

3.4 Research hypotheses

Main hypothesis 1

H1: There is a positive significant impact for the entrepreneurial leadership (risk, creativity, initiative, investing opportunities and strategic vision) on the application of total quality management at the commercial banks in the Kingdom of Bahrain.

Subsidiary hypothesis 2

H1.2: There is a positive significant impact for creativity on the application of total quality management principles at the commercial banks in the Kingdom of Bahrain.

Subsidiary hypothesis 3

H1.3: There is a positive significant impact for initiative on the application of total quality management principles at the commercial banks in the Kingdom of Bahrain.

Subsidiary hypothesis 4

H1.4: There is a positive significant impact for investing opportunities on the application of total quality management principles at the commercial banks in the Kingdom of Bahrain.

Subsidiary hypothesis 5

H1.5: There is a positive significant impact for strategic vision on the application of total quality management

Main hypothesis 2

H1: There are positive significant differences relating to the impact of the entrepreneurial leadership on the application of total quality management principles at the commercial banks in the Kingdom of Bahrain due to the demographics (gender, age, qualification, years of experience and position) of the total quality management principles at the commercial banks in the Kingdom of Bahrain.

Research Framework

Figure 1 (Below illustrates the research framework and shows the variables of the research)

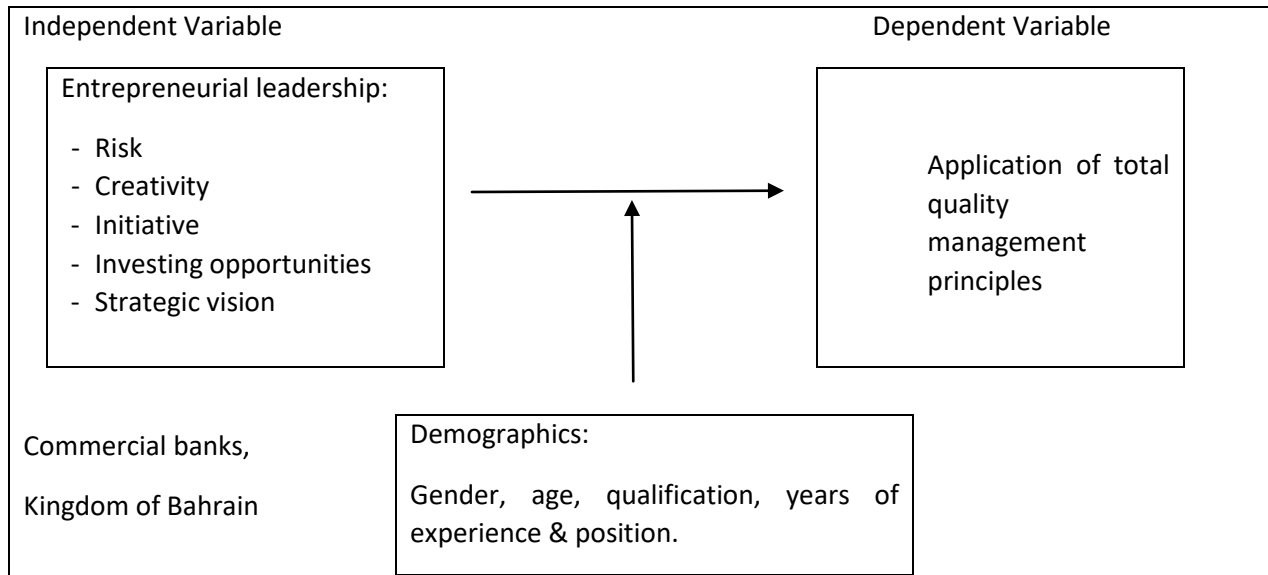


Figure 1 (Illustration of the research framework)

Data Collection

A five-point Likert scale was used to collect questionnaire survey as follows:

5	4	3	2	1
Strongly agree	Agree	Neutral	Disagree	Strongly disagree

A number of 331 questionnaires were circulated and a total of 328 were collected, three of them were incomplete, so they were discarded. 325 questionnaires were considered with a response rate of 98%.

4. Research Findings and results:

4.1 Pearson correlation co-efficient

Table (1) below shows that all correlation co-efficient are significant at the level of (0.01) which indicates the validity of the scale.

Table 1 Pearson correlation co-efficient

First Axis										Second Axis	
Entrepreneurial leadership										Application of total quality management principles	
Risk		Creativity		Initiative		Investing opportunities		Strategic vision		Statement	Correlation Co-efficient
Statement	Correlation Co-efficient	Statement	Correlation Co-efficient	Statement	Correlation Co-efficient	Statement	Correlation Co-efficient	Statement	Correlation Co-efficient		
1	0.757	1	0.729	1	0.775	1	0.727	1	0.728	1	0.429
2	0.757	2	0.741	2	0.709	2	0.751	2	0.701	2	0.410
3	0.825	3	0.750	3	0.741	3	0.765	3	0.768	3	0.374
4	0.672	4	0.719	4	0.698	4	0.768	4	0.750	4	0.470
5	0.771	5	0.718	5	0.782	5	0.750	5	0.820	5	0.263
6	0.870	6	0.707	6	0.727	6	0.777	6	0.760	6	0.638
										7	0.563
										8	0.162
										9	0.642

	10	0.544
	11	0.556
	12	0.557
	13	0.536
	14	0.553
	15	0.047

4.2 Reliability

The data were analyzed using SPSS and statistical results of Cronbach Alpha are as follows:

Table 2 Cronbach's Alpha

Reliability	
Dimensions	Cronbach's Alpha
Entrepreneurial leadership: - Risk (0.800) - Creativity (0.644) - Initiative (0.788) - Investing opportunities (0.718) - Strategic vision (0.718)	0.644
Application of total quality management principles	0.815
Total	0.730

Table (2) indicates that the Cronbach's Alpha is (0.730). This result indicates a high level of internal consistency for the research questionnaire.

4.3 Analysis of the demographic variable of the research

4.3.1 Gender Variable

Table 3 Distribution of the research sample according to gender

Variable	Number	Percentage
Males	132	40.6%
Females	193	59.4%
Total	325	100%

It is clear from the analysis of the research sample by gender (table 3) that the ration of males (40.6%), and the females' percentage is (59.4%) of the sample size.

4.3.2 Age variable

Table 4 Distribution of the research sample according to age

Variable	Number	Percentage
20 and less than 30	55	16.9%
30 and less than 40	113	34.8%
40 and less than 50	108	33.2%
50 years and above	49	15.1%
Total	325	100%

It can be seen from table (4) that there is a difference between the number of age groups of employees and the largest number of age group was that of (30 and less than 40 years) by (34.8%) of the total research sample and the lowest number of the age groups was (50 years and above) by (15.1%), which explains that the commercial banks in question depends on employees belonging to middle agree and not elderly.

4.3.3 Qualification variable

Table 5 Distribution of the research sample according to qualification

Variable	Number	Percentage
High school and less	53	16.3%
Bachelor	230	70.8%
Post studies	42	12.9%
Total	325	100%

Table (5) indicates that the largest percentage hold a Bachelor's degree by (70.8%), followed by holders of high school qualification by (16.3%), and then post studies by (12.9%).

4.3.4 Years of experience variable

Table 6 Distribution of the research sample according to years of experience

Variable	Number	Percentage
Less than 5 years	55	16.9%
5 years to less than 10 years	112	34.5%
10 years to less than 15 years	83	25.5%
15 years and above	75	23.1%

Total	325	100%
--------------	------------	-------------

Table (6) reveals that the staff with years of experience (5 – less than 10 years) were the largest with a percentage of (34.5%), followed by those of (10 – less than 15 years), with a percentage of (25.5%), then those of (15 years and above) with a percentage of (23.1%), and finally (less than 5 years) with a percentage of (16.9%).

4.3.5 Position variable

Table 7 Distribution of the research sample according to position

Variable	Number	Percentage
Top management	29	8.9%
Middle and low management	58	17.8%
Employees	238	73.2%
Total	325	100%

Table (7) shows that the vast majority of the research sample were employees with a percentage of (73.2%), followed by middle and low management with a percentage of (17.8%), and finally top management with a percentage (8.9%).

4.4 Analysis of answers to the questionnaire variable

4.4.1 Table (8) Analysis of the research sample answers to the questionnaire variable (entrepreneurial leadership, risk dimension)

Sr.	Statement	Mean	Standard Deviation	Ranking	Mean Interpretation
1	Administrators allow employees to participate in high-risk plans and projects	4.53	0.66	1	Strongly agree
2	The manager feels confident in taking calculated risks.	3.98	0.87	3	Agree
3	Fear of failure does not make the managers hold back from offering new services.	3.95	0.70	5	Agree
4	Failure is seen as a learning process and the leader tolerates employees when they make mistakes.	3.96	0.90	4	Agree
5	The management of the bank has a constant desire to enter new markets.	4.02	0.85	2	Agree
6	Management encourages employees to suggest new ideas that have not previously been tested.	3.85	0.73	6	Agree
Total		4.05	0.785		Agree

Results presented in table (8) show that the general average of the variable (entrepreneurial leadership, risk dimension) reached (4.05), which shows that the opinions of the research sample were high of this dimension.

4.4.2 Analysis of answers to the questionnaire variable

Table (9) Analysis of the research sample answers to the questionnaire variable (entrepreneurial leadership, creativity dimension)

Sr.	Statement	Mean	Standard Deviation	Ranking	Mean Interpretation
1	The bank's management encourages employees to participate in providing good suggestions for serving their customers.	4.00	0.82	2	Agree
2	The management does not hesitate to appreciate innovative solutions by employees, unlike traditional solutions.	3.55	0.88	6	Agree
3	The bank is marketing many new and different services far from the services provided in the past years.	4.07	0.81	1	Agree
4	Fundamental changes are made to the banking services provided by the bank on a regular basis.	3.78	0.69	3	Agree
5	Competing banks view us as the institution that leads innovation among all similar projects.	3.62	0.97	5	Agree
6	All material and human resources are allocated for research and development.	3.71	0.99	4	Agree
Total		3.79	0.86		Agree

Results displayed in table (9) show that the general average of the variable (entrepreneurial leadership, creativity dimension) reached (379), which shows that the opinions of the research sample were high of this dimension.

Table 10 Analysis of the research sample answers to the questionnaire variable (entrepreneurial leadership, initiative dimension)

Sr.	Statement	Mean	Standard Deviation	Ranking	Mean Interpretation
1	The bank's management initiate competitive measures for similar pioneering projects.	3.82	0.80	2	Agree
2	The management of the bank always seeks to discover the needs of customers that they do not realize and takes the initiative to provide solutions to them.	3.73	0.85	4	Agree
3	Bank's leadership gives employees the opportunity to experiment with their own way of doing the job.	3.78	0.81	3	Agree
4	The bank's leadership takes the initiative to investigate customer's	4.00	0.72	1	Agree

	problems and work to solve them before they appear to customers.				
5	The bank's management seeks to provide support, assistance, and national and social service in various occasions and emergency circumstances.	3.56	0.92	6	Agree
6	The bank's management has sufficient proactiveness to promote the bank's projects and services.	3.69	0.79	5	Agree
Total		3.76	0.82		Agree

Results presented in table (10) show that the general average of the variable (entrepreneurial leadership, initiative dimension) reached (3.76), which shows that the opinions of the research sample were high on this dimension.

Table 11 Analysis of the research sample answers to the questionnaire variable (entrepreneurial leadership, investing opportunities dimension)

Sr.	Statement	Mean	Standard Deviation	Ranking	Mean Interpretation
1	The management of the bank has implemented major changes in the bank, which have a noticeable impact on the overall performance.	4.00	0.90	1	Agree
2	In the light of competition with competing banks, the bank is the first to introduce banking services and technological solutions to the market	3.65	0.84	3	Agree
3	Bank management usually applies a firm competition policy in dealing with the tactics of competing banks.	3.56	0.81	4	Agree
4	The management of the bank has the necessary self-motivation to perform its tasks and the work entrusted to it.	3.55	0.83	5	Agree
5	The bank's management uses data and information clearly to predict future conditions.	3.69	0.81	2	Agree
6	Leadership gives its employees the opportunity to use their own judgement on matters relevant to the operation of the processes.	3.21	0.90	6	Neutral
Total		3.69	0.85		Agree

Table (11) shows that the general average of the variable (entrepreneurial leadership, investing opportunities dimension) reached (3.69), which shows that the opinions of the research sample were high on this dimension.

Table 12 Analysis of the research sample answers to the questionnaire variable (entrepreneurial leadership, strategic vision dimension)

Sr.	Statement	Mean	Standard Deviation	Ranking	Mean Interpretation
-----	-----------	------	--------------------	---------	---------------------

1	The bank's management seeks to publish the bank's vision, mission and strategic objectives on a regular basis and using the latest methods.	3.82	1.04	5	Agree
2	Management allows employees of all management levels to participate in the formulation and development of the bank's strategy.	3.82	0.98	4	Agree
3	When implanting strategic objectives management considers their priority and relative importance.	3.96	0.74	3	Agree
4	There is periodic supervision and follow-up by the leadership to the extend to which the strategic plans of the banks are achieved.	3.98	0.87	1	Agree
5	The process of implanting strategic plans is flexible enough that it can be modified if the need arises.	3.47	0.90	6	Neutral
6	The leadership in the bank is working on setting timelines for implementing the strategic plans of the bank.	3.97	0.80	2	Agree
Total		3.84	0.89		Agree

Table (12) shows that the general average of the variable (entrepreneurial leadership, strategic vision), reached (3.84), which shows that the opinions of the research sample were high on this dimension.

Table 13 Analysis of the research sample answers to the questionnaire variable (Application of total quality management principles)

Sr.	Statement	Mean	Standard Deviation	Ranking	Mean Interpretation
1	The management of the bank always seeks to enhance the quality of performance, reduce errors and treat them on an ongoing basis.	4.07	0.81	3	Agree
2	The senior management is committed to applying the principles of total quality management in all departments.	3.72	0.83	11	Agree
3	There is a clear and declared vision for the bank and message that achieves this vision.	4.35	0.80	1	Agree
4	Senior management empowers employees and involves them in various decisions.	3.91	0.93	5	Agree
5	The management of the bank is keen to involve all employees in setting the vision and mission of the bank.	3.31	0.90	15	Neutral
6	The top management is keen to	3.82	0.77	9	Agree

	continuously improve the performance of employees.				
7	Employees are constantly improving their performance.	3.89	0.90	6	Agree
8	Choosing the leaders in the bank commensurate with the quality requirements and standards	3.55	0.88	13	Agree
9	Power is delegated to lower administrative levels.	3.88	0.85	7	Agree
10	Senior management is keen to encourage employees to use multiple strategies in order to improve work on a permanent basis.	3.50	0.88	14	Agree
11	The management of the bank seeks to survey the opinions of all its employees and customers on the services provided.	3.73	0.93	10	Agree
12	The management of the bank seeks to obtain customer satisfaction.	4.16	0.71	2	Agree
13	The management of the bank seeks to raise the level of quality of services provided.	3.56	0.96	12	Agree
14	The management of the bank encourages using modern technology and methods in managing the services provided to customers.	3.84	0.88	8	Agree
15	The management of the bank encourages the evaluation and development of its services continuously.	4.02	0.97	4	Agree
Total		3.82	0.87		Agree

Table (13) indicates that the general average of the variable (application of total quality management principles) reached (3.82), which shows that the opinions of the research sample were high on this variable.

4.5 Testing results hypotheses

To make sure that the main hypothesis (1) is correct, “There is a positive significant impact for the entrepreneurial leadership (risk, creativity, initiative, investing opportunities and strategic vision) on the application of total quality management principles at the commercial banks in the Kingdom of Bahrain”, multiple linear regression analysis were used where the results show the following:

Table 15 Linear regression analysis

Source of variance	Correlation co-efficient	Adjusted R ²	F Value	P Value	Sig. Level
Multiple regression indicators	0.753	0.523	12.849	0.000	0.01
	B	Beta	T-value	P value	Sig. Level
Constant	14.567		5.578	0.000	0.01
Risk	0.699	0.303	2.358	0.028	0.05
Creativity	0.644	0.522	5.132	0.000	0.05

Initiative	0.408	0.352	3.232	0.033	0.05
Investing Opportunities	0.830	0.678	6.063	0.000	0.01
Strategic vision	0.561	0.794	4.308	0.000	0.01

According to the results presented above in tables (14), the main hypothesis (1) is accepted. In addition, results of the main hypothesis (2) "There is a positive significant impact for the entrepreneurial leadership (risk, creativity, initiative, investing opportunities and strategic vision) on the application of total quality management principles at the commercial banks in the Kingdom of Bahrain due to the demographics (gender, age, qualification, years of experience and position), showed that there were no statistically significant t differences at the level of (0.05) relating to the demographics (gender, age, qualification and years of experience). Only there were statistically significant differences at the level of (0.05) relating to the demographic position.

5 CONCLUDING COMMENTS

There is a positive significant impact for the entrepreneurial leadership on the application of total quality management principles at the banks in question. In addition, the results indicated that there are no positive significant differences relating to the impact of the entrepreneurial leadership on the application of total quality management principles at the banks in question due to the demographics (gender, age, qualification, years of principles and position).

In light of conclusions formulated, the following recommendations were proposed:

- The necessity of studying the local banking market in a scientific manner and thinking of new banking services that differ from those offered by competing banks.
- The necessity of encouraging employees to propose new ideas and urging them to address problems with innovative solutions and focusing on introducing organizational competition among employees about the quality of banking services provided to customers.
- Providing moral and material rewards and compensations for innovative problems solutions provided by employees.
- The need for banks to maintain a sufficient pf proactiveness that aims to promote bank's projects and services.
- Ensuring that the implementation of strategic plans s carried out with sufficient flexibility that makes them subject to modification if the need arises.
- Ensuring that the leaders and administrators of the banks in question are selected in a appropriate manner to the requirements and standards of quality.

REFERENCES

- Abdeldayem, M. M., Aldulaimi, S. H., & Kharabsheh, R. (2021). Development of Human Capital Resources to Increasing Economic Growth and Innovation in the GCC Countries. *International Journal of Green Management and Business Studies*, Vol. (1), No. (1), Pp. 62-79
- Al Aamri, Abdulllah (2020). The application of the dimensions of entrepreneurial leadership among the leaders of private secondary schools in Riyadh, unpublished master's thesis, colleges of the Arab East, Saudi Arabia.

- Abdulaimi, S. H. & Al Alkawi, T. (2021) Green Technologies of Human Resources for Green Economy: Application on GCC Countries. *International Journal of Green Management and Business Studies*, Vol. (1), No. (1), Pp. 15-28
- Al Ejmi, Mohamed (2019). *Modern trends in administrative leadership and human development*, second edition, Amman, Al Masira for publishing and distribution.
- Al Enezi, Fahad (2020). *The impact of entrepreneurial leadership, total quality management practices and innovation management on organizational performance SME*, in Kuwait, University of Kebangsaan, Malaysia.
- Al-Sanjary, O. I., Khalifa, M. (2021) Impact of COVID 19 Pandemic on Small and Medium Sized Businesses (SMEs) in the GCC. *International Journal of Green Management and Business Studies*, Vol. (1), No. (1), Pp. 29-49
- Bonnet, Furnham (2019). Who wants to be an entrepreneur? A study of adolescents interested in a young enterprise scheme. *Journal of economic psychology*, (12).
- Chaho, R. M., Aswad, A. (2021) The Cryptocurrency Legality and Environmental Challenges. *International Journal of Green Management and Business Studies*, Vol. (1), No. (1), Pp. 50-61
- Ebada, Ebrahim (2019). *The efficiency of total quality management and its role in the success of Islamic banks in light of competition*, master's thesis, Irbid, Jordan.
- Hegazy, Ahmed Abou El Fadel (2020). *Obstacles of applying management to sport clubs in Al-Jouf, Saudi Arabia*, *World Journal of Sport Sciences*, Volume (6), No. (1)
- Khan Sudha, Amjad Ali (2018). *Total quality management in higher education institutions*, *International Journal of social science and international research* volume (2), No. (6).
- Martinez, Al. (2020). *Total quality management, marketing and business performance: An exploratory study*, university of business studies, Spain.
- Mohamed, H. M. (2021) Green-Economic Constructions Using Composite GFRP Closed Forms. *International Journal of Green Management and Business Studies*, Vol. (1), No. (1), Pp. 1-14
- Paul Zijlstra (2020). *When is entrepreneurial leadership most effective?* Master thesis, management and governance university of Twente.