



Service Quality as an Antecedent of Brand Equity: Empirical Evidence in the Medical Tourism from Jordan

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ABSTRACT

This study aims to investigate the effect of service quality (SQ) on brand equity in medical tourism context. SQ is considered as a critical success element for achieving competitive advantage and building strong medical tourism brands in today's competitive market, Jordan is included. A brand with strong equity is vital weapon for a medical tourism's differentiation strategy and development of customer loyalty. In this study, a survey has been distributed to 384 medical tourist's in Jordan. Only, 306 data are usable and were used for data analysis. The findings of this study showed that the SQ is significantly associated with overall brand equity. Also, each of SQ dimensions that referring to tangibility, reliability, responsiveness, empathy, and assurance are significantly correlated with overall brand equity.

Keywords: Service Quality, Brand Equity, Medical Tourism

JEL Classifications: M31, M37, Z32

1. INTRODUCTION

The free movement of patients outside their countries for the purpose of obtaining medical and health care is commonly termed as "medical tourism" (Smith et al., 2009). Many factors such as globalization, improvements in technology and international quality of care standards, and lower cost contributed to a significant and rapid growth of the medical tourism (Guiry et al., 2013). This trend is potentially profitable and represents a significant opportunity for countries and businesses involved in medical tourism industry, particularly developing ones and Jordan is no exception. Global wise, it has been estimated that the annual growth in medical tourism industry exceeds 20% in generating revenues (Guiry et al., 2013). Thus, the medical tourism market is aggressively expanding (Guiry et al., 2013; Han and Hyun, 2015), and competition in global marketplace is becoming more intense. In such environment, the primary concern for the involved parties is differentiating their services from their competitors, in order to create high brand equity for of a country and therefore, the role of branding.

Branding plays a crucial role in service industry, due to the fact that strong brands are highly associated with better customers' trust

in services or intangible products, decreases customers' perceived risk, increases customer satisfaction and loyalty (Kim et al., 2008). Thus, developing and managing strong brand equity has evolved as a top strategic priority for many organizations, particularly in highly aggressive changing environment (Osakwe et al., 2016), due to its special role in linking the effects of customer loyalty to a solid of benefits to a firm such as gaining competitive differentiation, generating higher profits, and reducing marketing costs (Aaker, 1991; Yoo et al., 2000). However, despite tremendous efforts in brand equity building, attention to branding in service setting is still limited (Chang et al., 2008; Krystallis and Chrysochou, 2014), particularly in medical tourism industry (Guiry et al., 2013), in developing countries (Hanaysha et al., 2013; Van Doorn and Leeflang, 2014).

According to Ming et al. (2012), the development of service brands relied heavily on the customer perception towards the quality of service (Cronin and Taylor, 1992; Ha, 2009). In addition, service quality (SQ) is the main driver that may influence medical tourists' destination choice (Aliman and Mohamad, 2013; Guiry et al., 2013; Veerasoontorn et al., 2011). Furthermore, higher levels of SQ are essential to stimulate competitive position in the market

place and also to contribute to business success (Moghaddam, 2014). Therefore, SQ is becoming critical element for the brand equity management, in order to guaranty a positive customer experience with a brand.

However, still there are limited empirical studies performed on the effect of SQ on brand equity (Moghaddam, 2014), in the developing countries such as Jordan. In addition, SQ have been evaluated differently (Guiry et al., 2013; Sultan and Wong, 2013) according to the engaged industry, culture, and service type.

Considering the mentioned gap in the literature, empirical study on the effect of SQ on brand equity is therefore very valuable. Thus, this study seeks to investigate the effect of SQ on brand equity in Jordanian medical tourism context. Accordingly, this study intended to expand our knowledge about the effect of SQ dimensions on brand equity in Jordan. That is because most of the previous studies on brand equity were conducted in developed countries, with little attention is paid to developing countries context, Jordan is an example. Also, healthcare system, represented by medical tourism is considered as one of the main significant contributors to economic scale in such countries. In addition, this study targeted medical tourist, while most of brand equity studies have targeted students (Mostafa, 2015).

2. LITERATURE REVIEW

2.1. Brand Equity

Existing literature demonstrated that strong brands provide values for both the customer and the firm. This view has been conceptualized in terms of brand equity, and therefore such brands can be considered as an important asset for any firm (Aaker, 1991; Tuominen, 1999). As a result, brand equity has received considerable attention in the branding literature (Chang et al., 2008; Kim et al., 2008; Mostafa, 2015). However, brand equity was defined mainly based on two different perspectives, the financial perspective and the customer-based perspective (Aaker, 1991; Chang et al., 2008; Tuominen, 1999). From the customer-based perspective; the main focus of this study, according to Aaker (1991) defined brand equity as “a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and/or to that firm’s customers” (p.15). 2 years later, Keller (1993) added to Aaker’s definition as he expressed brand equity as the differential influence of brand knowledge on customer’s response to marketing activities of the brand, given by the difference between customer response to the marketing activities of the branded and unbranded products (Yoo et al., 2000).

Reviewing the above mentioned definitions, brand equity is viewed as a multi-dimensional construct of brand awareness, brand associations, brand loyalty, perceived quality, and other propriety assets (Aaker, 1991). While Keller (1993) proposed brand equity dimensions of brand image and brand awareness. Yoo et al. (2000) proposed that the overall brand equity model consists of brand loyalty, perceived quality, brand associations with brand awareness (Yoo et al., 2000). Their model was the first empirically examining the marketing activities and customer behavior in

relation to brand equity building (Yoo and Donthu, 2001; Yoo et al., 2000). Furthermore, the central notion of customer-based brand equity is that the power on what knowledge resides in the customers’ minds about the brand (Keller, 1993, Tuominen, 1999). As a consequence, effective marketing activities for a brand would enhance a greater confidence in customers, which in turn, would induce customers’ loyalties, better revenues and generate greater profits as well as foster competitive positioning (Keller, 1993).

Hence, this study followed Yoo’s et al. (2000) customer-based brand equity definition, which has been recently employed and cited by many scholars (e.g., Buil et al., 2013; Kapak and Azizi, 2013; Mohan and Sequeira, 2016). Accordingly, customer-based brand equity elements were represented by overall brand equity construct.

2.2. SQ

SQ evaluation from customers’ perspective “perceived SQ” has been recognized as the core aspect of customer-based brand equity (Aaker, 1991; Keller, 1993; Yoo et al., 2000). SQ has been increasingly considered as a critical factor for business success (Aliman and Mohamad, 2013; Khalid et al., 2011), and the medical tourism industry is not exceptional. In a highly competitive medical tourism industry, SQ provides the brand with differentiation and competitiveness among rival’s brand (Malik et al., 2011; Moghaddam, 2014). Therefore, the investment in SQ has improved the perception of customers towards the quality of service and boosts their experience with that brand (He and Li, 2011) in turn, it enhanced a favorable brand association (Moghaddam, 2014).

Grönroos (1984) stated that SQ is “The outcome of an evaluation process, where the consumer compares his expectations with the service he has received” (p.37). Where Parasuraman et al. (1988) defined SQ as the discrepancy between customers’ perceptions and customers’ expectations about the service. In addition, Zeithaml (1988) defined SQ as the customer’s judgment about overall excellence of a product/service (Parasuraman et al., 1988). Clearly, SQ reflects the degree in which the offered service meets or exceeds customer expectations. Furthermore, a human factor is involved in SQ evaluation process, therefore, a standardized and a stable level of quality is difficult to be achieved.

Yarimoglu (2014) and Ghotbabadi et al. (2015) indicated that performance only model (SERVPERF) adopted from Cronin and Taylor (1992) is one of the most commonly applied SQ models, which were designed to measure five-dimensions of SQ namely, tangibles, reliability, responsiveness, assurance, and empathy as being proposed by Parasuraman et al. (1988). However, there is a general agreement about the definition of these dimensions as stated by Parasuraman et al. (1988). Tangibles are about the personnel appearance of staff, physical facilities, and equipments. While reliability is about the service provider ability to provide the promised service dependably and accurately. Responsiveness refers to staff willingness to support and help customers as well as to provide prompt service, where assurance measures staff ability to inspire trust and confidence and their knowledgeability and kindness. Empathy measures staff caring attitude and

individualized attention that firm provides its customers. In the present study, SERVPERF model with five-dimensions of SQ were used.

A number of previous studies found a significant positive effect for the SQ on overall brand equity (Mourad et al., 2011). Moreover, Hirut (2015) and Vatjanasaregagul and Wang (2011) also indicated a significant positive effect for each dimension of SQ on brand equity. Based on the above discussion, this study presented the following hypotheses:

- H1: SQ has positive effect on overall brand equity.
- H1a: Tangibility has positive effect on overall brand equity.
- H1b: Reliability has positive effect on overall brand equity.
- H1c: Responsiveness has positive effect on overall brand equity.
- H1d: Assurance has positive effect on overall brand equity.
- H1e: Empathy has positive effect on overall brand equity.

3. RESEARCH METHODOLOGY

The aim of this field study is to investigate the effect of SQ on brand equity building and linking it with the medical tourism industry. Therefore, this study was conducted in medical tourism-healthcare context, which was presented by medical tourists who were traveling to Jordan for medical treatment purposes. The top five branded and biggest private hospitals in Amman, the capital of Jordan and the main hub for medical tourists, were chosen.

A survey approach was used for data collection. 384 medical tourists were selected based on systematic random sampling method whereby every 4th medical tourist who treated in the selected private hospitals was requested to answer the questionnaire. Only 306 valid questionnaires were used giving a high response rate of 79.69%. SPSS 21 and structural equation modeling on AMOS 21 were used for data analysis.

The measurement items for each construct were adapted from the existing literature using a seven-point Likert scale. 21 items were used in measuring five-dimensions of SQ, distributed as follow: Tangibility (4 items), assurance (4 items), and empathy (5 items) were employed from Aliman and Mohamad (2013). Reliability (4 items) borrowed from Ramseook-Munhurrun et al. (2010); whereas responsiveness (4 items) employed from Chakravarty (2011) and Ramseook-Munhurrun et al. (2010). Besides, another 11 items were employed to measure overall brand equity. Of these, ten items were borrowed from Vatjanasaregagul (2007) and one item was added to overall brand equity as suggested by experts in medical tourism branding during pre-test study. All measurement items were employed with minor modification on wording for the suitability in medical tourism context.

4. DATA ANALYSIS AND RESULTS

The results of demographic profile showed that the majority (55.6%) of respondents were male, with 28.8% of the participants were belonging to the age group of 36-45 years. Of these responders 48% of them had a bachelor degree. In addition, the majority (66.7%) of respondents were married. In terms of respondents' monthly income, around 53% reported that their

income is <USD 1000, where 31.4% of them earn (USD 1001-2000), and only 5% of them earn more than USD 3001. Based on demographic region, most of the medical tourists were arrived from Yemen (29.7%) and Libya (20.3%).

Confirmatory factor analysis (CFA) using AMOS was conducted to test the validity of the measurement scale. CFA on SQ produced Chi-square value of 297.634, $P = 0.0$; Tucker-Lewis Index = 0.949; comparative fit index (CFI) = 0.960; Goodness-of-Fit index = 0.906; adjusted goodness of fit index (AGFI) = 0.864; and root mean square error of approximation (RMSEA) = 0.077. Also, CFA on overall brand equity produced Chi-square value of 40.989, $P = 0.0$; TLI = 0.980; CFI = 0.987; GFI = 0.968; AGFI = 0.937; and RMSEA = 0.072. Thus, the results were able to reflect the validity of data for further analysis.

Additionally, Hair et al. (2010) stated that the construct validity and convergent validity supported, when the factor loading for each item is more than the minimum cut-off value of 0.5. From the presented results in this study, the loadings for all factors were satisfactory >0.5 , ranging from 0.545 to 0.939. Thus, the construct and convergent validity were supported. Furthermore, Cronbach's alpha was used through SPSS to analyze the reliability of the measurement items. The results indicated that all of the alpha values were above 0.7 (Hair et al., 2010), as follow: Tangibility (0.808), reliability (0.878), responsiveness (0.889), assurance (0.896), empathy (0.860), and overall brand equity (0.936), supporting that the measurement scales were reliable. This also supports the convergent validity (Hair et al., 2010).

For the hypotheses testing, Chin (1998) stated that for meaningful results, a standardized estimate should be >0.30 . In addition, a standardized estimate value that is >0.30 and <0.50 indicates a medium effect, while a value >0.50 indicates a strong effect. Thus, regression analysis was conducted among the study variables. The final structural model was drawn on AMOS, with results indicating a good model fit (Chi-square = 473.876, $P = 0.0$; TLI = 0.959; CFI = 0.965; GFI = 0.897; AGFI = 0.868; RMSEA = 0.057).

The results of the regression analysis shows a significant effect of SQ on overall brand equity as well as the significant effect of each dimension of SQ on overall brand equity. Besides, all the standardized estimates were in the range of medium to large effect size.

In details, the presented results indicated that SQ has a significant and positive effect on overall brand equity ($\beta = 0.632$, CR = 7.878, $P < 0.001$). Thus, H1 is confirmed. Furthermore, in terms of SQ dimensions, the results proved that tangibility ($\beta = 0.391$, CR = 3.799, $P < 0.001$), reliability ($\beta = 0.413$, CR = 3.010, $P < 0.01$), responsiveness ($\beta = 0.605$, CR = 8.620, $P < 0.001$), assurance ($\beta = 0.424$, CR = 4.521, $P < 0.001$), and empathy ($\beta = 0.637$, CR = 6.135, $P < 0.001$) were all positively related to overall brand equity. Therefore, H1a- H1e are supported.

5. DISCUSSION AND CONCLUSION

This study mainly focuses on the effect of SQ and its dimensions on overall brand equity building in medical tourism industry in

Jordan, and as evaluated by medical tourists. The results suggest that SQ has a large and positive effect on overall brand equity. This strong effect of SQ ($\beta = 0.632$) on overall brand equity, supports the hypothesis that customer perceptions of a brand's SQ would greatly enhance its brand equity building. This result is in line with the previous studies that indicate a positive relationship between SQ and brand equity (Mourad et al., 2011; Tan et al., 2012).

The findings also indicate that SQ dimensions have a positive effect on overall brand equity. For example, tangibility ($\beta = 0.391$) has a moderate positive direct effect on overall brand equity. This result was proved by previous literature (Hirut, 2015; Vatjanasaregagul and Wang, 2011). Similarly, reliability ($\beta = 0.413$) and assurance ($\beta = 0.428$) are found to have a moderate positive significant impact on overall brand equity. This was also in parallel with the existing previous studies which confirmed that reliability and assurance are correlated with overall brand equity (Hirut, 2015; Vatjanasaregagul, and Wang, 2011).

Regarding the impact of responsiveness on overall brand equity, the result confirmed that responsiveness ($\beta = 0.605$) is providing a strong and significant effect on overall brand equity. This result was also proved by the study of Hirut (2015) and Vatjanasaregagul and Wang (2011). Besides, empathy ($\beta = 0.637$) was also strongly correlated with overall brand equity building. A similar result was also found in a study by He and Li (2010), Hirut (2015), and Vatjanasaregagul and Wang (2011). Overall, the presented data of this study had enriched medical tourism brand equity, through investigating a detailed perceived quality dimensions. In addition, the findings presented here indicated that all dimensions of SQ have a significant effect on overall brand equity.

Up to now, the success in a highly competitive medical tourism industry would depends on building strong brands, which are favorable in the mind of customers. To achieve this, investments in providing high quality services to customers and creating a unique customer experience environment (Hirut, 2005) are critical for brand differentiation, which in turn would lead to building a strong brand equity.

6. LIMITATIONS AND FUTURE RESEARCH

This study has some limitations; of which it was limited to a single industry (the medical tourism) and single perspective (medical tourists). Further research in brand equity building in different industries and different perspectives is valuable. Also, this study presented only a single source of brand equity building. Therefore, future studies are recommended to investigate other brand equity building factors. Besides, this study focused only on overall brand equity as measured by Yoo et al. (2000). Future researches are suggested to cover other brand equity dimensions. Finally, the findings of this study were limited to SERVPER model of SQ. Future studies are also recommended to investigate the effect of SQ towards brand equity using different models for SQ.

REFERENCES

- Aaker, D.A. (1991), *Managing Brand Equity*. New York: Free Press.
- Aliman, N.K., Mohamad, W.N. (2013), Perceptions of service quality and behavioral intentions: A mediation effect of patient satisfaction in the private health care in Malaysia. *International Journal of Marketing Studies*, 5(4), 15-24.
- Buil, I., Martínez, E., de Chernatony, L. (2013), The influence of brand equity on consumer responses. *Journal of Consumer Marketing*, 30(1), 62-74.
- Chakravarty, A. (2011), Evaluation of service quality of hospital outpatient department services. *Medical Journal Armed Forces India*, 67(3), 221-224.
- Chang, H.H., Hsu, C.H., Chung, S.H. (2008), The antecedents and consequences of brand equity in service markets. *Asia Pasific Management Review*, 13(3), 601-624.
- Chin, W.W. (1998), Issues and opinion on structural equation modeling. *MIS Quarterly*, 22(1), 7-16.
- Cronin, J.J.Jr., Taylor, S.A. (1992), Measuring service quality: A reexamination and extension. *The Journal of Marketing*, 56, 55-68.
- Ghotbabadi, A.R., Feiz, S., Baharun, R. (2015), Service quality measurements: A review. *International Journal of Academic Research in Business and Social Sciences*, 5(2), 267-278.
- Grönroos, C. (1984), A service quality model and its marketing implications. *European Journal of Marketing*, 18(4), 36-44.
- Guiry, M., Scott, J.J., Vequist, D.G.IVth. (2013), Experienced and potential medical tourists' service quality expectations. *International Journal of Health Care Quality Assurance*, 26(5), 433-446.
- Ha, H.Y. (2009), Effects of two types of service quality on brand equity in China: The moderating roles of satisfaction, brand associations, and brand loyalty. *Seoul Journal of Business*, 15(2), 59-83.
- Hair, J.F.Jr., Black, W.C., Babin, B.J., Anderson, R.E., Tatham, R.L. (2010), *Multivariate Data Analysis: A Global Perspective*. 7th ed. New Jersey: Pearson Prentice Hall.
- Han, H., Hyun, S.S. (2015), Customer retention in the medical tourism industry: Impact of quality, satisfaction, trust, and price reasonableness. *Tourism Management*, 46, 20-29.
- Hanaysha, J., Hilman, H., Ghani, A., Hasmini, N. (2013), Assessing the literature on brand equity: from past, present to future. *Australian Journal of Basic and Applied Sciences*, 7(14), 488-499]
- He, H., Li, Y. (2010), Key service drivers for high-tech service brand equity: The mediating role of overall service quality and perceived value. *Journal of Marketing Management*, 27(1/2), 77-97.
- Hirut, S. (2015), *The Effect of Service Quality on Customer Based Brand Equity (A Case of Commercial Bank of Ethiopia)*, (Doctoral Dissertation, AAU).
- Kapak, S.J., Azizi, S. (2013), Factors affecting overall brand equity: The case of Shahrvand chain store. *Management and Marketing-Craiova*, 11(1), 91-103.
- Keller, K.L. (1993), Conceptualizing, measuring, and managing customer-based brand equity. *The Journal of Marketing*, 57, 1-22.
- Khalid, S., Mahmood, B., Abbas, M., Hussain, S. (2011), Customer satisfaction with service quality in conventional banking in Pakistan: The case of Faisalabad. *International Journal of Marketing Studies*, 3(4), 165-180.
- Kim, K.H., Kim, K.S., Kim, D.Y., Kim, J.H., Kang, S.H. (2008), Brand equity in hospital marketing. *Journal of Business Research*, 61(1), 75-82.
- Krystallis, A., Chrysochou, P. (2014), The effects of service brand dimensions on brand loyalty. *Journal of Retailing and Consumer Services*, 21(2), 139-147.

- Malik, M. E., Naeem, B., Nasir, A. M. (2011), Hotel service quality and brand loyalty. *Interdisciplinary Journal of contemporary Research in Business*, 3, 621-629.
- Ming, T.T., Wei, L.T., Lee, W.S.S., Ong, M.B.F., Su-Mae, T. (2012), Consumer-based brand equity in the service shop. *International Journal of Marketing Studies*, 4(4), 60.
- Moghaddam, A.K. (2014), Evaluation of banks services quality and its impact on creating brand preference and customers purchase intention. *ITMAR*, 1, 765-780.
- Mohan, B.C., Sequeira, A.H. (2016), The impact of customer-based brand equity on the operational performance of FMCG companies in India. *IIMB Management Review*, 28(1), 13-19.
- Mostafa, R.H. (2015), The impact of country of origin and country of manufacture of a brand on overall brand equity. *International Journal of Marketing Studies*, 7(2), 70.
- Mourad, M., Ennew, C., Kortam, W. (2011), Brand equity in higher education. *Marketing Intelligence and Planning*, 29(4), 403-420.
- Osakwe, C.N., Chovancova, M., Ogbonna, B.U. (2016), Linking SMEs profitability to brand orientation and market-sensing capability: A service sector evidence. *Periodica Polytechnica Social and Management Sciences*, 24(1), 34.
- Parasuraman, A., Zeithaml, V.A., Berry, L.L. (1988), SERVQUAL; A multiple-item scale for measuring consumer perceptions of service quality. *Retailing; Critical Concept*, 64(1), 12-40.
- Ramseook-Munhurrin, P., Lukea-Bhiwajee, S.D., Naidoo, P. (2010), Service quality in the public service. *International Journal of Management and Marketing Research*, 3(1), 37-50.
- Smith, R.D., Chanda, R., Tangcharoensathien, V. (2009), Trade in health-related services. *The Lancet*, 373(9663), 593-601.
- Sultan, P., Wong, H.Y. (2013), Antecedents and consequences of service quality in a higher education context. *Quality Assurance in Education*, 21(1), 70-95.
- Tan, T.M., Liew, T.W., William, L.S.S., Michelle, O.B.F., Tan, S.M. (2012), Consumer-based brand equity in the service shop. *International Journal of Marketing Studies*, 4(4), 60.
- Tuominen, P. (1999), Managing brand equity. *LTA*, 1(99), 65-100.
- Van Doorn, J., Leeflang, P.S. (2014), Does the importance of value, brand and relationship equity for customer loyalty differ between Eastern and Western cultures? *International Business Review*, 23(1), 284-292.
- Vatjanasaregagul, L. (2007), The Relationship of Service Quality, Consumer Decision Factors and brand Equity. Unpublished Doctoral Dissertation. US: Nova Southeastern University.
- Vatjanasaregagul, L., Wang, H.C. (2011), The impact of service quality and consumer decision factors on brand equity. *International Business and Economics Research Journal (IBER)*, 6(3), 97-104.
- Veerasoontorn, R., Beise-Zee, R., Sivayathorn, A. (2011), Service quality as a key driver of medical tourism: The case of Bumrungrad International Hospital in Thailand. *International Journal of Leisure and Tourism Marketing*, 2(2), 140-158.
- Yarimoglu, E.K. (2014), A review on dimensions of service quality models. *Journal of Marketing Management*, 2(2), 79-93.
- Yoo, B., Donthu, N., Lee, S. (2000), An examination of selected marketing mix elements and brand equity. *Journal of the Academy of Marketing Science*, 28(2), 195-211.
- Yoo, B.N., Donthu, N. (2001), Developing and validating a multidimensional consumer-based brand equity scale. *Journal of Business Research*, 52(1), 1-14.
- Zeithaml, V.A. (1988), Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *The Journal of marketing*, 52(3), 2-22.