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RESEARCH ON THE INFLUENCE OF TMTINNOVATION AWARENES ON INNOVATION PERFORMANCE

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Based on the Upper Echelons Theory，Principal-agent Theory and Technological Innovation Theory, starting from the perspective of corporate culture and refined management, this research puts forward a conceptual model and research hypothesis based on the research idea that "the innovation consciousness of the top management team affects innovation performance".

First, draw on mature scales at home and abroad to compile questionnaires. The questionnaires are distributed to top managers of high-tech enterprises. Finally, the collected sample data is analyzed to obtain hypothesis verification results.

The empirical results of this study show that: (1) the innovation awareness of the top management team has a positive impact on innovation performance; (2) the innovation awareness of the top management team has a positive impact on the innovation behavior of employees; (3) the innovation behavior of employees has a positive impact on innovation performance; (4) the innovation behavior of employees plays an intermediary role between the relationship between innovation awareness and innovation performance of the top management team.

Keywords: high tech enterprise; Top Management Team (TMT); innovation performance; employee innovation behavior

Introduction

With the development of smart cities, smart buildings have become a vital part. Smart buildings are designed by adopting intelligent methods. The goal is to improve the efficiency of design work, give full play to the functions of smart buildings, and achieve reasonable architectural design resources.

Some scholars (Amabile, 1988; David, 2001) predict that by 2050, more than two-thirds of the world's population will be about 5 billion people living in smart cities. Smart cities are based on the government's construction of an information sharing platform, breaking the data islands of various departments, realizing data resource integration, and

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using big data technology to provide information support services, supporting project implementation and urban development, and using technology to change human lives.

Among various production factors, human resources with knowledge and technology play the most critical role. As the fundamental carrier of knowledge and technology, human resources have not only become an important source of corporate competitive advantages, but also an important subject to achieve organizational innovation. That is to say, although high-tech enterprises in the intelligent construction industry are the main players in the innovation market, the enterprises themselves cannot complete the innovation process.

The ultimate practitioners of innovation are individuals. The fundamental source of innovation comes from the employees of the enterprise. The creativity of employees is the source and foundation of enterprise innovation. Only by continuously encouraging employees to invest in and participate in the creative activities of the enterprise, can an enterprise continue to promote the scientific and technological exploration and development of the organization and continuously enhance the innovation ability of the enterprise.

Yuan & Woodman (2010) regards employee innovation behavior as an important asset for companies to successfully innovate and gain competitive advantage in a dynamic environment.

Literature review

TMT Innovation Awareness
Taiwei (2012) believes that TMT's (Top Management Team) innovation awareness and courage are the prerequisites for TMT's independent innovation, and TMT plays a key role in the process of enterprise innovation and entrepreneurship. TMT's innovative awareness, vision and courage determine the development mode and path of the enterprise.

The author found through the public data survey of listed high-tech companies that 62.1% of the chairmen of the board have a bachelor degree or above, and 67.7% of the general manager has a bachelor's degree or above. This has laid a good foundation for enterprises to carry out technological innovation.

Innovative Behavior of Employees
Amabile (1988) proposed that employee innovation behavior refers to the activities that employees put forward innovative ideas on the quality of enterprise products and services, the manufacturing methods of products and services, and the management and operation of the enterprise, and actively implement them to enhance the competitiveness of the enterprise.

Zhou & George (2001) believe that employee innovation behavior refers to the activities of employees generating new ideas, new content, and promoting and realizing the ideas.

Lirong (2015) assigned employee innovation behavior refers to their activities on new ideas development and implementing in the work process. It specifically includes three aspects: proposing ideas, promoting ideas, and implementing ideas. Empirical evidence shows that the scale has good reliability and validity.

This paper based on the understanding of the connotation of employee innovation behavior, and believes that employee innovation behavior refers to individual employees' creative ideas.

Principal-agent Theory

It is based on the asymmetric information game theory. The asymmetry of information and the difference in risk preference in the principal-agent relationship separate two powers, which will lead to differences in the business goals of managers and shareholders: shareholders are the ultimate owners, and the business goals are to maximize corporate value, the manager's business goal is often to maximize personal interests. This kind of conflict of interests caused by different business objectives has a very obvious impact on the R&D and innovation activities of enterprises (David, 2001).

The relationship between TMT innovation awareness and innovation performance

Covin & Slevin (1991) proposed that TMT awareness affects corporate performance, and it can improve corporate performance by enhancing TMT awareness.

Lengnick-Hall (1992) believes that the introduction of new products and new technologies is the basis of entrepreneurial activities, and TMT can only achieve the best corporate performance by raising awareness.

Based on the above research, this article puts forward the hypothesis of the relationship between TMT innovation awareness and corporate performance。

Hypothesis H_1: TMT innovation awareness is positively correlated with innovation performance.

Hypothesis H_{1a}: The degree of emphasis is positively correlated with corporate performance.

Hypothesis H_{1b}: The degree of support is positively correlated with corporate performance.

The relationship between TMT awareness and employees' innovative behavior

An empirical study by Frese et al. (1999) shows that entrepreneurs focus on employee motivation. The more support and encouragement they give to employees, the more creativity they generate, and the more obvious their innovative behavior and results. The above research results and analysis on the influence of TMT innovation awareness on employee innovation behavior show that TMT innovation awareness stimulates and promotes employee innovation behavior and has a positive impact. The importance and support of TMT innovation awareness can play a role in the innovation behavior of employees.

The role of stimulus, influencing and guiding the innovative behavior of employees, based on the above theoretical analysis, this paper puts forward the following hypotheses:

HypothesisH_2: TMT innovation awareness is positively correlated with employee innovation behavior.

HypothesisH_{2a}:The degree of TMT emphasis is positively correlated with employee innovation behavior.

Hypothesis H_{2b}:The degree of TMT support is positively correlated with employee innovation behavior.

The relationship between employee innovation behavior and innovation performance

Scott & Bruce (1994) pointed out that employee innovation behavior is the basis of all high profits and high performance. Woodman et al. (1993) research pointed out that employees with innovative behaviors can quickly respond to customer needs, can put

forward new ideas, create new products, improve corporate competitiveness, and improve corporate performance.

Based on the above theoretical analysis, this paper proposes the hypothesis of the influence relationship between employee innovation behavior and corporate performance:

H_3: Employee innovation behavior has a significant positive impact on innovation performance

The Mediating Role of Employees' Innovative Behavior

The research of Drazin et al. (1999) shows that if TMT can actively encourage, guide and support employees, help employees build confidence, and stimulate employees' willingness and enthusiasm for innovation, it can promote the improvement of employees' innovative behavior, which is very useful for improving corporate performance.

Xiaoping et al. (2012) believe that the purpose of studying mediation is to further the internal mechanism of the occurrence and generation of this relationship on the basis of known relationships such as the relationship between leadership style and corporate performance, so that the relationship between the independent variable and the dependent variable is formed. The relationship chain is clearer and the path is more obvious.

Therefore, the author believes that between the independent variable entrepreneurial spirit and the dependent variable corporate performance, employee innovation behavior plays a mediating role. Based on the above theoretical analysis, this paper proposes the following hypotheses:

HypothesisH_4: TMT innovation awareness positively affects innovation performance through the mediating effect of employee innovation behavior.

Hypothesis H_{4a}: The degree of TMT innovation emphasis positively affects innovation performance through the mediating effect of employee innovation behavior.

Hypothesis H_{4b}: The degree of TMT support positively affects innovation performance through the mediating effect of employee innovation behavior.

Results and discussion

The questionnaire survey selected 300 corporate executives from different companies in Beijing, Tianjin, Qingdao, and Wuhan, including entrepreneurs, professional managers, and top executives for distribution. A total of 300 questionnaires were distributed, 285 were returned, and 15 were removed as invalid (Tab. 1).

Table 1 - Valid questionnaire
(made by the author)

Valid questionnaire	N	%
Questionnaire distribution	300	100.0
Withdraw	285	28.5
Weed out	15	5.2
efficient	270	94.7
total	270	100.0

Descriptive analysis

Analyze according to the dimensions measured in the scale, refer to Wu(2010) project analysis method, and use SPSS for analysis: add up the item scores and group them into the top 27% and the bottom 27%, and use an independent T test.

The t value is used as the decision value, and the Sig value is used to determine the significance. The larger the decision value, the higher the discrimination of the item, and the items that are not significant should be deleted. The results are shown in Tab. 2.

Table 2 - Descriptive analysis (N=270）
(made by the author)

| | Descriptive statistics | | | | | | | |
| | Mini | Maxi | Mean | Stan | Skewness | | Kurtosis | |
	Statistics	Statistics	Statistics	Statistics	Statistics	Standard error	Statistics	Standard error
INNOEMPH1	1.00	5.00	4.0296	.90386	-.545	.148	-.348	.295
INNOEMPH2	1.00	5.00	4.2593	.84451	-1.119	.148	1.136	.295
INNOEMPH3	1.00	5.00	4.1778	.84367	-.946	.148	.802	.295
INNOSUPP1	2.00	5.00	4.1333	.86913	-.673	.148	-.415	.295
INNOSUPP2	1.00	5.00	3.8148	1.07132	-.538	.148	-.670	.295
INNOSUPP3	2.00	5.00	4.3037	.85598	-1.201	.148	.839	.295
INNOSUPP4	2.00	5.00	4.3111	.80396	-1.142	.148	.948	.295
INNOSUPP5	2.00	5.00	4.2370	.78278	-.631	.148	-.521	.295
INNOSUPP6	1.00	5.00	4.3778	.81680	-1.704	.148	3.743	.295
PERF1	1.00	5.00	4.3259	.83448	-1.292	.148	1.630	.295
PERF2	1.00	5.00	4.3037	.78342	-1.246	.148	2.080	.295
PERF3	1.00	5.00	4.3630	.79597	-1.637	.148	3.810	.295
PERF4	2.00	5.00	4.3111	.81315	-1.129	.148	.826	.295
PERF5	2.00	5.00	4.4000	.75368	-1.440	.148	2.266	.295
PERF6	2.00	5.00	4.1481	.81362	-.612	.148	-.357	.295
INNOBEHA1	2.00	5.00	4.0370	.85714	-.499	.148	-.549	.295
INNOBEHA2	2.00	5.00	4.0370	.83961	-.450	.148	-.594	.295
INNOBEHA3	2.00	5.00	3.9259	.89301	-.296	.148	-.880	.295
INNOBEHA4	1.00	5.00	4.0074	.94059	-.609	.148	-.343	.295
INNOBEHA5	2.00	5.00	3.9704	.93618	-.434	.148	-.859	.295
INNOBEHA6	1.00	5.00	3.8889	.96532	-.425	.148	-.626	.295
INNOBEHA7	1.00	5.00	3.6593	1.11204	-.439	.148	-.576	.295
INNOBEHA8	1.00	5.00	3.9259	.97271	-.681	.148	-.053	.295
INNOBEHA9	1.00	5.00	3.8667	1.06167	-.670	.148	-.325	.295

From the descriptive statistical analysis results of the small sample data in Tab.2, the average value of each item is between 3.6593-4.4, which shows that the distribution is relatively balanced. The standard deviation of each item is between 0.74375-1.11204, indicating that the sample data dispersion is small.

Klein (1998) believes that when the absolute value of sample data skewness is less than 3 and the absolute value of kurtosis is less than 8, it can be considered that the observed variable basically conforms to the normal distribution.

From the above statistical results, the absolute value of skewness of all items is $\leqslant$ 1.704, and the absolute value of kurtosis $\leqslant$ 3.81, which is much smaller than the reference

value proposed by Klein (1998). Therefore, it can be considered that the form of the large sample data basically conforms to the normal distribution, and meets the basic requirements of the research hypothesis for the analysis of the data (Tab. 3).

Table 3 - Reliability test (N=270)
(made by the author)

Item	Inspection item	Code	CITC	Subscale Cronbach's α value	Cronbach's Alpha		
TMTIA	TMT can respect different opinions and objections	DOI1	.702	.776	.838	.926	.982
	TMT leaders encourage employees to try new processes and develop new products	DOI2	.685	.791			
	TMT can be trusted by subordinates and properly authorized	DOI3	.719	.759			
	TMT's professional background plays an important role in their awareness	DOS1	.603	.865	.881		
	TMT's work experience background plays an important role in their awareness	DOS2	.730	.859			
	TMT innovation atmosphere affects their consciousness changes	DOS3	.636	.848			
	TMT's awareness directly affects the company's strategic policy	DOS4	.617	.854			
PERF	Technological innovation ensures that the company can keep up with the speed of market changes	PERF1	.811	.925	.934		
	Technological innovation maintains and consolidates the company's market position	PERF2	.885	.864			
	Technological innovation guarantees the company's technological advantages over other competitors	PERF3	.852	.890			
	Technological innovation constitutes the core competitiveness of this enterprise	PERF4	.715	.799			
	Technological innovation has laid a good foundation for the long-term development of the company	PERF5	.835	.689			
	Recognition of the market where the product is put into	PERF6	.627	.882			
IBOE	Employees have a strong sense of active learning	IBOE1	.671	.961	.959		
	Employees can see problems from different angles	IBOE2	.840	.954			
	Employees are good at finding new ideas and new methods to solve problems	IBOE3	.868	.952			
	Employees have a strong sense of innovation	IBOE4	.861	.953			
	Employees dare to try challenging research topics or directions	IBOE5	.872	.952			
	Employees actively subscribe to journals or participate in exhibitions	IBOE6	.843	.953			
	Employees often think about the scalability brought by new technology	IBOE7	.859	.953			
	Employees participate in new technology training and participate in competitions	IBOE8	.863	.952			
	Employees will actively collect, analyze and summarize current developments in technology	IBOE9	.819	.955			

The results in Tab.3 show that the values of TMT innovation awareness, innovative enterprise performance, employee innovation behavior scale value α are all greater than 0.7,

and the CITC value is all greater than 0.5. It can be seen that the scale is ideal and the internal consistency of the scale is also relatively good.

Validity test

Table 4 - Validity Test (N=270)
(made by the author)

KMO & Bartlett TEST					
Variable	Code	KMO value	BartlettSphere inspection		
			Approximate chi-square	df	Sig.
TMTinnovation awareness	TMTIA	.896	1841.488	36	.000
Innovative corporate performance	PERF	.895	1435.125	15	.000
Innovative behavior of employees	IBOE	.941	2550.491	36	.000

Tab. 4Thevalidity test results of the innovative enterprise incentive model show that the KMO values of TMT innovation awareness, innovative enterprise performance and employee innovation behavior are 0.896, 0.895 and 0.941, respectively.

The Bartlett spherical value is 1841.488, 1435.125, and 2550.491, and the statistical significance level Sig value is 0.000. Therefore, the dimension table of the TMT innovation consciousness model in this paper is suitable for factor analysis.

The influence of innovation consciousness on innovation performance

First, use demographic variables as independent variables and enterprise performance as dependent variables to construct regression model M1; secondly, use demographic variables as control variables, TMT innovation awareness as independent variables, and enterprise performance as dependent variables to construct regression model M2. The test results are shown in Tab. 5.

Table 5 - The impact of MT innovation awareness and corporate performance（N=270）
(made by the author)

	Dependent variable: business performance					
	Model:M1			Model: M2		
	B	Sig	VIF	B	Sig	VIF
Independent variable						
TMT innovation awareness	.768	.000	0.98	.765	.000	1
R	.748[a]	0		.754[b]	.265	
R^2	.559	.000		.568	.000	
$\triangle R^2$	.559	.000		.009	.000	
F	647.434	.000	.000[b]	73.341	.000[c]	
$\triangle F$	647.434	0	.000	1.255	.265	

After statistical testing, when TMT innovation awareness changes 1, corporate performance changes with 76.8%. Model 2 is a model that considers demographic differences. From the data in Tab. 5, we can see that considering demographic characteristics, when TMT innovation awareness increase by 1 point means 76.5% increase in corporate performance, which indicates that there is a significant positive correlation between TMT innovation awareness and corporate performance.

Based on this, the hypothesis H_1 (positive correlation between TMT innovation awareness and corporate performance) has been verified.

Table 6 - Innovation Performance and TMT Innovation Awareness (N=270)
(made by the author)

| | Dependent variable: business performance | | | | | |
| | MODEL M1 | | | MODEL M2 | | |
	B	Sig	VIF	B	Sig	VIF
Independent variable						
Degree of importance	-.002	.965	4.003	.004	.939	4.049
Degree of support	.782	.000	4.003	.772	.000	4.047
R	.761[a]	.000		.766[b]	.002	
R^2	.579	.000		.586	.000	
$\triangle R^2$	.579	.000		.007	.000	
F	350.068	.000[b]		71.024	.000[c]	
$\triangle F$	350.068	.000		1.111	.354	

It can be seen from Tab.6 that the model has been statistically tested.

When the two dimensions of TMT innovation consciousness change by 1, corporate performance changes by -0.002, and the P value by 0.9650.782. Model 2 is a model that considers demographic differences. Among the two dimensions of TMT's innovation awareness, only the importance of innovation is significantly positively correlated with corporate performance. Based on this hypothesis H_{1b}, (the positive correlation between innovation support and corporate performance in TMT's innovation awareness) has been verified.

The influence of TMT's innovative consciousness on employees' innovative behavior

First, build regression model M1; secondly, TMT innovation awareness is an independent variable, and employee innovation behaviors are used as dependent variables to build regression model M2. The test results are shown in Tab.7:

Table 7 - Impact of TMT Innovation Awareness on Employee Innovation Behavior (N=270)
(made by the author)

| | Dependent variable: employee innovation behavior | | | | | |
| | MODEL M1 | | | MODEL M2 | | |
	B	Sig	VIF	B	Sig	VIF
Independent variable						
TMT innovation awareness	.854	.000	1.000	.856	.000	1.021
R	.690[a]	.000		.697[b]		
R^2	.476	.000		.486	.001	
$\triangle R^2$	.476	.000		.010	.001	
F	463.238	.000[b]		52.813	.000[c]	
$\triangle F^2$	463.238	.000		1.267	.258	

After testing, when TMT innovation awareness changes by 1, the employee innovation behavior changes by 85.4%. Model 2 is a model that considers demographic differences. From the data in the table, we can see that when the demographic characteristics are

considered, when TMT innovation awareness rises for 1 point, corporate performance increased by 85.6%, based on this hypothesis H_2 (the positive correlation between TMT innovation awareness and employee innovation behavior) is verified.

Table 8 - Employee Innovation Behavior and TMT Innovation Awareness Test (N=270)
(made by the author)

	Dependent variable: employee innovation behavior					
	MODE/L M1			MODEL/M2		
	β	Sig	VIF	β	Sig	VIF
Independent variable						
Degree of importance	.404	.000	4.003	.409	.000	4.049
Degree of support	.443	.000	4.003	.440	.000	4.047
R	.692[a]			.700[b]		
R^2	.479			.490		
$\triangle R^2$	.479			.011		
F	234.016	.000[b]		48.055	.000[c]	
$\triangle F^2$	234.016	.000		1.294	.244	

It can be seen from Tab.8 that the model has been statistically tested. When the two dimensions of TMT innovation awareness change by 1, employee innovation behavior changes with 0.404 and 0.443. Based on this, the hypothesis H_2 (the positive correlation between TMT innovation awareness and employee innovation behavior) is verified.

Table 9 - Impact Of Employee Innovation Behavior On Corporate Performance (N=270)
(made by the author)

	Dependent variable: business performance					
	MODEL M1			MODEL M2		
	B	Sig	VIF	B	Sig	VIF
Independent variable						
Innovative behavior of employees	.4662	.000	1	.465***	.000	1.0184
R	.562[a]			.577[b]		
R^2	.316*			.333***		
$\triangle R^2$	.316*			.017***		
F	498.173*	.000[b]		38.778***	.000[c]	
$\triangle F^2$	235.630*	.000		1.605***	.000	0.121

The model in Tab.9 has been statistically tested. When the employee's innovative behavior changes by 1, the company's performance changes by 46.6%. Model 2 is a model that considers demographic differences. From the data in the Tab. 9, we can see that when considering demographic characteristics. When consumer behavior on the digital platform rises by 1 point, corporate performance rises by 46.5%, and VIF is less than 10, indicating that there is no multicollinearity between demographic variables and employee innovation behavior as independent variables into the regression model, R is 0.562, employee innovation The behavioral variation can be explained by 56.2%.

The regression coefficient of employee innovation behavior (B=0.445, P<0.001) is significant, which indicates that there is a significant positive correlation between employee innovation behavior and corporate performance.

Based on this, the hypothesis H_3 (positive correlation between employee innovation behavior and corporate performance) is verified.

Table 10 - Testing Of Innovation Performance by Employee Innovation Behavior (N=270)
(made by the author)

| | Dependent variable: business performance | | | | | |
| | MODEL M1 | | | MODEL M2 | | |
	B	Sig	VIF	B	Sig	VIF
Independent variable						
TMT innovation awareness	.764			.752 ***	.000	1.062
R	.669[a]	.000		.701[b]	.000	2.000
R^2	.447*	.000		.491 ***	.000	
$\triangle R^2$	.447*	.000		.044 ***	.000	
F	498.173*	.000[b]		38.778 ***	.000[c]	
$\triangle F^2$	498.173*	.000		3.744 ***	.000	

The model in Tab.10 has been statistically tested. When the employee's innovative behavior changes by 1, the company's performance changes by 76.4%.

Table 11 - The Mediating Role of Employees' Innovative Behavior (N=270）
(made by the author)

| Dependent variable: business performance | | | | |
	M1	M2	M3	M4
Independent variable				
TMT innovation awareness	.854	.856	.765	.705
Mediating variable				
Innovative behavior of employees			.073	.088[b]
R	.690[a]	.697[b]	.754[b]	.751[b]
R^2	.476	.486	.568	.563
$\triangle R^2$	.476	.010	.009	.004
F	463.238	52.813	73.341	328.462
$\triangle F$	463.238	1.267	1.255	4.741

Model 2 is a model that considers demographic differences. From the data in the table, we can see that when considering demographic characteristics, when employee innovation behavior rises by 1 point, corporate performance rises by 75.2%, but the specific P value has no impact on corporate performance in terms of gender, education level, department, corporate nature, and employee size, except for age and time spent in the company. VIF is less than 10, indicating that there is no multicollinearity between demographic variables and TMT innovation consciousness as independent variables into the regression model, R is 0.66.9, and the explanatory variation of employee innovation behavior is 66.9%.

The regression coefficient of employee innovation behavior ($B=0.752$, $P<0.001$) is significant, which indicates that there is a significant positive correlation between TMT innovation awareness and corporate performance.

Based on this, the hypothesis H_3 (positive correlation between employee innovation behavior and corporate performance) is verified.

It can be seen from Tab.11 that after adding the intermediary variables, the coefficient of the independent variable TMT's innovation awareness is significantly reduced (from 0.854 to 0.705), and the F value of the model is also significant at the level of $P<0.05$, which proves that the employee's innovative behavior.

There is a partially intermediary relationship between TMT innovation awareness and corporate performance. Based on this, it can be determined that hypothesis H_4 (TMT innovation awareness positively affects corporate performance through the intermediary effect of employee innovation behavior) has been verified, which also proves that H3 (employee innovation behavior is positively correlated with corporate performance) is established.

Hypothesis test result

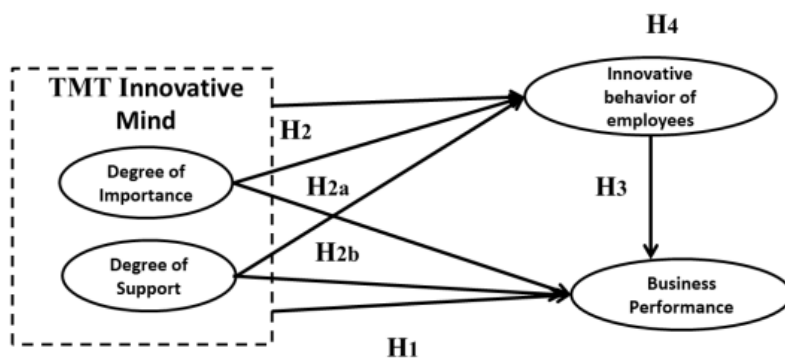|		
H_1	TMT innovation awareness is positively correlated with innovation performance.	Support
H_2	MT innovation awareness is positively correlated with employee innovation behavior.	Support
H_3	Employee innovation behavior has a significant positive impact on innovation performance	Support
H_4	TMT innovation awareness positively affects innovation performance through the mediating effect of employee innovation behavior.	Support

The theoretical model is established (Fig. 1).

Figure 1 - Theoretical model
(established by the author)

Conclusions and recommendations

First, the high level of senior management's awareness of innovation can to a large extent promote the improvement of corporate innovation performance through employee innovation. Therefore, for companies that pay more attention to R&D capabilities and innovation levels (such as high-tech companies and high-tech companies), shareholders and the board of directors should give executives more opportunities and rights to expand their horizons.

Second, employee innovation behavior plays a part of the mediating effect between executive innovation performance and enterprise innovation performance, and it can also promote the improvement of innovation performance output. Therefore, for companies that pay more attention to innovation performance output, on the one hand, they can consider improving innovation performance from the perspective of enhancing senior management's innovation awareness; on the other hand, when the corporate culture has formed a stable cohesive force, it can also improve employee innovation behavior and innovation.

The efficiency of achievement transformation will transform more invention patents into performance output that can create value and wealth for the enterprise.

Research limitations and future research directions

First, as the main content of the corporate spirit level configuration, the senior management's awareness of innovation is only a part of the corporate cultural structure, and other factors including the control of major shareholders will also affect the adjustment of corporate cultural structure, so follow-up research can consider starting from other aspects of the corporate culture structure.

Second, judging from the research results of this paper, corporate employee innovation behavior plays a part of the intermediary role between the senior management's innovation awareness and innovation performance. Combined with the theoretical sub-parts of this article, it can be seen that the intermediate factors affecting the senior management's innovation awareness and corporate innovation performance.

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INFLUENCE OF LENDING DECISIONS ON SMALL AND MEDIUM ENTERPRISES DEVELOPMENT
(CASE OF VIETINBANK, TIEN GIANG PROVINCE, VIETNAM)

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Small and medium-sized enterprises (SMEs) in the world are an indispensable part of the national economy. Customer information is always an important input data for the banking industry. Currently, banks are facing the problem of information asymmetry because borrowers provide unreliable and transparent information (data on financial and non-financial statements).

Research approaches the theory of distribution of bank credit capital based on the theory of Asymmetric Information; The theory of adverse selection of credit markets; Moral hazard theory; Social capital theory; Theory of application in banking administration.

The results of the factors affecting the bank's lending decision from high to low: (1) Information about the relationship with the bank (MQHNH) (ES = 0.207, P = 0.000); (2) Information on the capacity of the owner of the enterprise (NLCSH) (ES = 0.158, P = 0.005); (3) Social Information (ESR) (ES = 0.111, P = 0.020); (4) Information on Collateral (TSTC) (ES = 0.100, P = 0.022); (5) Information on Corporate Finance (TCDN) (ES = 0.088, P = 0.005) and (6) Information on Credit History (LSTD) (ES = 0.070, P = 0.009).

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Introduction

In the process of collecting and processing credit data of corporate customers, small and medium-sized enterprises are considered to be the most unreliable and transparent, especially in developing countries. To solve the information asymmetry situation, the banking system has built a customer credit rating process based on collecting and processing data of 2 types of information: hard information (defined as external, based on financial reports, credit history, assessment, credit scoring (Feldman, 1997; Berger et al., 2002) and soft information (defined as inside information, collected through the relationship between the borrower and the bank, or judged personal views, trust in customers, honesty in providing information (Petersen, 2004, Berger & Udell, 2002).

In 2020, out of 2,205 SMEs in Tien Giang over 30% of enterprises are severely lacking in the capital but cannot access bank credit for the following reasons:
- unaudited financial statements,
- weak asset guarantee,
- low financial efficiency,
- profit decline in recent years following the global trend.

This means that SMEs cannot meet the requirements of hard information set by banks. In addition to hard information, bank credit officers also consider soft information when making loan decisions such as:
- belief in the ability and ethics of business owners,
- participation in the network of relationships, etc.

These factors play an important role in making credit decisions but are currently not reflected in the credit policies of banks and businesses in Tien Giang.

Theoretical Basis

Concept and classification of hard information and soft information
The concepts of hard information and soft information have been widely developed in the organizational economics literature (Degryse & Cayseele, 2000; Sarasvathy, 2001). The distinction between hard information and soft information is not clearly stated, inconsistent, and incompletely defined.

According to research by Petersen (2004): hard information is quantitative information - digital numbers (in finance are balance sheet data, profits, assets...), soft information is qualitative information, speech (opinion, idea, project, opinion...); hard information about trends is backward in search direction (e.g.: balance sheet data), soft information tends to forecast future trends (e.g.: business plan).

Hard information is almost always recorded in digital form. Thus, in finance, hard information represented by financial statements, history of payments made on time, stock returns. Soft information is often communicated in writing. It includes opinions, ideas, rumors, economic projections, management statements, future plans, and market commentary.

The hard method of gathering information does not have to be personal. Instead, information is entered into a form without significant assistance or guidance from the data collector.

Hard information may (or may not) be publicly available and may (or may not) be verified by a third party, assessing the quality of hard information not explicitly verified. On the contrary, it is always possible to make certain points with soft information.

The role of two types of information in lending decisions of commercial banks

The role of hard and soft information in influencing firms' ability to access bank credit is described in Stein (2002). Information in a large bank is likely to be collected by one individual or a group of analysts and decisions made by another. As a result, financial decisions require information that is easily transmitted across physical or organizational distances.

The information must also have a uniform interpretation regardless of the context in which the information was collected. Large banks have multiple layers of management, which are decentralized or centralized as opposed to small or decentralized organizations. Thus, making financial decisions in the context of large banks shows that large banks depend relatively more on hard information.

The studies examine an important role of appropriate soft information in the context of geographical distance or stratification between lenders and borrowers. Soft information is collected by lenders through personal interactions with borrowers over time.

In particular, the proximity between lenders and borrowers facilitates soft information gathering (Agarwal & Hauswald, 2010). In the study by Petersen (2004) it was found that soft information affect on the lenders performance increased. Berger & De Young (2001), emphasize that small-scale banks have more flexibility than larger banks to assess credit by mainly relying on qualitative or soft information, collected by loan officers such as the personal knowledge of company owners, owners, and managers.

The role of the credit officer in the bank's lending decision

Procedures for information collection, information, analysis, and loan decision are established by loan officers (Petersen, 2004). In modern financial institutions, lower-level loan officers are often responsible for gathering information about borrowers and communicating this information to the bank's high-level managers (Stein, 2002).

Finally, large-scale banks with a distance of management decentralization have empowered lower-level agents (such as loan officers) to collect and process information about customers and make final lending decisions.

In Stein's study (2002), it was found that loan officer influences three common loan terms: loan spread, loan covenant, and loan maturity. Specifically: the loan officer explains about 24% of the variation in loan spreads, 47% of the variation in bank loans, and 56% of loan maturities.

Table 1 - Types of loans to SMEs in banks
(Source: Nguyen Hong Ha, 2013)

Priority level	Characteristics that determine loan type	Loan type	Information sources used	The main type of information	% For SMEs to borrow from banks
1	Leases	Lease for rent	Fixed asset rental valuation	Hard	4,84%
2	Commercial real estate mortgage	Commercial real estate loans	Valuation of commercial real estate	Hard	15,45%
3	Mortgage of residential real estate	Real estate loans	Residential real estate valuation	Hard	7,64%
4,5	Mortgage of motor vehicle/equipment	Housing	Valuation of motor vehicle/equipment	Hard	14,96%
6	Goods Receivable / Inventories	Motor vehicle loan / equipment	Valuation of receivables/inventories	Hard	9,02%
7	Large company/low leverage or Owner non-bankrupt equity	Asset-based lending	Financial statement review	Hard	8,94%
8	Small/medium company Small credit size Ownerdoes not repay large bank loans	Loan Report	Credit scores are mainly based on the personal credit history of the owner with limited financial information about the company and the loan.	Hard	11,83%
9	Relationship-based lending	Small business credit scoring	Lenders process information collected through timed contact with SMEs	Soft	4,07%
10	Judgment loan	Loan relationship	Lending judgment is based on limited hard information and personal and soft company experience/training (other than relationship lending)	Soft	7,64%

Difficulties in accessing bank loans of SMEs

SMEs account for about 90% of all businesses and more than 50% of jobs worldwide. SMEs contribute 33% to the GDP of developing countries (World Bank, 2013). The World Bank's SME Survey (World Bank, 2013) analyzed 130,000 companies in 135 countries, found that limited access to finance ranks at the top of the list of obstacles to the growth and development of SMEs. Both internal and external financial resources are needed for SMEs to grow, expand, develop and prosper.

Capital structure of SMEs (Berger, 2004):
- Commercial banks provide 18.75%,
- Financial companies - 4.91%,
- Other financial institutions - 3.00%,
- Trade credit - 15.78%,

- owner offers 4.10%.

- remaining capital types (not shown individually) include: corporate 1.74%, other individuals 1.47%, Government 0.49%, and credit cards 0.14%.

SMEs depend a lot on internal finance, but internal capital does not enough meet development requirements (Pandula, 2011). Internal finance is not as efficient as debt capital. This drives a growing need for external sources of finance.

Overview of factors affecting SME lending decision

Information provided by SMEs and collected by credit officers is critical to the loan officer's loan approval process. Credit specialists will use the information to assess the credit worthiness of SMEs and make credit decisions.

From the review of empirical studies on lending to SMEs, 15 factors are defined, which are important components of hard and soft information (Tab. 2).

Table 2 - Overview of factors affecting banks' lending decisions in previous studies
(compiled by the authors)

No.	Influence factor	Previous studies
I	**Hard Information**	
1	Financial report	Nguyen Anh Hoang (2014)
2	Business plan	Le & Nguyen (2006)
3	Business purpose	Uchida et al. (2006)
4	Products, services and potential	Ha Thi Thieu Dao et al. (2014)
5	Knowledge of business owners	Uchida et al. (2006)
6	Third party opinion	Ha Thi Thieu Dao et al. (2014)
7	Enterprise size	Nofsinger & Wang (2011)
8	Owner characteristics	Ajagbe & Adeniji (2013)
9	Collateral	Nguyen Anh Hoang (2014)
10	Credit history record	Ha Thi Thieu Dao et al. (2014)
II	**Soft information**	
11	Beliefs (ability and entrepreneurial personality)	Nguyen Hong Ha (2013)
12	Social network participation	Ferrary (2003)
13	Main lending bank	Khalid (2014)
14	Time of relationships	Nobuyoshi (2009)
15	Number of banking products	Ha Thi Thieu Dao (2014)

Research model and hypothesis

Through studying the theory and reality related to the lending decision of commercial banks for SME customers, the authors proposed the following research model (Fig.1) and hypothesis:

Hypothesis H_1: Vietnam Public Bank Tien Giang uses both hard and soft information in lending decision approval.

Hypothesis H_2: Soft information plays a more important role than hard information in a bank's lending decision.

Hard Information
- Financial report
- Business plan
- Business purpose
- Products, services and potential
- Knowledge of business owners
- Third party opinion
- Enterprise size
- Owner characteristics
- Collateral
- Credit history record

Soft information
- Beliefs (ability and entrepreneurial personality)
- Social network participation
- Main lending bank
- Time of relationships
- Number of banking products

Information for loan decision
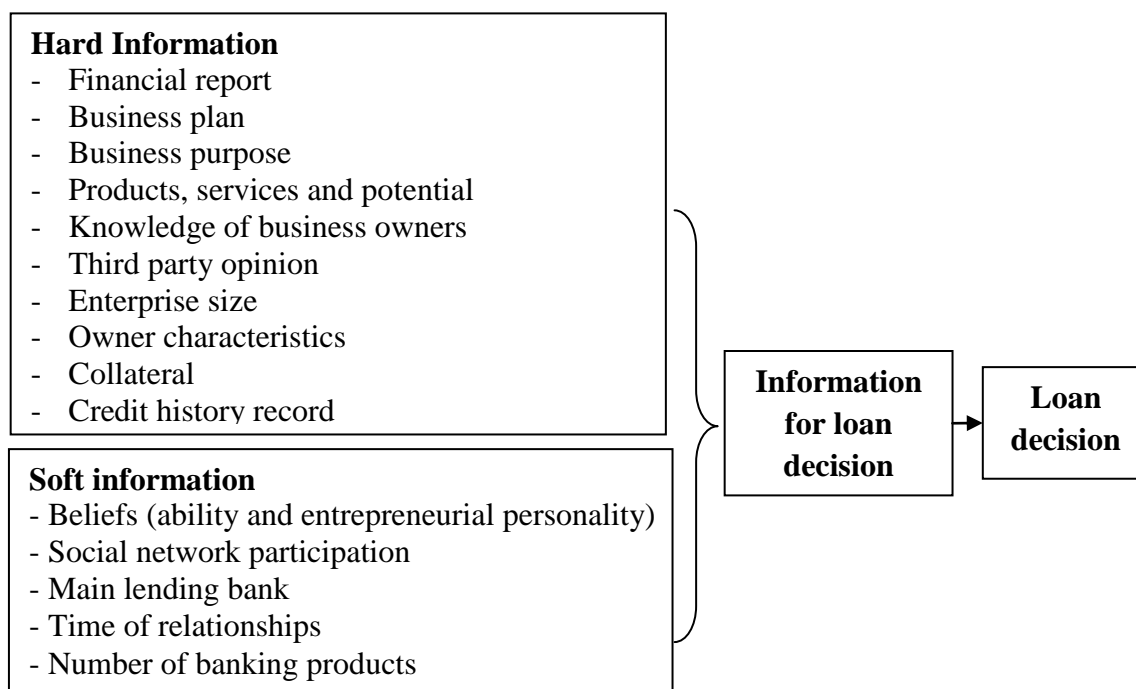
Loan decision

Figure 1 - Expected research model and hypothesis
(compiled by the authors)

Research Methods

Only with a suitable and scientific method can we accurately determine the necessary information affecting the loan approval process. Based on the previous overview and the views of the credit officers who directly collect information and credit ratings of corporate customers in Tien Giang, these necessary information sources, grouped into the following factors. Thereby testing the reliability of the scale and exploratory factor analysis to have the basis of multivariable regression analysis to determine the influencing factors. From there, there are grounds to recommend authorities to strengthen credit support for SMEs.

The research consists of two main steps: preliminary research and formal research. Preliminary research was carried out through two methods: qualitative and quantitative.

Qualitative research is used to discover, adjust and determine the relationship between the variables in the proposed research model, which is obtained after theoretical overview and situation overview. The purpose of qualitative research is to recalibrate the scales used in previous quantitative studies. Due to the difference in culture, language, and level of development, the scales need to be adjusted to better suit the context in Vietnam.

Qualitative research uses a preliminary questionnaire for 50 samples, selected by random sampling method and carried out in September 2021. When reviewing the research, building a model and 15 groups of factors from the review, in-depth interviewing, filtering 06 groups included in the official quantitative research model are 35 observed variables:

Hard information: (1) Information on corporate finance (TCDN) has 6 observed variables; (2 Information about collateral (TSTC) has 6 observed variables; (3) Information about credit history (LSTD) has 6 variables. Soft information: (4) Information about owner

capacity Enterprises have 6 observed variables; (5) Information about participating in social networks has 5 observed variables, and (6) Information about relationships with banks (MQHNH) has 6 observed variables.

A formal quantitative study was carried out to make a preliminary assessment of the reliability and validity of the scales designed and adjusted to suit the conditions in Vietnam. The study was officially carried out in Tien Giang province, convenient random sampling method, the survey process was conducted from October 2021 to December 2021, 300 questionnaires were distributed, the results were obtained. 275 votes, 246 best answers, reaching 89.45% of the samples.

Exploratory factor analysis (EFA) to determine the number of appropriate factors, the indexes are often interested in testing such as KMO coefficient (Kaiser-Meyer-Olkin) > 0.5 is a sufficient condition. For the appropriate factor analysis (Hoang Trong et al., 2010), the factor loading, if the factor loading is less than 0.4 in EFA, it will be rejected (Anderson & Gerbing, 1998) and the Eigenvalue has to stop when extracted factors have eigenvalue coefficient ≥ 1 and total variance extracted (AVE ≥ 50%) (Hoang Trong et al., 2010).

The preliminary assessment is performed using a scale with Cronbach's alpha reliability coefficient and exploratory factor analysis method, presenting indicators to check the appropriateness of the research model such as F-value, R^2, correlation coefficient, variance inflation factor (VIF), and hypothesis testing.

The results of the linear regression analysis show the relationship between the factors constituting the hard information and the soft information affecting the bank's lending decision, from the regression analysis results will determine significant relationships (95% test significance level).

At the same time, it also tests the research hypotheses to see if the relationship between factors is positive or negative and is significant at the 95% test value. Finally, we tested the reliability of the scale using Cronbach's Alpha, EFA, CFA, linear regression analysis, and SEM.

Table 3 - Cronbach's Alpha test after EFA

(Source: Author's calculation)

No.	Scale	Number of variables observe	Cronbach's Alpha	Correlation coefficient – total variable
1	Information about corporate finance	6	0.855	0.602
2	Information about collateral	6	0.885	0.631
3	Information about credit history	6	0.920	0.623
4	Information about the capacity of business owners	6	0.809	0.553
5	Information about participating in social networks	5	0.867	0.533
6	Information about the relationship with the bank	6	0.849	0.521
7	Bank loan decision	4	0.791	0.736
	Total	39		

Exploratory factor analysis (EFA)

In this study, the author uses the EFA exploratory factor analysis method to extract 35 components into a number of component factors (Hoang Trong et al., 2008) to measure the lending decision of banks row.

EFA results have 35 observed variables in the 6 components of the scale of influence on bank lending decisions, which are extracted into 6 components with KMO = 0.834, so EFA is appropriate.

The chi-squared statistics of Bartlett's test reached 2543,438 with significance level Sig = 0.000; Therefore, the observed variables are correlated with each other. With an eigenvalue of 1,083 and extracted variances of 66.109%, it proves that the analyzed data are in accordance with EFA, satisfactory.

All scales have confidence > 0.7 and correlation coefficients of all variables are > 0.4. Therefore, the reliability coefficients of all scales are obtained after EFA analysis.

Table 4 - Summary results of EFA
(Source: Author's calculation)

No.	Scale	Number of variables observe	Cronbach's Alpha	Variance	Value
1	Information about corporate finance	6	0,855		
2	Information about collateral	6	0,885		
3	Information about credit history	6	0,920		
4	Information about the capacity of business owners	6	0,809	66.109	Qualified
5	Information about participating in social networks	5	0,867		
6	Information about the relationship with the bank	6	0,849		
7	Bank loan decision	4	0,791	59.744	
	Total	39			

A preliminary assessment is performed using a scale with Cronbach's alpha reliability coefficient and exploratory factor analysis method, presenting indicators to check the appropriateness of the research model such as F-value, R2, correlation coefficient, variance inflation factor (VIF), and hypothesis testing.

Then, we tested the model fit, built multiple regression equations, and tested the hypotheses. Finally, we tested the reliability of the scale using Cronbach's Alpha, EFA, CFA, linear regression analysis, and SEM.

Confirmatory factor analysis (CFA)

Regarding the overall goodness of fit, factor analysis confirmed that this model has a chi-squared statistical value of 454,661 with 304 degrees of freedom (p = 0.000). The relative chi-squared for degrees of freedom CMIN/def is 1.496 (<2). Other metrics are: GLI = 0.823 (>0.8). TLI = 0.930 (> 0.9). CFI = 0.939 (> 0.9) and RMSEA = 0.059 (< 0.08).

Therefore, this model is not suitable for market data. This also allows us to say that there is a disorientation of the observed variables. Convergence values, standard weights of all scales are > 0.5 and statistically significant at p < 0.5. Therefore, the scales achieve convergent value.

Figure 2 - Confirmatory factor analysis (CFA)

(compiled by the authors)

Table 5 - Results of estimating the correlation between factors of a bank's lending decision

(Source: Author's calculation)

			Estimate	S.E.	C.R.	P
TSTC	<-->	LSTD	0,323	0,065	4,988	***
TSTC	<-->	NLCSH	0,196	0,050	3,950	***
TSTC	<-->	MQHNH	0,216	0,048	4,509	***
TSTC	<-->	MLXH	0,192	0,047	4,101	***
LSTD	<-->	NLCSH	0,275	0,064	4,284	***
LSTD	<-->	TCDN	0,186	0,072	2,600	0,009
LSTD	<-->	MQHNH	0,309	0,063	4,939	***
LSTD	<-->	MLXH	0,324	0,064	5,100	***
NLCSH	<-->	MQHNH	0,170	0,045	3,758	***
NLCSH	<-->	MLXH	0,220	0,050	4,403	***
MQHNH	<-->	MLXH	0,249	0,050	4,964	***

Structural equation modeling (SEM) results

The research model includes 6 concepts. After checking CFA and SEM, all concepts are satisfactory:

Hard information: (1) Information about corporate finance (TCDN); (2 Information about collateral (TSTC) and (3) Information about credit history (LSTD)

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Soft information: (1) Information about business owner capacity (NLCSH); (2) Information on social network participation (social network); and (3) information on the relationship with the bank (MQHNH).

The results show that this model has a chi-squared value of 644.0248 with 407 degrees of freedom (p = 0.000). The relative squared value of CMIN/def degrees of freedom is 1.582 (<2). Other indicators include: GTI = 0.902 (> 0.9), TLI = 0.912 (> 0.9), CFI = 0.923 (> 0.9) and RMSEA = 0.064 (< 0.08).

Therefore, this model achieves compatibility with the collected information. The factors include (1) Financial information of enterprises (TCDN) (ES = 0.088, P = 0.005); (2) Information on Collateral (TSTC) (ES = 0.100, P = 0.022); (3) Credit History Information (LSTD) (ES = 0.070, P = 0.009); (4) Information on the capacity of the business owner (NLCSH) (ES = 0.158, P = 0.005); (5) Social information (ESD) (ES = 0.111, P = 0.020); (6) Information about the relationship with the bank (MQHNH) (ES = 0.207, P = 0.000).

Figure 3 - Structural Equation Model (SEM)

(Source: Author's calculation)

The Bootstrap method is often used to test the model's estimates, with the iterative model being N = 1000. The estimated results for 1000 sampled mean plus deviation are shown in Tab. 5.

CR has the absolute value is very small, so it can be confirmed that the deviation is very low, and at the same time not statistically significant at the 95% confidence level. Therefore, we can conclude that the model's estimates can be trusted

Table 6 - Results of estimating the causal relationship between hard and soft information factors and banks' lending decisions
(Source: Author's calculation)

Correlations			Estimate	S.E.	C.R.	P	Label
QDCV	<---	TSTC	0.100	0.056	1.797	0.022	Yes
QDCV	<---	LSTD	0.070	0.032	0.319	0.009	Yes
QDCV	<---	NLCSH	0.158	0.056	2.828	0.005	Yes
QDCV	<---	TCDN	0.088	0.031	0.919	0.005	Yes
QDCV	<---	MQHNH	0.207	0.092	2.235	0.000	Yes
QDCV	<---	MLXH	0.111	0.071	1.555	0.020	Yes

Table 7 - Estimated results according to bootstrap, N = 1000
(Source: Author's calculation)

Correlations			SE	SE-SE	Mean	Bias	SE-Bias	CR
QDCV	<---	TSTC	0.080	0.002	-0.098	0.002	0.003	1.50
QDCV	<---	LSTD	0.058	0.001	0.011	0.001	0.002	2.00
QDCV	<---	NLCSH	0.083	0.002	0.161	0.004	0.003	0.75
QDCV	<---	TCDN	0.039	0.001	0.025	-0.003	0.001	-0.33
QDCV	<---	MQHNH	0.185	0.004	0.218	0.011	0.006	0.55
QDCV	<---	MLXH	0.165	0.004	0.095	-0.016	0.005	-0.31

Discussing research results

The research results are the scientific basis to prove the role of credit officers in the lending decisions of commercial banks, similar to the research results of Stein (2002): loan officers explained about 24%.of the change in loan spreads, which explains 47% of the variation in bank lending, and 56% of loan maturity.

The factor of financial situation collected from the financial statements of enterprises plays an important role in the decision to lend to SMEs, consistent with the research results of Uchida et al (2012), Nguyen Anh Hoang (2014).

The research results are also consistent with the requirements of providing a healthy financial situation in the approval of loan applications of commercial banks. The financial situation signals the health and ability of enterprises to repay loans.

Especially for SMEs in Tien Giang province, most of them are small businesses, just starting up, so the requirements are very high on financial indicators such as liquidity, quick payment, inventory turnover, average collection period. revenue, total assets, liabilities/total assets, overdue debts/total bank loans; Pre-tax/revenue collection; Earnings before tax/Total assets…these indicators show transparency in business and predict the debt repayment ability of enterprises.

Therefore, joint-stock SMEs with the public, transparent, and audited financial statements are always highly appreciated by banks, maintaining a weight of 45% - 70% of the total customer credit rating coefficients.

General information about SMEs' resources, business plans, business prospects, and management systems of SMEs also affect the lending decision of commercial banks. The research results are consistent with the research results of Petersen, (2004); however, in contrast to the study Uchida et al. (2006); Agarwal & Hauswald (2010) argues that general information about firms does not significantly influence lending decisions.

The factor "Information about Collateral" plays an important role in the lending decision of commercial banks consistent with the research results of Petersen (2004), Uchida et al., (2006). The biggest risk and also the most common, causing the most loss in the business of banks is credit risk.

Therefore, when assessing credit, banks cannot skip the review of conditions that can ensure the recovery of loans of enterprises, in which the condition of collateral is common. All these reasons lead to the conclusion that lending to SMEs in Tien Giang province is very risky, so commercial banks require collateral to improve credit repayment confidence to easily access capital bank loans.

Factor "Credit history information" plays an important role in the lending decision of commercial banks consistent with the research results of Berger & Udell (2002); Nguyen Anh Hoang (2014). Commercial banks always look back at the customer's transaction history before making a credit decision, because the transaction history reflects the financial situation and attitude to the bank's debt repayment obligation.

This research result is also consistent with the general credit process at commercial banks in Tien Giang province, if customers have a good credit history, it will be an advantage in creating trust with commercial banks, will easily access capital. more bank credit.

Factor "Capacity and personality of the business owner" plays an important role in the lending decision of commercial banks, the research results are similar to the research results of Petersen, MA. (2004); the capacity of business owners is highly appreciated in non-financial indicators when rating credits of corporate customers.

Including the management experience in the business field, the experience through the previous achievements or failures of the business owner, the ability to forecast market movements are factors that enhance the competitive position of the company enterprises themselves in the market.

The ethics of business owners are assessed through honesty in providing information to credit officers, these data help banks to assess the ability and attitude of SMEs to repay loans, which is an important factor important for commercial banks to decide whether to lend or refuse to grant credit.

Factor "Social network participation of SMEs" has no significant influence on the bank's lending decision. Research results are in agreement with previous studies: Petersen (2004); Nguyen Anh Hoang (2014) who believes that social relationships make it easier for businesses to access bank loans.

Factor the relationship with the lending bank plays an important role in the lending decision of commercial banks, consistent with the research results of Uchida et al. (2006); Nguyen Anh Hoang (2014). SMEs have quality collateral and long-term relationship with commercial banks, and it helps to reduce information asymmetry and makes it easier for SMEs to access bank loans.

Limitations of the study

Firstly: there are factors that may have an impact on the lending decision but have not been included in the research. Therefore, in the next study, these factors should be added in order to have higher practical results.

Secondly: the study only mentions that the role of hard information being more important than soft information, going against the internal credit-granting process at commercial banks in Tien Giang province as there is no in-depth analysis of the evaluation basis.

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EVALUATION OF EQUITY MUTUAL FUNDS PORTFOLIO PERFORMANCE IN INDONESIA USING SHARPE, TREYNOR AND JENSEN METHODS

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Besides investing in stocks, bonds, or gold, investors can also opt to invest in mutual funds. Mutual funds can be an alternative investment solution for beginner or risk-averse investor that doesn't have much knowledge in analyzing portfolio performance or know how to make a proper portfolio. There are four types of mutual funds, equity mutual funds, fixed income mutual funds, money market mutual funds, and balanced mutual funds. Equity mutual funds themselves are a type of mutual funds that invest at least 80% in stocks; therefore, the risk is quite higher than other types of mutual funds. The purpose of this study is to evaluate the performance of equity mutual funds available in Indonesia by using the Sharpe Index, Treynor Ratio, and Jensen Index from 2018 to 2020. The writer chooses to use the population of 7 equity mutual funds and Composite Stock Price Index of Indonesia data for the market return. Out of 7 chosen equity mutual funds, it can be concluded that Sucorinvest Equity was the best-performing equity fund during the study period.

Introduction

The vast majority of Indonesian Millennials and Generation Z populations have become more interested in investing but lack the necessary financial literacy. According to the OJK Financial Services Authority (2017) in Rahman & Risman (2021), financial literacy

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is knowledge, skills, and beliefs that influence attitudes and behavior to improve the quality of decision-making and financial management to achieve prosperity. Understanding financial literacy may be helpful for an investor in financial management since it directly concerns the ability to manage finances properly and responsibly (Rahman & Risman, 2021)

Warren Buffet, one of the richest men in the world gained his wealth by investing in mutual funds. Mutual funds can be defined as a tool where people give out their money to investment managers to be invested on their behalf. Investors nowadays are faced with many options for investment such as stocks, bonds, cryptocurrency, and other financial instruments. Investors that lack the knowledge or skills to manage or build an optimal portfolio may face high risk and loss that is why mutual funds can be an alternative choice of investment for these investors (Baker et al., 2016).

Baker et al (2016) stated there are various types of mutual funds, such as Money Market Mutual Funds, Bond Mutual Funds, Stock Mutual Funds. Each type of mutual funds is unique and has their own characteristic, therefore will cause differences in their performance. According to Indonesia Stock Exchange (2021), equity mutual fund is a mutual fund that invests at least 80% of its assets in equities. Because it invests in stocks, it has higher risks than other types of Mutual Fund. However, it gives a higher rate of return.

Mutual funds portfolio performance can be measured by using Sharpe Index, Treynor Ratio, and Jensen Index. Out of those 3 measuring instruments, the Sharpe index is the most commonly used and become the standard for industry because of how easily it can be implemented (Pangestuti et al., 2017).

In Indonesia, mutual funds portfolio performance has been evaluated by Pangestuti et al (2017). They conducted a study on equity mutual funds portfolio performance by using the Sharpe Index, Treynor Ratio, Jensen Index, Adjusted Sharpe Index, Adjusted Jensen Index, and Sortino Ratio.

This study aims to evaluate the performance of equity mutual funds in Indonesia by using Sharpe Index, Treynor Ratio, and Jensen Index. The writer hopes the results of this study could suggest equity mutual funds as an investment option to investors.

Literature review

Investment

Napoletano & Curry (2021) stated that investing is the process of buying assets that increase in value over time and provide returns in the form of income payments or capital gain. Another theory from Reilly et al. (2019) investment is the commitment of money for a period of time in order to gain future payments that compensate the investor for the funds, inflation, and uncertainty.

There are four main asset classes that people can invest in with the hopes of gaining profits: stocks, bonds, commodities, and real estate. Companies sell stock to raise money to fund their business operations. Buying shares of stock gives you partial ownership of a company and lets you participate in its gains (and the losses).

Some stocks also pay dividends, which are small regular payments of companies' profits (Napoletano & Curry, 2021).

EVALUATION OF EQUITY MUTUAL FUNDS PORTFOLIO

Mutual Funds

Besides investing in stocks, bonds, and other financial instruments, mutual funds can be an alternative investment for investors. Mutual funds arise because, some investors experience difficulties to make their portfolio investments (Zakarias & Tumewu, 2015). Those difficulties are usually because investors have to analyst and monitor the market, which can be very time-consuming. According to Zakarias &Tumewu (2015), mutual funds are managed by two parties, the Investment Manager and Custodian Bank. Investment manager (IM) is a company that manages its client's securities portfolio and is responsible for the investment activities. On the other hand, Custodian Bank is a part of the business activities of a bank in the field of safeguarding assets (Zakarias & Tumewu, 2015).

Return and Risk

There are three basic considerations for investment decisions consisting of: (1) Rate of return, (2) rate of risk, and (3) availability of funds. Risk and return have a unidirectional and linear relationship. According to Risman et al. (2017), each type of investment has a risk-return relationship that reflects the principle that safer investments tend to offerlower returns, whereas riskier investments tend to offer a higher return.

Return can be explained as the level of profit from the funds invested by investors. Return can be divided into 2 types, namely expected return and actual return. On the other hand, the risk is the possibility of the actual return that is different from the expected return. Markowitz's (1968) theory as written in Risman et al. (2017) explains the optimal portfolio as an investment that provides maximum results at a certain level of risk or a certain return on the minimal risk.

Portfolio

An efficient portfolio can be defined as combined investable assets in a way that produces the best possible expected level of return for their level of risk or the lowest risk for a target return. The line that connects all these efficient portfolios is known as the efficient frontier. The efficient frontier represents those portfolios that have the maximum rate of return for every given level of risk (Chen, 2021).

As stated in Partono et al. (2019) an optimal portfolio is a portfolio that gives a combination of stocks with high return and low risk. Investors can determine the optimal portfolio with single index model or the Markowitz model.

Capital Asset Pricing Model (CAPM)

Al-Afeef (2017) defined Capital Assets Pricing Model as a market return model based on the portfolio theory developed by Harry Markowitz. The portfolio model requires a critical condition on the weights of assets in medium-efficient portfolios. CAPM is based on a testable forecast on the relationship between risk and required return by choosing a portfolio that should be effective if the asset prices are clear to the market for all assets.

Sharpe and Black developed the CAPM model, which became a reliable model to measure the required return that can reflect the cost of equity financing. CAPM measures the risk of securities by calculating the sensitivity of return to the change in the market's return, the market's risk is measured by Beta Coefficient (Al-Afeef, 2017).

According to Tlemsani et al. (2020), security market line (SML) is the relationship between expected return and security risk Beta. The risk can be divided into 2 types,

systematic and unsystematic risk. The capital market line (CML) shows the relationship between expected return and standard deviation, it also describes how investors react. The most notable difference between CML and SML is how they measure risk differently. SML measures the risk as beta that calculates systematic risk, whereas CML measures the risk as a standard deviation that calculates the total systematic and unsystematic risk (Tlemsani et al, 2020).

Sharpe Index

Pangestuti et al (2017) stated that various methods of measuring portfolio performance that currently exists are mostly based on the theory developed by Markowitz. Among many methods of portfolio performance measurements, there is the Sharpe Index developed by Sharpe, which was originally created to measure the performance of mutual funds in the United States. Sharpe index is the most common measuring instrument used and becomes the standard for industry because of its popularity. Sharpe index can be described as a measure that employs calculations of unit return minus the risk-free rate of return compared to the total risk, commonly referred to as reward to variability. In other words, Sharpe Index emphasizes the portfolio performance measurement based on non-systematic risks (Pangestuti et al, 2017).

Sharpe index can be presented as:

$$s_p = \frac{r_p - r_f}{\sigma_p} \quad \text{(Zakarias \& Tumewu, 2015)}$$

Where:

r_p = portfolio rate of return
r_f = risk free rate of return
σ_p = standard deviation
s_p = Sharpe index

Treynor Method

Based on Qur'anitasari et al. (2019), the Treynor method is a measurement of portfolio performance developed by Jack Treynor. This index is often referred to as the reward to volatility ratio. Like the Sharpe index, portfolio performance on the Treynor Index is measured by calculating portfolio return with the magnitude of the portfolio risk.

The assumption used by Treynor is that the portfolio is well diversified so the risk that is considered relevant is systematic (Qur'anitasari et al, 2019).

Treynor index can be presented as:

$$T_p = \frac{r_p - r_f}{\beta_p} \quad \text{(Zakarias \& Tumewu, 2015)}$$

Where:

r_p = portfolio rate of return
r_f = risk free rate of return
β_p = beta or systematic risk of portfolio
T_p = Treynor index

Jensen Method

According to Qur'anitasari et al (2019), the Jensen Method is an index that shows the difference between the actual rate of return obtained by the portfolio and the expected rate of return if the portfolio is on the capital market line. The Jensen index is the excess return above or below the security market line, it can be easily be defined as a measurement of how much a portfolio "beats the market" (Qur'anitasari et al, 2019).

Jensen Alpha can be calculated by the following formula:

$$\alpha = \left(R_{i,t} - RFR_t\right) - \beta\left(R_{m,t} - RFR_t\right) \quad \text{(Zakarias \& Tumewu, 2015)}$$

Where:

$R_{i,t}$ = portfolio rate of return
RFR_t = risk free rate of return
$R_{m,t}$ = return of market
α = Jensen alpha

Methodology

This study is a descriptive study with a quantitative approach that illustrates mutual funds portfolio performance with data that is processed using Sharpe, Treynor, and Jensen method. The object of this study is samples of equity mutual funds from 7 investment managers in Indonesia, the Composite Stock Price Index of Indonesia, and the BI rate. The criteria for sample include: (1) Conventional mutual funds product, (2) Active during period 2018-2020, and (3) Have the complete monthly Net Asset Value available from 2018-2020.

Results and Discussions

The results of this study discussed the portfolio performance of 7 chosen equity mutual funds in Indonesia that are active during the 2018-2020 period. The 7 equity mutual funds consist of: Schroder Dana Prestasi, Schroder Dana Prestasi Plus, BNP Paribas Pesona, Rencana Cerdas, Dana Pratama Ekuitas, Sucorinvest Equity, and Sam Indonesian Equity (Tab. 1). To compare the portfolio performance with market return, the writer used the Composite Stock Price Index of Indonesia.

Table 1 - Equity Mutual Funds Expected Return and Standard Deviation
(made by co-authors)

Mutual Funds	Expected Return	Standard Deviation
Schroder Dana Prestasi	0.005346746	0.055974253
Schroder Dana Prestasi Plus	-0.02074249	0.052037254
BNP Paribas Pesona	-0.00814119	0.066384161
Rencana Cerdas	0.021038025	0.065823922
Dana Pratama Ekuitas	-0.02792266	0.085624961
Sucorinvest Equity	0.107300061	0.067378908
SAM Indonesian Equity	0.019502535	0.087295643

Based on Tab. 1, there are 3 out of 7 mutual funds that have negative expected return, those mutual funds are Schroder Dana Prestasi Plus, BNP Paribas Pesona, and Dana Pratama Ekuitas. Sucorinvest Equity has the highest expected return during the period of 2018-2020 with a rate of risk of 6.74%. Schroder Dana Prestasi gives out the lowest expected return with 0,53%.

Table 2. Comparison of Sharpe, Treynor and Jensen Index
(made by co-authors)

Mutual Funds	Sharpe	Treynor	Jensen
Schroder Dana Prestasi	-0.78658	-0.04502	-0.00799
Schroder Dana Prestasi Plus	-1.34745	-0.07813	-0.03705
BNP Paribas Pesona	-0.86641	-0.04994	-0.01508
Rencana Cerdas	-0.43050	-0.02478	0.01380
Dana Pratama Ekuitas	-0.90275	-0.05375	-0.02430
Sucorinvest Equity	0.85969	0.05043	0.10025
SAM Indonesian Equity	-0.34220	-0.01996	0.02528

If the index calculation results are positive and the greater, the portfolio performance is the better. From Tab. 2, almost every mutual fund has negative results except Sucorinvest Equity by using Sharpe and Treynor Index. On the other hand, the Jensen Index shows that there are 3 mutual funds that could be profitable. Those 3 mutual funds are Rencana Cerdas, Sucorinvest Equity, and Sam Indonesian Equity.

By using Sharpe, Treynor, and Jensen Index, it shows that Schroder Dana Prestasi Plus is the worst-performing mutual fund compared to the other 6 mutual funds. Sucorinvest Equity is consistently the best performing mutual fund as shown in table 2.

Conclusion

The results show that not all samples of equity mutual funds used for this study are able to produce a profitable investment. Sucorinvest Equity managed to be consistently given out good performance during the period with the highest score of Sharpe Index, Treynor Index, and Jensen Index.

Therefore, every investor that is interested to invest in an equity mutual fund may choose Sucorinvest Equity. The investment manager with bad and worst-performing mutual funds should reformulate their strategy to improve performance.

Another option is that it is better for investors to create their own portfolios instead of investing in equity mutual funds or perhaps investing in lower-risk mutual funds.

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TAX REVENUE AND ECONOMIC DEVELOPMENT
IN SOUTHEAST ASIAN COUNTRIES

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The article uses secondary data sources of World Bank and quantitative analysis model to examine the impact of the economic development level of countries in Southeast Asia on tax revenue. Research results show that, from 2000 to now, the level of economic development of countries in this region has increased significantly, which is reflected in the increase in GDP per capita, through which the income taxes of these countries have also increased from 2000 to the present. Besides, the results of quantitative analysis through the regression model also show that GDP per capita has a positive impact on tax revenue in countries in this region.

Keywords: tax revenue; economic development level; Southeast Asia

Introduction

Tax is an income that plays an important role for every country, is a tool that contributes to macroeconomic adjustment.

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TAX REVENUE AND ECONOMIC DEVELOPMENT

Tax income can be extracted from many different sources such as from businesses and individuals, from import and export activities, natural resources, corporate registration tax etc thus many factors affect the tax revenue.

There are many empirical studies, focusing on the factors affecting tax revenue. For example, Velaj & Prendi (2014) examined how GDP, inflation, imports and unemployment affect tax revenues in Albania; Castro & Ramirez (2014), Gupta (2007), Andrejovská & Pulikova (2018) used panel data to analyze factors affecting tax revenue in different countries.

Most of the above empirical studies consider the factors affecting tax revenue, but there is no study examining the impact of economic development level on tax revenue, especially in East Asian countries.

Theoretical basis

Tax revenue is defined as the revenues collected from taxes on income and profits, social security contributions, taxes levied on goods and services, payroll taxes, taxes on the ownership and transfer of property, and other taxes (OECD, 2021). Total tax revenue as a percentage of GDP indicates the share of a country's output that is collected by the government through taxes. It can be regarded as one measure of the degree to which the government controls the economy's resources.

Tax revenue is typically the major source of government revenue. In national accounts, taxes are defined as compulsory, unrequited payments levied by general government - or in a few cases by the EU institutions (EUROStat, 2021).

Economic growth is the continuing increase in the volume of production in one country, ie. GDP growth, while economic development is not only quantitative but also qualitative changes that lead to better meet their needs (Panth, 2020).

Economic development is a process of changing towards perfection in all aspects of the economy including economy, society, environment and institutions in a given period of time (Ho & Phuong, 2015).

In 2003, the United Nations used three criteria to determine a country's level of economic development. These criteria include: income (GDP) per capita, economic structure, and human development index (HDI), with GDP per capita as the core.

Tax revenue is influenced by factors including the level of economic development.

Therefore, the paper examines the impact of economic development on tax revenues in Southeast Asian countries, and specifically examines the impact of GDP per capita on tax revenues in Southeast Asian countries.

The higher the GDP per capita, the higher the demand for goods and services in general and public goods and services in particular; in addition, high GDP per capita increases the tax payment capacity of society. As a result, the amount of tax collected will increase (Fox & Gurley, 2005).

Castro & Ramírez (2014) assert that GDP per capita positively affects tax revenues in 34 OECD member countries for the period 2000–2011. Azka et al (2014) also confirmed that real income per capita is considered as one of the main factors determining tax revenue in Pakistan in the period 1980–2010; Aneyew (2016) stated that GDP per capita has a positive effect on tax revenues in Ethiopia for the period 1975-2013.

On that basis, we use a quantitative model to test the impact of GDP per capita on tax revenues in Southeast Asian countries according to Regression analysis.

Research data and methods

The study uses secondary data from 10 countries for the period from 2000 to 2020.

The selected countries include Singapore, Brunei, Cambodia, Indonesia, Lao, Myanmar, Malaysia, Philippines, Thailand, and Vietnam.

Results

Since 2000, GDP per capita in Southeast Asian countries has increased remarkably. According to data published by World Bank, Singapore is the country with the highest real GDP per capita in the region and reaches 58,057 USD/person/year.

Brunei is the second country in the region in terms of real GDP per capita and reaches 30,718 USD/person/year.

Malaysia is the third country in the region in terms of real GDP per capita and reaches 10,716 USD/person/year.

In particular, Myanmar is the country with the lowest real GDP per capita in the region, reaching only 1,218 USD/person/year.

In general, real GDP per capita among countries in the region has a significant difference and there is a large gap between developed countries and less developed countries in the region (Fig. 1).
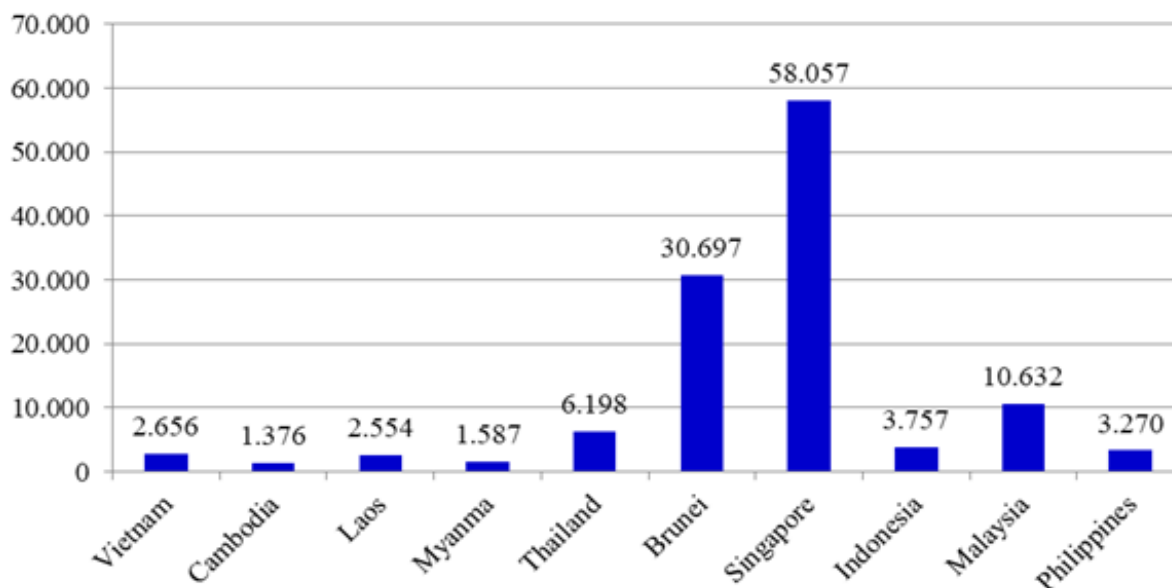

Figure 1 - GDP per capita of countries in Southeast Asia in 2020 (USD/person/year)
(Source: WorldBank)

In terms of tax revenue of countries in Southeast Asia, there are also significant differences.

This difference is due to the tax incentives of different countries. Cambodia, Vietnam, Thailand, Philippines, Singapore are countries with high tax revenue in the region. To compare tax revenues across countries we use tax revenues as a % of GDP.

Before the global financial crisis, Vietnam's number was at a much higher level, fluctuating over 20%/GDP and reaching 20.47%/GDP in 2015, while this figure in other countries in the region ranged from less than 10 to more than 16% (specifically Cambodia 9.7%, Indonesia 12.59%, Laos 13.42%, Malaysia 14.3%, Philippines 12.96%, Singapore 12.82% and Thailand 15.14%).

This ratio is currently on a decreasing trend, from 20.47% to 18.62% in 2019, but is still high when compared to other countries in the region,

Figure 2 - Tax and fee collection rates/GDP of Vietnam and some countries in the region in the period 2010-2019 (%).
(Source: calculation from Worldbank data)

Tax revenue to GDP of countries in Southeast Asia tends to decrease.

Because of the governments have taken measures to reduce tax rates and remove difficulties for businesses in response to the financial crisis and global economic recession. Therefore, the tax collected from this area is reduced compared to the proposed estimates.

With secondary data collected from the World Bank, we conduct a regression with the dependent variables - tax revenue and the independent variable - GDP per capita. The following results obtained (Tab. 1).

According to the results of the regression model, GDP per capita has a positive impact on tax revenue and affects 94.7% on tax revenue of countries in Southeast Asia (the p-value = 0.000 is smaller than α=0.01).

$$Y = 67143 + 9.2 X$$

The coefficient 9.2 explains the elasticity of GDP related to tax revenues.

With an increase of 1 USD in tax revenues, GDP will grow by 9.2 USD. This result is also consistent with many previous studies such as (Fox & Gurley, 2005; Castro & Ramírez, 2014; Aneyew, 2016).

Table 1 - Quantitative Analysis Results
(authors calculations)

Model Summary[b]										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.973[a]	.947	.944	2929.75560	.947	303.091	1	17	.000	1.594
a. Predictors: (Constant), TAXREV										
b. Dependent Variable: GDP										

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2601567984.020	1	2601567984.020	303.091	.000[b]
	Residual	145918954.176	17	8583467.893		
	Total	2747486938.195	18			
a. Dependent Variable: GDP						
b. Predictors: (Constant), TAXREV						

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	67143.055	2422.520		27.716	.000		
	TAXREV	9.204E-011	.000	.973	17.409	.000	1.000	1.000
a. Dependent Variable: GDP								

Conclusion

Tax revenue in Southeast Asian countries tends to increase in the period 2000-2019 and varies from country to country. The difference is because tax incentives are set differently from country to country.

At the same time, GDP per capita among countries in the period 2000-2019 also increased significantly. Particularly in 2020, despite facing many difficulties and challenges of the Covid-19 epidemic situation, GDP per capita in these countries still maintains a stable growth rate.

Besides, the results of quantitative analysis show that GDP per capita has a positive impact on tax revenue.

From there, we propose some governance implications to improve.

Countries in the region continue to flexibly implement dual goals: both to prevent the covid-19 pandemic, to recover and develop their economies, and to stabilize and maintain the situation of domestic production.

Improve the quality of education and training; develop highly qualified human resources in order to enhance the technology application ability of human resources in production.

Create all favorable conditions to support enterprises to maintain production, enhance the quality of business support services. Focus on removing difficulties for production and business, develop markets, increase purchasing power, and promote consumption of goods.

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RESEARCH ON THE QUALITY IMPROVEMENT OF GUIZHOU TOURISM COMMODITIES

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With the rapid development of social economy, tourism has gradually become one of the pillar industries of national economic development in various provinces of China. As one of the western provinces with extremely rich tourism resources, and due to the strong support of the state and provincial government, the tourism industry in Guizhou has achieved rapid development. This paper aimed to enrich the localization of tourism commodities and improve the quality of tourism commodities and to provide suggestions for the construction of the quality improvement path system of tourism commodities in Guizhou. Through the methods of literature review, theoretical interpretation, field investigation, classic case analysis, in-depth interview and questionnaire method, we have defined the types of tourist commodities in Guizhou, existing problems with their manufacture and sales, as well as the opportunities and challenges, it is concluded that the ways to improve the quality of tourist commodities in Guizhou province are as follows: searching for characteristics, concentrating investment, cooperating management, classifying promotion, innovation management, association participation, brand maintenance, perfect certification, creative publicity, joint marketing, benefit sharing, inclusive co-construction.

Keywords: tourism; commodity; Guizhou; innovation governance; brand maintenance

Introduction

Research Background

The tertiary industry is gradually becoming an important factor in the economic and social development of Guizhou Province of China, and the contribution of tourism in the tertiary industry is also rising rapidly. The status and role of tourism in the economic and social development of Guizhou is becoming more and more prominent, which has become one of the important supporting and advantageous industries of Guizhou Province.

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In the "Several Opinions of the State Council on Promoting the Reform and Development of Tourism Industry" issued by the State Council in 2014, proposals concerns the reform and development in the field of tourism and shopping industry were put forward in the aspects of optimizing the varieties of tourism commodities, building tourism commodity brand projects, studying and improving the policy of tax refund for shopping, regulating the market of tourism commodities and building special shopping areas. In the "Opinions on Further Promoting Tourism Investment and Consumption" issued by the General Office of the State Council in 2015, it is pointed out that the characteristic tourism commodities should be enriched and upgraded, the mass entrepreneurship and innovation in the tourism commodity industry should be promoted solidly, and the attractiveness of tourism commodities to tourists should be enhanced by encouraging market entities to develop and enrich the types of tourism commodities.

In Guizhou Province, the tourism industry is composed of six elements, among which "purchase" has been a relatively weak link in the development of provincial tourism. At present, there are many problems, for example, the scale of tourism merchandise business entities is still small, the degree of industrialization is low, it lacks professional talents, the overall proportion of shopping in the tourism merchandise market is also low, the brand power is weak, the homogenization phenomenon is serious, the price of local tourism merchandise is too high, and the institutional mechanism is inadequate.

Purpose and Significance of the Study

The purpose of this study is to investigate the achievements, advantages, disadvantages, opportunities, challenges and problems in the development of tourism commodities in Guizhou, so as to help Guizhou tourism commodities achieve quality improvement, and continuously enrich the theoretical research on tourism commodities localization and quality improvement, giving suggestions for the construction of the path system of Guizhou tourism commodities' quality improvement .

Literature Review

By combing the research results, it is found that the vast majority of current research is on two aspects: the problems that exist or the suggestions of measures.

For example, through the study of tourism commodities in Yulin (China), it was found that in the development of tourism commodities, problems such as lack of cultural connotation, serious homogenization and poor packaging (Yan, 2017) are common. Through the study of tea tourism commodities, it was proposed that integrating of cultural characteristics of the tea regions and improvement of tea quality are the main paths to attract tourists to buy (Pan, 2018).

Research on tourism commodities in Guizhou mainly focuses on two aspects: problems in the process of development and the development strategies.

For example, through the study of Guizhou Miao ethnics silver tourism commodities, it is found that there are significant problems of the quality, prices and sales channels (Yang & Liang, 2016).

In the process of developing tourism commodities in Guizhou, we should adhered to traditional characteristics, explore cultural connotations, and use market demand as a guide to position the target receptive population for tourism commodities (Zhang et al., 2016; Zhong, 2003).

Through innovation the use of various regional characteristic resources is continuously explored and the concept of tourism commodities is continuously improved (Chen, 2019). Another example - an empirical study in Gansu (China) - found that five principles that is market-oriented, ecological-oriented, characteristic-oriented, value-oriented and government-led should be followed in improving the quality of commodities (Cao, 2018).

The research on the localization of tourism commodities is mainly about the development strategy. For example, based on the study of tourism commodities in Sichuan (China), the research and development strategy of "point-line surface-platform" was proposed to enrich the cultural experience (Zhou, 2016), and through the study of Hainan sports tourism commodities, it was proposed to strengthen the portfolio development of tourism resources and sports to enhance the distinctiveness and competitiveness of commodities (Zhao, 2016; Ye & Cheng, 2005).

In general, the researches on tourism commodities in Guizhou mostly select representative individual commodities, (not the overall). Secondly, there is a lack of research on the tourism commodities localization. Thirdly, a problem how to promote the tourism commodities localization and to improve the quality of local production still needs to be explored.

Therefore, this study intends to enrich the theoretical research on the localization and the quality improvement of tourism commodities by studying the quality improvement of tourism commodities in Guizhou, and to give suggestions for the construction of the path system for improving the quality of tourism commodities in Guizhou.

Research Methodology

In addition to the traditional literature reviewing and theoretical interpretation methods, the following three methods we used:

Field Survey Method was used to obtain first-hand information and data, and to combine with quantitative analysis tools.

Typical Case Analysis Method studied to discover the problems, causes and mechanisms of localization and quality improvement of tourism commodities, as well as the mechanism of the development of tourism economy driven by tourism commodities localization and quality improvement.

RESEARCH ON THE QUALITY IMPROVEMENT

Questionnaire Survey Method in order to have an in-depth and detailed understanding of the current situation of tourism commodity quality in Guizhou Province. Survey was conducted during the period of October 8th to 23rd, 2021, Questionnaire Star software and WeChat were used to conduct the survey among the staff of government units in Liping County, Qiandongnan Prefecture, the staff of Zhaoxing Dong Village Development Company, and some tourists, commodity sellers, commodity movers, and commodity producers in the attractions of Zhaoxing Dong Village.

Totally 183 questionnaires were distributed, 172 were collected, with a recovery rate of 93.9%. From them 164 were valid, with an efficiency rate of 95.3%, and the specific statistical results are analyzed as follows (Tab. 1).

Table 1 - Summary of basic information of respondents
(results of the author's survey)

Questions	Options	Number of people (person)	Percentage (%)
1.Your gender?	Male	88	53.6
	Female	76	46.4
2. What is your age?	25 years old and below	24	14.6
	26-35 years old	37	22.8
	36-45 years old	49	30.2
	46-55 years old	22	13.5
	56 years old and above	32	18.9
3.What is your education?	Under college	37	22.6
	College	48	29.3
	Bachelor's degree	64	39.1
	Postgraduate	9	5.4
	Doctorate and above	6	3.6
4.What is your occupation?	Civil servant, institution employee	34	20.7
	Enterprise employee	22	13.4
	Visitors	67	40.8
	Individuals	41	25.1
5.Your average monthly income?	2000 yuan and below	12	7.3
	2001-4000 yuan	23	14.1
	4001-6000 yuan	58	35.4
	6001 yuan and above	71	43.2

The fifth question is a multiple choice about results of tourism commodity development in Guizhou (three possible answers to choose), 75.6% of respondents believe that it will increase regional consumption income, 71.3% believe that the tourism commodity economy will effectively develop, 61.6% believe that ethnic culture will spread, followed by rural revitalization promotion, employment levels improving and industrial structure optimization (Tab. 2).

Table 2 - Questionnaire on the current situation of tourism commodity quality in Guizhou (II)
(results of the author's survey)

Questions	Options	Number of people (person)	Percentage (%)
5. What do you think are the results achieved in the development of tourism commodities in Guizhou? (choose three answers)	The economy of tourism commodities has been effective	117	71.3
	Drives regional economic development	86	52.4
	Increased regional consumption income	124	75.6
	Improved employment levels	98	59.8
	Industrial structure was optimized	79	48.1
	Rural revitalization is promoted	97	59.2
	National culture is spread	101	61.6
6. What do you think are the advantages of tourism commodity development in Guizhou? (choose three answers)	Government policy support	123	75
	Rich in its own cultural and tourism resources	134	81.7
	Solid foundation for commodity production	98	59.8
	Convenient transportation	41	25
	Rich variety of tourist goods	31	18.9
7. What do you think are the disadvantages of the development of tourism commodities in Guizhou? (choose three answers)	Insufficient innovation in the development of tourism commodities	128	78.1
	Commodity production methods are relatively backward	107	65.2
	Lack of scientific management	114	69.5
	Relative lack of tourism resources	67	40.8
	Insufficient variety of goods	59	35.9
8. What do you think are the opportunities for the development of tourism commodities in Guizhou? (choose three answers)	Government's attention	132	80.5
	Rural revitalization strategy provides opportunities	108	65.9
	Rapid socio-economic development	128	78.1
	Rapid development of network technology (e.g., fast and jitterbug live)	131	78.9
	Decentralized development of tourism goods	119	72.6

After that, when asked about the disadvantages of the development of tourism commodities in Guizhou 78.1% of the respondents thought that the development of tourism commodities was not innovative enough, 69.5% thought that there was a lack of scientific management, 65.2% thought that the producing methods of commodity

are relatively backward, only 40.8% of the respondents chose the relative lack of tourism resources, and only 35.9% of the respondents chose "not enough variety of commodities".

The next question is a multiple-choice question designed to address the opportunities for the development of tourism commodities in Guizhou. Through the survey, in order of the number of respondents, they chose importance to the government, the rapid development of Internet technology (such as Quick Hand and Tik Tok), the rapid development of social economy, the decentralization of tourism commodities and the rural revitalization strategy provide opportunities.

Table 3 - Survey questionnaire on the current situation of tourism commodity quality in Guizhou (III)

(results of the author's survey)

Questions	Options	Number of people (person)	Percentage (%)
9. What do you think are the challenges facing the development of tourism commodities in Guizhou? (choose three answers)	Competition in tourism markets in other provinces and cities	134	81.7
	Plagiarism of tourism goods	129	78.7
	Insufficient innovation of tourism goods	124	75.7
	Risk of losing traditional crafts	107	65.2
10. What problems do you think exist in the process of developing tourism commodities in Guizhou? (choose three answers)	Competition from other provinces and cities in the tourism market	127	77.4
	Plagiarism of tourism products	119	72.7
	Weak brand power	114	69.6
	Serious homogenization phenomenon	121	73.8
	High price of tourism goods	138	84.1
	Institutional mechanism is not perfect	118	71.9
	Inadequate mechanism of cultural tourism integration	107	65.2
	Lack of professional talents	119	72.6

When asked about the challenges facing the development of tourism commodities in Guizhou (multiple choice question), 81.7% of the respondents believed that other provinces and cities compete in the tourism market, 78.7% believed that tourism commodities are copied, 75.7% believed that tourism commodities are not innovative enough, and 65.2% believed that traditional crafts are at risk of being lost (Tab. 3).

The last question asked about the problems in the tourism commodities development in Guizhou (multiple choice questions), and the problems were, in descending order of the number of respondents, high prices of tourism commodities, competition in the tourism markets of other provinces and cities, serious homogenization, plagiarism of tourism commodities, lack of professional talents, inadequate institutional mechanism, weak brand power and inadequate mechanism of cultural and tourism integration.

Research results

Achievements in the Development of Tourism Commodities in Guizhou

First, the tourism commodity economy has achieved remarkable results. The development of tourism commodities has promoted the regional economy, optimized the economic industrial structure and stimulated the regional consumption income.

Second, tourism commodities have contributed to the overall moderate prosperity, employment level has been raised, regional industrial structure has been optimized, and the process of rural revitalization has been promoted.

Third, tourism commodity culture has achieved remarkable results, and the culture of ethnic areas has been retained, spread and enriched, which is consistent with the survey results.

Table 4 - Opportunities and challenges for the tourism commodities development in Guizhou
(compiled by the author)

Advantages	The government provides an environment for innovation, the resources and cultural diversity provide the basic advantage, and the existing production base provides the advantage of expansion, which is consistent with the survey results.
Disadvantages	Lack of innovations in the R&D process of tourism commodities, relatively backward production methods, and lack of management in the sales market.
Opportunities	Poverty reduction through tourism and rural revitalization, progress of network technology, the decentralized development of tourism commodities, the rapid development of the domestic economy, and the spurt growth of tourism in Guizhou.
Challenges	Potential risk of losing traditional craftsmanship, the impact of external markets as well as copying, local tourism commodities lack the combination of characteristics and innovation.

Quality Problems of Tourism Commodities in Guizhou

Firstly, the scale of tourism commodity business entities is small, the degree of industrialization is low, and there is a lack of talents.

Secondly, the overall proportion of shopping in the tourism goods market is relatively low, the brand power is weak, the overall quality is not high, the homogenization phenomenon is very serious, foreign tourism goods flood the local market, and the price of local tourism goods is too high.

Third, there are shortcomings in the institutional mechanism, the benefit-sharing mechanism is not perfect, the institutional mechanism for the integration of culture and tourism is not sound enough, and the role of associations and the government has not been given full play.

Suggestions and countermeasures for the tourism commodities development in Guizhou

Find characteristics and invest mainly on the chosen field

The vitality of tourism commodities depends on whether they are closely combined with the advantages of local speciality. We should be market-oriented, fully exploit the advantages of Guizhou local tourism commodities such as Guizhou wine, Guizhou tea and Guizhou silver. According to the analysis of the production scale and situation of different regions in Guizhou province, we should centralize the design of a certain kind of tourism commodities and make plans for the market development of tourism commodities in the corresponding producing region.

First, based on the resource endowment, we should find more Guizhou specialities. Guizhou is located on the Yunnan-Guizhou plateau, with many high mountains. The special geographical location and complex topography make the rich and various ecological conditions and climate of Guizhou, which provide a rich material basis for special tourism commodities. At the same time, Guizhou has a large number of ethnic minorities with a long history, and the rich culture of ethnics and folk history provide a deep cultural heritage for Guizhou's special tourism commodities.

Second, we should be market-oriented and strengthen the comparative advantage. Guizhou's tourism commodities also have to own certain regional characteristics, such as the current wine in Zunyi and silver ornaments in the southeast part of Guizhou, etc.

According to the different production scales of different regions in Guizhou province, we should produce and develop the tourism commodities selectively and in a concentrated way, and the scale effect of the industry should be enhanced by integrating upstream and downstream industries, so as to improve product quality and reduce intermediate costs, enabling regional tourism commodities have a comparative advantage both in production and sales.

Third, based on the participation of multiple parties, we need to improve production capacity. Diversified investment structure not only can expand the scale of industry production, but also can reduce the risk of enterprises.

Not only the government and state-owned enterprises should actively participate in the investment of tourism commodities, but also we should actively introduce private capital, foreign investment and other forms of capital into the development of tourism commodities, thus forming a diversified, multi-level, multi-channel investment pattern to enhance production capacity and promote diversified investment and financing methods for tourism commodities.

Collaborative management and classified promotion

As tourism is a new industry, the management of it is divided into different departments. The development, regulation and guiding of tourism commodities are undertaken by different departments. At present, there is also no unified opinion on the classification of tourism commodities in the academic community, and even the scope of tourism commodities is not uniformly defined.

Therefore, the coordinated management of various departments to promote tourism commodities in broad categories is a more applicable approach.

First, we need to improve the management mechanism and establish institutional security scheme. We need to improve the institutional mechanism for the management of tourism commodities and for the market supervision and comprehensive law enforcement to create a safe and civilized tourism environment.

Finally, by enhancing the main responsibility of enterprises, constantly optimizing the quality of tourism goods and establishing a standardized business principle, we will make the tourists feel at ease and assured.

Second, we need to strengthen the synergy effect of multiple parties and improve the communication system. Under the leadership of the government, we should fully mobilize and bring into play the enthusiasm of enterprises and social capital, and integrate them with the development of commodity industry organically, promote and develop productivity, and thus create a new situation.

We should strengthen the mechanism of multi-party collaboration and create leading groups to coordinate and promote the Guizhouization and quality of the region's tourism commodities. The government, enterprises and individuals should be effectively connected, and the establishment of communication channels and including effective communication into the development of the industry are deeper understanding of the development of the tourism commodity market.

They also mean we are optimizing the quality of tourism commodities toward a more benign direction. The stability of Guizhou tourism commodity market relies on the collaborative work of enterprises, government, social and grassroots organizations as well as the strengthening of their own construction.

Governance innovation and association participation

The association will be a main participant and a bridge between enterprises and the government, thus to achieve quality improvement of tourism commodities under the premise of ensuring the sustainable development of tourism. At the same time, through innovating governance model, the industry governance system can be improved to create good external conditions for the tourism commodity market.

First is to let the association play the role of "link" to provide good industry services. Industry associations are not only a self-regulatory organization, but also an effective communication link between the government and enterprises, conveying the needs of enterprises to the government. At the same time, the industry association represents the common interests of all enterprises, strictly monitors the industry's product quality and strives to enhance the quality and image of its members.

Through the efforts of Association of Tourism Commodities, the belt of tourism commodity industry can be formed to provide good industry services, improve product quality and product innovation.

Second is to strengthen the association to form a competitive advantage by sticking together as a group. Tourism commodity association members exist in the whole tourism commodity system, including the research and development, primary processing, production, sales and other aspects.

The association should lead the members of each field to establish internal coordination mechanisms and mutual facilitation to reduce internal conflicts.

The formation of exclusive competitive groups and strategic alliances can improve the competitive advantage of tourism commodity enterprises to those outside the province and even foreign tourism commodity enterprises.

For example, the provincial tourism commodity association can consider use the unified marking "colorful and precious gift" or other better unified logo on the tourism commodities of all members, and the association will set up a professional department to certify the unified marked commodities to ensure high quality and fair price, so that tourists can buy them with confidence. All the unified labeled goods can get all members' recommendation and are exempt from the entry fee, display fees, agency fees, etc. in all links to reduce internal consumption and enhance competitiveness.

Strategically, tourism products in the province should be highly recommended, products with association label take priority over products outside the province, thus not only bypassing the restrictions of the Anti-Monopoly Law, but also improving the sales capacity of local tourism products.

Brand maintenance and certification improvement

In the past period of time the scale of the entities of tourism commodity production has been expanded, but there are still some problems in brand protection which are relatively weak links in the tourism commodity market in Guizhou.

First is to promote the establishment of certification trademarks. Guizhou does not have a certification brand of tourism commodities promoted by the government. China stipulates that there are four categories of trademark registration: commodity trademark, service trademark, collective trademark and certification trademark. Certification trademark refers to a sign that is controlled by an organization with the ability to supervise a certain commodity or service and used by individuals or units outside the organization to prove the origin, raw materials, manufacturing methods, quality or other specific quality of the commodity or service.

Such as "Beijing Gift" and "Shandong Gift". In essence, this brand with government background is the certification of the quality of local tourism products. The establishment of certification brand not only has the applicability of leading the brand system, but also has the feasibility of application.

Guizhou can promote the establishment of brand series such as "Colorful and Gui Gifts" and "Guizhou 100" by the provincial level to carry out tourism commodity

certification. Those who meet the requirements will be posted with the "Colorful and Gui Gifts" logo, and then 100 high-quality tourism products that can represent Guizhou can be selected, and the "Guizhou 100" logo will be posted, so that tourists can know the main tourism products in Guizhou and buy them.

Second is to establish the awareness of brand maintenance.

Under the condition of market economy, many traditional brand enterprises are facing severe challenges with their solidified business philosophy of "Good Wine is Not Afraid of the Deep Alley".

Some enterprises think that they are "century-old brands" and are inherited by their families, so they no longer need brand promotion and protection, which leads to a decline in market share or even bankruptcy.

These ideas which can weaken brand protection consciousness have had an adverse impact on the development of traditional "time-honored brands".

Guizhou Province is rich in ethnic and folk handicrafts. When developing traditional handicrafts, we should strengthen the awareness of local governments and traditional artists to protect intellectual property.

When new products are developed, we should quickly apply to the intellectual property department for intellectual property protection such as patents, designs, utility models, etc. This will protect tourism products with ethnic characteristics, and at the same time protect excellent traditional culture and innovation of tourism products.

Creative publicity and joint marketing

Through the marketing and promotion of tourism commodities, the circulation of commodities can be promoted and help publicize the image. In the marketing and publicity of tourism commodities, the government and enterprises should have good contact and communication.

The government should take the lead in promoting the marketing of tourism commodities in the general environment, and individual enterprises should form an excellent mode of cooperation between big marketing and small promotion, so as to jointly shape well-known local brands.

First, we should mark the unified logo of tourism commodities and focus on publicity and recommendations. For the tourism commodities selected as "Colorful Gui Li" and "Guizhou 100", we can make advantage of the relevant cultural and travel recommendation resources at home and abroad to help "selling goods".

We should display and sell the tourism commodities in the airport, the high-speed railway station, the highway service area, and the star hotel.

The tourism commodities will be introduced into airports, high-speed railway stations, highway service areas, star hotels, tourism distribution centers, travel agencies, scenic spots, rural tourist spots and homestay activities.

In the important tourism exhibitions or activities, we carry out the display and sales activities for tourism commodities to fully demonstrate the potential of Guizhou

tourism commodities market and advantages, enhance the influence of local tourism commodities in Guizhou and improve the popularity of tourism commodities.

Second is to increase marketing investment and to promote through a variety of channels. Marketing is an important means of market competition, and it is necessary to establish a diversified marketing model to adapt to market demand.

First we should put more efforts in advertising and marketing, as tourists usually come from all over the world, and the buyers of tourism commodities are a wide range of groups, and all tourists have the possibility of consumption.

Therefore, when advertising and marketing, we should consider multi-channel promotion.

The second we should pay attention to is exhibition marketing, actively holding or participating in exhibitions which are a good platform to recommend tourism goods to consumers and distributors, and often in which we can achieve more direct marketing effect. The cost of participating in the exhibition is low, which will not cause excessive economic cost burden on the exhibiting organization.

Third is to strengthen the joint marketing and improve the publicity of small and micro enterprises. On the one hand, there are many small and micro-enterprises engaging in Guizhou tourism goods and there are many individual hand operators. This supply structure has increased the difficulty of marketing.

Small and medium-sized enterprises and individual handicraft operators, which are mainly engaged in the production of special tourism commodities, should be mainly supported in propaganda to find a number of special commodities that meet the market demand, through which we can expand the product market.

On the other hand, we should strengthen the coordination between the government and enterprises on the marketing of tourism commodities. In the marketing of tourism commodities, enterprises and the government are often independent of each other and lack of cooperation, so there is usually inconsistency between government marketing and enterprise production, and inconsistency between the marketing in small enterprises and governments.

Therefore, it is necessary to integrate the resources of various places, organizations or industries to establish a public platform for the promotion of tourism commodities, and jointly promote tourism commodities through mutual cooperation and mutual benefit.

Sharing the Benefit and Cooperate with Inclusiveness

A perfect benefit-sharing mechanism can maximize the interests of all parties while achieving fair distribution and promoting the healthy and long-term development of the tourism commodity market, which is in line with the motivation of local governments to pursue maximum benefits.

First, we need to promote the mechanism of benefit-sharing. Around the three main entities of tourism commodities: government, enterprises, tourists, we promote local economic development, expand the benefits of enterprises, protect the rights and interests of consumers as the goal, and establish benefit-sharing mechanism, which is

the fundamental strategy to promote the synergy of all parties and to achieve the benefits of cooperation.

Second, we should pay attention to the construction of a sound interest compensation mechanism. In the development of tourism commodity industry, the participation of market and government can help to create new opportunities for the development of tourism commodity industry in Guizhou.

At the same time in the open market, it is easy to form agglomeration benefits which may rob individual producers and backward areas of their chances in commodity production, resulting in operating difficulties for them and also the gap between developed and backward areas will continue to widen.

A sound mechanism for interest compensation is conducive to further promote the fair and just distribution of the benefits of multi-party cooperation, which helps to improve the overall efficiency of the tourism commodity industry and promote the coordinated development of the regional economy.

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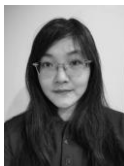
FORECASTING THE IMPORT DEMAND FOR CHEMICAL FERTILIZER IN THAILAND

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This study aims to forecast the import demand for chemical fertilizer in Thailand, namely, nitrogen fertilizer, potassium fertilizer, and compound fertilizer. Secondary time series is employed, covering the period from January 2008 to December 2021, or 168 months. The forecasting technique used for the study is the seasonal autoregressive moving average (SARIMA) or the Box-Jenkins method.The empirical results show that the appropriate models for forecasting the import demand of nitrogen fertilizer, potassium fertilizer, and compound fertilizer based on the lowest value of the Akaike criterion and Schwarz criterion are SARIMA(0,0,0)(0,1,1)$_{12}$, SARIMA(2,0,1)(0,1,1)$_{12}$, and SARIMA(1,0,0)(2,1,0)$_{12}$, respectively. The forecasts for the next 12 months (January to December 2022) reveal that the total import demand compared to the previous year for nitrogen fertilizer increased by

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5.12%, potassium fertilizer decreased by 8.74%, and compound fertilizer increased by 4.74%.

Keywords: prediction; chemical fertilizer; Box-Jenkins; agricultural input

Introduction

The agricultural sector has been necessary for economic development in Thailand throughout history to the present day. It is a source of food for humans, acting as one of the indispensable primary factors for human life. It is also a raw material for producing commodities to enhance the value-added of agricultural production to other economic sectors.

This ensures that agricultural commodities have always been in high demand. Moreover, Thailand has geographical and climatic conditions that are suitable for agricultural production. It can cultivate a wide variety of crops, so Thailand is a country that has the potential to produce agricultural commodities to meet the demand of consumers, either for domestic consumption or for export sales abroad. When it comes to exporting agricultural products,

Thailand is ranked the 8th largest agricultural exporter globally (Department of Trade Negotiations, 2021). In 2017, Thailand generated an income of more than 7.77 hundred billion baht from agricultural export products (agriculture, livestock, and fisheries), compared to 2007, when Thailand generated a revenue of 5.22 hundred billion baht from agricultural export products (Office of the Permanent Secretary, Ministry of Commerce, 2021). It presents a growth rate of 48.72% and indicates that the agricultural exports of Thailand are expanding considerably and are likely to develop further in the future.

The expansion of agriculture has resulted in an increase in the demand for chemical fertilizers because chemical fertilizer is necessary for agricultural production. The use of chemical fertilizers in agriculture has long been popular and widespread. Farming on the same land without applying fertilizer will lead to the depletion of soil minerals as they are consumed. As a result, the minerals in the soil are not sufficient to meet the needs of growing crops. Then the agricultural production quality deteriorates, and the quantity is reduced, so applying fertilizer is essential. Fertilizer application improves the quality of agricultural commodities by ensuring they absorb enough minerals to meet their growing needs. It can also shorten the cultivation time and reduce the damage caused by poor-quality products. The most popular fertilizer used by farmers for cultivation is chemical fertilizer because crops can absorb the minerals faster, and the mineral concentration levels are higher than is the case with organic fertilizer.

The demand for chemical fertilizer in Thailand has been increasing steadily due to increased cultivation levels. Still, at the same time, Thailand is unable to produce enough chemical fertilizer to meet domestic demand. Therefore, it is necessary to rely on imports from abroad. The major trading partners of Thailand are Saudi Arabia, China, Canada, Kuwait, South Korea, and Norway. Thailand primarily imports chemical fertilizers: nitrogen fertilizer, potassium fertilizer, and compound fertilizer (nitrogen, potassium, and phosphorus).

In 2019, Thailand imported 2.4 million tons of nitrogen fertilizer, 8.6 hundred thousand tons of potassium fertilizer, and 7.6 hundred thousand tons of compound fertilizer. By

comparison, in 2009, Thailand imported 1.8 million tons of nitrogen fertilizer, 5.4 hundred thousand tons of potassium fertilizer, and 6.1 hundred thousand tons of compound fertilizer.

From 2009 to 2019, Thailand has imported nitrogen fertilizer, potassium fertilizer, and compound fertilizer in amounts increasing by 35.86%, 58.79%, and 23.08%, respectively (Office of the Permanent Secretary, Ministry of Commerce, 2021).

Agricultural production in Thailand is usually seasonal in nature, so forecasting the use of chemical fertilizer as inputs for agricultural production is crucial for the proper management of chemical fertilizer stocks.

In addition, it is important for the business sector that imports chemical fertilizer to be able to properly manage the importation of chemical fertilizer to meet the demand for chemical fertilizer in the country. There is no study on the forecast of chemical fertilizers in Thailand from the literature review.

Moreover, it was found that only a tiny number of researchers studied chemical fertilizer forecasting abroad. For example, Mishra et al. (2014) have forecasted three major elements of chemical fertilizer in India using the ARIMA model. Therefore, the objective of this study is to forecast the import demand of three chemical fertilizers in Thailand, namely nitrogen fertilizer, potassium fertilizer, and compound fertilizer (nitrogen, potassium, and phosphorus: NPK).

Econometric Methodology

Data and variables

The data used in this study are in the form of a monthly time series from January 2008 to December 2021 (a total of 168 months), obtained from the International Trade Statistics of the Office of the Permanent Secretary, Ministry of Commerce. The variables consist of (1) the import quantity of nitrogen (N) in kilograms, (2) the import quantity of potassium (K) in kilograms, and (3) the import quantity of compound fertilizer (NPK) consisting of nitrogen, phosphorus, and potassium in kilograms.

Econometrics

The econometrics applied in this study include the Box-Jenkins technique (Box et al., 1994), or the seasonal autoregressive moving average (SARIMA). The forecasting method can be divided into five steps as follows (Jatuporn et al., 2020; Rueangrit et al., 2020; Cumroon et al., 2021; Ratsaminet et al., 2021).

Step 1: The stationarity test applies the Augmented Dickey-Fuller (ADF) unit root (Dickey & Fuller, 1979; 1981) to detect the order of integration in order to prevent unreliable results from spurious relationships. The ADF unit root models consist of (1) a random walk process with drift (ADF with α), and (2) a random walk with drift and linear time trend (ADF with α and T) as follows.

Random walk with drift.

$$\Delta F_t = \alpha + \theta F_{t-1} + \sum_{i=1}^{p} \phi_i F_{t-1} + e_t$$

Random walk with drift and linear time trend.

$$\Delta F_t = \alpha + \rho T + \theta F_{t-1} + \sum_{i=1}^{p} \phi_i F_{t-1} + e_t$$

Where
- F is the time series of the variables.
- Δ is the order of difference.
- α is the constant term.
- T is the time trend.
- θ and ϕ are the coefficients of the variables.
- t is the time lag starting from 1, 2, 3,…, p.
- e is the error term.

The null hypothesis of the ADF unit root (H_0) is the stationarity of the time series. The unit root tests start to check for the non-seasonal and seasonal orders. If the time series has proved to exhibit stationarity at the normal stage, it can be concluded that it contains the unit root I(0) process.

However, suppose the time series has been indicated to show non-stationarity at the normal stage. In that case, it needs to be added for the differencing order and tested again until the time series shows stationarity.If the time series has a unit root at the first difference, it can be concluded that it contains the unit root I(1) process.

Step 2: To identify the forecasting model, the SARIMA of Box-Jenkins (Box et al., 1994) is applied using the correlogram. The orders of autoregression and seasonal autoregression or AR(p) and SAR(P) have been identified using the Partial Autocorrelation Function (PACF). In addition, the orders of moving average and seasonal moving average or MA(q) and SMA(Q) have been identified using the Autocorrelation Function (ACF).

Step 3: The Maximum Likelihood Estimation (MLE) has been considered to estimate coefficients of the variables in the SARIMAmodel using the statistical significance level of 0.05. The structure of SARIMA(p,d,q)(P,D,Q)s can be displayed as follows.

$$(1 - \phi_p B)(1 - \Phi_p B^s)(1 - B)^d (1 - B^s)^D F_t = (1 - \theta_q B)(1 - \Theta_Q B^s) e_t$$

Where
- ϕp is the coefficient of AR(p).
- Φp is the coefficient of SAR(P).
- θq is the coefficient of MA(q).
- Θ_Q is the coefficient of SMA(Q).
- B is the lag operator.
- s is the seasonal frequency.
- D is the seasonal order of difference.
- d is the non-seasonal order of difference.

Step 4: The diagnostic checking is to prevent the serial correlation using the Ljung-Box (Q_{LB}) statistic. Suppose that there is no serial correlation in the model. In that case, the model can be used for forecasting; however, if more than one model is found that could be used in

the forecast, the most appropriate model will be chosen as the model with the lowest value of the AC and SC statistics.

Step 5: This study has forecasted the import demand of nitrogen fertilizer, potassium fertilizer, and compound fertilizer for 12 months ahead, starting from January to December 2022.

Empirical Results

The results of the ADF unit root to test for the non-seasonal order at the normal stage of N, K, and NPK has been determined using the t-ratio with the statistical significance level of 0.05 that equals -8.006, -5.444, and -13.567, respectively. It means that all of the time series can reject the null hypothesis (H_0) of non-stationarity for the non-seasonal order at the normal stage, which contains the unit root $I(d) = I(0)$ process.

After that, the seasonal order is determined for N, K, and NPK. The results of the ADF unit root for N, K, and NPK show that the t-ratios are equal to -11.23, -5.52, and -16.135, respectively. It means that all the time series can reject the null hypothesis (H_0) of non-stationarity at the statistical significance level of 0.05 for the seasonal order at the normal stage, which contains the unit root $I(D) = I(1)$ process.

The parameter estimation of the SARIMA(p,d,q)(P,D,Q)s using the MLE is presented in Tab. 2. It is found that the forecasting models for the time series of N are SARIMA(0,0,0)(1,1,0)$_{12}$ and SARIMA(0,0,0)(0,1,1)$_{12}$.

The forecasting model for the time series of K is SARIMA(2,0,0)(0,1,1)$_{12}$.

The forecasting models for the time series of NPK are SARIMA(1,0,0)(2,1,0)$_{12}$ and SARIMA(1,0,0)(1,1,0)$_{12}$.

Table 1–The results of the ADF unit root test

(Source: Authors' calculations)

Model	Non-seasonal I(0)		Seasonal I(1)	
	t-ratio	p-value	t-ratio	p-value
ADF with α				
N	-8.539*	<0.001	-11.975*	<0.001
K	-5.599*	<0.001	-5.937*	<0.001
NPK	-7.442*	<0.001	-16.580*	<0.001
ADF with α + T				
N	-8.625*	<0.001	-12.046*	<0.001
K	-6.574*	<0.001	-5.914*	<0.001
NPK	-7.444*	<0.001	-16.669*	<0.001

* The statistical significance level of 0.05.

To demonstrate the appropriate forecasting model presented in Tab. 3, the Q_{LB} statistic is used to test for the serial correlation problem. The null hypothesis of the Ljung-Box (Q_{LB}) statistic is no autocorrelation using the statistical significance level of 0.05.

The diagnostic checking using the Q_{LB} statistic in Table 3 indicates that none of the models of N, K, and NPK can reject the null hypothesis of no autocorrelation at the statistical significance level of 0.05.

However, the diagnostic checking of N and NPK found more than one appropriate model. The AC and SC statistics with the lowest value are considered to confirm the best-fitted forecasting model. Therefore, the most appropriate forecasting models are SARIMA$(0,0,0)(0,1,1)_{12}$ for N, SARIMA$(2,0,1)(0,1,1)_{12}$ for K, and SARIMA$(1,0,0)(2,1,0)_{12}$for NPK.

Table 2–The results of parameter estimation of SARIMA$(p,d,q)(P,D,Q)_{12}$

(Source: Authors' calculations)

Variable	N		K	NPK	
	$(0,0,0)(1,1,0)_{12}$	$(0,0,0)(0,1,1)_{12}$	$(2,0,1)(0,1,1)_{12}$	$(1,0,0)(2,1,0)_{12}$	$(1,0,0)(1,1,0)_{12}$
ϕ_1			0.584*	-0.246*	-0.231*
ϕ_2			0.268*		
θ_1			-0.570*		
Φ_1	-0.452*			-0.595*	-0.434*
Φ_2				-0.366*	
Θ_1		-0.691*	-0.769*		
AC	6094.642	6082.412	5803.487	5972.341	5988.165
SC	6100.742	6088.511	5818.736	5984.541	5997.315

* The statistical significance level of 0.05.

Table 3 –The results of diagnostic checking using the Q_{LB} statistic

(Source: Authors' calculations)

Lag	N		K	NPK	
	$(0,0,0)(1,1,0)_{12}$	$(0,0,0)(0,1,1)_{12}$	$(2,0,1)(0,1,1)_{12}$	$(1,0,0)(2,1,0)_{12}$	$(1,0,0)(1,1,0)_{12}$
1					
2	1.1272 [0.288]	0.5298 [0.467]			
3	2.3507 [0.309]	1.9814 [0.371]			1.3684 [0.242]
4	2.5487 [0.467]	2.1795 [0.536]		1.7480 [0.186]	2.6248 [0.269]
5	2.5967 [0.627]	2.2416 [0.691]	2.4219 [0.120]	1.7525 [0.416]	2.7873 [0.426]
6	2.5970 [0.762]	2.5425 [0.770]	2.4242 [0.298]	2.8936 [0.408]	2.7897 [0.594]
7	2.8185 [0.831]	2.7621[0.838]	2.8237 [0.420]	3.1321 [0.536]	2.9093 [0.714]
8	5.0761 [0.651]	5.3328 [0.619]	3.0369 [0.552]	4.5957 [0.467]	8.7445 [0.188]
9	5.0991 [0.747]	5.4009 [0.714]	4.9827 [0.418]	5.8173 [0.444]	8.8918 [0.261]
10	5.3365 [0.804]	5.4175 [0.797]	7.2054 [0.302]	7.8276 [0.348]	11.4818 [0.176]
11	8.4429 [0.586]	8.0985 [0.619]	8.1270 [0.322]	9.2227 [0.324]	11.8365 [0.223]
12	9.2605 [0.598]	8.2529 [0.690]	8.4763 [0.388]	9.9392 [0.355]	15.0054 [0.132]

Note: The number in [ ] is the p-value of the Q_{LB} statistic.

Table 4 – The results of forecasting import demand of N, K, and NPK
(Source: Authors' calculations)

Month	N	K	NPK
January	108,888,000	60,966,000	54,446,000
February	166,429,000	70,025,600	73,408,900
March	148,535,000	63,101,000	43,514,100
April	195,455,000	79,981,000	88,794,100
May	341,542,000	115,153,000	104,518,000
June	268,889,000	71,181,300	69,369,200
July	274,553,000	86,498,800	90,091,300
August	176,740,000	97,195,000	100,010,000
September	229,334,000	73,243,600	80,240,200
October	175,571,000	53,905,400	49,095,200
November	154,349,000	47,059,600	43,950,900
December	84,521,100	60,267,700	38,483,200
Total	2,324,806,100	878,578,000	835,921,100

Note: Unit of import demand is the kilogram

The forecasting of import demand for chemical fertilizer (N, K, and NPK) in Fig. 1 and Tab. 3 shows that Thailand will import nitrogen fertilizer with the highest volume in May, equal to 341,542,000 kilograms, and will import nitrogen fertilizer with the lowest volume in December, equal to 84,521,100 kilograms.

In addition, the total import volume of nitrogen fertilizer in 2022 equals 2,324,806,100 kilograms. The imported potassium fertilizer will have the highest value in May, equal to 115,153,000 kilograms, as well as the imported potassium fertilizer with the lowest volume in November, equal to 47,059,600 kilograms. In addition, the total import volume of potassium fertilizer in 2022 is equal to 878,578,000 kilograms.

The imported compound fertilizer (NPK) will have the highest value in May, equal to 104,518,000 kilograms, while the imported compound fertilizer with the lowest volume will be in December, equal to 38,483,200 kilograms. In addition, the total import volume of compound fertilizer in 2022 will be equal to 835,921,100 kilograms.
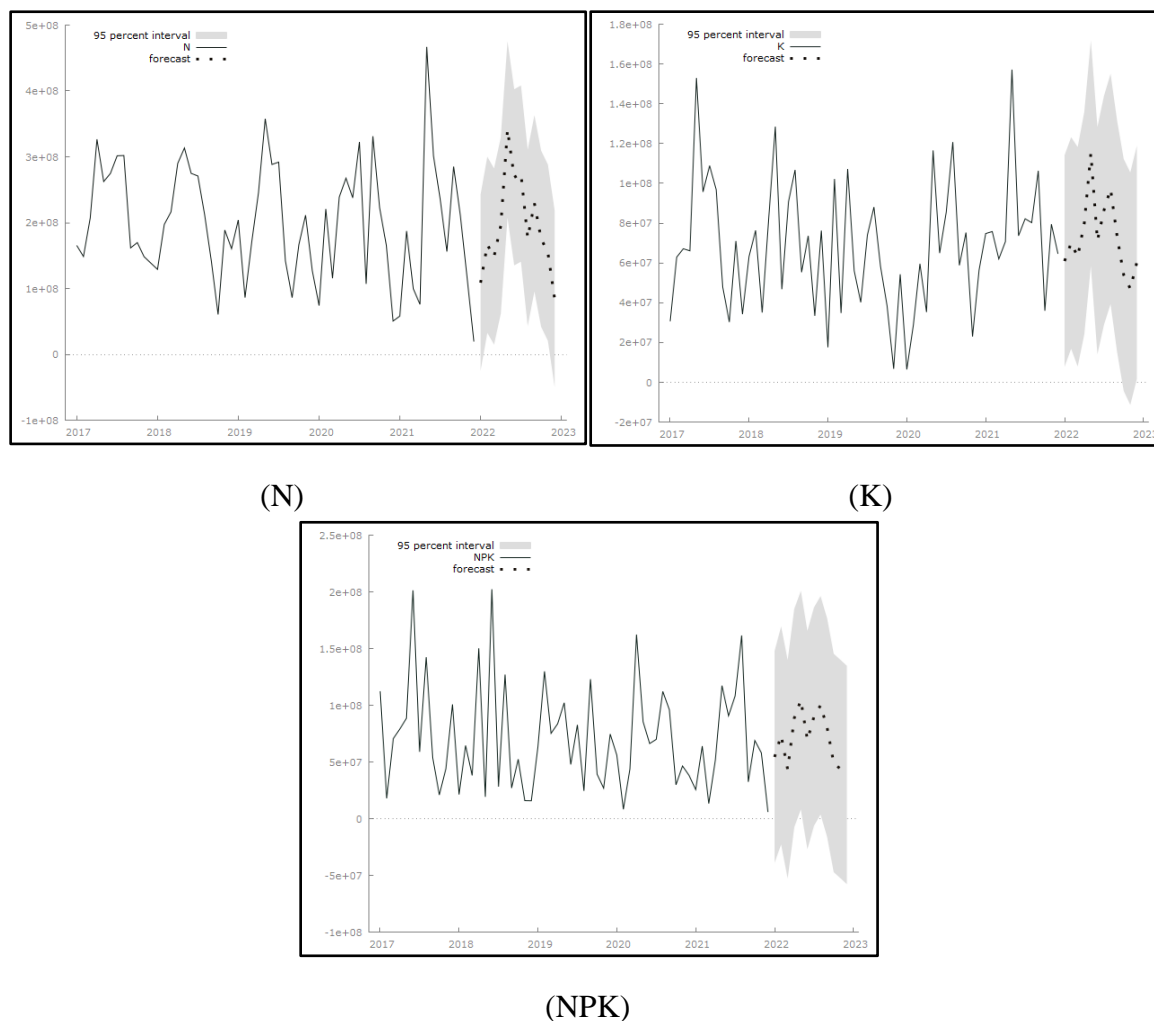
(N)

(K)

(NPK)

Figure 1 – The forecasting import demand of N, K, and NPK

(Source: Authors' calculations)

Concluding Remarks

The chemical fertilizer industry in Thailand has to rely on importing primary nutrients in commercial fertilizers from abroad, such as nitrogen, phosphorus, and potassium. More than 80% of the domestic chemical fertilizer used in Thailand must be imported from abroad each year. This is because the country cannot produce enough nitrogen and potassium fertilizer to meet domestic demand. In particular, there is a greater need for nitrogen fertilizer than other fertilizers. It is only phosphorus fertilizer that Thailand can produce in sufficient quantities to meet the domestic demand (Krungsri Bank, 2020). In 2022, Thailand is unlikely to be able to produce enough chemical fertilizer for domestic use. It is necessary to continue to rely on importing chemical fertilizers from abroad. There is also a tendency to have to import larger volumes due to higher demand from the increasing exports of agricultural commodities.

Whether it is rice, rubber, cassava, fruit, or ornamental plants, although some crop exports will be affected at some point by the 2019 coronavirus outbreak, overall agricultural

exports are likely to grow in 2022 (Manager Online, 2021). The objective of this study is to forecast the import demand for the nitrogen fertilizer, potassium fertilizer, and compound fertilizer (NPK) in Thailand using SARIMA(p,d,q)(P,D,Q)s or the Box-Jenkins method. The data used are a monthly time series covering the period from January 2008 to December 2021, or 168 months in total. The import demand for chemical fertilizer has been forecasted for 12 months ahead, starting from January to December 2022.

The stationarity of the time series is identified using the ADF unit root test. The coefficients of SARIMA(p,d,q)(P,D,Q)s are estimated using MLE using the statistical significance level of 0.05. The results show that in 2022, the total import volume of nitrogen fertilizer increased by 5.12% compared to the previous year. The total import volume of potassium fertilizer decreased by 8.74% compared to the previous year. The total import volume of compound fertilizer (NPK) increased by 4.74% compared to the previous year.

The overall import volume of chemical fertilizer in Thailand in 2022 shows an increasing trend; nitrogen fertilizer increased by 5.12% compared to the previous year because nitrogen fertilizer is the main fertilizer for rice and rubber cultivation which are the major exports of Thailand. The compound fertilizer increased by 4.74% compared to the previous year. The compound fertilizer will need to be used in the cultivation of almost all crops because nitrogen, potassium, and phosphorus are the main minerals that crops need. Moreover, it is always used for first-time fertilizer applications. There is always a high demand for it.

However, only potassium fertilizer decreased by 8.74% compared to the previous year. The reason is that the potassium fertilizer is mainly used in fruit cultivation. Due to the impact of the coronavirus 2019 epidemic, transportation has been disrupted, and trading partners have been temporarily closed, causing the reduction of fruit exports which affects the demand for crops in the next year. Therefore, the demand for using potassium fertilizer in the country will decrease.

The recommendations indicate that farmers should study the proper use of chemical fertilizer, whether it is the type of fertilizer suitable for the soil conditions or using the correct amount of fertilizer, including the appropriate period for chemical fertilizer application. The use of the wrong type of chemical fertilizer or the use of excessive amounts of chemical fertilizers will lead farmers to lose money.

However, some farmers may use organic fertilizers to reduce the use of chemical fertilizers. The government should have the policy to support farmers by educating them about the suitable types of chemical fertilizers or the correct chemical fertilizer application, as well as having policies to support farmers when the price of chemical fertilizers has increased due to the rise in world oil prices, which can affect farmers in terms of rising costs. The government can also promote the use of organic fertilizers to reduce the use of chemical fertilizers and develop the chemical fertilizer industry sector to ensure that Thailand is able to produce enough chemical fertilizer for domestic use, thereby reducing the volume of chemical fertilizer imports from abroad. The private sector should have a plan to import chemical fertilizers to reduce excessive imports, including studying the price of chemical fertilizers in advance to plan inventory management to prevent the problem of importing large amounts of chemical fertilizer during periods when chemical fertilizer is more expensive than usual. Hence, the prices of chemical fertilizers will affect the cost of cultivation of farmers.

Further, the study of import demand for chemical fertilizer in Thailand is not solely related to the season. Other variables should be involved in the forecasting model, such as the international exchange rate, cultivation index, climate, etc. In addition, researchers may use other forecasting techniques and add relevant variables.

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IMPACT OF COVID-19 PANDEMIC ON THE RISK AND RETURN TRADE-OFF: THE ROLE OF DIVERSIFICATION

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The Covid-19 pandemic triggered a sharp decline in asset values. As a result, a well-diversified portfolio over many industries provides the portfolio with the stability it needs to sustain against losses. Diverse financial assets and industries would differ significantly throughout history, whether the economy has been growing or not. Financial decisions must not be designed mainly based on a response to recent incidents but on long-term plans that implement diversification concepts.

The population of the research includes 39 Lebanese commercial banks. Using the annual reports of five different banks, we have compiled secondary data that contain the most often used ratios like ROE as a unit of measurement for the financial performance of the banks.

Risk management programs and bank performance, notably ROA and ROE, are commonly accepted to correlate. As a result, branch managers' inspections were an active credit risk assessment approach that had a favourable influence on the banks' financial stability. Findings also indicated that the traditional Bank's ROE profitability is strongly linked to its credit risk assessment strategy, as shown by regression analysis.

Keywords: liquidity risk; credit risk; market risk; solvency risk; COVID 19

Introduction

Research on portfolio diversification and risk mitigation was conducted in this study's review of recent publications on these topics.

Firstly, the origins and concept of portfolio diversity, including its advantages, were addressed. There was some discussion on diversifying one's company approach to have a well-diversified portfolio.

Then it was explained and discussed how risk assessment works and how to quantify volatility. Afterwards, Portfolio diversification's influence on risk mitigation was examined under two different headings.

Titles one and two explored the link between portfolio diversification and risk management and the effect of diversification on risk mitigation.

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Portfolio Diversification and Risk Management

Diversification is engaging in several assets to reduce risk and enhance reward. Thus, it allows investors to build their firm while minimizing risk. The concept of diversification is straightforward: through broadening your investment portfolio, we are sharing the hazards across a broader range of assets according to Jalloul (2021).

Risk management and diversification have been the subject of academic and policy studies worldwide. Specifically (Jedynak & Bąk, 2021) claimed that diversity enhances the essential function of the Bank in risk management banks.

Also (Goodell & Goutte, 2021) reported that international diversification decreases risk more efficiently than domestic diversification. The notion that securities and pension assets exhibit more significant correlations reflects their combined vulnerability to regionally-based disruptions instead of local diversification.

Moreover, the research of (Śliwiński, 2021) shows that global diversity is frequently regarded as the most effective technique for improving portfolio returns. In addition, research on Mauritian banks is being conducted to determine the influence of diversification of the Bank's portfolio on risk management. According to the study's findings, Mauritian banks are moderately effective in risk management due to the diversity of their portfolios. Additionally, the findings reveal a statistically significant difference between the factors when it comes to deciding whether to diversify locally or globally.

Given the potentially detrimental effects of COVID-19 on companies and the global economy, numerous studies have highlighted the importance of diversification in investments and risk management to survive the present crisis.

Research of 1434 Chinese publicly traded enterprises and their top five vendors and customers examined if and how broadening the distribution network affects the resilience of Chinese manufacturers throughout the continuing world crisis. The research highlights that enterprises with a diverse supplier base can enhance inventory availability during the COVID-19 crisis, whereas firms with a diverse customer base can assist reduce inventory. Additionally, organizations with a varied supplier base have increased profitability during times of crisis. Another research looked at the impact of revenue diversification (moving away from traditional lending operations and into non-interest income streams) on bank profitability and risk during the COVID-19 epidemic (Nurhayati et al., 2021).

According to the findings, non-interest revenue streams are positively connected to performance but negatively related to risk. Furthermore, research on the influence of Covid-19 on seafood-based culinary companies has been completed. It has been demonstrated that Covid-19 helps businesses to generate product diversification, which has resulted in an increased level of competitiveness, sustainability, and consumer confidence.

Aside from causing significant volatility in financial markets, the COVID-19 epidemic also interrupted the worldwide supply chain, causing significant volatility in the precious metals marketplace. Using a variety of tests (VAR, DCC, and GMV), a study has evaluated the diversification importance of precious metals – gold, silver, and platinum – for six Dow Jones Islamic (DJI) equity index portfolios (Das & Rout, 2020).

The empirical findings indicated that dynamic conditional correlations between sample assets grew dramatically throughout the COVID era, yet, coupling gold with any of the DJI equity indexes reduces the downside risk of these portfolios.

Furthermore, the prolonged COVID-19 epidemic has reduced the value of enterprises' assets and collateral against which they can borrow (Das & Rout, 2020; Nurhayati et al., 2021).

These shocks also raised enterprises' risk of default, lowered liquidity in the market and elevated the cost of borrowing (Acharya & Steffen, 2020).

The pandemic's interruptions to economic activity and cash flow shock imply that diversified organizations may be better equipped to seek investment options and thus secure financial help at cheaper costs than small enterprises. Thus, (Das & Rout, 2020) investigated whether diversification might help COVID-19-exposed enterprises lower their loan costs. Despite the pandemic's elevated borrowing costs, she claims that corporate and regional diversity reduces debt rate disparities for COVID-19-exposed enterprises, reducing risk.

The effect of revenue diversification on bank profitability and risk during the COVID-19 pandemic

Diversifying a bank's income beyond typical lending operations into non-interest revenue streams can minimize the volatility of that income. COVID-19 has an impact on the relationship between non-interest revenue and Bank profit and risk, according to our study. As a consequence of the epidemic, credit requirements were tightened, and demand for several sorts of loans decreased. Non-interest income streams have a good effect on performance, but a negative effect on risk, according to our findings (Li et al., 2021).

These findings are consistent with a good diversification impact from banks increasing their income streams outside conventional lending during the epidemic.

Diversification into non-interest sources of income should lead to increased income stability and lower risk for banks, especially if non-interest revenue streams are not substantially associated with conventional revenue sources of lending. For many reasons, banks may boost their returns to equity by taking advantage of non-interest income sources of revenue since they are not obliged to keep regulatory capital against many fee-based revenue streams. Banks that rely more heavily on non-interest revenue face more risk and poorer risk-adjusted earnings. The risk of diversification (Gubareva, 2021; Onali et al., 2021) says that banks may enter markets where they have no expertise or a competitive edge over their competitors. Another way to look at the consequences of non-interest activity is via the stock market.

Onali et al. (2021) utilize a portfolio framework to analyze the impact of growing non-interest income on stock market risk and return metrics for U.S. Bank holding firms to solve this problem. His findings show that banks that rely heavily on non-interest revenue sources are not more profitable but rather riskier. The financial crisis necessitated an investigation of the relationship between non-traditional banking operations and bank collapses (Goodell &Goutte, 2021; Pio et al., 2021.).

Some sources of non-interest income have a more significant influence on a company's chances of failure than others. As opposed to what they expected, they discovered that the risk of failure decreased with activities like insurance sales and securities brokerage. In contrast, the risk of failure rose with venture capital, asset securitization, and investment banking.

According to the study's findings of Onali et al. (2021), banks that take on more risk in unconventional businesses tend to take on more risk in their traditional ones. Non-interest income does not give the desired diversification advantages, according to the study

conducted on U.S. financial institutions. Studies on banks outside of the United States provide a more complex and even contradicting picture of the impact of non-interest income sources on bank risk and performance. No direct advantages were seen in a sample of small European banks regarding diversity.

In addition, they discover that bank performance and non-interest revenue are inversely related. There are claims that these outcomes are the consequence of tiny European banks taking on risky new business areas.

Bank stability in 15 E.U. nations is investigated by (Goodell & Goutte, 2021; Jedynak & Bąk, 2021), who finds that increasing the percentage of non-interest revenue streams makes banks much more stable and lucrative. Kohler finds that diversifying one's income is a worthwhile investment.

A sample of Italian banks discovered that revenue diversity improves risk-adjusted-performance. European banks in the 2018–2021 timeframe analyze the relationship between non-interest revenue and risk and profitability. Increases in non-interest revenue have a detrimental impact on profitability, but they also raise a financial institution's risk.

Methodology and data collection

The population includes Lebanese commercial banks. A total of 39 commercial banks are operating in Lebanon at any one time.

The study was sent to 200 people across five banks in Lebanon, but only 123 of them completed the questionnaires.

An analysis of "Risk Management" on commercial banks' profitability in Lebanon will be done using data gathered.

Likert scale (1-strongly agree, 2 agree, 3 agree, neutral, 4 disagree, and 5 strongly disagree) and questionnaires based on independent variables will be used to build the survey.

Using the annual reports of five different banks, we have compiled secondary data that contain the most often used ratios like ROE as a unit of measurement for the financial performance of the banks.

The findings of the regression analysis will be put to the test to see whether the research hypothesis is correct. Research hypotheses may be tested scientifically with the use of this method.

Analytical Model

The following "regression analysis" was used to determine the effect of risk management and diversification among the COVID 19 towards "financial performance" measured through ROE of the commercial banks in Lebanon.

The relationship equation as drawn in the formula below indicate the target and purpose of the regression

$$ROE = α + βCredit\ Risk + β\ Market\ Risk + βLiquidity\ Risk + β\ Solvency\ Risk$$

Findings

Credit Risk

Table 1 - Credit Risk Descriptive Statistics
(results of the author's survey)

	N	Minimum	Maximum	Mean	Std. Deviation
The Board of Directors' credit risk strategy is successfully communicated and implemented by the Bank's senior management in the form of policies and procedures.	123	1	5	2.83	1.521
Credit risk is effectively managed through the Bank's risk management framework.	123	1	5	2.50	1.173
Across all of the Bank's lending operations, the Bank uses a credit risk rating system.	123	1	5	1.63	0.732
Daily, the Bank evaluates the quality of its loan portfolio and takes corrective actions if any deterioration is detected.	123	1	5	3.50	1.490
The Bank regularly prepares a periodic report of credit risk	123	1	5	2.42	0.989
Valid N	123				

It was found that, according to accepted research techniques, the "credit risk" variable has a mean of between 1 and 3, which falls within agree or strongly agree at the scale of responses.

The mean is 2.49, indicating that most respondents who work in banks think that credit risk influences the ROE of the banks.

According to the poll, the ROE of the Bank would be adversely affected by 2.49% if the Bank granted loans in USD or Lebanese Pounds without doing the needed research and possessing the appropriate documentation, which would raise the default rate.

Liquidity Risk

Table 2 - Liquidity Risk Management
(results of the author's survey)

	N	Minimum	Maximum	Mean	Std. Deviation
It's possible to manage liquidity risk in the ban by following a set of rules and guidelines	123	1	5	2.39	1.226
By the Bank's highest management in the form of policies and procedures.	123	1	5	2.51	1.231
The Bank's risk management framework effectively manages liquidity risk.	123	1	5	2.44	1.003
The Bank periodically reports liquidity risk.	123	11	5	2.09	1.027
Valid N			123		

According to the findings of this section, "liquidity risk" has an average mean of 2.35 out of a possible 4.0.

A tremendous financial performance in the workplace suggests that Lebanese banks practice liquidity in the Bank.

Because the means' average is 2.35, it suggests that all five banks believe a clear link between liquidity risk and financial performance impacts ROE by 2.35%.

Liquidity risk, for example, refers to the Bank's capacity to effectively and efficiently handle its obligations.

Nevertheless, failure to manage such liquidity ratios will force banks to expand their leverage ratios, increasing the risk of exposure that may lead to default scenarios.

Regression Analysis

Table 3 - Regression Analysis
(results of the author's survey)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.528[a]	0.494	0.474	0.02285
a. Predictors: (Constant), Liquidity Risk, Risk Control , Credit Risk				

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.017	0.010		1.744	0.085
	Solvency Risk	0.526	0.018	0.453	29.22	0.013
	Market Risk	0.327	0.017	0.654	19.23	0.020
	Credit Risk	0.539	0.098	0.349	5.510	0.014
	Liquidity Risk	0.573	0.094	0.272	6.095	0.037
a. Dependent Variable: Performance						

An analysis of the model summary table shows that 52.8 percent of the variables affect bank financial performance, indicating that 47.2% of the variables affect the Bank's financial performance.

Liquidity risk, risk control, and credit risk all have a 49.4% influence on the financial performance of the Bank in question, according to R-Square, which measures the strength of relationships across variables.

Finally, the standard deviation is about 2%, which shows that the data is regular and free of bias.

As a result of the preceding regression analysis, a significant error of 5% indicates a direct association between the dependent and independent variables.

According to these findings with a significance level below five percent, there is an association between bank financial performance and four of the independent variables: solvency risk, market risk, solvency risk $(P < 0.013)$, market risk $(P < 0.020)$, credit risk $(P < 0.014)$, and liquidity risk $(P < 0.037)$.

Thus, the following can be concluded:

Financial Performance = 0.085 + 0.654 market risk + 0.349 credit risk + 0.272 liquidity risk + 0.453 solvency risk

Hence, upon analyzing the outcome of the findings, the figures can be interpreted as follows:

- Since the coefficient of the regression analysis is positive, which means that the link between market risk and financial performance is proportionate, the ROE's performance is influenced by 1% for every one unit rise in "market risk." Consequently, the more effectively the Bank manages market risk, the higher its ROE.
- For every one-unit increase in "credit risk", the performance is affected by 34.9%.
- For every one-unit increase in "liquidity risk," the performance is affected by 27.2%
- For every one-unit increase in "solvency risk", the performance is affected by 45.3%
- As for the T-Test, which is another method used to validate the research hypothesis, this test should then specify a level above 2 to indicate a 95% significant level validity.

Main Findings

Solvency Risk
Banks must have enough capital to handle various risks that may arise in their day-to-day operations, measured by their capital adequacy. One way to determine a company's ability to repay its debts is by dividing net equity by its weighted credit risk.

This CAR ratio, or Capital Adequacy Ratio, is critical in the Basel agreement criteria created to ensure the confidence of depositors and the fulfillment of central bank requirements in the banking system.

Therefore, the Bank's capital adequacy is one of the most critical aspects to consider. For the Basel Capital Arrangements, capital ratios were chosen to show risk management performance. Since the capital to risk ratio is essential, metrics were employed to assess how well credit risk management skills shaped the analysis's foundation.

On the other side, "Credit Risk" shows a statistically significant negative correlation with productivity. The research found that managing credit risk, which directly and indirectly affects solvency, may strengthen the confidence of investors and savers in banks that contribute to the growth and higher bank profitability.

According to the findings, Solvency risk affects development, growth, operational expansion, and the ability to get better financing. Commercial banks in Lebanon were studied in this study, which looked at the influence of risk management on the banks' solvency, market, credit, and liquidity risks. A descriptive statistical approach to the study of Lebanese banks was used to provide the key results.

A regression analysis was performed to assess the correlation between the dependent variables (financial performance) and the independent factors (solvency risk, market risk, credit risk, and liquidity risk). To determine if there is a positive or negative correlation between the variables, the researchers used Pearson Correlations. The acquired data were also subjected to a validity and reliability study to see whether it was reliable.

Credit Risk Findings

If a debtor or counterparty defaults on their loan obligations (default risk), then the credit of that debtor or counterparty will be diminished, which is a kind of credit risk.

The examination of borrowers' financial health has been at the heart of the banking sector for a long time. Collateral risk, as defined by the research, refers to the likelihood that counterparty may not be able to meet a payment commitment.

This means that when a payment is delayed or not received, it affects the Bank's ability to manage its cash flow and hence reduces its profit. A bank's credit risk management goal is to ensure that the Bank's risk-adjusted rate of return is maximized while maintaining a tolerable level of credit risk.

Because of this, credit scoring should be used to determine the possibility of a loan claimant, new borrower, or comparable defaulting or violating the terms of their loan. As a result, credit scoring assesses the likelihood of defaulting on a loan or credit card.

In addition, credit scores serve as an indication of a person's creditworthiness. The likelihood of a client or business returning the money they owe and any additional costs, such as debt and charges, is frequently shown in these metrics. The higher the borrower's credit score, the less likely that interest will not be paid. Scores may be applied to any digital range.

A credit service provider (CSP) may, on the other hand, use a risk-based pricing model for credit value, which focuses on the borrower's credit risk in terms of their loan, including interest rates. The primary advantage of a credit score is that it enables CSPs to quickly, accurately, and reliably decide if a candidate is qualified to receive a loan or negotiated payment arrangement.

Liquidity Risk

Financial institutions are considered liquid if they can raise their assets and meet their liabilities without incurring unacceptable losses. Short-term obligations or unanticipated withdrawals are not covered by the immediate value of assets, which is meant by the phrase "liquidity risk."

Banks' profitability is influenced by a wide range of factors, including their solvency risk, market risk, credit risk, and liquidity risk. These factors impact the balance between liquidity risk and liquidity generation or management of liquidity by a bank. The assets and liabilities play an essential role in determining the firm's risk and growth balance.

The less pressure a bank has and the better its liquidity is, the faster it can access cash and income. Even while banks need to be prepared for planned and unanticipated spending adjustments and growth funds, the risk here might be considered a chance for financial instability, even if some of them include expansion plans and unexpected credit growth.

According to the Basel Bank Oversight Committee, banks play a significant role in converting short-term deposits into long-term debt, creating systemic and market-specific liquefaction risk.

A massive explosion, a loss of confidence, or a domestic issue, such as the currency crisis, will finally lead to this cash availability. The ability of a bank to meet its cash flow obligations, which may be affected by external events and the acts of particular authorities, may be ensured by effective risk management of liquidity hazards.

A single bank's lack of liquidity may significantly impact the whole financial system, and regulators and market participants alike need to keep an eye on liquidity risk. On the

other hand, the price of liquidity depends on the current market conditions and the borrowing institution's risk assessment.

The cost of funding may rise if a regional recession occurs, such as a severe currency shortage, a drop or a deterioration of the Bank's credit expectations, or a downturn in the company's fundraising. During the previous decade, both the severity and the difficulty of dealing with the liquidity threat have increased.

Market Risk

Equity risk is the possibility that the company's net worth may decrease or go down in value. The risk of currency exposure that is not hedged is referred to as exchange risk. Banks and investors participating in international markets may be affected by the volatility of currency exchange rates.

An interest rate risk is a potential for financial losses due to changes in interest rates. Bonds and other fixed-income instruments may be less valuable when interest rates rise. The convexity law states that the price of a bond changes when the interest rate rises.

Using rate swaps, options, or other interest rate derivatives, investors may reduce their exposure to interest rate risk.

Summary

According to regression and Pearson analysis, reducing risk influences the financial performance of Lebanese banks.

This element has been extensively studied in prior research on risk management strategies, such as credit, market, solvency, and liquidity. Lebanese banks have several significant limitations in reducing risk due to these results.

As a result of quantitative data analysis, useful analytical information has been gained. According to the findings of a recent study, reducing the Bank's exposure to credit risk, liquidity risk, market risk, and solvency risk has a beneficial influence on the Bank's financial performance, which increases the Bank's ROE and profits.

Risk management programs and bank performance, notably ROA and ROE, are commonly accepted to correlate.

As a result, stress testing and credit scoring increased net income (year over year). Calculating their credit risk exposure, for example, would boost their revenues over time. In light of these findings, commercial banks should utilize their technologies to identify more factors and criteria that might affect their financial soundness. Branch managers began employing scoring methodologies that artificially boosted the yearly return on equity of banks to assess their exposure to credit risk.

As a result, branch managers' inspections were an active credit risk assessment approach that had a favourable influence on the banks' financial stability. Findings also indicated that the traditional Bank's ROE profitability is strongly linked to its credit risk assessment strategy, as shown by regression analysis. As a result, financial institutions become increasingly sensitive to credit risk as they expand their loan portfolios. This finding shows that the "exposure restrictions" method must be implemented immediately to maintain a bank's profitability.

It's interesting to note that the research statistically correlated bank profits to their "exposure restriction approach." Therefore, it is reasonable to infer that a commercial bank

will be more successful if it applies higher exposure limitations to potential future credit concerns.

However, risk management and recognition heavily influenced commercial banks' outcomes. However, for risk calculation and monitoring, the researchers relied on the tools supplied rather than their knowledge of potential dangers.

These approaches include financial statement analysis, creditworthiness and creditworthiness evaluations, credit rating and models of credit portfolios. They must be used to maintain and increase the profitability of banks.

Limitations of Research

As a result of these limitations, the current study could not effectively test the hypothesis because it relied solely on a questionnaire to analyze the relationship between risk management practices and financial performance and thus had a limited number of time constraints and responses to respond to.

The confidentiality and secrecy of the Bank prevented the researcher from maintaining risk management data analysis. Numerous additional factorswere not considered while looking at the influence of risk management on financial performance. Therefore just four variables were examined. Because the research was confined to just five banks, the results may have varied from one to the next if carried out on another institution.

Recommendations of Future Prospects

For this study, ROE was used to indicate a bank's financial performance, which should be relevant to all commercial banks.

Researchers advocate incorporating additional variables in addition to those already used in the study and quantitative and qualitative approaches to improve the quality of the research and investigate both managers' and workers' perspectives.

To better understand Lebanon's risk management processes, the research suggested comparing Lebanese banks and international banks.

In most cases, banks are forthcoming about the risk measurement methods. Still, the fact remains that they could use more sophisticated and dependable applications indicated in the study to manage better the financial risk that is becoming progressively severe under the present circumstances.

The validation and streamlining of their risk management plans, procedures, and activities in light of the Basel III agreement's applicability might be further suggestions to commercial banks.

Following these principles, financial institutions should be able to compare their risk management procedures and operations globally.

Regarding budget distribution, banks should ensure that risk control portions have an independent budget to ensure that funds are expended to develop the evolving risk climate. Their Risk Departments can handle the increased financial risks effectively, which would boost their financial efficiency untimely.

In addition, training programs for credit authorities are needed to help them thoroughly examine a customer's creditworthiness before making any loans.

As a result, credit officers must be well trainedto decrease the likelihood of loan applicants defaulting on their payments.

Second, management must use IFRS 9 methodologies to create a credit risk management program targeted at granting current loans while drastically lowering the acceptance of credits that might become problematic or lost in the long term. This method considerably reduces the risks associated with lending money to borrowers.

The Bank's credit risk management enforcement criteria must be constantly reinforced to its employees. To put it another way, banks must often remind their employees, especially in particular credit officials, of adhering to laws to maintain the Bank's operations.

The last effort is made to verify the feasibility of the hypothesis. The variables are applied to the Bank's financials to prove the level of performance improvement if the variables are applied.

Given that banks net income were:

<div align="center">

USD 130,045,000 in 2019

USD 131,880,000 in 2020

</div>

And given by the Regression analysis that Net Performance will be affected by the variables noted as such; then the following calculations are made to validate the effect of the regression outcome as follows using the 2020 net income alone ;

1) Solvency risk: impact the financial performance by 4.6% less 37.2 % as noted by the R-model summary, then the adjustment factor should read 3.261 %

Accordingly, the 2020 net income should read $ 131,310,000 X 1.0226 = $ 2,745,758 to become $ 134,277,606 if the recommendations are applied.

2) Market Risk: impact the financial performance by 4.65% less 37.2 % as noted by the R-model summery , then the adjustment factor should read 3.302 %

Accordingly , the 2020 should read $ 131,880,000 X 1.023 = $ 2,795,549 to become $ 134,913,240 if the recommendations are applied.

3) Credit Risk: impact the financial performance by 3.49%. less 37.2 % as noted by the R-model summery , then the adjustment factor should read 2.564 %

Accordingly, the 2020 should read $ 131,880,000 X 1.01564 = $ 1,899,321 to become $ 133,942,603 if the recommendations are applied.

4) Liquidity risk: impact the   financial performance by 3.90% less 37.2 % as noted by the R-model summary, then the adjustment factor should read 2.821 %

Accordingly, the 2020 should read $ 131,880,000 X 1.01821 = $ 2,211,422 to become $ 134,281,534 if the recommendations are applied.

Hence, adding all the variables would sum up to approx. $ 9,652,050

If added to the 2020 Net Income, the outcome should read = $ 131,092,050

Average growth is thus equal to approx. 7.9 %

Henceforth, it can be concluded that the risk ratios play an important role in affecting the financial performance of commercial banks in Lebanon, meaning that if the noted risks were applied, banks would have realized a 7.9 % growth to their 2020 net income.

In conclusion, besides the present recession and the default risks that the country faces culminating from the treasury bills and other securities, all Lebanese banks should increase their equity and apply the risk management tools because the doubtful advances and loans are increasing.

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THE COLLABORATIVE BRAND MARKETING: THE CASE OF BTS-McDONALD'S IN JAKARTA, INDONESIA

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In a rigid competition marketplace particularly during the pandemic time, greater emphasis is being placed on marketing strategy to boost the sales and business growth. Marketing strategy has a central role in the development of brand image, be it at the corporate, retail or product level. Fast food industry is one of the major sectors that continuously adapt their marketing strategy to the highly competitive market. With the spike popularity of technology and pop culture, many fast-food companies contest not only to stay on the business but also to gain competitive advantage with their innovative branding strategy. Certainly, there are many challenges that fast-food Company needs to deal with given the current pandemic situation where most are struggling to stay relevant and increase the sale amid difficult times. For this purpose, the focus of this study is the McDonald's franchise in Jakarta, Indonesia in which considered as one of the few which recently gain reputation due to collaborative brand marketing, they currently undergo with one of the biggest pop group. This article is devoted to explain what makes McDonald's collaboration's marketing strategy works and analysis of PESTEL on their marketing strategy. This study shows that popularity of BTS-McDonald's collaboration strategy related strongly to demography, social-culture, and technology aspects.

Keywords: collaborative brand marketing, fast-food chain, McDonald's; strategy; business growth

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THE COLLABORATIVE BRAND MARKETING

Introduction

Multinational fast-food companies are facing tough competition not only amongst themselves, but also the due to the novel Covid-19 pandemic situation, which has put pressures on so many businesses across many economic sectors. Thus, the situation forces many of these fast-food companies to be more creative in finding ways to stay afloat and in the same time competitive.

One of the strategies is to engage in collaborative relationships with various external partners including customers, suppliers, universities, and even competitors to integrate their value co-creation processes (Wang et al., 2015). The relationship on brand collaboration is quite a popular method for marketing strategy (Young et al., 2001, Washburn et al., 2004, Uggla & Åsberg, 2010, Ilhan et al., 2018, Chern & Ahmad, 2020).

This type of collaboration is co-operative marketing activities that consist of short or long-term associations of two or more individual brands (Hou et al., 2017). The usage of brand collaboration as marketing strategy can be represented by using the association of brand names, logos, or other proprietary assets of the brand in promotions. These days consumers are mostly smarter. They tend to choose a product based on its emotional values instead of its functional values as there are way too many functionally similar products which are competing within same category and consumers have become more selective on goods that are functionally similar (Hou et al., 2017). Thus, to successfully compete, companies came up with different approaches in marketing and partnership.

Collaborations between fast food chains have gradually grown in popularity over the past few years. Rather than competing, many chains have seen the value in joining forces, developing significant inroads with traditionally cautious consumers (Hall, 2020).

For instance, in the US, Burger King co-branding with Cinnabon, Australia has Belles Hot Chicken with US-based snack Cheetos (Hall, 2020).

Meanwhile, other trend that existed for decades is fast-food chains' collaboration with famous celebrities as a way to attract new customers, especially the younger generations (Linder, 2020). Whether it's a commercial or a meal created in their honor, these celebrity collaborations have existed for decades, and they can lead to giant success for the brand, generally. Famous celebrities' collaboration such as Travis Scott & McDonald's, Michael Jordan & McDonald's, Ringo Starr & Pizza Hut, Kate Upton & Hardee's, Chipotle & Shawn Mendes, and many more were little success story of fast-food collaboration with public figure that drove their product sales. Collaborating with young artists and creators became massive marketing strategy for fast-food chains in 2020 (Meisenzahl, 2021).

Indonesia served as the largest foodservice market among all Association of Southeast Asian Nations countries. Based on Nielsen report in 2016, showed that 11% of Indonesian citizens eat out at least once a day; this is higher than the global average of 9% (The Jakarta post, 2020).

Most of these are composed of take away food from fast-food chains. According to Agriculture and Agri-Food Canada's global analysis report in 2016, the value sales for Indonesia's foodservice market reached US$36.8 billion in 2014, which was about US$14 billion higher than the second top country in the ASEAN market. Full-service restaurants, fast food, and street stalls/kiosks are the top three growth drivers for Indonesia's foodservice market.

The top five Indonesia's foodservice companies in 2014 were Yum! Brand Inc., McDonald's Corp., Top Food Indonesia PT, Sederhana Citra Mandiri PT, Starbucks Corp., and A Great American Brand, LLC (Agriculture and Agri-Food Canada, 2016). According to USDA Foreign Agricultural Service's report (2019), KFC and McDonald's sit atop of the Indonesian's major chained fast-food.

The capital city of Indonesia, Jakarta is home to heavy contest of fast-food franchise between these two fast-food chain giants. McDonald's is the most famous ones when it comes to marketing strategy featuring collaboration with POP-stars as Nuyen (2021), describes it is the age of the celebrity McDonald's collaboration.

Quite recently, McDonald's have caused a stir in Jakarta over their newly collaboration with mega POP-stars from South Korea, BTS (Bangtan Boys) for meal and clothing package. According to BBC (2021), referred to police in Jakarta said in a statement that a total of 32 branches were temporarily closed across the city due to swarming of online orders as costumers want to get their hands on the mentioned exclusive package consist of French fries, hot sauces, a cup of coke, and chicken nuggets that cost ($3.1). Branches of McDonald's forced to shut due to high orders (BBC.com, 2021). Not only stops at the meal frenzy in Jakarta, Indonesia the fast-food packaging of BTS McDonald's Meal is in high demand and people are reselling its paper bags, boxes, and cups on e-commerce. In Indonesia, the packaging sells on marketplaces for up to a million rupiahs ($70) (Novi, 2021).

This study focuses on collaboration marketing strategy by McDonald's in Jakarta, Indonesia that made some of their chains is the area forced to be closed due to overcrowded with costumers. It is interesting analyze how the company aimed to turn their loyal customers into fans by using such a strategy of marketing. McDonald's marketing strategy mainly based on their first growth pillars: Maximizing marketing: Brand & Affordability. Called "Accelerating the Arches" (McDonald's.com), this new strategic initiative has three primary pillars: A renewed commitment to core menu products like burgers, chicken, and coffee to tap into consumer demand for familiarity; doubling down on what it calls the "3 D's,"—digital, delivery, and drive-thru; and maximizing marketing by "investing in new, culturally relevant approaches to effectively communicate the story of brand, food, and purpose" (Beer, 2020).

Literature Review

This study explored basic literature available on: (1) fast-food chains and (2) collaborative brand marketing.

The concept of the fast-food chain

According to Merriam Webster Online dictionary (n.d), Fast food, by definition, is "designed for ready availability, use, or consumption with little consideration given to quality or significance. According to (Goyal & Singh, 2007) as a "general term used for a limited menu of foods that lend themselves to production-line techniques; suppliers tend to specialize in products such as hamburgers, pizzas, chicken, or sandwiches".

Data Monitor's survey the fast food market is defined as the sale of food and drinks for immediate consumption either on the premises or in designated eating areas shared with other foodservice operators, or for consumption elsewhere (Goyal & Singh, 2007).

The fast-food industry, initially envisioned in Southern California during the 1940s, not only transformed the eating lifestyles of Americans, but also those in many other countries around the world, including most of Asian countries (Baig & Saeed, 2012).

McDonald's is the leader of the fast-food industry (Freeman, 2007) and it had the first drive-thru window (Fontinelle, 2020). Its founder, Ray Kroc, transformed a hamburger, fries, and a shake into the quintessential American meal, erected golden arches to guide hungry travelers, and appointed a kid-friendly clown as fast food's ambassador andfast food has since expanded to include an extensive array of foods (Freeman, 2007).

McDonald's has managed to squeeze ever-higher sales and greater profits from the American fast food industry—one that many called oversaturated as far back as the 1980s (Fontinelle, 2020).

In Indonesia, two most popular fast-food chains are Kentucky Fried Chicken (KFC) and McDonald's (Agriculture and Agri-food Canada, 2016). The two giants compete with many strategies but interestingly, no one have ever caused such an uproar like some McDonald's chains in Jakarta did (BBC, 2021). The first McDonald's chain opened in Jakarta, Indonesia on 1991 and there are more than 200 McDonald's operating across Indonesia, with dozens of them located in Jakarta (Croft-Cusworth, 2020).

Since 1950's, fast food was penetrating the food market and becoming more and more popular especially for younger generations. The young consumers visit fast food restaurants for fun and change (Goyal & Singh, 2007, Baig & Saeed, 2012).

In Jakarta, Indonesia, the landmark causing all the fuss wasn't a heritage cinema, an independent music venue, or a public park but a McDonald's restaurant (Croft-Cusworth, 2020). It is common to see a long line in a drive-through way outside of a fast-food restaurant or a bunch of crowded clients waiting to order in front of fast-food outlets. Even though nearly most of the customer knows that fast food got not health benefits, we still can observe every day in fast food restaurants customers come and order in an endless stream (Song, 2016).

The concept of collaborative brand marketing
Coalitions between companies, whether they are from different parts of the world or different ends of the supply chain, are a fact of life in business nowadays.In the global economy, a well-developed ability to create and sustain fruitful collaborations gives companies a significant competitive boost (Kanter, 1994).

Collaborative marketing alliances have been defined by Palmer (1996) as the "…mutual recognition and understanding that the success of each firm depends in on the other firm".

Kim et al. (2007) defines co-branding as multiple business alliances cooperating in marketing, space sharing, and production while maintaining their independence as a separate brand. Recently, celebrity and restaurant companies have recognized the importance of co-branding strategies (Keel & Nataraajan, 2012).

A larger number of chain restaurants and celebrities have together implemented co-branding strategies to accomplish synergy (e.g., McDonald's with BTS, Travis Scott, Michael Jordan, Chipotle with Shawn Mendes, and many more) (Rich, 2021).

Kim et al. (2007) summarizes the advantages of implementing a cobranding strategy as follows: "From the viewpoint of both the operator and the partner, the ability to access a broader customer base and form new relationships with clients is one of the most

important and beneficial advantages. The revenue generated by the partnership can generally outweigh the expense of forming the alliance; as a result, budgeted expenditures can be concentrated in other areas. In addition, co-branding enhances the credibility of the hotel's brand by borrowing credibility from other brands".

Collaborative marketing is a popular strategy for firms to share risks and exchange resources, access new markets, achieve economies of scale and obtain collaborative and competitive advantages (Kuang-Jung et al., 2015).

According to Sawhney (2001), collaborative marketing allows firms to tap into customer expertise by integrating customers into the firm's new product development process. The collaborative marketing may also serve as an exchange arrangement for partners to learn and obtain the technologies, skills and knowledge from each other's that are not available within their own organizations.

The relevant researches on collaborative marketing indicate these linkages between firms which provide technologies, entrepreneurial and managerial know-how and market access, to aid an export-oriented development strategy (Kuang-Jung, et al., 2015).

Yet, it is quite difficult to establish a successful and strong brand. To do branding it requires huge enterprise resource such as money, human resource and so on.

In these circumstances, extended enterprise collaboration is a solution for individual companies, in association with other companies, academia, and government, to increase the success rate of transition to environmental fit through collaboration with other companies (Kuang-Jung et al., 2015).

The research problem, goals, objectives

The research problem here concerns the fact that less study done to understand how the BTS-McDonald's collaboration pushes McDonald's sale in Jakarta, Indonesia amid Covid-19 pandemic. Hence, this study is trying to explore the causes and factors that are affecting the successful marketing of BTS-McDonald's collaboration.

The main objective of this research to study the factors of success in a collaborative brand marketing literature.

To achieve the research goal, the following objectives has been set forward:
- to study fast-food chain marketing strategy through collaboration with celebrity in Jakarta, Indonesia.
- using the obtained information to find which factors impact successful collaborative brand marketing of fast-food.

The research methods & analysis

The main object investigated in this study is McDonald's, a large multinational fast-food supply chain operating in Jakarta, Indonesia which recently have been grown popularity due to its collaboration with BTS, South Korean famous boy band.

The data analysis methods on this study can be divided into three: SWOT, PESTEL, and Porter's Five Forces.

The SWOT Analysis

In case of McDonald's collaborative brand marketing with K-POP famous group BTS in Jakarta, Indonesia, the SWOT analysis can be applied to see what makes this collaboration created hype and in the same time halted. Accordingly, each aspects are explained below:

Strengths: McDonald's is considered to be an iconic fast-food chain in Jakarta, Indonesia, it also branded as landmark that normally goes to a heritage cinema, an independent music venue, or a public park but a McDonald's restaurant (Croft-Cusworth, 2020). Moreover, with recent collaboration it has with BTS, most of its chain are overcrowded with customers who wanted to purchase BTS-themed meal package.

Weaknesses: The McDonald's queuing system and limited edition BTS meal have caused a backlash as there some chains in Jakarta made long line BBC (2021) branded those chains couldn't keep up with the orders of BTS-meal both online delivery service and walk in customers as people waited for hours to get the hands on the mentioned product.

Opportunities: Indonesia's population is generally young, and most of young people in Jakarta know what BTS is and how popular the South Korean band is. Jakarta is one of the cities where BTS fans majority reside in Indonesia. Hence, when McDonald's announce its collaboration with BTS, so many people swamp the restaurant.

According to BBC (2021) footfall in the US branches increased by 12% in the first week it was launched. Hence, it was no surprise that when the meal launched in K-Pop-mad Indonesia on Wednesday June 9th 2021, it was an immediate hit. Technology also plays a pivotal role as most of McDonald's chains in Jakarta partnered with online service delivery (Grab Food, Food Panda, and so on) and most people prefer to order through these online service delivery providers.

Threats: Covid-19 pandemic obviously has become threats to so many businesses, including McDonald's chains in Jakarta, Indonesia especially after the announcement of their hit collaboration with famous celebrity. Because of Covid-19, however, people did not go to the branches themselves. Instead, they used delivery services - sending drivers to the outlets in droves. In Jakarta, the capital, the police said on Wednesday that they had temporarily closed 32 McDonald's outlets "because they were found to have violated health protocols," including limiting capacity to 50 percent and avoiding crowds (Bengali, 2021).

The PESTLE Analysis

Political factors: might affect McDonald's collaborative brand marketing strategy in Jakarta, Indonesia by quite substantially if the regulations of Indonesian government regarding fast food chains especially during the COVID-19 Pandemic would give a lot of restrictions. However, in Indonesia the fast-food regulations mainly focused on food safety measures (Putri, 2018) and not heavily give burden how easily fast-food chains to enter Jakarta's market. Generally, Indonesia's capital city is quite liberal regarding international companies this include McDonald's.

Economic factors: BTS-McDonald's collaboration marketing strategy have caused some of McDonald's chains in Jakarta to be overcrowded by customers (BBC, 2021). hence the branding with celebrity have boost society's purchases for this particular limited edition BTS-meal by McDonald's even though the effects of Covid-19 still put most of

business in Jakarta under pressure, but it is a different case with BTS-McDonald's collaboration, the pandemic did not have significant impact on the sale. The high demand of this particular products even created another trend for people to re-sell the BTS-McDonald's empty food packaging over the internet due to its high value (Novi, 2021).

Social factors: play a pivotal role on why McDonald's collaborative marketing strategy drives most of their chains in Jakarta swamped with so many customers. McDonald's partner BTS, has massive fans (so called ARMY) in the capital of Indonesia (Lau, 2021) and because nearly anything related to BTS provokes a frenzy (NYTimes, 2021), especially in Jakarta, Indonesia. Hence, the demographic, lifestyle, and culture in Indonesia's capital are driving factors that made McDonald's-BTS collaboration such a big hit.

Technological factors: McDonald's outlets in Jakarta are well connected to technology. Partnering with many giant's online delivery services such as GoFood, GrabFood, Food Panda, and many more (Lee, 2019). This strong technological partnership allows McDonald's outlets to remain vigorous in marketing their product although the Covid-19 pandemic has made walk-in customers are essentially less because people are ordering McDonald's food mostly on the app (Lau, 2021).

Environmental factors: In Jakarta, Indonesia, McDonald's main environmental factor is that the Covid-19 pandemic itself. Indonesia, which has one of the highest coronavirus caseloads in Asia, has seen a surge of infections in recent weeks as more people gathered.

Legal factors: Considering the legal issues that McDonald's faced on their collaboration is generally none, except, under strict regulation of Covid-19, 33 of McDonald's outlets in Jakarta are forced to closed due to the violation of health protocols on overcrowded place. Because of Covid-19, however, people did not go to the branches themselves. Instead, they used delivery services - sending drivers to the outlets in droves, some even had to wait for more than 2 hours and some McDonald's outlets in Jakarta the queue could take up to 7 hours (BBC, 2021).

The Porter's Five Forces' Analysis

Porter's Five Forces of Competitive Position Analysis were developed in 1979 by Michael E Porter of Harvard Business School as a simple framework for assessing and evaluating the competitive strength and position of a business organization (Porter, 2008).

The model can be applied to any segment of the economy and helps explain why various industries maintain different degrees of profitability (Hall, 2021).

Threat of new entrants. In case of McDonald's marketing strategy in Jakarta, Indonesia, they succeed to improve their sales amidst the pandemic because of their new collaboration as none of its rival have done the same. With their exclusive collaboration with the famous band that makes other's similar business difficult to enter the competition.

Threat of substitutes. McDonald's marketing strategy did not actually increase the price on limited BTS meal. The package includes 10-piece Chicken McNuggets, medium fries, and a medium Coke and In Indonesia, the combo sells for 51,000 rupiahs or around $3.5 (Novi, 2021). This to make sure that such a product is accessible to everyone hence, avoiding its competitors to produce the same identical products because almost everyone can order them directly from McDonald's outlets.

Costumers' bargaining power. Due to brilliant marketing strategy, McDonald's in Jakarta virtually faces no competitors as the single producer of the 'BTS meal', which is super popular in Indonesia. Therefore, customer has no bargaining power over this matter because the product exclusively only available at McDonald's branches.

Suppliers' bargaining power. As the McDonald's acts as the single supplier and producer of a hit 'BTS meal'. Consequently, there are no other suppliers who would drive down the prof McDonald's could gain over the limited-edition product across the world especially in Jakarta, Indonesia where such a product goes viral.

Rivalry among existing competitors. The collaborative brand marketing strategy can be used to decrease to power of competing rivals. In this case, by doing exclusive collaborative brand with BTS, McDonald's secured its position as the only one who own limited edition product and exclusive distributor, hence dominating its rivals driving down the competition, especially in Jakarta, Indonesia.

Key research results

Based on the analysis of SWOT, PESTLE, and Porter's Five Forces, this paper has identified several aspects that are contributing to the success collaborative brand marketing strategy of McDonald's specifically in Jakarta, Indonesia. Those features are: demography, social, culture and perfect collaboration partner. According to sociological survey between July and September 2020, over 80,000 of the 400,000-plus people in the survey were from Indonesia and, at 20%, Indonesia had the most BTS fans anywhere in the world (Tizzard, 2021).

The country with the most respondents to the survey was, by far, Indonesia, accounting for 20% of those surveyed, beating the U.S. with 8.4% and South Korea with 3.7% (Borowiec, 2021). Indonesia is a young, populous country, with a longtime affinity for K-pop that includes the cosmetics and fashion that go along with it (Borowiec, 2021).

Indonesia is known as a country that can easily accept and consume popular culture from outside Indonesia (Utami & Winduwati, 2020).

This acceptance also applies to the recognition of K-Pop as one of the products of Korean pop culture that circulates very quickly and widely in Indonesia and without a question, K-pop fans are increasing every year in Indonesia, so many K-Pop idols come to Indonesia to greet their fans through concerts and fan meetings. (Utami & Winduwati, 2020). Accordingly, it was no coincide that collaborative brand marketing of BTS-McDonald's was and still a big success in Jakarta, Indonesia since the first promotion on 9th of June 2021 that will lasts one month.

According to the data gathered from Hootsuite, Indonesia has a total population of 272.1 million and 338.2 million of the populations are the smartphone users and almost 175.4 million people of Indonesia are internet users (Tina & Utami, 2020). Not only that, the success of McDonald's collaborative brand marketing strategy in Jakarta, Indonesia caused by how active Indonesian's 'army' participation that heavily based on social media and online market place (Irwansyah & Lestari, 2020, Tina & Utami, 2020, Utami & Winduwati, 2020).

With this huge market potential, McDonald's in Indonesian capital city have been using this channel to boost their sale by partnering with Gojek (Indonesia's biggest ride sharing platform) (Mobile Marketing Association, n.d.). Thus, it is essential for

McDonald's to use this link for its digital campaign as a measure to further increase their sales (Mobile Marketing Association, n.d.).

Due to recent uproar about overcrowded McDonald's chains in Jakarta, so many people ordered online through Gojek app for the limited edition BTS-McDonald's meal, which has caused a stir where local police authority had to close as many as 33 chains across Jakarta to stop people pouring in as a Covid-19 prevention effort (BBC, 2021).

The queue in most McDonald's branches in Jakarta for BTS limited edition meal package mostly dominated by Ojek Online (online delivery currier) (Damayanti, 2021), which means the amount of people who would prefer to use online services can be considered major strategy for McDonald's as pandemic-proof method of running the business. Apart from that, as enthusiasm of BTS-McDonald's product has initiated an online fundraising as many Indonesians felt like there is a need to help those online curriers who had to queue for hours through a website KitaBisa (a local Indonesian fundraising platform). It went viral on the internet as may have donated to the website as it aimed to get US $7496,93 and suprassed the target amount to US $10579,79 (Janti, 2021).

Discussion

McDonald's first celeb food collaboration took place in 1992, when they served the McJordan, named after basketball superstar Michael Jordan, which only available in specific city within the US. Then, after almost 30 years of celeb collaboration as their brand marketing strategy McDonald's had another partnership with J. Balvin and Travis Scott were McDonald's latest attempt to reach a more diverse and younger-skewing customer base of millennials and these collab were available globally (Dominko, 2020). But not until the very recent hit of McDonald's celebrity with BTS as in many places such a meal package went viral and treated as high value commodity, especially in Jakarta, Indonesia.

It is not the first time the company's collaboration with BTS went viral in Indonesia. In 2019, Tokopedia also took BTS as their company's Brand Ambassador and, at the same time, opened the official BTS Merchandise Store (Utami & Winduwati, 2020). From the previous analysis, it can be said that factors such as demography, culture, social, effective ambassador, and technology as brought McDonald's limited edition product sales to soar in many places, specifically Jakarta, Indonesia. Those aspects gave McDonald's an upper hand in Jakarta, Indonesia amongst its competitors.

Conclusion

Selecting the right collaborative brand partner as marketing strategy could stipulates company's product sales and proven quite a pandemic-proof tactic. The example of how customers in Jakarta, Indonesia rush to get their hands on a simple meal package of BTS can been seen as successful marketing plan by McDonald's. Partnering with such a popular artist gives McDonald's an upper hand against its competitors who basically sells similar product. BTS fans in Jakarta, Indonesia, swamped McDonald's outlets throughout the city with orders right from day 1 when the product released.

Surely, huge BTS fan base in Jakarta has become an important feature combined with technological aspect and socio-culture, which contributes to the success of

McDonald's marketing strategy across the city. The collaborative brand marketing can be said as an effective tactic during pandemic situation given the case of BTS-McDonald's partnership in Jakarta, Indonesia.

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INVESTIGATING THE RELATIONSHIP BETWEEN TOTAL QUALITY MANAGEMENT (TQM) AND HUMAN RESOURCES MANAGEMENT (HRM) IN LEBANESE COMPANIES

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Increasing customer satisfaction, efficiency, and market competitiveness are possible outcomes of Total Quality Management. On the other hand, TQM is an organized way to ensure that an organization's internal processes are continually improved. As a result of TQM, the quality of services and products may be improved while decreasing operational costs by enhancing human resources, processes, and equipment.

A quantitative methodology was employed to collect data. The sample size currently comprises 5% of the total workforce contacted to gather data. Researchers selected 120 participants using a cluster sample. The questionnaire had been coded using the Likert Scale ranging from 1 (Strongly Agree) to 5 (Strongly Disagree).The SPSS software has been utilized to analyze the data collected, and the results will be viewed in terms of regression analysis

The research findings showed that total quality management directly affects the performance of employees in the organizations. Training and development programs are interconnected as if the workers are motivated by workplace programs that help enhance their performance and strengthen their professions.

Compensation benefits and performance appraisals are two key elements that encourage staff to increase productivity. If the employee is satisfied, they will be kept at work and encouraged to pursue training and development programs, improving organizational performance and reducing turnover.

Keywords: recruitment & selection; teamwork & empowerment; training & development; performance appraisals; incentives & compensation

Introduction

The principle of providing consumers with high-quality goods and services is furthered through TQM. As a result, human resources and production processes have played a crucial role during the last half-century in transforming skilled human resources and professionals.

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According to (Kuswati, 2020) who have studied the many phases of human civilization, a man's place in society has changed. The appropriate people with the right talents, at the right time and in the right location are thus essential for accomplishing quality objectives. This is at the heart of effective human resource management.

Human resource management approaches that enable TQM to be applied will be examined in this study to establish the quality direction. The findings of this study are critical to our growing knowledge of the connection between HRM and TQM. A literature review of HRM-TQM practices and implementation strategies is the first step in the project. The study's emphasis on the link between TQM, HRM, and performance also demonstrates the relevance of organizational employees in gaining a competitive advantage according to (Petiho Numbu & Bose, 2019)

Literature Review

Human Resource Management

A greater emphasis has been placed on human resources (HR) due to economic ups and downs during the last decade. When times are tough, the focus of HR departments shifts from finding and retaining top-tier employees to finding ways to decrease costs and increase productivity (Riyanto et al., 2021).

Human resource management (HRM) is a distinct approach to personnel management that focuses on cultivating a highly motivated and competent workforce via cultural, structural, and individual strategies. HRM may be described as the process of acquiring, developing, creating, and keeping human relationships inside a company to achieve the business's basic objective (Nilasari et al., 2021).

Human resources management (HRM) is more than simply a support function for a corporation; it is also responsible for aiding in achieving corporate objectives. To help the business expand and become more productive, it aims to align HRM processes and practices with employee motivation and satisfaction.

As defined by (Kuranchie-Mensah & Amponsah-Tawiah, 2016), HRM (Human Resource Management) is the process of organizing, directing, monitoring, evaluating (including performance evaluations), and compensating human resources to create and develop human and industrial relations that will shape HRM policies and practices in the future.

To preserve competitive advantage, HRM systems may help organizations build and enhance their skills and contribute to sustainable advantages via organizational learning and innovation. Strategic HRM encompasses all of a company's HR policies and practices and the influence they have on its overall success. To build a good HRM system, the company must create and implement effective human resource management strategies (Kuranchie-Mensah & Amponsah-Tawiah, 2016; Raza et al., 2015) defines HRM practices as the efforts undertaken by an organization to create a pool of human potential to guarantee that the resources are leveraged to achieve organizational objectives.

Total Quality Management

Total Quality Management combines management practices and technology that allow empowered employees to delight consumers while simultaneously increasing revenue and reducing costs.TQM is founded on the premise that everyone engaged in developing or

consuming an organization's goods or services is responsible for the quality of those things and processes. TQM focuses on the engagement of management, workers, suppliers, and even customers to meet or exceed customer expectations according to (Raza et al., 2015).

Overall, TQM is a company culture dedicated to ensuring ultimate customer satisfaction by continuously improving products and services. TQM seeks to accomplish this by integrating all departments and processes inside the business to this end. It varies greatly from nation to country and from industry to industry.

Employee satisfaction and quality awareness are boosted due to implementing TQM in the workplace. As a result, TQM has gained widespread acceptance as a management strategy that emphasizes quality with a more holistic view of employee interactions. Employees are held responsible for ensuring that their company's products and services meet or exceed their customers' expectations via TQM (Kuswati, 2020).

Human Resource Management & *Total Quality Management*

Organizational results may be enhanced when HRM and TQM work together successfully. It is expected that the firm would perform better if HR and quality policies are linked, such as defining and conveying the TQM vision, preparing the organization and people for TQM implementation, and increasing quality awareness among workers at all levels, functions and departments (Kuranchie-Mensah & Amponsah-Tawiah, 2016).

A successful TQM program relies heavily on HRM. Human resource management (HRM) plays a significant part in executing the management system associated with complete quality in a business, notwithstanding the variances in nomenclature. Therefore, if a company is serious about total quality management, it must prioritize human resources management (Nabi et al., 2017).

TQM and HRM have gotten so much attention in the business world over the last several decades because they influenced both the person and the organization's performance. For this reason, a focus on comprehensive quality management and human resources is essential to increasing the organization's competitiveness.

Human resource management methods have been shown to have a favorable effect on the adoption of TQM. Implementing HRM practices may have a major impact on employee and customer satisfaction. Furthermore, TQM methods may have a favorable impact on a company's reputation and staff quality awareness (Muchtar, 2016; Siddiqui & Rida, 2019).

Quality management may significantly impacts how HRM runs, which can lead to adjustments and modifications in HRM procedures. As a result, HR activities may be used to guarantee successful TQM as part of integrating human resource strategy with TQM strategy. When it comes to human resources, TQM calls for a unique approach.

HR systems must be aligned with quality objectives if a business is to succeed. Communication, collaboration, empowerment, and quality commitment are bolstered by HR policies based on Total Quality Management (TQM). Using HRM as a foundation, individuals and groups may build stronger bonds, develop a shared sense of purpose, improve job performance, and effect a shift in organizational culture. As a result, it serves as an impetus for the adoption of TQM (Bao & Nizam, 2015)

Employees across all levels, roles and departments should be prepared for TQM implementation by establishing and disseminating TQM's vision. This should lead to an improvement in the company's productivity. The achievement of comprehensive quality depends on the effectiveness of the human resource management department. TQM and

HRM have the same endgame: maximizing output, reducing costs, improving customer satisfaction, and fostering a positive work environment (Alase & Akinbo, 2021).

There is some empirical evidence to back up these claims. There are many benefits to TQM programs, such as making employees more involved in making decisions. An organization's chances of implementing quality management successfully are higher when there are motivators present than when hygiene factors are used.

Conceptual model proposed

TQM implementation and HRM practices have been advocated in the current literature. Thus, the recruiting and selection, collaboration and employee empowerment, training and development, performance evaluation, and remuneration processes seem to indicate that the business intends to implement a customized approach system and techniques to affect the organization's performance.

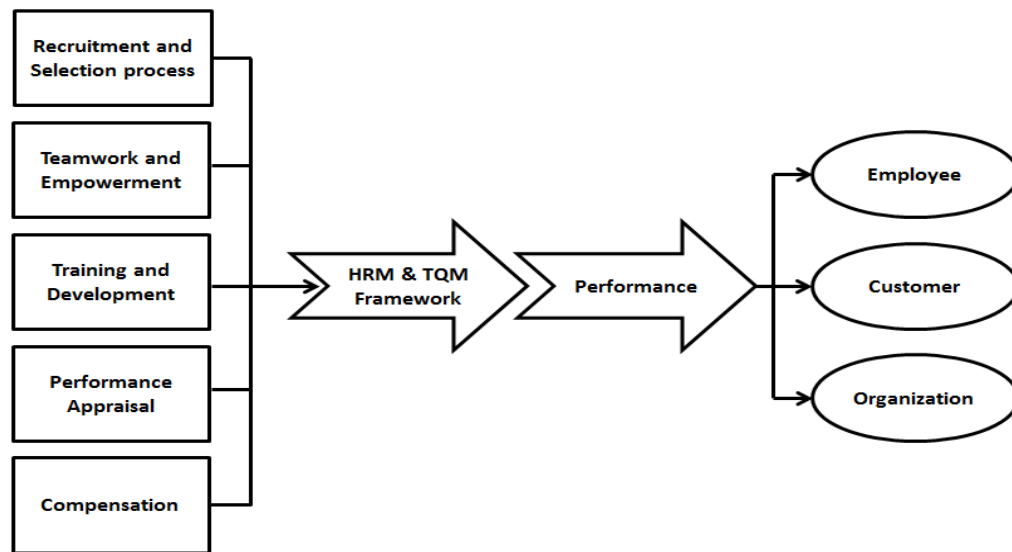TQM's efficacy may be studied using a conceptual model described in this research (Fig. 1).

Figure 1 - Research Model
(proposed by the author)

Recruitment and Selection

The first step in implementing TQM in a business is recruitment and selection. The recruiting process life cycle is a sequence of steps that are generally referred to as the stages of the recruitment process. At the same time, the selection is weeding out applications that aren't a good fit and selecting just those with the most relevant credentials. Recruitment and selection are thus one of the most critical jobs undertaken by a firm, which may be expensive and time demanding, including advertising expenditures, interview charges, and employee time (Almawali et al., 2021).

Candidates interested in working for the company are attracted during the recruitment stage. Organizational practices and activities aimed at discovering and enticing new personnel may also be referred to as recruiting. An organization's hiring and selection

procedures should aim to find the finest candidates for each position and treat each one with respect and decency

As a consequence, they are more satisfied with their jobs. Induction tools and a probationary period for the new employee may be developed with the help of TQM solutions during the selection process. As part of the recruiting and selection process, it is important to look for people who can work in teams and are adept at solving problems and those who are willing to share their ideas for improving procedures (Gomathi & Vishnumoorthy, 2020).

Teamwork and Empowerment

Even if there are interpersonal challenges, individuals will work together by using their abilities and offering constructive feedback, which is called teamwork. The company's approach to TQM relies heavily on the development of its employees and their involvement in improvement activities both individually and as part of a team. This is because collaboration improves job satisfaction and engagement while also fostering TQM.TQM relies heavily on teamwork. As a result, quality issues may be resolved more quickly, and individuals are less likely to be held responsible.

TQM entails taking on more responsibilities while earning the same salary as before. This is why all workers must participate in quality initiatives since they have the potential to increase the efficiency of the firm. Last but not least, the ability to work together as a team is essential to achieving long-term success. It encourages teamwork in solving quality issues, reduces the opportunity for individual blame, and encourages increased information exchange within the team. Found that collaboration was seen as the most important TQM practice, which correlates with job satisfaction.

Training and Development

Training and development provide employees with the information, job-related competencies, interpersonal skills, attitudes, and social behaviors they need to accomplish their jobs effectively. When firms give structural incentives in the form of professional development opportunities, employees become more engaged and capable of using their efforts to benefit the company. It is possible to improve the effectiveness of employee training while also increasing employee well-being and job satisfaction.

TQM training should not be seen as a one-time event but rather a continuous process that is followed regularly (Almawali et al., 2021).

TQM initiatives such as implementing new quality ideas, creating and using customer satisfaction systems, implementing statistical quality control, or altering the company's culture or departmental quality control rely heavily on educating employees.

TQM implementation necessitates the use of training and development. All staff should be taught quality improvement procedures, according to one of Deming's 14 principles. As a result, the human resources department must perform intensive staff training to understand how TQM standards are implemented.

People must be highly taught and dedicated to quality improvement methods, according to one of Deming's 14 management principles. As a result of using TQM, organizations put a great deal of effort into educating their personnel at all levels so that they may be more productive (Zamani et al., 2021).

Performance Appraisal and Reward System

The use of performance evaluation as a communication tool for managers to assess the quality of standards is widely acknowledged. Using quality standards, an organization's performance review aligns with Total Quality Management (TQM), identifies areas for growth and development, and gives insight into present issues.

For training and development purposes, performance evaluations in TQM-oriented firms are primarily employed in a formal annual evaluation done by the employee's supervisor.

Effective performance evaluation, which incorporates a variety of metrics from many businesses, is one performance management approach that may be quite beneficial. Two-way communication is at the heart of performance evaluation, so it's often referred to as such. Reviewing an employee's performance involves the phases of monitoring and analyzing the employee's performance level and then giving the individual feedback (Hazhar Omer Mohammed, 2019).

The use of formal performance evaluation methods helps to enhance overall quality. However, to improve TQM, firms need a unique assessment mechanism. According to a survey of firms with a strong focus on overall quality management, performance assessment is utilized mostly in training and development opportunities.

Incentives and Compensation

There must be a lot of focus on rewarding and praising high-performing personnel by the human resources management. TQM's incentive scheme rather than individual income emphasizes employee engagement, collaboration, and cooperation. This incentive scheme may be based on employee quality standards and may aim to achieve an improvement target. TQM mandates abolishing production-related salary structures in favor of a compensation model that emphasizes monetary and non-monetary incentives for employee growth and development (Robescu & Iancu, 2016).

Employees should, without a doubt, be managed and rewarded in line with business standards in the best way possible. It will also assist with the need to attract and retain the best and brightest employees. A higher level of employee satisfaction will lead to better customer service and task completion for the company, which will lead to increased profitability and market share as well as quality and competitiveness according to Ushakov & Shatila (2021).

In the literature on quality management, incentive systems have also been a contentious topic. Empowerment is more vital than compensation, according to (Alase & Akinbo, 2021). Moreover, the lack of incentives for collaboration and teamwork may lead to conflict inside an organization. However, the incentive system must be aligned with TQM.

Methodology

A quantitative methodology was employed to collect data. The sample size currently comprises 5% of the total workforce contacted to gather data. Researcher selected 120 participants using a cluster sample (64% of men and 36% of women; 22% were aged 18-25 yo, 45% - 26-35 yo, 21% - 36-45 yo, 12% - 46 years and above; 10% completed high school, 66% have a bachelor's degree, 22% have master's, and 2% have additional degree qualifications).

The questionnaire had been coded using the Likert Scale ranging from 1 (Strongly Agree) to 5 (Strongly Disagree).

The questionnaire focused on recruitment & selection, teamwork & empowerment, training & development, performance appraisals, incentives & compensation benefits.

The SPSS software has been utilized to analyze the data collected, and the results will be viewed in terms of regression analysis.

Regression Analysis

Table 1 - Regression Analysis
(results of author's survey)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.594[a]	.352	.334	.767
a. Predictors: (Constant), Recruitment & Selection, Teamwork & Empowerment, & Training & Development, Performance Appraisals, Incentives & Compensation, Performance				

Coefficients						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.099	.248		8.456	.000
	Performance Appraisals	.402	.056	.514	7.155	.000
	Teamwork & Empowerment	.422	.064	.526	6.593	.029
	Training and Development	.439	.066	.347	7.316	.014
	Incentives & Compensation	.412	.058	.149	7.103	.014
	Recruitment & Selection	.426	.075	.330	5.681	.026
a. Dependent Variable: Achievement						

The regression analysis had been conducted to test the relationship between the variables and validate the research hypotheses based on a margin error of 5%. It can be noticed that Performance appraisals showed: Beta= 0.514, t (120) = 7.155.

Teamwork and empowerment have a margin error of (0.0291) and a T-Test of (6.593), Training and Development have a margin error of (0.014) and a T-Test of (7.316), Incentives and Compensation have a margin error of (0.014) and a T-Test of (7.103), and Recruitment & Selection have a margin error of (0.026) and a T-Test of (5.681). All of the above variables scored a significance level lower than 0.05.

This means that the alternative hypotheses are accepted, and the null hypotheses are rejected.

$$Y = A + BX1 + BX2 + BX3 + BX4 + BX5$$

Employees productivity = 0.000 + 0.514 performance appraisal + 0.526 teamwork + 0.347 training & development + 0.149 incentives and compensations + 0.330 recruitment and selection

Thus, the following can be concluded:
- For every one-unit increase in performance appraisals, the employees' productivity increases by 51.4 units.

- For every one-unit increase in teamwork, the employees' productivity tends to increase by 52.6 units.
- For every one-unit increase in training & development, the employees' productivity tends to increase by 34.7 units.
- For every one-unit increase in incentives and compensation, the employees' productivity increases by 14.9 units.
- For every one-unit increase in recruitment and selection, the employees' productivity tends to increase by 33 units.

Findings

The research findings showed that total quality management directly affects the performance of employees in the organizations. Training and development programs are interconnected as if the workers are motivated by workplace programs that help enhance their performance and strengthen their professions.

On the other hand, the research results showed an important relationship between teamwork and efficiency; the higher the efficiency, the more teamwork will be practiced in the workplace.

Compensation benefits and performance appraisals are two key elements that encourage staff to increase productivity. If the employee is satisfied, they will be kept at work and encouraged to pursue training and development programs, improving organizational performance and reducing turnover.

As organizations develop to adaptability, quickness and continuous advancements, it ensures a good connection to improved performance with people and not for individuals.

Wage packages usually play a major role in increasing the employees' performance in the organization. Study findings show that the more incentives the workforce is paid, the higher the workforce's production, and therefore the better its competitiveness.

However, the findings show whether what motivates Person X does not inspire Person Y, implying that some employees are financially motivated while others are non-financially rewarded.

Recommendations and Further Contributions

It is an undoubted truth that many companies have recently realized that training and development programs play an important role in increasing the efficiency, abilities and productivity of the organization's personnel.

Recruitment and Selection Objectives should be SMART and unambiguous

Targets should be SMART and clear and should be unique and meet the company's requirements, and they should be measurable, achievable, realistic, and timely.

Targets should also contain performance goals standards of measurements and should be seen as individually achievable.

A foundation should also be given for motivating through inherent and external incentives, which lead to commitment and better performance.

Teamwork and Empowerment

Team trust is one of the most critical qualities for a team to function well at work. As a result, team members will be able to openly express their thoughts and ideas without fear of retaliation or criticism. As a result, a leader's primary responsibility is to inspire their team members to go the extra mile at work; it takes time to create trust in the workplace since followers believe in deeds rather than words.

One of the most successful motivating individuals and groups at work is to lead by example. A leader should not ask his subordinates to do a duty he would not perform himself in the workplace. In other words, if a leader wants his people to remain up late and work, he should make it happen. Because of this, the leader should demonstrate to his staff that he is equal to them in the workplace, which will lead to increased employee trust and productivity.

Everyone in the company must be treated equally. The expectations of each team should be done and respected by all members, and team regulations should be established. With the help of their team members, some bosses in the workplace write rules together to ensure that everyone adheres to the same set of standards.

Clearly defined roles and duties must be established to avoid unpleasant workplace shocks and difficulties. A reduction in working stress and routine will result from this.

Training and Development

A more professional approach to identifying training needs should be taken with the help of the line manager and HR employees. All parties involved must agree on exactly what the trainees' need, such as the skills and attitudes necessary for them to succeed in the workplace.

Departmental, sectional, and team goals and objectives should be components of any strategic planning process. The company should see learning, training, and development as an ongoing activity essential to the organization's success and progress.

Performance Appraisals and Reward Systems

An annual performance assessment information system used to evaluate workers' performance should offer employees with particular information about their performance issues and methods of improving their performance. This evaluation should clarify and identify the disparities in performance and create action plans to enhance employee performance via training programs and development programs.

Corporate career planning includes matching the professional goals with the organization's possibilities. A career path is the sequence of the particular employment possibilities involved. The Authority and the workers must take on the same part of their duty to succeed in career management. Workers must define their ambitions and skills and realize, via counselling, what training and development their employees need for their specific professional knowledge and training.

Development and planning of succession are very important. Each employee should be accessible for career advancement plans and training and development forecasts.

Compensation and Reward Systems

The deployment of a reward system boosts employee productivity. As it focuses on all aspects of long-term success, concrete value, and positive interpersonal relationships, it aims

to attract and retain the best talent, cultivate a strong management-employee partnership, and alleviate workplace tensions.

All employees, at all levels, should have access to a pay system that meets their needs both intrinsically and extrinsically to maintain the integrity of the firm as a whole while also increasing productivity. Understanding and managing incentives and compensation in an agreed framework, defined goals, standards and competency requirements may lead to improved results for both individuals and organizations.

Conclusion

TQM is based on the idea that everyone involved in developing or consuming an organization's products or services has responsibility for the quality of those items and processes. To put it another way, TQM uses the participation of management, employees, suppliers, and even consumers.

HRM and TQM, both of which are relatively new approaches, have sparked a lot of attention among practitioners. According to the findings, adopting and enabling TQM necessitates a matching HR strategy, which would comprise HRM.

It is apparent that senior management and all workers must support TQM adoption in a business and that this support has been maintained and enabled by HRM practices. Before committing their resources to HRM implementation, organizations must identify essential HRM practices to their company and emphasize these practices.

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REWARDING PROGRAMS AND EMPLOYEE MOTIVATION IN FOOD INDUSTRY IN THAILAND: THE CASE OF CP ALL & FOOD PASSION

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The paper is devoted to rewarding programs and employee motivation in food industry in Thailand. It is explored the relationship between the reward programs practiced by companies in Thailand and their employees' motivation and/or job satisfaction. The interesting reward programs of CP ALL Company Limited and Food Passion Company Limitedhave been chosen to be analyzed in this research. Strengths and weaknesses of each are identified, as well as threats and opportunities of the recognition and reward programs. External factors that may prevent companies to reward their employees are also analyzed, and last but not least the cause and effect diagram will be observed. Moreover, the research paper also covers the countermeasures of the hurdles that companies might face.

Keywords: employee motivation; recognition and rewards; employee satisfaction

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Introduction

Rewards programs are employer's initiatives to give some offerings to employees as a symbol of appreciating their achievement, behaviors, anniversaries, milestones, etc. (Martic, 2019).

Nowadays, these programs are widely practiced because they are believed to increase motivation in which it will eventually increase productivity as well. Employees tend to work harder or prioritize their actions if they know that they will be rewarded with something valuable if they do so (Satyendra, 2013).

Employee motivation is key to an organization's success because if companies experience less productivity from their employees, it will cause lower levels of output, and this may cause the company to fail in reaching its objectives and goals.

Therefore, it is always a good idea for employers to motivate their employees so that they will perform at their best. There are so many ways that employers can reward their employees other than conventional compensation methods which include salary, overtime, commissions, merit pay, profit-sharing and bonuses are categorized as compensation.

Another type of extrinsic reward is benefits which are often less direct compared to compensation. Examples of benefits are health insurance, retirement plans, use of a company car and mobile phone, expense accounts for meals and travel and it can be something intangible like flexible working schedules.

The attractive benefit package can help companies to motivate their employees (Brown, n.d.). In this research, information about CP ALL and Food Passion will be collected in order to understand more about their company and to analyze the rewards programs practiced in their company.

Literature Review

In the past, employees were considered as an input of goods and services production until Elton Mayo conducted The Hawthorne Studies from the year of 1924 to 1932 in which it changed that way of thinking about employees as an input as the result of this study found that employees are not motivated entirely by wealth and employee behavior is linked to their attitudes (Lindner, 1998).

The Hawthorne studies began the human relation approaches to management of businesses, whereby the needs and motivation of employees became the one of the focus for every manager (Bedeian, 1993).

Lindner (1998) defined motivation as an inner force that drives individuals to accomplish personal and organizational goals. Businesses need motivated employees, Smith (1994) explained that motivated employees help organizations to survive and they are more productive. Psychologists have proposed different ways of looking at motivation, whereby motivation may arise either from outside (extrinsic motivation) or inside (intrinsic motivation) of an individual.

Extrinsic motivation arises when an individual is motivated to perform a behavior or engage in an activity because he/she wants to get something in return or avoid something unpleasant situation, while Intrinsic motivation is when an individual engages in a behavior because he/she finds it rewarding for him/herself by performing the activity rather than waiting for rewards (Cherry, 2020).

A high level of intrinsic motivation can be seen by such interest and involvement in the work, and by such a perfect match of task complexity with one's skill level, that make he/she experience a sense of merging with the activity they are doing (Ganta, 2014).

In the research performed by Isen & Reeve (2005), they found that employee's feeling of happiness promotes the enjoyment of doing their jobs, and it leads to self-control and the ability to stay on doing the tasks even when the tasks are uninteresting or unpleasant for them.

This means that some employees are driven by the value and meaning of the tasks they are completing rather than extrinsic rewards.

Lin (2007) also stated that extrinsic rewards may only secure temporary compliance with employees. In other words, an employee that is looking for extrinsic motivation will only be temporarily driven to complete their tasks, they may feel demotivated once they have received the rewards they want.

Therefore, to create long-term effects of employee motivation, employers must understand employees' interests and motivation factors.

Schickey (2018) discussed the importance of placing a limit on extrinsic motivation as it pressures employees to complete the tasks and this pressure may lead to a demotivation as they may find the job not pleasing anymore.

This kind of motivating programs and strategies should be considered in a company's business plan because placing too much focus on extrinsic motivating factors may cause a company to find its employees are no longer focusing on their work performance in which this situation will end up to a declining employee morale and work output will be decreased too.

The Research Problem, Goals and Objectives

In this era, there are still employers that are not implementing motivating programs for their employees, especially medium-small sized businesses which turnover rate could be high. The question remains whether they are aware of how important it is to keep their employees motivated and the impact behind it.

The goal of this research is to study about motivating programs that are practiced in the real businesses world specifically in CP ALL Co. Ltd. and Passion Food Co. Ltd., and to find out the outcomes of the programs being practiced by them.

Research Objectives:
- to explore the facts about the current motivating programs of CP ALL Co. Ltd. and Passion Food Co Ltd;
- to investigate the relation between motivating programs and employees' motivation;
- to investigate what are situations or factors that may affect the implementation of motivating programs in CP ALL and Passion Food;
- to analyze the strengths and weaknesses of the programs, as well as opportunities it may give to the company, as well as the threats;
- to provide suggestion to companies which have not practiced motivating programs in their business.

Research methods and analytical tools

Research Methodology
In this research paper, the secondary research method is used

Analytical Tools used in this research:
SWOT Analysis. In this research paper, we will analyze the SWOT of the motivating programs practiced by some businesses in Thailand.

Ishikawa Modeling. In this research paper we will analyze any possible issues that may occur or have occurred in the companies that implemented motivating programs.

CP ALL Company Limited

Background of CP ALL Company Limited
CP ALL is Thailand's largest private company and known as one the world's largest conglomerates. It was established in 1988 by the Charoen Pokphand Group, and today it has many subsidiary companies in various fields of business including retail, wholesale, financial services, education, ready to eat and bakery service, marketing communication service, and logistics. An example of CP ALL's subsidiary is the famous convenience store chain in Thailand, 7-Eleven. As a giant company, CP ALL employs over 100,000 employees. We would like to analyze CP ALL because we found the motivation programs for their employees are interesting. Following are the motivating programs practiced by CP ALL Co. Ltd. in their companies

Motivating programs of CP ALL Company Limited

Bot to helps 7-Eleven employees
CP ALL has started to make use of a "Bot" to help them run their business in 7-Eleven stores because some tasks require a lot of manpower and cannot be done by a single employee. This investment is meant to increase productivity, manage challenges in the operation field, and it helps in reducing employees' workloads. With the implementation of this technology, the time required to get things done are reduced.

According to CP ALL's reports, this bot has increased employees' job satisfaction rate (Kryon Full-Cycle Automation Streamlines Processes for CP All, Thailand's sole operator of 7-Eleven Convenience Stores, 2020). This job satisfaction rate can boost intrinsic motivation of the employees. Wolfe (2017) explained that motivation and satisfaction are closely related, in which job satisfaction can be described as a type of motivation.

C.P. Leadership Institute (CPLI)
CP ALL established the C.P. Leadership Institute (CPLI) as part of reward or incentive programs to motivate and encourage their future employees. CP ALL will train students and enhance their leadership skills as well as other essential abilities in order to get qualified and promoted to be employees in the future; this is a significant and new way of motivating talents apart from monetary or extrinsic motivation. CP ALL believes that it is a better way to educate students and develop all of their skills and ability in order to make them more productive and valuable.

This motivation program creates sustainable growth for both employees and organizations as it's beneficial for both parties, and it shows that CP ALL cares for the employability of youngsters as it takes care of their development. One key to business success is to understand the company as well as to understand the people in the company, as everyone deserves to feel valued by the company (Beine, 2015). Robert (n.d.) explains that people who feel valued will be more motivated and engaged compared to those who did not feel valued.

Diversity & Inclusion practices
CP ALL committed to diversity and inclusion through emphasizing equal treatment which does not discriminate based on religion, sexual preference, gender, age, disability and any other characteristics considered to be human rights.

Employees of CP ALL feel included as their uniqueness has been warmly welcomed, this will increase employee loyalty and retain them from leaving the company. CP ALL takes the matter of employee's fair treatment seriously because every employee is considered as a meaningful resource and key to company success and CP ALL has won an outstanding organization that supports the work of people with disabilities award (Respecting Human Rights, committed to International Principles, Creating Peace, 2019).

A result of research about the relationship between diversity inclusion practice and employee engagement shows that employee levels of engagement will increase as they have the impression towards their company's diversity practice.

The higher diversity inclusion company provided the higher engagement company will receive from their employees. (The role of diversity practices and inclusion in promoting trust and employee engagement, 2015) whereby according to Terry (2020), truly engaged employees are often intrinsically motivated.

Compensations & Benefits
CP ALL offers many extrinsic motivations for employees such as job promotion, reasonable salary and benefits, scholarship for employee's children, loans for hospital admission, housing loans, and support program for unforeseen disaster. CP ALL received the response rate of both Employee Engagement Pulse Surveys and Employee Engagement Full Surveys at 98%. (Mix the Similar, Mend the Different, and Make Good and Talented Individuals, Mould to Unite a Force, 2019).

So, as explained by Terry (2020) that engaged employees are often intrinsically motivated, we can assume that employees of CP ALL are motivated with the compensations and benefits provided.

College and work-based learning
Besides C.P. Leadership Institute (CPLI), CP ALL also built a college and university under its brand as well. Students will learn how to operate retail business directly from their experience. CP ALL developed this curriculum into an establishment of Panyapiwat Technological College (PTC) in 2005.

And later on in 2007, Panyapiwat Institute of Management (PIM) was founded to offer education at a higher level, from bachelor degree to doctor degree. Nowadays, Panyapiwat Institute of Management has successfully produced qualified students and the graduating students are offered opportunities to work with the company.

Similar to the impact of CPLI, this program may also make those students feel valued and they will be motivated intrinsically.

Activities for employee's children

CP ALL provides special training about maternal care and childcare for employees with pregnancy covering topics such as relationship management for pregnant mothers, pre and post- maternal care, nutrition knowledge for pregnancy. Moreover, CP ALL also offers a very interesting campaign that is eligible for employees with children with the age range of 0-6 years old, each program divided by the age of the child. CP ALL gives books to its employees free of charge.

The first book is for children with age 0-3 years old to learn how to read a book by having their parents read books for them 10-15 minutes a day; this campaign is to promote employees' quality time for them and their child. It becomes very successful with the employee satisfaction rate of 97%.

This high level of job satisfaction rate can boost intrinsic motivation of the employees as Wolfe (2017) explained that satisfaction can be described as part of motivation too.

In Tab. 1 below it is presented the SWOT analysis for CP ALL's Motivating Programs.

Table 1 - SWOT Analysis of CP ALL's Motivating Programs
(compiled by co-authors)

Strengths	Weaknesses
The CPLI and College program is creating sustainable growth for the company as it prepares future talents. The diversity & inclusions programs has brought CP ALL to win some awards.	High investment cost for the "bot" in 7-Eleven operations. "Bot" can prevent employees from performing at their best. The package of compensations and benefits may be costly. Extrinsic rewards are motivating temporarily.
Opportunities	**Threats**
Improve employer branding. Low employee turnover rate. Productivity improved as the employees' satisfaction rate is high. Attract external talents.	If employees are not getting motivated anymore, the programs will be a waste. The participants of CPLI and College might left CP ALL after their graduation.

In Fig. 1 it is shown the Ishikawa diagram for of CP ALL's Motivation Programs.

Fishbone diagram shows that there are many causes that may lead to demotivation of employees.

Even when CP ALL conducted its motivating programs but during business operation there is an error or issue in one of the variable factors for example, when employees found that their salary is below market range or other company, there is a chance that they will be demotivated immediately.
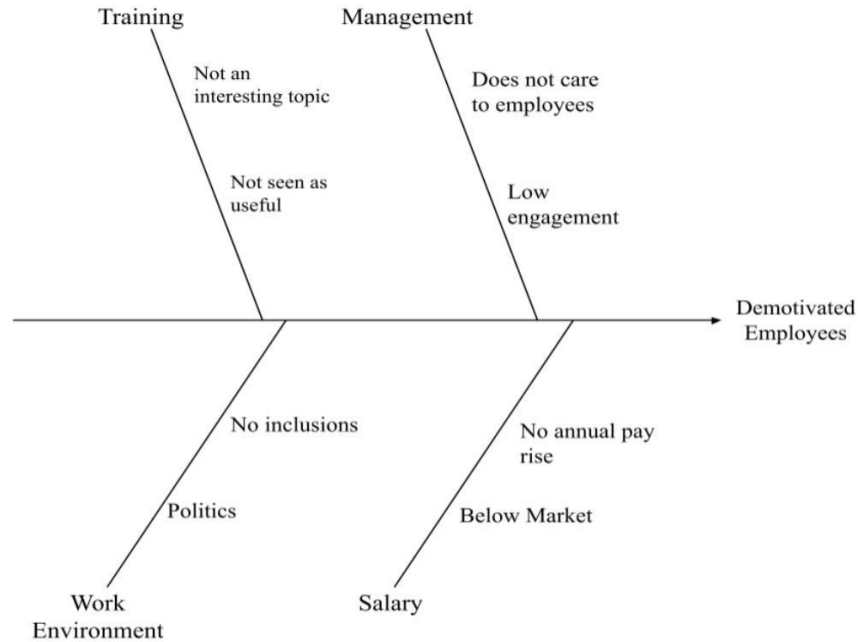
Figure 1 - Ishikawa Modeling of CP ALL's Motivation Programs
(compiled by co-authors)

Food Passion Company Limited

Background of Food Passion

Food Passion Co Ltd. is the operator of Bar-B-Q Plaza, Chana and Joom Zap Hut restaurant (Jitpleecheep, 2017).

Bar-B- Q Plaza was founded in 1987 by Mr. Choopong Choopojchareon, it is a self-cooking barbeque restaurant with 138 branches around Thailand. (Our Story, n.d.).

The human resource practices of Food Passion Co Ltd. have led them to win the "Best Employer Thailand 2017" award, followed by Best of "The Best Employer Award 2018" from Aon Hewitt, and "Best Companies to Work For In Asia 2019" from HR Asia Awards (Food Passion-organization which fulfill employees with joy, 2019).

In an interview with the CEO of Food Passion Co Ltd., Mrs. Chataya Suphannahong, She mentioned that Bar-B-Q Plaza's turnover rate is only 60% which is lower than average other restaurants in the market whereby the turnover rate is 80%. Mrs. Chataya revealed the secret of the company's success in retaining employees are Trust and Engagement.

Motivating programs of Food Passion

Unlike CP ALL Co. Ltd. who promotes both external and internal motivating programs, Food Passion has a concept of being a big family; therefore they are more focused on motivating employees intrinsically.

It is interesting and great because intrinsic rewards can increase the quality of working performance better than extrinsic rewards (Cherry, 2019).

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The Waiter's Mom

In 2015, Bar-B-Q Plaza released a program called "The Waiter's Mom". It was all about rewarding the hardworking employees who are unable to have a day off on public holiday specifically during mother's day as they have to work in the restaurant outlet. They created a real-time video where employees were asked to do a survey including questions like "when is the last time you have dinner with family?"

The results of surveys indicate that the majority of employees wanted to spend time with their family. A month before mother's day, these employees were rewarded with the chance to celebrate mother's day by dining at Bar-B-Q plaza with their parents (Polden, 2015).

During the dining, the higher management teams were the one who served foods and beverages to the employees. This will make employees feel valued. In addition to that, Bar-B-Q Plaza later gave their 3,800 employees two extra day offs for this special occasion so employees can spend maximum 3 days together with their parents (10 things to know about the waiters mom advertisement by Bar B Q Plaza, the winner of The Best Digital and Film Adman 2015 award, 2015). Giving extra off day with no reduction in pay or benefits will lead to an improvement in productivity and employee satisfaction (Jolly & Inman, 2018). Thus, this kind of program will improve employees' motivation.

Happy 4 Plus 4

Happy 4 Plus 4 is an employee benefits concept of Food Passion which includes Eat Well where the company provides two meals per day for operation staff at the restaurants and employees at corporate offices will have free breakfast. Secondly, Rest Well where the company offers a relaxation room with Wi-Fi installed for branch staff to rest and blind massage therapists will be sent to provide a good massage for the staff too.

There are also Stay Healthy, Share Knowledge where the company gives educational chances for employees such as scholarship, Good Family, Earn Saving where the company came up with the plan to support employees to manage their financial plan to cope with their debt obligation and last concept is Give to Society (Food Passion- organization which fulfill employees with joy, 2019). When company policy guides the direction of the working environment to be supportive to employees, employees will become motivated and engaged accordingly (Chiemeke et al., 2018).

Test Running "Sook Jai Day" and "P Jai Dee"

Normally, a day before the grand opening is used for practicing the store operation process after the actual store audit as part of training. They name this day as "Sook Jai Day" or a day of happiness. On this day, management will visit the branch and give a speech to encourage all the employees, let them try the meal and also practice servicing so that they understand the customer's perspective and they will indirectly get on-the-spot training. According to Sharma & Shirsath (2014) training is a motivational factor which enhances the knowledge of the employee towards the job. It will boost the motivation of an employee.

Moreover, each of the branches will have a "P Jai Dee" or kind hearted sister. This position will be in charge of personal consultants and act as a listener, as the company is concerned that their employees might have other problems they might want to discuss apart from work such as personal issues.

Whereby Tracy (n.d.) explained that an effective listening is essential to motivating employees. So, this program can get employees motivated intrinsically.

Uniform

In the operation of Bar-B-Q Plaza restaurants, the uniform policy has been changed whereby it's not a must for employees to wear leather shoes, and sneakers are allowed. This is changed because the HR has found that the average walk during operation hours is around 10 km per day, making the employees feel uncomfortable with leather shoes.

Additionally, the company has also changed the pattern of the uniform to be more modern and practical for staff. CEO of Passion Food, Mrs. Chataya argued that even these changes is only a minor change, but it has raised an impact to employees as they gain a feeling of being cared by company, making them become motivated.

Uniform is one of the factors that has impact on employee performance, way of behavior and job satisfaction (Karch & Peters, 2017). And it is explained that uniforms can affect the working process as well as it increases employee motivation towards common objectives because they feel like they truly are a part of the business (Motivate Your Store Employees With Custom Uniforms, 2019).

People Connect

People Connect is one of the Food Passion website's sections where posts about personal impression towards their job will be written down and shared to both internal and external personnel. The interesting point is most of the interviewees are actual employees of Bar-B-Q plaza in various positions, not only the higher management team but also lower rank, so employees in the lower position feel more connected and engaged to the company as their thought and point of view were being listened to by the company.

This pleasure feeling is considered as a kind of Job satisfaction as well (Chiemeke et al., 2018). In which it may lead to motivation.

In Tab. 2 below it is presented the SWOT analysis for the Food Passion's Motivating Programs.

Table 2 -SWOT Analysis of Food Passion's Motivating Programs
(compiled by co-authors)

Strengths	Weaknesses
The Waiter's Mom program is very unique and will be memorable for the employee. The people connect program will let employees engage with the company. The Happy 4 Plus 4 is very personalized and unique. Has been effective in reducing the turnover rate.	The Happy 4 Plus 4 however can be costly if the number of employees is many. Some staff might prefer pay rise instead of these intangible benefits.
Opportunities	**Threats**
Create positive employer image. Lower down employee turnover rate even more. Productivity improved due to job satisfaction. These programs can act as marketing tool for attracting talents.	The "P Jai Dee" program might lead to favoritism that makes one employee does not get along with other but just one. If employees are not getting motivated anymore, the programs will be a waste of energy and money.

Fig. 2 presents the Ishikawa Modeling of Food Passion's Motivating Programs.
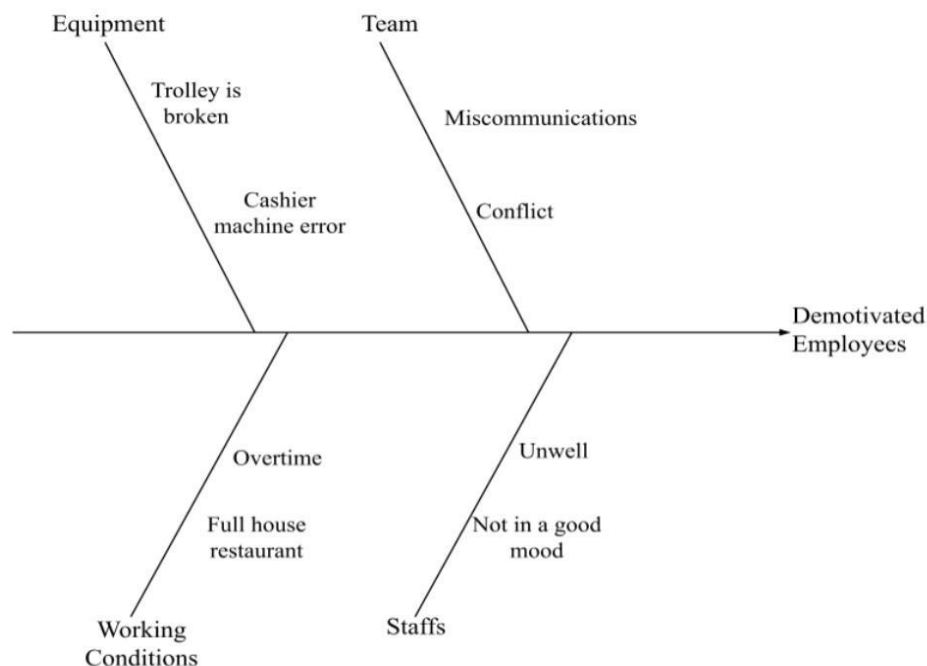

Figure 2 - Ishikawa Modeling of Food Passion's Motivating Programs
(compiled by co-authors)

Above fishbone diagram shows that there are many causes that may lead to demotivation of employees.

Even when Food Passion conducted its motivating programs but during business operation there is an error or issue in one of the variable factors for example, employees are having conflict that causes them to be in an uncomfortable situation, there is a chance that they will be demotivated during the day.

Recommendations

Based on the above findings, motivating programs in companies are not just benefiting the employees' side.

We found that both of the companies that we have analyzed, CP ALL Co. Ltd and Food Passion Co. Ltd, also benefited in many ways by the implementation of their motivating programs. CP ALL's motivating programs have been successfully increasing the employees' satisfaction (Elevating the Occupational Safety and Creating a Friendly Work Environment, 2020), and they have received awards as an outstanding organization which support disabilities person (Respecting Human Rights, committed to International Principles, Creating Peace, 2019) as they create an environment where employees feel valued and taken care by the company.

The awards they received can benefit them in a way that it can build up the employer branding as it can increase visibility, reach, credibility and attract talents (Why Awards Are Good For Your Employer Brand, n.d.), while the increased employees' satisfaction will help

them in reducing turnover rate and help maintain a motivated workforce (Employee Retention & Satisfaction, 2020).

Similarly, Passion Food also successfully keeping their turnover rate at 60% which is considered low when compared to average restaurant businesses in the market according to Mrs. Chataya, CEO of Food Passion. Therefore, we would like to provide recommendations for companies who have not been practicing motivating programs.

First of all, the management team in companies should understand that motivation can lead to an increased productivity (Satyendra, 2013) so that they will be eager to get employees motivated.

Secondly, they can conduct surveys to evaluate employee satisfaction or motivation level to understand better on what is expected by each and every employee as different people have different preferences.

From this point, they can develop such motivation programs accordingly either it will be focusing on intangible rewards and benefits or its extrinsic rewards through bonuses, pay rise, etc…

However, continuous assessment of employees' motivation level and satisfaction should be done to see whether the motivating programs implemented are working well or it is actually not motivating them at all, especially extrinsic motivation. It is important to place a limit as extrinsic rewards work only for a short period of time and employees may find it not pleasing anymore after they get what they wanted earlier (Schickey, 2018).

Another reason why companies should implement these programs is that it has proven through above analysis of CP ALL and Food Passion that it can create mutually beneficial situations for both employers and employees in other words win-win situation whereby employees are happy with what they get, and in return employers will get maximum output due to the increase in productivity.

Quain (2019) also explains that motivated employees are likely to perform at a higher standard than employees who feel unmotivated to do their best at work.

Conclusion

To sum up our findings, analysis, and discussion above, the implementation of motivating programs in business nowadays should be taken into consideration. Employers as providers should look at it as a long-term investment whereby it affects their employees' performance and it eventually will impact their business results as well at the end of the day. It is actually also creating huge opportunities for the employers to become a company where everyone wants to work in the future so that they will have a pool of talents and will not cost much for their recruitment and selection processes.

However, as mentioned in the analysis part above, sometimes, there are gaps between employees' expectations and employer's, especially across generations whereby millennials prefer extrinsic rewards more than Gen X and Baby-boomers do (Exposing Some Truths About Motivating Millennials in the Workforce, 2021).

This can happen due to lack of understanding from the employers side that is why employee satisfaction / engagement surveys play an important role in a business. Employers should do maximum efforts to make sure their employees are motivated like how CP ALL and Food Passion have been doing.

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ABILITY OF ORGANIZATIONAL COMMITMENT IN MEDIATION OF EMOTIONAL INTELLIGENCE AND JOB SATISFACTION ON THE PERFORMANCE OF BOARDING SCHOOL TEACHERS

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The purpose of this study was to analyze the ability of organizational commitment to mediate the effect of Emotional Intelligence and Job Satisfaction on performance. The data analysis technique used a structural equation modeling (SEM) model with a partial least square approach. This study concludes that Emotional Intelligence, satisfaction, has a positive and significant effect on organizational commitment, but commitment has no effect on performance. Then the influence of emotional intelligence on performance is positive and significant, this indicates that emotional intelligence has an effect on performance, the better a person's emotional intelligence means the better the performance, then satisfaction has a positive and significant effect on performance.

Keywords: organizational commitment ability; emotional intelligence; job satisfaction; structural equation modeling

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ABILITY OF ORGANIZATIONAL COMMITMENT

Introduction

Constitution of Indonesia, chapter 72 states that teachers as professionals have special duties and obligations, these tasks are to educate, teach and train students to become virtuous people and have knowledge and skills. The success of education is very dependent on the performance of the teacher, so it needs serious attention and handling.

Performance as a result of one's work can be in the form of quantity and quality of work (Mangkunegara, 2009; Torang, 2012; Mathis, 2006; Sedarmayanti, 2009; Robbins & Judge, 2011).

According to Mathis & Jackson (2011) performance can be measured from: a) quantity of work, b) quality of work, c) punctuality in work, d) attendance, and e) being able to work together. In general, Islamic boarding school teachers have more satisfaction because they can serve the Islamic boarding school (Kyai), job satisfaction is an emotional reaction in the form of an attitude in the form of feelings of satisfaction or dissatisfaction in the work situation, cooperation, wages and other things related to physical and psychological factors that are felt (Kaswan, 2012; Sutrisno, 2009; Handoko, 2008).

According to Schnake (1983) satisfaction can be measured through 3 indicators, namely: 1) social satisfaction, extrinsic satisfaction and 3) intrinsic satisfaction. Obedience in religion has implications for a person's emotional intelligence, teachers in Islamic boarding schools on average have high religious observance. A person's ability to understand, and recognize oneself and others are emotional intelligence (Agustian, 2009; Goleman, 2015; Boyatzis et al., 2000).

Emotional intelligence is divided into 4, namely: 1) self-awareness, 2) self-management, 3) social awareness, and 4) the ability to cooperate (Boyatzis et al., 2000).

The commitment of teachers to the institution is based on devotion to the boarding school. Organizational commitment is a measure of the strength of identification and the state of a person siding with the organization so that it intends to maintain its membership (Allen &Meyer, 1997; Robbins & Coulter, 2010; Meyer et al., 2002).

Allen &Meyer (1997) divide commitment into three, namely: a) attitude commitment, b) sustainability commitment and c) normative commitment. The commitment of the boarding school teachers is quite high; on the other hand, there are doubts about their performance because it needs an in-depth study. The factors that affect performance are motivation, workload, organizational commitment, job satisfaction, competence, compensation, emotional intelligence and others, on basis of this thought the researchers tried to research the ability of organizational commitment to mediate the effect of emotional intelligence and job satisfaction on Boarding School Teacher's Performance.

The problems in this study are:

1) how are the effect of emotional intelligence and job satisfaction on organizational commitment,

2) how is the effect of organizational commitment on teacher performance,

3) how are the effect of emotional intelligence and job satisfaction on teacher performance,

4) how are the effect of emotional intelligence and satisfaction work on teacher performance, with organizational commitment as an intervening variable.

The purpose of this study was to analyze the ability of organizational commitment to mediate the effect of emotional intelligence and job satisfaction on performance.

Research Methods

Determination of the research sample with purposive sampling technique, this technique is used on certain considerations of the researcher, and this refers to the opinion of Sugiyono (2010). The data analysis technique uses PLS-based SEM because this technique is an alternative to SEM analysis, with the data not having a multivariate normal distribution. SEM analysis with PLS latent variables can be estimated according to the associated manifest variables, latent variables are treated to replace the manifest variables. Monecke & Leisch (2012) stated that SEM with PLS consists of three components, namely:
-   Structural model (inner model),
-   Measurement model (outer model),
-   Weighting Scheme (weight relations).

SEM with PLS has a special feature that is not owned by covariance-based SEM is a weighting scheme (weight relation). The weight relation score looks at the relationship between indicators and their latent variables (Abdillah & Jogiyanto, 2015).

Results and Discussion

Research result

Outer test ensures that the measurements used are valid (valid and reliable). Valid results are obtained by testing 2 times eliminating the loading factor value below 0.50 using the SmartPLS 2.0 program. The test results are as illustrated on Fig.1.
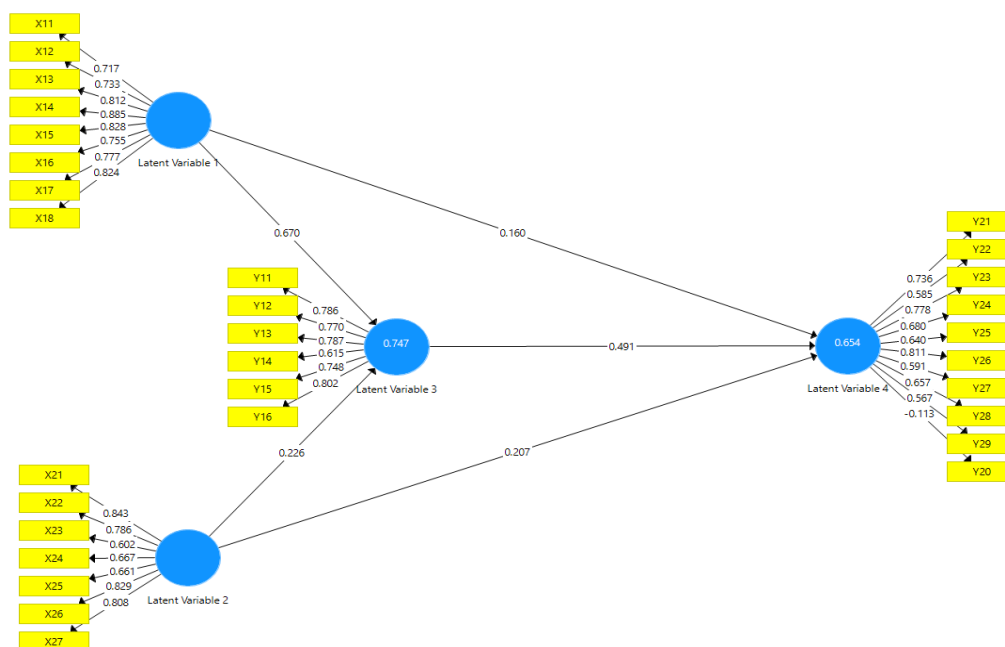

Figure 1 - Preliminary results of the PLS Algorithm
(Source: primary data, processed 2022)

ABILITY OF ORGANIZATIONAL COMMITMENT

Table 1 - Value of Average Variance Extracted (AVE) First Test
(Source: data processed in 2022)

Construct	AVE	Status
Emotional Intelligence	0.629	Valid
Satisfaction	0.559	Valid
Commitment	0.568	Valid
Performance	0.414	Invalid

If the initial results show invalid (below 0.50), the next step is to eliminate the indicator below the specified limit value until the results are valid. The minimum remaining indicators for each variable are 3 indicators; the following is a picture of the results of the first test in this study.
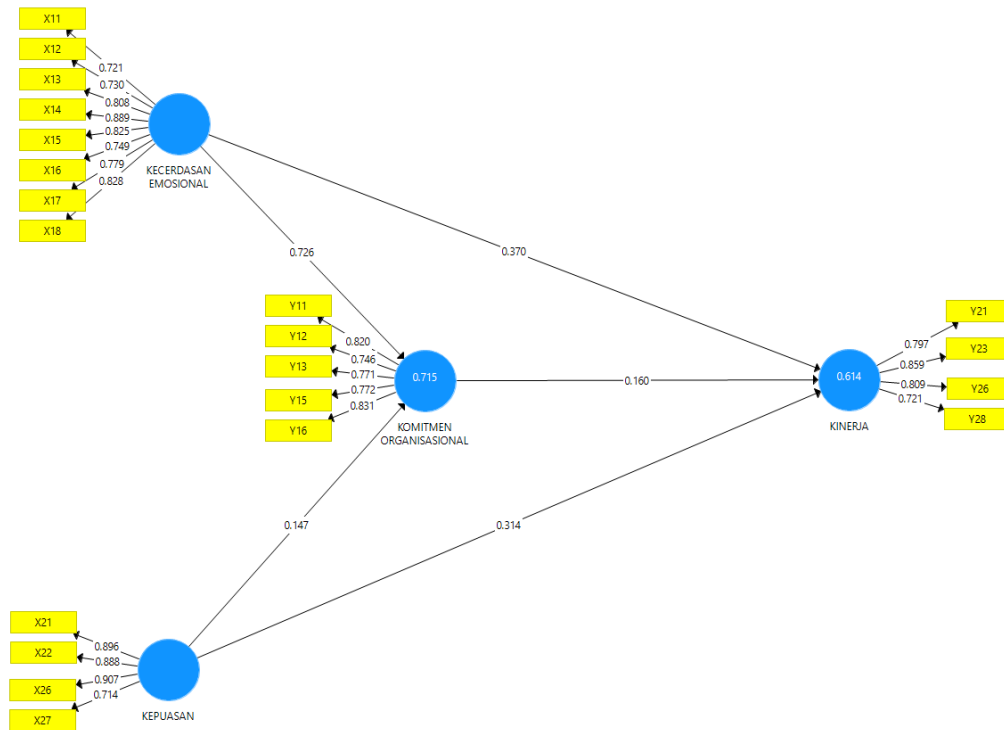

Figure 2 - Results of the First PLS Algorithm. Analysis
(Source: Primary data, processed 2022)

The indicator is declared valid if the construct's loading factor is> 0.50. The results of the loading factor for each construct are as follows (Tab. 2).

Table 2 - Outer Loadings
(Source: data processed in 2022)

Construct	Emotional Intelligence	Satisfaction	Organizational Commitment	Performance	Status
X11 <- Emotional Intelligence	0.721				Valid
X12 <- Emotional Intelligence	0.730				Valid
X13 <- Emotional Intelligence	0.808				Valid
X14 <- Emotional Intelligence	0.889				Valid
X15 <- Emotional Intelligence	0.825				Valid
X16 <- Emotional Intelligence	0.749				Valid
X17 <- Emotional Intelligence	0.779				Valid
X18 <- Emotional Intelligence	0.828				Valid
X21 <- Satisfaction		0.896			Valid
X22 <- Satisfaction		0.888			Valid
X26 <- Satisfaction		0.907			Valid
X27 <- Satisfaction		0.714			Valid
Y11 <- Organizational Commitment			0.820		Valid
Y12 <- Organizational Commitment			0.746		Valid
Y13 <- Organizational Commitment			0.771		Valid
Y15 <- Organizational Commitment			0.772		Valid
Y16 <- Organizational Commitment			0.831		Valid
Y21 <- Performance				0.797	Valid
Y23 <- Performance				0.859	Valid
Y26 <- Performance				0.809	Valid
Y28 <- Performance				0.721	Valid

The loading factor can be seen from the convergent validity value or the Average Variance Extracted (AVE) value. The AVE value of each construct/variable in this study is as follows (Tab. 3).

Table 3 - Average Variance Extracted (AVE) Value of the second test
(Source: Data processed from SmartPLS 2.0 output)

Construct	AVE	Status
Emotional Intelligence	0.629	Valid
Satisfaction	0.731	Valid
Commitment	0.637	Valid
Performance	0.622	Valid

Based on Tab. 3 above, the AVE value is above 0.50 meaning that there is no problem with convergent validity, and then the next step is to test discriminant validity. The results of the Discriminant validity test can be seen in the cross-loading Tab. 4.

Table 4 - Cross loadings
(Source: Data processed from SmartPLS 2.0 output)

Construct	Emotional Intelligence	Satisfaction	Organizational Commitment	Performance	Status
X11	0.721	0.640	0.626	0.617	Valid
X12	0.730	0.535	0.501	0.659	Valid
X13	0,808	0,532	0,619	0,729	Valid
X14	0,889	0,743	0,830	0,699	Valid
X15	0,825	0,605	0,523	0,648	Valid
X16	0,749	0,558	0,429	0,597	Valid
X17	0,779	0,645	0,534	0,710	Valid
X18	0,828	0,665	0,616	0,664	Valid
X21	0,793	0,896	0,709	0,756	Valid
X22	0,583	0,888	0,619	0,577	Valid
X26	0,658	0,907	0,677	0,580	Valid
X27	0,619	0,714	0,383	0,485	Valid
Y11	0,682	0,515	0,553	0,820	Valid
Y12	0,553	0,352	0,400	0,746	Valid
Y13	0,729	0,593	0,620	0,771	Valid
Y15	0,662	0,678	0,513	0,772	Valid
Y16	0,664	0,627	0,615	0,831	Valid
Y21	0,549	0,599	0,797	0,455	Valid
Y23	0,622	0,534	0,859	0,586	Valid
Y26	0,636	0,652	0,809	0,626	Valid
Y28	0,578	0,490	0,721	0,539	Valid

Tab. 4 shows the loading value of each item on the construct is greater than its cross-loading value, this shows that all indicators of the four variables are declared valid because the convergent validity and discriminant validity loading values are above 0.50.

As a certainty that there are no problems related to measurement, the last step in the outer model is reliability testing through composite reliability. The results of composite

reliability meet if it has a value above 0.70. The following is the composite reliability value of the results on the SmartPLS 2.0 output:

Table 5 - Composite Reliability Value
(Source: Data processed in 2022)

Construct	C	composite Reliability
Emotional Intelligence	0.931	Reliable
Satisfaction	0.915	Reliable
Commitment	0.891	Reliable
Performance	0.875	Reliable

Tab. 5 illustrates the composite reliability value of all constructs above 0.70, this indicates that all variables are declared reliable. The reliability test can use the Cronbach's Alpha benchmark, the output results of SmartPLS version 2 are as follows:

Table 6 - Cronbach's Alpha
(Source: Data processed by SmartPLS 2.0)

Construct	Cronbach's Alpha
Emotional Intelligence	0.915
Satisfaction	0.875
Commitment	0.848
Performance	0.808

Because in Tab. 6 the value of Cronbach's Alpha all constructs > 0.60 (minimum value), indicates that all variables are declared reliable, so the analysis can be continued. The smallest Cronbach's Alpha value is 0.808 on the performance variable.

Inner Model

After fulfilling the outer model criteria, then the structural model testing (inner model) is carried out. The R-square value which is often called the Coefficient of Determination R^2 from the structural model is illustrated in Tab. 7.

Table 7 - R-Square
(Source: Data processed from SmartPLS 2.0 output)

Construct	R-Square
Commitment	71.5%
Performance	61.4%

The description of Tab. 7 regarding the coefficient of determination R^2 or R-square results of this study, namely:

Organizational commitment is influenced by emotional intelligence and satisfaction of 71.5% and the remaining 28.5% is influenced by other factors not included in the model. This means that organizational commitment is influenced by emotional intelligence and satisfaction of 71.5% while 28.5% is influenced by other variables not examined in this study.

Performance is influenced by factors of emotional intelligence, satisfaction, and organizational commitment by 61.4% and the remaining 38.6% is influenced by factors outside the model. This means that performance is influenced by emotional intelligence, satisfaction, and organizational commitment by 61.4% while 38.6% is influenced by variables outside the variables of this study.

Hypothesis Test

Table 8 - PathCoefficients (Mean,STDEV,T-Values)
(Source: Data processed from SmartPLS 2.0 output)

	Original Sample(O)	Sample Mean(M)	Standard Deviation (STDEV)	T-Statistics_ (O/ S T E RR)
Emotional Intelligence → Organizational Commitment	0.726	0.723	0.076	9,580
Satisfaction → Organizational Commitment	0.147	0.152	0.086	1,703
Organizational Commitment → Performance	0.160	0.164	0.116	1.374
Emotional Intelligence → Performance	0.370	0.368	0.118	3,147
Satisfaction → Performance	0.314	0.315	0.097	3,235

Based on the Path Coefficients in Tab. 8 above, the test results are as follows: t-statistics

1. Emotional intelligence variable has a significant influence on organizational commitment because t-count > t-table (9.580 > 1.966)

2. The effect of the satisfaction variable on organizational commitment is not significant because t-count < t-table (1.703 <1.966)

3. Organizational commitment has no significant effect on performance because t-count < t-table (1.374 <1.966)

4. Variable emotional intelligence with significant effect on performance t-count > t-table (3.147 > 1.966)

5. The satisfaction variable has a significant effect on performance because the value of t-count > t-table (3.235 > 1.966)

Parameter Coefficient

1. The effect of emotional intelligence on organizational commitment is 0.726 (t-statistic = 9.580), meaning that there is a positive and significant influence, so the higher emotional intelligence, the higher the organizational commitment.

2. The effect of satisfaction on organizational commitment is 0.147 (t-statistic = 1.703), meaning that the effect of satisfaction is not significant, so satisfaction does not contribute to organizational commitment.

3. The effect of organizational commitment on performance is 0.160 (t-statistic = 1.374), meaning that organizational commitment has no significant effect. This indicates organizational commitment does not contribute to performance.

4. The influence of emotional intelligence on performance is 0.370 (t-statistic = 3.147), this indicates that there is a positive and significant influence so that the level of emotional intelligence determines the level of performance.

5. The effect of satisfaction on performance is 0.314 (t-statistic = 3.235), meaning that there is a positive and significant effect, so that satisfaction can be stated to contribute to performance. The higher the satisfaction, the higher the performance.

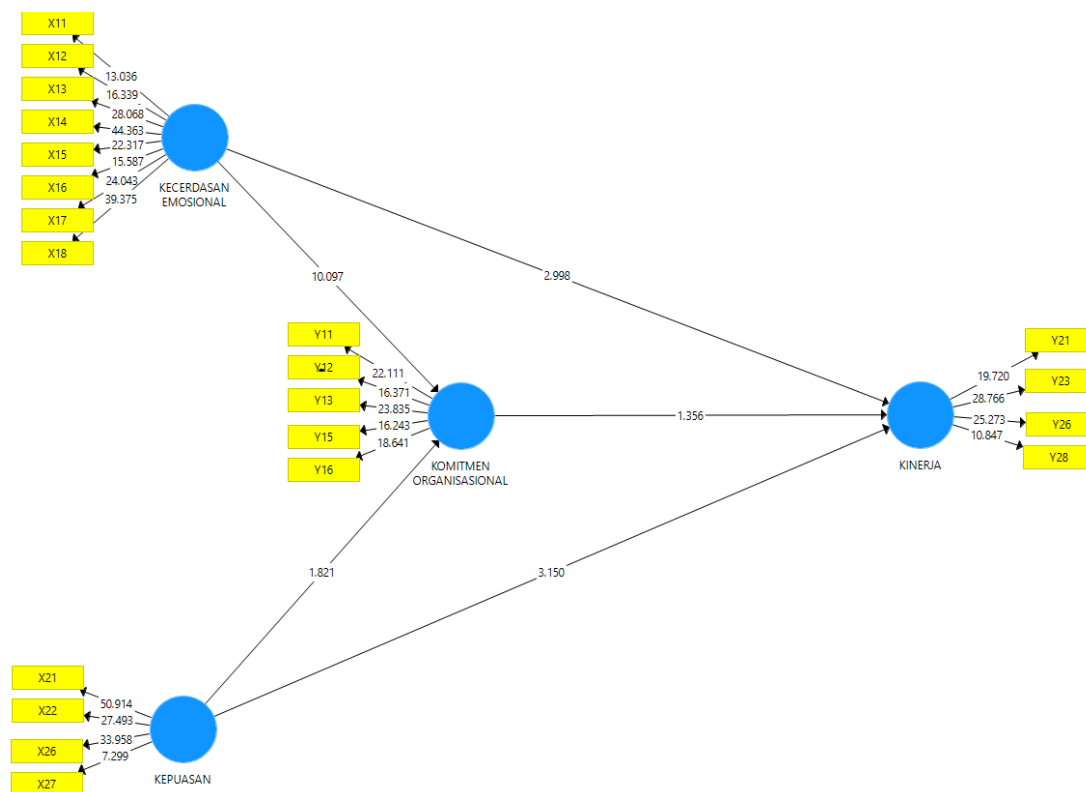Below is an image of the t-statistical values based on the output with SmartPLS version 2.0.

Figure 3 - Bootstrapping Output
(Source: compiled by co-authors)

Discussion

Research on the effect of emotional intelligence and satisfaction on performance with organizational commitment as an intervening variable for school teachers who are under the auspices of Islamic boarding schools is partially proven and partially unproven, following the discussion of the research (Tab. 9).

Table 9 – Hypotheses test results
(Source: compiled by the co-authors)

Hypothesis	t-statistic	t-table	test results
H1: Emotional Intelligence has a positive and significant effect on organizational commitment	9,580	1.966	Accepted
H2: Satisfaction has a positive and significant effect on organizational commitment	1,703	1.966	Rejected
H3: Organizational commitment has a positive and significant effect on performance	1,374	1.966	Rejected
H4: Emotional Intelligence has a positive and significant effect on performance	3,147	1.966	Accepted
H5: Satisfaction has a positive and significant effect on performance	3,235	1.966	Accepted

Emotional Intelligence has a positive and significant effect on organizational commitment for teachers in Islamic boarding schools. This is because the t-statistic value is greater than the table value. This study supports the results of research conducted by Ngatimun et al (2019), Rachmelya et al (2017), Edward & Purba (2020), where the results of the three studies concluded that emotional intelligence affects organizational commitment because the value < p, 0.05. Based on this research, shows that when the emotional intelligence of a teacher increases, the performance will also increase.

The effect of satisfaction on organizational commitment for teachers in Islamic boarding schools is not proven; this is because the results of the t-statistic value are smaller than the table value. This study is different from the results of previous studies conducted by Musringudinet al (2016), Hakim & Hidayat (2018), Rosita et al (2016), Widayanti et al (2016), Divine et al (2017). This is possible because the teacher's organizational commitment will still be realized even in terms of lack of satisfaction, because of the principle of devotion to Islamic boarding schools.

Research on the effect of commitment to performance is not proven, because the effect is not significant. The research supports the results of Ngatimun et al (2021), but differs from the results of research conducted by Tumigolung et al (2019), Winarya et al (2018), Murgianto et al (2016). This illustrates that organizational commitment has a positive effect on performance, this shows that the better a person is committed to the organization, the better their performance will be.

The results of the research on the influence of emotional intelligence on performance are positive and significant; this indicates that emotional intelligence affects performance, the better a person's emotional intelligence will bring a person's performance better. This

research is in line with the results of research conducted by Setyaningrum et al. (2016), Mulyasari et al. (2018).

Research on satisfaction positively and significantly affects proven performance. This indicates that the satisfaction of Islamic boarding school teachers affects teacher performance. This research is in line with research conducted by Qustolani (2017), Sutrisno et al. (2021), Winarya et al. (2018), Murgianto et al. (2016), Rosmaini et al. (2019).

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THE EFFECT OF PROMOTION MIX ON CUSTOMERS' INTEREST (THE CASE OF HOUSE OWNERSHIP CREDIT IN ISLAMIC BANKING MUAMALAT, INDONESIA)

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This study aims to determine the effect of promotion mix on customers' interest in applying house ownership credit Islamic banking Muamalat. The research method used is quantitative with multiple linear regression method through the application of the Statistical Package for

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Social Science (SPSS). The population in this study is IB Muamalat KPR customers. The research sample was 50 respondents using saturated sampling technique. The results showed that advertising and personal selling had a positive and significant effect on customer interest. While the sales promotion and publicity variables have no effect on customer interest.

Introduction

A sharia bank is a bank that in its activities, both in raising funds and in distributing funds, provides and imposes rewards on the basis of sharia principles (Choiriyah, 2019). The first Islamic bank in Indonesia is Bank Muamalat Indonesia, was established on November 1, 1991 and officially operated on May 1, 1992 (Bank Muamalat, 2022).

Along with the development, Bank Muamalat continues to create innovative banking products that are attractive, competitive and provide ease of transaction. Innovationproduct has an important role for Bank Muamalat in entering and controlling the ever-changing market. Bank Muamalat also continues to make improvements for its company development efforts so that it can serve customers better. One of the performances carried out is a financing program in the form of Home Ownership Loans (KPR).

Mortgage products are products issued by banks in order to help people meet their housing needs. Having a house as a place to live is the desire of almost everyone, especially for those who are married and have families. However, sometimes they are constrained by large enough installments for their mortgage obligations. No wonder they take advantage of a fairly easy way to immediately have a dream home, one of which is through the related bank mortgage.

Bank Muamalat is certainly aware of the public enthusiasm who wants to immediately have a dream home without having to be afraid of exorbitant interest rates or other costs when choosing a mortgage for financing. Bank Muamalat offers a solution for home ownership problem, with various kinds of benefits that can be obtained by its customers, especially applying sharia rules in the process.

The high public interest in the ownership of this residence, makes conventional banks and Islamic banks like competing to offer mortgages to finance the house. In the face of intense competition, banks must have an effective strategy in order to maximize the products marketed to customers and as much as possible to attract customers' interest. This of course requires a reliable strategy to be able to compete with other banks and one of the strategies that can be implemented is the promotionstrategy/promotion mix.

Promotion is a form of communication carried out by companies in offering products, services, or ideas to consumers through providing information and persuading consumers to be motivated to buy (Mihai, 2013; Mbogo, 2013; Khairani & Lubis, 2018; Pasaribu et al., 2021; Rombe, 2021; Familmalek et al., 2015). There are four kinds of promotion mix that can be used by each bank in promoting its products and services. The first is advertising, promotion in the form of pictures or words contained in banners, brochures.

Secondly, sales promotion that can increase sales by providing attractive incentives.

Thirdly, personal selling through personal employees in serving and influencing customers. Fourthly, publicity that can improve the bank's image in front of prospective customers (Religia et al., 2021; Mogaji et al., 2021; Da Silva et al., 2021; Nahar et al., 2021).

However, the problems that often occur during this time show the promotion mixhas not been fully maximized through real applications, so there are still many people who do not know or are not interested in the products offered. There should be concrete steps taken by management or personnel to be able to attract customers' interest by using the promotion mix.On the basis of these objectives, researchers are interested in examining the effect of the promotion mix on customers' interest in applying KPR IB Muamalat.

Methods

The research method used in this research is quantitative. The population in this study were mortgage financing customers at Bank Muamalat KC Surabaya – Mas Mansyur with a total of 50 people. The sampling technique in this study uses saturated sampling, which is a sample collection technique in which all members of the population are used as samples (Babin et al., 2021; Christofi et al., 2021; Easterby-Smith et al., 2021; Bell, 2022).

Data was collected using a questionnaire and supported by interviews with related parties to complete the data and strengthen the analysis of the computational data collected. The collected data was analyzed by using the Statistical Package for Social Science (SPSS).

Result and Analysis

Validity Test
Test was conducted to determine the validity of the questionnaire. The validity test can be seen from the value rcount greater than rtable (at level 10%), meaning that the questionnaire item is valid. Based on the results of the validity test, the following results were obtained (Tab. 1).

Table 1 - Validity Test Results
(Source: obtained by co-authors)

Items Questions	Adver-tising	Sales Promotion	Personal Selling	Publicity	Customer Interests
	Value of r Calculated				
1	0,839	0,844	0,743	0,730	0,875
2	0,819	0,923	0,722	0,825	0,742
3	0,758	0,816	0,700	0,691	0,795
4	0,626	0,552	0,591	0,759	0,851
5					0,823
6					0,852

Tab. 1 above shows the results of validity test for each instrument, namely advertising (X1), sales promotion (X2), personal selling (X3), publicity (X4) and customer interest (Y) known to have a value rcount is greater than the value of rtable (0.235). So it can be concluded that each instrument is declared valid.

Reliability Test

The reliability test in this study used the Cronbach Alpha formula.
If the Cronbach Alpha value is above 0.6 then the questionnaire is reliable.

Table 2 - Reliability Test Results
(Source: obtained by co-authors)

Variable	Alpha
Advertising	0.744
Sales Promotion	0.807
Personal Selling	0.734
Publicity	Customer
Interest	0.900

Tab. 2 shows the Cronbach Alpha values respectively as follows: advertising 0.744, sales promotion 0.807, personal selling 0.631, publicity 0.734, and customer interest 0.900. So it can be concluded that each variable is declared reliable/accepted.

Normality Test

Test aims to know the normality of data distribution. If the significance value is above 0.05, it means that the data is normally distributed (Purwanto et al., 2021).

Table 3 - Normality Test Results
(Source: obtained by co-authors)

N		Unstandardized Residual
		50
Normal Parametersa	Mean	.00
	Std. Deviation	1.94
Most Extreme Differences	Absolute	.178
	Positive	.080
	Negative	-178
Kolmogorov-Smirnov Z		1.261
Asymp. Sig. (2-tailed)		.083

Tab. 3 above shows the normality test results obtained a significance value of 0.083, so these results already show a normal distribution.

Multicollinearity Test

Test can be seen from the tolerance value and Variance Inflation Factor (VIF).
The multicollinearity test was measured based on the tolerance value above 0.10 and the VIF value below 10.

Table 4 -Multicollinearity Test Results
(Source: obtained by co-authors)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Toleran-ce	VIF
1	(Constant)	1.650	3.907		.422	.675		
	Advertising	1.015	.213	.564	.762	.000	1.311	-.125
	Sales Promotion	.209	-.094	-.599	.552	.434	2.304	.246
	Personal Selling	.560	4.754	.277	2.275	.028 .724	1.381	-.032
	Publicity	.254	-.020	-127	.900	.431	and	2,322

Tab. 4 above shows the tolerance and VIF values respectively as follows: advertising 0.762 and 1.311, sales promotion 0.4342.304, personal selling 0.724 and 1.381, publicity 0.431 and 2.322. So it can be concluded that there is no symptom of multicollinearity between these variables.

Heteroscedasticity Test

Test is used to know the classical assumption existence of heteroscedasticity. If the significant value is above alpha = 5%, then there is no heteroscedasticity problem (Cameron & Bagchi, 2021; Zhao et al., 2021; Sun & Wang, 2022).

Table 5 -Heteroscedasticity Test Results
(Source: obtained by co-authors)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.011	.064		1.900	2.638
	Advertising	-.253	.144	-.285	-1.754	.086
	Sales Promotion	-.073	.141	-.111 -.516	.608	Personal
	Selling	-.029	.166	-.029	- .176	.861
	Publicity	.127 .171	Table	.464	.160 .739	5

Tab. 5 above shows significant values in a row as follows: advertising 0.086, sales promotion 0.608, personal selling 0.861, publicity 0.464. So it can be concluded that there are no symptoms of heteroscedasticity.

Hypothesis Test

The tested hypothesis can be seen by comparing the value of tcount with ttable. If tcount is greater than ttable (0.025; 45 = 2.021) with a significance value below 0.05, then H0 is rejected (H1 is accepted).

Table 6 -Hypothesis Test Results
(Source: obtained by co-authors)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.650	3.907		.422	.675
Advertising (X1)	1.015	.213	.564	4.754	.000
Sales Promotion (X2)	-.125	.209	-.094	-.599	.552
Personal Selling (X3)	.560	.246	.277	2.275	.028
Publicity (X4)	-.0,32	.254	-.020	-127	.900

Tab/ 6 above shows the tcount value and the observed significance value with the following explanation:

Advertising (X1) has an effect on customer interest (Y) with a t-count of 4.754 > 2.021 and a significance value of 0.000 <0.05. This means that H1 is accepted. Advertising activities (advertising) conducted by Bank Muamalat Mas – Mansyur aim to provide information and influence customer interest in buying the products offered. Advertising activities carried out by Bank Muamalat through several media deemed suitable to attract customers' attention, for example with brochures, banners, radio, and television. From this advertising activity, the public learned about the existence of the iB Muamalat KPR at Bank Muamalat KC Surabaya – Mas Mansyur. The results of this study strengthen the research of Nazli & Arafah (2020) and Hodijah (2019), which stated that advertising had an effect on interest.

Sales promotion (X2) has no effect on customer interest (Y) with a t-count of -0.599< 2.021 and a significance value of 0.522 > 0.05. This means that H2 is rejected. Sales promotion activities carried out by Bank Muamalat Mas Mansyur are given to agencies and employees. However, the results of this study contradicted those of stated that personal selling had no significant effect on consumer buying interest (Bigdellou et al., 2022).

Publicity (X4) has no effect on customer interest (Y) with a t-count of -0.127 < 2.021 and a significance value of 0.014 < 0.05.This means that H4 is rejected. Publicity activities carried out by Bank Muamalat Mas – Mansyur such as holding regular recitations every month, holding social services, establishing relationships with various parties or related producers by sponsoring various events. The results of this study contradict the research of Rahman et al. (2019), which state that publicity affects interest.

Conclusion

Advertising (X1) and Personal selling (X3) have a positive and significant effect on customer interest. Meanwhile, sales promotion (X2) and publicity (X4) have no effect on customer interest.The contribution of each variable (advertising, sales promotion, personal selling, and publicity) should be adjusted to the target/object of promotion in order to obtain optimal results.

This will affect customer interest so that they decide to buy the products offered.Looking at the results of research that shows information facilities that can be used

by companies for marketing mix in Sharia Home Ownership Financing, and can be used as notes or corrections to maintain and improve their performance, as well as improve if there are weaknesses and deficiencies.

Future research should cover more variables to obtain better conclusions.

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