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INVESTIGATION EFFECT OF BRAND EQUITY ON THE OPERATIONAL PERFORMANCE IN ADIDAS PRODUCTS

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Abstract
This study aims to investigate the effect of brand loyalty, brand association, brand awareness, and perceived quality on the brand equity and effect of the brand equity on the operational performance in Adidas products in Iran. The tool that were used in this research was questionnaire. In the first stage 418 questionnaires were distributed among students, then in the next step we could receive 395 questionnaires. Structural Equation Modeling (SEM) with Lisrel software was tested for the data analysis in this study. The results of this research suggest that there is a meaningful relationship and correlation between brand equity and operational performance. In fact, four variables including brand loyalty, brand association, brand awareness, and perceived quality has a direct effect on the brand equity and brand equity has a direct effect on operational performance.

Introduction
One of the top popular and potentially significant marketing concepts that has been extensively discussed by both academicians and practitioners over the past decade is brand equity. It has become necessary for brand managers to comprehend and measure brand equity (Ambler, 2003). To the best of our knowledge, research studies in this area have been deficient.
In spite of considerable share in the concept of customer based brand equity, there have been few efforts at its measurement in the Adidas Products.
The results of this study will not only enrich the field of research pertaining to the use of brand equity for leveraging business performance, but also help brand managers of Adidas Company to manage their brands productivity.
The principal purpose of the study is to determine the reasonable association between brand equity and operational business performance. The practical implications of this research can be useful to managers in organizations to leverage brand equity to upgrade operational performance of their businesses.
The concept of brand equity can be operationalized from two aspects: from the aspect of consumer comprehension (cognitive approach) and that involving consumer behavior (behavioral approach) (Silverman, etal.1998). The consumer perceptions approach such as brand awareness, brand associations and perceived quality. The consumer behavior approach includes brand loyalty and the focus on paying a price differential (Myers, 2003).
The brand assets/liabilities are classified to five types: brand loyalty, brand name awareness, perceived brand quality, brand associations, and other proprietary brand assets. Other proprietary brand assets include patents, trademarks, and channel relationships.
The increasing number of brands in international markets necessitates the development of valid and trustworthy brand equity measures that can be generalize across different countries (Buil, etal.2008). Eccles (1991) has stated that there has been a revolution in performance measurement, desire organizations to stress of non-financial performance measures. There are persuasive reasons for viewing business performance in terms broader than business economic performance. (Venkatraman & Ramanujam, 1987).
Companies invest many of resources in building and maintaining their brands. Companies must consequently manage by metrics and balance short and long-term viewpoint and performance. According to the some researchers, by 2020, branding will become the most significant value driver for boardrooms (Roll, 2009).
Baldauf, et al. (2003) found that brand equity components brand awareness, perceived quality, and brand loyalty to be positively related to brand profitability performance and brand market performance. Tolba and Hassan (2009) concluded that brand equity constructs are correlated with brand market performance.
Theoretical background and hypotheses development.

INTERNATIONALJOURNALOFRESEARCH SCIENCE& MANAGEMENT

Brand loyalty: was considered one of the most important determinants of brand equity (Aaker, 1991; Yoo et al., 2000).nt.
Brand awareness*:* is depended on the operation of brand identities in consumer's memory and can be reflected by how well the consumers can identify the brand under a variety of situations. (Keller, Kevin 1993)
Brand equity*:* is a phrase used in the marketing industry which indicates the value of having a famous brand name can bring more money from products with that brand name than from products with a less famous name, as consumers believe that a product with a famous name is better than products with a less famous names. (Aaker, David A 1991, Keller, Kevin 2003, etal.)
Brand association: The associations form the starting point of the consumer's impressions and opinions of a brand and for the choices consumers make about buying and using different brands (Keller 2001).
Perceived quality: MITRA & Golder (2006) believed that the perceived quality were from the consumers own experience or others and the business related marketing information by introducing the quality expedition in the definition of perceived quality.
Operational performance*:* The present study is based on the conceptualization of operational performance by Venkatraman and Ramanujam (1986), where, the operational performance of the companies is measured by the market share. However, financial measures of performance alone cannot guide an organization to market dominance. Non-financial performance indicators also have to be measured and improved (Kaplan & Norton, 1996).
H1: Brand loyalty has a direct impact on brand equity.
H2: Brand awareness has a direct impact on brand equity.
H3: Brand association has a direct impact on brand equity.
H4: Perceived quality has a direct impact on brand equity.
H5: Brand equity has a direct impact on operational performance.

Methodology
Measures
The hypothetical constructs were all measured using a five point Likert scale anchored from 1(strongly disagree) to 5(strongly agree). four dimensions of brand equity were considered for scale development. Five items were designed to measure brand awareness. Six items measured brand loyalty, and four items measured perceived quality. The six-item scale for brand loyalty was adapted from measures developed by Aaker (1996), Odin, Odin, and Vallette-Florence (2001), Yoo and Donthu (2001) and Beatty and Kahle (1988). The four items of perceived quality were derived from Dodds, Monroe, and Grewal (1991). Ten items were used to measure brand association. Four brand equity items were designed to capture the overall brand equity. The results indicated that the validity and reliability of the measurement were adequate.
Data collection and sampling
The tool that were used in this research was questionnaire. The questionnaire consists of two parts. Part (I) included demographic information related to age, education, income, and gender. Part (II) consists of questions specific to Adidas products. Questions in part (II) were multiple choice questions and related to brand equity. To examine the hypotheses a comprehensive survey was conducted among Molana University students. At first, we distributed a notification questionnaire among 418 respondents. In the next step, we could receive 395 questionnaires. 58 percent of respondents were male and 42 percent were women.

Results
In order to test of Hypothesis we conducted structural equation modeling (SEM) analyses. The model for these analyses included four exogenous latent factors, Brand associations, Brand awareness, Brand loyalty and Perceived quality. Finally, the hypothesized model also included two latent endogenous factors, Brand equity and Operational performance. The fit of the models was assessed with the 2 statistic, the Goodness- of-Fit Index (GFI), and the root mean square error of approximation (RMSEA). In addition, we used the Comparative Fit Index (CFI), the Incremental Fit Index (IFI), and the Non-Normed Fit Index (NNFI). For each of these statistics, values of 0.90 or higher are acceptable (Hoyle, 1995), except for the RMSEA for which values up to 0.08 indicate an acceptable fit to the data (MacCallum, Browne, & Sugawara, 1996). Furthermore, we controlled for the 90% confidence intervals around the RMSEA. A narrow confidence interval is an indication for good precision of the RMSEA (MacCallum et al, 1996).
Descriptive results, measurement model and convergent validity
Means, standard deviations, and correlations between the variables, as well as the internal consistencies of the scales are presented in Table 1. As depicted in Table 1, the means of the constructs range from 3.093(for brand

INTERNATIONALJOURNALOFRESEARCH SCIENCE& MANAGEMENT

equity) to 3.438 (for brand loyalty). The convergent and discriminant validity of the constructs were tested by confirmatory factor analysis using the ordinary Least Squares estimator of LISREL 8.73 (Joreskog & Sorbom, 1996). The discriminant validity of the scales was checked by the Fornell and Larcker's (1981) formula. As can be seen from Table 1, it can be seen that the values in the diagonals are greater than the values in their respective row and column thus indicating the measures used in this study are distinct. Composite reliability and average variance extracted to assess convergence validity (see table1). Composite reliabilities range from 0.923 (for brand awareness) to 0.93 (for perceived quality), which exceed the recommended level of 0.7, (see table 1), therefore, demonstrate a reasonable reliability level of the measured items. We used the factor loadings (see table2), the recommended values for loadings are set at > 0.5. From table 1 it can be seen that the results of the measurement model exceeded the recommended values thus indicating sufficient convergence validity.

Goodness of fit statistics

The primary method for model testing was structural equations modelling by means of LISREL 8.73 and the polychromic correlation matrix as input. Ordinary Least Squares was used as the model estimation method due to using ordinal scales for measurement (Joreskog & Sorbom, 1996). This testing confirms a model's goodness of fit, and the hypothesized paths. Results of SEM analysis showed that model fits well to the data, (Chi-Square=177.57, DF=124, RMSEA=0.038, CFI=0.99, NFI=0.98, NNFI=0.99, GFI=0.95) (see fig1).

Table1. Descriptive Statistics, Bivariate Correlations, AVE, CR, CA and mean

Construct	**BAS**	**VAW**	**BL**	**PQ**	**BE**	**OP**	AVE	CR	CA	Mean
brand associations	**0.902**						0.814	0.929	0.886	3.447
brand awareness	0.272	**0.895**					0.801	0.923	0.876	3.153
brand loyalty	0.307	0.229	**0.895**				0.802	0.924	0.877	3.438
perceived quality	0.244	0.251	0.254	**0.904**			0.817	0.930	0.888	3.280
brand equity	0.379	0.36	0.377	0.416	**0.897**		0.805	0.925	0.879	3.096
operational performance	0.42	0.294	0.356	0.341	0.494	**0.9**	0.810	0.927	0.883	3.222

The diagonal figures in bold indicate the average variances extracted (AVE) for constructs. The scores in the upper diagonal are Pearson correlations.

Table 2. Loading factors

construct	items	Loading factors	t-value
Brand associations	BAS1	0.93	20.16
	BAS2	0.84	18.77
	BAS3	0.94	19.77
Brand awareness	BAW1	0.87	18.28
	BAW2	0.92	18.77
	BAW3	0.96	19.85
Brand loyalty	Bl1	0.89	19.71
	Bl2	0.86	18.88
	Bl3	0.91	18.54
Perceived quality	PQ1	0.91	20.14
	PQ2	0.97	19.81
	PQ3	0.87	18.98
Brand equity	BE1	0.99	-
	BE2	0.94	18.13
	BE3	1	19.36
Operational performance	OP1	0.93	-
	OP2	0.96	19.34
	OP3	0.95	18.45

INTERNATIONALJOURNALOFRESEARCH SCIENCE& MANAGEMENT

Structural model

In order to test the mediation effects formulated in Hypothesis, we followed Baron and Kenny's approach (1986), according to which there are four steps in establishing a significant mediation effect. First, there must be a significant relationship between the predictor and the outcome. Second, the predictor must be significantly related to the mediator. Third, the mediator should be significantly related to the outcome variable. Finally, there is a significant mediation effect when the relationship between the predictor and the outcome becomes significantly weaker (partial mediation) or nonsignificant (full mediation), after the inclusion of the mediator. The Sobel T test was used to examine the significance of the indirect effect. As shown in Table 3. To evaluate the structural models' predictive power, we calculated the R^2, R^2 indicates the amount of variance explained by the exogenous variables (Barclay et al.1995). Using a T-value technique with a sampling of 378, the path estimates and t-statistics were calculated for the hypothesized relationships: As shown in Table 3 and fig 1, the path coefficients and result of hypotheses.

Table 3. Hypothesis Testing

effects	Hypothesis	Beta	t-value	R^2	Result	Sign
Direct	Brand associations → Brand equity	0.22	4.14	0.57	Supported	+
	Brand awareness → Brand equity	0.21	3.95		Supported	+
	Brand loyalty → Brand equity	0.23	4.25		Supported	+
	Perceived quality → Brand equity	0.30	5.68		Supported	+
	Brand equity → Operational performance	0.59	10.52	0.35	Supported	+
Indirect	Brand associations → Brand equity→ Operational performance	0.13	3.92	0.15	Supported	+
	Brand awareness → Brand equity→ Operational performance	0.12	3.76		Supported	+
	Brand loyalty → Brand equity→ Operational performance	0.13	4.02		Supported	+
	Perceived quality → Brand equity→ Operational performance	0.18	5.16		Supported	+

|t|>1.96 Significant at P<0.05, |t|>2.58 Significant at P<0.01,

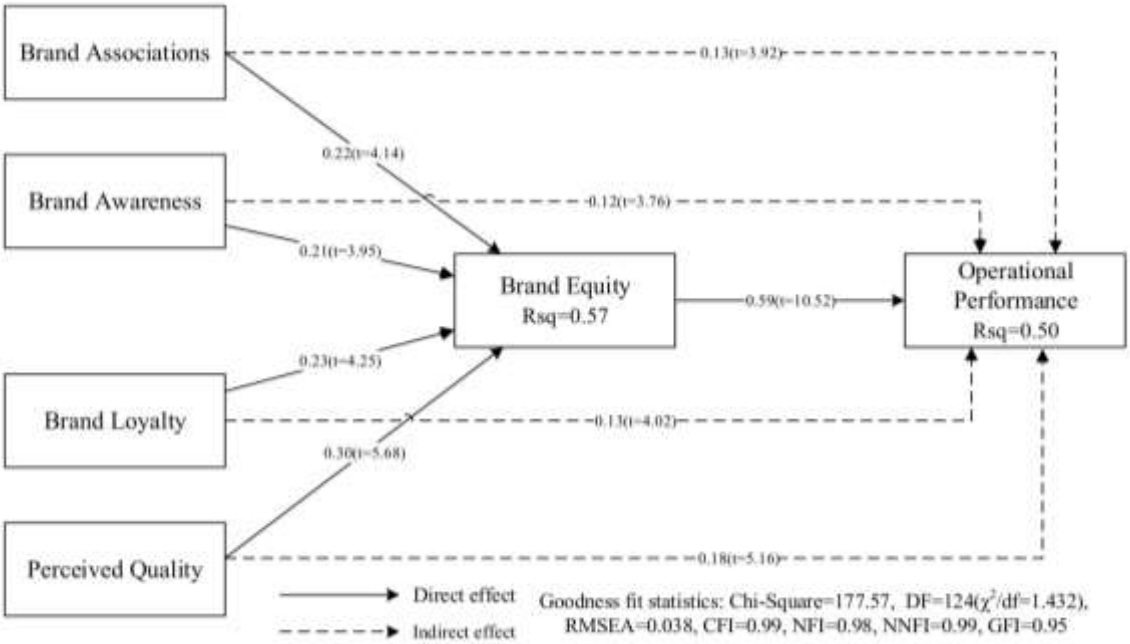

Fig 1 Research Model in Estimation and Significant situation

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Conclusions

In this research we investigated effect of brand loyalty, brand awareness, brand association, and perceived quality on the brand equity and operational performance. The results of this study guides us to substantiation the strong influence of brand loyalty, brand awareness, brand association, and perceived quality on brand equity and provide rugged support for the value of research on brand equity in the Adidas products. A high balance of variance on overall brand equity was predicted by the brand association, brand loyalty and perceived quality dimensions. This research also earned relationship between brand equity and operational performance . The impact of a brand equity on the operational performance is consequential and important. The result from the study provide substantial insight for brand manager to justify the resources spent on building brand equity.

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