome (Zehir et al., 2011). It indicates the gap between what s/he expects of the service and what s/he receives (Parasuraman, Zeithaml & Berry, 1985; Lewis & Booms, 1983; Crosby, 1979). Service quality also refers to the level of service accessed through the relationship and communication between a service provider and a consumer. Grönroos (1984) divides this into technical quality (what is done) and functional quality (how it is done).

In the case of PLBs, good service quality leads to greater satisfaction with the store concerned (Anderson, Fornell & Lehmann, 1994; Carrillat, Jaramillo & Mulki, 2009; Parasuraman et al., 1985). Thus, when consumers

form a good impression of a store, based on the quality of service it offers, they instantly create a positive PLB image. This level of customer satisfaction with the store makes the buying decision easier. Huang (2003) applies this concept to the banking industry and shows that the quality of service provided by a bank has a substantial impact on its image. Lin (2005) traces a similar relationship between good service quality, customer satisfaction, brand loyalty and brand image. Wu, Yeh and Hsiao (2011) test the relationship between service quality and PLB image and find that it is positive and significant. Based on the literature, we present the following hypothesis (H1): *service quality has a positive effect on PLB image*.

Numerous studies support the positive relationship between store image and purchase intention (see Rehman et al., 2014; Ahmad et al., 2014). The concept of store image was introduced by Martineau (1958), who observed that consumer perception of a store pertained to its functional qualities and emotional factors. This definition has been extended to include other store attributes considered essential by shoppers (Wu et al., 2011; James, Durand & Dreves, 1976). Store image encompasses not only the physical environment of a store (Richardson et al., 1996), but also what customers think of its products and quality of service (Zimmer & Golden, 1988). Purchase intention refers to the likelihood of a given product being consumed in the future. Thus, if a consumer's purchase intention increases, so does the possibility that s/he will purchase that product (Dodds, Monroe & Grewal, 1991; Schiffman & Kanuk, 2007).

A positive brand image is associated with greater intention to buy (Dodds et al., 1991; Grewal et al., 1998). Consumers with a high store image will perceive its product quality as being superior. Thus, image has a positive influence over purchase intention with respect to that retailer (Grewal et al., 1998). Analogously, PLB image is the association that consumers attach to PLB products, which drives their perception and opinion of that brand (Wu et al., 2011). Ahmad et al. (2014) argue that PLB image affects purchase intention. Thus, our second hypothesis (H2) is that *PLB image has a positive effect on purchase intention*.

While purchase intention refers to the likelihood that a consumer will buy a given product in the future, Diallo (2012) and Jacoby and Chestnut (1978) define brand loyalty as the consumer's tendency to purchase a service or product of a specific brand again and again. Brand loyalty includes the customer's commitment to re-buy the same brand or speak about it positively to others (Gogoi, 2013). In this sense, it helps determine a company's effectiveness and profitability (Aaker, 1991).

Several studies show that brand loyalty extends to PLBs. Our third hypothesis (H3) is that *purchase intention has a positive impact on brand loyalty.*

Unlike national brands, PLB products tend to advertise less and thus less information is passed onto the consumer. Consumers use various external cues – including brand image and service quality – to reduce the perceived risk associated with PLB products (Shimp & Bearden, 1982; Perry & Perry, 1976). When brand image improves in a consumer's eyes, the perceived risk decreases (Cox, 1962; Kotler & Keller, 2008; Roselius, 1971). Perceived risk is measured as the financial, physical and functional risk associated with using a given product (Stone & Grønhaug, 1993). Liljander, Polsa & van Riel (2009) show that it can have an adverse impact on the image of the PLB. As argued above, stores can improve their PLB image and use it to differentiate themselves from other stores, build customer loyalty and thus increase their profits (Hoch, 1996; Levy & Weitz, 2004; Richardson et al., 1996). This points to a negative and significant relationship between PLB image and perceived risk (Wu et al., 2011; Rzem & Debabi, 2012). Thus, our fourth hypothesis (H4) is that *PLB image has a negative effect on perceived risk.*

Finally, perceived risk is an essential factor in making purchase decisions with respect to PLBs (Wu et al., 2011; Dursun et al., 2011; Diallo, 2012; Yap, Leong & Wee, 2012). The higher the risk associated with a brand (in this case, a PLB), the lower will be the consumer's purchase intention (Tseng & Hwang, 2003). In the same way, smaller levels of perceived risk imply greater intention to purchase a PLB product (Narasimhan & Wilcox, 1998; Shimp & Bearden, 1982; Taylor, 1974). Given that the mediating role of risk has received little attention in the context of PLBs, our fifth hypothesis (H5) is that *perceived risk mediates the relationship between PLB image and purchase intention.*

Figure 1 illustrates the hypotheses discussed above.

Figure 1: Theoretical framework
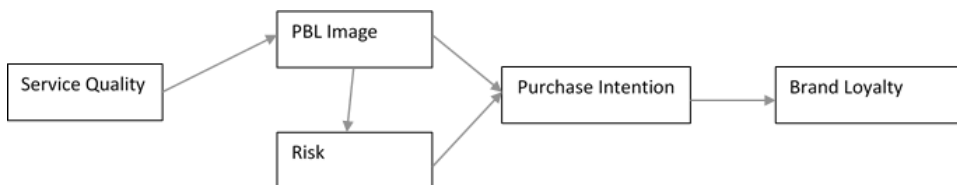
3. Data and Methodology

Our sample consisted of young university students as potential PLB consumers. Employing convenience and snowball sampling, we distributed 500 questionnaires in English that could be completed online or on paper. The final usable sample comprised 348 questionnaires, resulting in a response rate of 69.6 percent. A t-test was conducted to compare early and late respondents (see Miller & Smith, 1983). Responses were compared with each item of the instrument to determine the nonresponse error (see Gall, Borg & Gall, 1996). No significant differences were noted for any item. The questionnaires contained measurement items and sociodemographic questions (see Appendix).

3.1. Instruments

Table 1 summarizes the operational definition of each variable used in the analysis.

Service quality consists of a five-item scale measuring three dimensions: interaction quality, service environment quality and outcome quality (see Brady & Cronin, 2001). Interaction quality reflects customers' perception of their interaction with the salesperson. Service environment takes into account their evaluation of the store environment. Outcome quality gauges their purchase experience in that store.

Table 1: Measures used in the study

Variable	Number of items	Study
Service quality	5	Brady and Cronin (2001)
Purchase intention	2	Grewal et al. (1998)
	2	Liljander et al. (2009)
	2	Knight and Kim (2007)
PLB image	5	Vahie and Paswan (2006)
Perceived risk	2	Mieres et al. (2006)
	4	Stone and Gronhaug (1993)
Brand loyalty	4	Vogel et al. (2008), Dwivedi et al. (2012)
	1	Kuenzel and Halliday (2008)

PLB image is measured as a two-dimensional construct that includes affection and quality (see Keller, 2003). Affection refers to the customer's satisfaction with, or inclination toward, a given PLB. Quality refers to the customer's perception of the product's quality. Vahie and Paswan (2006) measure PLB image using five items.

Perceived risk is gauged by three dimensions: financial risk, functional risk and physical risk. The physical and functional risk measures are adapted from Stone and Grønhaug (1993). Functional risk denotes the possibility that the product will not achieve its intended function. Physical risk refers to the possibility that the product might cause physical harm. The measures of financial risk are adapted from Mieres, Martin and Gutierrez (2006). Financial risk refers to the possibility that the product's price exceeds the benefit or value received by the consumer. Six items are used to measure these three dimensions of perceived risk.

Purchase intention is measured using a two-item scale developed by Knight and Kim (2007). The other four items are adapted from Grewal et al. (1998) and Liljander et al. (2009). *Loyalty intentions* are operationalized using five items: two adapted from Vogel, Evanschitzky and Ramaseshan (2008), two adapted from Dwivedi et al. (2012) and one adapted from Kuenzel and Halliday (2008).

3.2. Methodology

The SEM is run using Amos 18. The benchmark for all factor loadings is 0.5 (see Wu et al., 2011). Any item with a factor loading of below 0.5 is discarded. The composite reliability (CR) of the constructs is tested using the standardized confirmatory factor analysis (CFA) solutions (see Shook et al., 2004) and a benchmark of 0.7 (see Diallo, 2012). The data is also examined for convergent and discriminant validity. The measures of model fit reported include the root mean square error of approximation (RMSEA) and chi-square divided by the degrees of freedom (CMIN/df).

The incremental fit indices include the normed fit index (NFI), non-normed fit index (NNFI or TLI), comparative fit index (CFI) and incremental fit index (IFI). These show that our model fits the data well. All the model fits mentioned above are also reported in the path analysis. The squared multiple correlation (R2) is also calculated to gauge the variable's explanatory power. The extent of mediation is also tested using an SEM, following Iacobucci (2008) and Zhao, Lynch and Chen (2010). We do not use Baron and Kenny's approach, given the criticism put forward by MacKinnon, Fairchild and Fritz (2007).

4. Descriptive Analysis

Respondents were asked to report their age, gender, monthly income, level of education, student status, marital status and place of

residence. The sample comprised 55.7 percent of women and 44.3 percent of men. Most respondents were 20–25 years old (81.9 percent), 93.7 percent were single and 84.8 percent were students, 76.4 percent of whom were undergraduates. More than half the sample resided in Lahore (55 percent), followed by Sialkot (35 percent) and other areas (5 percent).

The skewness and kurtosis values lie within the benchmark ± 2.0. Harman's (1967) single-factor test confirms that the variance explained by each variable is not greater than 60 percent. The results show that the first component explains 53.55 percent of the variance.

4.1. Measurement Model

The CFA results show that the model fit is acceptable. Two items – measuring perceived risk and PLB image – are deleted, as their factor loadings are below 0.5. The factor loadings of the remaining items range between 0.60 and 0.95, as shown in Table 2. The CR values range between 0.808 and 0.936. All the variables used exhibit a reasonable degree of reliability. The table also gives the convergent validity of the data, which is gauged through average variance extracted (AVE) and discriminant validity (DV).

Table 2: Results of measurement model

Variable	Items	Factor loading	CR	AVE	DV
Purchase intention	P1	0.88	0.935	0.708	0.842
	P2	0.89			
	P3	0.92			
	P4	0.88			
	P5	0.72			
	P6	0.75			
Service quality	SQ1	0.75	0.930	0.727	0.853
	SQ2	0.89			
	SQ3	0.87			
	SQ4	0.94			
	SQ5	0.81			
PLB image	PLBI1	0.95	0.808	0.592	0.769
	PLBI2	0.69			
	PLBI3	0.63			
Perceived risk	PR2	0.60	0.849	0.591	0.769
	PR3	0.75			
	PR4	0.95			

Variable	Items	Factor loading	CR	AVE	DV
	PR5	0.73			
Brand loyalty	BL1	0.87	0.936	0.747	0.864
	BL2	0.85			
	BL3	0.82			
	BL4	0.83			
	BL5	0.94			

Source: Authors' calculations.

Model fit indices are divided into standalone and incremental fit indices (Bollen, 1989). To evaluate the measurement model fit, we use the following indices: CFI, TLI, NFI, CMIN/DF, IFI and RMSEA. The absolute and incremental model fit indices indicate that the proposed model fits the data well (Table 3). All the indices used are deemed acceptable, following Zarei et al. (2013).

Table 3: Goodness-of-fit model (CFA)

Index	Model fit value	Standard value
Standalone indices		
CMIN/d.f.	4.36	Range (1 to 5)
RMSEA	0.03	≤ 0.05
Incremental indices		
Normed fit index (NFI)	0.92	≥ 0.90
Non-normed fit index (NNFI or TLI)	0.98	≥ 0.90
Comparative fit index (CFI)	0.93	≥ 0.90
Incremental fit index (IFI)	0.91	≥ 0.90

Source: Authors' calculations.

4.2. Path Analysis (Structural Model)

Table 4 summarizes the results of the structural model, including levels of significance. The parameter estimates give the magnitude and sign of the relationship between constructs. Table 5 shows that the goodness-of-fit values lie within acceptable ranges, indicating that the model fits the data.

H1 tests the relationship between service quality and PLB image. The model yields an estimate of 0.408 (p-value < 0.05), indicating that a one-unit increase in service quality increases PLB image by 0.408 units (implying a positive relationship). We test H2 by regressing PLB image on purchase intention. This yields a coefficient of 0.634 (p-value < 0.05),

indicating that PLB image has a positive impact on purchase intention. H3 tests the relationship between purchase intention and brand loyalty. We obtain a coefficient of 0.78, indicating a positive and highly significant relationship between the two variables. H4 proposes a negative relationship between PLB image and perceived risk. We find that the relationship is highly significant, with a negative coefficient value of 0.459. As expected, a positive image reduces consumers' perceived risk.

Table 4: Results of structural model (structural coefficients)

Hypothesized path	R2	Estimate	Significance
H1: Service quality ---> PLB image	0.06	0.408	***
H2: PLB image ---> purchase intention	0.62	0.634	***
H3: Purchase intention ---> brand loyalty	0.69	0.780	***
H4: PLB image ---> perceived risk	0.43	-0.496	***

Source: Authors' calculations.

Table 5: Results of goodness-of-fit model (path analysis/structural model)

Index	Model fit value	Standard value
Standalone indices		
CMIN/d.f.	3.11	Range (1 to 5)
RMSEA	0.01	≤ 0.1
Incremental indices		
Normed fit index (NFI)	0.95	≥ 0.9
Non-normed fit index (NNFI or TLI)	0.98	≥ 0.9
Comparative fit index (CFI)	0.94	≥ 0.9
Incremental fit index (IFI)	0.95	≥ 0.9

Source: Authors' calculations.

The squared multiple correlation term (R2) denotes the explanatory power of the variable. In this case, the R2 values for service quality and PLB image are very low (0.06). However, the overall model appears to be satisfactory. This anomaly may be due to the large variation across individual units of observation (an inherent characteristic of cross-sectional data). Another reason may be that the survey questionnaire was in English, possibly compromising respondents' ability to communicate. Hu et al. (1999) note that low R2 values suggest that other factors be added to the model.

4.3. Mediating Effects

The mediating effects were tested by bootstrapping in Amos 18 (see Zhao et al., 2010). Table 6 gives the p-values for the mediating effect of perceived risk on the relationship between PLB image and purchase intention. Although the two variables have a direct relationship with each other, this relationship is not significant in the presence of perceived risk. Thus, we reject H5 on finding that perceived risk does not mediate the relationship between PLB image and purchase intention.

Table 6: Testing for mediating effects

Mediation hypothesis	P-values of			Result
	Direct effect (without mediation)	Direct effect (with mediation)	Indirect effect (with mediation)	
H5: PLBI --> PR --> PI	0.009	0.020	0.365	No mediation

Source: Authors' calculations.

5. Discussion

This study evaluates consumer perceptions of store brands (PLBs) in Pakistan by determining which factors affect consumers' purchase intentions. We find that PLB image has a positive impact on purchase intention. This is consistent with studies such as Dodds et al. (1991), Grewal et al. (1998) and Faryabi, Sadeghzadeh and Saed (2012).

Service quality is found to have a direct and positive effect on PLB image. This implies that, when consumers receive a high level of service at a given store, their satisfaction levels will increase and they will be more likely to speak about the store in positive terms – thereby improving the image of the private brands it offers. Lin (2005) and Wu et al. (2011) also report a positive relationship between service quality and brand image. By providing a higher level of service to its customers, a store can outperform other retailers and remain competitive. This translates into greater purchase intention on the part of its customers and higher brand loyalty to its PLBs. Service quality thus acts as a predictor of consumers' purchase intentions with respect to PLBs.

In terms of the association between PLB image and perceived risk, the results of the path analysis indicate a significant negative relationship between the two variables. This implies that consumers with a positive

image of a given PLB (in terms of quality and value for money) will likely associate less risk with it. PLBs are also perceived as being risky and inexpensive, implying that people are less willing to buy them. Our sample of consumers is reasonably well off, which could explain why respondents preferred to buy national or international brands rather than store brands, which they deemed more risky.

Finally, we test the relationship between purchase intention and brand loyalty. We find that consumers who are satisfied with a given purchase will likely return to buy other products, thereby becoming loyal to that brand in the future.

The study's findings have several useful marketing implications that underscore the use of PLBs as a critical strategy for retailers. Many items, including grocery products, are now perceived as commodities. As consumers become more aware, their interest has begun to shift from national to store brands. In this context, the role and importance of supermarkets, hypermarkets and grocery stores is increasing, with such outlets now offering a greater variety of clearly labeled, store-branded products. By reducing the element of risk associated with store brands and building greater trust with their customers (for instance, by improving service quality), stores can increase their consumer loyalty to the PLBs they offer.

6. Limitations and Future Research

Our results should be interpreted in the context of several limitations, which in turn reflect avenues for further research:

- The sample consisted primarily of young, educated, urban respondents. This implies that our findings cannot necessarily be generalized.

- Unlike other studies, we have not concentrated on specific types of stores such as drugstores or grocery stores. Wu et al. (2011), for instance, look at specific industries to examine how PLB image affects purchase intention. Future research could consider the influence of other product-level characteristics such as retail competitiveness, shelf space used and product variety.

- We found no evidence of perceived risk mediating the relationship between PLB image and purchase intention. This could be a location-

specific result. Future research could thus reapply this hypothesis to a particular industry.

- Brand loyalty does not necessarily apply to all consumers, especially in Pakistan, where poverty and inflation may force them to change their purchasing patterns. The fall in consumer purchasing power means that people prefer cheaper products.

7. Conclusion

The aim of this study was to assess the relationship between service quality and PLB image to determine which factors increase purchase intention with respect to PLBs. We applied an SEM to a sample of 348 respondents to measure the attributes of purchase intention. Using CFA and path analysis applied through Amos 18 and SPSS, we measured the validity and reliability of the constructs, gauged the model fit and tested our hypotheses.

Consistent with the literature, we find that (i) service quality and PLB image are positively correlated, (ii) PLB image is positively correlated with buying intent, and (iii) the retailer's service quality has a positive impact on PLB image and increases purchase intention. PLB image is, therefore, an important determinant of purchase intention. Better service quality is likely to increase PLB image, resulting in higher consumer loyalty via purchase intention.

References

Aaker, D. A. (1991). *Managing brand equity*. New York: Free Press.

Ahmad, A., Noor, S. M., & Wel, C. A. C. (2014). Factors influencing consumers' purchase decision of private label brand products. *International Journal of Economic Practices and Theories*, 4(2), 101–110.

Ailawadi, K. L., & Keller, K. L. (2004). Understanding retail branding: Conceptual insights and research priorities. *Journal of Retailing*, *80*(4), 331–342.

Ailawadi, K. L., Pauwels, K., & Steenkamp, J.-B. E. M. (2008). Private-label use and store loyalty. *Journal of Marketing*, *72*(6), 19–30.

Anderson, E. W., Fornell, C., & Lehmann, D. R. (1994). Customer satisfaction, market share, and profitability: Findings from Sweden. *Journal of Marketing*, *58*(3), 53–66.

Ashraf, M. (2011). *Vibrant Pakistan: Your private label source*. Retrieved from https://www.tdap.gov.pk/doc_reports/tdap_report_on_plma_20 11.pdf

Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.

Brady, M. K., & Cronin, J. J. (2001). Some new thoughts on conceptualizing perceived quality: A hierarchical approach. *Journal of Marketing*, *65*(3), 34–49.

Burton, S., Lichtenstein, D. R., Netemeyer, R. G., & Garretson, J. A. (1998). A scale for measuring attitude toward private label products and an examination of its psychological and behavioral correlates. *Journal of the Academy of Marketing Science*, *26*(4), 293–306.

Carrillat, F. A., Jaramillo, F., & Mulki, J. P. (2009). Examining the impact of service quality: A meta-analysis of empirical evidence. *Journal of Marketing Theory and Practice*, *17*(2), 95–110.

Collins-Dodd, C., & Lindley, T. (2003). Store brands and retail differentiation: The influence of store image and store brand attitude on store own brand perceptions. *Journal of Retailing and Consumer Services*, *10*(6), 345–352.

Cox, D. F. (1962). The measurement of information value: A study in consumer decision-making. In W. S. Decker (ed.), *Emerging concepts in marketing*. Chicago: American Marketing Association.

Crosby, P. B. (1979). *Quality is free: The art of making quality certain*. New York: McGraw-Hill.

Diallo, M. F. (2012). Effects of store image and store brand price-image on store brand purchase intention: Application to an emerging market. *Journal of Retailing and Consumer Services*, *19*(3), 360–367.

Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of Marketing Research*, *28*(3), 307–319.

Dunne, D., & Narasimhan, C. (1999). The new appeal of private labels. *Harvard Business Review*, May–June, 41–52.

Dursun, İ., Kabadayi, E. T., Alan, A. K., & Sezen, B. (2011). Store brand purchase intention: Effects of risk, quality, familiarity and store brand shelf space. *Procedia – Social and Behavioral Sciences*, *24*, 1190–1200.

Dutta, K., & Singh, S. (2014). Deriving customer satisfaction and loyalty from organized retailer's sales promotion activities in India. *International Journal of Sales, Retailing and Marketing*, *3*(1), 21–32.

Dwivedi, A., Merrilees, B., Miller, D., & Herington, C. (2012). Brand, value and relationship equities and loyalty-intentions in the Australian supermarket industry. *Journal of Retailing and Consumer Services*, *19*(5), 526–536.

Farris, P. W., Bendle, N. T., Pfeifer, P. E., & Reibstein, D. J. (2006). *Marketing metrics: 50+ metrics every executive should master*. London: Pearson Education.

Faryabi, M., Sadeghzadeh, K., & Saed, M. (2012). The effect of price discounts and store image on consumer's purchase intention in online shopping context case study: Nokia and HTC. *Journal of Business Studies Quarterly*, *4*(1), 197–205.

Gall, M. D., Borg., W. R., & Gall, J. P. (1996). *Educational research: An introduction*. London: Pearson.

Gogoi, B. J. (2013). Study of antecedents of purchase intention and its effect on brand loyalty of private label brand of apparel. *International Journal of Sales and Marketing Management Research and Development*, *3*(2), 73–86.

Grewal, D., Krishnan, R., Baker, J., & Borin, N. (1998). The effect of store name, brand name and price discounts on consumers' evaluations and purchase intentions. *Journal of Retailing*, *74*(3), 331–352.

Grönroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing*, *18*(4), 36–44.

Gupta, S., Jain, R., & Parmal, V. (2014). Study of impact of brand image of retailers on customers' buying decision of store brands. *International Journal of Sales, Retailing and Marketing*, *3*(1), 3–10.

Harman, H. (1967). *Modern factor analysis*. Chicago, IL: University of Chicago Press.

Hoch, S. J. (1996). How should national brands think about private labels? *Sloan Management Review*, *37*(2), 89–102.

Hoch, S. J., & Lodish, L. M. (1998). *Store brands and category management*. Unpublished manuscript, Wharton School, University of Pennsylvania, PA.

Hu, P. J., Chau, P. Y. K., Sheng, O. R. L., & Tam, K. Y. (1999). Examining the technology acceptance model using physician acceptance of telemedicine technology. *Journal of Management Information Systems*, *16*(2), 91–112.

Huang, M. C. (2003). *A study on service quality, enterprise image and consumer loyalty of banks in Taiwan*. Unpublished Master's thesis, Nanhua University, Taiwan.

Iacobucci, D. (2008). *Mediation analysis*. Thousand Oaks, CA: SAGE.

Jacoby, J., & Chestnut, R. W. (1978). *Brand loyalty: Measurement and management*. New York: Wiley.

James, D. L., Durand, R. M., & Dreves, R. A. (1976). The use of a multi-attribute attitude model in a store image study. *Journal of Retailing*, *52*(2), 23–32.

Keller, K. L. (2003). *Strategic brand management: Building, measuring, and managing brand equity* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.

Knight, D. K., & Kim, E. Y. (2007). Japanese consumers' need for uniqueness: Effects on brand perceptions and purchase intention. *Journal of Fashion Marketing and Management*, *11*(2), 270–280.

Koschate-Fischer, N., Cramer, J., & Hoyer, W. D. (2014). Moderating effects of the relationship between private label share and store loyalty. *Journal of Marketing*, *78*(2), 69–82.

Kotler, P. T., & Keller, K. L. (2008). *Marketing management* (13th ed.). Upper Saddle River, NJ: Prentice-Hall.

Kuenzel, S., & Halliday, S. V. (2008). Investing antecedents and consequences of brand identification. *Journal of Product and Brand Management*, *17*(5), 293–304.

Kumar, N., & Steenkamp, J.-B. E. M. (2007). *Private label strategy: How to meet the store brand challenge*. Boston, MA: Harvard Business School.

Levy, M., & Weitz, B. A. (2004). *Retailing management* (5th ed.). New York: McGraw-Hill.

Lewis, R. C., & Booms, B. H. (1983). The marketing aspect of service quality. In L. Berry, G. Shostack & G. Upah (eds.), *Emerging perspectives on services marketing* (pp. 99–107). Chicago, IL: American Marketing Association.

Liljander, V., Polsa, P., & van Riel, A. (2009). Modeling consumer responses to an apparel store brand: Store image as a risk reducer. *Journal of Retailing and Consumer Services*, *16*(4), 281–290.

Lin, C. T. (2005). *A study on the relationship among service quality, enterprise image, customer satisfaction and consumer loyalty of banks*. Unpublished Master's thesis, Chaoyang University of Technology, Taiwan.

MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology*, *58*, 593–614.

Martineau, P. (1958). The personality of the retail store. *Harvard Business Review*, *36*, 47–55.

Mieres, C. G., Martin, A. M. D., & Gutierrez, J. A. T. (2006). Antecedents of the difference in perceived risk between store brands and national brands. *European Journal of Marketing*, *40*(1–2), 61–82.

Miller, L. E., & Smith, K. L. (1983). Handling nonresponse issues. *Journal of Extension*, *21*(5), 45–50.

Narasimhan, C., & Wilcox, R. T. (1998). Private labels and the channel relationship: A cross-category analysis. *Journal of Business*, *71*(4), 573–600.

Nielsen. (2011). *The rise of the value-conscious shopper*. Available at http://hk. nielsen.com/documents/PrivateLabelGlobalReport.pdf

Nielsen. (2014). *The state of private label around the world*. Available at http://www.nielsen.com/content/dam/nielsenglobal/kr/docs/global-report/2014/Nielsen Global Private Label Report November 2014.pdf

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, *49*(4), 41–50.

Pepe, M. S., Abratt, R., & Dion, P. (2012). Competitive advantage, private-label brands, and category profitability. *Journal of Marketing Management*, *28*(1–2), 154–172.

Perry, M., & Perry, A. (1976). Service contract compared to warranty as a means to reduce consumer's risk. *Journal of Retailing*, *52*, 33–40.

Rehman, H. I., Ashar, M., Javed, B., Khalid, M., & Nawaz, R. (2014). Impact of retail store characteristics on purchase intention. *International Journal of Sales, Retailing and Marketing*, *3*(1), 11–20.

Richardson, P. S., Dick, A. S., & Jain, A. K. (1994). Extrinsic and intrinsic cue effects on perceptions of store brand quality. *Journal of Marketing*, *58*(4), 28–36.

Richardson, P. S., Jain, A. K., & Dick, A. S. (1996). Household store brand proneness: A framework. *Journal of Retailing*, *72*(2), 159–185.

Roselius, T. (1971). Consumer rankings of risk reduction methods. *Journal of Marketing*, *35*(1), 56–61.

Rzem, H., & Debabi, M. (2012). Store image as a moderator of store brand attitude. *Journal of Business Studies Quarterly*, *4*(1), 130–148.

Schiffman, L. G., & Kanuk, L. L. (2007). *Consumer behavior* (9th ed.). Upper Saddle River, NJ: Prentice Hall.

Semeijn, J., van Riel, A. C. R., & Ambrosini, A. B. (2004). Consumer evaluations of store brands: Effect of store image and product attributes. *Journal of Retailing and Consumer Services*, *11*(4), 247–258.

Seock, Y.-K., & McBride, J. (2017). Influence of department store image on private label brand preference among consumers with different level of knowledge and familiarity. In C. L. Campbell (ed.), *The customer is NOT always right? Marketing orientations in a dynamic business world* (pp. 96–98). Berlin: Springer.

Sethuraman, R. (2009). Assessing the external validity of analytical results from national brand and store brand competition models. *Marketing Science*, *28*(4), 759–781.

Shimp, T. A., & Bearden, W. O. (1982). Warranty and other extrinsic cue effects on consumers' risk perceptions. *Journal of Consumer Research*, *9*(1), 38–46.

Shook, C. L., Ketchen, Jr, D. J., Hult, G. T. M., & Kacmar, K. M. (2004). An assessment of the use of structural equation modeling in strategic management research. *Strategic Management Journal*, *25*(4), 397–404.

Stone, R. N., & Grønhaug, K. (1993). Perceived risk: Future considerations for the marketing discipline. *European Journal of Marketing*, *27*(3), 39–50.

Taylor, J. W. (1974). The role of risk in consumer behavior. *Journal of Marketing*, *38*(2), 54–60.

Tseng, Y. M., & Hwang, F. S. (2003). The mediate effect of price consciousness on purchasing private brand: The application of path analysis model. *Chiao Da Management Review*, *23*(1), 151–182.

Vahie, A., & Paswan, A. (2006). Private label brand image: Its relationship with store image and national brand. *International Journal of Retail and Distribution Management*, *34*(1), 67–84.

Vogel, V., Evanschitzky, H., & Ramaseshan, B. (2008). Customer equity drivers and future sales. *Journal of Marketing*, *72*(6), 98–108.

Wu, P. C., Yeh, G. Y.-Y., & Hsiao, C.-R. (2011). The effect of store image and service quality on brand image and purchase intention for private label brands. *Australasian Marketing Journal*, *19*(1), 30–39.

Yap, S.-F., Leong, S.-M., & Wee, Y.-G. (2012). Store brand proneness: Effects of perceived risks, quality and familiarity. *Australasian Marketing Journal*, *20*(1), 48–58.

Zarei, E., Zainalipour, H., Mohammadi, M., & Zare, S. (2013). *Scale construction and validation for evaluation of training performance in Hormozgan University of Medical Science, Iran*. Journal of Applied Environmental and Biological Sciences, 3(12), 101–106.

Zehir, C., Sahin, A., Kitapci, H., & Ozsahin, M. (2011). The effects of brand communication and service quality in building brand loyalty through brand trust: The empirical research on global brands. *Procedia – Social and Behavioral Sciences*, *24*, 1218–1231.

Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, *37*(2), 197–206.

Zimmer, M. R., & Golden, L. L. (1988). Impressions of retail stores: A content analysis of consumer images. *Journal of Retailing*, *64*(1), 265–293.

Appendix

The following items were used to measure the study's variables and factors affecting purchase intention. Items marked with an asterisk were deleted from the study because they had lower factor loadings.

Service quality (Brady & Cronin, 2001):

- I would say that the quality of my interaction with this store's employees is high.
- I would rate this store's physical environment highly.
- I always have an excellent experience when I visit this store.
- I feel good about what this store provides its customers.
- I would say that the store's physical environment is one of the best in the industry.

Purchase intention (Grewal et al., 1998; Liljander et al., 2009; Knight & Kim, 2007):

- The probability that I would consider buying store brands is high.
- I will purchase store brands next time.
- I would consider buying store brands.
- There is a strong likelihood that I will buy store brands.
- I intend to buy this store's private label brand frequently.
- I plan to buy this store's private label brand more often.

PLB image (Vahie & Paswan, 2006):

- Too many of the private label brands I buy at this store are defective in some way.
- Most private label brands I buy at this store wear out too quickly.
- This store does not care enough about the quality of its private label brand.
- I like this store's private label brand very much*.
- I am satisfied with most of the private label brands I buy at this store*.

Perceived risk (Mieres et al., 2006):

- I think that buying this store brand is a waste of money and I am worried that it is not worth the money spent*.

- I think that buying a store brand is not a wise way of spending money.

Perceived risk, modified (Stone & Gronhaug, 1993):

- Since private label brands are not safe, if I purchase a private label brand product, I would be concerned about the potential physical risk associated with this product.

- Using this product will lead to some uncomfortable physical side-effects.

- If I purchase a private label brand for use, I become concerned that the product will not provide the level of benefits I expect.

- I am concerned about the reliability and dependability of the product I purchase from a private label brand for use*.

Brand loyalty (Vogel et al., 2008; Dwivedi et al., 2012; Kuenzel & Halliday, 2008):

- I would continue to repurchase from this brand.

- I would recommend this store to my friends and family.

- I would buy additional products from this brand.

- I would spend more than a year on this store brand.

- I will speak positively about store brands.

Sectoral Integration and Domestic Portfolio Diversification in the Karachi Stock Exchange

Awais Ahmed,[*] Muhammad Nasir Malik,[**] Obaid Anwar Awan,[***] Asif Muzaffar[****]

Abstract

This study analyzes sectoral integration among the top ten sectors listed on the Karachi Stock Exchange (KSE), using a market value-weighted index and daily stock price data for 2001–14. Since the literature shows that domestically diversified portfolios outperform globally diversified ones, the study's results have implications for the construction of well-diversified domestic portfolios among individual and institutional investors. We find that, apart from automobiles and cement, all other sectors listed on the KSE provide good diversification opportunities. The Granger causality test shows that cement, chemicals and banking cause most other sectors uni-directionally, while oil and gas, biotechnology and pharmaceuticals, textiles, and electricity are caused by most other sectors. From a domestic investor's perspective, the KSE provides reasonable diversification opportunities across different sectors.

Keywords: diversification, portfolio management, Karachi Stock Exchange, sectoral integration.

JEL classification: G110.

1. Introduction

Portfolio management is a widely discussed issue in the finance literature, given that selecting appropriate stocks in portfolio formation is a key investment decision. Prior to Markowitz's (1952) modern portfolio theory, which changed the dynamics of portfolio formation, investments were treated as standalone securities rather than constituents of a portfolio. Markowitz thus provided a new perspective of investment management by introducing the concept of correlation among returns on different securities. This allowed investors to look at systematic risk as the only

---
[*] Lecturer, Lahore Business School, University of Lahore.
[**] Assistant professor, Business School, University of Central Punjab, Lahore.
[***] Lecturer, RMIT University, Australia.
[****] Assistant professor, University of Central Punjab, Lahore.

priced risk in the context of a well-diversified portfolio, whereby some of the unsystematic risk could be diversified away through the inclusion of uncorrelated securities.

Subsequently, as Grubel and Fadner (1971) show, diversification opportunities became increasingly available in global capital markets. Rational investors began to diversify their investment portfolios, initially at the domestic level, and then leveraging the concept to create globally diversified portfolios. Globalization, the emergence of multinational companies and electronic stock trading have since reduced the barriers to international investment. There has been a marked increase in cross-border investment in capital markets. At the same time, international stock markets have become more integrated, causing diversification opportunities to shrink.

Wong et al. (2004) note that integration among the stock markets of different countries increased after the market crash of 1987. Ahmed (2012) argues that this integration has increased further since the Asian financial crisis of 1997. The impact of 9/11 and the global financial crisis of 2008 on capital markets across developed and emerging economies alike indicates that cross-border portfolio diversification is not necessarily as effective as perceived. On the other hand, despite the widespread acceptance of modern portfolio theory, under-diversification is still prevalent among investors. Blume, Crockett and Friend (1974) examine a sample of individual investor portfolios and find them to be significantly under-diversified. Some 30 years later, Goetzmann and Kumar (2008) report similar results. A behavioral explanation provided in the literature pertains to narrow framing bias, whereby investors perceive securities' returns to be positively correlated and thus underestimate the benefits of diversification.

In the context of Pakistan, many studies have measured the integration of the Karachi Stock Exchange (KSE) with other stock markets in developed and emerging economies, following the trend of international diversification. However, as opportunities for international diversification diminish on the heels of greater global market integration, investors have begun to refocus on domestic portfolio diversification.

The literature provides very little information on the integration – or lack thereof – of returns in different sectors listed on the KSE. Accordingly, we attempt to address this gap by examining the degree of correlation and integration among sectors of the KSE. The results could prove useful for institutional as well as individual investors in portfolio

formation by identifying which sectors provide the most diversification benefits. Although the study has a domestic focus, it may be of equal interest to regional investors, given that the KSE has emerged as an important regional stock exchange in the last few years. In 2014, Bloomberg ranked the KSE as the world's third-best performing stock market since 2009, while the MSCI has recently listed the KSE in its emerging markets index.

2. Literature Review

Portfolio construction is the science of choosing an appropriate combination of securities from the investment universe. Following the introduction of modern portfolio theory, numerous studies have examined aspects of portfolio management. Evans and Archer (1968) find that the variance of a portfolio is inversely related to the number of securities it contains: the greater the number of securities, the fewer chances that their prices will fall simultaneously. Booth and Fama (1992) show that a portfolio's compounded return is higher than the weighted average of the compounded returns of all the assets in that portfolio. This is because the contribution of each asset to the portfolio return is greater than its compounded return. Sankaran and Patil (1999) demonstrate that the benefits of holding many securities are greater than holding a single security.

As another strand of the literature shows, despite the wide acceptance of modern portfolio theory, many investors remain under-diversified. Blume et al. (1974) analyze a sample of investment portfolios to assess the extent of under-diversification and find that 34 percent of investors held only one stock, 55 percent held between one and ten stocks, and only 11 percent held more than ten stocks in their portfolios. Goetzmann and Kumar (2008) examine a sample of 40,000 investors from 1991 to 1996 and observe that most of them are under-diversified and seem to give little importance to correlation among stocks. Barberis, Huang and Thaler (2006) argue that, historically, most people are reluctant to allocate their money in stock markets even though the stock market has a high mean return and low correlation compared to other household risks.

With the onset of globalization and concomitant changes in financial technology and innovation, the 1970s saw a rising trend in cross-border diversification. Levy and Marshall (1970) argue that a key reason investors opt for cross-border investment is to avoid country-specific risk. The World Bank (1997) notes that the world's financial markets have become global marketplaces, with investors diversifying their portfolios

among various developing countries to achieve higher returns and minimize their risk. Bodie, Kane and Marcus (1999) emphasize the benefits of international diversification by arguing that an internationally diversified portfolio bears less risk than one diversified solely in the US.

Following this recognition of the importance of international diversification, numerous studies have attempted to measure the integration of developed, emerging and regional markets. Most of these studies focus on equity markets in developed countries or regions, including the US, Europe and Japan. The emergence of Asian capital markets in the 1990s, however, has prompted greater research on the degree of integration between these markets and other stock markets in developed countries.

In the context of the KSE, numerous studies have been conducted that measure its integration with other global markets. Husain and Saidi (2000) examine the integration of the Pakistani stock market with those of the US, France, the UK, Germany, Japan, Hong Kong and Singapore. Using cointegration analysis, they find that the former is not integrated with international markets.

Arshad, Saleem and Abdullah (2008) measure the integration between the KSE and a sample of developed country stock markets (the US, the UK, Italy, Germany, Canada, France, Japan and Australia). They find that the KSE is integrated only with the French and Japanese stock markets. Iqbal, Khalid and Rafiq (2011) explore the relationship between three stock markets – the US, Pakistan and India – and find no evidence of cointegration among them. However, their Granger causality test results show that the US stock market has a unidirectional influence over the KSE in Pakistan and the Bombay Stock Exchange in India.

Aamir, Husnain and Ali (2012) examine the relationship between the Pakistani stock market and the G8 country stock markets (the UK, the US, Canada, Japan, France, Germany, Italy and Russia). Applying the multivariate cointegration approach, they find no long-term relationship between the Pakistani stock market and G8 stock markets. However, the Granger causality test results reveal unidirectional causality between the Pakistani market and the stock markets of France, Japan, Germany, the UK and Italy.

Hussain et al. (2013) investigate the relationship among several South Asian stock markets – Pakistan, India, Bangladesh and Sri Lanka – as

well as between these markets and the US, UK, Australian and Japanese stock markets. While no significant relationship emerges, the study's Granger causality test results indicate bidirectional causality between the Colombo Stock Exchange and the KSE. Khan and Aslam (2014) assess the cointegration of the Pakistani stock market with a sample of Asian stock markets, including Japan, China, Singapore, Malaysia, India and Indonesia. Applying the Johansen–Juselius cointegration test, they find that the Pakistani stock market is integrated with the stock markets of India, Indonesia, Singapore and Malaysia.

With increased globalization, the flow of information from one country to another has become very fluid, such that shocks in one part of the world may also be felt elsewhere. International financial markets have also become more integrated. When investors invest in foreign markets, the transaction costs involved are likely to be higher than in domestic markets. Moreover, exchange rate fluctuations may increase the associated risk (Odier & Solnik, 1993).

According to Longin and Solnik (1995), the correlation among stock markets rises in periods of high volatility. Errunza, Hogan and Hung (1999) argue that the benefits of diversifying a portfolio cross-border are statistically and economically insignificant compared to diversifying a portfolio of domestic assets. The incremental gains from international portfolio diversification over domestic portfolio diversification have also diminished over time as investment barriers change. Cavaglia, Melas and Tsouderos (2000) show that the reward-to-risk ratios of portfolios diversified across industries are better than those for portfolios diversified across countries.

Increased investment in international markets has also meant a decline in the benefits of diversification due to greater integration. Examining the degree of integration among major stock markets prior to, and after, the wave of globalization that occurred in the 1980s, Masih and Masih (2002) find that these markets became more integrated post-globalization. Schwebach, Olienyk and Zumwalt (2002) observe that the benefits of international diversification have declined significantly after the Asian crisis of 1997. Mun (2005) notes that the cross-market contagion effect of 9/11 has created an adverse investment environment for internationally diversified investors, with the impact reaching stock markets in the UK, Germany and Japan. Ahmed (2012) argues that the viability of cross-border portfolio diversification has fallen heavily since the

1987 Wall Street crash, the Asian financial crisis of 1997, 9/11 and the subprime mortgage crisis of 2008.

Following the increased integration and reduced diversification opportunities across global financial markets, investors and academics have turned their attention to the diversification opportunities available domestically. Arbelaez, Urrutia and Abbas (2001) measure the level of integration among six key sectors of the Colombian stock market. Testing for stationarity, cointegration, causality, impulse response and variance decomposition in a vector error correction model, they find that the selected indices exhibit long-term linkages. In half these cases, the indices indicate Granger causality in the short term.

Gee and Karim (2005) measure the degree of integration among five sectors of the Kuala Lumpur Stock Exchange Composite Index in Malaysia. They apply unit root tests, multivariate cointegration and causality tests to a vector autoregression (VAR) model and vector error correction model, using daily and weekly closing price data over three periods (pre-crisis, crisis and post-crisis). The results show short-term causality between these sectors. The construction sector is found to have led other price indices before the crisis, while the financial sector played the most significant role in influencing prices post-crisis.

Wang, Kutan and Yang (2005) explore the relationship among major sector indices in the Shanghai and Shenzhen stock exchanges for the period 1993–2001. Their results indicate a high degree of interdependence, implying that the benefits of diversification among these sectors is relatively limited. Constantinou et al. (2008) use daily price index data for 12 sectors listed on the Cyprus Stock Exchange from 1996 to 2002, but find no evidence of cointegration. Al-Fayoumi, Khamees and Al-Thuneibat (2009) investigate the degree of sectoral integration in the Amman Stock Exchange in Jordan and observe that, barring services, the other sectors are integrated with each other, indicating opportunities for diversification for investors.

Ahmed (2012) examines the short-run and long-run relationship among 12 sectors of the Egyptian stock market, using daily sector indices data for 2007–10. Applying multivariate cointegration and Granger causality tests, he finds that the stock market offers the benefits of diversification in the short run, whereas the benefits of diversifying portfolios among these sectors in the long run are more limited. Noor, Khan and Khan (2014) investigate the integration among ten sectors of the

Bombay Stock Exchange, using daily sector indices data for 2010–13. They apply Johansen's cointegration and Granger causality tests and find that the banking and IT sectors are integrated and that consumer durables and realty are integrated. The other sectors provide an excellent opportunity for domestic investors to diversify their portfolios.

What this review of the literature reveals is that, while several studies have measured the degree of integration between the KSE and other stock markets in developed or emerging economies, there has been no comprehensive study of integration (or lack thereof) among the various sectors constituting the KSE. This study attempts to investigate the possible integration and causal relationships among various sectors of the KSE. Its findings are expected to help investors diversify their portfolios among different sectors to minimize portfolio risk.

3. Data and Methodology

The KSE currently has over 600 companies listed across 36 sectors. We select those sectors that represent more than 2 percent of the total market capitalization of the KSE to measure integration. Table 1 gives the selected sectors and their percentage share of total market capitalization. These sectors represent about 88 percent of the total capitalization of the KSE.

Table 1: Selected KSE sectors and market capitalization

	Sector	Market capitalization
1	Automobiles and parts	3.35%
2	Commercial banking	19.71%
3	Cement	7.31%
4	Chemicals	10.32%
5	Electricity	4.39%
6	Food producers	10.84%
7	Oil and gas	20.67%
8	Personal goods/textiles	4.81%
9	Pharma and biotech	2.50%
10	Tobacco	4.10%

Source: Authors' calculations.

We select five companies from each sector, apart from tobacco, which includes only three companies (see the Appendix for a list of the companies selected in each sector). The selected firms represent the bulk

of that sector's capitalization – on average, over 70 percent. The final sample represents 75 percent of the total market capitalization of the KSE. In the absence of sectoral indices, we develop daily market value-weighted indices of the selected sectors for the period 1 January 2001 to 31 December 2014.

Figure 1 reveals some interesting trends. The growth rate of different sectors from 2001 to 2005 is moderate and almost all sectors follow a similar trend. The banking sector experienced exponential growth from 2005 to 2008 until the global financial crisis. However, its recovery was phenomenal and the sectoral index shows the highest growth over the study period. In terms of growth, banking is followed by oil and gas, food production, cement and automobiles. Most sectors have experienced healthy growth since 2012, except for textiles, chemicals and electricity.

Figure 1: Sectoral market-weighted indices
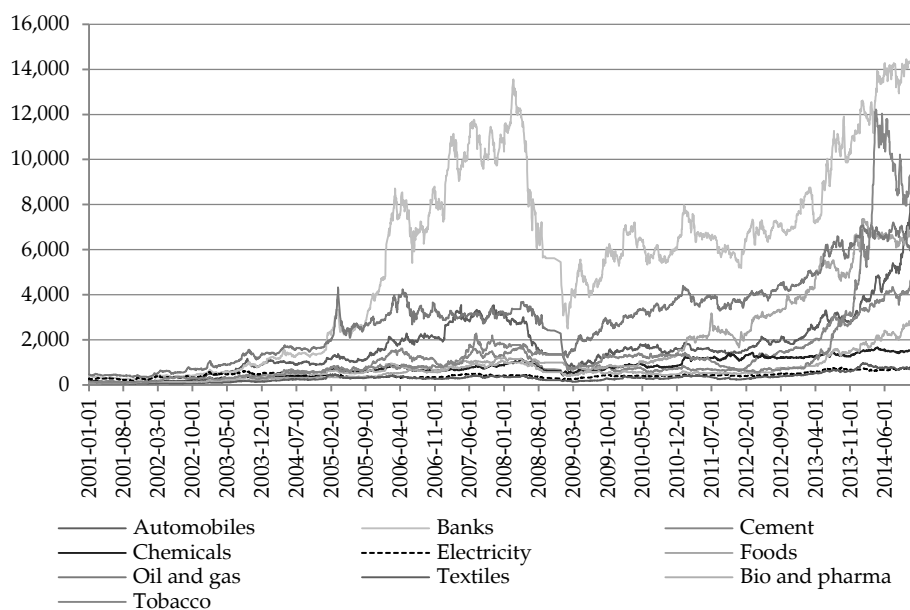
4. Research Methodology

We begin by examining the nature and strength of the relationship between the different sectoral indices, for which cross-sector correlations are estimated as follows:

$$\rho_{xy} = \frac{\sigma_{xy}}{\sigma_x \sigma_y} \tag{1}$$

where σ_{xy} represents the covariance between sectors x and y, σ_x and σ_y are the standard deviations of the returns on sectors x and y and ρ_{xy} is the correlation coefficient.

While correlation analysis measures the degree of co-movement between two series over a certain period, it is not sufficient to ascertain the presence of a long-run stationary relationship between the two. A cointegration analysis must be performed to determine whether an equilibrium relation exists. To illustrate this argument, consider a two-variable regression model: $Y_t = \beta_1 + \beta_2 X_t + u_t$. The classical ordinary least squares assumptions suggest:

$$\beta_2 = \frac{\sum(X_t - \bar{X})(Y_t - \bar{Y})}{(X_t - \bar{X})^2} \tag{2}$$

Let us suppose that $X_t \sim I(1)$, but $Y_t \sim I(0)$. In this case, X_t is nonstationary but Y_t is stationary at level. Even if X_t and Y_t demonstrate significant periodic correlation, a long-run relationship does not exist between the two variables. Since X_t is nonstationary, its variance will increase over time, thus causing the estimator β_2 to converge to 0 as the sample size increases. The estimator β_2 does not have a nonlimiting or asymptotic distribution and is therefore no longer unbiased.

4.1.1. Unit Root Test

Before examining the cointegration between sectors, it is necessary to establish that each series is integrated of the same order (see Granger, 1981; Engle & Granger, 1987). Two different tests are used to ascertain the order of integration. The first one, the Dickey–Fuller (DF) test, involves estimating the following equation:

$$\Delta Y_t = \delta Y_{t-1} + u_t \tag{3}$$

where Y_t is the sector index for a given day, Y_{t-1} represents the sector index for the previous day, δ is the correlation coefficient and u_t is the error term. Since a critical limitation of the DF test is serial correlation, we also apply the Phillips–Perron test to account for heteroskedasticity and autocorrelation in the error terms, using the Newey–West heteroskedasticity and autocorrelation-consistent covariance matrix estimator.

4.1.2.   Johansen's Multivariate Cointegration Test

Two or more sectors are said to be integrated with each other if they show a tendency to move together. Johansen's multivariate cointegration test is used to test the long-run and short-run equilibrium relationship between the nonstationary indices of all the sectors:

$$\lambda_{trace} = -T \sum \ln(1 - \lambda_i) \tag{4}$$

where λ_i is the estimated eigenvalue and λ_{trace} is the trace statistic.

4.1.3.   Granger Causality Test

An important characteristic distinguishing cointegration from correlation is the presence of causal flow (Engle & Granger, 1987). For a series to be cointegrated, there must be at least one causal flow in the integrated system. To ascertain potential cross-interactions among the sectors, we use the Granger causality test.

If two sectors are integrated, the integration may be either unidirectional or bi-directional. Unidirectional integration exists when changes in one sector occur independently of the other. Bidirectional integration, on the other hand, indicates that knowledge of the changes in one sector can improve the predictability of changes in the other and vice versa, that is, neither sector evolves independently of the other.

$$Q_{prob}(W_{t+n} \mid \theta_t = Q_{prob}(W_{t+n} \mid \omega_t) \tag{5}$$

where Q_{prob} is the conditional probability and ω_t the information set available at time t.

5.   Empirical Results

This section presents the descriptive statistics and empirical results.

5.1. *Descriptive Statistics*

The summary statistics for all the market-weighted indices are presented in Table 2. The automobile sector has the highest average daily return, followed by tobacco, showing that the daily changes in stock prices and/or volume are largest in these sectors. The lowest daily return is observed in the case of the chemicals sector with a mean return of 0.035 percent. The tobacco sector shows the greatest variability, with a standard

deviation of 2.61 percent. In contrast, the least volatility is observed in food production, which has a standard deviation of 1.39 percent. This suggests that the latter carries the least risk for investors.

Table 2: Descriptive statistics, market-weighted index returns

Sector	Obs.	Mean	Min.	Max.	SD	Skewness	Kurtosis
Automobiles	3,353	0.1308%	-19.3223%	26.1869%	1.8692%	0.9676	22.7734
Banking	3,353	0.1086%	-20.8907%	22.3742%	2.3117%	0.5665	16.0659
Cement	3,353	0.1182%	-14.8520%	32.1465%	2.1046%	1.3891	22.9172
Chemicals	3,353	0.0354%	-16.9831%	22.9485%	1.8251%	0.4572	21.5118
Electricity	3,353	0.1013%	-23.3015%	22.6890%	1.8523%	-0.3828	26.4822
Foods	3,353	0.1013%	-43.5777%	6.4166%	1.3955%	-9.7829	294.7364
Oil and gas	3,353	0.0734%	-18.2456%	14.2412%	1.9846%	-0.3997	10.2335
Textiles	3,353	0.0644%	-16.0558%	25.4899%	1.9353%	0.8227	17.9723
Bio and pharma	3,353	0.1002%	-16.6326%	35.5867%	2.0832%	2.1764	47.6784
Tobacco	3,353	0.1240%	-13.4505%	19.6419%	2.6137%	0.3803	6.2963

Source: Authors' calculations.

We also examine the normality of the index returns. Obtaining information on the distribution of the underlying price series is important to investors as it indicates the possibility of sharp fluctuations in prices. Moreover, return dynamics such as volatility, skewness and kurtosis are often employed as inputs to models used in portfolio selection and optimization. Our results show that, apart from electricity, food production and oil and gas, the returns on all sectors are positively skewed, which points to the presence of extreme values at the positive end of the distribution. The kurtosis value for all sectors is greater than 3, suggesting a leptokurtic distribution. This finding is unsurprising as stock returns often tend to be fat-tailed and positively skewed (Andersen et al., 2001).

5.2. Correlation Results

The results of the correlation matrix of market-weighted index returns in Table 3 show that the automobile sector is weakly correlated to food production and tobacco, and moderately correlated to the other sectors. Banking is strongly correlated to cement, chemicals and oil and gas, as these sectors have a high proportion of debt in their capital structure. Banking is weakly correlated to food production and tobacco, since most of the companies in these sectors are equity-financed. Cement is strongly correlated to chemicals, oil and gas, and textiles, and weakly correlated to food production and tobacco.

Table 3: Correlation of market-weighted index returns

Sector	Automobiles	Banking	Cement	Chemicals	Electricity	Foods	Oil and gas	Textiles	Bio and pharma	Tobacco
Automobiles	1.0000									
Banking	0.4479	1.0000								
Cement	0.4661	0.6187	1.0000							
Chemicals	0.3904	0.6258	0.5855	1.0000						
Electricity	0.3225	0.4754	0.4791	0.5125	1.0000					
Foods	0.0889	0.0960	0.1170	0.1258	0.0878	1.0000				
Oil and gas	0.3724	0.6175	0.5687	0.5891	0.5142	0.1116	1.0000			
Textiles	0.4110	0.5786	0.5880	0.5459	0.4441	0.1142	0.5371	1.0000		
Bio and pharma	0.3379	0.4522	0.3705	0.4009	0.2303	0.0937	0.3333	0.3253	1.0000	
Tobacco	0.1784	0.2383	0.2467	0.2143	0.1771	0.0687	0.2324	0.2237	0.1597	1.0000

Source: Authors' calculations.

Chemicals and electricity are strongly correlated to oil and gas, since both sectors depend heavily on oil. Oil and gas and textiles are strongly correlated to banking, cement and chemicals, and weakly correlated to food production and tobacco. The biotech and pharma sector is moderately correlated to all other sectors. Food production and tobacco are the least correlated sectors in terms of daily returns with all other sectors. In general, food production and tobacco provide the best opportunity for portfolio diversification in a domestic context.

The correlation matrix indicates that the returns on different sector indices are positively related, but does not provide any information on the spread between the returns of two indices or whether the spread is mean-reverting. In other words, the presence of positive correlation does not necessarily imply a long-run equilibrium between the returns on different indices. For a long-run equilibrium to exist, the spread or linear combination of two returns series must be stationary. To verify the presence of a long-run equilibrium, a cointegration procedure must be employed. Even if two nonstationary series are strongly and positively correlated, it may not be possible to draw valid inferences based on past behavior.

5.3. Unit Root Tests

One of the assumptions in running cointegration tests is that the underlying time series must be integrated of the same order. The DF and

Phillips–Perron tests are used to examine the stationarity of the data. In both cases, their results are broadly consistent with the time series behavior of the variables indicated in Figure 1. Since the null of nonstationarity cannot be rejected at level in all cases, the reported variables are retested in first-difference form. Table 4 shows that the null hypothesis is rejected for all variables, thus clearly indicating that they are all integrated of order 1 or I(1).

Table 4: Stationarity test results

Sector	ADF test (level 0)		ADF test index (level 1)		Phillips–Perron test (level 0)		Phillips–Perron test (level 1)	
	T-stat	Prob.	T-stat	T-stat	T-stat	Prob.	T-stat	Prob.
Automobiles	4.806	1.0000	-51.448	0.0000*	3.738	1.0000	-51.835	0.0000*
Banking	-0.016	0.9572	-51.432	0.0000*	-0.332	0.9208	-51.762	0.0000*
Cement	5.165	1.0000	-52.020	0.0000*	4.548	1.0000	-52.248	0.0000*
Chemicals	-0.144	0.9448	-51.404	0.0000*	-0.222	0.9358	-51.182	0.0000*
Electricity	0.089	0.9653	-54.861	0.0000*	-0.061	0.9532	-54.936	0.0000*
Food prod.	2.289	0.9989	-54.792	0.0000*	1.910	0.9985	-54.953	0.0000*
Oil and gas	-0.936	0.7759	-52.073	0.0000*	-1.066	0.7286	-52.599	0.0000*
Textiles	0.772	0.9912	-51.590	0.0000*	0.344	0.9793	-51.692	0.0000*
Bio and pharma	2.877	1.0000	-52.683	0.0000*	2.372	0.9990	-52.692	0.0000*
Tobacco	3.063	1.0000	-51.332	0.0000*	1.536	0.9977	-51.552	0.0000*

Note: The 1 percent critical value is –3.430. * indicates significance at 1 percent.
Source: Authors' calculations.

5.4. Lag Length Selection

To run cointegration and Granger causality tests, it is important to determine the lag length, based on which we gauge which sectors are integrated with each other and cause the movement of other sectors. The VAR lag length selection test is run to determine the appropriate lag lengths for establishing Granger causality. The test uses five methods, three of which – the likelihood ratio, final prediction error and Akaike information criterion – suggest a lag length of 4 (Table 5).

Table 5: VAR lag length selection criteria

Lag	LL	LR	df	P	FPE	AIC	HQIC	SBIC
0	-239848				7.30E+49	143.199	143.205	143.217
1	-153404	1.70E+05	100	0.000	3.00E+27	91.650	91.722	91.851
2	-152964	879.94	100	0.000	2.50E+27	91.447	91.584*	91.830*
3	-152829	270.14	100	0.000	2.40E+27	91.426	91.628	91.992
4	-152664	328.73*	100	0.000	2.3e+27*	91.387*	91.655	92.136

Note: * = lag order selected based on criterion, LR = sequential modified likelihood ratio test statistic, FPE = final prediction error, AIC = Akaike information criterion, SBIC = Schwarz Bayesian information criterion.
Source: Authors' calculations.

5.5. *Multivariate Cointegration Test*

Interpreting the results of Johansen's multivariate cointegration test is based on either the eigenvalue or trace statistic – in this case, we use the latter. The trace statistic value of a selected index should be less than the critical value of the given rank. The rank represents the number of possible cointegrating equations. Table 6 gives the results of Johansen's multivariate cointegration test, according to which there are two cointegrating series among the ten selected sectors of the KSE.

Table 6: Multivariate cointegration test results

Maximum rank	Market-weighted index		5% critical value
	Eigenvalue	Trace statistic	
0	–	345.1372	233.13
1	0.03544	224.1909	192.89
2	0.02034	155.3052*	156.00
3	0.01422	107.3078	124.24
4	0.00910	76.6729	94.15
5	0.00723	52.3585	68.52
6	0.00595	32.3602	47.21
7	0.00463	16.7973	29.68
8	0.00370	4.3725	15.41
9	0.00127	0.1051	3.76
10	0.00003		

Note: * = null hypothesis rejected at 0.05.
Source: Authors' calculations.

Since these test results only give the number of cointegrating equations or sectors, and not which sectors are integrated, we also run pair-wise cointegration tests for each sector against the other selected sectors.

5.6. Pair-Wise Cointegration Test

Table 7 gives the results of the pair-wise cointegration of each sector with all other sectors. The decision is made based on the trace statistics with a 5 percent critical value of 15.41. A value of less than 15.41 shows that there is no cointegration between the selected sectors. The results of the market-weighted index show that the automobile and cement sectors are cointegrated with all the other sectors. Banking, chemicals, textiles, and oil and gas are the least integrated sectors and are only integrated with automobiles and cement. Electricity, food production, biotech and pharma, and tobacco are integrated among themselves, but not with banking, chemicals, textiles or oil and gas.

Table 7: Pair-wise cointegration test results

	Automobiles	Banking	Cement	Chemicals	Electricity	Foods	Oil and gas	Textiles	Bio and pharma	Tobacco
Automobiles		19.5142	34.2887	16.9816	23.8434	23.1667	25.7742	19.020	34.7492	30.6509
Banking	19.5142		25.7660	3.1743*	4.0539*	8.2328*	8.2025*	7.0796*	8.6644*	6.9035*
Cement	34.2887	25.7660		22.7339	29.8203	28.5747	32.1025	25.3622	48.8155	30.0357
Chemicals	16.9816	3.1743*	22.7339		4.5026*	9.8379*	7.4333*	4.8624*	7.3310*	7.2799*
Electricity	23.8434	4.0539*	29.8203	4.5026*		12.8795*	2.8085*	12.972*	16.9717	15.5924
Foods	23.1667	8.2328*	28.5747	9.8379*	12.8795*		9.3530*	13.128*	17.6449	21.2377
Oil and gas	25.7742	8.2025*	32.1025	7.4333*	2.8085*	9.3530*		5.2224*	13.2134*	12.2696*
Textiles	19.0204	7.0796*	25.3622	4.8624*	12.9720*	13.1283*	5.2224*		13.2474*	19.4589
Bio and pharma	34.7492	8.6644*	48.8155	7.3310*	16.9717	17.6449	13.213*	13.247*		23.6069
Tobacco	30.6509	6.9035*	30.0357	7.2799*	15.5924	21.2377	12.269*	19.4589	23.6069	

Note: 5 percent critical value = 15.41, * = null hypothesis rejected at 0.05.
Source: Authors' calculations.

5.7. Granger Causality Test

Table 8 gives the results of the Granger causality test for each sector vis-à-vis all other sectors. The results show that the automobile sector is Granger-caused by cement, textiles, biotech and pharma, and tobacco. Banking is Granger-caused by tobacco alone, and cement is Granger-caused by food production, biotech and pharma, and tobacco. The chemicals sector is not caused by any sector, electricity is Granger-caused

by automobiles alone, and food production is caused by cement, biotech and pharma, and tobacco.

Table 8: Granger causality test results

	Automobiles	Banking	Cement	Chemicals	Electricity	Foods	Oil and gas	Textiles	Bio and pharma	Tobacco
	Equation sectors									
Automobiles		1.5211	5.127	3.2138	9.5969*	6.9309	4.955	3.5227	15.03*	25.774*
Banking	3.5245		5.688	6.0431	6.0386	4.7326	4.7892	3.5277	9.4647*	1.7425
Cement	12.927*	0.74626		4.9629	3.0861	12.429*	14.398*	18.988*	12.671*	30.517*
Chemicals	3.2037	8.0816	0.70621		0.95656	1.9283	8.5665	7.3421	11.398*	7.2173
Electricity	6.6214	7.3939	8.2821	4.1024		4.0843	9.2416	3.598	2.1466	4.3201
Foods	8.80037	1.9598	22.071*	8.5849	8.3192		3.0223	3.194	3.2173	14.999*
Oil and gas	7.5267	2.2397	4.3606	0.40445	2.9971	5.94		5.5597	5.4736	5.747
Textiles	10.639*	2.6917	7.0981	5.9469	9.1993	2.9024	14.125*		8.4005	16.612*
Bio and pharma	10.628*	3.7644	36.44*	4.5255	8.0121	12.332*	7.6767	32.144*		6.5487
Tobacco	38.55*	10.336*	54.903*	8.8881	2.9492	45.93*	2.7433	14.744*	24.317*	

Note: * = significant at 5 percent and excluded sector causes equation sector.
Source: Authors' calculations.

Oil and gas is Granger-caused by cement and textiles, and the latter is caused by cement, biotech and pharma, and tobacco. The biotech and pharma sector is Granger-caused by automobiles, banking, cement, chemicals and tobacco, whereas tobacco is caused by automobiles, cement, food production and textiles.

6.   Conclusion

While the KSE has emerged as one of the world's top performing stock exchanges, small investors do not fare as well for lack of knowledge and their inability to diversify portfolios. The results of this study are thus especially helpful to investors who lack the resources to diversify their portfolios globally.

Studies conducted after the Asian financial crisis of 1997 and global financial crisis of 2008 show that the integration between global stock markets has increased, thereby reducing diversification opportunities. Recent trends 2000 onward suggest that investors are more inclined to seek diversification opportunities domestically. However, there is hardly any literature available on the KSE in this regard. Accordingly, this study aims

to help identify diversification opportunities domestically for institutional as well as individual investors.

We have identified those sectors of the KSE that provide good diversification opportunities domestically. The results of the correlation matrix show that the returns on automobiles, banking, chemicals, cement, electricity, oil and gas and textiles are moderately correlated to each other, whereas the returns on food production, biotech and pharma, and tobacco are less correlated, thus providing better diversification opportunities.

The results of the pair-wise Johansen cointegration test for selected sectors of the KSE, using a market-weighted index, show that most of these sectors are not integrated with each other in the long run, thus providing good diversification opportunities for portfolio managers and investors. The exceptions are the automobile and cement sectors, which are cointegrated with all the other sectors and do not provide opportunities for diversification. Biotech and pharma and tobacco are integrated only with electricity and food production. This implies that investors creating a portfolio of biotech and pharma and tobacco should adjust their allocations toward electricity or food production. Banking, chemicals, oil and gas, and textiles are the least integrated sectors and provide excellent diversification opportunities, especially for small and local investors who do not have access to foreign markets.

Finally, the results of the Granger causality test show that banking, chemicals and electricity are the least caused sectors, whereas automobiles, biotech and pharma, and tobacco are the most caused sectors. Chemicals, electricity, and oil and gas do not cause other sectors, whereas cement, biotech and pharma, and tobacco cause most of the other sectors.

References

Aamir, S., Husnain, M., & Ali, A. (2012). Is Pakistani equity market integrated to the equity markets of group of eight (G8) countries? An empirical analysis of Karachi Stock Exchange. *Romanian Economic Journal*, *15*(45), 289–324.

Ahmed, W. M. (2012). Comovements and causality of sector price indices: Evidence from the Egyptian stock exchange. *International Journal of Business and Emerging Markets*, *4*(3), 200–222.

Al-Fayoumi, N. A., Khamees, B. A., & Al-Thuneibat, A. A. (2009). Information transmission among stock return indexes: Evidence from the Jordanian stock market. *International Research Journal of Finance and Economics*, *24*, 194–208.

Andersen, T. G., Bollerslev, T., Diebold, F. X., & Ebens, H. (2001). The distribution of realized stock return volatility. *Journal of Financial Economics*, *61*(1), 43–76.

Arbelaez, H., Urrutia, J., & Abbas, N. (2001). Short-term and long-term linkages among the Colombian capital market indexes. *International Review of Financial Analysis*, *10*(3), 237–273.

Arshad, H., Saleem, H. M., & Abdullah, M. S. (2008). Long-run relationships between an emerging equity market and equity markets of the developed world: An empirical analysis of Karachi Stock Exchange. *International Research Journal of Finance and Economics*, *16*, 52–62.

Barberis, N., Huang, M., & Thaler, R. H. (2006). Individual preferences, monetary gambles, and stock market participation: A case for narrow framing. *American Economic Review*, *96*(4), 1069–1090.

Blume, M. E., Crockett, J., & Friend, I. (1974). Stockownership in the United States: Characteristics and trends. *Survey of Current Business*, *54*, 16–40.

Bodie, Z., Kane, A., & Marcus, A. J. (1999). *Investments* (4th ed.). New York: McGraw-Hill.

Booth, D. G., & Fama, E. F. (1992). Diversification returns and asset contributions. *Financial Analysts Journal*, *48*(3), 26–32.

Cavaglia, S., Melas, D., & Tsouderos, G. (2000). Cross-industry and cross-country international equity diversification. *Journal of Investing*, *9*(1), 65–71.

Constantinou, E., Kazandjian, A., Kouretas, G., & Tahmazian, V. (2008). Cointegration, causality and domestic portfolio diversification in the Cyprus stock exchange. *Journal of Money, Investment and Banking*, *4*, 26–41.

Engle, R., & Granger, C. (1987). Co-integration and error correction: Representation, estimation, and testing. *Econometrica*, *55*(2), 251–276.

Errunza, V., Hogan, K., & Hung, M.-W. (1999). Can the gains from international diversification be achieved without trading abroad? *Journal of Finance*, *54*(6), 2075–2107.

Evans, J. L., & Archer, S. H. (1968). Diversification and the reduction of dispersion: An empirical analysis. *Journal of Finance*, *23*(5), 761–767.

Gee, C. S., & Karim, M. Z. A. (2005). Stock price integration in the Malaysian stock market. *Thammasat Economic Journal*, *23*(3), 123–145.

Goetzmann, W. N., & Kumar, A. (2008). Equity portfolio diversification. *Review of Finance*, *12*(3), 433–463.

Granger, C. W. J. (1981). Some properties of time series data and their use in econometric model specification. *Journal of Econometrics*, *16*(1), 121–130.

Grubel, H. G., & Fadner, K. (1971). The interdependence of international equity markets. *Journal of Finance*, *26*(1), 89–94.

Husain, F., & Saidi, R. (2000). The integration of the Pakistani equity market with international equity markets: An investigation. *Journal of International Development*, *12*(2), 207–218.

Hussain, S. H., Sabir, H. M., Ali, Y., Ali, S. J., & Ismail, A. (2013). Interdependence of South Asian and developed stock markets and their impact on KSE (Pakistan). *Asian Economic and Financial Review*, *3*(1), 16–27.

Iqbal, A., Khalid, N., & Rafiq, S. (2011). Dynamic interrelationship among the stock markets of India, Pakistan and United States. *International Journal of Economics and Management Engineering*, *5*(1), 8–14.

Khan, S. N., & Aslam, M. S. (2014). Cointegration of Karachi Stock Exchange with major South Asian stock exchanges. *International Journal of Accounting and Financial Reporting*, *4*(1), 106–117.

Levy, H., & Marshall, S. (1970). International diversification of investment portfolios. *American Economic Review*, *60*(4), 668–675.

Longin, F., & Solnik, B. (1995). Is the correlation in international equity returns constant: 1960–1990? *Journal of International Money and Finance*, *14*(1), 3–26.

Markowitz, H. (1952). Portfolio selection. *Journal of Finance*, *7*(1), 77–91.

Masih, A. M. M., & Masih, R. (2002). Propagative causal price transmission among international stock markets: Evidence from the pre- and post-globalization period. *Global Finance Journal*, *13*(1), 63–91.

Mun, K.-C. (2005). Contagion and impulse response of international stock markets around the 9-11 terrorist attacks. *Global Finance Journal*, *16*(1), 48–68.

Noor, M. A., Khan, M. M. A., & Khan, M. A. (2014). Co-movement analysis among different sectors of Indian stock market. *International Journal of Research*, *1*(4), 540–556.

Odier, P., & Solnik, B. (1993). Lessons for international asset allocation. *Financial Analysts Journal*, *49*(2), 63–77.

Sankaran, J. K., & Patil, A. A. (1999). On the optimal selection of portfolios under limited diversification. *Journal of Banking and Finance*, *23*(11), 1655–1666.

Schwebach, R. G., Olienyk, J. P., & Zumwalt, J. K. (2002). The impact of financial crises on international diversification. *Global Finance Journal*, *13*(2), 147–161.

Wang, Z., Kutan A. M., & Yang, J. (2005). Information flows within and across sectors in Chinese stock markets. *Quarterly Review of Economics and Finance*, *45*(4–5), 767–780.

Wong, W. K., Penm, J., Terrell, R. D., & Lim, K. Y. C. (2004). The relationship between stock markets of major developed countries and Asian emerging markets. *Journal of Applied Mathematics and Decision Sciences*, *8*(4), 201–218.

World Bank. (1997). *Private capital flows to developing countries: The road to financial integration*. New York: Oxford University Press.

Appendix

List of selected companies in each sector

Automobiles and parts	Commercial banking	Cement
Honda Atlas Cars (Pakistan) Ltd	Allied Bank Ltd	Bestway Cement Ltd
Atlas Honda Ltd	National Bank of Pakistan	Fauji Cement Company Ltd
Pak Suzuki Motor Company Ltd	United Bank Ltd	Maple Leaf Cement Factory Ltd
Indus Motor Company Ltd	Habib Bank Ltd	DG Khan Cement Company Ltd
Atlas Battery Ltd	MCB Bank Ltd	Lucky Cement Ltd

Chemicals	Electricity	Foods
Fatima Fertilizer Company Ltd	Hub Power Company Ltd	Engro Foods Ltd
Fauji Bin Qasim Fertilizers Ltd	Kot Addu Power Company Ltd	National Foods Ltd
Fauji Fertilizer Company Ltd	PAKGEN Power Ltd	Ismail Industries Ltd
Dawood Hercules Corporation Ltd	Nishat Chunian Power Ltd	Nestle Pakistan Ltd
Engro Corporation Ltd	Nishat Power Ltd	Rafhan Maize Products Ltd

Oil and gas	Personal goods and textiles	Pharma and biotech
Oil and Gas Development Company Ltd	Nishat Mills Ltd	GlaxoSmithKline (Pakistan) Ltd
Pakistan Petroleum Ltd	Ibrahim Fibre Ltd	Abbot Laboratories (Pakistan) Ltd
Pakistan State Oil Company Ltd	Kohinoor Textile Mills Ltd	Searle Company Limited
Pakistan Oilfields Ltd	Gul Ahmed Textile Mills Ltd	IBL HealthCare Ltd
Mari Petroleum Company Ltd	Nishat Chunian Ltd	Highnoon Laboratories Ltd

Tobacco		
Pakistan Tobacco Company Ltd	Philip Morris (Pakistan) Ltd	Khyber Tobacco Company Ltd

The Impact of Celebrity Endorsement on Brand Affection and Purchase Intention: The Mediating Role of Word of Mouth

Farida Saleem[*]

Abstract

Celebrity endorsement is widely used as an advertising technique. This study examines three dimensions of celebrity endorsement, including trustworthiness, expertise and attractiveness, as predictors of positive word of mouth by consumers. It also gauges the impact of word of mouth on purchase intention and brand affection in terms of the role it plays as a mediating construct between celebrity endorsement and consumers' behavioral outcomes. The study uses a sample of 369 respondents to test a structural equation model. Its results reveal that the fully mediated model is superior to the partially mediated model and that trustworthiness is the most important attribute of celebrity endorsement, yielding positive consumer behavior.

Keywords: celebrity endorsement, word of mouth, purchase intentions, brand affection.

JEL classification: M31, M37.

1. Introduction

Celebrity endorsement has long been a popular marketing tool and is recognized as a "widespread and essential" phenomenon of "modern-day marketing" (Biswas, Hussain & O'Donnell, 2009). It is also deemed a pragmatic marketing communication strategy (Erdogan, 1999). Sponsorship advertising can involve different kinds of endorsers, including easily identifiable celebrities, with whom people are familiar, ordinary consumers, companies or animated characters (Stout & Moon, 1990). Arguably, using well-known or eminent people to endorse a product is most likely to attract consumer interest (Daneshvary & Schwer, 2000).

McCracken (1989) defines a celebrity endorser as "any individual who enjoys public recognition and who uses this recognition on behalf of a consumer good by appearing with it in an advertisement." Such ads are

---

[*] Associate Professor University of Lahore, Chanab Campus, Gujrat

known as marcoms and allow celebrities to bring "their own culturally related meanings [to the ad] … irrespective of the required promotional role." Advertisers choose to use celebrities to communicate the attributes and benefits of their products because celebrity endorsement is considered an effective promotional strategy (Rashid, Nallamuthu & Sidin, 2002). The last two decades have seen a sharp rise in this marketing trend and it has become an important marketing strategy among firms with respect to almost all types of media (Levin, 1988). In 1977, about 15 percent of television commercials in the US featured celebrities (Fireworker & Friedman, 1977). By 1985, this percentage had increased to 20 percent (Sherman, 1985). Currently, about 30 percent of advertisements feature celebrities.

Among other aspects, the literature on sponsorship advertising and celebrity endorsement looks at the influence of sponsorship on consumer behavior, that is, purchase intentions and loyalty (Lafferty & Goldsmith, 1999), the reasons for sponsorship on behalf of corporations in sports (Marshall & Cook, 1992), its influence on attitudes and behavior in view of experienced or similar endorsers (Feick & Higie, 1992), and the perceived compatibility of the endorser with the product (Till & Busler, 1998). The aim of this study is to provide a better understanding of the processes underlying celebrity endorsement, including its impact on purchase intention and brand affection among consumers, and to investigate the mediating effect of word of mouth (WOM) in the relationship between celebrity endorsement, purchase intention and brand affection in Pakistan.

Considerable importance is given to the use of celebrity endorsement as an effective strategy to communicate brand message and influence consumers' purchase intentions as well as other brand attributes, using control variables such as brand involvement, brand image and brand awareness. However, the use of other communication strategies incorporated with celebrity endorsement in a specific cultural context needs further study. In this case, we look at the limitations of WOM to investigate the gap identified by Wang and Yang (2010), who explore how the relationship between celebrity endorsement and consumer attributes is mediated by WOM communication.

2. Literature Review

The nature of the celebrity endorser affects how consumers perceive the attributes and benefits of the product being endorsed, thereby increasing its acceptability among customers. Since they trust the celebrity, people tend to transfer their perception of the celebrity to the brand being

endorsed (Biswas, Biswas & Das, 2006). Thus, celebrity endorsement is considered an effective marketing technique by which marketers not only promote and persuade, but also make their product or brand more desirable with the appearance of a celebrity. Customers who see celebrities as role models are inclined to modify their behavior to match that of the latter (Ahmed, Farooq & Iqbal, 2014). This process influences consumer attitudes and perceptions.

The significance of celebrity endorsement in brand communication lies in the idea that celebrities can add value not only to the product they are endorsing, but also to the brand (Okorie, Oyedepo & Akhidenor, 2012). This entails taking advantage of public recognition: celebrities appear in advertisements associated with different products and services because they draw consumers' attention and aid product or brand recall (Agrawal & Kamakura, 1995). The literature shows that celebrity endorsement makes a given brand or product distinguishable from others and creates a positive brand image (Petty, Cacioppo & Schumann, 1983). The considerable impact that celebrities can have on people's minds – and thereby on consumer behavior – makes such advertisements more persuasive (Choi & Rifon, 2007) and thus enhances customers' purchase intentions toward that brand (Friedman & Friedman, 1978).

Accordingly, advertisers try to match the personality of a celebrity to the attributes of the product being endorsed because this congruency focuses on the customer's senses and helps create a positive brand attitude (Kamins, 1989). Pradhan, Duraipandian and Sethi (2016) investigate the celebrity congruence model and find that brand-celebrity and user-brand-personality congruence is significantly associated with brand attitude and brand purchase intention. Zahaf and Anderson (2008) observe that celebrities perceived as being credible and trustworthy and who are known for their expertise in a given area, can influence buyers' willingness to purchase a product far more effectively than the degree of congruency between that product and the celebrity. Thus, advertisers hire celebrities to endorse brands or products based on their attractiveness (Baker & Churchill, 1977) as well as their credibility (Sternthal, Dholakia & Leavitt, 1978).

Social learning theory, proposes Bandura (1967), helps explain human cognitive behavior – in this context, how role models can have a significant impact on people's behavior, through an experiment testing aggressive behavior among children. The study shows that a group of children who were exposed to a certain model in a cartoon, shown attacking a doll verbally and physically, behaved twice as aggressively as

children who had been exposed to a nonaggressive model. This theory posits that individuals learn to behave in a certain way by observing the actions of their role models (Westen, 1999).

According to Bergkvist and Zhou, celebrity endorsement "is an agreement between an individual who enjoys public recognition [the celebrity] … and an entity [the brand] … for the purpose of promoting the entity" (2016, p. 664). Similarly, Fraser and Brown (2002) describes a role model as an individual or person whose beliefs, ideas, attitudes, perception, values, actions and behavior are observed keenly by others. People then imitate them and implement their (the role model's) behavior in their routine lives. This underscores the social influence of celebrities through the processes of identification and persuasion.

Feilitzen and Linne (1975) argue that people tend to identify most strongly with media characters or celebrities, even imitating their styles and mannerisms to become more like them (McGuire, 1974). Celebrity endorsement positively affects consumers' attitudes toward a product relative to when it was not endorsed by a celebrity (Knoll & Matthes, 2017). Martin and Bush (2000) also examine the influence of television stars, media entertainers, sports athletes and parents as role models on purchase intention and consumption attitudes. Similarly, Fraser and Brown (2002) use the example of musician Elvis Presley to show how celebrities are seen as role models and how their values, ideas and beliefs can thus be modified at a social and personal level. This applies particularly to purchase behavior among teenagers.

3. Study Hypotheses

This section develops the study's hypotheses concerning celebrity endorsement and WOM, purchase intention and brand affection.

3.1. Celebrity Endorsement and WOM

WOM is a key factor in consumer decision making (Mangold, Miller & Brockway, 1999). It refers to the face-to-face interaction between a sender and receiver by which one influences the attitude, perception and behavior of the other, whether in a positive or negative sense (Sweeny, Soutar & Mazzarol, 2008).

WOM is used to assess consumers' post-purchase behavior (Swan & Oliver, 1989) and is often deemed a better, more authentic source of

information or feedback about a product than the information propagated by the firm itself. This is because the sender generating WOM is independent of the company to which that product belongs and is, therefore, not biased (Silverman, 2001). People prefer to rely on the information they receive through informal and/or face-to-face interaction (for example, from other consumers) when making purchase decisions rather than relying on formal advertisements (Bansal & Voyer, 2000) because their fellow consumers are more likely to provide objective information (Schiffman & Kanuk, 2000).

The literature identifies three characteristics of WOM messages: (i) the favorableness or valence of the message: its positive or negative aspects; (ii) its emotive aspect: the depth, richness, vividness, intensity and emotional appeal used to shape people's values with convincing results; and (iii) its cognitive aspect: what is being said on the basis of rational appeal (Harrison-Walker, 2001; Mazzarol, Sweeney & Soutar, 2007).

Since WOM consists of information based on opinion, it can be positive or negative. WOM may convey pleasant, satisfying and favorable experiences to others when it is positive, or unpleasant experiences – thereby reducing the worth and value of that product – when it is negative (Anderson, 1998). Moreover, it is not necessary that people generate and receive only positive or only negative WOM – most consumers encounter mixed WOM during their interaction with others (Wang, 2011). However, marketers are concerned with spreading positive WOM and reducing or avoiding negative WOM, given the latter's role in the success of a product among consumers (Day, 1971). Bush, Martin and Bush (2004) observe that positive WOM is more likely to be generated when a product or service has been endorsed by a popular athlete or sports celebrity. According to Ohanian (1991), for a truly effective celebrity endorsement, the chosen celebrity endorser should not only be knowledgeable, but also experienced and qualified enough to be deemed an expert in that area by consumers.

Marketers have traditionally examined three characteristics of endorsers, including attractiveness, trustworthiness and expertise. Attractiveness can refer either to the physical attractiveness of the endorser or to perceived similarities between the endorser and receiver (Feick & Higie, 1992; McCracken, 1989). Feick and Higie (1992) find that, when individual taste is the more dominant, a consumer's similarity with the endorser becomes more important in identifying preferences for products or services. Expertise implies that the endorser is knowledgeable about the product or service s/he is endorsing. This plays a significant role when

there is no or little variation in tastes and preferences among consumers. Finally, the trustworthiness of the endorser is an important indicator of his or her credibility (Friedman, Termini & Washington, 1976). For consumers, therefore, the perception that the endorser is knowledgeable, trustworthy and attractive makes him or her a credible source of information.

Based on the literature reviewed above, the study's first three hypotheses are:

- H1: *The attractiveness of a celebrity endorser creates positive WOM among consumers*.

- H2: *The expertise of a celebrity endorser creates positive WOM among consumers*.

- H3: *The trustworthiness of a celebrity endorser creates positive WOM among consumers*.

3.2. WOM and Purchase Intention

The cost incurred by companies to attract new customers is far greater than that of retaining existing customers (Spreng, Harrell & Mackoy, 1995). Hence, purchase intention remains an important area of enquiry for researchers and marketers. WOM communication is considered one of the most important determinants of customers' attitudes and buying intentions (Xia & Bechwati, 2008; Sen & Lerman, 2007; Jalilvand & Samiei, 2012). WOM messages are, therefore, a key reference point when making purchase decisions (Jalilvand & Samiei, 2012).

Positive WOM generated by immediate social groups, including family and friends, in the form of suggestions and advice, helps reduce perceived risk (Cox, 1967), thereby enhancing the buyer's purchase decision. WOM has been found to increase revenue generation for many products, including automobiles (Swan & Oliver, 1989) and films (Mizerski, 1982). Positive WOM events lead to more favorable consumer attitudes and behavior (Hamer, Liu & Sudharshan, 1999). Based on these findings, the study proposes (H4) that *positive WOM has a significant impact on purchase intention among customers*.

3.3. WOM and Customer Brand Affection

Brand affection is the "emotion or affective reaction of the consumer towards a product or brand, representing the direct or overall evaluation of the consumer towards the product" (Wu & Wang, 2011, p. 453). While

celebrity endorsement has no direct impact on brand attributes (Bergkvist, Hjalmarson & Mägi, 2016), consumers may be influenced by the attitude of the endorsing celebrity toward a given brand (Ling & Liu, 2008). Thus, when a highly credible celebrity is featured in an advertisement, customer attitudes toward that brand are more likely to be positive (Wu & Wang, 2011). In turn, positive WOM is likely to attract new customers and retain existing ones (Reichheld & Sasser, 1990). In this sense, it affects brand attitudes as well as brand affection (Wu & Wang, 2011). Based on these findings, the study's fifth hypothesis (H5) is that *positive WOM has a significant impact on brand affection*.

4. Methodology

Three dimensions of celebrity endorsement – attractiveness, expertise and trustworthiness – were measured, using a scale adapted from Ohanian (1990). In all, 14 items were used to gauge celebrity endorsement, with four items measuring the endorser's attractiveness and five items each measuring expertise and trustworthiness. WOM was measured using three items adapted from Maxham (2001). Brand affection and purchase intention were measured using three items each adapted from Chaudhuri and Holbrook (2001) and Shukla (2010), respectively. All questions related to the study variables were measured using a five-point Likert scale ranging from 1 for "strongly disagree" to 5 for "strongly agree".

A self-administered questionnaire was developed, pertaining to (i) celebrity endorsement, (ii) WOM, (iii) brand affection, (iv) purchase intention and (v) demographics. The data was collected through online survey forms as well as hard copies of the questionnaire distributed among a conveniently available sample. A total of 500 hard copies were distributed at different universities in Rawalpindi and Islamabad. Of these, 225 useable questionnaires were returned. Another 144 online survey forms were filled by respondents through social media websites such as Facebook, Instagram and Linkedin. A total of 369 useable questionnaires was received.

5. Data Analysis

SPSS software was used to carry out a descriptive analysis of the data, while AMOS was used to run the structural equation model. The latter entailed a two-step incremental approach: fitting the measurement model and then fitting the structural model.

5.1. Sample Profile

Of a total sample of 369 respondents, 63 percent (234) were female and 37 percent (135) were male. The bulk of respondents (almost 58 percent) were students, most of them aged 21–31 (52.3 percent). Most respondents were unmarried (62.6 percent). Table 1 gives the mean, standard deviation, internal consistency measures and inter-correlation of the study's endogenous and exogenous variables.

Table 1: Descriptive analysis, correlation matrix and AVE

Latent construct	No. of items	Mean	SD	1	2	3	4	5	6
Attractiveness	4	2.17	0.93	**0.73**					
Trustworthiness	5	2.65	0.85	0.41* (0.17)	**0.68**				
Expertise	5	2.37	0.82	0.50* (0.25)	0.59* (0.35)	**0.53**			
Word of mouth	3	2.55	0.99	0.31* (0.09)	0.43* (0.18)	0.41* (0.17)	**0.75**		
Brand affection	2	2.62	1.10	0.34* (0.11)	0.35* (0.12)	0.34* (0.11)	0.69* (0.48)	**0.80**	
Purchase intention	3	2.75	1.05	0.45 (0.20)	0.46 (0.21)	0.35 (0.12)	0.70 (0.49)	0.65 (0.42)	**0.77**

Note: * $p < 0.01$, AVE given in bold, shared variance given in parentheses.
Source: Author's estimates.

All the variables have a reliability coefficient that falls within an acceptable range (0.07 or above), as suggested by Nunnally and Bernstein (1994). All the correlations are significant and take the direction expected. None of the coefficients is greater than 0.8, indicating that there is no multicollinearity in the dataset.

5.2. Validity Analysis

We gauge the construct validity based on the factor loading value of each observed variable in its respective latent construct. Discriminant validity is checked using Fornell and Larcker's (1981) criteria. The value of the average variance extracted (AVE) for all observed constructs is less than the value of the squared multiple correlation in each case. This confirms the construct and discriminant validities of the data (Table 1).

5.3. Reliability Analysis

Table 2 confirms the reliability of the data, using Cronbach's alpha and composite reliability (CR) indices. The proposed hypotheses are tested

using a structural equation model. Following Anderson and Gerbing (1988), we carry out a two-step analysis. This entails establishing the suitability and reliability of the measurement model and then testing the structural model. Using a three-factor model for celebrity endorsement warrants a confirmatory factor analysis (CFA). Since WOM is taken as the mediating factor, we also conduct a specific mediation analysis.

Table 2: CFA results for observed and latent constructs

Latent and observed constructs	β	α	CR	AVE
Attractiveness		0.912	0.91	0.72
AT1	0.845			
AT2	0.815			
AT3	0.872			
AT4	0.872			
Trustworthiness		0.896	0.89	0.68
TW1	0.818			
TW2	0.825			
TW3	0.842			
TW4	0.821			
Expertise		0.853	0.85	0.53
EX1	0.711			
EX2	0.808			
EX3	0.764			
EX4	0.649			
EX5	0.685			
Word of mouth		0.896	0.90	0.75
WOM1	0.819			
WOM2	0.897			
WOM3	0.873			
Brand affection		0.885	0.88	0.77
BA1	0.922			
BA2	0.864			
Purchase intention		0.908	0.91	
PI1	0.887			
PI2	0.817			
PI3	0.848			

Note: α= Cronbach's alpha, CR = composite reliability, AVE = average variance extracted.
Source: Author's estimates.

The fit of the measurement and structural models is verified using different fit indices, including the $\chi 2$ statistic, comparative fit index (CFI),

adjusted goodness-of-fit index (AGFI), goodness-of-fit index (GFI), root mean square error of approximation (RMSEA) and root mean square residual (RMR). There is still some debate over the acceptable cutoff values for adequate fit (see Hu & Bentler, 1999; Cheung & Rensvold, 2002). However, we consider the following recommendations: CFI > 0.95 and RMR < 0.08, following Hu and Bentler (1999); GFI = 0.95 and AGFI = 0.90, following Miles and Shevlin (1998). While MacCallum, Browne and Sugawara (1996) suggest an RMSEA of below 0.08, Hu and Bentler propose a cut-off value close to 0.06 and Steiger (2007) indicates a rigorous upper limit of 0.07.

5.4. CFA (Measurement) Model

Table 3 compares the proposed six-factor model with other possible CFA models.

Table 3: Comparison of CFA models with six-factor model

CFA model	χ^2 (df) df/χ^2	CFI	RMR	GFI	RMSEA	Comparison with six-factor model $\Delta\chi^2$ (df)
Three-factor	1,827 (185) 9.8	0.699	0.120	0.613	0.155	1,426 (12)
Four-factor	1,580 (182) 8.2	0.744	0.113	0.636	0.145	1,179 (9)
Six-factor	401 (173) 2.3	0.953	0.440	0.910	0.060	

Source: Author's estimates.

These include a three-factor model containing all the items measuring celebrity endorsement as one construct, and purchase intention and brand affection as one construct; and a four-factor model that loads the items measuring attractiveness, trustworthiness and expertise onto one factor, with purchase intention, brand affection and WOM as separate factors. The results in Table 3, including the **2 difference tests, show that the six-factor model has better fit indices than the other models.

5.5. Full Measurement Model

A full CFA is conducted to incorporate the observed variables (items of scales) and their latent constructs. This entails using the

maximum likelihood estimation method. Since all the observed variables are loaded well – with regression weights greater than 0.6 – on their respective latent constructs, none of the items is removed from the analysis at this stage. The AVE and CR are calculated using the CFA measurement model outputs (see Table 2).

5.6. Structural Model Analysis

The proposed model is a fully mediated model with no direct path between celebrity endorsement, purchase intention and brand affection. However, to establish that this model is better than a partially mediated one, with direct paths between these variables, we compare the two. Table 4 shows that four of the six paths between celebrity endorsement, purchase intention and brand affection are insignificant, thereby confirming the superiority of the fully mediated model.

Table 4: Comparison of fully and partially mediated structural models

Proposed relationship	Fully mediated model			Partially mediated model		
	Standardized regression weight	t-value	p-value	Standardized regression weight	t-value	p-value
TR => WOM	0.298	4.426	0.000	0.283	0.408	0.000
AT => WOM	0.154	2.595	0.009	0.109	1.785	0.074
EX => WOM	0.166	2.399	0.016	0.183	2.523	0.012
WOM => PI	0.739	13.692	0.000	0.621	11.337	0.000
WOM => BA	0.712	14.178	0.000	0.659	11.845	0.000
AT => PI				0.249	5.025	0.000
AT => BA				0.114	2.296	0.022
TR => PI				0.139	2.481	0.013
TR => BA				-0.004	-0.073	0.945
EX => PI				-0.087	-1.503	0.133
EX => BA				0.031	0.522	0.602

Note: TR = trustworthiness, AT = attractiveness, EX = expertise, WOM = word of mouth, PI = purchase intention, BA = brand affection.
Source: Author's estimates.

Although the goodness-of-fit indices provide useful information about the overall model, it is worth noting that they are not enough to assess the mediating role of WOM in the proposed relationships. This is examined in the following section.

5.7. *Mediation Analysis*

The proposed model predicts that the relationship between celebrity endorsement, purchase intention and brand affection is mediated by WOM. We test this using the well-established criteria put forward by Baron and Kenny (1986). The first step is to establish whether there is a substantial relationship between the dependent and independent constructs. The second step is to test for a substantial relationship between the dependent and mediator variables. The third step is to check for (i) an insignificant association between the dependent and independent constructs in the presence of the mediating variable (full mediation) and (ii) a decrease in the strength of this association in the presence of the mediating variable (partial mediation) (Table 5).

Table 5: Mediation analysis of specific indirect effect of celebrity endorsement on purchase intention and brand attitude

Celebrity endorsement	Indirect effect through WOM on PI			Indirect effect through WOM on BA		
				BCCI		
	Estimate	Lower	Upper	Estimate	Lower	Upper
Trustworthiness	0.264*	0.133	0.423	0.287*	0.147	0.445
Attractiveness	0.147*	0.023	0.275	0.159*	0.026	0.302
Expertise	0.167*	0.034	0.293	0.181*	0.038	0.331

Note: BCCI = bias-corrected confidence interval, * significant at 0.01, ** significant at 0.05.
Source: Author's estimates.

Following Holmbeck (1997), we conduct the mediation analysis using the bootstrapping approach (Iacobucci, 2008) to structural equation modeling. The indirect or mediated effects are calculated through a resampling of 3,000 using a 95 percent bias-corrected confidence interval.

6. Discussion

This study investigates the impact of three dimensions of celebrity endorsement – attractiveness, expertise and trustworthiness – on purchase intention and brand affection, with WOM taken as an intervening construct. Its results are in line with many other studies, including a meta-analysis conducted by Amos, Holmes and Strutton (2008), who show that the endorser's attractiveness, expertise and trustworthiness, when exercised separately, explain the effectiveness of such ads better than the celebrity's source credibility alone.

The study's most important finding concerns the intervening role of WOM in the suggested relationships. It finds that WOM fully mediates the relationship between all three dimensions of celebrity endorsement and purchase intention and brand affection. These results support Wu and Wang's (2011) finding that e-WOM mediates the relationship between the endorser's attractiveness, trustworthiness and expertise and brand attitude, including brand affection, brand trust and customer intention to purchase.

The observed positive impact of all three dimensions (attractiveness, trustworthiness and expertise) on WOM reflects previous empirical evidence, such as Bush et al. (2005), who note that positive WOM is generated through normative and informational influences. Similarly, interpersonal influences, such as whether a consumer's peer group likes or dislikes a certain endorser, affect purchase decisions. Among young female consumers, products or services endorsed by their favorite endorser or athlete are more likely to generate positive WOM. Dix, Phau and Pougnet (2010) find support for the model proposed by Bush et al. (2005) in predicting the behavior of young Australian consumers. They find that sports celebrities as role models have considerable influence over WOM, which in turn affects brand loyalty, purchase intention and complaint behavior among consumers.

Of the three dimensions of celebrity endorsement, trustworthiness has the strongest impact on WOM, followed by expertise and attractiveness. According to Malik and Guptha (2014), the trustworthiness of the celebrity endorser helps strengthen consumers' faith in the brand being endorsed as well as positive changes in brand attitude. McGinnies and Ward (1980) find that the perceived trustworthiness of an endorser shapes consumer attitude and behavior more than perceived expertise. Wei and Wu (2013) point to credibility and trustworthiness as key factors shaping consumer attitude in Malaysia. Yoon, Kim and Kim (1998) underscore all three dimensions of celebrity endorsement with respect to positive brand beliefs among US and Korean consumers, although they too emphasize the relative importance of trustworthiness.

Based on the study's results, a firm's choice of celebrity endorser is important for developing positive WOM. Advertising agencies and clients in the US and Europe, for instance, prefer celebrity endorsers characterized by trustworthiness, familiarity and credibility (Erdogan, Baker & Tagg, 2001). This makes it important for companies and advertising agencies to consider the trustworthiness and credibility associated with potential celebrity endorsers when designing advertising campaigns, to ensure they

have the greatest possible impact on positive WOM, thereby increasing brand affection and purchase intentions.

7. Study Limitations and Future Research

Given the constraints related to time, accessibility and sampling frames, the study relied on convenient sampling to collect its data, which may affect the extent to which these results can be generalized. Although we have used cross-sectional data, future research could use longitudinal data to minimize common method bias.

Another aspect that could be incorporated is the cultural context. Considering that culture also shapes values, beliefs, attitudes, behavior and lifestyle, it may be interesting to gauge how this affects consumer response to different types of celebrities in Pakistan, including athletes, actors, singers, professionals, spokespersons, opinion makers and journalists. Future research could also assess whether celebrity endorsers associated with negative perceptions affect brand attributes such as brand affection, purchase intention and trust. Similarly, the effect of celebrity switching behavior on consumer behavior is an area worth examining.

References

Agrawal, J., & Kamakura, W. A. (1995). The economic worth of celebrity endorsers: An event study analysis. *Journal of Marketing*, *59*(3), 56–62.

Ahmed, N., Farooq, O., & Iqbal, J. (2014). Credibility of celebrity endorsement and buying intentions: An evidence from students of Islamabad, Pakistan. *International Letters of Social and Humanistic Sciences*, *20*, 1–13.

Amos, C., Holmes, G., & Strutton, D. (2008). Exploring the relationship between celebrity endorser effects and advertising effectiveness: A quantitative synthesis of effect size. *International Journal of Advertising*, *27*(2), 209–234.

Anderson, E. W. (1998). Customer satisfaction and word of mouth. *Journal of Service Research*, *1*(1), 5–17.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*(3), 411–423.

Baker, M. J., & Churchill, G. A., Jr. (1977). The impact of physically attractive models on advertising evaluations. *Journal of Marketing Research*, *14*(4), 538–555.

Bandura, A. (1967). Behavioral psychotherapy. *Scientific American*, *216*(3), 78–86.

Bansal, H. S., & Voyer, P. A. (2000). Word-of-mouth processes within a services purchase decision context. *Journal of Service Research*, *3*(2), 166–177.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173–1182.

Bergkvist, L., & Zhou, K. Q. (2016). Celebrity endorsements: A literature review and research agenda. *International Journal of Advertising*, *35*(4), 642–663.

Bergkvist, L., Hjalmarson, H., & Mägi, A. W. (2016). A new model of how celebrity endorsements work: Attitude toward the endorsement as a mediator of celebrity source and endorsement effects. *International Journal of Advertising*, *35*(2), 171–184.

Biswas, D., Biswas, A., & Das, N. (2006). The differential effects of celebrity and expert endorsements on consumer risk perceptions: The role of consumer knowledge, perceived congruency, and product technology orientation. *Journal of Advertising*, *35*(2), 17–31.

Biswas, S., Hussain, M., & O'Donnell, K. (2009). Celebrity endorsements in advertisements and consumer perceptions: A cross-cultural study. *Journal of Global Marketing*, *22*(2), 121–137.

Bush, A. J., Martin, C. A., & Bush, V. D. (2004). Sports celebrity influence on the behavior of Generation Y. *Journal of Advertising Research*, *44*(1), 108–118.

Bush, V. D., Bush, A. J., Clark, P., & Bush, R. P. (2005). Girl power and word-of-mouth behavior in the flourishing sports market. *Journal of Consumer Marketing*, *22*(5), 257–264.

Chaudhuri, A., & Holbrook, M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty. *Journal of Marketing*, *65*(2), 81–93.

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, *9*(2), 233–255.

Choi, S. M., & Rifon, N. J. (2007). Who is the celebrity in advertising? Understanding dimensions of celebrity images. *Journal of Popular Culture*, *40*(2), 304–324.

Cox, D. F. (1967). The audience as communicators. In D. F. Cox (ed.), *Risk taking and information handling in consumer behavior* (pp. 172–187). Boston, MA: Harvard University, Graduate School of Business Administration.

Daneshvary, R., & Schwer, R. K. (2000). The association endorsement and consumers' intention to purchase. *Journal of Consumer Marketing*, *17*(3), 203–213.

Day, G. S. (1971). Attitude change, media and word of mouth. *Journal of Advertising Research*, *11*(6), 31–40.

Dix, S., Phau, I., & Pougnet, S. (2010). 'Bend it like Beckham': The influence of sports celebrities on young adult consumers. *Young Consumers*, *11*(1), 36–46.

Erdogan, B. Z. (1999). Celebrity endorsement: A literature review. *Journal of Marketing Management*, *15*(4), 291–314.

Erdogan, B. Z., Baker, M. J., & Tagg, S. (2001). Selecting celebrity endorsers: The practitioner's perspective. *Journal of Advertising Research*, *41*(3), 39–48.

Feick, L., & Higie, R. A. (1992). The effects of preference heterogeneity and source characteristics on ad processing and judgements about endorsers. *Journal of Advertising*, *21*(2), 9–24.

Feilitzen, C., & Linne, O. (1975). Identifying with television characters. *Journal of Communication*, *25*(4), 51–55.

Fireworker, R. B., & Friedman, H. H. (1977). The effects of endorsements on product evaluation. *Decision Sciences*, *8*(3), 576–583.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39–50.

Fraser, B. P., & Brown, W. J. (2002). Media, celebrities, and social influence: Identification with Elvis Presley. *Mass Communication and Society*, *5*(2), 183–206.

Friedman, H. H., & Friedman, L. (1978). Does the celebrity endorser's image spill over the product? *Journal of the Academy of Marketing Science*, *6*(4), 291–299.

Friedman, H. H., Termini, S., & Washington, R. (1976). The effectiveness of advertisements utilizing four types of endorsers. *Journal of Advertising*, *5*(3), 22–24.

Hamer, L. O., Liu, B. S.-C., & Sudharshan, D. (1999). The effects of intra-encounter changes in expectations on perceived service quality models. *Journal of Service Research*, *1*(3), 275–289.

Harrison-Walker, L. J. (2001). The measurement of word-of-mouth communication and an investigation of service quality and customer commitment as potential antecedents. *Journal of Service Research*, *4*(1), 60–75.

Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology*, *65*(4), 599–610.

Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*(1), 1–55.

Iacobucci, D. (2008). *Mediation analysis*. Thousand Oaks, CA: SAGE.

Jalilvand, M. R., & Samiei, N. (2012). The impact of electronic word of mouth on a tourism destination choice: Testing the theory of planned behavior (TPB). *Internet Research*, *22*(5), 591–612.

Kamins, M. A. (1989). Celebrity and non-celebrity advertising in a two-sided context. *Journal of Advertising Research*, *29*(3), 34–42.

Knoll, J., & Matthes, J. (2017). The effectiveness of celebrity endorsements: A meta-analysis. *Journal of the Academy of Marketing Science*, *45*(1), 55–75.

Lafferty, B. A., & Goldsmith, R. E. (1999). Corporate credibility's role in consumers' attitudes and purchase intentions when a high versus a low credibility endorser is used in the ad. *Journal of Business Research*, *44*(2), 109–116.

Levin, G. (1988). Celebrity licensing gets tougher. *Advertising Age*, *59*, 1 February.

Ling, I. L., & Liu, Y. F. (2008). Comprehension and persuasion on advertising message: Heuristic-systematic model approach. *Journal of Management*, *25*(5), 487–503.

MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, *1*(2), 130–149.

Malik, G., & Guptha, A. (2014). Impact of celebrity endorsements and brand mascots on consumer buying behavior. *Journal of Global Marketing*, *27*(2), 128–143.

Mangold, W. G., Miller, F., & Brockway, G. R. (1999). Word-of-mouth communication in the service marketplace. *Journal of Services Marketing*, *13*(1), 73–89.

Marshall, D. W., & Cook, G. (1992). The corporate (sports) sponsor. *International Journal of Advertising*, *11*(4), 307–324.

Martin, C. A., & Bush, A. J. (2000). Do role models influence teenagers' purchase intentions and behavior? *Journal of Consumer Marketing*, *17*(5), 441–453.

Maxham, J. G. (2001). Service recovery's influence on consumer satisfaction, positive word-of-mouth and purchase intentions. *Journal of Business Research*, *54*(1), 11–24.

Mazzarol, T., Sweeney, J. C., & Soutar, G. N. (2007). Conceptualizing word-of-mouth activity, triggers and conditions: An exploratory study. *European Journal of Marketing*, *41*(11–12), 1475–1494.

McCracken, G. (1989). Who is the celebrity endorser? Cultural foundations of the endorsement process. *Journal of Consumer Research*, *16*(3), 310–321.

McGinnies, E., & Ward, C. D. (1980). Better liked than right: Trustworthiness and expertise as factors in credibility. *Personality and Social Psychology Bulletin*, *6*(3), 467–472.

McGuire, W. J. (1974). Psychological motives and communication gratification. In J. G. Blumler & E. Katz (eds.), *The uses of mass communications: Current perspectives on gratifications research* (pp. 167–196). Beverly Hills, CA: SAGE.

Miles, J., & Shevlin, M. (1998). Effects of sample size, model specification and factor loadings on the GFI in confirmatory factor analysis. *Personality and Individual Differences*, *25*(1), 85–90.

Mizerski, R. W. (1982). An attribution explanation of the disproportionate influence of unfavorable information. *Journal of Consumer Research*, *9*(3), 301–310.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

Ohanian, R. (1991). The impact of celebrity spokespersons' perceived image on consumers' intension to purchase. *Journal of Advertising Research*, *31*(1), 46–54.

Okorie, N., Oyedepo, T., & Akhidenor, G. (2012). The dysfunctional and functional effect of celebrity endorsement on brand patronage. *Online Journal of Communication and Media Technologies*, *2*(2), 141–152.

Petty, R. E., Cacioppo, J. T., & Schumann, D. (1983). Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of Consumer Research*, *10*(2), 135–146.

Pradhan, D., Duraipandian, I., & Sethi, D. (2016). Celebrity endorsement: How celebrity-brand-user personality congruence affects brand attitude and purchase intention. *Journal of Marketing Communications*, *22*(5), 456–473.

Rashid, M. Z. A., Nallamuthu, J., & Sidin, S. M. (2002). Perceptions of advertising and celebrity endorsement in Malaysia. *Asia Pacific Management Review*, *7*(4), 535–553.

Reichheld, F. F., & Sasser, W. E., Jr. (1990). Zero defections: Quality comes to services. *Harvard Business Review*, *68*(5), 105–111.

Schiffman, L. G., & Kanuk, L. L. (2000). *Consumer behavior* (7th ed.). New York: Prentice Hall.

Sen, S., & Lerman, D. (2007). Why are you telling me this? An examination into negative consumer reviews on the web. *Journal of Interactive Marketing*, *21*(4), 76–94.

Sherman, S. P. (1985, August 19). When you wish upon a star. *Fortune*, 66–71.

Shukla, P. (2010). Impact of interpersonal influences, brand origin and brand image on luxury purchase intentions: Measuring interfunctional interactions and a cross-national comparison. *Journal of World Business*, *46*(2), 242–252.

Silverman, G. (2001). *The secrets of word-of-mouth marketing: How to trigger exponential sales through runaway word of mouth*. New York: AMACOM.

Spreng, R. A., Harrell, G. D., & Mackoy, R. D. (1995). Service recovery: Impact on satisfaction and intentions. *Journal of Services Marketing*, *9*(1), 15–23.

Steiger, J. H. (2007). Understanding the limitations of global fit assessment in structural equation modeling. *Personality and Individual Differences*, *42*(5), 893–898.

Sternthal, B., Dholakia, R., & Leavitt, C. (1978). The persuasive effect of source credibility: Tests of cognitive response. *Journal of Consumer Research*, *4*(4), 252–260.

Stout, P. A., & Moon, Y. S. (1990). Use of endorsers in magazine advertisements. *Journalism and Mass Communication Quarterly*, *67*(3), 536–546.

Swan, J. E., & Oliver, R. L. (1989). Post-purchase communications by consumers. *Journal of Retailing*, *65*(4), 516–533.

Sweeney, J. C., Soutar, G. N., & Mazzarol, T. (2008). Factors influencing word of mouth effectiveness: Receiver perspectives. *European Journal of Marketing*, *42*(3–4), 344–364.

Till, B. D., & Busler, M. (1998). Matching products with endorsers: Attractiveness versus expertise. *Journal of Consumer Marketing*, *15*(6), 576–586.

Wang, X. (2011). The effect of inconsistent word-of-mouth during the service encounter. *Journal of Services Marketing*, *25*(4), 252–259.

Wang, X., & Yang, Z. (2010). The effect of brand credibility on consumers' brand purchase intention in emerging economies: The moderating role of brand awareness and brand image. *Journal of Global Marketing*, *23*, 177–188.

Wei, K. K., & Wu, Y. L. (2013). Measuring the impact of celebrity endorsement on consumer behavioral intentions: A study of Malaysian consumers. *International Journal of Sports Marketing and Sponsorship*, *14*(3), 2–22.

Westen, D. (1999). *Psychology: Mind, brain and culture* (2nd ed.). New York: John Wiley & Sons.

Wu, P. C., & Wang, Y.-C. (2011). The influences of electronic word-of-mouth message appeal and message source credibility on brand attitude. *Asia Pacific Journal of Marketing and Logistics*, 23(4), 448–472.

Xia, L., & Bechwati, N. N. (2008). Word of mouse: The role of cognitive personalization in online consumer reviews. *Journal of Interactive Advertising*, 9(1), 3–13.

Yoon, K., Kim, C. H., & Kim, M.-S. (1998). A cross-cultural comparison of the effects of source credibility on attitudes and behavioral intentions. *Mass Communication and Society*, 1(3–4), 153–173.

Zahaf, M., & Anderson, J. (2008). Causality effects between celebrity endorsement and the intentions to buy. *Innovative Marketing*, 4(4), 57–65.

Linking Empowering Leadership, Psychological Empowerment, Self-Leadership, Creative Involvement and Creativity: A Sequential Mediation Model

Ishfaq Ahmed,[*] Muhammad Khalid Khan[**] and Ghulam Ali Bhatti[***]

Abstract

This study examines the relationship between empowering leadership and employee creativity through the serial mediating role of psychological empowerment and self-leadership with creative work involvement. Applying a chain mediation approach to a sample of 314 respondents, we find that empowering leadership has a significant effect on the selected mediators (self-leadership, psychological empowerment and creative work involvement), which in turn transfer this effect to employee creativity.

Keywords: empowering leadership, self-leadership, psychological empowerment, creative work involvement, creativity, serial mediation.

JEL classification: C12, C31, D23, M10, O31.

1. Introduction

The idea of achieving the best possible employee attitudes and behaviors has gained significance in the last few decades and changed how organizations handle their human resources. This has resulted in a shift in organizational work design in terms of autonomy, self-leadership, delegation and empowerment (Pyoria, 2005). It is also evident that empowerment tends to yield positive outcomes both for individuals and organizations (Seibert, Silver & Randolph, 2004).

The concept of employee empowerment is led by two distinct schools of thought. The socio-structural perspective focuses on the interventions and practices implemented by leaders, managers and

---

[*] Assistant professor, Hailey College of Commerce, University of the Punjab, Lahore.
[**] Registrar, University of the Punjab, Lahore.
[***] Associate professor and chairperson, Department of Commerce, University of Gujrat.

organizations to empower their employees. The psychological perspective is rooted in the perceptions that employees develop about their own contribution to, and role in, an organization (Spreitzer, 1995, 2008; Bennis & Nanus, 1985; Lawler, 1986). Together, both approaches operationalize the concept of psychological empowerment (PE) in terms of employees' perception of, and response to, the conditions of structural empowerment (Laschinger et al., 2004).

In looking at ways to empower employees, a key factor is the role of the leader. Leaders find different – and often original – ways to influence their followers, one of which involves empowering leadership (EL) (Ahearne, Mathieu & Rapp, 2005; Amundsen & Martinsen, 2014). According to Manz and Sims (1991, 2001), an empowering leader is one who equips others to lead themselves and who is willing to share power with his/her followers (see Randolph & Kemery, 2011; Vecchio, Justin & Pearce, 2010).

The EL approach is linked to the concept of super-leadership (Manz & Sims, 2001) – creating leaders among one's followers –and of self-leadership (SL) among employees. SL is defined as the process of governing one's behavior through various cognitive and behavioral strategies (Neck & Houghton, 2006). While it is valuable in itself, Stewart, Courtright and Manz (2011) comment that SL is not a substitute for external leadership. This makes it important to study the role of EL as a facilitator of SL.

The literature presents ample evidence of EL as a key predictor of PE and SL among employees. Amundsen and Martinsen's (2014) pioneering study, for instance, shows that both PE and EL are tied to the concept of employee empowerment. An important aspect of EL is that of building a culture of empowering one's followers to become self-leaders. The outcomes of this style of leadership are often better than ordinary job outcomes. Randolph and Kemery (2011) observe that empowering leaders influence their followers in two ways: by adding value to and empowering the latter psychologically, and by creating leaders among followers. Zhang and Bartol (2010) underscore the role of empowering leaders in creating leadership roles for individuals through PE.

Although many studies have examined the mediating role of PE in the relationship between EL and employee outcomes, the mediating role of SL remains under-investigated (see Amundsen & Martinsen, 2014, 2015). Moreover, while studies such as Singh and Sarkar (2012) have assessed the

relationship between PE and job involvement, the literature on EL in this context is scanty. Drawing on emotional regulation theory (ERT), this study looks at SL and PE as mediating variables in the relationship between EL and creative work involvement (CWI).

2. Literature Review

The foremost relationship we examine here concerns EL and SL (among employees). Although this has received little empirical attention, we consider Amundsen and Martinsen's (2014, 2015) argument that the role of employee empowerment lies in making employees self-dependent and able to self-lead. SL encompasses the skills and tactics used by individuals to propel themselves toward achieving higher levels of effectiveness and performance (Amundsen & Martinsen, 2014; Manz, 1986).

According to Manz and Sims (2001), SL can be grouped into three distinct strategies: (i) natural reward-focused, (ii) behavior-focused and (iii) constructive thought patterns. Natural reward strategies entail intrinsic motivation, enjoyability, activities leading to pleasure and redesigning a job accordingly (Houghton & Neck, 2002). Behavioral strategies include setting goals and directing, observing, rewarding, correcting and appraising oneself (Manz & Neck, 2004). Constructive thought patterns refer to valuing one's performance in terms of success, positive self-talk, changing one's thinking patterns and reinforcing self-belief (Houghton & Neck, 2002). Martinsen (2009), however, criticizes the conventional concept of SL as being individual-oriented with restricted application to work settings. This implies that the concept must be expanded to include such aspects as coordinated effort and self-effort and creative thought processes with a view to meeting task requirements.

The association can be framed in terms of Hochschild's (1983) ERT, which refers to the cognitive appraisal and physiological stimulation of a situation, which are then regulated to meet the demands of an organization. Thus, employees manage their emotions to fit the workplace (for example, leading to job satisfaction). Gross (1998a, b) develops a model of emotional regulation at the workplace that engenders the idea of 'emotional labor'. Under this model, the input of external forces (an organization or leaders) serve as a stimulus, to which individuals respond in the shape of emotions.

Based on this theoretical premise, we can assume that, when leaders empower their followers (the stimulus), employees respond by

developing their capacity for SL. The theoretical and empirical literature includes numerous studies on the positive association between EL and SL (see, for example, Amundsen & Martinsen, 2014, 2015; Houghton & Yoho, 2005; Tekleab et al., 2008; Yun, Cox & Sims, 2006). Based on this, we present the following hypothesis (H1): *EL will positively predict SL*.

As with PE, SL can be a significant predictor of employee creativity. Noting the dearth of literature in this area, Stewart et al. (2011) emphasize its importance as an avenue for research, in response to which Amundsen and Martinsen (2015) investigate the role of SL in predicting employee creativity and find a strong association between the two variables. This relationship can also be framed in terms of ERT, such that EL, supported by SL (the stimulus), spurs employee creativity (the response).

While some studies have focused on the direct impact of SL on employee creativity, they do not consider the mechanism through which this relationship operates. We examine this association on the premise that self-regulation and empowerment among employees – both dimensions of SL – influence their level of energy and intrinsic motivation at work (see Atwater & Carmeli, 2009; Amabile, 1983). Greater SL in the form of self-regulation and empowerment will yield better employee outcomes in terms of creativity. Thus, our second hypothesis (H2) is that *EL has an indirect influence over employee creativity through the mediating roles of SL and CWI*.

Drawing on Thomas and Velthouse (1990), we consider PE a form of intrinsic motivation to work. Several factors underpin the association between PE and EL. The first pertains to the role of empowering leaders who create a sense of meaningful work by sharing their goals and objectives with employees (Conger & Kanungo, 1988). The second factor involves the extent to which leaders share power, delegate responsibilities, offer autonomy and encourage employees to participate in decision making at work (Amundsen & Martinsen, 2014; Manz & Sims, 1987).

Empowering leaders also generate positive self-perception among employees with respect to the latter's competence by providing encouragement, emotional support, performance models and positive persuasion (Bandura, 1986). This relationship has garnered substantial empirical support in the literature (see, for example, Amundsen & Martinsen, 2014, 2015; Boudrias et al., 2009; Seibert, Wang & Courtright, 2011; Randolph & Kemery, 2011; Raub & Robert, 2010). Accordingly, we present the following hypothesis (H3): *EL positively predicts employees' PE*.

Finally, we investigate the impact of PE and SL on employee creativity. While numerous studies observe that PE has a positive influence on employees' job-related attitudes, including their job satisfaction and performance (see Seibert et al., 2011; Castro, Periñan & Bueno, 2008; Dewettinck & van Ameijde, 2011; Hechanova, Alampay & Franco, 2006; and Seibert et al., 2004), not many have examined the relationship between empowerment and creativity (see Zhang & Bartol, 2010; Spreitzer, De Janasz & Quinn, 1999; Spreitzer, 1995). PE is considered the source of intrinsic task motivation (Thomas & Velthouse, 1990) and the foremost determinant of creativity at the workplace (Amabile, 1983).

Atwater and Carmeli (2009) argue that effective (empowering) leaders can energize their employees into higher levels of CWI. Vanichchinchai (2012) supports this thesis, observing that employees with higher levels of involvement deliver better task-related performance. This points to a positive relationship between employees' CWI and their creative performance. Thus, our fourth hypothesis (H4) is that *EL indirectly influences employee creativity through the mediating roles of PE and CWI.*

3. Research Methodology

Our sample was drawn from employees working at information technology firms, where creativity is a key aspect of performance. The study targeted 53 software firms employing 789 employees (78 percent in permanent positions and 22 percent on contract). We contacted 417 employees (45 percent contractual, 55 percent permanent) for permission to conduct a survey, of which 329 respondents agreed to complete the survey questionnaire. Since 15 questionnaires had to be discarded because they had been incorrectly filled or left incomplete, we were left with a sample of 314 usable responses for analysis. Of the sample, 12.8 percent comprised team leaders, 85.69 percent were male and 63.67 percent had less than a year's experience.

The survey instruments are adapted from existing studies. Creativity is measured using a 13-item scale drawn from George and Zhou (2001), which includes items such as "I am a good source of creative ideas". To operationalize CWI, we use a nine-item scale adapted from Tierney, Farmer and Graen (1999), with items such as "I have demonstrated originality at my workplace". The 20-item scale used by Amundsen and Martinsen (2015) measures SL, with items such as "I offer to take on tasks when I feel well qualified to carry them out". Spreitzer's (1995) 12-item scale measuring PE gauges items such as "the work I do is very important

to me". EL is operationalized using an 18-item scale adapted from Amundsen and Martinsen (2014), with items such as "my leader provides guidance on how I can do my work in the best possible way". All these measures are characterized by an acceptable level of internal consistency (∞ = 0.79–0.94).

We use structural equation modeling to carry out a confirmatory factor analysis and gauge the validity of the constructs. The results of the goodness-of-fit tests indicate that a five-factor model is better than a single-factor model (one-factor model: $x2$ = 792.531, df = 325, SRMR = 0.09, CFI = 0.72, RMSEA = 0.09; five-factor model: $x2$ = 932.152, df = 349, SRMR = 0.06, CFI = 0.90, RMSEA = 0.02). The constructs are deemed discriminant and independent. Additionally, the acceptable factor loadings (0.53–0.91, $p < 0.001$) indicate good convergent validity (AVE > 0.50; see Hair et al., 2010).

4. Results

Table 1 shows that the reliability statistics fall within the acceptable range (0.81–0.93 > 0.70; see Nunnally, 1978), confirming that the measures used are reliable. The bivariate correlation analysis reveals that all the variables are positively and significantly correlated. Since we can see that none of the demographic variables is significantly correlated with the criterion variable, they do not need any further treatment.

Table 1: Descriptive statistics

	Mean (SD)	1	2	3	4	5	6	7	8	9
1 EL	4.01 (0.92)	(0.814)								
2 SL	3.88 (0.93)	0.453**	(0.810)							
3 PE	3.99 (0.68)	0.496*	0.125*	(0.829)						
4 CWI	3.93 (0.84)	0.389**	0.304*	0.493*	(0.930)					
5 Creativity	3.91 (0.69)	0.301**	0.412**	0.245**	0.419*	(0.929)				
6 Age	27.12 (8.52)	-0.008	0.020	0.008	0.017	0.015	0.009*	–		
7 Gender		0.045	-0.010**	-0.012**	0.035	0.010**	0.015	0.054		
8 Qualifications		0.013	-0.012	0.021**	0.009**	0.022**	0.004	0.017	–	
9 Experience with current employer	4.15 (2.17)	0.009**	0.037**	0.005**	0.074	0.018**	0.028	0.023	0.021	–

Note: N = 314, * p > 0.001, ** p > 0.05.
Source: Authors' estimates.

Table 2 shows that the structural model fits the data. The study's hypothesis-testing results are presented in Tables 3 and 4, in which we use Preacher and Hayes' process macros for the serial mediation analysis.

Table 2: Structural equation model results

	Standard value	Direct effect
x2		795.32 (df = 349)
GFI	≥ 0.90	0.944
AGFI	≥ 0.80	0.878
CFI	≥ 0.90	0.845
NFI	≥ 0.90	0.890
NNFI	≥ 0.90	0.912
RMSEA	≤ 0.08	0.050

Source: Authors' estimates.

The results show that EL has a significant effect on creativity ($\beta = 0.0945$, p < 0.05) and that all the paths are significant. Since the EL path to creativity, mediated by SL and CWI, is significant (a1d2b1 $\beta = 0.0358$, CI = 0.1247 to 0.0985), we can conclude that the relationship between EL and creativity is explained by the chain mediation of SL and CWI. This finding supports both H1 and H2. The results also support the presence of serial mediation by PE and CWI (a1d2b1 $\beta = 0.0113$, CI = 0.1195 to 0.0971), thus supporting H3 and H4.

Table 3: Serial mediation analysis (EL-SL-CWI-C)

Antecedents		M1(PE) Coeff.	SE	P		M2 (CWI) Coeff.	SE	P		Y (Creativity) Coeff.	SE	P
EL	a1	0.3214	0.0894	0.0001	a2	0.1247	0.06352	0.0001	C	0.0945	0.0645	0.0040
SL		–	–	–	d21	0.4329	0.0845	0.0000	b1	0.2573	0.0841	0.0010
CWI		–	–	–		–	–	–	b2	0.0921	0.0412	0.0000
Constant	iM1	3.5478	0.1994	0.0000	iM2	2.1249	0.3450	0.0000	iy	3.0314	0.2847	0.0000
		R2 = 0.1032				R2 = 0.1412				R2 = 0.0425		
		F = 12.1452				F = 18.6253				F = 28.4762		
		p = 0.0001				p = 0.0000				p = 0.0000		

Source: Authors' estimates.

Table 4: Serial mediation analysis (EL-PE-CWI-C)

Antecedents		M1(PE)				M2 (CWI)				Y (Creativity)		
		Coeff.	SE	P		Coeff.	SE	P		Coeff.	SE	P
EL	a1	0.3214	0.0894	0.0001	a2	0.1247	0.06352	0.0001	C	0.0945	0.0645	0.0040
PE		–	–	–	d21	0.2415	0.0954	0.0000	b1	0.1450	0.0793	0.0641
CWI		–	–	–		–	–	–	b2	0.0921	0.0412	0.0000
Constant	iM1	3.5478	0.1994	0.0000	iM2	2.278	0.2365	0.0000	iy	3.0146	0.2845	0.0000
		$R^2 = 0.1032$				$R^2 = 0.1984$				$R^2 = 0.0381$		
		F = 12.1452				F = 45.2173				F = 29.142		
		p = 0.0001				p = 0.0000				p = 0.0000		

Source: Authors' estimates.

5. Discussion

Drawing on ERT, we assume that EL influences employees by increasing their creativity through the sequential mediation of SL/PE and CWI. We test this using four hypotheses.

The first hypothesis states that EL has a positive effect on employees by developing their SL skills. Our results support this hypothesis in line with ERT as well as other studies, including Amundsen and Martinsen (2014, 2015); Houghton and Yoho (2005); Tekleab et al. (2008); and Yun et al. (2006). The second hypothesis states that EL affects employee creativity through the serial mediation of SL and CWI. Although the literature does not focus on this relationship, our results support the hypothesis, consistent with ERT.

Finally, our results support the third and fourth hypotheses, which state that EL influences PE among employees. This is consistent with Amundsen and Martinsen (2014, 2015); Boudrias et al. (2009); Randolph and Kemery (2011); Raub and Robert (2010); and Seibert et al. (2011). Our findings also reflect the assumptions we have drawn from ERT, which state that employees' emotions are directed by the stimuli offered by their organization and leaders – to which employees respond in the form of greater SL and creativity.

6. Conclusion

This study examines the serial mediation mechanism of PE/SL and CWI among employees, through which EL is tied to higher levels of creativity at the workplace. Our findings show that the impact of EL is

transmitted to employees when they perceive an increase in their levels of PE and SL; this enhances their creativity through the mediation of CWI. In other words, leadership style can influence creativity by enhancing the self-belief and positive psychological state of followers as well as their belief in their own capacity for leadership and their creative ability and involvement.

The study's results are subject to several limitations. These include its limited sample size and cross-sectional nature, which raises the possibility of common method variance. Attempts to replicate the study should address these limitations, consider additional relationships such as between SL and PE, and incorporate other leadership styles and variables (such as energy) into the chain mediation process.

References

Ahearne, M., Mathieu, J., & Rapp, A. (2005). To empower or not to empower your sales force? An empirical examination of the influence of leadership empowerment behavior on customer satisfaction and performance. *Journal of Applied Psychology*, *90*(5), 945–955.

Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, *45*(2), 357–376.

Amundsen, S., & Martinsen, O. L. (2014). Empowering leadership: Construct clarification, conceptualization, and validation of a new scale. *Leadership Quarterly*, *25*(3), 487–511.

Amundsen, S., & Martinsen, O. L. (2015). Linking empowering leadership to job satisfaction, work effort, and creativity: The role of self-leadership and psychological empowerment. *Journal of Leadership and Organizational Studies*, 22(3), 1–20.

Atwater, L., & Carmeli, A. (2009). Leader-member exchange, feelings of energy, and involvement in creative work. *Leadership Quarterly*, *20*(3), 264–275.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bennis, W. G., & Nanus, B. (1985). *Leaders: Strategies for taking charge*. New York: Harper & Row.

Boudrias, J.-S., Gaudreau, P., Savoie, A., & Morin, A. J. S. (2009). Employee empowerment: From managerial practices to employees' behavioral empowerment. *Leadership and Organization Development Journal*, *30*(7), 625–638.

Castro, C. B., Periñan, M. M. V., & Bueno, J. C. C. (2008). Transformational leadership and followers' attitudes: The mediating role of psychological empowerment. *International Journal of Human Resource Management*, *19*(10), 1842–1863.

Conger, J. A., & Kanungo, R. N. (1988). The empowerment process: Integrating theory and practice. *Academy of Management Review*, *13*(3), 471–482.

Dewettinck, K., & van Ameijde, M. (2011). Linking leadership empowerment behavior to employee attitudes and behavioral intentions: Testing the mediating role of psychological empowerment. *Personnel Review*, *40*(3), 284–305.

George, J. M., & Zhou, J. (2001). When openness to experience and conscientiousness are related to creative behavior: An interactional approach. *Journal of Applied Psychology*, *86*(3), 513–524.

Gross, J. J. (1998a). Antecedent- and response-focused emotion regulation: Divergent consequences for experience, expression and physiology. *Journal of Personality and Social Psychology*, *74*(1), 224–237.

Gross, J. J. (1998b). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, *2*(3), 271–299.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Upper Saddle River, NJ: Prentice Hall.

Hechanova, M. R. M., Alampay, R. B. A., & Franco, E. P. (2006). Psychological empowerment, job satisfaction and performance among Filipino service workers. *Asian Journal of Social Psychology*, *9*(1), 72–78.

Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. Berkeley, CA: University of California Press.

Houghton, J. D., & Neck, C. P. (2002). The revised self-leadership questionnaire: Testing a hierarchical factor structure for self-leadership. *Journal of Managerial Psychology*, *17*(8), 672–691.

Houghton, J. D., & Yoho, S. K. (2005). Toward a contingency model of leadership and psychological empowerment: When should self-leadership be encouraged? *Journal of Leadership and Organizational Studies*, *11*(4), 65–83.

Laschinger, H. K. S., Finegan, J. E., Shamian, J., & Wilk, P. (2004). A longitudinal analysis of the impact of workplace empowerment on work satisfaction. *Journal of Organizational Behavior*, *25*(4), 527–545.

Lawler, E. E. (1986). *High-involvement management*. San Francisco, CA: Jossey-Bass.

Manz, C. C. (1986). Self-leadership: Toward an expanded theory of self-influence processes in organizations. *Academy of Management Review*, *11*(3), 585–600.

Manz, C. C., & Neck, C. P. (2004). *Mastering self-leadership: Empowering yourself for personal excellence* (3rd ed.). Upper Saddle River, NJ: Prentice-Hall.

Manz, C. C., & Sims, H. P., Jr. (1987). Leading workers to lead themselves: The external leadership of self-managing work teams. *Administrative Science Quarterly*, *32*(1), 106–129.

Manz, C. C., & Sims, H. P., Jr. (1991). Superleadership: Beyond the myth of heroic leadership. *Organizational Dynamics*, *19*(4), 18–35.

Manz, C. C., & Sims, H. P., Jr. (2001). *The new superleadership: Leading others to lead themselves*. San Francisco, CA: Berrett-Koehler.

Martinsen, O. L. (2009, May). *Self-leadership: An expanded theory, a new self-leadership inventory, and some research findings*. Paper presented at the 14th European Congress of Work and Organizational Psychology, Santiago de Compostela, Spain.

Neck, C. P., & Houghton, J. D. (2006). Two decades of self-leadership theory and research: Past developments, present trends, and future possibilities. *Journal of Managerial Psychology*, *21*(4), 270–295.

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.

Pyoria, P. (2005). The concept of knowledge work revisited. *Journal of Knowledge Management*, *9*(3), 116–127.

Randolph, W. A., & Kemery, E. R. (2011). Managerial use of power bases in a model of managerial empowerment practices and employee psychological empowerment. *Journal of Leadership and Organizational Studies*, *18*(1), 95–106.

Raub, S., & Robert, C. (2010). Differential effects of empowering leadership on in-role and extra-role employee behaviors: Exploring the role of psychological empowerment and power values. *Human Relations*, *63*(11), 1743–1770.

Seibert, S. E., Silver, S. R., & Randolph, W. A. (2004). Taking empowerment to the next level: A multiple-level model of empowerment, performance, and satisfaction. *Academy of Management Journal*, *47*(3), 332–349.

Seibert, S. E., Wang, G., & Courtright, S. H. (2011). Antecedents and consequences of psychological and team empowerment in organizations: A meta-analytic review. *Journal of Applied Psychology*, *96*(5), 981–1003.

Singh, M. and Sarkar, A. (2012). The relationship between psychological empowerment and innovative behavior: A dimensional analysis with job involvement as mediator. *Journal of Personnel Psychology*, *11*(3), 127–137.

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal*, *38*(5), 1442–1465.

Spreitzer, G. M. (2008). Taking stock: A review of more than twenty years of research on empowerment at work. In C. Copper & J. Barling (eds.), *Handbook of organizational behavior* (pp. 54–72). Thousand Oaks, CA: SAGE.

Spreitzer, G. M., De Janasz, S. C., & Quinn, R. E. (1999). Empowered to lead: The role of psychological empowerment in leadership. *Journal of Organizational Behavior*, *20*(4), 511–526.

Stewart, G. L., Courtright, S. H., & Manz, C. C. (2011). Self-leadership: A multilevel review. *Journal of Management*, *37*(1), 185–222.

Tekleab, A. G., Sims, H. P., Jr., Yun, S., Tesluk, P. E., & Cox, J. (2008). Are we on the same page? Effects of self-awareness of empowering and transformational leadership. *Journal of Leadership and Organizational Studies*, *14*(3), 185–201.

Thomas, K. W., & Velthouse, B. A. (1990). Cognitive elements of empowerment: An 'interpretive' model of intrinsic task motivation. *Academy of Management Review*, *15*(4), 666–681.

Tierney, P., Farmer, S. M., Graen, G. B. (1999). An examination of leadership and employee creativity: The relevance of traits and relationships. *Personnel Psychology*, *52*(3), 591–620.

Vanichchinchai, A. (2012). The relationship between employee involvement, partnership management and supply performance: Findings from a developing country. *International Journal of Productivity and Performance Management*, *61*(2), 157–172.

Vecchio, R. P., Justin, J. E., & Pearce, C. L. (2010). Empowering leadership: An examination of mediating mechanisms within a hierarchical structure. *Leadership Quarterly*, *21*(3), 530–542.

Yun, S., Cox, J., & Sims, H. P., Jr. (2006). The forgotten follower: A contingency model of leadership and follower self-leadership. *Journal of Managerial Psychology*, *21*(4), 374–388.

Zhang, X., & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal*, *53*(1), 107–128.

The Relationship Between Employee Empowerment and Subjective Wellbeing: Evidence from Services-Based SMEs in Pakistan

Nimra Ali Khokher[*] and Abdul Raziq[**]

Abstract

Employee empowerment plays a key role in the management of talented personnel: it enables an organization to use workers' skills and abilities in a way that enhances the performance of both employer and employee. Based on a survey of 349 small and medium enterprises in Quetta, this study examines the impact of employee empowerment on employees' subjective wellbeing, which is measured in terms of affective and cognitive components. Its results indicate that employee empowerment has a significant and positive impact on employees' subjective wellbeing, implying that senior managers should prioritize this aspect of human resource management.

Keywords: employee empowerment, subjective wellbeing, small or medium enterprise.

JEL classification: M12.

1. Introduction

With increased globalization and market competition, the concept of employee empowerment has gained considerable importance in human resource management. Committed, motivated employees are more likely to compete successfully and adapt more easily to organizational or market changes. Employee empowerment enables organizations to utilize talented personnel in a way that improves the performance of both employer and employee. In this context, it means giving employees more autonomy, but also greater responsibility and holding them accountable for the job-related decisions they make. It also means that senior managers may need to oversee the work of such employees because the latter can potentially influence the organization's output and performance.

[*] MS student, Faculty of Management Sciences, Balochistan University of Information Technology, Engineering and Management Sciences, Quetta.
[**] Associate professor, Faculty of Management Sciences, Balochistan University of Information Technology, Engineering and Management Sciences, Quetta.

Employee empowerment involves increasing a worker's authority, knowledge and motivation. In turn, this creates greater trust between the employee and the organization as well as among employees. Put more precisely, the extent of employee empowerment shapes employees' subjective wellbeing (SWB), which McGillivray and Clarke (2006) define as a "multidimensional evaluation of life, including cognitive judgments of life satisfaction and affective evaluations of emotions and moods" (p. 4). SWB therefore combines positive and negative affectivity – that is, pleasant and unpleasant emotions, respectively – as well as life satisfaction (Shmotkin, 1998). In this case, it enables one to measure the extent to which employees are happy or satisfied with their lives (see Page, 2005).

Not many studies have looked at the impact of employee empowerment on SWB. Studies such as Chikumbi (2011), Collings and Mellahi (2009), and Pinto and Dhulla (2012) have focused on its impact on employee satisfaction or the competitive advantage associated with employee empowerment and restricted their analysis to affective components (emotions and moods), rather than cognitive components. We aim to address this gap in the literature by gauging the impact of employee empowerment on both the cognitive and affective aspects of employees' SWB. The study draws on a sample of small and medium enterprises (SMEs) in Balochistan's services sector, for which there is little or no literature available since most other studies in this field tend to focus on larger firms in relatively developed regions.

In many countries, SMEs are an important part of the economy and contribute meaningfully to economic growth. However, the definition of an SME varies across countries, depending on the number of employees or the volume of revenue or assets. For example, Egypt defines an SME as employing between 5 and 50 workers, while Vietnam uses a range of 10 to 300 employees. The World Bank defines SMEs as firms with a maximum of 300 employees and US$15 million apiece in annual revenues and assets. The Inter-American Development Bank describes SMEs as employing up to 100 workers and earning less than US$3 million in revenues (Dahlberg Group, 2011, p. 6).

In Pakistan, the Small and Medium Enterprise Development Authority defines SMEs by the number of employees (up to 250), paid-up capital (up to PRs25 million) and annual sales (up to PRs250 million). The SME Bank uses the volume of assets as its sole criterion, while the Pakistan Bureau of Statistics considers only the number of employees. The State Bank of Pakistan defines an SME based on the nature of the business, the

number of employees, the amount of capital and the value of annual net sales (Raziq & Shaikh, 2015).

Our findings are expected to add to the literature on employee empowerment among SMEs in Balochistan and its impact on their employees' SWB. Effective employee empowerment gives firms a competitive advantage by enhancing workers' motivation, capacity for innovation and productivity.

2. Literature Review and Hypotheses

The concept of employee empowerment plays a crucial role in an organization's human resource management. Karakoc and Yilmaz (2009) note that empowered employees are better able to use their skills and abilities, which not only improves the performance of the organization, but also improves their own performance and working life. An important aspect of employee empowerment is the level of supervision this entails: Dizgah et al. (2011) argue that organizations that empower their employees must also supervise them and monitor their actions.

Empowering employees involves giving them a position of greater authority and the ability to influence the outcomes and events of the organization (Honold, 1997). Juhl et al. (1997) observe that it also entails building employees' work-related knowledge and motivation (p. 103). Empowering employees increases their level of satisfaction as a behavioral component of SWB, thereby increasing their commitment toward and engagement with the organization. This ultimately benefits the organization. Moreover, greater commitment and motivation among employees enables them to compete more successfully and adapt more easily to changes (Torani, Yazdi & Gohari, 2008).

Employee empowerment is useful in that it improves the productivity of employees and allows the firm to make optimal use of their abilities by shaping their behaviors and emotions (Naderi, Jamshidiyan & Salimi, 2008). As Seyedjavadin, Heydari and Shahbaz-Moradi (2009) show, the need to develop a more effective and productive workforce with high-caliber managerial capabilities requires organizations to empower their employees. Chikumbi (2011) adds that employee empowerment helps develop greater trust among employees and increases their sense of belonging to the organization. It gives employees a sense of motivation, satisfaction, commitment, authority,

responsibility and accountability, thereby compelling the firm to achieve its goals in a better way (Ongori, 2009).

Based on the literature, we test the following hypotheses:

- H1: Employee empowerment has a significant positive impact on the affective components of employees' SWB.

- H2: Employee empowerment has a significant positive impact on the cognitive components of employees' SWB.

3. Methodology

This section describes the study's sampling method and SWB measures.

3.1. Sampling Method

The city of Quetta in Balochistan is not only a commercial hub, but also occupies a strategic position in the province. As the capital, Quetta has a far larger chain of businesses, industries, markets and resources than other cities in Balochistan, making it the best choice of sampling locations in the province. Moreover, limited or difficult access as well as time constraints meant it was not possible to sample SMEs in other cities in Balochistan.

We have used a nonprobability sampling method. It is worth noting that there is no dataset pertaining specifically to SMEs by province (Raziq & Shaikh, 2015), much less one for Quetta alone. We have targeted SMEs in the services sector rather than in manufacturing because Quetta has far fewer manufacturing SMEs than the other provinces so that collecting data would not have been feasible.

The data collection procedure involved contacting the heads or managers of services sector firms in Quetta to establish if they qualified as an SME. In each case, we then asked to meet the head or manager and presented a letter explaining the purpose of the study and asking for permission to collect data. A total of 486 self-administered questionnaires[1]

---

[1] Each questionnaire introduced the researchers and the study's objectives. It also clarified that participation in the survey was voluntary and all responses strictly confidential. Only the supervisor and researcher had access to the completed questionnaires and all results were discussed with the supervisor alone.

were distributed to SME employees, of which 380 were returned. Of these, 349 were deemed useable and the remaining were discarded.

3.2. Measures of SWB

The questionnaire for this study was adapted from Chikumbi (2011) and Jansen (2009). SWB can be measured by affective components such as positive or negative emotions, and by cognitive components such as life satisfaction. Both components were measured separately, using two different scales. Affective components (positive or negative emotions) were measured on a positive and negative affect scale. The scale comprised 20 items (emotions or feelings) and participants were asked to assess the extent to which each emotion or feeling applied to them. Of the 20 items, 10 measured positive affects and 10 measured negative affects against a five-point Likert scale ("strongly disagree, disagree, uncertain, agree, strongly agree"). The cognitive component, life satisfaction, was measured by a satisfaction-with-life scale comprising five items assessed against a five-point Likert scale ("strongly disagree, disagree, uncertain, agree, strongly agree").

To gauge the validity and reliability of the questionnaire, we asked a group of SME specialists and SME owners/managers in the services sector to assess its content against the prevailing culture, norms and environment of SMEs in Quetta. Based on their feedback, the questionnaire was revised, some irrelevant questions removed and certain questions rephrased for simplicity (see Appendix 1). The reliability analysis yielded a Cronbach's alpha coefficient greater than 0.7.

4. Results

Table 1 provides descriptive statistics for the sample, indicating the distribution of respondents by age and gender. Almost two thirds of all respondents are male. Overall, most respondents are aged 15–35.

Table 1: Descriptive statistics

	Frequency	Percentage	Valid percentage	Cumulative percentage
Gender				
Male	225	64.5	64.5	64.5
Female	124	35.5	35.5	100.0
Total	349	100.0	100.0	
Age (years)				
15–25	154	44.1	44.1	44.1
26–35	123	35.2	35.2	79.4
36–45	54	15.5	15.5	94.8
46–55	11	3.2	3.2	98.0
56 +	7	2.0	2.0	
Total	349	100.0	100.0	100.0

Note: n = 349.
Source: Authors' estimates.

4.1. *Exploratory Factor Analysis*

The factor analysis applied to all the scales used in the study reveals that the Kaiser-Meyer-Olkin value of each component is greater than 0.70, indicating its sampling adequacy. Applying Bartlett's test of sphericity to each component yields significant values at the 0.05 level. Table 2 presents a rotated component matrix of the factor loadings for each variable, showing which questions relate to which factor. In each case, the item has a high loading of more than 0.5 in its component (variable).

Table 2: Rotated component matrix

Item	EE	CC	AC (PA)	AC (NA)
I contribute to determining my performance objectives.	0.747			
My manager provides clear guidance on how s/he wants a certain assignment done.	0.675			
My manager allows me to make job-related decisions.	0.756			
My manager allows me to innovate and take risks that relate to new developments.	0.769			
My job requires me to take initiative and responsibility.	0.720			
In most ways, my life is close to ideal.		0.760		
My life is in excellent condition.		0.832		
I am satisfied with my life.		0.844		
So far, I have gotten the important things I want in life.		0.682		
I usually feel interest in life.			0.983	
I usually feel excitement in life.			0.978	
I usually feel strong in life.			0.960	
I usually feel enthusiastic in life.			0.964	
I usually feel proud in life.			0.944	
I usually feel alert in life.			0.965	
I usually feel inspired in life.			0.578	
I usually feel determined in life.			0.983	
I usually feel attentive in life.			0.972	
I usually feel active in life.			0.609	
I usually feel distressed in life.				0.995
I usually feel upset in life.				0.965
I usually feel guilty in life.				0.958
I usually feel scared in life.				0.961
I usually feel hostile in life.				0.971
I usually feel irritable in life.				0.979
I usually feel ashamed in life.				0.942
I usually feel nervous in life.				0.963
I usually feel jittery in life.				0.955
I usually feel afraid in life.				0.988

Note: EE = employee empowerment, CC = cognitive component, AC = affective component, PA = positive affectivity, NA = negative affectivity.
Extracted method: principal component analysis.
Rotation method: varimax with Kaiser normalization. KMO test result > 0.5. Bartlett's test result = $p < 0.05$ (factor loadings of less than 0.5 are omitted).
Source: Authors' estimates.

4.2. Correlation Analysis

Before performing a regression analysis to test the hypotheses, we examine the correlation between the variables, following Hair et al. (2010), to determine if it is possible to investigate the impact of employee empowerment on employee SWB. Table 3 indicates correlation between all the variables used in the study at a 5 percent level of significance. This implies that a regression analysis is feasible. Since the results also indicate that the negative affects variable of the affective components of employee SWB shows no significant correlation with the other variables, we discard this variable.

Table 3: Reliability analysis and correlations

	EE	AC (PA)	AC (NA)	CC
EE	(0.785)			
AC (PA)	0.511**	(0.973)		
AC (NA)	−0.015	−0.033	(0.992)	
CC	0.358**	0.342**	−0.008	(0.764)

Note: EE = employee empowerment, CC = cognitive component, AC = affective component, PA = positive affectivity, NA = negative affectivity.
** = significant at 0.05 level (two-tailed). Cronbach's alpha coefficients for multi-item scales given in parentheses.
Source: Authors' estimates.

4.3. Regression Analysis

Having satisfied the basic assumptions of a regression analysis (see Appendix 2), we move onto determining the impact of the employee empowerment variable (EE) on the SWB variable. Both hypotheses are tested at a 5 percent level of significance.

The first hypothesis (H1) states that EE has a significant positive impact on the affective components of SWB. The R-squared term (0.261) and adjusted R-squared (0.259) in Table 4 indicate that EE explains about 26 percent of the variance in the positive affectivity of the affective components of SWB. The multiple correlation coefficient of R (0.511) is significant, with a p-value of less than 0.05 (F (349) = 122.700; $p < 0.05$). EE therefore has a significant positive variance in the positive affectivity of the affective components of SWB.

Table 4: Regression of EE on affective components of SWB

R	R squared	Adjusted R squared	SE of estimate	F	Sig.
0.511a	0.261	0.259	0.95592	122.700	0.000
	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	SE	Beta		
(Constant)	1.491	0.178		8.395	0.000
EE	0.868	0.078	0.511	11.077	0.000

Note: a = predictor (constant), EE = employee empowerment, b = dependent variable (positive affectivity of affective components of SWB), SE = standard error.
Source: Authors' estimates.

The beta term (0.511) in Table 4 is significant ($t (349) = 11.077$; $p < 0.05$), indicating that other variables apart from EE also contribute to determining the positive affectivity of the affective components of SWB. This implies that we can reject the null hypothesis of no significant positive impact on the affective components of SWB with respect to EE.

The second hypothesis (H2) states that EE has a significant positive impact on the cognitive components of employee SWB. Table 5 gives the results of the regression used to test this hypothesis. The R-squared (0.128) and adjusted R-squared (0.126) values indicate that EE explains about 13 percent of the variance in the cognitive components of SWB. The multiple correlation coefficient of R (0.358) is significant ($F (349) = 50.949$; $p < 0.05$), with a p-value of less than 0.05. These results demonstrate that EE has a significant positive variance in the cognitive components of SWB.

Table 5: Regression of EE on cognitive components

R	R squared	Adjusted R squared	SE of estimate	F	Sig.
0.358a	0.128	0.126	0.63248	50.949	0.000
	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	SE	Beta		
(Constant)	1.613	0.117		13.732	0.000
EE	0.370	0.052	0.358	7.138	0.000

Note: a = predictor (constant), EE = employee empowerment, b = dependent variable (cognitive components of SWB), SE = standard error.
Source: Authors' estimates.

The beta term (0.358) is significant (t (349) = 7.138; $p < 0.05$) and we can reject the null hypothesis of no significant positive impact on the cognitive components of SWB with respect to EE.

5. Discussion

The purpose of this study is to investigate the impact of employee empowerment on employee SWB. Our results suggest that employee empowerment is correlated with the affective and cognitive components of employee SWB at a 0.05 level of significance. The literature divides SWB into cognitive components and affective components. The latter comprise positive and negative affects, such that an employee is subject to either positive affects or negative affects.

Our results support the literature to the extent that there is a significant, positive correlation between employee empowerment and the affective and cognitive components of employee SWB. However, the results also indicate an insignificant correlation with the negative affects of the affective components of employee SWB. We therefore discard the negative affects and test both hypotheses with respect to the positive affects of the affective components of SWB. The results show that employee empowerment has a significant, positive impact in predicting the affective components as well as cognitive components of employee SWB.

Our results imply that empowering employees helps develop greater trust among them and a sense of belonging to the organization. This is in line with Chikumbi's (2011) findings. Empowerment also leads to greater motivation, satisfaction, commitment, authority, responsibility and accountability, enabling the firm to achieve its goals more effectively (see Ongori, 2009). In this sense, employee empowerment has a significant positive impact on the SWB of a firm's employees.

6. Conclusion

This study examines the impact of employee empowerment on employee SWB for a sample of SMEs in the services sector in Quetta. It shows that employee empowerment plays a vital role in shaping the SWB of employees. Specifically, the study's results indicate that employee empowerment has a significant positive impact on the affective and cognitive components of employee SWB.

These results have important implications for organizations, which stand to benefit from empowering their employees and according them greater authority and accountability. The increase in trust, sense of belonging, motivation and satisfaction that accompanies employee empowerment contributes to employees' SWB to a significant degree. The firm's managers are, therefore, responsible for ensuring that employee empowerment practices are implemented and monitored effectively, given the likely impact on the firm's success. This entails determining how best to empower and motivate talented employees, while ensuring that they feel their work is integral to the firm.

Future research could extend the study's hypotheses to SMEs in other sectors such as manufacturing as well as SMEs in other cities in Pakistan, depending on access, time and convenience. Given the dearth of research on employee empowerment and SWB in SMEs, the present study hopes to address this gap and to encourage further research in this area. Its findings are important to SME human resource managers, as they emphasize the value of investing in, and empowering, talented employees.

References

Chikumbi, C. N. L. (2011). *An investigation of talent management and staff retention at the Bank of Zambia*. Unpublished Master's thesis, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa.

Collings, D. G., & Mellahi, K. (2009). Strategic talent management: A review and research agenda. *Human Resource Management Review*, *19*(4), 304–313.

Dahlberg Group. (2011). *Report on support to SMEs in developing countries through financial intermediaries*. Geneva: Author.

Dizgah, M. R., Chegini, M. G., Farahbod, F., & Kordabadi, S. S. (2011). Empowerment and organizational effectiveness in the executive organizations. *Journal of Basic and Applied Scientific Research*, *1*(9), 973–980.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Upper Saddle River, NJ: Prentice Hall.

Honold, L. (1997). A review of the literature on employee empowerment. *Empowerment in Organizations*, *5*(4), 202–212.

Jansen, R. C. (2009). *An investigation into the subjective wellbeing of the female stripper*. Unpublished Master's thesis, University of South Africa, Pretoria.

Juhl, H. J., Kristensen, K., Dahlgaard, J. J., & Kanji, G. K. (1997). Empowerment and organizational structure. *Total Quality Management*, *8*(1), 103–111.

Karakoc, N., & Yilmaz, A. K. (2009). Employee empowerment and differentiation in companies: A literature review and research agenda. *Enterprise Risk Management*, *1*(2), 1–12.

Keith, T. Z. (2006). *Multiple regression and beyond*. Boston, MA: Allyn & Bacon.

McGillivray, M., & Clarke, M. (2006). Human wellbeing: Concepts and measures. In M. McGillivray & M. Clarke (eds.), *Understanding human wellbeing* (pp. 3–16). Tokyo: United Nations University Press.

Naderi, N., Jamshidiyan, A. R., & Salimi, Q. A. (2008). Employees' empowerment from on-jobs training, case study: Isfahan oil purge. *Olome Ensani Va Ejtemaei*, *7*(27), 113–132.

Ongori, H. (2009). Managing behind the scenes: A viewpoint on employee empowerment. *African Journal of Business Management*, *3*(1), 9–15.

Osbourne, J. W., & Waters, E. (2002). Four assumptions of multiple regression that researchers should always test. *Practical Assessment, Research and Evaluation*, *8*(2), 1–5.

Page, K. (2005). *Subjective wellbeing in the workplace*. Unpublished Bachelor's thesis, Deakin University, Faculty of Health and Behavioral Sciences, Melbourne, Australia.

Pinto, L. W., & Dhulla, T. V. (2012). To study the talent management system in banking sector with regards to motivation and satisfaction. *Bombay Psychologist*, *27*(1–2), 51–54.

Raziq, A., & Shaikh, A. A. (2015). Exploring recruitment and selection practices in Pakistani SMEs. *International Journal of Basic and Applied Sciences*, *4*(1), 102–108.

Seyedjavadin, S. R., Heydari, H., & Shahbaz-Moradi, S. (2009). The effective factors on human resource empowerment in services, case study: Banks. *Modiriyat Dolati*, *1*(2), 75–88.

Shmotkin, D. (1998). Declarative and differential aspects of subjective wellbeing and its implications for mental health in later life. In J. Lomranz (ed.), *Handbook of aging and mental health: An integrative approach* (pp. 15–43). New York: Plenum Press.

Torani, S., Yazdi, F. V., & Gohari, M. R. (2008). The relationship between empowerment climate and employees' perception empowerment in training hospitals in Kerman. *Modiriyate Salamt*, *11*(31), 17–26.

Appendix 1

Survey questionnaire

Section A: Biographical information

Gender					
Designation					
Division or department					
Age (years)	15–25	26–35	36–45	46–55	56 +

Section B: Talent management practices

Talent management involves acquiring talent, managing employees' performance and salary packages, empowering employees and retaining talent.

Instructions: Please indicate the extent to which each statement applies to you, using the scale below.

Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
1	2	3	4	5

B1	**Acquiring talent**					
1	The firm conducts a skills audit to assess gaps in workers' skills.	1	2	3	4	5
2	The recruitment process enables an extensive selection of talent.	1	2	3	4	5
3	The recruitment process succeeds in selecting the best talent.	1	2	3	4	5
4	The firm's induction programs are well structured and help new employees settle in.	1	2	3	4	5
5	The firm has a large enough pool of managerial talent available to fill any vacancies.	1	2	3	4	5
6	The firm has programs in place for building its pool of managerial talent, from which it appoints new managers.	1	2	3	4	5
7	Before advertising a vacancy, the firm tries to tap its internal talent pool.	1	2	3	4	5
B2	**Performance management**					
8	Targets and deadlines are clearly communicated to staff members.	1	2	3	4	5

9	The firm's performance review focuses on evaluating my competencies and abilities.	1	2	3	4	5
10	I receive positive feedback in my performance appraisal.	1	2	3	4	5
11	My performance appraisal is discussed with my supervisor.	1	2	3	4	5
12	Any weaknesses detected in the appraisal are addressed through training as a staff development initiative.	1	2	3	4	5
13	The firm conducts performance reviews regularly.	1	2	3	4	5
14	My personal objectives are aligned with the firm's business goals.	1	2	3	4	5
B3	**Salary packages**					
15	My salary package is adequate, given my (skill) level.	1	2	3	4	5
16	My salary and other variable payments compare well with the rest of the market.	1	2	3	4	5
17	My remuneration package is attractive.	1	2	3	4	5
18	My remuneration package matches the effort I put into my work.	1	2	3	4	5
19	The rewards offered by the firm motivate one to perform better.	1	2	3	4	5
20	There are incentives in place to perform well.	1	2	3	4	5
21	I think the firm's reward system is equitable.	1	2	3	4	5
22	Being rewarded for good performance is valuable.	1	2	3	4	5
B4	**Employee empowerment**					
23	I contribute to determining my performance objectives.	1	2	3	4	5
24	My manager provides clear guidance on how s/he wants a certain assignment carried out.	1	2	3	4	5
25	My manager allows me to make decisions pertaining to my job.	1	2	3	4	5
26	My manager allows me to be innovative and take risks that relate to new developments.	1	2	3	4	5
27	The tasks I am assigned require me to take initiative and responsibility.	1	2	3	4	5
B5	**Retaining talent**					
28	The scope of my work is very interesting.	1	2	3	4	5
29	The firm has a cordial atmosphere.	1	2	3	4	5
30	My manager values my contribution to the firm.	1	2	3	4	5
31	I understand, and am committed to, the firm's vision and goals.	1	2	3	4	5
32	My job gives me satisfaction.	1	2	3	4	5
33	My job is secure.	1	2	3	4	5
34	The firm allows equal opportunities for promotion.	1	2	3	4	5
35	My planned career path can be achieved at this firm.	1	2	3	4	5

Section C: Subjective wellbeing

SWB is measured using an affective component (a positive or negative affect) and a cognitive component (life satisfaction).

Instructions: Please indicate the extent to which each statement applies to you, using the scale below.

Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
1	2	3	4	5

| C1	Cognitive component: satisfaction with life					
36	In most ways, my life is close to ideal.	1	2	3	4	5
37	My life is excellent.	1	2	3	4	5
38	I am satisfied with life.	1	2	3	4	5
39	So far, I have obtained the important things in life.	1	2	3	4	5
40	If I could live my life over, I would change almost nothing.	1	2	3	4	5
C2	Affective component: positive or negative affectivity					
41	I usually feel interested in life.	1	2	3	4	5
42	I usually feel excited about life.	1	2	3	4	5
43	I usually feel strong about life.	1	2	3	4	5
44	I usually feel enthusiastic about life.	1	2	3	4	5
45	I usually feel proud of my life.	1	2	3	4	5
46	I usually feel alert.	1	2	3	4	5
47	I usually feel inspired.	1	2	3	4	5
48	I usually feel determined.	1	2	3	4	5
49	I usually feel attentive.	1	2	3	4	5
50	I usually feel active.	1	2	3	4	5
51	I usually feel distressed.	1	2	3	4	5
52	I usually feel upset.	1	2	3	4	5
53	I usually feel guilty.	1	2	3	4	5
54	I usually feel scared.	1	2	3	4	5
55	I usually feel hostile.	1	2	3	4	5
56	I usually feel irritable.	1	2	3	4	5
57	I usually feel ashamed.	1	2	3	4	5
58	I usually feel nervous.	1	2	3	4	5
59	I usually feel jittery.	1	2	3	4	5
60	I usually feel afraid.	1	2	3	4	5

Assumptions of multiple regression analysis

Linearity

The assumption of linearity is important in regression analysis because the results obtained are based on this (Keith, 2006). If there is no linear relationship between the dependent and independent variables, then the regression results will either underestimate or overestimate the relationship (Osbourne & Waters, 2002). Figure A1 indicates a linear relationship between the dependent and independent variables in this study, implying that the data used satisfies the assumption of linearity.

Figure A1: Linearity between dependent and independent variables

Scatterplot
Dependent Variable: CComp
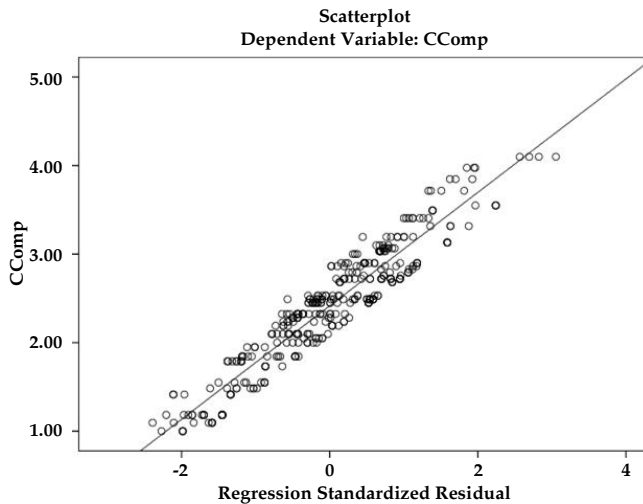
Source: Authors' estimates.

Normality

For a regression analysis, the data should be normally distributed. This is checked using different methods, including skewness and kurtosis statistics, histograms and p-plots. Table A1 indicates the normal distribution of the data used in this study, based on the skewness and kurtosis statistics.
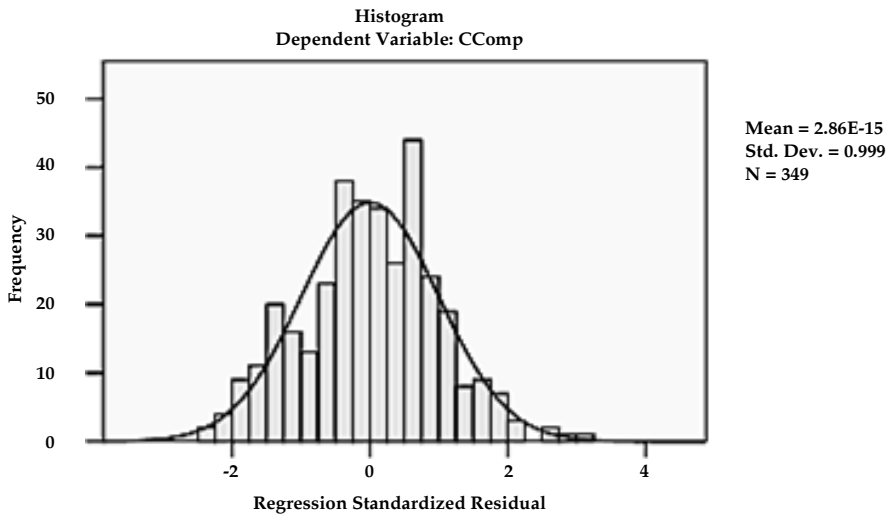
Table A1: Normal distribution of data

	Mean	SD	Skewness		Kurtosis	
			Statistic	SE	Statistic	SE
EE	2.1696	0.65396	0.262	0.131	−0.299	0.260
CC	2.4159	0.67635	−0.030	0.131	−0.183	0.260
AC (PA)	3.3736	1.11056	−0.159	0.131	0.159	0.260
AC (NA)	23.6126	10.51699	0.258	0.131	−0.982	0.260

Note: n = 349.
EE = employee empowerment, CC = cognitive component, AC = affective component, PA = positive affectivity, NA = negative affectivity, SD = standard deviation, SE = standard error.
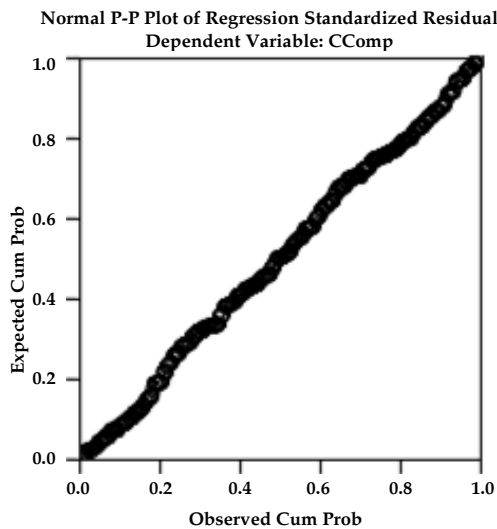*Source*: Authors' estimates.

The shape of the histogram in Figure A2 and the p-plot in Figure A3 both represent a normal distribution, that is, the errors are normally distributed and the residual values are plotted as a normal curve. Therefore, the assumption of normality is not violated.

Figure A2: Normal distribution of data (histogram)

Source: Authors' estimates.

Figure A3: Normal distribution of data (probability plot)

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: CComp

Source: Authors' estimates.

Homoskedasticity

In regression analysis, the assumption of homoskedasticity should be satisfied: there should be equal variance of errors across all levels of the independent variables. Figure A4 indicates that the errors are spread out consistently across the variables, implying that the data is homoskedastic.

Figure A4: Homoskedasticity of independent variables

Scatterplot
Dependent Variable: Comp
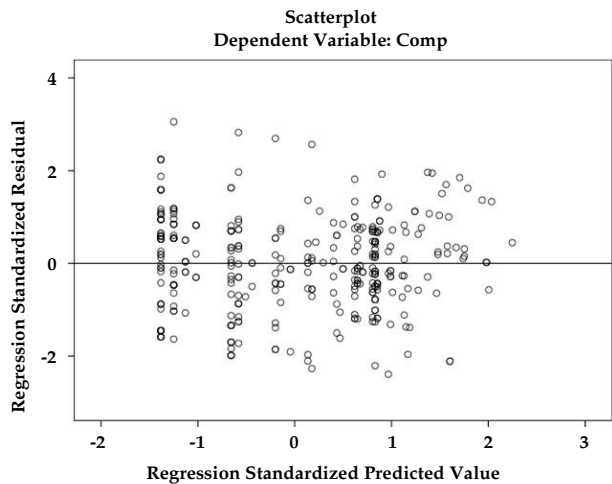
Source: Authors' estimates.

Notes for Authors

1. The first page of the manuscript should have the title of the paper, the names(s) of author(s), and a footnote giving the current affiliation of the author(s) and any acknowledgments.

2. The following page should include an abstract (maximum 400 words). The abstract should be followed by Journal of Economic Literature (JEL) classifications and keywords (minimum of two and maximum of five). Please note that JEL classifications are also available for marketing and management related topics. For more on JEL classifications please consult http://www.aeaweb.org/journal/jel_class_system.php.

3. The main text of the article should be single column format, double line spaced with font style of Times New Roman. All main headings should be bold with size 16, while subheadings should be bold with font size 14. The main text should be justified with size 12.

4. The numerals used for headings and subheadings should be 1, 1.1 and 1.1.1. It is advised to limit the level of headings within article.

5. Write one to nine in words, 10 and above should be in figures. Write numbers in figures (not words) for exact measurements, quantities and percentages. Use thousands, millions, billions and not crores and lakhs. In text use 'per cent'; in tables and figures '%'. In the case of decimal, use "0.8" rather than ".8". Maintain consistency in the number of decimal places after the decimal point. Thus, use either "7.8" and "10.0" or "7.89" and "10.00" throughout the article.

6. Give specific dates in the form "22 December 1999". Decades should be referred to as 'the 1990s'. Please spell out the "nineteenth century", etc.

7. Displayed formulae should be numbered consecutively throughout the manuscript as (1), (2), etc. against the right-hand margin of the page. In cases where the derivation of formulae has been abbreviated, it is of great help to the referees if the full derivation can be presented on a separate sheet (not to be published).

8. Do not embed "graphically designed" equations, but prepare these using the word processor's facility **(Example: Microsoft equation editor)**.

9. Distinguish between figures (diagrams) and tables (statistical material) and number them in separate sequences. Each table/figure should have a brief but descriptive title. All table/figures should be as self-explanatory as possible, incorporating any necessary descriptive material in a note at the base of the table.

10. Do not import the tables/figures into the text file but, instead, indicate their approximate locations directly in the electronic text. **Example: [Insert Table 1 about here], [Insert Figure 1 about here]**.

11. Footnotes should be numbered sequentially.

12. All references used in the text should be listed in alphabetical order of the authors' surnames at the end of the text. References in the text should include the name(s) of author(s) with the year of publication in parentheses, and all references should conform to the style of the Journal. Further information on questions of style may be obtained from the Editor, The Lahore Journal of Business, Lahore – Pakistan.

13. To avoid unnecessary errors you are strongly advised to use the "spellchecker" function of your word processor.

14. Any manuscript which does not conform to the above instructions may be returned for the necessary revision.

15. Before publication, page proofs will be sent to the corresponding author. Proofs should be corrected carefully; the responsibility for detecting errors lies with the author.

16. All submissions should be in electronic format to ljb@lahoreschool.edu.pk

Lahore Journal of Business – Call for Papers

Aims and Scope

Lahore Journal of Business (LJB), a peer reviewed publication of Lahore School of Economics, is aimed at providing a specialized forum for dissemination of qualitative and quantitative research in various areas of business administration. LJB invites researchers, policy makers and analysts to submit competitive theoretical and empirical papers that explore and contribute to the understanding of various areas in business domain. The Journal aims at bringing together state of art research findings, particularly from emerging markets, in various business disciplines including (but not limited to) accounting, banking, management, marketing, finance, investments, human resource management and organizational behavior.

Paper Submission and Review Process

The submission of articles will be followed by an editorial review to determine the relevance of manuscript and scope of the Journal. On editorial acceptance, there will be a double-blind review by our advisory panel that comprise of eminent international and local researchers and scholars. The recommendations/comments of the referees will be communicated to the corresponding authors. The papers are now being considered for publication. The manuscript can be submitted in electronic format (.doc and .docx only) to ljb@lahoreschool.edu.pk

Key Areas of Interest: *Accounting, Banking, Management, Marketing, Finance, Strategy, Human Resource Management, Organizational Behavior etc.*

Contact Info

Ms. Sadia Tabassam
Assistant Editor, Lahore Journal of Business
Lahore School of Economics, Lahore, Pakistan
T +92 (0) 42 111-656-111 Ext. 286
ljb@lahoreschool.edu.pk

THE LAHORE JOURNAL

OF

BUSINESS

Lahore School of Economics

INTERSECTION MAIN BOULEVARD PHASE VI DHA AND BURKI ROAD, BURKI LAHORE, PAKISTAN.
TEL: 0092-42-36561230 FAX: 0092-42-36561230

SUBSCRIPTION FOR PUBLICATIONS

1.   **Kindly enter a subscription for the following publication of the Lahore School of Economics:**

Publication	Yearly subscription (within Pakistan)	Yearly subscription (outside Pakistan)	Period (No. of years)	Total Payment
1. The Lahore Journal of Business	Rs. 600.00	US $ 50	….............	….............

2.   **The subscription is to be in the following name and address:**

Name: ---

Address: ---

            ----

3.   **A crossed cheque/demand draft for the sum of Pakistan Rupees/US $_____ is enclosed made out in the name of The Lahore School of Economics to cover the above subscription.**

4.   **Please address your order to: Editor, Lahore Journal of Business, Centre for Research in Economics and Business, Lahore School of Economics, Intersection Main Boulevard Phase VI DHA and Burki Road, Burki Lahore, 53200, Pakistan.**

Signature: ------------------------------------

Name: --

Date: ---

The Lahore School of Economics

The Lahore School of Economics (established 1993) is one of Pakistan's leading centres of learning for teaching and research in economics, finance and business administration. The Lahore School of Economics' objectives include: (i) The training of young Pakistanis as professional economists, finance managers, accountants, financial analysts, bankers and business executives, and (ii) Undertaking research in economics, management, finance and banking to further deepen understanding of major economic facts, issues and policies.

The Lahore School was granted a Charter in January, 1997 by an Act of the Provincial Assembly of the Punjab: The Lahore School of Economics Act 1997 (Act II of 1997). The Charter vests the powers of an independent degree granting institution to The Lahore School.

The Lahore School has both undergraduate and graduate programs in economics, business information systems and finance. Its postgraduate program leading to the MPhil and PhD degree is administered through the Lahore School's Centre for Research in Economics and Business (CREB). The student body and faculty comprise both national and expatriate Pakistanis and The Lahore School encourages expatriate Pakistanis to join as students or as faculty.

The Lahore School's publication program comprises The Lahore Journal of Economics, The Lahore Journal of Business (bi-annual publications), Lahore Journal of Policy Studies, a Seminar Paper Series and a Text Book Series. The Program encourages both in-house and external contributors.

For further information, please call (Pakistan 92-42-) 35870704 or 36560969 or visit the Web page: www.lahoreschoolofeconomics.edu.pk