

Re-globalisation and Supply Chain Reshoring: Motivation and Performance of Global Companies in Korea

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Abstract: This study examines how reshoring-related motivations and performances, in response to re-globalisation, of global firms operating in Korea are different by country and industry. It develops six reshoring motivational factors with twenty-six items and three performance indicators with seven items, and analyses differences by countries (i.e., US, Japan and Korea) and by industries (i.e., traditional manufacturing, and technology and knowledge-based industries) for each item. Four hypotheses projecting the differences of reshoring motivations and performances are established from literature. Survey data are collected from global companies currently operating in Korea that have had reshoring experiences. A total of fifty-three (53) companies responded to the survey. This paper analysed differences in reshoring motivation and performance in the three countries by conducting a one-way analysis of variance to test the hypotheses. The results show statistically significant differences in terms of reshoring motivations and performances by countries, and noticeable differences by industries. American and Japanese firms are similar in respect of reshoring motivation and performance, while Korean counterparts are different with regard to customer service, labour and country factors from the reshoring motivation, and the cost and organizational innovation elements from the reshoring performance. The research findings are an interesting addition to the literature given that existing differences for reshoring motivation and performance by country and industry were empirically examined in a local context. The results presented by the study is intended to provide strategic insights into the logistics and operational decisions to be considered when making reshoring-related decisions, as well as how to effectively manage dispersed global supply chains in an era of re-globalisation.

Keywords: Reshoring Motivation and Performance, Global Supply Chains and Operations, Global Firms, Local Context, Differences by Country and Industry

1. Introduction

In past decades, with the rapid globalization of markets and production factors, international companies relocated their overseas production bases to countries with low production costs. Increasing foreign direct investment also facilitated these offshoring movements, which tended to have various strategic motives. As a result, the global supply chains of international companies widened geographically and became increasingly complex. However, in recent years, there have been many changes in foreign investment patterns, such as the restructuring of the global supply chain. In contrast to the previous trend of expanding overseas production, many companies (e.g. in advanced countries such as the US, Japan and European countries) have moved their overseas production bases back to their home countries. The business decision to revise an existing offshore strategy and relocate a foreign production base back in the home country is termed ‘reshoring’. Governments of home countries tend to expect considerable benefits from reshoring growth, including the creation of new jobs and the

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stimulation of economic recovery[1][2].

In accordance with this shift in global supply chain management, many studies have examined the phenomenon of global firm reshoring and its various effects. For example, existing studies have examined the following: the factors that promote and interfere with reshoring[3]; the determinants of reshoring[2]; reshoring processes[1]; and the characteristics and status of reshoring[4]. Other studies have investigated the job creation effect of reshoring and the economic impact of reshoring on the home country[5]. However, despite reshoring's significance, prior studies have not systematically analysed companies' reshoring motivations or the impact of reshoring on firm performance. Moreover, existing studies have mainly addressed reshoring in advanced countries such as the US, Japan, and Europe rather than in less advanced countries such as Korea. In addition, the analyses' results regarding the determinants and effectiveness of reshoring have varied with the industries studied. These variations suggest that reshoring motivation and performance might be subject to such variables as industry type and a country's economic level.

In light of the above contention, the following questions arise: what precisely are global companies' motivations for reshoring and do reshoring strategies truly help companies improve their performance? Do international companies that are actively reshoring in less advanced countries have the same motivations as those in developed countries, and is their performance similarly improved? Do the expected effects of reshoring apply equally to all industries, or are greater effects expected in a particular industry, such as traditional manufacturing or the advanced technology industry? The purpose of this study is to systematically examine companies' reshoring motivations and organizational performance. The study also empirically investigates whether home countries and the industrial types of reshoring companies can control reshoring motivations and performance. The results of this study may have strategic implications for companies planning to reshore in the future, from the perspective of global supply chain management.

This paper consists of the following sections. First, a literature review introduces the concept of reshoring and its strategic significance in modern global supply chain management. The literature review establishes the theoretical basis for identifying an international firm's reshoring status and its impact on organizational performance. The relevant hypotheses are then developed. Finally, the last section presents the empirical analysis and the discussion.

2. Literature Review

Many studies have explored the reshoring motivations of global firms, and one of the most important motives identified has been the cost factor. In general, foreign investment decisions of companies have been based on the lower costs and wages that can often be found abroad. Recently, however, these cost-reduction benefits have been waning. Labour wages in local countries have begun to rise, while productivity has not been as high as expected. In addition, as offshoring has proliferated across the globe, supply chains have become more complex, increasing the cost of global logistics. Reshoring decisions cannot be explained on the basis of cost alone, pointing out that small- and medium-sized enterprises have recently been transferring their manufacturing processes from low-cost countries to high-cost home countries[1]. This may be due to a lack of skilled workers in the host country, and a resulting loss in innovation potential. This may lead to a poor quality of offshore production. Furthermore, as the complexity of global supply chains has increased with an increasing number of host countries, companies faced reduced operational flexibility and, at the same time, increased global logistics and supply chain coordination costs. Therefore, companies may return production to their home countries to lower these costs. In addition, offshoring presented a risk of losing know-how to local companies. Yet another reason behind the decision to reshore is to reacquire the "made in" effect from producing in

home countries[6]. Based on the existing literature, this study categorises reshoring drivers into the following seven factors: quality improvement and brand image enhancement agenda; response to changes in country factor costs; reconfiguration and restructured costs; enhanced innovation capability; improved customer responsiveness; risk management and supply dependability; and institutions. This study empirically analyses the reshoring motivations of international firms in terms of these seven factors.

Existing studies on the performance of reshoring companies have focused mainly on the economic effects on the home country. For example, the job creation effect of reshoring is high in Europe[7]. Meanwhile, the economic effects of reshoring are still being actively debated[8]. Although the debate on the actual effects of reshoring continues, many advanced countries (e.g., Germany, France, UK, and US) have adopted policies to support reshoring. Not showing consistent results, the aforementioned findings imply that reshoring can have positive or negative effects on a home country economy. However, most studies have predominantly focused on the economic effects of reshoring in a home country. Few studies have empirically analysed the performance of individual reshoring companies. Therefore, this study will examine whether individual companies' reshoring decisions have a positive effect on their performance.

As discussed earlier, the major determinants of companies' reshoring decisions include country factors, production flexibility, quality improvement, brand image enhancement, risk management, and cost savings in supply chain management. However, the motives of reshoring companies may differ by country or industry. For example, studies on reshoring by American and German businesses show clear differences between the two countries. American businesses consider production cost as a major motivation to reshore, while German businesses tend to emphasize qualitative factors, such as supply elasticity or product quality improvement. Meanwhile, Japan has implemented reshoring incentive policies to stimulate local industries and economies. For example, the former Prime Minister Abe designated a total of ten national strategic special zones throughout Japan, advocating for deregulation to foster regional industries so that overseas Japanese companies could return home. As a result, many Japanese companies returned to take advantage of the strong incentives, which also succeeded in attracting more foreign companies to Japan[9]. Compared to companies reshoring in advanced countries, companies reshoring in less developed countries would tend to have different motives. For example, in the case of Korea, wage increases in major investment countries, such as China, were not found to be a significant factor in reshoring decisions. In fact, Korean companies are continuing to increase their foreign investments, as they are facing increasing demand to localize production abroad. For this reason, businesses that have invested abroad are unlikely to reshore in Korea even with the support and encouragement of the Korean government. Rather, it is highly likely that reshoring in Korea could occur in high value-added fields and industries such as R&D, design, and technology. Therefore, the Korean government is seeking to develop an institutional incentive system for reshoring to attract high-value-added industries rather than to simply support reshoring for cost-saving companies[10]. The following hypothesis is accordingly established.

H₁: Global companies' motivation for reshoring differs from country to country.

Alternatively, the motivation for reshoring may depend on the characteristics of an industry. Traditional manufacturing companies such as those in apparel, textile, footwear, automobile, and machinery parts industries that have invested in low-wage countries to exploit low costs of production tend to reshore in home countries due to rising wages in local countries. Meanwhile, advanced-technology-related manufacturing and its R&D industry (e.g., information and communication technology, industries related to the Fourth Industrial Revolution that use artificial intelligence, Internet of Things (IoT) and 3D printing technology, and electric and autonomous vehicles) are motivated to

reshore based on advanced social infrastructure and skilled labour in their home countries. Therefore, this study classifies industries into the following two types: traditional manufacturing; and technology and knowledge-based industries. The study then analyses whether there are differences between these industry types in terms of reshoring motivations. The following hypothesis, based on what has been discussed above, is established. .

H₂: Global companies' motivation for reshoring differs from industry to industry.

In the short term, companies undergoing reshoring may experience an increase in costs from the relocation. These are the costs of moving their production facilities from overseas areas to home countries, establishing new production facilities in home countries, and relocating employees. Reshoring companies' financial performance may temporarily decline due to these short-term cost increases, but it may improve in the mid- to long- term as the company benefits from home country incentives and productivity improvements. In addition, companies may improve their strategic performance through reshoring. For example, a company's productivity may improve with higher quality employees, and its product quality and brand image could be enhanced. Moreover, transportation and logistics costs may be reduced as a result of supply chain simplification after reshoring. Reshoring seems to be a universal trend around the world, but if we examine it in detail, there may be distinct performance differences across countries or industries. For example, reshoring policies emerged in the US starting in the late 2000s, and they have continued to expand in advanced countries, such as in European countries and Japan[11]. A common characteristic of reshoring performance in developed countries is that the job creation effect from a reshoring decision is quite large[10][11]. In all, reshoring has created 576,000 jobs in the US since 2010, and it has been reported that reshored companies in the US will continue to improve their competitiveness. In fact, from 2010 to 2018, the employment effect from reshoring in the US increased by 2,300%. Although it may have, in part, stemmed from national macroeconomic effects, experts claim that the expansion of corporate reshoring was a major driver of the increase. In addition, the increased employment of international companies in their home countries means that the financial performance of the reshoring companies would also continue[11]. On the other hand, the reshoring performance in less developed countries would be different. In contrast to the above cases, Korea actually has a very low percentage of reshoring companies compared to those offshoring, and the country's trend of domestic companies expanding overseas and offshoring does not appear likely to change anytime soon. In addition, the financial and strategic performance of reshoring in less developed countries is not as clear as that in developed countries. This leads us to the following hypothesis.

H₃: Global companies' reshoring performance varies from country to country.

Reshoring performance may vary by industry. Companies' motives for reshoring also vary by industry, and the expected effects and actual performance may be different. On the one hand, traditional manufacturing firms that have invested in low-wage foreign countries to exploit low costs of production face diminished cost advantages when local wages increase. When the home country government offers cost incentives to attract corporate reshoring, these manufacturing companies may decide to reshore to gain advantages. Thus, traditional manufacturing firms can further increase their cost efficiency and financial performance through reshoring. On the other hand, in the case of advanced technology and knowledge-based manufacturing, if the human resources and infrastructure in the home country's information technology or high-tech fields are very developed, a company will actively reshore even if the operational costs in the home country are high. In addition, advanced-technology-related manufacturing companies can further enhance their international competitiveness in new technology, R&D, and organizational innovation through reshoring. Against this backdrop, this study presents the

following hypothesis.

H₄: Global companies' reshoring performance varies from industry to industry.

3. Research Methodology

3.1 Research Method

This paper adopts a quantitative research method to statistically test those established hypotheses. A survey method is used to collect the quantitative data. The following sections present the construct operationalization to measure the variables, the sampling strategy, and the data collection methods. The constructs for the hypothesis testing have been operationalized for measurement and are based on comprehensive literature that empirically measured and tested the relevant constructs. All the variables presented in this section were measured on a five-point rating scale, and the questionnaire was developed on the basis of those measurements. This paper empirically analyses the differences between countries in terms of reshoring motivation and performance, using the examples of the US, Japan, and Korea. Data were collected from international companies with subsidiaries in Korea and with headquarters in the US, Japan, and Korea. While the US ranks first based on GDP (gross domestic product; i.e. \$21,433,226 as of 2020) and Japan ranks 3rd (i.e. \$5,081,770 as of 2020), Korea ranks 12th (i.e. \$1,646,739 as of 2020)[12]. This indicates that the level of economic development is very high in the US and Japan, and relatively lower in Korea. Meanwhile, sample firms were identified using Korea Trade-Investment Promotion Agency (KOTRA)'s directory of global firms that had entered Korea. A Korean governmental organization under the Ministry of Trade, Industry and Energy, KOTRA provides publicly credible data on foreign investment and trade to the public regularly[13].

3.2 Data Collection

There were a total of two thousand and seventy-eight(2,078) companies, and a survey was conducted among five-hundred (500) randomly selected companies. This study filtered the sample companies by asking whether they had at least one reshoring experience. The survey targets were limited to employees who were at the team-leader level or higher who were familiar with the headquarter's international management strategy. Over a period of 1.5 months in 2020, a total of fifty-three (53) individuals responded to the survey. There were thirty (30) American companies, twelve (12) Japanese companies, and eleven (11) Korean ones.

4. Data Analysis Results

[Table 1] shows the descriptive statistics of the variables. To test the Hypothesis 1, we analysed differences in reshoring motivations in the three countries by conducting a one-way analysis of variance using IBM SPSS25 software. This method aimed to detect differences in motivation across countries. The results are presented in [Table 2] to [Table 9]. As shown in the tables, motivational differences by country are found in all items of customer service, 1 item of risk management, 2 items of the labour factor, and 3 items of the country factor. The result shows that while there are no differences the reshoring motivation in terms of the reconfiguration and restricted cost factor, there are statistically significant differences in the customer service factor among the three countries. The post-hoc analysis showed that the US and Japan are categorized in the same group while Korea is different, showing that the means for the US and Japan are higher than those of Korea. This result implies that companies in the US and Japan make reshoring decisions to improve their customer service more than Korean

companies do. As shown in [Table 4] and [Table 5], while there are no differences in reshoring motivation in terms of supply chain efficiency and the flexibility factor, there are statistically significant differences in the risk management factor among the three countries, partially in the two items, RM2 and RM5. The post-hoc analysis showed that in RM2, the means of the three countries are all different, with Korea having the highest mean, followed by the US and Japan. Also for RM2, the means of the three countries are all different, with the US having the highest mean, followed by Japan and Korea. This implies that in terms of local security, Korea is the most sensitive in making reshoring decisions. When it comes to needing certainty around delivery times, the US appears to have the strongest motive for reshoring.

[Table 1] Descriptive Statistics

Variables		N	Mean value	Standard deviation
Reconfiguration and restricted cost	RR1	53	3.8868	.72484
	RR2	53	3.9057	.68680
	RR3	53	4.1509	.66205
Customer services	CS1	53	3.7736	.69729
	CS2	53	3.9245	.58339
	CS3	53	4.0000	.75955
	CS4	53	3.8868	.86958
	CS5	53	3.9811	.84331
Supply chain efficiency and flexibility	SEF1	53	3.5283	.60776
	SEF2	53	3.6226	.62716
	SEF3	53	3.6792	.72784
Risk management	RM1	53	4.1698	.46969
	RM2	53	4.1321	.52027
	RM3	53	4.3396	.73231
	RM4	53	4.2264	.54213
	RM5	53	4.1509	.74411
Labour factors	LF1	53	3.8679	.89952
	LF2	53	3.8491	.86372
	LF3	53	2.6226	.73971
Country factors	CF1	53	3.6415	.96266
	CF2	53	4.0755	.58339
	CF3	53	4.1698	.67185
	CF4	53	3.8679	.70813
	CF5	53	3.8491	.84116
	CF6	53	3.9623	.78354
Cost	Cst1	53	3.2642	.73774
	Cst2	53	3.2830	.79366
Quality	Qu1	53	3.9057	.56378
	Qu2	53	4.0566	.49672
	Qu3	53	3.8113	.70864
Organizational Innovation	OI1	53	3.9434	.63291
	OI2	53	3.9811	.57145

[Table 2] Differences in Reshoring Motivation by Country: Reconfiguration and Restricted Cost

Source of difference		Squared sum	Degree of freedom	Mean Square	F	Significance
RR1	Between groups	.028	2	.014	.026	.974
	Within groups	27.292	50	.546		
	Total	27.321	52			
RR2	Between groups	.819	2	.410	.864	.428
	Within groups	23.709	50	.474		
	Total	24.528	52			
RR3	Between groups	.167	2	.083	.184	.832
	Within groups	22.626	50	.453		
	Total	22.792	52			

[Table 3] Differences in Reshoring Motivation by Country – Customer Service

Source of difference		Squared sum	Degree of freedom	Mean Square	F	Significance
CS1	Between groups	8.500	2	4.250	12.661	.000
	Within groups	16.783	50	.336		
	Total	25.283	52			
CS2	Between groups	7.945	2	3.973	20.366	.000
	Within groups	9.753	50	.195		
	Total	17.698	52			
CS3	Between groups	14.283	2	7.142	22.720	.000
	Within groups	15.717	50	.314		
	Total	30.000	52			
CS4	Between groups	22.392	2	11.196	33.068	.000
	Within groups	16.929	50	.339		
	Total	39.321	52			
CS5	Between groups	22.016	2	11.008	36.779	.000
	Within groups	14.965	50	.299		
	Total	36.981	52			

[Table 4] Differences in Reshoring Motivation by Country: Supply Chain Efficiency and Flexibility

Source of difference		Squared sum	Degree of freedom	Mean Square	F	Significance
SEF1	Between groups	1.455	2	.727	2.048	.140
	Within groups	17.753	50	.355		
	Total	19.208	52			
SEF2	Between groups	1.124	2	.562	1.454	.243
	Within groups	19.329	50	.387		
	Total	20.453	52			
SEF3	Between groups	1.527	2	.764	1.468	.240
	Within groups	26.020	50	.520		
	Total	27.547	52			

As shown in [Table 6] and [Table 7], the three countries differ in terms of reshoring motivation in several labour and country factors. Firstly, in LF1 and LF2, the US and Japan are in the same group, with higher mean values than those of Korea. This implies that the US and Japan are more motivated by the skilled workforce availability and labour productivity in their home countries than is Korea. Regarding CF1 and CF4, the US and Japan are in the same group, with higher means than that of Korea. This suggests that companies in the US and Japan are more motivated to utilize local resources compared to Korean companies. In CF4, the three countries differ from each other, with Japan having the highest mean and the US and Korea following. [Table 8] shows differences in reshoring performance by country. The reshoring performance of the countries are different in terms of cost-saving factors. While the US and Japan are in the same group, both with mean values above 3.0, Korea had a mean value of 2.6. Although for the two cost factors, the mean values of the US and Japan are slightly higher than that of Korea, a mean value of mid-3 points means that the cost saving performance would not be substantial. Meanwhile, the Korean companies' mean value of mid-2 points ensures that these companies' reshoring performance would be very low in terms of cost savings. Regarding the organizational performance factor (OI2), the US and Japan have higher mean values than that of Korea, and this difference is statistically significant. To test the Hypothesis 3, this paper classified the responding companies into the following two industry types: the traditional manufacturing industry (i.e., companies that produce textiles, machinery and auto parts) and the advanced technology industry (i.e., the knowledge and technology-based industry: there are thirty-five (35) companies in the traditional manufacturing category and eighteen (18) in the advanced technology industry. First, the traditional manufacturing companies focus on achieving economies of scale using existing manufacturing techniques. In this industry, labour productivity and cost and resource efficiency are expected to more strongly impact

offshoring motivation. The second type of industry requires the development of new, innovative technologies and has been profoundly affected by the Fourth Industrial Revolution. Semiconductors, solar power generation, technology test and inspection services, OLED fine chemical materials, solar cell development, and information and communication services are examples of this type of industry. This type requires more highly skilled manpower for research and production rather than simply requiring an inexpensive workforce. Therefore, more advanced infrastructure in R&D and production areas can be a determining factor in reshoring.

[Table 5] Differences in Reshoring Motivation by Country: Risk Management

Source of difference		Squared sum	Degree of freedom	Mean Square	F	Significance
RM1	Between groups	.119	2	.059	.261	.771
	Within groups	11.353	50	.227		
	Total	11.472	52			
RM2	Between groups	2.215	2	1.107	4.669	.014
	Within groups	11.861	50	.237		
	Total	14.075	52			
RM3	Between groups	1.043	2	.521	.971	.386
	Within groups	26.844	50	.537		
	Total	27.887	52			
RM4	Between groups	.950	2	.475	1.656	.201
	Within groups	14.333	50	.287		
	Total	15.283	52			
RM5	Between groups	8.599	2	4.299	10.645	.000
	Within groups	20.194	50	.404		
	Total	28.792	52			

[Table 6] Differences in Reshoring Motivation by Country: Labour Factor

Source of difference		Squared sum	Degree of freedom	Mean Square	F	Significance
LF1	Between groups	17.439	2	8.720	17.697	.000
	Within groups	24.636	50	.493		
	Total	42.075	52			
LF2	Between groups	10.009	2	5.005	8.694	.001
	Within groups	28.783	50	.576		
	Total	38.792	52			
LF3	Between groups	1.160	2	.580	1.063	.353
	Within groups	27.292	50	.546		
	Total	28.453	52			

[Table 7] Differences in Reshoring Motivation by Country: Country Factor

Source of difference		Squared sum	Degree of freedom	Mean Square	F	Significance
CF1	Between groups	30.836	2	15.418	44.424	.000
	Within groups	17.353	50	.347		
	Total	48.189	52			
CF2	Between groups	1.528	2	.764	2.363	.105
	Within groups	16.170	50	.323		
	Total	17.698	52			
CF3	Between groups	1.052	2	.526	1.173	.318
	Within groups	22.420	50	.448		
	Total	23.472	52			
CF4	Between groups	3.997	2	1.998	4.525	.016
	Within groups	22.079	50	.442		
	Total	26.075	52			
CF5	Between groups	11.742	2	5.871	11.719	.000
	Within groups	25.050	50	.501		
	Total	36.792	52			

CF6	Between groups	1.712	2	.856	1.417	.252
	Within groups	30.212	50	.604		
	Total	31.925	52			

To test the Hypothesis 4, this paper conducted a t-test to compare the mean differences between the two industry types. [Table 10] shows the results. There are few differences in reshoring motivation and performance by industry type except for the five factors (i.e., CS4; RM1, 2 and 3; LF3; and OI2). Regarding CS4, knowledge and technology-based industry have a higher mean value than that of traditional manufacturing, and the difference is statistically significant. This result implies that when making reshoring decisions, companies in the knowledge and technology-based industry are more motivated to seek a new product mix with novel value than are companies in the traditional manufacturing industry. Regarding risk management factors, the traditional manufacturing industry shows a higher mean value than that of the knowledge and technology-based industry. This suggests that compared to companies in the traditional manufacturing industry, those in the knowledge and technology-based industry are more risk taking and that in their reshoring decisions, they are less motivated by the need for risk management. For the Labour factor (LF), the two industries both have low mean values, but the value is lower in the traditional manufacturing industry. Regarding the OI2 performance factor, the knowledge and technology-based industry has a higher mean value than that of the traditional manufacturing industry. This implies that compared to companies in the traditional manufacturing industry, companies in the knowledge and technology-based industry are more proactive about expanding to new business markets and entering into new industry sectors using reshoring strategies. Having presented the above results in the local context, this research supports the Hypotheses 1, 2, 3 and 4 in a partial manner

[Table 8] Differences in Reshoring Performance by Country

Source of difference		Squared sum	Degree of freedom	Mean Square	F	Significance
CST1	Between groups	5.556	2	2.778	6.107	.004
	Within groups	22.745	50	.455		
	Total	28.302	52			
CST2	Between groups	5.826	2	2.913	5.409	.007
	Within groups	26.929	50	.539		
	Total	32.755	52			
QUA1	Between groups	.145	2	.072	.221	.802
	Within groups	16.383	50	.328		
	Total	16.528	52			
QUA2	Between groups	.277	2	.139	.552	.579
	Within groups	12.553	50	.251		
	Total	12.830	52			
QUA3	Between groups	1.621	2	.810	1.654	.202
	Within groups	24.492	50	.490		
	Total	26.113	52			
OI1	Between groups	1.477	2	.739	1.908	.159
	Within groups	19.353	50	.387		
	Total	20.830	52			
OI2	Between groups	2.295	2	1.147	3.906	.027
	Within groups	14.686	50	.294		
	Total	16.981	52			

[Table 9] Differences in Reshoring Motivation and Performance by Industry Type

Variables	Industry Type				T-value	P
	Traditional manufacturing (n=35)		Knowledge and Technology based industry (n=18)			
	Mean	S.D	Mean	S.D		
RR1	3.885	.758	3.888	.676	.015	.988
RR2	3.942	.683	3.833	.674	.546	.587
RR3	4.142	.692	4.166	.618	-.123	.903
CS1	3.774	.645	3.777	.618	-.031	.975
CS2	3.857	.601	4.055	.539	-1.777	.245
CS3	3.885	.718	4.222	.808	-1.548	.128
CS4	3.685	.832	4.278	.826	-2.459	.017**
CS5	3.913	.817	4.111	.900	-.802	.426
SEF1	3.542	.657	3.5	.514	.241	.811
SEF2	3.714	.667	3.444	.511	1.501	.139
SEF3	3.657	.725	3.722	.751	-.306	.761
RM1	4.257	.505	4.000	.343	1.937	.058*
RM2	4.228	.490	3.944	.539	1.932	.059*
RM3	4.514	.701	4.000	.685	2.546	.014**
RM4	4.257	.505	4.166	.618	.572	.570
RM5	4.142	.772	4.166	.707	-.109	.913
LF1	3.742	.816	4.111	1.022	-1.425	.160
LF2	3.885	.866	3.777	.878	.427	.671
LF3	2.742	.816	2.388	.501	1.678	.099*
CF1	3.657	1.083	3.611	.697	.163	.871
CF2	4.000	.594	4.222	.548	-1.323	.192
CF3	4.114	.718	4.277	.574	-.837	.407
CF4	3.914	.742	3.777	.646	.661	.512
CF5	3.942	.872	3.666	.766	1.135	.262
CF6	3.971	.785	3.944	.802	.118	.907
CST1	3.257	.657	3.277	.894	-.096	.924
CST2	3.314	.718	3.222	.942	.397	.693
QUA1	3.828	.568	4.055	.539	-1.401	.167
QUA2	4.000	.542	4.166	.383	-1.161	.251
QUA3	3.742	.657	3.944	.802	-.980	.332
OI1	4.000	.594	3.833	.707	.906	.369
OI2	3.885	.582	4.166	.514	-1.727	.090*

3. Discussion

This study analysed whether the motives and performance of reshoring international companies differ by country and industry. Summarizing this study's results, first, all countries (i.e., the US, Japan, and Korea) showed strong motives for reconfiguration, restricted cost, and risk management factors. With respect to these motivation factors, this study found no differences between countries. However, with respect to customer service, labour and country factors, a number of items showed between-country differences. In detail, US and Japan showed higher averages than Korea for those three factors. This suggests that in US and Japan, the domestic market is relatively large and important, and companies reshore to further improve their services to their domestic customers and thereby realize increased profits. On the other hand, Korea's domestic market size and profit potential are relatively lower; thus, there is less of an incentive to reshore to enhance customer service if it means facing a short-term cost increase. Regarding labour and country factors, the US and Japanese governments more actively encourage reshoring by offering strong incentives to companies. As a result, companies in those countries are highly motivated to reshore to realize advantages.

Regarding reshoring performance, the quality of products and services factor and the organizational innovation factor showed high average values in all three countries. This means that reshoring helps

companies improve the quality of their products and services as well as enhances their organizational innovation. It was also found that reshoring performance varies by country. In particular, the cost and organizational innovation elements tended to differ by country, with US and Japanese companies having higher mean values than those of the Korean companies. This result implies that reshored companies in advanced countries such as the US and Japan may enjoy cost-based advantages and organizational innovational benefits from reshoring. Conversely, no significant difference was found between countries in the quality of products and services factor. This implies that not only in the US and Japan but also in Korea, reshoring companies are reaping the benefit of improved quality in their products and services.

The results regarding differences in reshoring motivation and performance by industry are as follows. The mean value for motivation to improve customer service was significantly higher in the knowledge and technology-based industries than in the traditional manufacturing industry. This implies that companies in knowledge and technology-based industries are more strongly motivated to improve products and added value in their home countries by proactively utilizing technology-related cluster effects. In addition, risk management and labour factors were higher in the traditional manufacturing industry. This implies that companies in the traditional manufacturing industry are less inclined to take risks, preferring a safer environment compared to companies in technology and knowledge-based industries. In addition, the tendency to increase cost advantages by improving labour productivity would have a higher value in the traditional manufacturing industry. In terms of reshoring performance, it was found that the achievements of organizational innovation (e.g., introducing new technologies) are higher in technology and knowledge-based industries. This suggests that due to characteristics of the industry, companies in technology and knowledge-based industries tend to acquire and utilize new technologies and knowledge more than companies in traditional manufacturing industries do.

4. Conclusions

The findings of this paper have meaningful implications to the supply chain management of international companies planning to reshore in the future. Many advanced countries have been promoting reshoring for its positive economic and employment effects. From the standpoint of individual companies, however, this option must be weighed carefully. While the incentives offered by a home country's government may seem attractive, a company must carefully consider its industry's characteristics and whether the governmental incentives are matched to the company's internal and external circumstances. Since reshoring can increase restructuring and reconfiguration costs in the short term, these costs as well as the expected effectiveness of the reshoring should be carefully analysed. As improvements in corporate innovation cannot be achieved in the short term and must be cultivated in a long-term way, companies may face substantial difficulty in accurately estimating reshoring effects and determining their final course of action. The international business environment changes rapidly on a daily basis, and the recent Covid-19 pandemic is yet another important factor to consider in the decision to reshore. Therefore, reshoring decisions should not be based on fragmentary information. Rather, they should be approached strategically with an integrated, macroscopic view of a company's global supply chain management.

This study does, however, have a few limitations. Firstly, as the norm for empirical investigations, the greater the number of sampled companies, the stronger the base for the generalizability of the findings. Follow-up research is imperative. Secondly, the research findings presented in this paper are of overseas-based, global companies investing and operating in the local context of Korea. Thus, further research needs to expand the scope for investigation in terms of the survey region and respondent characteristics for detailed analysis.

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