The Mediation Role of Brand Equity in Achieving Customers Brand Satisfaction and Commitment in the Egyptian Banking Sector

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Abstract

Egyptian banks face various challenges, including intensified competition from new banks, competition from non-banking enterprises, new and expensive technologies, and instability in the economic and political macro environment. Therefore, branding becomes an important topic nowadays with the increasing competitiveness in the banking sector. This paper will discuss the relations between Brand Equity antecedents; Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness and Customer Brand Loyalty and the research dependent variables; Brand Commitment and Brand Satisfaction taking in consideration Brand Equity as a mediator. The research methodology adopted is based on the development of a questionnaire that allows for the measurement of customers' perceptions and past experiences with brands. The adoption of this data-collection method was due to the need to measure the focal constructs of the model, as well as the extensive use of survey methodology in previous studies examining customer branding. A correlation, regression and SEM were applied as an in-depth statistical tool of measuring the direct and indirect hypothesized relations. It was found that there is a significant full mediation role of Brand Equity between the independent variables and Brand Satisfaction and Brand Commitment, except for Brand Engagement, implying that Brand Equity is a key role of achieving Customer Satisfaction and Commitment through gaining a competitive advantage.

Keywords: Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty, Brand Commitment and Brand Satisfaction.

تتعرض البنوك المصرية للكثير من التحديات المتمثلة في التنافس القوي من البنوك الجديدة التي تدخل السوق المصرية، إلى جانب المؤسسات المالية غير البنكية، والتكنولوجيات الحديثة ذات التكاليف العالية، وعدم الاستقرار الاقتصادي والسياسي في البيئة المحيطة. وبناء عليه، فقد أصبحت العلامات التجارية أحد أهم الوسائل للحصول على ميزة تنافسية ضمن بنوك السوق المصرية. ويناقش هذا البحث العلاقة بين المتغيرات المؤثرة على العلامات التجارية - مثل جذب العملاء، تجربة العملاء، إدراك العملاء وولاء العملاء – والمتغيرات التابعة – وهي رضاء والتزام العملاء. كما يناقش البحث دور الوسيط للعلامات التجربة بين العلاقات السابق ذكرها وبعضها البعض. وقد قام الباحث باعداد الاستقصاء الخاص بمتغيرات البحث وتحليل البيانات باستخدام تحليل الارتباط والانحدار وبناء نموذج المعادلة الهيكلية. وقد أظهرت النتائج الدور المعنوي للعلامات التجارية بين كل من المتغيرات المستقلة والتابعة، مما يستلزم اهتمام البنوك بالعلامات التجارية وتوعية العملاء بها وبدورها للحصول على الميزة التنافسية المطلوبة من خلال رضاء والتزام العملاء باستخدام علامة تجارية دون غيرها.

1 Introduction

As the current economic environment becomes more competitive and introducing new brands becomes increasingly costly, companies must find new strategies to increase their capacity and competitiveness (Lee et al., 2011). A wide variety of programs have been developed and implemented to increase customer loyalty. Most of these programs are directed to customers' functional and economic benefits, like price-discounts, coupons, and mileage programs. It should be highlighted that these types of loyalty programs are not adequate to simultaneously increase multifaceted customer loyalty despite their importance (Gustafsson et al., 2005). That is, increasing customer loyalty in a full sense requires a series of customized marketing strategies altered to various loyalty types (Hur et al., 2011).

Branding has been described as "the cornerstone of services marketing for the twenty-first century" (Berry, 2000, p. 129). In fact, due to the inherent service characteristics (i.e. tangibility, inseparability, heterogeneity and perishability), it has been argued that the notion of branding is more important to services than to physical goods (Kapferer, 2004). There is a difference between products and services, where it was emphasized that what is really important is the services for all organizations; whether they are introducing products or services. New perspectives for marketing have emerged in which service provision rather than goods is fundamental to economic exchange. With this approach in mind, organizations need to appreciate how to effectively market the service component of their product offering in order for a competitive advantage to be realized. In the context of services, as fewer tangible cues exist to assist customers in making decisions when purchasing services (Javalgi et al., 2006), brand name is considered as a source of information and risk reducer, simplifying the decision-making process (Kayaman and Arasli, 2007).

While customer pre-purchase evaluation of services has largely changed as a result of the advancement of the internet and its facilitation of greater customer access to various consumption-related information (Peterson et al., 1997; Moon, 2004), it has not completely resolved the issues that are inherent when marketing a service. Access to greater information can reduce the customer's perceived risk level with respect to service purchase decisions. However, such availability of information

is unlikely to replace the actual experience for services that are high in experience qualities. In situations, such as these, a strong brand is a requirement for reducing the challenges customers may face when making a purchase decision. Therefore, a strong service brand is considered as a promise of future satisfaction, as well as developing customer trust associated with the invisible purchase (Berry, 2000).

The competitive advantage of firms that have brands with high equity include price premiums, increased customer demand, brands that can be extended easily to competitive marketing activity (Keller, 2003). Early studies engrossed on the financial influence of branding strategies, finding that branded products delivered higher yields (Kalafatis et al., 2012). Branding started in the form of fast-moving consumer goods industry (FMCG), where traditional models of brand equity developed by Aaker (1991, 2002), Keller (1993, 2003) have been largely inspired by that industry. There is no uncertainty that the service industry can benefit from the knowledge accumulated by consumer goods firms. Nonetheless, the nature of services, specifically their immateriality and the inseparability between production and consumption requires a different method to build an influential service brand. In the services marketing literature, a few authors have recommended new methods to establish a strong brand in the service sector, such as De Chernatony (2002) and Berry (2000). They identify and emphasize the significance of employees during their communications with customers and their capability to refine the brand values (Zeithaml and Bitner, 1998; Bitner et al., 1990; Parasuraman et al., 1988) in order to generate a specific meaning to the brands (Kimpakorn & Tocquer, 2010).

Therefore, this research comes to test the influence of Customer Engagement, Experience, Awareness and Loyalty on Brand Satisfaction and Commitment to know the right and effective approach of Brand Equity for achieving the Brand Commitment and Satisfaction. This research addresses the issue of how Egyptian banks respond to various challenges that are disrupting the traditional business model. Also, it is investigating the mediation role Brand Equity in the mentioned relationships. The following section will present a review of literature of the Brand Equity antecedents and how they might impact Satisfaction and Commitment. The third section will present the methodology of the current research, while the fourth section will present the results and

findings. Finally, the fifth section will provide the conclusion of the research and main recommendations for future research.

2 Literature Review

Commitment was firstly defined as the development of stable relationships with partners, accepting short-term problems to maintain relationships and assuring the stability of the relationships (Anderson and Weitz, 1992). Therefore, Commitment is considered as a core feature of relationship marketing management and as a requirement for achieving a company's goals. When a customer is committed to a brand or a company, it is highly likely that the customer will cooperate actively and will not easily be attracted to competitors, which in turn will increase profits. In addition, commitment is viewed as the source of competitiveness as it has causal relations with a company's cost reduction and profit increase, the word-of-mouth effect through recommendations, and a premium pricing effect (Hur et al, 2011).

Customer-based brand equity happens as soon as customers are aware with the brand and grasp favorable, strong and unique brand associations in memory (Keller, 1993). Aaker (1996b) has stated that BE is a set of assets and liabilities. Five brand equity assets – brand loyalty, brand awareness, perceived quality, brand association and other proprietary brand assets – are fundamentals of value creation. This study uses these five brand equity groupings from Aaker (1991), as they are the most acceptable to-date. As brand equity is a multidimensional thought (Aaker, 1991), there was a variety of ways measuring the dimensions for branding – some include brand loyalty and brand association (Shocker and Weitz, 1988). There is also brand knowledge, which comprises of brand awareness and brand image (Keller, 1993). Furthermore, Yoo et al. (2000) have suggested that perceived quality, brand loyalty and brand awareness have a strong brand association. Among the five brand equity assets, it is very difficult to operate a consumer's observation of brand association in an experiment (Pappu et al., 2006).

Furthermore, other proprietary brand assets, such as patents, are not easy to assess. Therefore, the current study uses brand loyalty, brand association and perceived quality as the dimensions of BE. Brand loyalty is randraa significant contemplation when assessing the value of a brand as loyalty can translate into profit (Aaker, 1991). Brand loyalty

is a barrier for new entrants and forms the basis for a price premium (Aaker, 1996b). Brand loyalty also encourages repeated purchase behavior from consumers, and discourages them from switching to competitor brands (Yoo et al., 2000). Therefore, the greater the customer loyalty, the higher the BE will be. Perceived quality is another dimension of brand value that can encourage customers to choose a product or service (Zeithaml, 1988).

"Perceived quality can be definite as the customer's observation of the overall quality or advantage of a product or service with respect to its future purpose, relative to substitutions" (Aaker, 1991). Customers' product experiences, expenditure situations and unique needs might innfluence their decision of product quality (Yoo et al., 2000). Since customers make their choices based on product attributes and compare these to other products, perceived quality is not an objective measure. Perceived quality can increase customer satisfaction, provided the customer has had some previous experience with the product or service (Aaker, 1996a). Hence, perceived quality is generally associated with BE (Motameni and Shahrokhi, 1998), and the better the perceived quality, the greater the BE (Yoo et al., 2000). From a brand association perspective, Aaker (1991) felt that BE is closely related to brand association. "A brand association is anything linked in memory to a brand" (Aaker, 1996a).

Keller (1998) suggested that brand association can be divided into three major categories: attributes (including product-related attributes and non-product-related attributes such as price, brand personality, emotions and experience), benefits (what customers think the product or service can do for them, including functional benefits, symbolic benefits and experiential benefits) and attitudes (customers' overall evaluations of the brand). The most powerful brand associations are those that deal with the intangible or abstract traits of a product. Brand association can assist with spontaneous information recall (Osselaer and Janiszewski, 2001) and this information can become the basis of differentiation and extension (Aaker, 1996b). Strong association can help strengthen brand and equity. Similar to perceived quality, brand association can also increase customer satisfaction with the customer experience (Lee et al., 2011).

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Therefore, BE from the customer perspective suggests that positive BE occurs when the customer responds more favorably to a marketing activity (e.g. advertising and promotion) for the brand than they do to the same activity for an unbranded product or service from the same category (Keller, 1993). For example, measuring customer BE overtime allows managers to understand how the firm's marketing activities affect brand knowledge held by customers, and how changes in such knowledge affect sales. To realize such important insight, a number of brand models have been developed for the distinct purpose of understanding the elements of customer-based BE (Berry, 2000).

Berry's (2000) emphasis on customer experience in building service brands can be described by the fact that the customer's awareness of a service brand, while initially designed by the marketing department through external communication, eventually rests on employee-customer interaction and the reliability of service delivery that is managed internally within the service firm (McDonald et al., 2001). Further indication of the significance of the customer's experience is provided in the relation marketing literature (Berry, 2002; Lewis, 1989). In addition to cutting off costs to gain new customers, the relation marketing literature encourages that a key benefit of retaining customers is the capability to progress expertise within the customer base, thereby providing better service encounters (Hennig-Thurau et al., 2002).

In illumination the creation of service BE, the model captures the importance of service experience, which has been overlooked in Aaker (1991) and Keller's (1993) theoretical models. Furthermore, Berry's (2000) model clearly allocates areas of management responsibilities in building a service brand. The following section will investigate the model under study and propose the methodology used by the researcher to test the assigned relationships.

3 Research Methodology

In order to test the research hypotheses that underpin this study, the research methodology adopted is based on the development of a questionnaire that allows for the measurement of customers' perceptions and past experiences with brands. The adoption of this data-collection method was due to the need to measure the focal constructs of the

model, as well as the extensive use of survey methodology in previous studies examining customer branding. The questionnaire is shown in the appendix, where a total number of 28 statements were defined for the research variables. Respondents were randomly selected from customers of the Egyptian public banking sector. A total number of 429 were considered in the study after excluding questionnaire with missing responses from three banks currently representing the public sector of banks in Egypt. Thus, the sample is considered as a stratified random probability sampling, as respondents are considered from the three banks representing the public sector. The proposed framework was introduced in Figure 1, where it could be observed that Customers Engagement, Experience, Awareness and Loyalty were considered as the independent variables; Brand Satisfaction and Commitment are considered as the dependent variables, while BE is considered as the mediator.
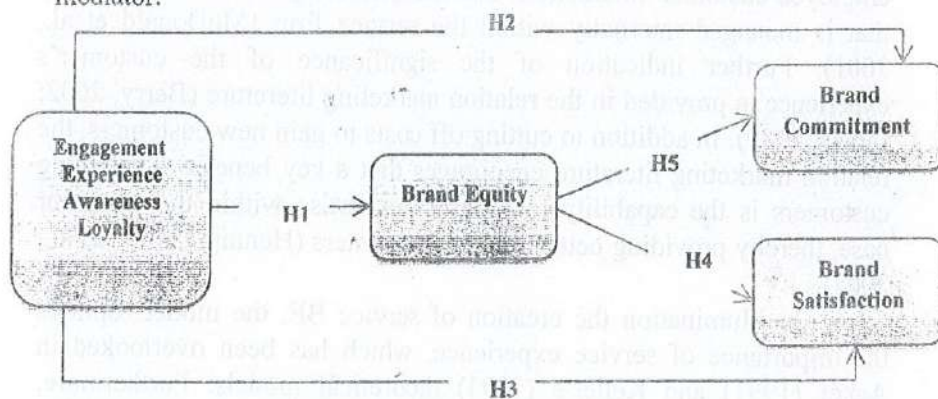
Figure 1   Research Framework

Accordingly, the research hypotheses could be formulated as follows:

H_1: There is a significant influence of Brand Equity Antecedents on BE.

H_2: There is a significant influence of BE Antecedents on Brand Commitment.

H_3: There is a significant influence of Brand Equity Antecedents on Brand Satisfaction.

H_4: There is a significant influence of BE on Brand Commitment.

H_5: There is a significant influence of BE on Brand Satisfaction.

H_6: BE mediates the relation between Brand Equity Antecedents and Brand Commitment.

H_7: Brand Equity mediates the relation between BE Antecedents and Brand Satisfaction.

The following section will investigate the research hypotheses proposed above using correlation analysis and Structural Equation Modeling (SEM). Thus, both; SPSS and AMOS statistical packages – versions 24.

4 Results and Findings

This section will include validity and reliability tests. The collected data cannot be used until these tests are applied and give the result that this data is valid and reliable. At this point data could be used for testing the research hypotheses. The questionnaire statements are designed in which it can measure what it expected to measure correctly, this what is called validity (Sekaran & Bougie, 2010). To measure the factor validity, the average variance extracted (AVE) is used to represent the average community for each latent factor. This measure should exceed 0.5 to state adequate validity (Hair et al., 1998). Then Factor loading for each item is used to examine validity, in which it should be 0.4 minimum (Chin, 1998).

To examine reliability, each factor is measured using a group of statements, the consistency between these statements refers to reliability in which it can be examined by Cronbach's Alpha, the most common used test of reliability. The range of Alpha coefficient comes between 0 to 1, the higher the score the higher the reliability. The adequate reliability should be referred by Alpha coefficients exceeding 0.7(Nunnally, 1978). Validity testing and reliability of the data used for this research were displayed in Table 1.

By studying the variables in the model which consists of Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty, Brand Equity, Brand Commitment and Brand Satisfaction, it was found that all variables exceed the 50% in the AVE indicator and also exceeding 0.4 factor loading for each item.

Table 1: Data Validation

Variables	KMO	AVE	Cronbach's Alpha	Items	Item Loading
ENG	0.719	75.082%	0.889	ENG1	.773
				ENG2	.751
				ENG3	.723
				ENG4	.757
EXP	0.830	76.267%	0.896	EXP1	.794
				EXP2	.751
				EXP3	.725
				EXP4	.782
AWA	0.687	81.800%	0.919	AWA1	.862
				AWA2	.723
				AWA3	.947
				AWA4	.740
LOY	0.819	77.293%	0.900	LOY1	.771
				LOY2	.723
				LOY3	.773
				LOY4	.825
BE	0.828	78.667%	0.908	BE1	.740
				BE2	.859
				BE3	.746
				BE4	.802
BC	0.777	75.509%	0.890	BC1	.781
				BC2	.806
				BC3	.712
				BC4	.721
BS	0.713	56.203%	0.740	BS1	.622
				BS2	.525
				BS3	.472
				BS4	.629

Descriptive analysis provides summary statistics about the research variables, including the mean, median, variance and standard deviations. Table 2 shows the descriptive analysis for the research

variables. It was observed that the mean of Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty, Brand Equity, Brand Commitment and Brand Satisfaction are 2.3566, 2.4592, 2.6037, 2.3823, 2.5664, 3.5385 and 4.4149 respectively.

Table 2: Descriptive Analysis

Research Variables	N	Mean	Variance	Std. Deviation	Frequency Percent				
					1	2	3	4	5
ENG	429	2.3566	0.716	0.84615	14.5	44.3	33.3	7.0	.9
EXP	429	2.4592	0.726	0.85179	12.4	39.9	38.2	8.6	.9
AWA	429	2.6037	0.698	0.83531	8.4	37.1	40.6	13.8	.2
LOY	429	2.3823	0.699	0.83625	13.5	43.1	36.1	6.1	1.2
BE	429	2.5664	0.657	0.81079	7.9	38.9	42.9	9.1	1.2
BC	429	3.5385	0.604	0.77733	.2	7.7	39.4	43.4	9.3
BS	429	4.4149	0.477	0.69063	.2	.7	8.2	39.2	51.7

Testing the Effect of Customer Brand Equity Antecedents on Brand Equity (BE)

Table 3 shows the correlation matrix between independent variables Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty and BE. There is a significant positive correlation between Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty and BE, as corresponding P-values is less than 0.05 and r>0. It was observed that the values of Pearson's correlation for the research variables; Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty and BE, are 0.757**, 0.692**, 0.660** and 0.714** respectively.

Table 3 Correlation Matrix between Customer Brand Equity Antecedents and B E

		ENG	EXP	AWA	LOY	BE
ENG	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	429				
EXP	Pearson Correlation	.758**	1			
	Sig. (2-tailed)	.000				
	N	429	429			
AWA	Pearson Correlation	.650**	.470**	1		
	Sig. (2-tailed)	.000	.000			
	N	429	429	429		
LOY	Pearson Correlation	.761**	.665**	.542**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	429	429	429	429	
BE	Pearson Correlation	.757**	.692**	.660**	.714**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	429	429	429	429	429

Table 4 shows the multiple regression analysis of the influence Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty on BE. It could be observed that the P-value of the whole model is 0.000 which stated a significant influence of the model generally on the BE. Also, the R square is 0.682 which means that the model explains 68.2% of the variation in BE. Then, it was found that P-values of the variables; Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty are 0.000, 0.000, 0.000 and 0.000, implying a positive significant impact of Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty on BE (β = 0.198, 0.229, 0.272 and 0.237).

Table 4: Regression Model of Customer Brand Equity Antecedents on Brand Equity

Research Variables	Unstandardized Coefficients		Standardized Coefficients	T	P-value	Overall P-value	R Square
	B	Std. Error	Beta				
(Constant)	.264	.083		3.193	.002		
ENG	.198	.052	.206	3.811	.000		
EXP	.229	.041	.241	5.605	.000	0.000	0.682
AWA	.272	.035	.280	7.721	.000		
LOY	.237	.042	.245	5.638	.000		

Therefore, the regression equation can be stated as follows:

$$BE = 0.264 + 0.198 * ENG + 0.229 * EXP + 0.272 * AWA + 0.237 * LOY$$

Thus, the hypothesis that Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty has a significant impact on BE was fully supported.

Testing the Effect of Customer BE Antecedents on Brand Commitment

Table 5 shows the correlation matrix between independent variables of ENG; EXP, AWA, LOY, and BC. It was observed that the value of Pearson's correlation for the research variables; ENG, EXP, AWA, LOY, and BC are 0.634, 0.573, 0.549, and 0.603 respectively, with P-values of 0.000. Thus, there is a significant positive correlation between BC and Research variables.

Table 5   **Customer BE Antecedents and Brand Commitment**

		1	2	3	4	5
ENG	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	429				
EXP	Pearson Correlation	.758**	1			
	Sig. (2-tailed)	.000				
	N	429	429			
AWA	Pearson Correlation	.650**	.470**	1		
	Sig. (2-tailed)	.000	.000			
	N	429	429	429		
LOY	Pearson Correlation	.761**	.665**	.542**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	429	429	429	429	
BC	Pearson Correlation	.634**	.573**	.549**	.603**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	429	429	429	429	429

Table 6 shows the multiple regression analysis of the impact of Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty on Brand Commitment. It could be observed that the P-values of the whole model are 0.000 which stated a significant impact of the model generally on the Brand Commitment. Also, the R square is 0.640 which means that the model explains 64% of the variation in Brand Commitment. Then, it was found that P-value of the variables; Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty are 0.000, 0.000, 0.000 and 0.000, implying a positive significant impact of Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty on Brand Commitment (β = 0.190, 207, 257 and 215).

Table 6: Regression Model of Customer BE Antecedents on Brand Commitment

Research Variables	Unstandardized Coefficients		Standardized Coefficients	T	P-value	Overall P-value	R Square
	B	Std. Error	Beta				
(Constant)	1.401	.084		16.623	.000		
ENG	.190	.053	.207	3.580	.000		
EXP	.207	.042	.226	4.945	.000	0.000	0.640
AWA	.257	.036	.276	7.155	.000		
LOY	.215	.043	.232	5.009	.000		

Therefore, the regression equation can be stated as follows:

Brand Commitment = 1.401 - 0.190 * ENG + 0.207 * EXP + 0.257 * AWA + 0.215* LOY

Thus, the second hypothesis that Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty have a significant impact on Brand Commitment was fully supported.

Testing the Effect of Customer BE Antecedents on Brand Satisfaction

Table 7 shows the correlation matrix between independent variables of Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty and Brand Satisfaction. There is a significant positive correlation between Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty and Brand Satisfaction, as corresponding P-values is less than 0.05 and r>0. It was observed that the value of Pearson's correlation for the research variables; Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty and Brand Satisfaction, are 0.734**, 0.667**, 0.642 and 0.689 respectively.

Table 5   Customer BE Antecedents and Brand Commitment

		1	2	3	4	5
ENG	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	429				
EXP	Pearson Correlation	.758**	1			
	Sig. (2-tailed)	.000				
	N	429	429			
AWA	Pearson Correlation	.650**	.470**	1		
	Sig. (2-tailed)	.000	.000			
	N	429	429	429		
LOY	Pearson Correlation	.761**	.665**	.542**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	429	429	429	429	
BC	Pearson Correlation	.634**	.573**	.549**	.603**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	429	429	429	429	429

Table 6 shows the multiple regression analysis of the impact of Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty on Brand Commitment. It could be observed that the P-values of the whole model are 0.000 which stated a significant impact of the model generally on the Brand Commitment. Also, the R square is 0.640 which means that the model explains 64% of the variation in Brand Commitment. Then, it was found that P-value of the variables; Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty are 0.000, 0.000, 0.000 and 0.000, implying a positive significant impact of Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty on Brand Commitment (β = 0.190, 207, 257 and 215).

Table 8: Regression Model of Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty and Brand Satisfaction

Research Variables	Unstandardized Coefficients		Standardized Coefficients	T	P-value	Overall P-value	R Square
	B	Std. Error	Beta				
(Constant)	2.781	.090		30.818	.000		
ENG	.146	.057	.178	2.566	.011		
EXP	.149	.045	.184	3.333	.001	0.000	0.476
AWA	.187	.038	.226	4.861	.000		
LOY	.183	.046	.222	3.982	.000		

Therefore, the regression equation can be stated as follows:
Brand Satisfaction = 2.781 + 0.146 * ENG + 0.149 * EXP - 0.187 * AWA - 0.183* LOY

Thus, the third hypothesis that Customer Brand Engagement, Customer Brand Experience, Customer Brand Awareness, Customer Brand Loyalty have a significant impact on Brand Satisfaction was fully supported.

Testing the Effect of Customer BE on Brand Commitment

Table 9 shows the correlation matrix between the independent variable; BE and the dependent variable; Brand Commitment. There is a significant positive correlation between BE and Brand Commitment, as corresponding P-value is less than 0.05 and Pearson's correlation coefficient r = 0.976**, which is greater than 0.

Table 9 Correlation Matrix between BE and Brand Commitment

		BE	BC
	Pearson Correlation	1	
BE	Sig. (2-tailed)		
	N	429	
	Pearson Correlation	.976**	1
BC	Sig. (2-tailed)	.000	
	N	429	429

Table 10 shows the simple regression model of the influence of BE on Brand Commitment. It could be observed that there is a positive significant influence of BE on Brand Commitment with regression coefficient β = 0.935, as well as P-value of 0.000, which is less than 0.05. Also, the R square is 0.952 which means that the model explains 95.2% of the variation in Brand Commitment.

Table 10 Regression Model BE and Brand Commitment

	Model	Unstandardized Coefficients		Standardized Coefficients	T	P-Value	R Square
		B	Std. Error	Beta			
1	(Constant)	1.138	.027		41.481	.000	
	Brand Equity	.935	.010	.976	91.743	.000	0.952

Therefore, the regression equation can be stated as follows:

Brand Commitment = 1.138 + 0.935 * BE

Thus, the fourth hypothesis was supported, which means that BE has a significant impact on Brand Commitment.

Testing the Effect of Customer BE on Brand Satisfaction

Table 11 shows the correlation matrix between the independent variable; BE and the dependent variable; Brand Satisfaction. There is a significant positive correlation between BE and Brand Satisfaction, as corresponding P-value is less than 0.05 and Pearson's correlation coefficient r = 0. 844**, which is greater than 0.

Table 11 Correlation Matrix between BE and Brand Satisfaction

		BE	BS
BE	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	429	
BS	Pearson Correlation	.844**	1
	Sig. (2-tailed)	.000	
	N	429	429

Table 12 shows the simple regression model of Brand Equity influence on Brand Satisfaction. It could be observed that there is a positive significant influence of Brand Equity with regression coefficient β = 0.719, as well as P-value of 0.000, which is less than 0.05. Also, the R square is 0.712 which means that the model explains 71.2% of the variation in Brand Satisfaction.

Table 12: Regression Model BE and Brand Satisfaction

Model	Unstandardized Coefficients		Standardized Coefficients	T	P- Value	R Square
	B	Std. Error	Beta			
(Constant)	2.571	.060		43.154	.000	0.712
1 Brand Equity	.719	.022	.844	32.462	.000	

Therefore, the regression equation can be stated as follows:

Brand Satisfaction = 2.571 + 0 19 * Brand Equity

Thus, the fifth hypothesis was supported, which means that BE has a significant influence on Brand Satisfaction.

Applying the SEM for the Research Model

Table 13 shows the SEM of the influence of ENG, EXP, AWA, and LOY on Brand Commitment. It could be observed that there is an insignificant influence of ENG and EXP on the dependent variable; Brand Commitment with Estimates of 0.116 and 0.087 respectively, as well as P-values of 0.101, and 0.185. respectively, while there is a significant impact of AWA and LOY on Brand Commitment with Estimates of 0.258, and 0.130 as well as p-value of 0.000, and 0.011 respectively. Also, the R square is 0.382 which means that "AWA, and LOY "explains 38.2% of the variation in **Brand Commitment.**

Also, there is a significant impact of EXP on Brand Satisfaction with Estimates of 0. 159, as well as p-value of 0.009, Also, the R square is 0.758 which means that "EXP "explains 75.8% of the variation in

Brand Satisfaction.

Table 13   SEM for Research Model without Mediation

			Estimate	P-value	R Square
BC	<---	ENG	.116	.101	
BC	<---	EXP	.087	.185	
BC	<---	AWA	.258	***	0.382
BC	<---	LOY	.130	.011	
BS	<---	BC	.980	***	
BS	<---	ENG	.065	.330	
BS	<---	EXP	.159	.009	0.758
BS	<---	AWA	.094	.121	
BS	<---	LOY	.047	.337	

The model fit indices; CMIN/df = 2.639, GFI = 0.927, CFI = 0.963, and RMSEA = 0.062 are all within their acceptable levels.

Table 14   Model Fit for SEM model without Mediation

CMIN/DF	p-value	GFI	CFI	RMSEA
2.639	0.000	0.927	0.963	0.062

Testing the Mediation Role of Brand Equity for the Research Model

Table 15 shows the SEM of the influence of ENG, EXP, AWA, and LOY on Brand Equity. It could be observed that there is a positive significant influence of EXP, AWA, and LOY on the dependent variable; Brand Equity with Estimates of 0.314, 0.432, and 0.266 respectively, as well as P-value of 0.000. respectively. While there is insignificant relation between ENG on Brand Equity with p-value of 0.573. Also, the R square is 0.594 which means that "EXP, AWA, and LOY "explains 59.4% of the variation in **Brand Equity.**

In addition, there is insignificant influence of ENG, EXP, AWA, and ROY on Brand Commitment with Estimates of 0.095, -0.036, 0.093, and 0.031 respectively. With p-values of 0.154, 0.580, 0.153, and 0.545 respectively. While, there is significant influence of BE on Brand

Commitment Also, the R Square is 0.504 which means that BE explains 50.4% of variation on **Brand Commitment**.

Furthermore, there is significant influence between BE, and BC on Brand Satisfaction with p-value of 0.000 while there is insignificant influence between ENG, EXP, AWA, and LOY with p-values of 0.202, 0.296, 0.716, and 0.559 respectively. Also, the R Square is 0.790 which means that BE, and BC explains 79% of variation on **Brand Satisfaction**.

Therefore, it is could be considered that Brand Equity is fully mediating the relationship between Brand Awareness and Loyalty and Brand Commitment, as Brand Awareness and Loyalty tended to be insignificant in the presence of Brand Equity. Also, Brand Equity is fully mediating the relationship between Brand Experience and Brand Satisfaction, as Brand Experience turned to be insignificant in the presence of Brand Equity.

Table 15   SEM for Research Model with Mediation

			Estimate	P-value	R Square
BE	<---	ENG	.045	.573	
BE	<---	EXP	.314	***	0.594
BE	<---	AWA	.432	***	
BE	<---	LOY	.266	***	
BC	<---	BE	.390	***	
BC	<---	ENG	.095	.154	
BC	<---	EXP	-.036	.580	0.504
BC	<---	AWA	.093	.153	
BC	<---	LOY	.031	.545	
BS	<---	BE	.367	***	
BS	<---	BC	.790	***	
BS	<---	ENG	.078	.202	0.790
BS	<---	EXP	.062	.296	
BS	<---	AWA	-.022	.716	
BS	<---	LOY	-.028	.559	

The model fit indices; CMIN/df = 2.854, GFI = 0.911, CFI = 0.871, and RMSEA = 0.066 are all within their acceptable levels.

Table 16   Model Fit indices for SEM Model with Mediation

CMIN/DF	p-value	GFI	CFI	RMSEA
2.854	0.000	0.911	0.871	0.066
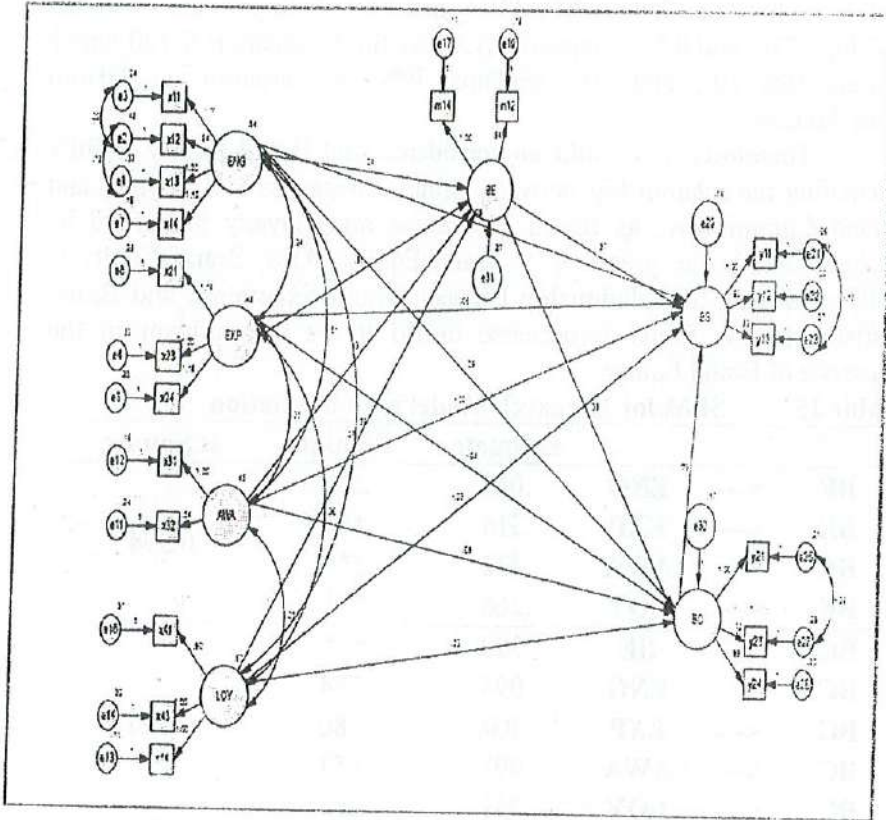
Thus, the sixth and seventh hypotheses were partially supported, which means that BE partially mediates the relation between its antecedents and Brand Commitment and Brand Satisfaction.

5 Conclusion

The above results illustrate the role of Brand Equity mediation to cope with the required level of Brand Commitment and Brand Satisfaction in the Egyptian public banking sector. This means that brand equity is an important issue for customers to achieve their satisfaction and commitment to a bank rather than another. It could be observed that customers are not relatively committed or satisfied by the public banks services, which implies the application of brand equity through mainly having good experience and awareness regarding their banks and how they might serve their customers. This will lead to customers being satisfied and committed to their banks specially in that global world nowadays. Further, research could conduct comparative analysis between private and public Egyptian banks to be able to compare between different sectors performance. Also, future research could be done to evaluate the role of brand equity in different other sectors rather than the banking sector.

References

Aaker, D.A. and Equity, M.B., 1991. Capitalizing on the Value of a Brand Name. *New York, 28*, pp.35-37.

Aaker, D.A., 1996. Measuring brand equity across products and markets. *California management review, 38*(3), p.102.

Anderson, E. and Weitz, B., 1992. The use of pledges to build and sustain commitment in distribution channels. *Journal of marketing research*, pp.18-34.

Berry, L.L., 2000. Cultivating service brand equity. *Journal of the academy of Marketing Science, 28*(1), pp.128-137.

Bui, A.L., Horwich, T.B. and Fonarow, G.C., 2011. Epidemiology and risk profile of heart failure. *Nature Reviews Cardiology, 8*(1), p.30.

Chapman, P.B., Hauschild, A., Robert, C., Haanen, J.B., Ascierto, P., Larkin, J., Dummer, R., Garbe, C., Testori, A., Maio, M. and Hogg, D., 2011. Improved survival with vemurafenib in melanoma with BRAF V600E mutation. *New England Journal of Medicine, 364*(26), pp.2507-2516

Chin, W.W., 1998. The partial least squares approach to structural equation modeling. *Modern methods for business research, 295*(2), pp.295-336.

Crick, S.L., Jayaraman, M., Frieden, C., Wetzel, R. and Pappu, R.V., 2006. Fluorescence correlation spectroscopy shows that monomeric polyglutamine molecules form collapsed structures in aqueous solutions. *Proceedings of the National Academy of Sciences, 103*(45), pp.16764-16769.

Evanschitzky, H., Iyer, G.R., Plassmann, H., Niessing, J. and Meffert, H., 2006. The relative strength of affective commitment in securing loyalty in service relationships. *Journal of Business Research, 59*(12), pp.1207-1213.

Fullerton, G., 2005. How commitment both enables and undermines marketing relationships. *European journal of marketing, 39*(11/12), pp.1372-1388.

Geyskens, I., Steenkamp, J.B.E., Scheer, L.K. and Kumar, N., 1996. The effects of trust and interdependence on relationship commitment: A trans-Atlantic study. *International Journal of research in marketing, 13*(4), pp.303-317.

Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. and Tatham, R.L., 1998. *Multivariate data analysis* (Vol. 5, No. 3, pp. 207-219). Upper Saddle River, NJ: Prentice hall.

Hennig-Thurau, T., Gwinner, K.P. and Gremler, D.D., 2002. Understanding relationship marketing outcomes: an integration of relational benefits and relationship quality. *Journal of service research, 4*(3), pp.230-247.

Kemp, E. and Bui, M., 2011. Healthy brands: establishing brand credibility, commitment and connection among consumers. *Journal of Consumer Marketing, 28*(6), pp.429-437.

Kimpakorn, N. and Tocquer, G., 2010. Service brand equity and employee brand commitment. *Journal of Services Marketing, 24*(5), pp.378-388.

Lee, H.M., Lee, C.C. and Wu, C.C., 2011. Brand image strategy affects brand equity after M&A. *European journal of marketing, 45*(7/8), pp.1091-1111.

Lewis, R.L., Newell, A. and Polk, T.A., 1989. *Toward a Soar theory of taking instructions for immediate reasoning tasks*(No. AIP-60). CARNEGIE-MELLON UNIV PITTSBURGH PA ARTIFICIAL INTELLIGENCE AND PSYCHOLOGY PROJECT.

Li, L. and Keller, G., 1998. Abrupt deep-sea warming at the end of the Cretaceous. *Geology, 26*(11), pp.995-998.

Macrae, C.F., Bruno, I.J., Chisholm, J.A., Edgington, P.R., McCabe, P., Pidcock, E., Rodriguez-Monge, L., Taylor, R., Streek, J.V. and Wood, P.A., 2008. Mercury CSD 2.0–new features for the visualization and investigation of crystal structures. *Journal of Applied Crystallography, 41*(2), pp.466-470

Mayall, B., 2002. *Towards a sociology for childhood: thinking from children's lives*. Open University Press.

McDonald, A.J. and Mascagni, F., 2001. Colocalization of calcium-binding proteins and GABA in neurons of the rat basolateral amygdala. *Neuroscience, 105*(3), pp.681-693.

Moorman, C., Zaltman, G. and Deshpande, R., 1992. Relationships between providers and users of market research: The dynamics of trust within and between organizations. *Journal of marketing research, 29*(3), p.314.

Motameni, R. and Shahrokhi, M., 1998. Brand equity valuation: a global perspective. *Journal of product & brand management*, 7(4), pp.275-290.

Nunnally, J.C. and Bernstein, I.H., 1978. Psychometric theory.

Santos, E.A. and Keller, R., 1993. Regulation of circulating levels of the crustacean hyperglycemic hormone: evidence for a dual feedback control system. *Journal of Comparative Physiology B, 163*(5), pp.374-379.

Santos, E.A. and Keller, R., 1993. Regulation of circulating levels of the crustacean hyperglycemic hormone: evidence for a dual feedback control system. *Journal of Comparative Physiology B, 163*(5), pp.374-379.

Sekaran, U. and Bougie, R., 2010. Research methods for business: A skill building approach. Chichester: John Willey & Sons Ltd. *2010*.

Shocker, A.D. and Weitz, B., 1988. A perspective on brand equity principles and issues. *Report*, (88-104), pp.2-4.

Van den Bulte, C. and Lilien, G.L., 2001. Medical innovation revisited: Social contagion versus marketing effort. *American Journal of Sociology, 106*(5), pp.1409-1435.

Van Osselaer, S.M. and Janiszewski, C., 2001. Two ways of learning brand associations. *Journal of Consumer Research, 28*(2), pp.202-223.

Yoo, T.S. and Lafortune, S., 2000. A general architecture for decentralized supervisory control of discrete-event systems. In *Discrete Event Systems* (pp. 111-118). Springer, Boston, MA.

Zeithaml, V.A., 1988. Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *The Journal of marketing*, pp.2-22.

Elyria Kemp, My Bui, (2011) "Healthy brands: founding brand reliability, commitment and connection among consumers", Journal of Consumer Marketing, Vol. 28 Issue: 6, pp.429-437, https://doi.org/10.1108/07363761111165949

Hsiang-Ming Lee, Ching-Chi Lee, Cou-Chen Wu, (2011) "Brand image strategy affects BE after M&A", European Journal of Marketing, Vol. 45 Issue: 7/8, pp.1091-1111, https://doi.org/10.1108/03090561111137624.

Narumon Kimpakorn, Gerard Tocquer, (2010) "Service BE and employee brand commitment", Journal of Services Marketing, Vol. 24 Issue: 5, pp.378-388, https://doi.org/10.1108/08876041011060486

Stavros P. Kalafatis, Natalia Remizova, Debra Riley, Jaywant Singh, (2012) "The differential influence of BE on B2B co- branding", Journal of Business & Industrial Marketing, Vol. 27 Issue: 8, pp.623-634, https://doi.org/10.1108/08858621211273574

Won-Moo Hur, Kwang-Ho Ahn, Minsung Kim, (2011) "Building brand loyalty through managing brand community commitment", Management Decision, Vol. 49 Issue: 7, pp.1194-1213, https://doi.org/10.1108/00251741111151217

Appendix: Research Questionnaire

		Engagement (Khan et al., 2016)						
	1-	Using this bank website gets me to think about this bank						
	2-	I think about this bank a lot when I'm using its website						
	3-	Using this bank website stimulates my interest to learn more about this bank						
	4-	I feel very positive when I use this bank's website						
		Experience (						
	1-	The operating hours of the bank are convenient and sufficient						
	2-	The ATMs of the bank is at the convenient locations						
	3-	The bank provides me proper information						
	4-	The statements and letters sent by the bank are clear						
		Brand Awareness (Kim, 2012; Ding & Tseng, 2015)						
	1-	This bank is one of the most popular ones						
	2-	I have heard this bank name						
	3-	I can recognize this bank among competing banks						
	4-	I can quickly recall the symbol or logo of this bank						
		Brand loyalty (Lee et al, 2011; Alam et al, 2012)						
	1-	This bank would be my first choice						
	2-	I consider myself loyal to this bank						
	3-	I use this bank because it is the best choice for me						
	4-	I consider myself to be a loyal patron of this bank						

	Brand Equity (Rambocas et al., 2018)					
1-	It makes sense to transact with this bank instead of any other bank, even if they are the same					
2-	Even if another bank has the same products as my bank, I prefer to transact with mine					
3-	If there is another bank as good as my bank, I prefer to transact with mine					
4-	It seems smarter to transact with my bank, even if banks are not all that different					
	Brand Commitment (Kemp &Bui, 2011; Louis et al., 2010)					
1-	I consider myself to be a loyal supporter of the bank services.					
2-	This bank services are my first choice when it comes to banking services.					
3-	I would use this bank services over other banks services.					
4-	This bank has a lot of meaning to me					
	Satisfaction (Shuv-Ami, 2016)					
1-	I am satisfied with this bank.					
2-	I am satisfied with the way this bank meets my expectations.					
3-	I am satisfied with the way this bank fits my needs.					
4-	Overall, I am satisfied with this bank					