

MANAGERIAL EFFICIENCY AND ENTERPRISES PERFORMANCE (THE CASE OF AQUACULTURE INDUSTRY IN VIETNAM)

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Research aimed to measure the managerial factors influence on the performance of aquaculture enterprises in Vietnam. Methods of Cronbach alpha, EFA, CFA analysis were used to test data (with the help of SPSS and AMOS software) collected from the survey of 211 aquaculture enterprises in BA Ria - Vung Tau, Vietnam (BRVT). Results show that management factors such as (1) commitment of senior management of organizing production, (2) human resources, training, (3) customer orientation, (4) business relationship, (5) commitment of senior management to human resource training, (6) manufacturing organizations have a positive relationship with business performance

Keywords: performance, senior management, production organization, human resources, Vietnam

Introduction

In the modern conditions of economic globalization, productivity is significant factor for the economic development of country, industry and every enterprise (Steenhuis & Bruijn, 2006). Theoretically, previous studies have demonstrated on influence of management factors on enterprise productivity. However, no research has been conducted to study the concurrent impact of management factors on productivity in a sufficient and systematic way.

Based on this, this study was conducted to: 1) Identify the management factors affecting business performance and the relationship between these factors; 2) Identify the relationship between strategic planning and positive work accomplishment.

Theoretical foundations and research models

Performance concept

Performance is also a topic that has been of interest to technicians, sociologists, economists and especially managers for many years. For a manufacturing enterprise, from the managerial perspective, productivity is the optimal useful of resources to create products that best meet the requirement of the customer (Tangen, 2005, p. 35). This definition



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addresses two important characteristics: first, productivity is closely related to the use of resources (efficiency); second, productivity is strongly correlated with the satisfied customer (efficiency).

This view is analogous to the productivity perspective of the new approach. Productivity must include optimum efficiency and efficiency. Performance also manifests itself through the quality and usefulness of the output. Performance-oriented output, so must consider the product created in close relation to the needs and expectations of the market. Therefore, performance and quality are not mutually exclusive, but on the contrary, efficiency - quality are intertwined, mutual support (Khan, 2003). Hence, performance measurement must include both efficiency and performance, measure how well business responds to customer requests for product quality, product price, and on-time delivery and measure the financial results of the business.

Relationship between manager and business performance

There are some research on performance and the factors that affect it at different angles and perspectives. Studies that are concerned with human resource factors also find a close link between employee education, training and business productivity (Chapman & Al-Khawadeh, 2002). Findings by Baines (1997), Khan (2003) demonstrate that commitment senior management is an inbuilt component of corporate productivity enhancement programs; once charged, they are ready to supply the necessary documentation in training human resources, providing sufficient resources to facilitate efficient production system. A number of recent studies also show that senior management's commitment to efficiency has a direct impact on the training human resources and production organization (Politis, 2005). Studies that are concerned with human resource factors also find a close relationship between employee education and training and business productivity (Chapman & Al-Khawadeh, 2002).

A number of empirical studies show that the composition of manufacturing organizations: working conditions, equipment maintenance, process control have a significant contribution to enterprise productivity (McKone, et al., 2001; Sauian, 2002). Some theoretical and empirical studies agree that customer orientation is a key element in business. Research by Park & Miller (1998), Sauian (2002), Khan (2003) shows that customer orientation has a positive impact on enterprise productivity. Baines (1997) shows that the relationship of trust and cooperation between management and workforce is closely related to enterprise productivity. In addition, corporate communication is a factor that influences enterprise productivity (Baines, 1997). That is why a great number of frameworks have been unified in development, such as the Balanced Scorecard, performance prisms, and pyramid performance, methods of converting performance measurement and Cambridge Method of measurement performance (Hoffman & Mehra,1999). Most published studies focus either on the structure of new measurements or on additional advice.

In summary, the results of previous studies show that there are five groups of

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management factors affecting business performance, namely, commitment of senior management on performance, human resources training, organization production, customer orientation and business relationships. However, these groups of factors were studied independently, most of the previous studies focused on only one or two groups of factors.

Model theory and hypotheses

Based on the theoretical and the results of the previous studies concerned, this paper proposes a theoretical model that simultaneously investigates the influence of six groups on enterprise performance. In particular, the commitment of senior management to impact performance through the production organization and the training of human resources.

- Commitment of senior management on human resource training (concern and support of the leadership of the human resources training and the provision of resources to create favorable conditions for production organization);

- Commitment of senior management of production organization (interest, support and facilitation in production organization);

- Human resources, training (employees are developed and trained with the knowledge and skills necessary for the task);

- Customer orientation (understand the needs of the customer to produce products that meet the maximum requirements, make necessary changes to improve the product, the best meet the changing requirements of customers);

- Relationship with the enterprise (relational trust, cooperation and exchange, information sharing between parts of the enterprise; between staff and management);

- Organization of production (create a favorable working environment; equipment maintenance is always in good working order; effective control and coordination of production processes).

In the theoretical model, there are six hypotheses to be tested:

H1: There is a positive relationship between the commitment of senior management on human resource training and business performance.

H2: There is a positive relationship between the commitment of senior management on production organization and business performance.

H3: There is a positive relationship between production organization and business performance.

H4: There is a positive relationship between human resource training and business performance.

H5: There is a positive relationship between customer orientation and business performance.

H6: There is a positive relationship between the business relationship and the business performance

Competitive model

Competitive models play an important role in the development of the theory in

particular and in the study of economic and social science in general. "Instead of focusing on testing a theoretical model, we need to test it with a competitive model. Building a competitive model is not only a logical thing to do but a natural one in research" (Zaltman et al, 1982). Therefore, it is not advisable to wait for the competing model to be tested in other studies, which must be done in the same study. Because this way the subjects studied, measured and the other environmental factors are set up equally for the proposed theoretical model and model competition, so the reliability of the comparison will be higher (Appelbaum, 2005). For the reasons above, this study considers a competitive model to compare with the theoretical models given. As display above, senior management commitment is an integral part of the corporate performance enhancement program. Lack of commitment by senior management is the first major cause of failure in performance improvement programs (Hoffman & Mehra, 1999). Therefore, it can be hypothesized: "There is a positive relationship between the commitment of senior management on performance and enterprise productivity".

Table 1 - The scale of the variables in the model proposed
(Compiled by the author)

Original Scale	Original author scale
Commitment of senior management on human resource training	Baines (1997), Khan (2003)
Commitment of senior management of production organization	Baines (1997), Khan (2003)
Organization of production	Tangen (2005), Politis, 2005
Human resource training	Tangen (2005, Sauian (2002)
Customer orientation	Khan (2003), Sauian (2002)
Relationship in Business	Baines (1997)

Research methodology

Quantitative research method was used, data was collected through direct interviews, e-mails and online surveys through questionnaires with random sampling, surveyed population consists of the managers in the export business of aquaculture BRVT.

The scale of research concepts in the theoretical model is a multivariable scale. The observed variables were measured on a 5-point Likert scale (from 1: very disagree with 5: strongly agree). The statements in each scale are derived from previous studies (Hoffman & Mehra, 1999). Scale concept adjusts to the conditions of BR-VT enterprises based on the results of in-depth interview with experts and business managers.

The theoretical model has six independent variables measured by 36 observed variables and one dependent variable measured by seven observed variables.

The commitment of senior management on human resource training scale (S1) is measured by 6 observed variables.

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The commitment of senior management on a production organization scale (S2) is measured by 6 observed variables.

The human resources, training scale (S3) is measured by 4 observed variables.

The customer oriented Scale (S4) is measured by 5 observed variables.

The relationship with the Business scale (S5) is measured by 5 observed variables.

The Organization of production scale (S6) is measured by 6 observed variables

The performance in Business (S6) is measured by 3 observed variables.

The scale is tested for Cronbach's Alpha coefficient of confidence for each component.

The scale is preliminarily evaluated by the Exploratory Factor Analysis (EFA) and Cronbach's Alpha confidence factor for each component (1st level concept) with the help of SPSS software. Next, the scales were further tested by CFA (Confirmatory Factor Analysis). The SEM (Structural Equation Modeling) method through AMOS software is used to test theoretical models and competitive models along with hypotheses.

Result

Describe survey samples

Data sets collected from 211 enterprises with the characteristics are shown in Table 2.

Preliminary assessment of the scale with the EFA

The scale of research concepts is assessed and preliminarily analyzed using the EFA exploratory factor analysis and the Cronbach Alpha coefficient for each component. Selection criteria are variables that must have item-total correlation > 0.40 ; Coefficient Cronbach Alpha > 0.60 ; Factor loading > 0.40 ; Satisfactory scale when the total variance is $\geq 50\%$ (Hair et al, 1998).

The EFA results show that after the 4 variables have low load factor, the measurement variables in the component scales have a load factor ranging from 0.424 to 0.872. The variance of the scales ranged from 53.471% to 76.176. The item-total correlation coefficient ranges from 0.439 to 0.841. Cronbach Alpha's components range from 0.752 to 0.861. EFA analysis results showed that 6 factors were extracted in the individual value is 1.397, the total variance extracted 76.176% $> 50\%$. KMO = 0.885 coefficients > 0.5 , the statistical significance test 6132.370 Bartlett with Sig = 0.000 < 0.05 . The system variables are factors > 0.5 . Therefore, the observed variables satisfy the conditions and is used to analyze the CFA.

Confirmation of the shell model with CFA

The distribution verify of the observed variables shows that most of the Kurtoses and Skewnesses are in the range $[-1, + 1]$. Therefore, the ML (Maximum Likelihood) method is used to estimate the parameters in the models. The CFA results of each scale show that there are 7 unqualified variables. After these types of variables, the scale models are well suited to

the data (small chi-squared values with $p > 0.05$). Regression coefficients (normalization) ranged from 0.65 to 0.92; overall reliability and satisfaction.

Table 2 - Characteristics of survey samples
(compiled by the autor)

Company type	Number	%	Type of production	Number	%
State company	10	4.74	Shrimp processing	41	19.43
Joint stock company	52	24.64	Fish processing	38	18.01
Private company	94	44.55	Squid processing	28	13.27
Limited liability company	36	17.06	Mollusk processing	25	11.85
100% state capital company	19	9.00	Surimi processing	12	5.69
Company size	Number	%		8	3.79
Under 50 people	15	7.11	Aquaculture	25	11.85
50-200 people	42	19.91	Processing fish meal	15	7.11
200-500 people	128	60.66	Fish sauce processing	11	5.21
Over 500 people	26	12.32	Other	8	3.79
Total	211	100.00	Total	211	100.00

Table 3- Relationship between concepts in the research model
(compiled by the autor)

Relation	Estimate	S.E.	C.R.	P	Label
Commitment1 <--> Commitment2	.530	.046	6.661	.008	
Commitment1 <--> Organization	.635	.046	6.768	.003	
Commitment1 <--> Orientation	.621	.046	6.458	.007	
Commitment1 <--> Relationship	.623	.043	6.538	.002	
Commitment2 <--> Organization	.734	.056	7.187	***	
Commitment2 <--> Orientation	.747	.058	7.287	***	
Commitment2 <--> Relationship	.821	.065	7.972	***	
Organization <--> Orientation	.666	.051	6.246	.001	
Organization <--> Relationship	.754	.053	7.762	***	
Orientation <--> Relationship	.722	.055	7.039	***	

CR: Critical values; SE: Standard error

Recommended to consider the relationship between variables observed and unobserved (Podsakoff et al., 2003). CFA is formed through AMOS. According to McKone, K. E. , (2001), the value of the load points for each component standards exceed the minimum threshold of 0.40 at the 5% significance. Table 3 shows all values within the proposal. The results showed that P value < 0.05 correlation coefficient pairs composition different concept than 1. Thus the concepts worth distinguishing, components affect the business performance of the aquaculture enterprise.

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Linear structural analysis indicates that the model chi-squared value statistics are 161.253 with 136 degrees of freedom and the value of $P = 0.040$, chi-squared relative freedom under C_{min}/df is 1.186 (< 2). Other indicators such as $GFI = 0.901$ (> 0.9), $TLI = 0.981$ (> 0.9), $CFI = 0.985$ (> 0.9) and $RMSEA = 0.036$ (< 0.08). Therefore, this model fits the gathered data. This also permits a separate assessment of the development of the observed variables. On the convergence value, standard scales must be > 0.5 and statistically significant with $p < 0.05$, so the scale achieved convergence value.

The results on the scales are summarized in Table 3. After eliminate 8 variable type, the scale of the research concepts reached the level of value and reliability. This is the basis for moving to a theoretical model and competitive model with hypotheses.

Table 4 - A summary table of test results
(compiled by the autor)

Concept	Observed variables	Cronbach Alpha	Variance	Average coefficient regression	Value converging distinguishes
Commitment of senior management on human resource training	06	0.782	55.40	0.714	Qualified
Commitment of senior management of production organization	06	0.843	53.24	0.785	
Organization of production	05	0.771	65.21	0.742	
Human resource training	04	0.828	70.32	0.833	
Customer orientation	05	0.816	72.41	0.754	
Relationship in Business	03	0.762	74.63	0.837	

Result structural model

The SEM results of the theoretical model are shown in Figure 1 was carried out to find out the relationship between Commitment of senior management on human resource training, commitment of senior management of production organization, organization of production, human resource training, customer orientation, relationship in business and business performance. Results showed that the model's value after calibration with chi-squared statistic 162.153, with 134 degrees of freedom ($P = 0.049$), chi-squared relative freedom under C_{min}/df is 1.210 (< 2). Other indicators such as $GFI = 0.907$ (> 0.9), $TLI = 0.963$ (> 0.9), $CFI = 0.971$ (> 0.9) and $RMSEA = 0.039$ (< 0.08). Therefore, the above statistics allow conclusions: theoretical models are appropriate for the survey dataset.

SEM results of the competitive model with chi-squared statistic 171.074, with 135 degrees of freedom ($P = 0.019$), chi-squared relative freedom under C_{min}/df is 1.267 (< 2). Other indicators such as $GFI = 0.901$ (> 0.9), $TLI = 0.963$ (> 0.9), $CFI = 0.944$ (> 0.9) and $RMSEA = 0.044$ (< 0.08).

Comparing the chi-squared value between the competing models and the theoretical model, the difference of the two models is 8.921 (171.074 - 162.153) with a degree of freedom (135-134), which difference is statistical significance. Therefore, the theoretical model is chosen because it is better suited to the data than the competitive model.

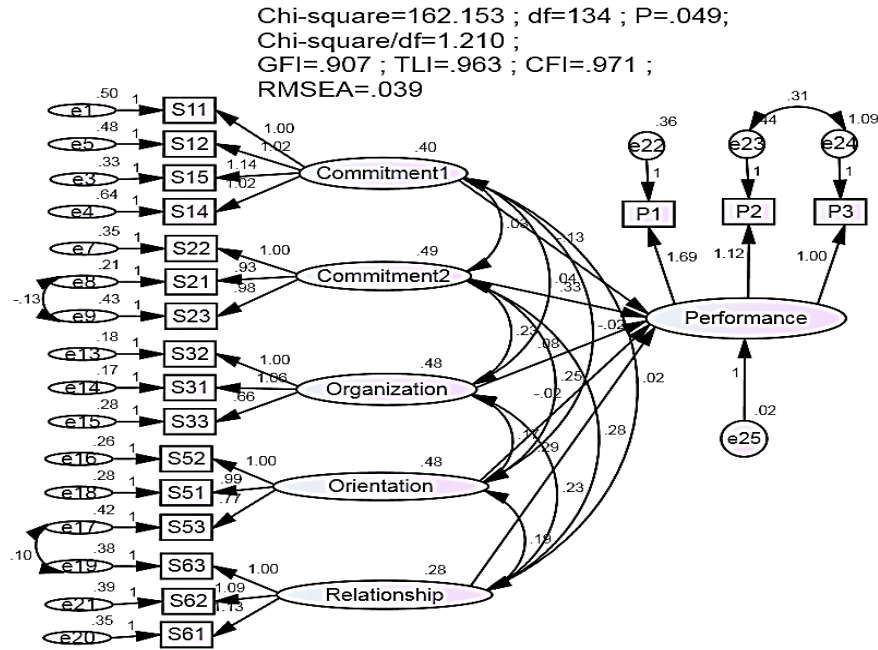


Figure 1 - Theoretical modeling results (normalized)
 (compiled by author)

Table 4 - Causal relationships between research concepts (standardization),
 (compiled by the autor)

			Estimate	S.E.	C.R.	P	Label
Performance	<---	Commitment1	.133	.065	2.058	.040	
Performance	<---	Commitment2	.332	.134	2.479	.013	
Performance	<---	Organization	.079	.072	1.094	.024	
Performance	<---	Orientation	.021	.064	.325	.045	
Performance	<---	Relationship	.295	.166	1.771	.025	

Check the reliability of the estimates by Bootstrap

Bootstrap method used to test the model estimates the final model with repetition pattern is N = 1000. The estimation results from 1000 samples are averaged together with the deviation is shown in Table 13, CR absolute value is less than 2, it can be said that deviation is very small; while no statistically significant at the 95% confidence level. Thus, we can conclude that the model estimates can be trusted. There are three valuable relationships theoretically.

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Table 5 - The results estimated by bootstrap with N = 1000
(compiled by the autor)

Parameter			Estimate normal			Estimate Bootstrap N=1000			
			Estimate	SE	SE-SE	Mean	Bias	SE-Bias	CR
Performance	<---	Commitment1	0.163	0.189	0.004	-0.152	0.010	0.006	1.667
Performance	<---	Commitment2	0.943	0.978	0.022	1.188	-0.245	0.031	-7.903
Performance	<---	Organization	0.063	0.312	0.007	0.078	0.016	0.010	1.600
Performance	<---	Orientation	0.026	0.253	0.006	-0.062	-0.036	0.008	-4.500
Performance	<---	Relationship	0.021	0.951	0.021	-0.201	-0.180	0.030	-6.000
Performance	<---	Human	0.049	0.367	0.008	-0.021	-0.069	0.012	-5.750

Conclusions

This study proposes and tests a theoretical model of the relationship between management factors and the impact of these factors on business productivity. Offered model comprehensively examines the management factors in an aquaculture enterprise

Improving the performance of seafood exporters Ba Ria-Vung Tau

In order to consolidate and improve the efficiency of BR-VT companies, in the near future, we need to understand the following basic points:

1) *In the context of market economy, competition creates a positive and stable change in factors affecting the ability of BR-VT enterprises to improve the efficiency.*

Competition is the driving force for business and the economy as a whole development. The competition encourages enterprises to improve their management capacity, technological level, skills, labor productivity, and maximize the efficiency of the use of resources in the economy. In addition, competition brings benefits to consumers because of cheaper goods, better quality, and better after-sales.

2) *Secondly, BR-VT companies play a decisive role in enhancing the efficiency and support of related industries.*

Increasing efficiency to compete is vital to businesses. The BR-VT aquaculture enterprises are still facing a lot of obstacles that limit their competitiveness, which caused by business environment and activity of state agencies. Enterprises must take the initiative, promote their own strengths, overcome weaknesses, take advantage of opportunities, and overcome the risk to improve efficiency, increase competitiveness.

3) *Third, improving efficiency to compete as a result of long-term striving must be based on the process of industrialization and modernization of BR-VT enterprises.*

4) *Fourth, improving efficiency is necessary to pay attention to the synchronous implementation of many steps and factors, but it is necessary to focus on key and decisive steps to create synergy for enterprises.*

5) *Fifth, improve the efficiency to compete need to take into account the specific characteristics of each enterprise in BR-VT*

It is argued that the competitiveness of BR-VT enterprises are closely linked to the advantages of the product marketed by the enterprise, the market share it holds, and the business efficiency of the firm. However, it is not enough to rely solely on internal strengths and advantages, because in the context of globalization, external advantages can still be the key to success in business. Therefore, improving the efficiency of enterprises is the exploitation and use of internal and external strength and competitiveness to create products and services attraction to consumers to develop and improve the situation. Compared with competitors in the market, different businesses have different characteristics, conditions, strengths and weaknesses. Therefore, performance-enhancing solutions to compete for each business cannot be exactly the same.

Performance-enhancing solutions

Based on this study, the BR-VT aquaculture enterprises should improve the following:

1) Commitment to senior management with production organization, 2) Customer orientation, 3) Human resource training, 4) Relationship in the business to enhance performance in the enterprise.

- Commitment of senior management to production organization. The use of human resources to influence the processing of other inputs into goods products and services to meet the needs of enterprises. In terms of management, a simple system will save money and make decisions quickly, properly and efficiently.

- Human resource training. Organize the training and implementation of professional training programs, major, and the work skills of employees in each department. Improve the initiative in training by developing the internal trainers, first of all, the training staff in fishery processing, followed by professional training in communication, sales, and facilitation for letting new employees learn about the business and be aware of their position and role.

- Customer orientation. Customers will be a long-term profit for the company. It is not enough to see a customer-focused goals as merely marketing plans and customer service. For customer-related work, every employee needs to understand what that is and see the challenges they may face. Understanding the status of customer relationships and even a few simple things about your customers will have a great impact on company revenue goals, which will make it easier to manage.

Relationship in the business: Building value statements and trust between employees and management, Small group discussion groups can be organized by department to convey the mission, the vision and values of the organization into words. Cohesion is an attitude of loyalty, trust of employees with enterprise; In order to achieve commitment to an employee organization, managers need to build and establish positive relationships between employees and businesses while encouraging employees to respect loyalty, devoted to the enterprise.

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