

# A basic study of overseas expansion in Japanese small and medium enterprises

Masahiro MARUYAMA

## Abstract

The purpose of this study is to show clearly what influences overseas expansion of Japanese small and medium enterprises (SMEs). As various may have affected overseas expansion of SMEs, in order to clarify exploratively causal relationship among many nominal or ordinal categorical variables, this study conducts decision tree analysis with Exhaustive Chi-squared Automatic Interaction Detector. The conclusion is that SMEs with overseas expansion tend to consider acquisition of customers in their spot as important. Production and/or sales activities overseas of SMEs are mostly related to recognizing merits of dealing with customers which expand overseas. In addition, lack of intention of overseas expansion are mostly related to diffident and/or passivity about their domestic operations and uniqueness of business.

## 1. Introduction

As global market grows, whereas domestic market stagnates, and many factories of major Japanese firm move overseas, small and medium enterprises (SMEs) as well as large firms are also expanding abroad. According to the change in the nominal GDP around the world, the GDP of emerging economies such as Asia is rising, whereas Japan's share of world GDP is declining (IMF 2014). The reason of Japanese market shrinkage is caused by not only economic stagnation but also transfers of production offshore and prospects of decline in population. The ratio that Japanese firms do foreign direct investment or export directly is increasing every year though the ratio of large firm is higher than SMEs (SMEA2014). Compared with the geographical distribution of the overseas subsidiaries, while major firms have a relatively large number of direct investments in North America and Europe in addition to Asia, the ones of the SMEs are mostly located in Asia (METI 2013). SMEs which export directly consider "having customers", "having a reliable partner" and "knowledge

of trends in exports markets” as important in order to make export successful (SMEA 2014). However, in order to expand overseas, firms have to overcome certain obstacles and risks different from domestic market. In particular, SMEs have difficulties that they have limits in respect of funds or human resources. On the other hand, innovations of information communication technology (ICT) help SMEs to do business globally. This study shows Japanese SMEs’ overseas expansion, which is a concept including direct investment such as holding subsidiaries or branches, export, and a third party’s practical use. What advances or bars overseas expansion of SMEs? It is the purpose of this study.

## 2. Review

Data on many Japanese firms show that firms investing more heavily in intangible assets, such as technology and advertising, achieved greater profitability gains from growth in foreign direct investment (Lu & Beamish 2004). Firm’s size and age do not in themselves determine the capacity of the firm for internationalization (Reuber & Fisher 1997). A research with Japanese SMEs sampling assert that foreign direct investment can be a more competitive way than exporting for operating in international markets, and alliances with partners with local knowledge, and can be an effective strategy to overcome the lack of resources and capabilities (Lu & Beamish 2001). On the other hand, as SMEs have such constraints, to develop a range of alliances and collaborative partnerships is also efficient (Freeman et al. 2006). Using survey data from SMEs in China implies that social networks with business partners have three information benefits (1) knowledge of foreign market opportunities; (2) advice and experiential learning; and (3) referral trust and solidarity (Zhou et al.2007).

Many SMEs which face lack of resources, recognize the value of information communication technology. According to several case studies in Australia in the second half of the 1990s, using technology can overcome problems that smaller born-global firms face lack of economies of scale, lack of resources such as financial and knowledge, and aversion to risk taking, and can achieve competitive advantage (Freeman et al. 2006). Internet intensity of Australian SMEs enhance information and knowledge, which in turn positively influences the amount of international market growth (Mathews et al. 2012).

## 3. Method

This study uses a large-scale secondary data. It is “Survey of overseas expansion of Japanese firm in 2012, Japan Finance Corporation Research Institute,” provided by the Social Science Japan Data Archive, Center for Social Research and Data Archives, Institute of Social Science, The University of Tokyo. One benefit of using secondary data is that we can obtain extensive and comprehen-

sive data. Further, secondary data collection on such a large scale would be cost-effective. On the other hand, a demerit of secondary data analysis is that we cannot always obtain data required for our research. In spite of such limitations, the study uses the secondary data because the large-scale survey contributes to clarify the study purpose which finds exploratively the cause of overseas expansion.

The targets for the original survey are SMEs which Japan Finance Corporation lends. The survey has 2,524 valid replies and the return rate is 24.0%. The survey is an unregistered mail self-declaration. A question is a total of 39 which consists of the following four sections; 1. General condition, 2. Influence of your firm by overseas expansion of Japanese firms, 3. Present condition and plan of your overseas expansion, 4. Direct foreign investment. The question item of this survey has little quantitative data and much nominal or ordinal categorical qualitative data.

In order to clarify exploratively causal relationship which makes much categorical data the independent variable, this study conducts decision tree analysis with Exhaustive Chi-squared Automatic Interaction Detector (Exhaustive CHAID, Bigss et al. 1991). The algorithm is a modification to the basic CHAID (Kass 1980), which performs a more thorough merging and testing of predictor variables, whereas requires more analyzing time. The analysis is suitable for this study because the algorithm only accepts nominal or ordinal categorical predictors.

#### 4. Results

Various variables can have affected overseas expansion of SMEs. Table 1 presents detailed descriptive statistics about general condition of the sample. The types of industry of the firm which answered are various such as manufacturing, distributors and service. About the uniqueness of their goods, service or business, a negative answer accounts for 42.0% of the whole. About sales or profit

Table 1: General condition

Variables	Sample	%	Variables	Sample	%
Industry	2,524		Sales for recent 3 years	2,498	
Construction	155		Upward		12.0
Manufacture	237		Slightly Upward		20.1
Information & Communication	2.1		No Change		18.7
Transport	4.3		Slightly Downward		21.3
Wholesaler	11.4		Downward		27.9
Retailer	14.5		Profit for recent 3 years	2,498	
Real estate	2.8		Upward		8.2
Restaurant & Hotel	4.8		Slightly Upward		19.6
Education	0.4		No Change		22.7
Service	17.8		Slightly Downward		24.7
Others	2.8		Downward		24.9
Uniqueness of your goods, services, business	2,489		Intention of domestic operations	2,430	
Yes	23.7		Expansion intention		46.6
Partial Yes	34.3		Status quo intention		46.9
No	42.0		Reduction intention		6.5
The number of employees for recent 3 years	2,488				
Increase		25.6			
No Change		50.6			
Decrease		23.9			

Table 2: Influence of respondents firm by overseas expansion of Japanese firms

Variables	Sample	%	Variables	Sample	%
Overseas expansion of customers in Japan	2,216		Overseas expansion of suppliers in Japan	2,153	
Production at overseas factory		22.4	Production at overseas factory		19.2
Outsourcing of production to overseas firms		16.2	Outsourcing of production to overseas firms		15.3
Sales in their own stores		10.7	Sales in their own stores		7.2
Overseas expansion except production or sales		6.7	Overseas expansion except production or sales		3.9
Outsourcing of except production or sales to overseas		4.6	Outsourcing of except production or sales to overseas		3.2
Exporter		17.1	Exporter		8.7
Other overseas expansion		1.4	Other overseas expansion		1.3
No overseas expansion firms		32.0	No overseas expansion firms		34.7
No firms because of all selling to consumers		17.2	No suppliers		10.2
Unknown		14.0	Unknown		24.1
Sales to these firms for recent 3 years	799		Buying with difficult substitution with the others	608	
Upward as the whole		27.8	Yes		46.9
No Change		41.4	No		53.1
Downward as the whole		30.8	Buying from these firms for recent 3 years	648	
Sales unit price to these firms for recent 3 years	798		Upward as the whole		46.9
Upward as the whole		7.8	No Change		55.3
No Change		47.9	Downward as the whole		19.5
Downward as the whole		44.4	Buying unit price from these firms for recent 3 years	648	
Demand to quality and time for delivery for recent 3 years	796		Upward as the whole		33.3
Strict as the whole		50.1	No Change		45.5
No change		49.0	Downward as the whole		21.1
Loose as the whole		0.9	Quality and time for delivery for recent 3 years	646	
Profit to these firms for recent 3 years	797		Improvement as the whole		17.3
Upward as the whole		9.8	No change		72.0
No Change		48.7	Worsening as the whole		10.7
Downward as the whole		41.5	Merits of dealings with these firms (Multiple answer)	626	
Merits of dealings with these firms (Multiple answer)	769		Low price		57.2
High earnings rate		10.7	Good quality		7.7
a large volume of dealings		23.3	Short time for delivery		3.4
Satability of dealings		16.4	Good support		3.8
Stability of sales unit price		7.3	Easy availability of competitor or market information		14.7
Future dealings expansion		24.6	Others		3.0
Easy availability of competitor or market information		14.2	Nothing in particular		30.0
Others		2.2	Demerits of dealings with these firms (Multiple answer)	609	
Nothing in particular		35.9	High price		5.1
Demerits of dealings with these firms (Multiple answer)	762		Poor quality		33.2
Low earnings rate		26.5	Long time for delivery		27.9
a small volume of dealings		5.5	A large lot to order		21.0
Instability of dealings		20.7	Difficulty of change of orders		14.6
Instability of sales unit price		14.7	Others		2.6
Future dealings shrink		29.9	Nothing in particular		37.4
Others		4.7	Intention of the relation to overseas expansion of firms	624	
Nothing in particular		31.9	Increase in buying intention		24.2
Intention of the relation to overseas expansion of firms	791		Decrease in buying intention		7.7
Increase in dealing intention		43.0	No idea		68.1
Decrease in dealing intention		5.8			
No idea		51.2			

for recent 3 years, negative answers also exceed affirmative ones. However, many respondents tend to have expansion intention of their domestic operations. Although there is nothing to the table, the average of the number of employees of respondents is 25.9 persons, and the standard deviation is 58.1.

Table 2 also presents descriptive statistics about the influence of SMEs by overseas expansion of other Japanese firms. Respondents which have customers or suppliers with some kind of overseas expansion also answer about the influence by the condition. About sales unit price and profit for recent 3 years to customers with overseas expansion, the downward exceeds the upward. About merits of dealing with these customers, there are many replies which choose a large volume of present dealings or future dealings expansion. On the contrary, low earnings rate or uncertainties such as instability of present dealings and future dealings shrink are recognized widely as a demerit. About buying volume and unit price for recent 3 years from suppliers with some kind of overseas expansion, the upward exceeds the downward. Most of merits of dealings with these firms focus on low

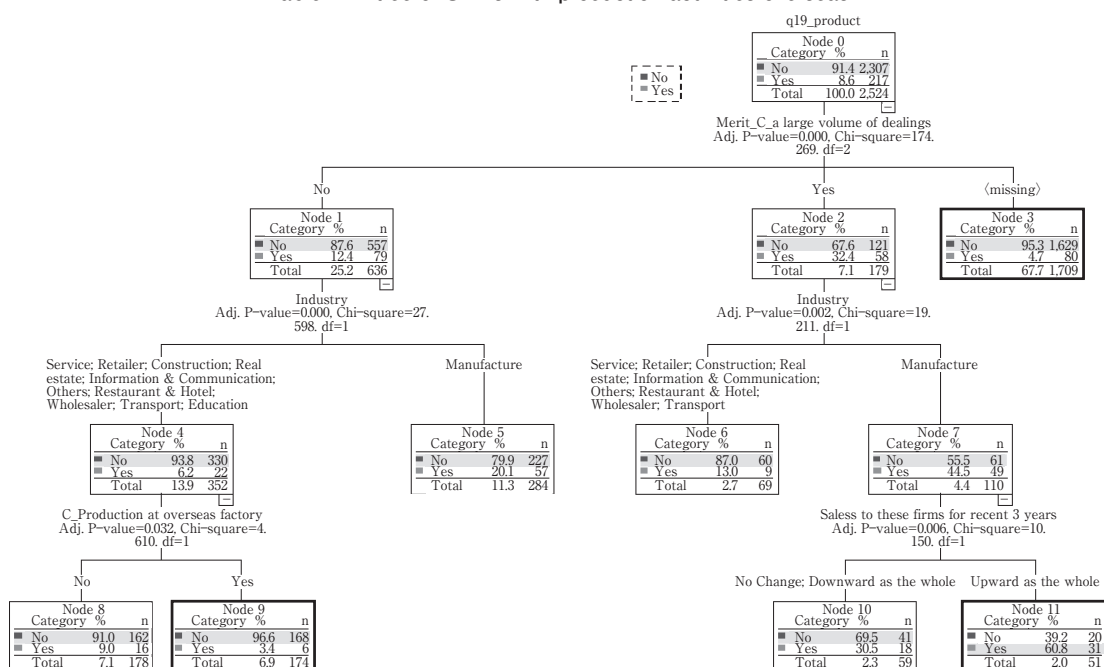
Table 3: Present condition and plan of respondent firm's overseas expansion

Variables	Sample	%		Section4 Variables	Sample	%
Present condition of your overseas expansion	2,240			The area of foreign direct investment	229 (168firms)	
Your local subsidiary for producing goods		5.5	Section 4	North America		6.1
Your local subsidiary for selling goods		2.9		Mid & South America		1.3
Your local subsidiary for business except producing or selling		0.8		Taiwan		1.7
Your branch for producing goods		0.3		China		54.6
Your branch for selling goods		0.4		South Korea		4.4
Your branch for business except producing or selling		0.2		Indonesia		3.1
Dispatch of representative		1.8		Malaysia		3.9
Outsourcing of production to an overseas firm		4.6		Philippine		3.5
Export your own		3.9		Singapore		1.7
Export by the trading company or agency		4.4		Thailand		8.7
Others		0.7	Vietnam		7.4	
Not advanced to overseas now but once advanced		2.5	India		0.4	
Not advanced to overseas until now		80.8	Myanmar		0.4	
Plan of your overseas expansion	2,093		see Appendix A	Other Asia		0.9
Prepare to product goods overseas now		1.4		Russia		0.0
Prepare to sell goods overseas now		1.6		Europe		1.7
Prepare to do business except producing or selling now		0.7		Africa		0.0
Prepare to export now		0.7		Oceania		0.0
Plan to product goods overseas in the future		3.0		The original / present purpose in the first overseas expansion	159	
Plan to sell goods overseas in the future		4.2		(Up to 3 choices)	Original	Present
Plan to do business except producing or selling in the future		2.2		Reduction of personnel expenses	34.6	26.5
Plan to export in the future		2.8		Reduction of purchase cost	28.3	31.6
No plan for now		22.0		Reduction of sales and administrative expenses	4.4	4.5
No intention to advance to overseas		64.6	Employment of engineers	2.5	2.6	
Reasons for not advancing overseas (Multiple answers)	1,325		↪	Employment of workers other than engineers	17.0	15.5
Shortage of funds		42.3		Reservation of the land for business	5.0	3.2
Shortage of talented people		34.0		Strengthening of supply chains	6.3	4.5
Lack of network to overseas		27.5		Existing customers' reservation	27.0	22.6
Unable to manage multiple firms		14.0		Substantial service to existing customers	22.6	20.0
Unable to understand overseas market		18.4		Improvement in notability and a brand image	5.7	9.0
Less demand in overseas		12.2		Expansion of new accounts or a market	42.1	54.2
Lack of market competitive		8.6		The start of new business	13.8	16.1
Just domestic is enough		41.4		Overseas from the time of foundation.	3.8	3.9
Distrust overseas firm		7.8		Others	3.8	2.6
Leakage of intellectual property and know-how		2.6		Achievement of the sales target of an overseas base		
Failure of former overseas expansion		0.5		Yes		50.3
Different business practice and legal system		11.9		→The period required by achievement from the business start	43.3month	
Language barrier		19.1		Not yet		49.7
Vague uneasiness		12.2				
Difficulty of keeping domestic employment		5.3				
Lack of scope because of just foundation		4.3				
Intention of keeping business size		12.1				
Discontinuance of business in your time		15.2				
Others		5.4				

price.

Table 3 shows descriptive statistics about present condition or plan of overseas expansion of respondent SMEs. Respondents which perform direct foreign investment by having a subsidiary and/or branch also reply to the section 4. Only 168 of 2,524 respondents reply to the section. The overseas bases of 229 of 168 firms are located in Asia, America, and Europe besides China. Purposes in the first overseas expansion tend to shift from the original personnel cost reduction and the correspondence to existing customers to new customer's exploitation. Achievement of the sales target in an overseas base takes the long period of time of 43.3 months on the average. 64.6% of 2,093 firms, i.e., 1,353 respondents, reply reasons for not advancing overseas. Respondents which are preparing overseas expansion reply to the question where they will, which is shown Appendix A. Respondents which do not have intentions to advance to overseas also reply why they decide. Many of the reasons are related to shortage of their management resources such as funds, employee and network. 41% of respondents are satisfied only with entry to the domestic market, and 19% of those are anxious about use of a foreign language. According to the Appendix, East Asia, Southeast Asia and North America are selected as these countries and regions are larger markets or located in geographical proximity to Japan. As compared with the existing overseas expansion of Table 3, areas of

Table 4: A tree of SMEs with production activities overseas

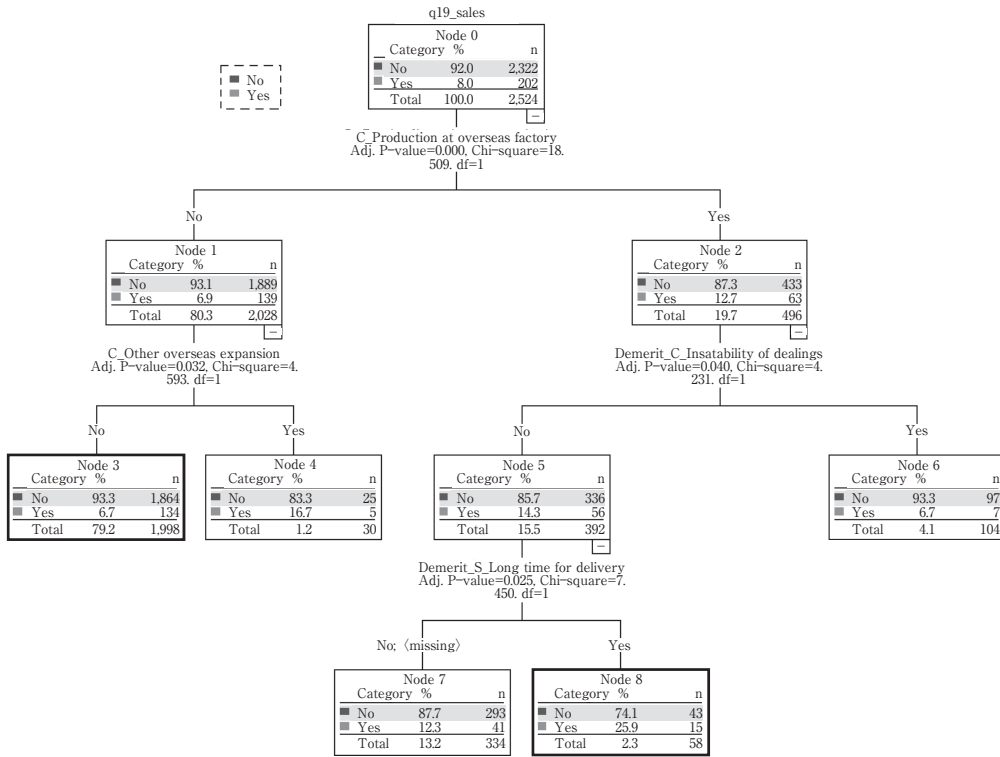


the future plan are spread around East Asia and Southeast Asia such as Taiwan, South Korea, Thailand and Vietnam.

According to Table 4, decision tree analysis conducts that SMEs which perform production activities overseas show what kind of variables they have. A decision tree analysis with Exhaustive CHAID which consists of three steps: merging, splitting and stopping. A tree is grown by repeatedly using these three steps on each node starting from the root node. The production activity is a concept containing “local subsidiary for producing goods”, “branch for producing goods”, and “outsourcing of production to an overseas firm”, in the present condition of your overseas expansion of Table 3. SMEs with production activities overseas consist of firms which replied to these three choices one or more.

The node 0 of Table 4 shows that 8.6% of the whole respondents perform the production activities overseas. It is divided into three by the variable that the merit of dealings with the overseas expansion customer is a large volume of dealings. As the node 2 shows, 32.4% of the firms which recognize the merit perform production activities overseas. Among those, the node 7 shows that 44.5% of the firms of the manufacturing industry perform the activities. Furthermore, among those, the node 11 shows that 60.8% of the firms in which sale to customers with overseas expansion perform production overseas activities. On the contrary, only 3.4% of the SMEs which belong to the node 9 perform production activities overseas. These are firms which do not recognize the merit of a large

Table 5: A tree of SMEs with sales activities overseas

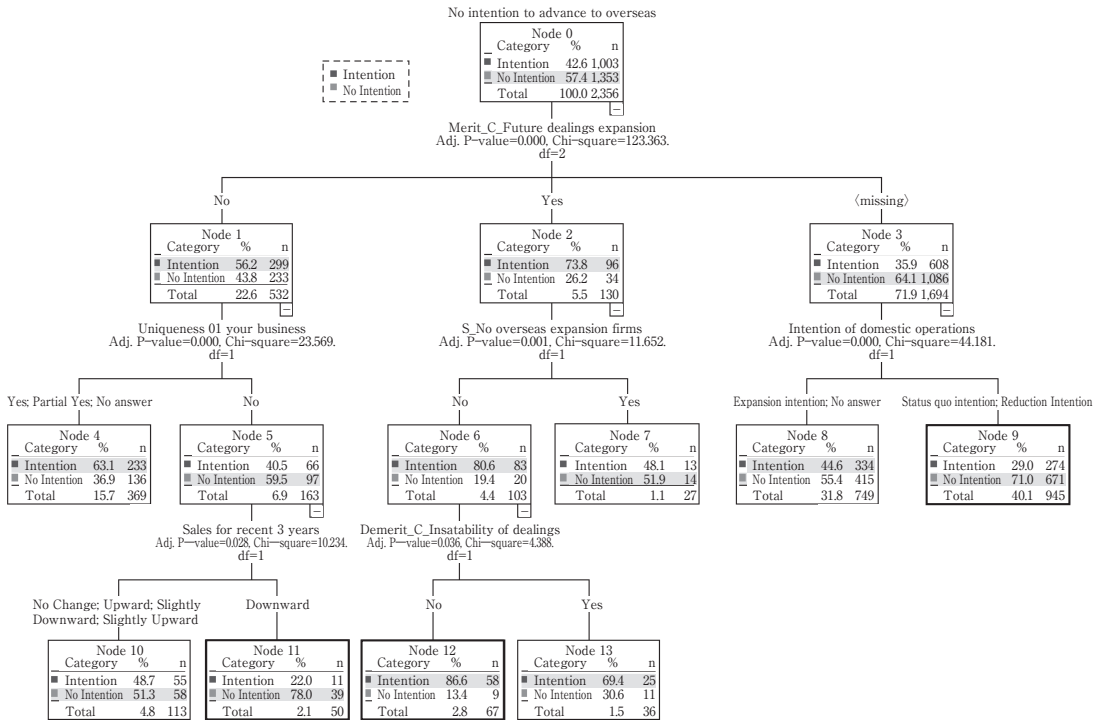


volume of dealings, to customers with overseas expansion, are other than manufacture, and have customers with their own factory overseas. The node 3 has 67.7% of the whole respondents, w, which do not have customers with the overseas expansion. The rate that such SMEs with the production activities overseas is as low as 4.7%.

Table 5 shows a tree of SMEs with sales activities overseas. The sales activity is a concept containing “local subsidiary for selling goods”, “branch for selling goods”, “dispatch of representative”, “export your own”, and “export by the trading company or agency” in the present condition of your overseas expansion of Table 3. SMEs which perform the sales activities consist of firms replied to these four choices one or more.

The node 0 of Table 5 shows that 8.0% of the whole respondents perform sales activities overseas. It is divided into two by the variable that their customers in Japan have a factory overseas. As the node 2 shows, 12.7% of the firms which have such customers perform sales activities overseas. Among those, as the node 8 shows, 25.9% of the firms which do not recognize the demerit of instability of dealings with overseas expansion of customers in Japan and which recognize the demerit of long time for delivery with overseas expansion of suppliers in Japan perform sales activities overseas. On the contrary, 1864 firms, i.e., 93.3% of the firms belonging to the node 3 do not perform sales

Table 6: A tree of SMEs without overseas intention



activities overseas. They have neither customers with overseas factory nor customers except production or sales overseas activities.

Table 6 shows a tree of SMEs with no intention to advance to overseas of Table 3. The number of SMEs is 2356 firms except 168 firms which are doing direct foreign investment. SMEs which do have neither present condition nor plan of your overseas expansion occupy 57.4% of the whole.

78.0% of the firms belonging to the node 11 do not have an overseas expansion intention. These firms recognize neither the merit of future dealings expansion with overseas expansion of customers in Japan, nor uniqueness of their goods, service or business, and have downward of their sales for recent 3 years. In addition, 71.7% of the firms belonging to the node 9 do not also have an overseas expansion intention. These firms do not have overseas expansion of customers in Japan, and have the status quo or reduction intention about domestic operations. On the contrary, 58 firms of the node 12 have intentions to future overseas expansion. They recognize the merit of future dealings expansion with overseas expansion customers, have suppliers with overseas expansion, and do not recognize the demerit of instability of dealings with overseas expansion customers.



## 5. Discussion

According to the original survey, SMEs which have not expanded overseas is 80.8% of the answer firms. However, SMEs which do overseas expansion are increasing in number gradually (SMEA 2014). Although profitability declines at first when SMEs begin foreign direct investment, greater levels of the investment are associated with higher performance (Lu & Beamish 2001). Table 3 also shows that achievement of the sales target in an overseas base takes 3 or 4 years. Firms with more internationally experienced management teams use more foreign strategic partners and delay less in obtaining foreign sales after start-up, which leads to a greater degree of internationalization (Reuber & Fisher 1997). In spite of the rapid globalization, the great majority of SMEs are not still overseas expansion. The reason seems to be the increase in the uncertainty accompanying overseas expansion. Overseas business does not come without risks. However, SMEs with overseas expansion are increasing in number gradually. According to the decision tree analysis of table 4, 5 and 6, overseas expansion of Japanese SMEs consider reservation of customers in their market. In addition, production and/or sales activities overseas of SMEs are mostly related to recognizing merits of dealing with customers which expand overseas. Lack of intention of overseas expansion are mostly related to difficult and/or passivity about their domestic operations and uniqueness of business. SMEs' development of overseas markets demonstrates the importance attached to countries and regions offering high growth or large markets as targets for development of operations overseas. Firms without dispersed overseas operations need to address these risks by developing their overseas business while maintaining their domestic operations.

## 6. Limitations and future research

This study has three limitations. First, as many of data for this analysis is nominal scales, analytical skills have a limitation. It is desirable to collect metrical data like sales and attitudes like an overseas expansion intention by sensory scales. Second, dealings with the foreign company in an overseas market cannot be taking into consideration the influence which it has on Japanese SMEs. The original survey focuses on the influence of dealings among Japanese firms which expand overseas. However, it is effective to expand the original market of the firm which expands overseas. Third, as precedence research shows, in order for SMEs where management resources are scarce to do overseas expansion, practical use of information and communication technology is effective. Social networks can be an efficient means of helping internationally oriented SMEs to go international more rapidly and profitably (Zhou et al. 2007). This study does not analyze that issue on restrictions of

data. These limitations originate in analysis using secondary data. The study should be conducted by original collected data which shows clearly what stimulates the overseas expansion of SMEs.

## References

- Biggs, D., Ville, B., and Suen, E. (1991) "A Method of Choosing Multiway Partitions for Classification and Decision Trees", *Journal of Applied Statistics*, 18-1, pp. 49-62.
- Freeman, Susan., Edwards, Ron. & Schroder, Bill (2006) "How Smaller Born-Global Firms Use Networks and Alliances to Overcome Constraints to Rapid Internationalization", *Journal of International Marketing*, 14-3, pp. 33-63.
- IMF; International Monetary Fund (2014) "World Economic Outlook, April 2014" <http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx>
- Lu, Jane W. & Beamish, Paul W. (2001) "The Internationalization and Performance of SMEs" , *Strategic Management Journal*, 22-6/7, pp. 565-586.
- Lu, Jane W. & Beamish, Paul W. (2004) "International diversification and Firm performance : The S-Curve Hypothesis", *Academy of Management Journal*, 47-4, pp. 598-609.
- Kass, G. V. (1980) "An Exploratory Technique for Investigating Large Quantities of Categorical Data", *Applied Statistics*, 20-2, pp. 119-127.
- Mathews, Shane W., Healy, Marilyn J., & Wickramasekera, Rumintha (2012) "The internationalisation of information, knowledge and interaction components of the firm's internationalisation process", *Journal of Marketing Management*, 28-5/6, pp. 733-754.
- METI; Ministry of Economy, Trade and Industry (2013) "2013 Basic Survey of Japanese Business Structure and Activities".
- Reuber, A Rebecca & Fischer, Eileen (1997) "The influence of the management team's international experience on the internationalization behaviors of SMEs", *Journal of International Business Studies*, 28-4, pp. 807-825.
- SMEA; Small and Medium Enterprise Agency (2014) "2014 White Paper on Small and Medium Enterprises in Japan".
- Takeuchi, Eiji (2013) "What kind of influence does the overseas expansion have on Japanese firms?", *Japan Finance Corporation Research Institute Monthly Report*, 55, pp. 4-15, in Japanese.
- Zhou, Lianxi., Wu, Wei-ping., & Luo, Xueming (2007) "Internationalization and the performance of born-global SMEs: the mediating role of social networks", *Journal of International Business Studies*, 38, pp.673-690.

**Appendix A: The area SMEs preparing overseas expansion**

Variables	Sample	%
The area SMEs preparing overseas expansion	80	
NorthAmerica		11.3
Mid & South America		6.3
Taiwan		27.5
China		57.5
South Korea		31.3
Indonesia		15.0
Malaysia		15.0
Philipine		8.8
Singapore		12.5
Thailand		26.3
Vietnam		16.3
India		12.5
Myanmar		10.0
Other Asia		7.5
Russia		1.3
Europe		8.8
Africa		3.8
Oceania		1.3