International Journal of Advanced Multidisciplinary Research and Studies

Comparative Evaluation of the Internal Social Capital of Plastic and Packaging Firms

[1] Chu Thi Huyen Yen, [2] Nguyen Thi Thuy Nga, [3] Nguyen Thi Mai Anh
[1] Faculty of Social work, University of Labour and Social Affairs, Vietnam
[2] University of Labour and Social Affairs, Vietnam
[3] East Asia University of Technology, Vietnam

Corresponding Author: **Nguyen Thi Mai Anh**

Abstract

This study was conducted with the aim of assessing the internal social capital of plastic and packaging firms in Hanoi and neighboring provinces through survey results. The survey subjects are employees of plastic and packaging firms in Hanoi and neighboring provinces. We use both qualitative and quantitative research methods. Quantitative research methods were carried out with SPSS software, including independent T-tests and ANOVA. Research results show that there is no difference in assessing the internal social capital of plastic and packaging firms in Hanoi and neighboring provinces between different subjects in terms of gender, marital status, academic standards, job position, career seniority and age. Based on this result, the study proposes some recommendations for plastic and packaging firms and employees.

1. Introduction

Social capital is a relatively durable social network, sympathy, level of sympathy, and mutual interaction between members (Fukuyama, 2002) [3].

In recent years, the packaging industry has made important contributions to the Vietnamese economy and is considered a potential manufacturing industry with opportunities coming from the development of industry and e-commerce, digital media, and trade agreements signed. According to Mr. Nguyen Ngoc Sang, Chairman of the Vietnam Packaging Association, the packaging industry plays an increasingly important and highly appreciated role. Globally, the value of packaging has approached 500 billion USD per year, growing on average 12% per year. In Vietnam, packaging is an industry with a good and stable growth rate (Tu Uyen, 2023) [14].

After a long period of development, Vietnam's plastics industry has made many great strides, especially in recent years. Along with economic development and increasing demand for plastic products, this industry is becoming one of the most potential industries in the Vietnamese economy. However, Vietnam is also facing many challenges in this industry. Due to low tax rates, plastic products must meet many of the strict rules of the agreement. Besides, Vietnamese plastic businesses are also facing strong competition with competitors around the world, especially countries with low production costs such as China and India. In addition, science and technology for plastic production in Vietnam have not been fully developed, raw materials are mainly imported from abroad, and production costs are high.

In Vietnam, in recent years, social capital has received a lot of attention from the state and researchers related to socio-economic issues. However, there have not been many adequate studies on the internal social capital of plastics and packaging firms.

2. Literature Review

In firms, employees who understand and trust each other will support each other in sharing information and knowledge regularly through informal conversations, leading to greater efficiency among employees. cross-functional teams (Rosenthal, 1996) [13]. As Chen and Tseng (2012) [1] said, cooperation between functional departments or divisions is the key to improving

work quality and efficiency. Additionally, internal social capital leads to a friendly work atmosphere based on trust and mutual understanding among employees (Yang *et al*., 2016) [15].

Internal network structure is the network of relationships between employees, divisions, or internal departments within an enterprise (Dai *et al*., 2015) [2]. The relationship network is presented horizontally and vertically.

The quality of internal relationships shows that everyone in the firm must trust, share information and knowledge (Nguyen & Huynh, 2012) [8], and share common goals and vision (Prieto-Pastor *et al*., 2018) [12]. Regularly keeping mutual promises, maintaining close relationships, and regularly exchanging knowledge and information, each department tries its best to avoid harming the interests of other departments (Mikovic *et al*., 2019) [7].

Nguyen and Kant (2004) [9], studying paper recycling village households in Vietnam, concluded that social capital has a strong and positive contribution to household income as well as income contribution. Giving to poor households is greater than giving to rich households.

3. Methodology
3.1 Qualitative Research Methods and Quantitative Research Methods
Research methods combining desk research with surveys and in-depth interviews were carried out. Six department-level managers of plastic and packaging enterprises in Hanoi and five economic and social work lecturers were selected for interviews and online surveys.

We use SPSS software for quantitative research methods. In this study, we compare the differences in the internal social capital of plastic and packaging firms between different survey subjects in terms of genders, academic standards, marital status, job positions, ages, and career seniority.

3.2 Scale for Measuring Observed Variables and Samples
Six observed variables of the internal social capital of plastic and packaging firms are inherited from the research of Nguyen *et al*. (2023) [10] and previous studies.

The questionnaire was sent to employees at plastic and packaging firms and received 200 questionnaires. After cleaning, there were 180 valid responses that were used for analysis. The study sample is presented in Table 1.

Information on the data collected is shown in Table 1. It shows that among the respondents, 33.3% were business staff, 30.6% were accountants, 18.3% were in the production department, and other positions accounted for 17.8%. Of these, 49 participants are from 22 to 30 years old, accounting for 27.2%; 47 participants are from 30 to 35 years old, accounting for 26.1%; 45 participants are from 35 to 45 years old, accounting for 25.0%; and the remaining respondents are 45 years old or older, accounting for 21.7%. Among the respondents, 36.1% of the participants were single, and 63.9% of the participants were married. There were 130 participants who were bachelors; the remaining were postgraduates.

Table 1: Respondents by job positions, ages, academic standards and marital status

	Frequency	Percent	Cumulative Percent
Job positions			
Business staffs	60	33.3	33.3
Accountants	55	30.6	63.9
Production department	33	18.3	82.2
Other positions	32	17.8	100.0
Ages			
From 22 to 30 years old	49	27.2	27.2
From 30 to 35 years old	47	26.1	53.3
From 35 to 45 years old	45	25.0	78.3
45 years old or older	39	21.7	100.0
Academic standards			
Bachelor	130	72.2	72.2
Postgraduate	50	27.8	100.0
Marital status			
Single	65	36.1	36.1
Married	115	63.9	100.0
Total	**180**	**100.0**	

4. Results
4.1 Independent T-test: Different Genders
A comparison of the results of the evaluation of the differences in the internal social capital of plastic and packaging firms with participants of different genders (male and female) can be seen in Table 2. According to the results shown in Table 2, sig Levene's test is 0.443, which is more than 0.05. The variance between males and females is not different. Moreover, the sig value t-test is 0.334, which is more than 0.05, which means that there is no statistically significant difference in the internal social capital of plastic and packaging firms between these different genders (Hoang & Chu, 2008; Hair *et al*., 2009; Hair *et al*., 2014) [6, 4, 5].

Table 2: Differences in the internal social capital of plastic and packaging firms with participants of different genders - 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
ISC	Equal variances assumed	0.591	0.443	-0.968	178	0.334	-0.09706	0.10030	-0.29499	0.10086
	Equal variances not assumed			-0.965	153.210	0.336	-0.09706	0.10060	-0.29580	0.10167

4.2 Independent T-Test: Academic Standards
A comparison of the results of the evaluation of the differences in the internal social capital of plastic and packaging firms with participants of different academic standards (bachelor and postgraduate) can be seen in Table 3. According to the results shown in Table 3, sig Levene's test is 0.227, which is more than 0.05. The variance between

bachelor's and postgraduate degrees is not different. Moreover, the sig value t-test is 0.757, which is more than 0.05, which means that there is no statistically significant difference in the internal social capital of plastic and packaging firms between these different academic standards (Hoang & Chu, 2008; Hair *et al*., 2009; Hair *et al*., 2014) [6, 4, 5].

Table 3: Differences in the internal social capital of plastic and packaging firms with participants in different academic standards-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
ISC	Equal variances assumed	1.188	0.277	0.309	178	0.757	0.03410	0.11021	-0.18338	0.25159
	Equal variances not assumed			0.325	98.429	0.746	0.03410	0.10503	-0.17432	0.24252

4.3 Independent T-Test: Marital Statuses

A comparison of the results of the evaluation of the differences in the internal social capital of plastic and packaging firms with participants of different marital statuses (single and married) can be seen in Table 4. According to the results shown in Table 4, sig Levene's test is 0.642, which is more than 0.05. The variance between single and married is not different. Moreover, the sig value t-test is 0.207, which is more than 0.05, which means that there is no statistically significant difference in the internal social capital of plastic and packaging firms between these different marital statuses (Hoang & Chu, 2008; Hair et al., 2009; Hair et al., 2014) [6, 4, 5].

Table 4: Differences in the internal social capital of plastic and packaging firms with participants of different marital status- 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
ISC	Equal variances assumed	0.217	0.642	-1.267	178	0.207	-0.12965	0.10234	-0.33160	0.07230
	Equal variances not assumed			-1.279	136.662	0.203	-0.12965	0.10139	-0.33016	0.07085

4.4 ANOVA-Job Positions

An ANOVA test was needed to make a comparison of the results of the evaluation of the differences in the internal social capital of plastic and packaging firms between the four subjects, including participants who are business staff, participants who are accountants, participants who are in the production department, and participants in other positions. Table 5 shows that the sig Levene statistic is 0.047, which is smaller than 0.05, which means that the hypothesis of homogeneity of variance among the variable value groups (different job positions) has been violated. Therefore, we use the Welch test results in Table 6. Sig test Welch is equal to 0.919, which is more than 0.05; that is, there is no difference in mean DCS between different job positions. Thus, there is no difference in the internal social capital of plastic and packaging firms among employees of different job positions (Hoang & Chu, 2008; Hair et al., 2009; Hair et al., 2014) [6, 4, 5].

Table 5: Test of Homogeneity of Variances

Descriptions	Levene Statistic	df1	df2	Sig.
ISC				
Based on Mean	2.701	3	176	0.047
Based on Median	2.576	3	176	0.055
Based on Median and with adjusted df	2.576	3	146.311	0.056
Based on trimmed mean	2.580	3	176	0.055

Table 6: Robust Tests of Equality of Means

ISC	Statisticᵃ	df1	df2	Sig.
Welch	0.166	3	83.788	0.919

4.5 ANOVA-ages

An ANOVA test was needed to make a comparison of the results of the evaluation of the differences in the internal social capital of plastic and packaging firms between the four subjects, including participants who are from 22 to 30 years old, participants who are from 30 to 35 years old, participants who are from 35 to 45 years old, and participants who are 45 years old or older. Table 7 shows that the sig Levene statistic of 0.811 is greater than 0.05, which means that the hypothesis of homogeneity of variance among the variable value groups (different ages) has not been violated. Table 8 shows that sig. is 0.331, which is more than 0.05, which indicates that there is no statistically significant difference in the internal social capital of plastic and packaging firms between the mentioned four groups of ages (Hoang & Chu, 2008; Hair et al., 2009; Hair et al., 2014) [6, 4, 5].

Table 7: Test of Homogeneity of Variances

Descriptions	Levene Statistic	df1	df2	Sig.
ISC				
Based on Mean	0.320	3	176	0.811
Based on Median	0.351	3	176	0.789
Based on Median and with adjusted df	0.351	3	170.365	0.789
Based on trimmed mean	0.290	3	176	0.833

Table 8: ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
ISC					
Between Groups	1.501	3	0.500	1.150	0.331
Within Groups	76.611	176	0.435		
Total	78.113	179			

4.6 ANOVA–Career Seniority

An ANOVA test was needed to make a comparison of the results of the evaluation of the differences in the internal social capital of plastic and packaging firms between the three subjects, including participants who have career seniority less than 5 years old, participants who have career seniority from 5 to 10 years old, and participants who have career seniority 10 years old or older. Table 9 shows that the sig Levene statistic of 0.221 is greater than 0.05, which means that the hypothesis of homogeneity of variance among the variable value groups (career seniority) has not been violated. Table 10 shows that sig. is 0.179, which is more than 0.05, which indicates that there is no statistically significant difference in the internal social capital of plastic and packaging firms between the mentioned four groups of career seniority (Hoang & Chu, 2008; Hair *et al*., 2009; Hair *et al*., 2014) [6, 4, 5].

Table 9: Test of Homogeneity of Variances

Descriptions	Levene Statistic	df1	df2	Sig.
ISC				
Based on Mean	1.523	2	177	0.221
Based on Median	1.448	2	177	0.238
Based on Median and with adjusted df	1.448	2	163.470	0.238
Based on trimmed mean	1.542	2	177	0.217

Table 10: ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
ISC					
Between Groups	1.502	2	0.751	1.735	0.179
Within Groups	76.611	177	0.433		
Total	78.113	179			
	Sum of Squares	Df	Mean Square	F	Sig.
ISC					
Between Groups	1.502	2	0.751	1.735	0.179
Within Groups	76.611	177	0.433		
Total	78.113	179			

4.7 The Relationship between the Internal Social Capital of Plastic and Packaging Firms
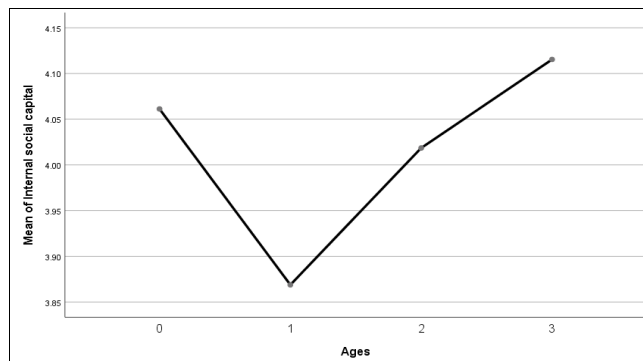
4.7.1 Job Positions

Next, the line graph shows the relationship between the internal social capital of plastic and packaging firms and each respondent's job position (Fig 1). Fig 1 shows that this line tends to go down when the respondents' job positions are in the production department. But this line tends to slope up when the respondents' job positions are accountants and other positions.
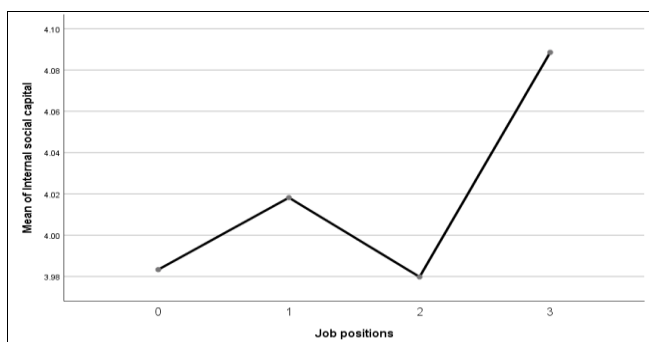
Fig 1: The line graph shows the relationship between the internal social capital of plastic and packaging firms and each respondent's job positions
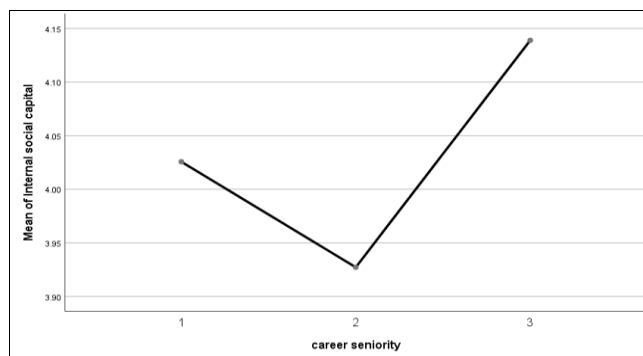
4.7.2 Ages

Next, the line graph shows the relationship between the internal social capital of plastic and packaging firms and each respondent's age (Fig 2). Fig 2 shows that this line tends to go down when the respondents' ages range from 30 to 35 years old. But this line tends to slope up when the respondents' ages are 35 to 45 years old and 45 years old or older.

Fig 2: The line graph shows the relationship between the internal social capital of plastic and packaging firms and each respondent's ages

4.7.3 Career Seniority

Next, the line graph shows the relationship between the internal social capital of plastic and packaging firms and each respondent's career seniority (Fig 3). Fig 3 shows that this line tends to go down when the respondents' career seniority is from 5 to 10 years old. But this line tends to slope up when the respondents' career seniority is 10 years or older.

Fig 3: The line graph shows the relationship between the internal social capital of plastic and packaging firms and each respondent's ages

5. Discussion and Implications

Vietnam's growing economy has been creating demand for growth in many fields, including the plastic industry in general and plastic businesses in particular. The demand for plastic products is increasing in industries, especially in the fields of packaging and construction materials.

The export market is also expanding for Vietnamese plastic products. Supply in some countries around the world increased sharply with the expansion plans of large-scale enterprises.

Vietnamese plastic firms have a price advantage because of their cheap and abundant human resources. The Vietnamese government is supporting investment in the plastics industry through tax policies and encouraging investment in

industrial parks.

For the packaging industry, the COVID-19 pandemic that appeared in early 2020 brought both positive and negative impacts according to changes in consumer behavior. Like in many other industries, the COVID-19 pandemic has created major disruption in the packaging sector due to lockdown measures, travel restrictions, and workforce shortages. The supply chain is broken; there is a shortage of raw materials; the price of raw materials has increased; but production materials are mainly imported and account for 60%–70% of the cost.

The picture of the packaging industry last year was differentiated by product groups and packaging materials. In terms of product groups, the consumer goods, pharmaceutical and health care products industries, and e-commerce grew strongly, leading to the pharmaceutical packaging, food packaging, and labeling segments. Disinfectants, soap packaging, detergents, and hand sanitizers are currently in high demand. On the other hand, demand for packaging for luxury and industrial products tends to decrease.

Besides the negative impacts, COVID-19 also creates additional development opportunities for the Vietnamese packaging industry, accelerating innovation, digitalization, and expanding production scale and consumption markets in many countries. Favorable packaging segment, especially society's greater appreciation of the positive role of packaging. However, to turn opportunities into reality, each firm is required to adapt quickly, have appropriate plans for each stage of development, and ensure increasingly high requirements for packaging quality and design. Good preservation, convenience, smarter, and clear traceability.

6. References

1. Chen LC, Tseng CY. Benefits of cross-functional training: three departments of hotel line supervisors in Taiwan. J. Hosp. Tour. Manag. 2012; 19:115-122.
2. Dai W, Mao Z, Zhao X, Mattila A. How does social capital influence the hospitality firm's financial performance? The moderating role of entrepreneurial activities. International Journal of Hospitality Management. 2015; 51:42-55.
3. Fukuyama F. Social capital and development: The coming Agenda. SAIS Review. John Hopkin University Press. 2002; 22(1):23-37.
4. Hair JF, Black WC, Babin BJ, Anderson RE. Multivariate Data Analysis (7th ed.). Upper Saddle River, NJ: Prentice Hall International, 2009.
5. Hair JF, Henseler J, Dijkstra T, Sarstedt M, Ringle C, Diamantopoulos A, *et al*. Common beliefs and reality about partial least squares: Comments on Rönkkö and Evermann. Organizational Research Methods. 2014; 17(2):182-209.
6. Hoang T, Chu NMN. Analyzing researched data with SPSS (2nd ed.). Ho Chi Minh City, Vietnam: Hong Duc Publishing House, 2008.
7. Mikovic R, Petrovic D, Mihic M, Obradovic V, Todorovic M. Examining the relationship between social capital and knowledge usage in the nonprofit industry. Journal knowledge management research & practice, [online], 2019. Available at: Doi: https://doi.org/10.1080/14778238.2019.1638740 [Accessed 10 June 2020].
8. Nguyen HT, Huynh DT. The contribution of social capital into the activities of real estate companies in Vietnam. Journal of International Business Research. 2012; 3:53-69.
9. Nguyen VH, Kant S. The contribution of social capital to household welfare in a paper-recycling craft village in Vietnam. The Journal of Environment & Development, 2004.
10. Nguyen TH, Le TT, Nguyen XH, Nguyen THP. Internal Social Capital: The Case of Plastic and Packaging Firms. International Journal of Advanced Multidisciplinary Research and Studies. 2023; 3(4):1180-1183
11. Prieto-Pastor I, Martín-Pérez V, Martín-Cruz N. Social capital, knowledge integration and learning in project-based organizations: A CEO-based study. Journal of Knowledge Management. 2018; 8:1803-1825.
12. Rosenthal EA. Social Networks and Team Performance. Chicago: University of Chicago, 1996.
13. Tu Uyen. In 2022, the revenue of the packaging industry in Vietnam will reach nearly 15 billion USD. Accessed May 26, 2023, 2023. From: https://plo.vn/nam-2022-doanh-so-nganh-bao-bi-viet-nam-dat-gan-15-ti-usd-post735150.
14. Yang S, Liu Y, Wei J, *et al*. Social capital on mobile SNS addiction: A perspective from online and offline channel integrations. Internet Research, 2016. ISSN: 1066-2243, Article publication date: 1 August 2016