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The mediating role of Brand Value and Creativity in relationship between Trade Intelligence and Financial Efficiency: Empirical study from Private Banks in Erbil, Kurdistan Region of Iraq

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Abstract

The primary purpose of this research is to build a model that examines the mediating role of brand value and creativity in the relationship between trade intelligence and financial efficiency. The quantitative method and survey questionnaire are applied to obtain empirical data from commercial banks in Erbil, the capital city of the Kurdistan Region. The research sample consisted of 300 bank employees who willingly participated in the survey and answered the questions. The collected data were analyzed by conducting descriptive statistics and structural equation modeling experiments using the SPSS-AMOS 26 software. The results demonstrated that trade intelligence positively impacts the financial efficiency of banks. In addition, trade intelligence directly relates to brand value and creativity. In the same regard, results showed that brand value and creativity impact the financial efficiency of banks. Furthermore, results indicated that brand value and creativity mediate the relationship between intelligence and financial efficiency.

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Keywords: Trade intelligence, Financial Efficiency, Brand Value, Creativity.

1. Introduction:

Today, in every organization or office or company, what has occupied the minds of managers and employees the most is how to interact with each other and achieve the goals of the organization, one of which is to improve performance; Yokel has explained the version with three dimensions, which are: efficiency, adaptability and human resources. Successful organizations have a significant characteristic that distinguishes them from unsuccessful organizations; This is the hallmark of financial efficiency. "Financial Efficiency" is a topic that has attracted the attention of researchers and the public for a long time (Barakina et al., 2021).

Banking and economic experts have defined and implemented different methods to evaluate the financial efficiency of banks and compare their efficiency. Among these methods, we can mention the data coverage analysis method, the random frontier method, and the financial ratio method. In 1988, the Basel Banking Supervision Committee proposed the criteria of the Camels model to examine financial institutions using financial ratios. This model is widely used in some countries for the financial efficiency of economic enterprises, including banks. The Central Bank of America, the African Development Bank, the Asian Development Bank, and the World Bank also use the mentioned indicators to measure the activity of banks and financial institutions (Armstrong & Taylor, 2020).

The current situation of banks shows that due to the large volume of data resulting from the daily operation of the operational systems, the experts of these financial institutions have faced problems such as how to collect, store, analyze and use it effectively. Data mining, or in other words, business intelligence, seems to be necessary from a single data warehouse (Zarei & Ahmadi Alvar, 2021).

Trade intelligence is a type of business management used to describe applications and technology in collecting, presenting, accessing, and analyzing data and information to help organizations make optimal business decisions. Trade intelligence is a set of technologies and processes that allow people at all levels of the organization to access and analyze data and ultimately make accurate decisions. The purpose of trade intelligence is to facilitate decision-making and decision-making based on organizational facts. Performance evaluation and measurement make the system intelligent, motivate people towards the desired behavior, and are central to formulating and implementing corporate policy. Today, rapid political, social, and economic changes have transformed the role of governments from direct management

to guiding and guiding functions. They have caused government organizations to look at their internal and external environment differently than yesterday (Elena, 2011).

According to (Turban et al., 2019), banks are among the institutions and organizations that, using this technology, can collect and refine data from daily financial transactions and analyze and retrieve information for the decision-making process for managers. Make it easy and efficient. So that even by using business intelligence, they can draw a future perspective by creating a clear understanding of the current state of the bank and help bank managers in providing a long-term and strategic perspective; Because the primary and fundamental goal of the bank, like other for-profit organizations, is to maximize the wealth of its owners. To increase shareholders' wealth, the bank can make decisions regarding allocating assets, investments, and distribution of facilities with different maturities. Therefore, this financial institution should continually review its Financial Efficiency and provide the basis for improving and promoting its indicators. Adopting these decisions made the need to evaluate financial efficiency more critical; in this way, banks can examine their performance in terms of profitability, capital adequacy, asset structure, and liquidity compared to competing banks so that they can measure their position and compare improve and upgrade their performance (Anastasiei & Georgescu, 2021).

Various factors affect the financial efficiency that involves the economic success of the bank; therefore, it has prompted managers to identify these factors; one of these factors is business intelligence. But these orientations alone do not improve financial efficiency, but there are various mediators, one of which is brand value (Pu et al., 2021).

Brand value is the value customers, and potential customers perceive from a brand. Brand value is measured by the level of customer trust in a brand. A company's brand value can be calculated by comparing the expected future revenue from a branded product with the expected future revenue of an equivalent non-branded product. This difference, usually the same profit, means customers' trust in this brand and their willingness to pay more than competing brands with a lower perceived value. However, this calculation is based on approximation. This value can include tangible, functional features (for example, twice the cleaning power or half the fattening rate) and intangible and emotional features (such as the brand for people with good taste or style) (Edmans et al., 2016).

Today, managers have realized that brand and brand management are essential for the survival of their business. Brands have become an integral part of the company's value and a vital strategic asset, so for some companies, the brand is considered all the assets of that

company. That is why companies have paid particular attention to brand and brand management. Having strong brands increases the company's competitiveness and increases its profitability. The statistics of the world's top brands in 2011 confirm this (Agrawal et al., 2018).

Another factor that can affect financial efficiency is creativity. Creativity is a mental process that is seen by a specific person and at a particular time; A process that results in a new work, either an idea or something new and different. Different products can be verbal, non-verbal, objective, or subjective (Sung & Choi, 2012).

The private banks of Erbil province try to achieve excellent performance by developing and implementing practical business strategies and exploiting the leading opportunities by investing in available capabilities and resources. The diversity of financial and strategic goals, leading environmental conditions, organizational resources, and skills lead the company to use a set of strategic behaviors. (Morgan et al., 2009) showed that trade intelligence and brand value can help improve financial efficiency.

In today's highly competitive world, managers need a strategy to be unique to advance the products and services of organizations and banks in the field of competition. In other words, having a tool to differentiate the organization and products from competitors and their products from techniques and tools that support senior managers and managers of private banks in Erbil province to make timely and quick decisions among various information and data intelligence system is commercial. Operationalizing trade intelligence and using its applications creates many competitive advantages in private banks and provides suitable platforms to cover banking challenges; Therefore, considering the importance of using trade intelligence in financial institutions and institutions, this study seeks to answer the question of how much trade intelligence affects financial efficiency with the mediating role of brand value and creativity of private banks in Erbil province?

2. Methodology

The research method is applied in terms of purpose and comparative in terms of research method. Also, this research is cross-sectional regarding the type of survey research, words of individual analysis unit, and time horizon. The research data is of an interval type and was collected from the answers to the five-choice Likert questions in the research questionnaires.

The statistical population in this research consists of all employees of private bank branches in Erbil province, and 300 employees are considered the statistical population. The sample size was determined

based on Cochran's formula of 300 employees who were selected by available random sampling. The fit of the research model was checked with the help of structural equation modeling (SEM) and Amos software. To investigate the effect of trade intelligence on financial efficiency with the mediating role of brand value and creativity (a case study of private banks in Erbil province), from the financial efficiency questionnaire (Spangenberg & Theron, 2004), Trade intelligence to collect data from the questionnaire (Barakina et al., 2021), Brand Value Questionnaire (Lomakin et al., 2020) and Creativity Questionnaire (Idris, 2021) were used based on the Likert scale; education was used by selecting the option of minimal (score 1), low (score 2), medium (3), high (score 4), and too much (score 5).

To determine the validity of the questionnaire, content validity is used, which is usually used to examine the components of a measurement instrument. For this purpose, a standard questionnaire was prepared and given to the supervisor and other relevant experts. After considering the corrective comments, it was modified and then distributed. Also, the validity of the research instrument was confirmed using factor validity, which was established through confirmatory factor analysis with the help of AMOS software. The reliability of the questionnaire was determined using Cronbach's alpha coefficient. The coefficient results are 0.85 to 0.86 percent. The closer the Cronbach's alpha index is to one, the higher the internal correlation between the questions and, thus, the more homogeneous they will be. Cronbach suggested a reliability coefficient of % 45 as low, %75 as moderate and acceptable, and %95 as high, and values above %7.5 were considered favorable in this test. Considering that Cronbach's alpha coefficient is financial efficiency (0.89), trade intelligence questionnaire (0.88), brand equity questionnaire (0.88), and creativity questionnaire (0.86), so it can be said that the whole Questionnaires and its variables have good reliability.

3. RESULTS AND DISCUSSION

3.1. Socio-Demographic Characteristics of Respondents

In this part of the research, a descriptive analysis of demographic data is done, which is given in table number 1.

Table 1 shows that 167 respondents are men (%55.66) and 133 are females (%44.34). 48 respondents (%16) have post-diploma degrees, 131 respondents (% 43.7) have bachelor's degrees, and 121 respondents (%40.3) have master's degrees and above. 31 respondents are (%10.3) under 5 years, 119 respondents are (%39.7) between 5 and 10 years; 86 respondents are (% 28.7) have work experience between 11 and 15 years, 64 respondents are (%21.3) have more than 15 years of work experience. 47 respondents (%15.6) are

under 25 years old, 179 respondents (%59.6) are between 26 and 32 years old, 62 respondents (%20.6) are between 33 and 40 years old, and 12 respondents (%4.2) are over 41 years old.

Table 1. Frequency distribution of respondents according to demographics

Variables		Frequency	%
Gender	Man	167	55.66
	Female	133	44.34
	Total	300	100
Education	Post-Diploma	48	16
	Bachelor	131	43.7
	Masters and Higher	121	40.3
	Total	300	100
Employment	Under 5 years	31	10.3
	Between 5 and 10 years	119	39.7
	Between 11 and 15 years	86	28.7
	More than 15 years	64	21.3
	Total	300	100
Age	< 25s	47	15.6
	26 to 32 years	179	59.6
	33 to 40 years	62	20.6
	> 41 years	12	4.2
	Total	300	100

3.2. Descriptive Data

When choosing a statistical test for research, we must decide whether to use parametric or non-parametric tests. One of the main criteria for this selection is the Kolmogorov-Smirnov test. Kolmogorov-Smirnov test shows the normality of data distribution. The results of this test are given in Table 2.

Table 2. Normality of data through the Kolmogorov-Smirnov (k-s) test

Variables	Number	k-s	Meaningful level	The result of normal/non-inferior distribution
Financial Efficiency	300	1.098	0,586	Normal
Trade Intelligence	300	1.297	0.579	Normal
Brand's special value	300	1.364	0.553	Normal
Creativity	300	1.276	0.564	Normal

Table 2 shows that the obtained values are more than the significance level of 0.50, so the assumption of normality of the data related to the research variables is accepted.

As the contents of Table 3 show, the mean and standard deviation of the entire sample (300 respondents) in financial efficiency with a mean of 14.169 and a standard deviation (7.629); trade intelligence of 16.207 and a standard deviation (6.743), brand specific value of 13.376 and a standard deviation (6.348); Creativity is 13.897 and a standard deviation (6.532).

Before the primary analysis, some preliminary studies were conducted to gain initial insights related to the data. In this research, the relationships of 4 variables in the proposed model have been investigated. Descriptive findings related to the research variables' mean and standard deviation are shown in Table 3, and the correlation matrix of model variables is in Table 4.

Table 3. Descriptive findings related to research variables for all subjects

Variables	Mean	SD	Lowest	Highest
Financial Efficiency	14.169	7.629	5	17
Trade Intelligence	16.207	6.743	4	19
Brand's special value	13.376	6.348	4	15
Creativity	13.897	6.532	5	16

Table. 4 shows that the assumed relationship between the variables is consistent with the expected paths, which means that all relationships were significant at the significance level of 0.01. These correlation analyses have provided insight into the bivariate relationships between the research variables. The path analysis method has been applied to simultaneously test the hypothesis of assumed relationships in the current research.

Table 4. Matrix of correlation coefficients of model variables

Variable	Financial Efficiency	Business Intelligence	Brand's special value	Creativity
Financial Efficiency	1			
Business Intelligence	0.186 **	1		
Brand's special value	0.147 **	0.176 **	1	
Creativity	0.163 **	0.145 **	0.157 **	1

3.3. Analysis of confirmatory factors

Before evaluating the structural model, confirmatory factor analysis was performed on the research variables to show the validity of the

questionnaire formulation. The variables presented in this research include three variables measured using a questionnaire. Figure 1 shows the model of factor analysis of the factors related to the current research questionnaire, and Table 5 shows the fit indices of the model. The confirmatory factor analysis model results show a reasonable and acceptable fit. Also, the indicators in table 5 show that these factors fit relatively well.

Table 5. Factor loading coefficients

Strong	Financial Efficiency	Business Intelligence	Brand's special value	Creativity
Q1	0.898			
Q2	0.799			
Q3	0.697			
Q4	0.887			
Q5	0.867			
Q6		0.689		
Q7		0.798		
Q8		0.652		
Q9		0.897		
Q10		0.782		
Q11		0.697		
Q12		0.275		
Q13		0.898		
Q14		0.721		
Q15			0.765	
Q15			0.764	
Q17			0.676	
Q18			0.687	
Q18			0.745	
Q20			0.225	
Q21				0.677
Q22				0.285
Q23				0.698
Q24				0.765
Q25				0.763
Q26				0.696

Considering that 23 out of 26 questions are in the acceptable range. Therefore, considering this output from the software, it can be acknowledged that 96% of the factor loading coefficients are above 0.4, which shows the appropriateness of the criteria of this model.

3.4. Main findings

To evaluate the proposed model, the path analysis method was used. All analyzes were done using SPSS and AMOS software.

1-Path analysis: The path analysis method based on AMOS software was used with maximum likelihood estimation to evaluate the proposed model.

2- Significance coefficients: The essential criterion for measuring the relationship between structures in the model is the significant number t. If the value of these numbers exceeds 1.96, it indicates the correctness of the relationship between the constructs. As a result, the research hypotheses are confirmed at the confidence level of 95%.

3- How to interpret t coefficients: As shown in Figure 1, the value of t coefficients should be greater than 1.96 to confirm its significance at the 95% confidence level. In the lower model, the value of t in the structure is more significant than 1.96, which indicates that the structural model's meaningful relationship is confirmed and more excellent than 1.96.

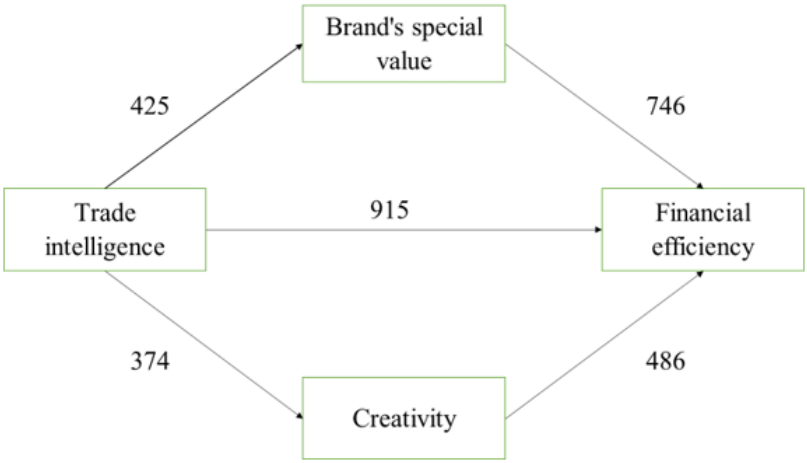
4- R2 criterion: It is a criterion used to connect the measurement part and the structural part of structural equation modeling. It shows the effect an exogenous variable has on an endogenous variable. The critical point is that R2 is calculated only for the model's endogenous structures (financial efficiency). In the case of exogenous forms, the value of this criterion is zero. The higher the value of R2 related to the endogenous structures of a model, it indicates the model's fit is 0.23, 0.38, and 0.88 as weak, medium, and strong values of the model.

Table 6: R^2 values

Variable	R^2	Fixed	Power
Financial Efficiency	0.748	More than 0.50	Strong

Table 6 shows the acceptable fit of the model.

Figure 1: The leading model in the path coefficient mode



The variant shown in Figure 1 is all greater than 1.96, so with confidence, 0.95% of the hypotheses may exist.

3.5. Suitability of the research model

Convergent validity is a criterion used to fit the measurement models in the structural equation modeling method. The bar displayed for the desirability of AVE is equal to and higher than 0.5. Table. 7 shows the output results of the model for AVE.

Table 7. The results of average variance extracted (AVE) of model structures

Variable	Trade Intelligence	Business Intelligence	Brand's special value	Creativity
AVE	0.744	0.796	0.613	0.685

As can be seen, the results of Table.7 show the appropriateness of the convergent validity criterion.

Divergent validity is acceptable when the AVE for each construct is greater than the shared variance between that construct and other constructs in the model. Based on the results obtained from the correlations and the square root of AVE, which is calculated on the diameter of Table. 8, it is possible to conclude the model's validity at the structure level regarding the criterion.

Table 8. Matrix of divergent validity assessment

Variables	Financial Efficiency	Business Intelligence	Brand's special value	Creativity
Trade Intelligence	0.874	-	-	-
Business Intelligence	0.847	0.743	-	-
Brand's special value	0.765	0.756	0.697	-
Creativity	0.799	0.735	0.682	0.649

The suitability of the proposed model was evaluated based on suitability criteria. After the initial analysis, it was found that the data analysis showed that the values of the fit indices indicate a good fit of the initial model with the data. The fit of the final model with the data based on the fit index is shown in Table. 9. The macro test program (Preacher & Hayes, 2004) was used on SPSS software to determine the significance of the indirect paths of the independent variable on the dependent variable through the mediation variable.

Table 9. Fitting the proposed and final models with the data based on the fit indices

Pattern	X^2	df	X^2 / df	IFI	TLI	CFI	NFI	RMSEA	RMR
Final pattern	4.38	3	1.63	0.96	0.92	0.93	0.91	0.0028	0.039
Allowable value	> 0.90	> 0.90	> 3	> 0.90	> 0.90	> 0.90	> 0.90	> 0.1	Near zero.

As the contents of Table. 9 shows that the final model has a good fit. Because the ratio between chi-square and degrees of freedom is between one and three, which is an acceptable value, in this model, TLI, IFI, NFI, and CFI index are all higher than % 90, which are all excellent values. The value of RMSEA is also 0.0028, which is within the acceptable range. The value of RMR is also close to zero and is within the standard range.

Table 10 shows the paths and their standard coefficients in the proposed model based on the output of AMOS software.

Table 10. Structural model: paths and their standard coefficients in the proposed model

Path	β	coefficient (T)	P-Value	Rejection or approval
Trade ⟶ Intelligence Financial Efficiency	0.787	7.997	0.0001	Confirmed
Trade ⟶ Intelligence Brand Value	0.697	5.456	0.0001	Confirmed
Trade ⟶ Intelligence Creativity	0.645	5.453	0.0001	Confirmed
Brand Value ⟶ Financial Efficiency	0.724	6.657	0.0001	Confirmed
Creativity ⟶ Financial Efficiency	0.688	6.678	0.0001	Confirmed
Brand-specific combat impact between Trade intelligence ⟶ and Financial Efficiency	0.899	7.967	0.0001	Confirmed
The creator of the impact between Trade intelligence ⟶ and Financial Efficiency	0.866	7.876	0.0001	Confirmed

4. Conclusion and Recommendation

The central hypothesis is that trade intelligence affects the financial efficiency of private banks in Erbil province with the mediating role of brand equity and creativity.

The findings of the Table. 10 indicate the significance of this mediating effect. The lower limit of the confidence interval is 0.005, and the upper limit is 0.030. The confidence level for this confidence interval is 95, and the number of respondents resampling is 300. This mediating relationship is significant because zero is placed outside these two confidence intervals; Therefore, the central hypothesis is confirmed.

The results of this research with the results of studies (Popovich et al., 2020; Song and Choi, 2020; Smirnova et al., 2019 and Morgan et al., 2018) are aligned. Access to accurate and timely information is an essential asset for private banks in Erbil province. When the trade intelligence systems are designed correctly, and on the other hand, the report can make decisions, and the organization can improve its performance. By making the right decisions, it will seek satisfaction. Before the opportunities to be identified by the close and accurate eyes of competitors and to take the chance of growth and advancement from the organization, to achieve them, these goals are only possible by making accurate and intelligent decisions by the trading system.

Different banks with different dimensions and working fields may face other problems regarding the optimal use of data in systems, such as personnel, salary, etc. The company's data is located in various sources, and integrating them to obtain analytical reports is costly and time-consuming. Operational software can provide reports up to the level of middle managers; It has rarely been seen that senior managers use this system as a source of decision making. The cost of producing trade intelligence leads to beneficial benefits, such as increasing revenue, gaining new competitive opportunities, achieving more time for marketing, increasing customer satisfaction through the customer relationship system, automating manual processes, and increasing speed and agility. The organization is to reduce costs and make decisions for the organization.

The first sub-hypothesis: Trade intelligence affects the Financial Efficiency of private banks in Erbil province.

Based on Table 10 and relying on statistical rules and beta value (0.787) and taking into account that the value of T= 7.997 is more significant than 1.96 and also taking into account that the significance level is less than 0.05 and Taking these values in acceptable ranges, there is no evidence to reject the null hypothesis, so the first sub-hypothesis is not dismissed. Based on this, it can be acknowledged that trade intelligence significantly affects financial efficiency. Considering the beta value and its positivizes, it can be confirmed that this effect is positive. The results of this research with the results by (Morgan et al., 2009; Popovič et al., 2018; Sung & Choi, 2012; Tolstoy et al., 2022) are consistent. New technologies are developing at a breakneck speed,

while societies in general and the market, in particular, are looking for tricks to ensure survival in this chaotic and turbulent arena at an indescribable rate. Organizations must accept that their philosophy of life has changed and that being alive no longer means reaching the desired state. They must look for competition and its tools; trade intelligence is one of them. Trade intelligence is to help the company to improve its performance and enhance its competitive advantage in the market. Trade intelligence helps in making better decisions by evaluating whether the activities and functions lead companies to advance towards their goals or not. Business managers need valuable and relevant facts at their fingertips to make better decisions. Still, there is often a deep gap between the information required by business managers and the vast amount of data that a business entity collects in its daily operations. To fill this gap, business units invest enough to develop and grow trade intelligence systems to convert raw recorded data into useful information. The most effective job of the BI system is to provide access and processing of a vast amount of data and deliver related subsets to the bank managers in a form that they can easily report. Fact-based decision-making and trade intelligence analysis are impacting all organizations fundamentally. We live in an increasingly saturated world with information, and technology is available to facilitate this.

The second sub-hypothesis: Trade intelligence affects the brand value of private banks in Erbil province.

Based on Table 10 and relying on statistical rules and beta value (0. 697) and considering that the value of T=5.456 is more significant than 1.96, and also considering that the significance level is less than 0.05. And placing these values in acceptable ranges, there is no evidence to reject the null hypothesis, so the second sub-hypothesis is not dismissed. Based on this, it can be acknowledged that trade intelligence significantly affects brand equity. According to the beta value and its positivizes, it can be confirmed that this effect is positive. The results of this research with the results by (Morgan et al., 2009; Popovič et al., 2018; Sung & Choi, 2012) are aligned.

Banks, especially private banks, should invest in their trade intelligence to develop and improve their market; Because by using business intelligence, it can analyze the challenging environment of competition by relying on special tools and techniques and obtaining relevant information, and by adopting appropriate competitive strategies, it can be one step ahead of competitors. Also, by using the trade intelligence system, accepting accurate economic and financial information and analysis from customers, the market, and the organization's internal environment, and making the right decisions while developing relationships with customers, increase the added value of your services and products. In the meantime, if the capacities

of organizational intelligence are used, the organization can mobilize and direct its intellectual abilities to solve problems and problems. It can create new opportunities with complete intelligence and nobility in the internal and external environment. Build capacity and improve your power and capabilities in the market.

The third sub-hypothesis: Trade intelligence affects the creativity of private banks in Erbil province.

Based on Table 10 and relying on statistical rules and beta value (0.645), the value of T=5.453 is greater than 1.96, and the more significant significance level is less than 0.05. And placing these values in acceptable ranges, there is no evidence to reject the null hypothesis, so the third sub-hypothesis is not dismissed. Based on this, it can be acknowledged that trade intelligence significantly affects creativity. Considering the beta value and its positivizes, it can be confirmed that this effect is positive. The results of this research (Morgan et al., 2009; Popovič et al., 2018; Sung & Choi, 2012) are aligned. Since the business environment is changing rapidly and business processes are becoming more complex, it will be tough for managers to have a comprehensive and complete understanding of their business environment. Globalization, deregulation, mergers and acquisitions, competition, and technological innovation have forced companies to rethink their business strategy. Meanwhile, many large companies have resorted to trade intelligence to help them understand and control business processes to achieve a competitive advantage. Intelligence is a method of improving business performance by assisting executive decision-makers in obtaining scientific information. Today, with the shortening of the life cycle of products and the technology used in them, the category of innovation has become increasingly important in business, one of the principles of creating an innovative environment, knowing the market, and being aware of the wide range of possible opportunities, as well as being aware of strengths. And the internal weakness of the organization. With their many capabilities, business and competitive intelligence provide information in these fields for the organization. On the other hand, an organization's competitiveness is another factor that plays a vital role in creating an innovative environment; in fact, it can be said that an organization's innovativeness is meaningless without its competitiveness.

The fourth sub-hypothesis: brand equity affects the financial efficiency of private banks in Erbil province.

Based on Table 10 and relying on statistical rules and beta value (0.724) and considering that the value of T=6.657 is more significant than 1.96, and also considering that the significance level is less than 0.05. And placing these values in acceptable ranges, there is no evidence to reject the null hypothesis, so the fourth sub-hypothesis is not dismissed. Based on this, it can be acknowledged that brand equity

significantly affects Financial Efficiency. Considering the beta value and its positivizes, it can be confirmed that this effect is positive. The results of this research and the study (Morgan et al., 2009; Popovič et al., 2018; Sung & Choi, 2012) are aligned. Today, the brand name is considered a value or asset for companies. Regarding brand equity, there are two views based on the customer and based on financial indicators, and on the other hand, social responsibility can improve brand equity by influencing the customers' point of view. In today's era, the financial efficiency review is critical, and bank managers and leaders determine the bank's plans and strategies. Performance is a suitable and effective criterion for evaluating Financial Efficiency. The importance of performance for banks makes every factor that affects it essential. Achieving higher performance is a goal that banks take various measures to achieve. Capabilities play an indispensable role in creating a competitive advantage for banks, and marketing, innovation, and learning can be mentioned among these capabilities. A brand is a mechanism that helps organizations to achieve a competitive advantage. Brand equity, which has become a marketing concept since 1980, is the added value created by the brand name for the organization. When properly and objectively assessed, brand equity is a good standard for measuring the ongoing impact of marketing decisions. Building brand equity is a valuable marketing goal because it guarantees success and income. The success of companies depends on adopting measures that help promote their brand. Therefore, it is essential that before any action, there is knowledge about the factors affecting the success of the brand to achieve success in determining the strategies and performance of the company.

The fifth sub-hypothesis: creativity affects the financial efficiency of private banks in Erbil province.

Based on Table 10 and relying on statistical rules and beta value (0. 688) and considering that the value of T=6.678 is more significant than 1.96, and also considering that the significance level is less than 0.05. And placing these values in acceptable ranges, there is no evidence to reject the null hypothesis, so the fifth sub-hypothesis is not dismissed. Based on this, it can be acknowledged that creativity significantly affects Financial Efficiency. According to the beta value and its positivizes, it can be confirmed that this effect is positive. The results of this research with the results of studies (Morgan et al., 2009; Popovič et al., 2018; Sung & Choi, 2012) are aligned. Creativity and innovation have had an essential effect on banks' and companies' financial and economic performance. On the other hand, bank managers must consider the challenges of innovation and creativity to achieve better financial and economic performance as well as maintain the competitive position of the bank and the company; Because these challenges, especially knowledge and market

challenges, are one of the most critical factors that, if they increase in the company, will cause weak financial efficiency and also cause the bank or company to be out of the competitive market.

The sixth sub-hypothesis: Trade intelligence affects Financial Efficiency with the mediating role of brand equity.

The findings indicate the significance of this mediating effect. The lower limit of the confidence interval is 0.009, and the upper limit is 0.036. The confidence level for this confidence interval is 95, and the number of respondents resampling is 300. This mediating relationship is significant because zero is placed outside these two confidence intervals; Therefore, the sixth hypothesis is confirmed. The results of this research with the results of studies (Morgan et al., 2009; Popovič et al., 2018; Sung & Choi, 2012) are aligned. A very dynamic market, constant changes in customer demands, intense competition, and the need for strict control and risk management are only some of the characteristics of the business environment that banks are constantly faced with. Data mining and knowledge retrieval are essential parts of business intelligence, which can cover many challenges faced by different departments of banks with complex statistical analysis, discovering relationships between data, and predicting the behavioral trends of financial institutions' systems. The key to business success for many banks is the correct use of data to make better, faster, and flawless decisions. To achieve this goal, banks need to use reliable and efficient tools such as trade intelligence as a positive catalyst to help these institutions mechanize analysis, decision-making, strategy development, and forecasting. In other words, trade intelligence in these institutions is to collect, process, and analyze a large amount of data and convert them into practical business value in decision-making by creating a platform for intelligent analytical reports.

The seventh sub-hypothesis: Trade intelligence affects financial efficiency with the mediating role of creativity.

The findings indicate the significance of this mediating effect. The lower limit of the confidence interval is 0.008, and the upper limit is 0.035. The confidence level for this confidence interval is 95, and the number of bootstrap resampling is 300. This mediating relationship is significant because zero is placed outside these two confidence intervals; Therefore, the seventh hypothesis is confirmed. The results of this research and the study (Morgan et al., 2009; Popovič et al., 2018; Sung & Choi, 2012) are aligned. Trade intelligence in banks can lead to cost reduction, which is also to studies (Panja et al., 2020) and (Greenbaum, 2019) who believe that trade intelligence software allows the banking industry to These financial institutions can maximize revenue by analyzing profit and loss, including service sales analysis, campaign management, market segment analysis, and risk

analysis, and at the same time, reduce costs by managing risk and preventing fraud. And also improve operational efficiency.

According to the mentioned results, the following practical suggestions can be effective.

1- As trade intelligence affects Financial Efficiency with the mediating role of brand equity and creativity. It can be suggested that asset yield, capital yield, loan-to-asset ratio, and cost-to-income ratio represent banks' financial health indicators to express banks' financial efficiency.

2- In the same way, trade intelligence affects financial efficiency. It can be suggested to create a trade intelligence unit in the bank to regularly review the activities of competitors and evaluate their bank's actions in comparison with competitors.

3- As trade intelligence affects the unique value of the brand. It can be suggested that managers should pay attention to market orientation as an essential factor of competition; market orientation significantly affects market share and customer satisfaction. The competitor is one of the dimensions of market orientation, which is related to the commercial and competitive intelligence of the organization; that is, the organization can positively influence the competitiveness and, therefore, the market orientation in the organization due to the commercial intelligence.

4- As trade intelligence affects creativity. It can be suggested that considering the significant effects of sales promotion capabilities, strategic marketing planning, implementation and control of marketing programs, and market research on the organization's performance, managers are recommended to pay special attention to these capabilities in their plans. Have. Also, by giving enough authority to the marketing department and its planners, the proper context for creative ideas and their implementation is provided and supported.

5- As brand equity affects financial efficiency. It can be suggested that brand equity should be considered a key indicator to express brand health, and its monitoring is also a necessary step in effective brand management.

6- As creativity affects financial efficiency. It can be suggested that innovation in services and providing new products, raising employees' creativity, and involving creative employees in decision-making and creating products and services are needed.

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