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Policy of Investing in Improving Competitiveness in the Construction Firms Listed on the Stock Market

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ABSTRACT: This study is conducted to assess, investigate the policy of investing in improving competitiveness in the construction firms listed on the stock market. Data were collected from surveying construction firms doing business which are listed on the stock market in Vietnam. The primary sources of data collected from February 2019 to February 2020 in Vietnam. Based on the collected data, we employ both qualitative and quantitative methodology along with some tools such as descriptive statistics, Cronbach's Alpha, T-test to analysis, evaluate and measure the policy of investing in improving competitiveness in the construction firms. The results show that there are six (6) attributes of the policy of investing in improving competitiveness in the construction firms and the policy of investing in improving competitiveness in the construction firms achieved an average of 3.71/5. Based on the findings, some recommendations are given for construction firms for improving the investment activities to improve competitiveness.

Keywords: Policy of investing, competitiveness, construction firms
JEL codes: E22, G31, O16, P45

I. INTRODUCTION

Investment in improving competitiveness is a part of development investment. The result of investment in improving competitiveness is to create and strengthen factors of competitiveness, to consolidate competitive tools to meet the competitive objectives in each period.

Investment activities in the enterprise could determine the establishment, survival and development of enterprises. An established business requires infrastructure construction, technology equipment, machinery, product researches, create and organize human resources, etc. These are the fundamental activities of investment and development to build any business.

Most enterprises in general and construction firms in particular carry out competitiveness investment activities on the basis of competition strategy, competition tools, and competitive advantages determined depending on each stage. Each competitive tool, competitive advantage is not only affected by one investment activity but also affected by many other investment activities. On the other hand, each investment activity not only affects a specific competitive advantage or a competitive tool but can also affect many other competitive advantages and tools. Therefore, it is impossible to separate investment activities for any competitive tool or any competitive advantage.

Besides, for construction firms, competitiveness enhancement is conducted through the form of development investment. Development investment in construction firms can be the use of financial, physical, labor and intellectual resources to build and repair houses and infrastructure, and to procure equipment and install them on the pedestal foundation, to train and retrain human resources to carry out the regular costs associated with the operation of these assets in order to maintain, enhance and expand the production and business capacity of enterprises.

Construction industry plays an important role in the national economy. It determines the size and technical level of the society in general and the industrialization and modernization in the current period in particular. Most listed construction firms have contributed significantly to the achievements of the construction industry. In addition, listed construction firms also create many jobs for workers, contributing to the labor market stablization and development. However, out of 92 listed construction firms that set a profit plan (profit after tax and profit before tax), only 18 firms exceeded the target and 10 firms completed 100% of the plan, which means up to 70% of construction firms fail to meet the set plan (Nhu Xuan, 2020). Therefore, investing to improve competitiveness of listed construction firms is necessary.

However, to make investments in improving competitiveness really positively affect business performance, construction firms need to have specific plans and strategies for each policy of investing to improve competitiveness.

II. LITERATURE REVIEW

The competitiveness of businesses depends on their ability to exploit their own unique capabilities to create low-cost products and product differentiation, including model elements. Each enterprise must develop a competitive strategy related to determining its position to promote competencies to face competing forces such as potential competitors, current competitors, substitutes, customers and suppliers (Porter, 1981).

Buckley et al. (1988) stated that competitiveness is the ability of a company to face and defeat competitors in providing products and services in a sustainable and profitable way. According to Garelli (2005), competitiveness is the immediate and future capacity of the company in designing, manufacturing and marketing their goods globally with a price and quality that is superior to competitors in domestic and foreign markets.

In Vietnam, studies on competitive capability such as Cuong (2002), Cap (2003) have focused on analyzing the theory of competitive competence. In addition, there are opinions that it is difficult to give exact criteria to assess the competitiveness of enterprises.

Chuan (2017) argues that technological backwardness would create low and unstable product quality and increase product costs, which limit the competitiveness of enterprises. In recent years, although enterprises have renovated equipment and technology from developed industrial countries, the pace of technological and equipment innovation is still slow, neither being convergent nor following any particular orientation. The author also asserted that labor market is a competitive advantage of Vietnam because of cheap labor costs. However, labor productivity is quite low with mainly manual labor in the industrial labor. Therefore, it is necessary to overcome this situation soon by carefully training so that Vietnamese labor would have high productivity and truely become a competitive advantage compared to other countries in the region.

The above studies have presented some contents related to investment in improving competitiveness. However, there is no research that fully presents investment in improving competitiveness in construction enterprises. In the current context, the competitive strategy of construction firms listed on the stock market is to maintain, consolidate their positions, conduct bidding and find contracts to compete fairly with other domestic and foreign construction firms. Therefore, this study analyzes, assesses and measures the content of investment in improving the competitiveness of construction firms listed on the stock market. We propose properties of investment activities in improving competitiveness in construction firms as described in Table 1 below:

Table 1: Attributes (indicators) of the policy investing in improving competitiveness in the construction firms

Code	Scale
1	Investment in science and technology development
2	Investment in human resources quality
3	Investment in plant and factory building
4	Investment in machinery and equipment purchases
5	Investment in machinery and equipment repairing
6	Investment in Marketing development

III. METHODOLOGY

The authors have the research process for the attributes of the policy investing in improving competitiveness in the construction firms that having two phases following.

Phase 1: We applied the expert methodology

We created a list of attributes gathered from the literature reviews as mentioned in the above studies. We discussed with 5 experts' consultation and 5 economics lecturers to improve the scale and design of the questionnaire. The results of surveying 5 experts and 5 economics lecturers showed that the attributes of the policy investing in improving competitiveness in the construction firms. Based on the above results, we built survey questionnaires for quantitative research (see table 1).

Phase 2: We send surveys to 150 respondents who are working in the position of head of the department or board of directors in listed construction firms. Completed questionnaires were collected from the surveyed enterprises are 115. The research sample is consistent with that of Hair et al. (1998). All data collected from the questionnaire are coded, processed by SPSS 22.0. We tested a reliability scale with Descriptive statistics, Cronbach's Alpha coefficient and T-test. Any observational variables with a total correlation coefficient greater than 0.3 and Cronbach's Alpha coefficient greater than 0.6 would ensure reliability of the scale.

IV. RESULTS

4.1. Descriptive Statistics

Table 2: Respondents by Job description, Work experience

	Frequency	Percent	Cumulative Percent
Job description			
Board of directors	41	35.7	35.7
Head of the department	74	64.3	100.0
Work experience			
Less 3 years	34	29.6	29.6
Over 5 years	45	39.1	68.7
From 3 to 5 years	36	31.3	100.0
Total	**115**	**110.0**	

Table 2 shows that among the 115 respondents, board of directors accounted for 35.7%, while the remaining 64.3% or 74 respondents were head of the department. Of these, 29.6% of the participants have work experiences less 3 years, 31.3% of the participants have work experiences from 3 to 5 years and over 5 years accounted for 39.1%.

Table 3: Descriptive analysis of attributes of the policy of investing in improving competitiveness in the construction firms

	N	Minimum	Maximum	Mean	Std. Deviation
PIIC1	115	1.0	5.0	3.71	1.168
PIIC2	115	2.0	5.0	4.10	.627
PIIC3	115	1.0	5.0	3.78	.935
PIIC4	115	1.0	5.0	2.73	1.046
PIIC5	115	2.0	5.0	4.05	.647
PIIC6	115	1.0	5.0	3.89	.989
Valid N (listwise)	**115**			**3.71**	

Table 3 indicates that the respondents agree with the dependent variables of "the policy of investing in improving competitiveness in the construction firms", where six (6) attributes were quite high with an average of 3.71 compared with the highest of the Likert 5-point scale. All these six (6) attributes were rated at an average of 2.73 or higher.

4.2. Cronbach's Alpha

The policy of investing in improving competitiveness in the construction firms has been measured by the Cronbach's Alpha. Results of testing Cronbach's alpha of attributes are presented in Table 4 below.

Table 4: Results of Cronbach's Alpha Testing of Attributes

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
The policy of investing in improving competitiveness in the construction firms (PIIC): Cronbach's Alpha: .793				
PIIC1	18.56	4.617	.359	.733
PIIC2	18.17	5.051	.574	.680
PIIC3	18.49	5.620	.326	.705
PIIC4	19.54	6.707	.319	.749
PIIC5	18.22	5.259	.471	.732
PIIC6	18.38	4.975	.387	.709

The results also show that attributes of the dependent variables have Cronbach's Alpha coefficients that are greater than 0.6, and the correlation coefficients of all attributes are greater than 0.3. So, all the attributes of the dependent variables are statistically significant (Hoang and Chu, 2008; Hair et al, 2009).

4.3. Independent T – test

Comparing the results of the evaluation of the policy of investing in improving competitiveness in the construction firms between board of directors and head of the department is shown in Table 5.

Table 5: Differences of the policy of investing in improving competitiveness between board of directors and head of the department - Independent Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
PIIC	Equal variances assumed	3.329	.071	2.209	113	.029	.18353	.08307	.34811	.51895
	Equal variances not assumed			2.030	64.736	.046	.18353	.09041	.36411	.50296

According to the results of Table 5, Sig Levene's Test = 0.071 more than 0.05; the variance between the two board of directors and head of the department is not different. Moreover, Sig value T-Test = 0.029 < 0.05, which means there is statistically significant difference in the level of the policy of investing in improving competitiveness competence evaluation by workers who have different job description (Hoang & Chu, 2008; Hair et al, 2009).

V. DISCUSSION AND ADMINISTRATIVE IMPLICATIONS

Many experts believe that investment is the sacrifice of existing resources to conduct certain activities with expectation to achieve beneficial results for investors in the future. In financial words, the beneficial result here is profit. Meanwhile, the competitiveness of enterprises is the ability to gain and maintain market share in the market with a certain profit. Therefore, investment activities or competitiveness improvement must meet profitability requirements.

Construction firms must use material and financial resources or in other words, spend money to upgrade equipment, renovate technology, train and supplement knowledge for managers, technical engineers and workers, or to buy information about the market and competitors. Thus, investment and investment efficiency are prerequisites of enhancing the competitiveness of enterprises.

5.1. Investment in science and technology development includes capital-spending activities to apply advanced technologies into business activities such as investing in technological innovation and technological improvement; making technology transfer through joint ventures, associating with foreign companies; procurement of construction equipment (such as concrete mixers, cranes, etc.); purchasing other equipment for construction activities. This investment activity enhances the competitiveness of construction firms through creating foundation for modern products and high-class constructions, supporting the development of distribution channels, supporting the management and administration. In addition, investment in scientific and technological development has brought many achievements to construction firms.

Construction firms have implemented renovation, absorption and technology mastering; been aware of the importance of new and advanced technological application, especially the key technologies of the 4.0 Revolution. The Industrial Revolution 4.0 has impact on most businesses including Construction firms. Therefore, construction firms need to adapt quickly and take advantage of modern technology to innovate and optimize manufacturing to reduce the risk of being left behind.

In recent years, construction firms have made great efforts in activities of investment in technological innovation. Because of capital constraints, the technological innovation investment process is not only importing new equipment but also upgrading existing equipment. In addition, some human resources in construction firms have high technical level, so construction firms have tried to take advantage of existing talents by launching a scientific and technological research programme. As a result, construction firms can improve technology, save costs and solve capital difficulties. However, investment capital for scientific and technological development of construction firms is still modest, investment capital for technology development accounts for a small proportion of the total investment capital.

Therefore, construction firms need to increase capital for further development of science and technology, making science and technology really become a regular activity of enterprises. In addition, creative labor movements and initiatives should be maintained regularly and popularized in construction firms.

5.2. Investment in plant and factory building is activities that use capital sources to expand and upgrade facilities, including: buying, renting, constructing and repairing working offices, buying equipment and working facilities at the office, etc. These investment activities directly affect the competitiveness of construction firms through contributing to the expansion of the distribution system, creating facilities and spacious places for construction firms, creating a working environment for employees and creating convenient and modern transaction locations for customers.

Most of the construction firms when investing in factory construction take the size of the workshop, the layout of the premises, materials, construction costs and construction progress into account. In addition, construction firms are also interested in the design of the whole ground and each item of workshops, warehouses, offices, infrastructure systems, etc.

In construction firms, investing in factories building is both a job and a product. When the construction is completed, it is the property of enterprises; construction firms can use it or sell it to customers.

Factory building investment is the initial mandatory investment. Most construction firms have used the capital to conduct initial facilities. The plant and factory system is also enterprises' appearance; investors also evaluate the performance of the enterprise through the plant and factory system so the factory system also contributes to attract investors.

Recognizing the importance of investing in building factories, most construction firms have allocated capital for this activity. However, the capital used in investing in factory building in construction firms is not convergent because of the size, business results and business strategies of each enterprise. In addition, the proportion of capital spending on plant buildings investment in the total investment capital in construction firms has also decreased in recent years.

Most construction firms have quite adequate factory systems, serving the working needs of workers. However, the modernity of factory system needs to be further improved accordingly. On the other hand, investment in building factories also needs to be improved and developed synchronously with other investment activities in construction firms.

5.3. Investment in procurement of machinery and equipment: Innovation of equipment is to improve the quality of construction products, to satisfy customers, and at the same time to reduce the consumption of raw materials and the product warranty costs, to save significant resource in production costs for businesses. Modernizing machinery and equipment combining with scientific manufacturing and developing a team of skilled engineers and workers is one of the basic measures to lower costs through increasing labor productivity.

The process of procuring machinery and equipment at most construction firms includes: (i) Research on the necessity of investment, favorable and difficult conditions; (ii) Estimated investment scale, form of investment; (iii) Preliminary analysis and selection of technology, techniques and conditions for provision of supplies, equipment, raw materials, energy, services and infrastructure; (iv) Preliminary evaluation of the total investment, the plan to mobilize capital sources, the ability to repay debts and collect interests; (v) Preliminary calculation of economic efficiency of investment.

In recent years, the method of bidding is one of the main methods of getting construction contracts in our country and it has brought tremendous economic efficiency. Therefore, to bid and win the bid, to affirm its position in competition, construction firms need special types of construction equipment, synchronous, modern and advanced technology. Therefore, investment in improving construction equipment capacity and technological innovation is always concerned by construction firms. Construction firms focus on investing in purchasing new machinery and equipment to meet the requirements of the construction works about technical, fine art, timely construction progress, etc. Every year, the amount of capital invested in procurement of machinery and equipment is quite large, accounting for a high proportion of the total investment capital. Therefore, most construction firms have owned modern machinery and equipment, contributing to create a firm position in competition and development of enterprises.

5.4. Investment in machinery and equipment repair

Investment in repairing machines and equipment has also been focused on by enterprises in addition to investing in procurement of machinery and equipment. This method has the advantage of utilizing old production capacity, reducing investment costs. Investment in repairing construction equipment and machinery tends to increase gradually in recent years. The proportion of capital spending on repairing machinery and equipment to the total capital for investment also increased.

5.5. Investing in improving the quality of human resources is the use of capital in activities that can encourage employees to contribute knowledge and skills to their works, meet requirements of the jobs.

Construction firms have focused on training and improving the quality of human resources to meet increasingly higher requirements, increasingly complex techniques, increasingly modern equipment and in accordance with advanced construction processes. Therefore, human resources in construction firms increased both in quantity and quality.

The source of investment in improving the quality of human resources has continuously increased over the years with a high speed. The proportion of human resources investment over the total investment capital has also increased in recent years.

Construction firms are also interested in allocating jobs to workers. Managers, engineers and workers are paid adequate attention. Construction firms always consider human resources as a focus and leading factor in production, business and sustainable development activities.

Construction firms have conducted training for labors and raised their wage levels. In addition, the leadership of the construction firms directs the trade union division to organize activities for employees such as vacation, tourism, sports and culture, etc. contributing to improving workers' physical and mental health.

Bonus and welfare funds are maintained to reward and motivate employees to create employees commitment with enterprises.

Besides, most construction firms have paid attention to health care for workers. Hygiene measures of epidemic prevention, occupational health work, periodic health examinations for workers, and occupational safety are always maintained at construction firms.

The construction firms that focus on investing in improving the quality of human resources have been sufficient in quantity and quality of teams of managers, construction engineers and skilled worker who are trained through many large projects, having courage to overcome difficulties and challenges, are a key force in the development process of enterprises.

5.6. Investment in marketing development

Investing in marketing development is to bring the image of businesses to customers, to support sales effectively. Sales promotion is sales support activities, including promotions, customer access and product introduction, such as:

Investment in innovation and promotion of brand identity system (brand name, logo, colors, website, uniforms, layout of the company's headquarters and branches).

Investment in advertising activities on the mass media, in community-oriented activities such as rewarding high-achieving sports athletes (construction firms carry out the construction of gymnasiums).

Organizing to reach customers and introduce products,

Implementation of incentive programs and promotions.

In construction firms, marketing development investment spending is still quite low, accounting for a small proportion in investment activities. This proves that marketing activity has not been paid much attention by construction firms. However, marketing activities play an important role in businesses, contributing to the development of businesses, improving competitiveness. Therefore, construction firms need to change their investment perspective, adjust the investment structure towards increasing the proportion of investment in marketing development.

VI. CONCLUSION

In addition to regular production and business activities, construction firms in order to survive, develop and compete with competitors in the market must conduct activities that maintain the system of technical facilities, the availability of assets, and more importantly, develop them at a higher level, improve products and services in accordance with market conditions. These are also activities that require businesses to pay attention and develop strategies and plans in line with market requirements and the business conditions itself. That is investment activities to improve competitiveness.

Investment has contributed to creating a higher competitiveness for construction fimrs. Competitive competence will help businesses gain greater profits, create conditions for businesses to increase equity capital, conduct reinvestment and other activities to achieve profitability goals and to affirm position and to reach safety goals.

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