A Study on Importance and Satisfaction of Forwarders as to Airline Services: Based on the Main Export Route of Korean Market

Sung-Hyun Yoon[1], Dr. Jin-Woo Park[2]

ARTICLE INFO	ABSTRACT
	The purpose of this study is to establish a service policy and procedure for airlines by identifying the services that the forwarders want to have amid the conditions of stagnant cargo demand and high oil prices. The survey was conducted for the three routes of Frankfurt, LA and Shanghai, which were the major export routes. The differences between importance and satisfaction of services were analyzed by utilizing IPA and gap analysis. It was found that the five factors such as price, agility, sociality, ease of use and reliability and also the 24 service items had differences between importance and satisfaction for each route. This study aims to take the lead in the service competition and provide strategic implications for survival in the future through identifying and providing the services that the forwarders want to have in the harsh market situation featuring the revenue reduction and cost increase of airlines.

1. Introduction

Korea-originating air cargo demand has continued to decrease coupled with the global airline demand peaked in 2010. The demand reduction of IT products, the major cargos of air transport, is likely to continue for the time being with the sluggish economic recovery in Europe and the slower growth in China. In addition, the high value added logistics is becoming a low-margin market structure due to the excess of supply of air cargos, in particular, the rate competition caused by the increase in passenger belly space. Moreover, the airlines are in a situation where their survival could not be guaranteed without an improvement for service competitiveness and profitability because of overseas factory relocation, lighter and smaller packages, minimization of air cargos due to precise SCM and improvement in timeliness of freight transport of shippers. Furthermore, jet fuel has become about three to four times higher than 10 years ago with more than USD 120 per barrel despite such economic downturn; thereby, playing a critical factor for the competitiveness and profitability of airlines. The airlines are now in a crisis where they have to survive a severe downturn by developing and carrying out services meeting customer's needs in addition to cost reduction in order to overcome such situation.

Under such environment, airlineshould identify what cargo agencies that are their customers want and respond by establishing appropriate service policies and procedures. Thus, the purpose of this study is to suggest strategic implications in terms of the things that the airlines should pursue for competitiveness improvement by identifying the properties deemed important by the forwarders among the service factors as to the major routes of Korea-originating airlines in addition to determining satisfaction.

2. Selection Factors and Service Properties of Airlines

It would be required to have a complex procedure that includes packaging, unloading, warehousing, customs clearance, documentation, etc. in addition to transportation in order to transfer cargos internationally. Thus, the shippers leverage the strategy of assigning such tasks to a third-party called forwarder and focusing their assets on the core areas such as R&D, sales, marketing, etc. In addition, the airlines allow the forwarders to sell on behalf of them and cargos are to be brought in the airlines' warehouse as they are ready for carriage. Sometimes, the forwarders carry out even bulk unification cargo; thus, they are able to reduce sales related cost as well as cargo terminal investment cost and ground handling cost. As a result, the

[1] Department of Business Administration, Korea Aerospace University,Korea.
[2] Associate Professor, Dept. of Business Administration, Korea Aerospace University. Hwajeon-dong, Deogyang-gu, Goyang-city, Gyeonggi-do, South Korea.

shippers assign the forwarders and the forwarders select and use airlines based on their own criteria. Due to this structure, the airlines attract cargos from the forwarders. In recent years, the forwarders have become a more specialized and larger through mergers and acquisitions in order to provide all kinds of logistics related services such as warehouse, storage, information. In addition to transportation globally with a global network to take the responsibility for most of the shippers' supply chain.

The current air cargo market is facing several obstacles and uncertainties including economic crisis, rise of oil price, and natural disaster. However, the importance of air cargo is gradually on the rise even in this situation; thus, the airlines providing each air cargo service should secure competitive advantage through service improvement on service areas as well as identifying the selection properties of major airlines (Park, 2013). The overall degree of satisfaction increases when the airlines provide services desired by the customers. Furthermore, they lead to word of mouth and re-purchasing; thus, the provision of such outstanding services has played an important role for the survival of airlines and the studies on airline selection factor and service properties are constantly underway. Choi (2003) analyzed the importance of forwarders on the airlines' services with the four dimensions of supply capability, reliability of services, rate competitiveness and operation capability as for the 18 evaluation elements. And service reliability had the highest degree of importance, and followed by operation capability, supply capability and rate competitiveness. Moon (2006) analyzed the factors to be considered when the forwarders select airlines. Schedule, space offering, and rate were found to be the most important factors. Kim (2008) verified which would be deemed the most important element to the forwarders by classifying the 16 factors into the five factors of ease of use, familiarity, reliability, incentive, rate and flight frequency, and concluded that rate and flight frequency were deemed the most important factors. Na (2009) measured the quality of Sky team air cargo service and reliability, fast responsiveness, affordability, safety, and infrastructure. were found to be the important qualities for the cargo service. Park (2013) defined the four dimensions of business operation capability, reliability, responsiveness and security by the 14 sub-factors. As a result, the forwarders placed importance on them in the order of reliability, responsiveness, business operation capability and security. Lima et al. (2007) analyzed that price, reliability, time and flexibility would be important in their study on the selection of eight airlines in Brazil and also TAM linhas Aereas was receiving the highest reputation among the airlines in Brazil. Park et al. (2009) revealed that accuracy and economic efficiency would be more important factors from the shipper's perspective, whereas accuracy and agility would be more important factors from the expert's perspective among such factors as agility, accuracy, safety, economic efficiency and dependability from the competitiveness evaluation for Korean courier delivery services company. Meng et al. (2010) investigated the factors influencing customer satisfaction as to air cargo outsourcing, and they proposed delivery value, knowledge innovation value, service-added value, information value and performance satisfaction value for customers. Also they concluded that there were the customer satisfaction factors by identifying reliability, agility, customer orientation, and flexibilityin terms of customer satisfaction. They considered that delivery factor and reliability factor were the most important factors for empirical analysis.

3. Methodology

This study extracted the questionnaire items based on the previous studies and the preliminary research. Also this study allowed the five experts who had worked in the cargo industry for more than 15 years to delete and modifythe questions that were not worthy of a question due to overlapping concept or changing time through the interview and preliminary survey. In addition, this study formed the total of 24 survey questions by adding the items that were regarded as the important properties in the current air cargo market even though they had not been mentioned in the past like the environmental factor or included in the previous studies since they were not deemed important through the interviews with the experts. As for service importance and the service satisfaction for each airline, they were measured based on the Likert 7-point scale. As for importance, it was measured based on 1= Not very important and 7= Very important, whereas 1= Very dissatisfied and 7= Very satisfied for airline satisfaction. The measurement variables and items used in this study are as shown in Table 1.

<Table 1>Modified airline service properties

Property	Factor
Price	Inexpensive rate Diverse prices depending on product Rate discount of air cargo in accordance with performance (volume incentive) Rate increase policy for sufficient lead time
Agility	Fast transportation time (fast destination arrival time) Fast loading time at transit points (transit or trucking) Flight on time (accuracy of departure and arrival time) Global network (transportation route and flight region) Various transportation schedules (frequent schedule)
Reliability	Space limit that can be offered once Ability to provide stable space for regular traffic Availability for space in high season Responsiveness and notice for urgent situation (delay, off loaded) Transportation of reserved cargo without irregularity
Ease of use	Ease of use and accuracy of cargo tracing Ease of use for reservation (staff, system) Flexible reservation transportation service (accommodating cargo change and weight increase) Sharing partnership between companies (strong ties)
Sociality	Company reputation (image, integrity, industry leadership) Promotion of green logistics (interested in green logistics) National authentication(AEO, ISO 9002, etc.) Provision of information and suggestion of appropriate guideline Various marketing promotions (FAM tour, marketing materials) Integrity of sales and transportation staffs

This study conducted the survey for the three most important routes of North America, Europe and China, which were Frankfurt, L.A and Shanghai, among the demands as to Korea-originating export cargos. This study conducted the survey through direct visit and Internet for the forwarders that were the active members of Korea Logistics Association in 2012. The survey had been conducted for about 2 months from December 2012 to January 2013 and 200 copies of the questionnaire were distributed to the forwarders that had secured a large quantity of cargos in these three routes. Excluding the questionnaires whose responses were incomplete or less reliable, 167 copies for Frankfurt, 145 copies for LA importance and 171 copies for Shanghai from the total of 168 respondents were utilized in the empirical analysis. The general features of samples are as shown in Table 2.

<Table 2>Demographic characteristics and general features

Item		Number	Percentage
Title	employee	33	19.6
	Assistance manager	32	19.0
	Manager	78	46.4
	General manager or above	25	14.9
Working period	>3 years	21	12.5
	Between 3 and 5 years	28	16.7
	Between 5 and 10 years	49	29.2
	<10	70	41.7
Main handling commodity	Electric parts	*99*	*58.7*
	Machine or automobile parts	27	16.3
	Garments	22	13.0
	Others	20	12.0
Monthly cargo tonnage	>30	*30*	*17.9*
	Between 30 and 100	19	11.3
	Between 100 and 300	45	26.8
	<300	74	44.0
Monthly Master Air Waybill	>100	33	19.6
	Between 100 and 300	52	31.0
	Between 300 and 900	35	20.8
	>900	48	28.6

As shown above, as for work position, manager or higher accounted for 60 percent and five years or more accounted for 70 percent as for years of experience. As for major parts, electronic products accounted for almost 60 percent. The survey was conducted mainly for the forwarders that had cargos; thus, more than 100 tons per month accounted for almost 73 percent (those listed in the top 100 forwarders), and the forwarders with use of more than 300 times a month accounted for about 50 percent.

4. Empirical Results

4.1 Result of Factor Analysis
This study conducted the reliability analysis in order to examine whether the measurement items that formed the airline service propertieshad properly reflected the relevant theoretical variables, and conducted the exploratory factor analysis in order to verify the validity as to the questionnaire by compressing the information contents. The study usedthe Verimax rotation in order to examine whether the factors being used were accurately measured and the study was based on the Eigenvalue of more than 1 so that the dispersion of at least more than one variable could be explained. The factor loading to represent the correlation degree between variables and factors was set to be more than 0.5. It was classified into the five factors as shown in Table 3. All of Cronbach' α values were more than 0.6; thus, it could be concluded that there was not a problem for reliability.

\<Table 3\>Factor analysis on importance of airline services

Factor	1	2	3	4	5	Cronbach' α
Sociality	.868	.140	.155	.044	.104	0.891
	.836	.157	.160	.092	.034	
	.765	-.045	.036	.081	.115	
	.717	.170	.261	.243	-.044	
	.683	.210	-.036	.319	.172	
	.656	.306	.071	.275	-.053	
Reliability	.166	.860	.137	.169	.029	0.881
	.189	.814	.203	.147	.122	
	.152	.692	.264	.375	.088	
	.250	.638	.250	.184	.236	
	.033	.545	.143	.470	.244	
Agility	.197	-.009	.824	.079	.037	0.842
	.082	.410	.673	.123	.107	
	.087	.063	.672	.402	.172	
	.127	.410	.671	.118	.222	
	.062	.379	.647	.050	.132	
Ease of use	.260	.308	.157	.692	.134	0.825
	.444	.125	-.008	.642	.043	
	.325	.243	.297	.638	.086	
	.119	.409	.350	.630	.167	
Price	-.178	.038	.049	.172	.694	0.663
	.398	-.046	.136	.118	.687	
	.171	.272	.058	.165	.665	
	.060	.205	.281	-.121	.605	
Verification of KMO and Bartlett	0.879					
Sphericity verification of Bartlett	Chi-square approximation		2422.29			
	Order of freedom		276			
	Significant probability		0.000			

4.2 Result of Gap Analysis

T-test was used to verify the difference for the relationship between expectation and satisfaction as to the airline selection factor and service properties of the forwarders. The results of Gap Analysis for each factor and item were as shown in \<Table 4\> and \<Table 5\>. As a result of Gap Analysis, there appeared to be a significant difference for each factor of Frankfurtroute, L.A route and Shanghairoute. On the whole, satisfaction was found to be lower than importance; however, satisfaction was found to be higher than importance as for socialityfactor.

Looking in detail, most of the respondents expected to have an accurate and economic rate service for urgent and expensive cargos; however, they responded that they had not generally received that kind of service. On the other hand, they were found to have a higher degree of satisfaction than expected for green logistics, national authentication (AEO, ISO), various promotion and corporate image, which have become a global issue in recent years. The factors, which had a significant difference for all of the three routes, were the 15 factors that included promotion of green logistics, national authentication, various promotion, company reputation, space offering in high season belonging to reliability, stable provision of space as to fixed quantity, fast processing and notice for urgent situation, transportation without irregularity, fast transshipment time of pass stop belonging to agility, fast transportation time, flexible reservation shipment service belonging to ease of use, ease of cargo tracking, cheap transportation cost belonging to price, air cargo rate discount in accordance with performance andrate increase policy for sufficient lead time. From all the above items,it was found that the forwarders were not satisfied to the extent that they had expected for all the routes. On the other hand, information offering of socialitydid not differ significantly in all the routes.

<Table 4> Result of gap analysis for each factor

Factor	Frankfurt			L.A			Shanghai		
	Import ance	Satisfa ction	p-value	Import ance	Satisf action	p-value	Importance	Satisf action	p-value
Sociality	4.38	4.93	.000**	4.23	4.56	.001*	4.74	4.93	.014*
Reliability	5.91	5.08	.000**	6.05	4.70	.000**	6.18	5.30	.000**
Agility	5.69	5.38	.000**	5.90	5.11	.000**	5.80	5.22	.000**
Ease of use	5.70	5.38	.000**	5.49	4.97	.000**	5.71	5.32	.000**
Price	5.38	4.66	.000**	5.30	4.20	.000**	5.48	4.80	.000**

*p<0.05, **p<0.001

Looking at each route, Frankfurt route had a significant difference for ease of reservation and various prices. On the other hand, it did not have a significant difference for space limit that is available once, global network, flight on time, various transportation schedules and sharing partnership between companies. It is believed that there has not been any space related issue even with the sudden increase in schedule and cargo quantity since many airlines were flying on this route. In addition, it was found that flight on timeand partnership between airlines and forwarders was maintained accordingly. Those factors that did not have a significant difference in Frankfurt route, such as space that is available once, global network, flight on time, various transportation schedules and sharing partnership, had a significant difference in L.A route. L.A route was being operated based on somefreighters; thus, the shippers were found to be dissatisfied with space issue, flight schedule, flight on timeand sharing partnership. On the other hand, it did not have a significant difference for ease of reservation and various prices, which had a significant difference in Frankfurt route. Therefore, the shippers were found to be satisfied to the extent of their expectation for these areas in L.A route. Shanghai route did not have a significant difference for global network, ease of reservation and various prices; however, this could be explained by the fact that it was a short-range point to point transportation and there were more flights compared to the demand. On the other hand, space limit that is available once, flighton time, various flight schedules and sharing partnership were found to have a significant difference. It is believed that this is because there are some cases of not being able to accommodate all when there is a sudden increase in demand and also there are often delayed flights and only few flights fly at the good time slots.

Most of those items with the largest difference between expectation and satisfaction were found to be related to reliability and price. The parts are being supplied globally in recent years due to the global saucing; however, the most important thing would be to ensure that the reserved cargos would depart and arrive at the destination safely on time due to the diffusion of the Just in Time concept, the no inventory policy. In the case of not departing on time due to airline defect or other reasons, they should come up with an alternative by immediately informing forwarders after carrying out an appropriate action. However, the shippers continue to put pressure on the forwarders, the service providers, for lowering price through bidding every year; thus, the forwarders should request the airlines for a reasonable price as well. If price reduction is not appropriate, the forwarders will be likely to get loss as the man-in-the-middle position. Therefore, it is possible to find out that they are very sensitive to price issue. On the other hand, it was found

that only few forwarders were interested in the long-term tasks promoted by the airlines, such as promotion of green logistics and image enhancement through national authentication, in this harsh reality, whereas most of the forwarders were not interested in these issues. Moreover, event or customer invited tour were not deemed very important; however, they had a higher degree of satisfaction than expected since the airlines have promoted these aggressively.

<Table 5> Result of gap analysisfor each item

Factor	Property	Frankfurt			L.A			Shanghai		
		Importance	Satisfaction	p-value	Importance	Satisfaction	p-value	Importance	Satisfaction	p-value
Sociality	Promoting green logistics	3.77	4.58	.000**	3.6	4.26	.000**	4.36	4.57	.034*
	National certification status	3.89	4.69	.000**	3.94	4.39	.006*	4.47	4.87	.001*
	Various promotion	3.82	4.35	.000**	3.53	3.92	.004*	3.99	4.36	.000**
	Company reputation	4.95	5.47	.000**	4.68	5.08	.001*	5.17	5.40	.027*
	Information offering	4.90	4.94	.662	4.62	4.64	.861	4.99	4.94	.576
	Integrity of staff	5.00	5.57	.000**	5.03	5.04	.912	5.46	5.41	.664
Reliability	Space in high season	5.98	4.86	.000**	6.22	4.4	.000**	6.35	5.12	.000**
	Availability of space	6.16	5.22	.000**	6.18	4.82	.000**	6.19	5.49	.000**
	Ability to cope with emergency situations	5.96	4.90	.000**	6.28	4.58	.000**	6.42	4.94	.000**
	Space limit	5.46	5.24	.750	5.52	4.88	.000**	5.75	5.50	.011*
	Shipment without IRR	6.02	5.15	.000**	6.05	4.82	.000**	6.20	5.25	.000**
Agility	Global network	5.42	5.35	.561	5.55	5.12	.000**	5.26	5.09	.219
	Flight on time	5.84	5.59	.056	6.08	5.34	.000**	6.1	5.19	.000**
	Transportation schedule	5.49	5.31	.118	5.58	4.91	.000**	5.45	5.18	.025*
	Transshipment time	5.88	5.14	.000**	6.00	5.06	.000**	5.98	5.23	.000**
	Transportation time	5.87	5.52	.004*	6.21	5.13	.000**	6.16	5.43	.000**
Ease of use	Scheduled transportation service	5.54	5.09	.000**	5.50	4.63	.000**	5.60	5.20	.000**
	Sharing partnership	5.41	5.20	.074	5.23	4.92	.012*	5.40	5.15	.024*
	Ease of reservation	5.83	5.47	.000**	5.37	5.2	.161	5.73	5.61	.203
	Ease of cargo tracking	6.04	5.58	.000**	5.88	5.14	.000**	6.13	5.33	.000**

Price	Cheap transportation cost	6.15	4.86	.000**	5.89	4.12	.000**	6.02	5.16	.000**
	Various rates	5.08	4.56	.000**	4.39	4.13	.082	4.76	4.61	.320
	Discount fare	5.59	4.86	.000**	5.71	4.63	.000**	5.84	4.85	.000**
	Freight rate increase policy	4.83	4.38	.002*	5.15	3.72	.000**	5.30	4.57	.000**

*P<0.05, **P<0.001

4.3 Result of IPA

Martilla& James(1977)argued that it would be effective to use the central value rather than the mean value in the case where data was crowded at a certain value, whereas it would be effective to use the mean value rather than the central value for relative evaluation on data.Thus, this study conducted IPA by applying the mean value. As for the mean value of importance, Frankfukt route was 5.43, L.A route was 5.39 and Shanghai route was 5.58, whereas Frankfurt route was 5.08, L.A route was 4.70 and Shanghai route was 5.11 for the mean value of satisfaction.

The results on the items of "keep up the good work", "concentrate here", "low priority" and "possible overkill" in accordance with IPA matrix as to importance and satisfaction of the airline selection factors and service properties of cargo agencies are as shown in Figure 1, 2 and 3.
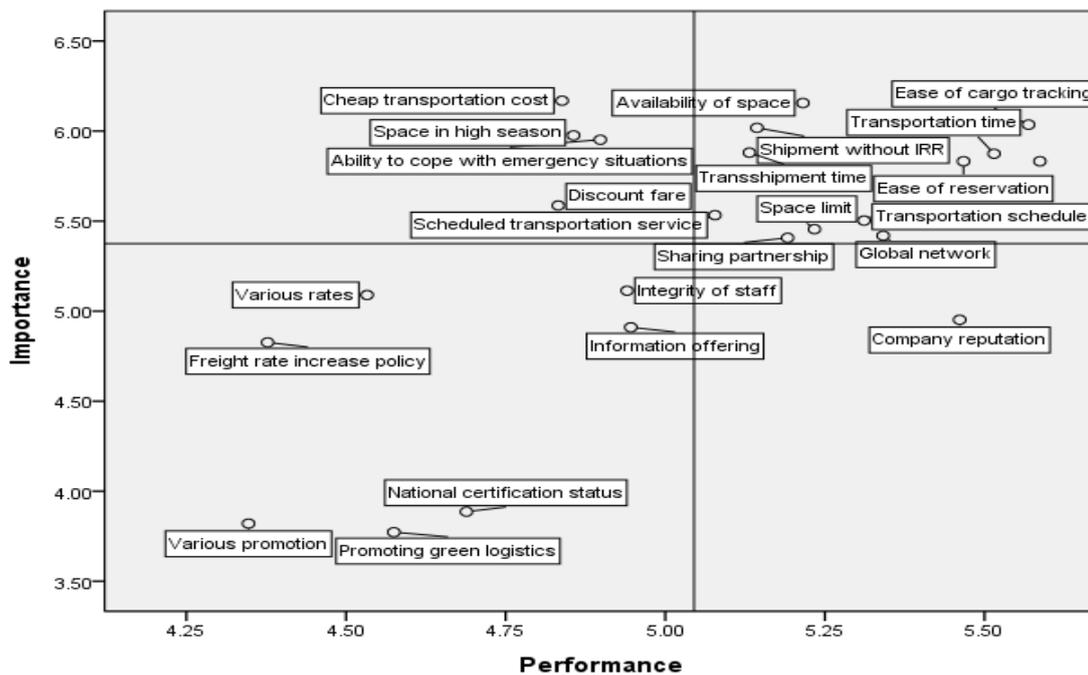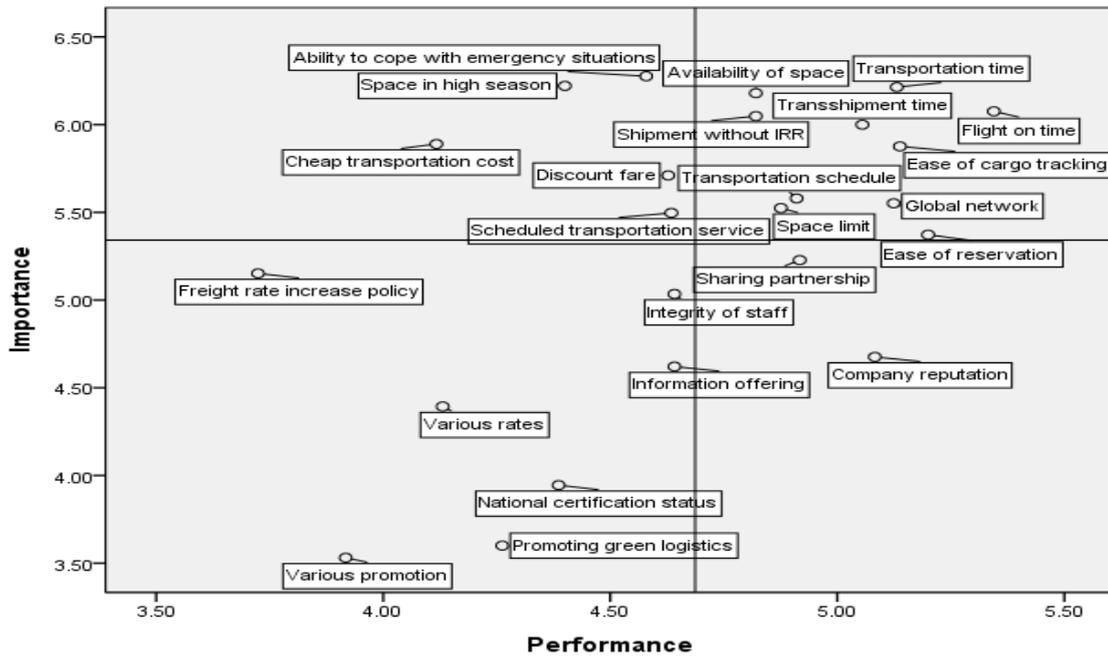

Figure 1. Frankfurt route
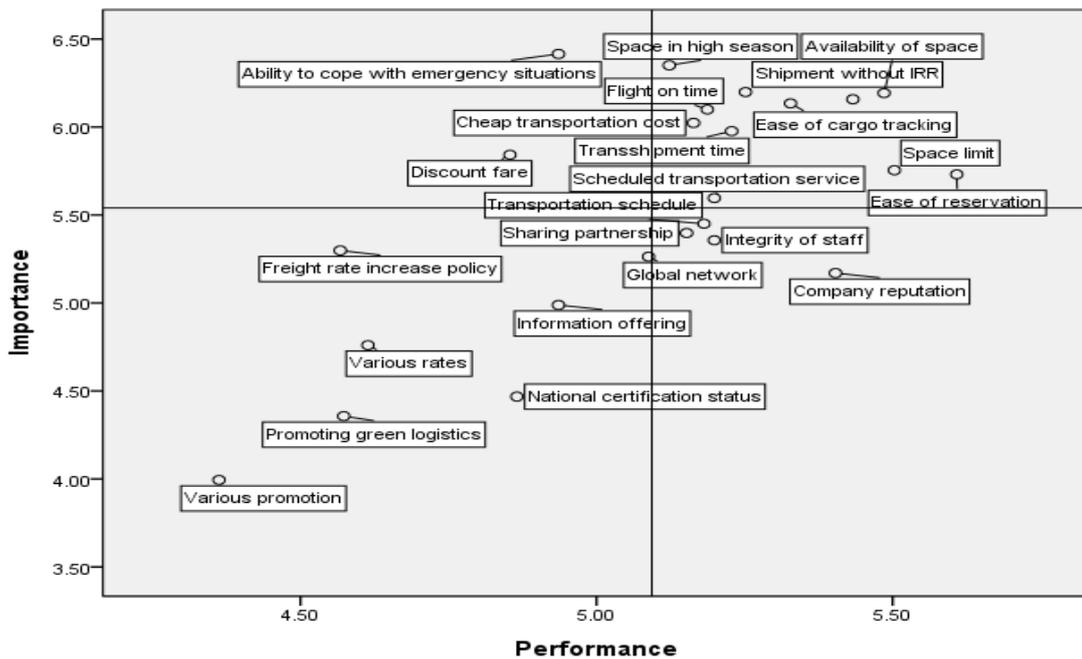
Figure 2. Los Angeles route

Figure 3. Shanghai route

As a result of IPA for each route, there were some items belonging to one of the quadrants for all routes while there were also some factors having a slight difference depending each route. The three properties of reliability (provision of stable space as to regular traffic, space limit that is available once and transportation without irregularity) in the first quadrant "keep up good work" and the three properties of agility (flight on time, fast transportation time and fast transshipment time) and the two properties of ease of use (ease of reservation and ease of cargo tracking) were found to be the common factors for each route. It was found that the airlines were satisfied with space offering and also flight on time and fast

transshipment and arrival. In addition, reservation via telephone, email or homepage was convenient and they were satisfied with the cargo tracking through the system. As for Frankfurt route, they were satisfied with frequent transportation schedule, flexible reservation transportation service that accommodated modification and weight increase of cargos, sharing partnership between companies and global network being operated in various destinations. On the other hand, as for L.A route, they were satisfied with schedule related items such as frequent transportation schedule, global network being operated in various destinations, etc. and services provided by the airlines. As for Shanghai route, they were satisfied with the fact that they received a sufficient space even in high season due to the frequent flights and a subsequent increase in demand and also inexpensive price with intense competition between the airlines rather than schedule related issues. The airlines need to constantly maintain the services shown in the first quadrant, which they have done properly so far. The second quadrant "concentrate here" are the properties that are not provided by the airlines at the acceptable level even though they are deemed important by the forwarders. Commonly, the airlines do not respond appropriately when an irregularity occurs due to airline delay, flight cancellation or sudden change in cargo demand. Moreover, they believe that the airlines are stingy about incentive for performance. In addition, they were dissatisfied with cheap transportation cost and securing space in high season as for Frankfurt route, whereas, they were dissatisfied with flexible reservation transportation system in addition to these factors as for L.A route.

It would be imperative to inform the forwarders, the customers, accurate facts and actions taken in a kind and detailed manner within a short period of time after carrying out an appropriate action for urgent situations such as flight cancellation and long-term delay due to airline maintenance or irregularitycaused by the nature of cargos. In addition, it would be imperative to establish a low cost system by utilizing the passenger belly supply, which is another alternative in this situation of high oil price. There had been a lot of heavy freights; nonetheless, the forwarders had no option but to use freighters even though the cost was higher due to the insufficient quantity of belly supply by the airlines. However, cargos have continued to become lighter and smaller packages and the unit cost on airplanes could be substantially reduced as a lot of the passenger planes like 777-300 that had a large quantity of belly space have being flown for the long-range routes. In particular, there have been some complaints that the price level of national airlines or some large-scale airlines has become relatively high while some airlines had reduced the price substantially by this strategy in such routes as Frankfurt route. Thus, it would be necessary to review the possibility that freighter oriented supply might be converted to passenger plane-centric supply even in the US-bound routes in addition to the European routes. Furthermore, it would be imperative to seriously consider the offering of tangible and intangible incentive depending on the performance of contributedtonnage and so on, which are provided to frequent flyers as conducted for passenger sales. On the other hand, the forwarders want a flexible reservation service to fully respond to sudden changes in cargo quantity of important shippers in L.A route; thus, the airlines should attempt to differentiate their services to offer different rate by services, in other words, selling urgent go-show cargos at high prices as charging additional fee and less time-sensitive cargos with two to three days delay at an affordable price.

The third quadrant "low priority" is the area that the forwarders are currently not considering as important. Also, it is the area that does not need to be improved; thus, there appeared to be rate increase policy with lead time, various rates, information offering, national authentication status, promotion of green logistics and various marketing promotions. The agencies may not regard rate increase policy with lead time and various price policy as an important factor based on their judgment that there would not be many incidents in which price would increase due to low demand. Furthermore, it is possible to find out that the forwarders were not much interested in those social issues such as national authentication or promotion of green logistics. In addition, they were not satisfied with the airlines' promotional events, advertising and promotion through mass media or magazines; however, they did not deem them important either. They did not deem information offering important since they were able to check in real time what they wanted to get. The global network of Shanghai route is the point to point transportation that would not usually need transshipment in a short-range; thus, the forwarders thought that various routes would not be necessary.

The fourth quadrant "possible overkill" represented company reputation and integrity of staffs. It was found that the forwarders did not deem the fact that the airlines was creating an atmosphere of clean and honest transactions as fulfilling their full social responsibilities for an enhancement of corporate image as important when selecting an airline. Sharing partnership was found in L.A route while it was also found in Shanghai route as well. However, Shanghai route considered even frequent flights as an excessive factor in addition to sharing partnership. It can be concluded that Shanghai route had too many of flying more than

10 times a day; thus, it was viewed as a waste.

5. Conclusion and Implication

This study identified the properties deemed important among the airline selection factors of the forwarders as to the three main routes of Korea-originating airlines, which were Frankfurt, L.A and Shanghai and analyzed satisfaction for each property. As a result of the analysis, there appeared to be 13 to 16 factors for each route between importance and satisfaction of the forwarders as to the airline services. They had a higher degree of satisfaction than expected in the sociality area; however, they were found to have a high degree of dissatisfaction in the reliability and price areas. In addition, the forwarders deemed reliability as the most important factor in L.A route and Shanghai route, and followed by agility, ease of use, price and sociality. And they deemed reliability as the most important fact in Frankfurt route, and followed by ease of use, agility, price and sociality. Lastly as a result of IPA, it would be imperative to carry out appropriate measure and notice in the case when cargos were not loaded on time due to flight cancellation or long-time delay because of maintenance or other reasons as for the items that need to be urgently resolved in all the routes. Moreover, they also believed that it would be required to give incentive to cargos just like the mileage system of passengers in accordance with accumulated transportation. There were some complaints on price preservation of the existing airlines in Frankfurt route because of the price reduction of some competingairlines and the forwarders were requesting for more flexibility to accommodate changes of reserved cargos for L.A route in a situation where cargo demands were quickly changing.

The airlines can be assured of their survival at the time of oversupply only if they focused their services and competencies on the needs of forwarders, which were the shippers' agents and also their customers. On the whole, the forwarders were satisfied with the airline services; however, they were dissatisfied with reliability and price. Therefore, it would be imperative for the airlines to inform the forwarders, the customers, accurate facts and actions taken in a kind and detailed manner for urgent situations such as flight cancellation and long-term delay due to airline maintenance or irregularity, etc. In addition, it would be imperative to establish a low cost system by utilizing the passenger planes belly supply, which is another alternative in reality.

This study can be differentiated in terms of providing strategic suggestions to the airlines by extracting importance and satisfaction for each route as to the air cargo services from the forwarders, the customers of the airlines. However, there should be more follow-up studies in the future since this has the following limitations. First, the study has been conducted on overall items as for importance and satisfaction for each route. Most of the Korea-originating items are electronic products, machines, fabrics and chemical products; thus, it would be possible to get more meaningful results if the study was conducted on importance and satisfaction for each item. Second, importance and satisfaction of the forwarders on the airlines could vary depending on demand, oil price and airline supply at the time. Thus, it is believed that it would be more meaningful to study changes in importance and satisfaction of the forwarders by researching for few years rather than at one point.

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