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A study on the effects of sales related factors on brand equity

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ABSTRACT

This paper presents an empirical investigation to study the effects of sales related factors on brand equity. The study designs a questionnaire and distributes it among all 353 sales representatives who work for a dairy producer in province of Mazandaran, Iran. Using principal component analysis, seven variables including qualification criteria, motivation, personality, empowering sales representative, information size, personal characteristics and sales interest in job on brand equity are extracted. The implementation of structural equation modeling has confirmed that there were positive and meaningful relationships between seven factors and brand equity. The highest impact belongs to empowering sales representative followed by qualification criteria, quantity of information, personality and sales motivation.

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1. Introduction

The strategic planning process can be normally linked with corporate goal formulation but it is argued that bigger progress would be constructed in understanding marketing's participation in strategic planning if marketing's role in the goal formulation process can be accomplished. Unfortunately, the extant theories of the firm are inadequate in varying degrees for this purpose. Anderson (1982) proposed a new theory of the firm, which attempts to specify the role of marketing and the other functional areas in the goal setting and strategic planning process. There are literally several methods for sales promotion and management such as sales force automation (SFA) (Barker et al. 2009), which is the implementation of software to automate sales tasks, including sales activities, order processing, customer management, sales forecasting and analysis, sales force management, and information sharing. According to Bente et al. (2012), reputation and seller photos hold a large and equally sized capability for sellers' "face work" in most online transactions. Buehrer et al. (2005) explored the reasons why salespeople use SFA technologies, the perceived barriers to SFA usage and how management may increase the usage of SFA technology.

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Cascio et al. (2010) introduced a new antecedent to the SFA adoption model, management commitment alignment (MCA) and explained that alignment between top management and immediate supervisors' commitment to the SFA technology played essential role on SFA adoption. Their results indicated that while commitment from both leadership levels seemed to be the most conducive to SFA adoption, misaligned commitment conditions maintained differential impacts on adoption. More specifically, even when supervisors are committed to sales technology, insufficient top management commitment may hurt SFA adoption.

Cho and Chang (2008) empirically investigated the psychological and social antecedents of salespeople's resistance toward SFA technologies in South Korea. They added to the literature on SFA technologies by looking at resistance toward innovation in the post-adoption as well as intraorganizational diffusion stage.

Franke and Park (2006) combined findings from a sample of 155 salespeople to examine alternative methods of antecedents and consequences of adaptive selling behavior (ASB) and customer orientation (CO). They reported that selling experience could increase performance but not job satisfaction, and saleswomen rated their performance and satisfaction bigger than salesmen did. The magnitudes of the relationships in their survey also indicated that ASB and selling experience had bigger impacts than CO and gender on salesperson performance did.

Gohmann et al. (2005) reported the results of a study, which concentrated on the differences in perceptions held by the United States Army's hiring force and its top-level management toward the Army's newly adopted SFA system, the Army Recruiting Information Support System (ARISS). They reported that substantial differences existed between the perceptions held by the recruiting force and higher level management toward ARISS, the SFA system.

2. The proposed study

This paper presents an empirical investigation to study the effects of sales related factors on brand equity. The study designs a questionnaire and distributes it among all 353 sales representatives who work for a dairy producer in province of Mazandaran, Iran. Fig. 1 demonstrates some basic personal characteristics of the participants. According to the results of Fig. 1, 63% of the participants were male and 37% of them were female. In addition, most participants were middle-aged people. Approximately, 85% of the participants hold some university education. In addition, the results of Fig. 1 have indicated that most of the sales representative had less than 5 years of job experiences.

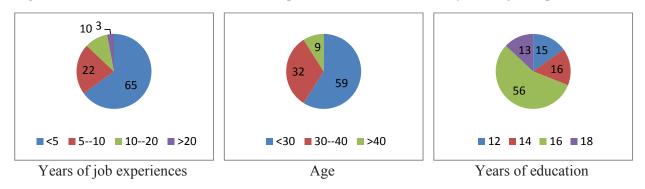


Fig. 1. The summary of job experience, age and years of education

The study considers the effects of seven variables including qualification criteria, motivation, personality, empowering sales representative, information size, personal characteristics and sales interest in job on brand equity. Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy along with Bartlett's test have been accomplished and the results are 0.879 and Chi-Square = 4554.141 with Sig. = 0.000. These results have indicated that the questionnaire is reliable and we may rely on to

examine the hypotheses of the survey. Table 1 shows details of commonalities for 60 questions of the survey.

Table 1The results of commonalities

Attribute	Initial value	Extracted	Attribute	Initial value	Extracted	Attribute	Initial value	Extracted
8	1	0.573	31	1	0.637	46	1	0.554
9	1	0.553	32	1	0.649	47	1	0.052
13	1	0.616	33	1	0.595	48	1	0.584
14	1	0.608	34	1	0.631	50	1	0.599
16	1	0.527	35	1	0.007	51	1	0.521
17	1	0.602	36	1	0.579	52	1	0.625
20	1	0.688	37	1	0.661	53	1	0.539
21	1	0.618	38	1	0.668	54	1	0.625
25	1	0.069	39	1	0.627	56	1	0.677
26	1	0.606	40	1	0.573	57	1	0.625
27	1	0.637	41	1	0.535	60	1	0.583
29	1	0.574	44	1	0.686			
30	1	0.619	45	1	0.688			

As we can observe from the results of Table 1, most values are well above 0.5, which validates the overall questionnaire. We have removed some questions and applied principal component analysis and Table 2 shows details of the results after rotation has been applied.

Table 2
The summary of principal component analysis

The summary of principal componer		Components									
	1	2	3	4	5	6	7	8	9	10	
Information on inventory	.699	-		•				·			
Top management commitment	.565										
Training	.461	.388	.321	.307							
Performance	.716										
Behavior	.667										
Efforts	.498										
Word of mouth advertisement	.396	.318								.317	
Independent sales management		.563		312					.381		
Response to customers		.485	.336								
Job satisfaction		.591						.334			
Job security		.615									
Reputation		.535									
Skills	.356		.516								
Perception image			.714								
Work relationships			.676								
Innovative ideas				.431			.307	.328			
Technical knowledge				.522			.398				
Market knowledge				.343			.303				
Specialty				.622							
Capability	.320			.510					.376		
Flexible sales					.562			.363			
Updated knowledge					.674						
Formal rewards					.631	.302					
Loyalty	.341		.402		.553						
Quantity of information						.793					
Quality of information						.689					
Performance reflection				345		.516				.365	
Technology							.759				
Innovation							.707				
Information on competitors								.648			
Information on customers								.677			
Age									.668		
Residence against automated systems									.425	.356	
Gender									.794		
Region of work								408		.483	
Sales based on requirements								.348		.356	
Long term profitability										.744	

The study extracted seven variables including qualification criteria, motivation, personality, empowering sales representative, information size, personal characteristics and sales interest in job on brand equity. Cronbach alphas for these components are 0.787, 0.834, 0.709, 0.731, 0.770, 0.731, 0.773, respectively. These results validate the overall questionnaire. The results of some basic statistics are Chi-square = 544.47; RMSEA = 0.047; $X^2/df = 1.42$; CFI = 0.98; IFI = 0.98; RFI= 0.92; AGFI = 0.86; NFI = 0.93, which are within acceptable limits.

3. The results

Table 3 demonstrates the results of the implementation of structural equation modeling (SEM).

Table 3The summary of SEM implementation

Variable	loading Factor	T-Value	Variable	loading Factor	T-Value			
	Qualification criteria		Empowering sales representatives					
8	0.58	8.2	16	0.52	7.11			
20	0.42	5.72	25	0.28	3.64			
21	0.63	9.12	46	0.37	4.94			
9	0.55	7.7	47	0.64	8.96			
41	0.66	9.68	48	0.52	o7.2			
14	0.59	8.35		Personality				
33	0.71	10.55	34	0.67	9.28			
57	0.63	0.00	32	0.63	8.57			
	0.63	9.09	35	0.63	8.70			
	Sales' motivation		Sales representatives' interest					
36	0.66	9.23	13	0.61	8.13			
37	0.61	8.45	17	0.69	9.46			
50	0.68	9.62	54	0.49	6.37			
51	0.51	6.88	60	0.54	7.14			
	Size of information		Personal characteristics representatives					
38	0.63	8.59	40	0.6	7.78			
39	0.68	9.5	53	0.56	6.78			
52	0.59	8.03	56	0.53	6.78			

Next, we use the results of factor analysis to verify the effects of these seven factors on brand equity. The results of some basic statistics are Chi-square = 701.87; RMSEA = 0.063; $X^2/df = 1.76$; CFI = 0.96; IFI = 0.96; RFI= 0.91; AGFI = 0.87; NNFI = 0.93, which are within acceptable limits.

4. Discussion and Conclusion

The implementation of structural equation modeling has provided us good insight to examine the effects of seven important factors influencing on brand equity. Table 4 shows details of our findings on testing the hypotheses of the survey.

Table 4The results of structural equation modeling

The results of structural equation modeling									
Relationship	β	Standard β	Standard error	t-value	R-Square	P-Value	Result		
Qualification criteria → Brand equity	0.8	0.80	0.11	7.1	0.64	P<0.01	Confirmed		
Sales motivation → Brand equity	0.72	0.72	0.1	6.89	0.52	P<0.01	Confirmed		
Personality → Brand equity	0.74	0.74	0.11	6.76	0.54	P<0.01	Confirmed		
Empowering sales representative → Brand equity	1.03	1.03	0.12	8.42	0.98	P<0.01	Confirmed		
Quantity of information → Brand equity	0.76	0.76	0.11	6.77	0.57	P<0.01	Confirmed		
Personal characteristics → Brand equity	0.66	0.66	0.12	5.52	0.44	P<0.01	Confirmed		
Sales representative motivation → Brand equity	0.71	0.71	0.12	6.03	0.51	P<0.01	Confirmed		

According to the results of Table 4, all seven factors influence on brand equity, positively. The highest impact belongs to empowering sales representative followed by qualification criteria, quantity of information, personality and sales motivation.

The results of our findings are consistent with findings of Hawkins et al. (2013), Holmes and Srivastava (2002), Honeycutt Jr et al. (2005), Keillor et al. (1997), Keller (1993), Rangarajan et at. (2005), Ram and Jung (1991) and Aaker (1990, 2008, 2009, 2012).

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