

# THE HIERARCHICAL RELATIONSHIP BETWEEN BRAND EQUITY DIMENSIONS

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## Abstract

Brands have been considered as the second most important assets for a firm after customers .This study proposes a brand equity model with four dimensions: brand awareness, brand trust, perceived quality, and brand loyalty. In addition, the relationships among four dimensions and their effects on brand equity are investigated empirically. In order to accomplish the objectives proposed, a model reflecting the hierarchical relationship between the brand equity dimensions of brand awareness, brand trust, perceived quality and brand loyalty and brand equity, the model is tested by structural equations and the sample is 369 students from the higher institute of business administration (HIBA), the finding show that perceived quality does not has a significant influence on both brand trust and brand equity, on other hand, the rest of relationship between brand equity dimensions and brand equity is confirmed . The study finding can be used by mobile market in creating brand equity by using some strategies which can lead to the brand equity.

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**Keywords:** Brand awareness, Perceived quality, Brand trust, Brand loyalty, Brand equity.

## Introduction

Brands have been considered as the second most important assets for a firm after customers (Doyle, 2001). Brand equity is one of the most important concepts in business practice as well as in academic research. This is because successful brands can allow marketers to gain competitive advantage (Lassar et al, 1995).

The concept of brand equity has been discussed in a different ways, literatures divide brand equity into three categories: the customer-based perspective (Aaker, 1991), the financial perspective (Simon and Sullivan, 1993), and the combined perspective (Anderson, 2007).

Strong brand with positive brand equity has several advantages such as: consumer preference and purchase intention (Cobb-Walgren et al, 1995); market share (Agarwal and Rao, 1996); consumer perceptions of product quality (Dodds et al, 1991); larger margins, increase marketing communication effectiveness, and great loyalty, (Keller, 1993); consumer evaluations of brand extensions (Aaker , 1991); consumer price insensitivity (Erdem et al, 2002); and resilience to product-harm crisis (Dawar and Pillutla, 2000).

## **Literature Review**

### **Brand awareness**

Brand awareness is widely misunderstood and often wrongly measured, even by experienced managers (Rossiter and Percy, 1987). Both Aaker, (1991) and Keller, (1993) show that Brand awareness is based on both brand recognition and recall, (Aaker, 1991) defines brand awareness as “the ability of the potential buyer to recognize and recall that a brand is a member of a certain product category”, and can be defined as “consumers' ability to identify the brand under different conditions, as reflected by their brand recognition or recall performance Kotler and Keller, (2006).

The first step to build brand equity is to create brand awareness (Aaker, 1991) and according to Tong and Hawley, (2009) Brand awareness is a source of brand equity. Yasin et al, (2007) found that brand awareness leads to a high level of brand equity. Brand awareness was found to have positive effect on brand equity (Yoo et al, 2000: Juntunen et al, 2011: Mishara and Datts, 2011). Based on these the following hypothesis is proposed in this study:

**Hypothesis 1: Brand awareness has a significant positive impact on brand equity.**

### **Perceived quality**

Perceived quality is defined as “the customer’s perception of the overall quality or superiority of a product or service with respect to its intended purpose, relative to alternatives” (Zeithaml, 1988), on other hand Aaker, (1991) defines perceived quality reflects upon “the customer’s perception of the overall quality or superiority of a product or service with respect to its intended purpose relative to alternatives” The consumer’s opinion about the product’s quality and its attributes with regard to its expected performance forms the measurement scale indicator of the brand quality perceived by individuals (Ramos and Franco, 2005) and according to Aaker, (1991) perceived quality lends value to a brand in several ways: high quality gives consumers a good reason to buy the brand and allows the brand to differentiate itself from its competitors, to charge a premium price, and to

have a strong basis for the brand extension. Perceived quality was found to have positive effect on brand equity (Yoo at al., 2000: Atilgan et al, 2005: Kambiz and samaneh, 2011). Based on these the following hypothesis is proposed in this study:

**Hypothesis 2: Perceived quality has a significant positive effect on brand equity.**

**Brand trust**

Brand trust has drawn increasing attention from both practitioners and researchers in recent years. Moorman, Zaltman, and Deshpande (1992) defined trust as “a willingness to rely on an exchange partner in whom one has confidence.” .Chaudhuri and Holbrook (2001) define brand trust as “consumers’ willingness to rely on the ability of the brand to perform its stated function”.

Building and maintaining trust is at the core of brand equity, because it is a key characteristic of any successful long-term relationship (Garbarino and Johnson, 1999). (Lasser et al, 1995) indicate that brand trust is one of the brand equity dimensions. In order to enjoy the substantial competitive and economic advantages provided by brand equity as a relational market-based asset, companies must build brand trust (Delgado and Munuera, 2005). Based on these the following hypothesis is proposed in this study:

**Hypothesis 3: brand trust has a positive effect on brand equity**

**Brand loyalty**

Brand loyalty is, like brand loyalty, a complex construct in itself, which needs to be disaggregated if it is to be clearly understood? (Atilgan et al, 2005). Researchers have been challenged to define and measure brand loyalty because this dimension is formed by two different components: attitudinal and behavioral (Dick and Basu, 1994). Brand loyalty is defined as “a situation which reflects how likely a customer will be to switch to another brand, especially when that brand makes a change, either in price or in product features (Aaker ,1991) .

Brand loyalty is at the heart of brand equity (Tong and Hawley, 2009) and according to Aaker, (1996) brand loyalty is a core dimension of brand equity. Brand loyalty was found to have a dominant effect on brand equity it leads to a high level of brand equity (Gil et al, 2007). Based on these the following hypothesis is proposed in this study:

#### **Hypothesis 4: brand loyalty has a positive effect on brand equity.**

##### **Relationship between Brand Equity Dimensions:**

Yoo et al (2000) noted a hierarchy of effects among brand equity dimensions. They posited that awareness and associations preceded perceived value and, in turn, influenced brand loyalty.

Grewal, Krishnan, Baker and Borin (1998) indicate that brand awareness has a positive and significant relationship on perceived quality in a bicycle brand study. (Aaker, 1996) also concludes that Brands with greater awareness and familiarity, consumers tend to ascribe positive quality value. Keller (1993) shows that brand awareness affected a consumer's decision-making, According to Campbell and Keller (2003) suggests that increasing brand familiarity through accumulated customer experiences not only created a knowledge structure for the consumer, but also built up confidence about the brand. Xingyuan et al (2010) indicates that brand awareness and product knowledge are positively related to brand trust and there is a direct effect of brand familiarity on brand trust (Ming et al, 2011) at the same time brand knowledge positively related to brand trust (fuller et al. ,2008). When students have information on product quality or are satisfied with the quality of the product based on their previous experience, they are likely to trust the product. Perceived quality is found to be the main antecedent of brand loyalty (Biedenbach and Marell, 2009). Trust had been at the centre of studies that aimed to explain loyalty. Loyalty is developed if there is an element of trust (Berry, 1993). Brand trust in recent studies has been recognized as a key variable in long-term relationships with customers, which in turn positively affects brand loyalty (Matzler, et al, 2008; Sung et al, 2010; Ming et al, 2011).

Based on the assumed hierarchy of effects between brand equity dimensions, the current study tests the following hypotheses:

**Hypothesis 5: brand awareness has a positive effect on perceived quality.**

**Hypothesis 6: brand awareness has a positive effect on brand trust.**

**Hypothesis 7: perceived quality has a positive effect on brand trust.**

**Hypothesis 8: perceived quality has a positive effect on brand loyalty.**

**Hypothesis 9: brand trust has a positive effect on brand loyalty.**

#### **Methodology:**

##### **The model:**

A research framework was designed to test the above hypothesized relationships, for the purpose, the Mobile market in Syria was targeted; the target population of interest was defined as the students of a local university. The model to be tested results from the hypotheses previously figures 1.

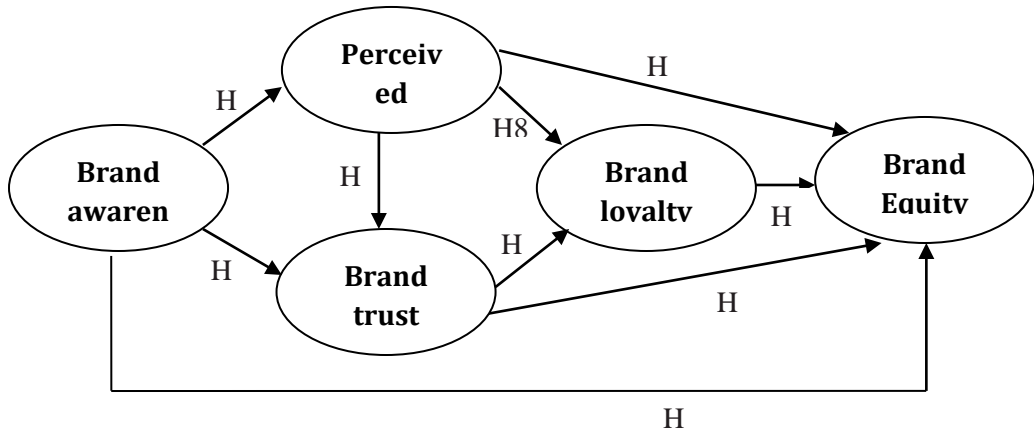


Figure 1. The research model

**Sample’s definition**

In order to test the proposed model we select a sample of university students because they are one of the most important customers of mobiles. A total of 382 business students from the higher institute of business administration (HIBA) participated in the study. Because of missing data, 13 questionnaires had to be excluded from further analysis. The Demographic profile of the sample is given in table 1.

Table 1. Demographic profile of the sample

		N	%
<b>Gender</b>	Male	185	50.1
	Female	184	49.9
	<b>Total</b>	<b>369</b>	<b>100</b>
<b>Income (SP)</b>	None	197	53.4
	<10000	116	31.4
	10000-20000	40	10.8
	>20000	16	4.3
	<b>Total</b>	<b>369</b>	<b>100</b>
<b>Age</b>	<20	140	37.9
	20 - 25	215	58.3
	>25	14	3.8
	<b>Total</b>	<b>369</b>	<b>100</b>
<b>Education level</b>	Under graduate	346	93.8
	Post graduate	23	6.2
	<b>Total</b>	<b>369</b>	<b>100</b>

### Method of data obtainment

The questionnaire was designed as a survey instrument including all constructs of the proposed model to investigate the hypotheses of interest. The questions in the questionnaire are based on a review of the literatures and researches. The survey questionnaire consists of six sections. The first section is designed to obtain sample characterization. The second section is designed to measuring the brand awareness with a three items using five-point Likert-type scale adapted from (Yoo et al, 2000).The third section deals with the measurement of perceived quality with six items using a five-point Likert-type scale following (Yoo et al, 2000). The forth section is designed to measuring brand loyalty with three items using a five-point Likert-type scale following (Yoo et al, 2000).The fifth section is designed to measuring brand trust with three items using a five-point Likert-type scale following (Li et al, 2008).The sixth section is designed to measuring brand equity with four items using a five-point Likert-type scale following (Yoo et al, 2000). Respondents are asked to indicate their agreement level of each item of the sections on the 5-point Likert scale anchored by “strongly disagree (=1)” to “strongly agree (=5).”.

### Analysis of result

In this section we will evaluate the measurements scales used in the research and then we will use the regression analysis to proceed an estimation of the structural model. Figure 2 shows the estimation model with the standardized regression weights.

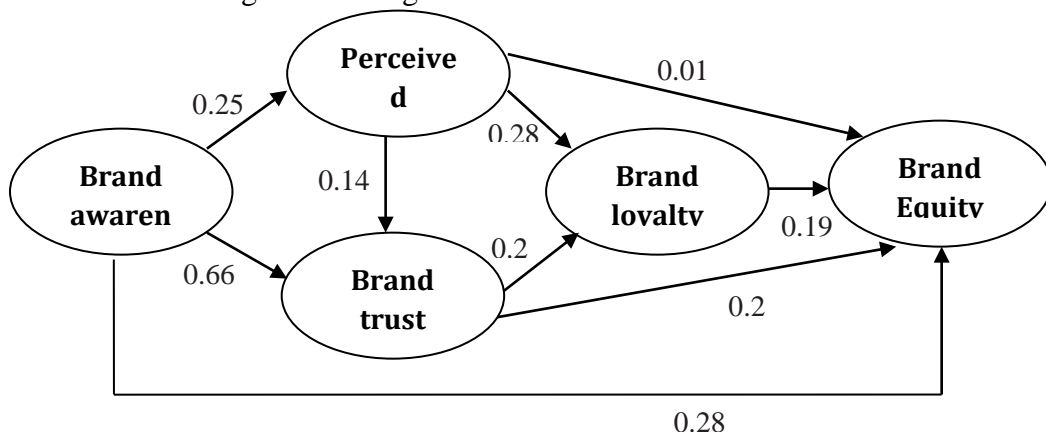


Figure 2. Final model

We applied Cronbach’s alpha statistic to measure the consistence of each item under the same construct (supplied by the SPSS).Table 2 reveals the composed reliability of independent and dependent variables. We can

notice that all constructs have greater than the suggested value of 0.6 recommended by (Malhotra, 2004).

Table 2. Construct reliability

Construct	Item number	Reliability
Brand awareness	3	.828
Perceived quality	6	.799
Brand trust	3	.865
Brand loyalty	3	.765
Brand equity	4	.863

Fit indices (supplied by the AMOS) calculated for the measurement model indicated a good fit between the structural model and data. The root mean square error of approximation (RMSEA) value below 0.08 indicates a reasonable error of approximation (Browne and Cudeck, 1993). As suggested for an acceptable model, both comparative fit index (CFI) and goodness of fit index (GFI) values are above 0.90 (Jaccard and Wan, 1996). The other fit measures like Normed Fit Index (NFI), is more than 0.9 which showed a well-fitting model (Bentler, 1992). Table 3 provides the value of the fit indices of the model.

Table 3. Fit indices of the empirical model

Test	Value
RMSEA	0.058
GFI	0.913
NFI	0.902
CFI	0.943

Regarding the hypothesis tests (supplied by the AMOS), as shown in Table 4, seven out of nine hypothesized relationships are supported in the estimated structural model except for H2 and H7 which had low estimates. Therefore perceived quality does not have a significant influence on both brand trust and brand equity. As shown in Figure 2, brand awareness has significant positive effects on both perceived quality ( $\beta = 0.25$ ,  $t$ -value = 5.02) and brand trust ( $\beta = 0.66$ ,  $t$ -value = 8.63) and brand equity ( $\beta = 0.28$ ,  $t$ -value = 4.38). Hence, H5 and H6 and H1 are supported. Furthermore, brand trust also has significant positive effects on brand loyalty ( $\beta = 0.22$ ,  $t$ -value = 4.16) as well as brand equity ( $\beta = 0.25$ ,  $t$ -value = 4.92), indicating that H9 and H3 are supported. A significant positive effect of perceived quality on brand loyalty ( $\beta = 0.28$ ,  $t$ -value = 3.33) is also found, and thus H8 is supported. Finally, brand loyalty is found to have a significant positive effect on brand equity ( $\beta = 0.19$ ,  $t$ -value = 3.38), and thus H4 is supported.

Table 4. Result of the structural model

Structural equations	Estimate	C.R.	P	Result
Brand awareness → brand equity	0.277	4.367	***	Supported
perceived quality → brand equity	0.099	1.495	0.135	Rejected
Brand trust → brand equity	0.250	4.923	***	Supported
Brand loyalty → brand equity	0.188	3.381	***	Supported
Brand awareness → perceived quality	0.248	5.019	***	Supported
Brand awareness → brand trust	0.661	8.630	***	Supported
perceived quality → brand trust	0.144	1.618	0.106	Rejected
perceived quality → brand loyalty	0.275	3.328	***	Supported
Brand trust → brand loyalty	0.215	4.163	***	Supported

### Conclusion and implications

Based on the results obtained in this study brand awareness has significant positive effects on both perceived quality and brand trust and brand equity. Brand trust also has significant positive effects on brand loyalty as well as brand equity. A significant positive effect of perceived quality on brand loyalty is also found. Finally, brand loyalty is found to have a significant positive effect on brand equity. We also observe that brand awareness has the bigger impact on brand equity when compared with the other dimensions. Some of the finding in this study consists with results of previous researches, but contrary to the expectation, perceived quality did not influence both brand trust and brand equity.

The brand awareness is important because it helps a certain mobile brand-name become a customer's decision choice set. In other words, if customers are not aware of a certain mobile when they search for a certain mobile, then it is very unlikely for them to choose this mobile. Whereby brand awareness mostly influences the cognitive component, and brand equity cannot be created without brand awareness. Hence, Mobiles Company and brand managers are advised to look carefully at their brand marketing communication strategy to help maintain customer recognition and recall of a mobile's brand-name compared to its competitors.

This study also offers contributions to academicians in several ways. To date there have been number of studies in brand literature that focus largely on the main effects of brand equity dimensions on brand equity.

Summing up the results, the study goals were reached and the study provides a model to enhance the brand equity and gives several important implications for strategic brand management.

### Research limitation and future research

There are several limitations to this study. First, it is studied just the direct effect of the brand equity dimensions on brand equity. It is suggested



that future research can study the indirect effect between the brand equity dimensions and brand equity. Second, other variable needs to be studied, such as brand image, brand association. Third, we should investigate this study in service industries. Forth, the subject of this study is student. It is suggested that future research can expand its participants to general consumers. Finally we should try to replacing this study with more product categories.

### **References:**

- Aaker, D.A., (1991), “Managing Brand Equity: Capitalizing on the Value of a Brand Name”, New York: The Free Press.
- Aaker, D.A., (1996), “Measuring brand equity across products and markets” California Management Review.
- Agarwal, M.K. and Rao, V. (1996), “An empirical comparison of consumer based measures of brand equity”, Marketing Letters, Vol. Vol.7 ,No. 3, pp. 237-47.
- Atilgan, E., Aksoy, S., and Akinci, S., (2005), “Determinants of the brand equity A verification approach in the beverage industry in Turkey”, Marketing Intelligence and Planning, Vol. 23 No. 3, pp. 237-248.
- Anderson, j., (2007), “Brand equity: The perpetuity perspective” American Marketing Association: winter 2007, pp.142-143.
- Berry, L. L., (1993), “Relationship Marketing”, in Alex (2011) “Consumer Evaluations of Product Line Brand Extension” The IUP Journal of Brand Management, Vol. 5, and No. 1.
- Biedenbach, G., Marell, A., (2009), “The impact of customer experience on brand equity in a business-to-business services setting” , Journal of Brand Management, Vol. 17, No.6,pp. 446–458 .
- Bentler, P. M. (1992), “On the fit of models to covariances and methodology to the Bulletin. Psychological Bulletin”, 112, 400–404. In: Byrne, Barbara M.,(2010) “Structural equation modeling with AMOS: basic concepts, applications, and programming” -2nd ed.
- Browne, M. W. and Cudeck, R., (1993), “Alternative ways of assessing model fit”. In: Byrne, Barbara M.(2010) “Structural equation modeling with AMOS: basic concepts, applications, and programming” -2nd ed.
- Campbell, M. C.and Keller, K. L. (2003), “Brand familiarity and advertising repetition effects”. Journal of Consumer Research,Vol 30 (2), pp. 292-301.
- Chaudhuri, A., and M. B. Holbrook. (2001). “The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty”. Journal of Marketing, Vol.65 (2):pp. 81–93.
- Cobb-Walgren, C. J., Ruble, C. A., and Donthu, N., (1995), “Brand Equity, Brand Preference, and Purchase Intent”, Journal of Advertising, Vol. 24, No. 3, pp. 25-40.

- Delgado, E. and Munuera, J. (2005), “Does brand trust matter to brand equity?”, *Journal of Product and Brand Management*, Vol. 14 No. 3, pp. 187-96.
- Dawar, N., and Pillutla, M. M., (2000), “Impact of product-harm crises on brand equity: The moderating role of consumer expectations”, *Journal of Marketing Research*, Vol. 37, No. 2, pp. 215-226.
- Dodds, W.B., Monroe, K.B., and Grewal, D., (1991), “Effects of Price, Brand, and Store Information on Buyers' Product Evaluations”, *Journal of Marketing Research*, Vol. 28, pp.307-319.
- Doyle, P., (2001), “Shareholder-value-based brand strategies”, *Journal of Brand Management*, Vol. 9(1), pp. 20-30.
- Dick, A. S., and Basu, K., (1994), “Customer Loyalty: Toward an Integrated Conceptual Framework”, *Journal of the Academy of Marketing Science*, Vol.22, No.2,pp.99-113.
- Erdem, T., Swait, J., and Louviere, J., (2002), “The impact of brand credibility on consumer price sensitivity”, *International Journal of Research in Marketing*, Vol. 19 (1), pp. 1-19.
- Fuller, J., Matzler, K., & Hoppe, M., (2008), “Brand community members as a source of innovation”, *The Journal of Product Innovation Management*, Vol.25, pp.608-619.
- Garbarino, E., Johnson, M. S., (1999), “The Different Roles of Satisfaction, Trust, and Commitment in Customer Relationships”, *Journal of Marketing*, Vol. 63 (2), pp.70-87.
- Gil, R. B., Andre´s, E. F., and Salinas, E. M., (2007), “Family as a source of consumer-based brand equity”, *Journal of Product and Brand Management*, Vol.16, No. 3, pp. 188-199.
- Grewal D, Monroe K. B., and Krishnan R., (1998), “The Effects of Price-Comparison Advertising on Buyers' Perceptions of Acquisition Value, and Behavioral Intentions”, *Journal of Marketing*, Vol. 62, No. 2, pp. 46-59.
- Jaccard, J., and Wan, C. K., (1996), “Lisrel Approaches to Interaction Effect in Multiple regression”. California, USA: Sage Publications Inc.
- Juntunen, M., Juntunen, J., and Juga, J., (2011), “Corporate brand equity and loyalty in B2B markets: A study among logistics service purchasers”, *Journal of Brand Management*, Vol. 18, No.4-5, pp. 300–311.
- Kambiz, H., Samaneh, S., (2011), “Evaluating the role of information provided by the family and the company as sources of brand equity”, *Middle-East journal of scientific research*, Vol.7 (6):pp.851-858.
- Keller, K.L., (1993), “Conceptualizing measuring and managing customer-based brand equity”, *Journal of Marketing*, Vol. 57 pp.1-22.
- Kotler,P. and Keller, K.L., (2006), “Marketing management” Pearson Education, Inc., Upper Saddle River, New Jersey.

- Lassar, W., Mittal, B., and Sharma, A., (1995), “Measuring customer-based brand equity”, *Journal of Consumer Marketing*, Vol. 12, No. 4, pp. 11–19.
- Li, F., Zhou, N., Kashyap, R., and Yang, Z., (2008), “Brand trust as a second-order factor: An alternative measurement model”. *International Journal of Market Research*, Vol.50 (6), pp.817-839.
- Malhotra, N.K., (2004), “Marketing Research”, Prentice Hall, Fourth Edition.
- Matzler, K., Grabner-Krauter, S., and Bidmon, S., (2008), “Risk aversion and brand loyalty: the mediating role of brand trust and brand affect”. *Journal of Product and Brand Management*, Vol.17 (3),pp. 154–162.
- Ming, T.T., and Ismail, H.B., Rasiah, D., (2011). “Hierarchical Chain of Consumer-Based Brand Equity: Review From The Fast Food Industry”. *International Business & Economics Research Journal* . Vol,10 .No.9: p.p67–80.
- Mishra, P., and Datta, B., (2011), “Perpetual Asset Management of Customer-Based Brand Equity-The PAM Evaluator”, *Current Research Journal of Social Sciences*, 3(1): pp.34-43.
- Moorman, C., Zaltman, G., and Deshpande, R., (1992), Relationships between providers and users of marketing research: The dynamics of trust within and between organizations. *Journal of Marketing Research*, 29(3), 314–329
- Ramos, A. F. and Franco, S.J., (2005), “the Impact of Marketing Communication and Price Promotion on Brand Equity” *Brand Management*, 12(6), pp. 431-444.
- Rossiter, J.R. and Percy, L., (1987), “Advertising and Promotion Management”, McGraw-Hill, New York, NY.
- Simon, C.J., and Sullivan, M.W., (1993), “The Measurement and Determinants of Brand Equity: A Financial Approach”, *Marketing Science*, 12(1), pp. 28-52.
- Sung, Y., Kim, J. and Jung, J., (2010), “The Predictive Roles of Brand Personality on Brand Trust and Brand Affect: A Study of Korean Consumers”, *Journal of International Consumer Marketing*, 22:5–17, pp.5-17.
- Tong, X., and Hawley, J.M., (2009), “Creating brand equity in the Chinese clothing market The effect of selected marketing activities on brand equity dimensions”, *Journal of Fashion Marketing and Management*, Vol. 13, No. 4, pp. 566-581.
- Xingyuan, W., Li, F, and Wei, Y., (2010), “How Do They Really Help? An Empirical Study of the Role of Different Information Sources in Building Brand Trust?”, *Journal of Global Marketing*, , pp. 243–252.

Yasin, N. M., Noor, M. N., and Mohamad, O., (2007), “Does image of country-of-origin matter to brand equity?”, *Journal of Product and Brand Management*, Vol.16, No. 1, pp. 38-48.

Yoo, B., Donthu, N., and Lee, S., (2000), “An Examination of Selected Marketing Mix Elements and Brand Equity”, *Journal of the Academy of Marketing Science*, Vol. 28, No.2, pp. 195-211.

Zeithaml, V.A., (1988), “Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence”, *Journal of Marketing*, Vol. 52 No. 3, pp. 2-22.