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What are the Reasons Why Japanese Enterprises File So Many Patent Applications without Request for Examination?

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Abstract— Since Japan stated in 2002 to become an Intellectual Property based nation, Japanese enterprises have tried to improve Intellectual Property strategies to contribute to the strength of global competitiveness. Japanese enterprises file many patent applications every year. However, about 35% patent applications in Japan are withdrawn without requests for examination. We reached to the research questions why Japanese enterprises have the tendency not to make requests for examination while they have filed many patent applications. We asked Japanese enterprises by questionnaires; what are the most critical reasons why they need to file many patent applications and why they need to make requests for examination about many patent applications. We made analyses on the aggregate results by statistical methods.

We found that filing many patent applications aiming “Patent Blocking” is the critical factor to have increased the number of patent applications without request for examination. Moreover, this factor “Patent Blocking” initiated to increase the number of total patent applications in Japan. We assume that filing many patent applications aiming “Patent Blocking” is Japanese unique way to define their patent application strategy. Those findings will be helpful to promote effective patent application strategy with global competitiveness for all global enterprises.

I. INTRODUCTION

Since 1980's, the US promoted the pro-patent policy, and this policy has extended to the other countries. In 1994, TRIPS agreement, which required all countries to change over to a strong patent protection regime, was signed as a part of the WTO agreement. In such background, since Japan stated in 2002 to become an Intellectual Property based nation, Japanese enterprises have tried to improve Intellectual Property strategies to strength the Japanese industry's competitiveness. Japanese patent application activities have become more positive since then [13]. Table 1 shows the number of patent applications in major regions in 2008. In this table, residential patent application means patent applications filed by domestic applicants. The total number of patent applications in Japan

was 391,002 in 2008, which is the second rank after the United States of America (the US). The number of residential patent applications in the US is 231,588. The residents in the European Patent Convention (EPC) signatory states filed 72,183 patent applications to European Patent Office (EPO) [4]. And, the number of residential patent applications in Japan was 330,110 in 2008, which was top rank in the world. Japanese applicants, which mean Japanese enterprises, have the biggest number of residential patent applications in the world.

According to the other characteristic data in Japan, Table 2 shows the ratio of patent applications having request for examination in major regions in 2007, 2008, and 2009 [6]. The ratio in the United States Patent and Trademark Office (USPTO) is 100 percent because the US does not have request for examination system. EPO, Japan Patent Office (JPO) and Korean Intellectual Property Office (KIPO) have the request for examination system, where applicants have to make request for examination formally to make the application to be examined. The deadline in EPO is 6 months after the date of issuing the search report. In JPO, the deadline is 3 years after the date of filing a patent application. It's 5 years in KIPO. However, although there are the differences of the deadline period, the final ratio of request for examination in Japan is very low compared with other regions clearly.

In Japan, patent applications without request for examination after the deadline is deemed as withdrawn without being examined. Since the total number of patent applications in Japan is roughly 400,000 every year [5], this means that about 35% patent applications in Japan, that is about 140,000, are withdrawn without requests for examination every year. In KIPO, patent applications which are withdrawn without requests for examination are about 30,000, and those in EPO are only about 10,000. Japan is the country which has the biggest number of patent applications without request for examination in the world.

TABLE 1: THE NUMBER OF RESIDENTIAL AND NON-RESIDENTIAL PATENT APPLICATIONS IN MAJOR REGIONS IN 2008

	Japan	the US	EPO	KR	CN
Residential Patent Application*	330,110	231,588	72,183	127,114	194,579
Non Residential Patent Application	60,892	224,733	74,378	43,518	95,259
Total	391,002	456,321	146,561	170,632	289,838

*EPO: the resident in EPC signatory states

Source: Japan, the US, KR and CN: World Intellectual Property Organization (2009) [13]

EPO: European Patent Office (2009) [4]

TABLE 2: THE RATIO OF PATENT APPLICATIONS HAVING REQUEST FOR EXAMINATION
(The number of patent applications having request for examination/
The number of patent applications *100)

Year	JPO	USPTO	EPO	KIPO
2007	66.2	100	94.5	83.9
2008	65.6	100	93.5	83.4
2009	63.2	100	92.1	79.4

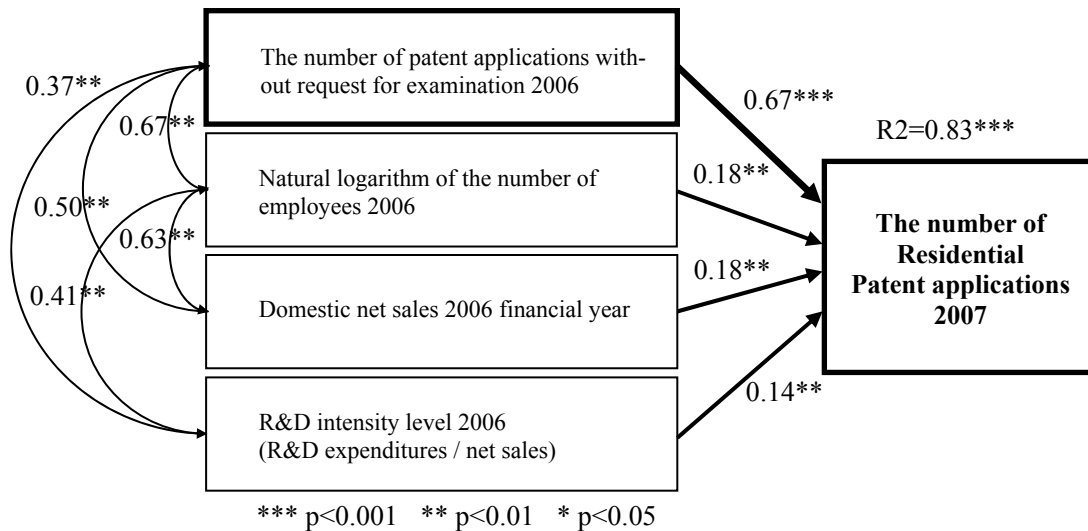
Source: 2007, 2008: Japan Patent Office (2009) [6]
2009: Korean Intellectual Property Office (2010) [8]

We found that Japanese enterprises have the tendency that they do not make requests for examination while they have filed many patent applications. As we can see in the past researcher that there are some opinions about the large number of patent applications in Japan, the patent management by Japanese enterprises having many patent applications has not yet developed [1] [7] [11] [12]. Filing many patent applications isn't the best way for managing own intellectual property. Moreover, Japanese enterprises file patent applications without having intention to acquire the patent rights. Why Japanese enterprises have the tendency not to make requests for examination while they have filed many patent applications? We would like to raise those research questions, to be clarified.

II. LITERATURE REVIEW

It is said that the factors to increase the number of patent applications are R&D expenditure, the size of enterprise (Natural logarithm of the number of employees), R&D intensity level (R&D expenditures / net sales), and market share

(Domestic net sales) and so on [2] [10] [14]. But, the most influential factor in Japan was the number of patent applications without request for examination [9]. According to this literature, they created multiple regression expression with significances about the number of residential patent applications in Japan by using fact data. Fig. 1 shows the path diagram of those results. The factors which have the influence on the number of residential patent application in 2007 are the number of patent applications without request for examination 2006 (0.67), natural logarithm of the number of employees 2006 (0.18), domestic net sales 2006 financial year (0.18), and R&D intensity level 2006 (0.14). The number of patent applications without request for examination 2006 was the most influential determinant. These factors had middle correlations except between domestic net sales 2006 financial year and R&D intensity level 2006. The past number of patent applications without request for examination was the most influential factor to the number of patent applications than other factors such as R&D expenditure, the size of enterprise, R&D intensity level (R&D expenditures / net sales), and market share etc.

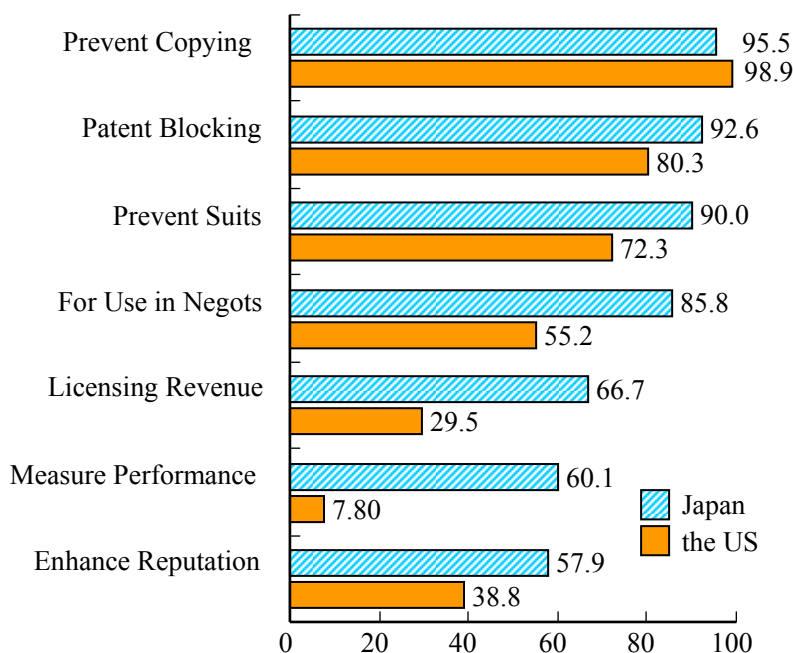


Source: Masujima, M., and Tanaka, Y. (2010) [9]

Fig. 1: Path diagram of the number of residential patent applications in Japan 2007

From those results, it was suggested that Japanese enterprises have a tendency to file patent applications before they decide whether they should acquire patent rights of the invention. They considered two reasons from the viewpoint of management; Japanese enterprises have the tendency to file patent applications without the intention of acquiring patent rights at the time of filing. First reason is to make other enterprises stop acquiring patent right on the same invention, even though the invention or the patent right might not be important to him or his business. The second reason is to encourage and motivate employees for innovation activities. When an enterprise doesn't allow filing patent applications of an in-house invention, the inventor's motivation might be lowered. Therefore, the enterprise tends to file the invention, even if they don't have the intention of acquiring patent rights. In this study, we will verify whether those two reasons are true. And if we can accept that those reasons are true, those reasons can explain why Japanese enterprises file so many patent applications without request for examination, and why they have so many residential patent applications.

The purposes motivating their decision to file patent applications are considered as follows: to prevent copying (Prevent Copying), to prevent other enterprises from patenting related inventions (Patent Blocking), to prevent being sued with patent infringement (Prevent Suits), to improve their position in negotiations, e.g. cross-licensing negotiations (For Use in Negots), to obtain licensing revenue (Licensing Revenue), to measure the performance of their firm's researchers (Measure Performance), and to enhance the reputation of the enterprises (Enhance Reputation) [3]. Fig. 2 shows the aggregate results about the purpose filing patent applications in the US and Japan (the case of Product Innovation). The motivations for filing patent applications in Japan were higher than those of the US, because the averages of the response values in Japan are higher than those of the US in almost all items. However, this literature can't explain which kind of purpose are the influential factors to increase patent applications because those purposes don't occur evenly. The qualities, which mean the motivations, and the amount is different to achieve the specific purpose in enterprises. And, this literature does not explain why Japanese enterprises don't make requests for examination while they have filed many patent applications. Our studies have originalities against those prior literatures in the following two points: clarifying the specific purposes for which Japanese enterprises don't make requests for examination while they have filed many patent applications, clarifying the reason to increase the number of patent applications in Japan. Patent application strategies are the important factor of management of technologies. We believe that our originalities will help to promote effective patent application strategies, and, will be useful to promote technology management of enterprises.



Source: Cohen, W. M., Goto, A., Nafata, A., Nelson, R. R., and Walsh, J. P. (2002) [3]

Fig. 2: The purposes filing patent applications, Product Innovation (Japan N=526; the US N=561)

We considered “Patent Blocking” is one of the specific purposes for which Japanese enterprises don’t make requests for examination because “Patent Blocking” is achieved at the time of filing. “Patent Blocking” prevents other enterprises from acquiring patent rights, even though the invention or the patent right might not be important to him or his business.

Moreover, we considered that motivating enterprise’s researchers toward filing patent applications (Motivate Researchers) was more effective than “Measure Performance” to increase the number of patent applications. We considered that “Motivate Researchers” is also one of the specific purposes for which Japanese enterprises don’t make requests for examination. “Motivate Researchers” is encouraging and motivating employees to make innovations. When an enterprise doesn’t allow filing patent applications of an in-house invention, the inventor’s morale might be lowered. Therefore, the enterprise tends to file inventions, even if there is no intention of acquiring rights itself. Based on those situations, our hypotheses on the tendency to file many patent applications in Japan are as follows.

Hypothesis 1: Japanese enterprises have some specific purposes to file many patent applications. To achieve those purposes, they don’t need to make requests for examination while they have filed many patent applications.

Hypothesis 2: The said purposes must be preventing other enterprises from patenting related inventions (Patent Blocking), and motivating enterprise’s researchers toward filing patent applications (Motivate Researchers).

III. METHODOLOGIES

We can find the factor of decision making of enterprises whether they file patent application and whether they make requests for examination or not. By clarifying this finding, we can understand the reason why Japanese enterprises don’t make requests for examination while they have filed many

patent applications, and the reason to increase the number of patent applications in Japan. The procedure of our study is as follows. We conducted questionnaire to verify our hypotheses. The target audiences are employees who belong to intellectual property development in Japanese enterprises. We contacted 178 target audiences by online, collected the responses from 62 target audiences (the response rate: 34.8%), and analyzed the responses from 53 target audiences except for subjects with missing values (the effect response rate: 29.7%). Table 3 shows the enterprises’ difference between industries, capitalization, number of patent application, and number of employees in 53 respondents. The enterprises of 53 people filed 75,650 and 71,030 patent applications in 2006 and 2007. 53 sample sizes seem appropriate to indicate the behavior of Japanese patent applications, from the viewpoint of the volume of patent applications

We have selected various purposes to file patent applications. We asked them whether they need to file many patent applications to achieve the specific purpose. Moreover, we asked them whether they need to make requests for examination about many patent applications to achieve the same purpose. We selected seven purposes motivating their decision to file patent applications; to prevent copying (Prevent Copying), to prevent other enterprises from patenting related inventions (Patent Blocking), to avoid being sued for patent infringement (Avoid Suits: revised from “Prevent Suits”), to improve their position in negotiations, e.g. cross-licensing negotiations (For Use in Negots), to obtain licensing revenue (Licensing Revenue), to activate the performance of their enterprises’ researchers (Motivate Researchers), and to enhance the reputation of the enterprises (Enhance Reputation) by reference to [3]. Moreover we added another item: to digest the budget (Budget Digestion). We set eight purposes in all. We asked the following sixteen items by using four-point Likert Scale (Strongly Agree, Agree, Disagree, Strongly disagree).

TABLE 3: THE ENTERPRISES’ DIFFERENCE OF 53 RESPONDENTS

Industries		Capitalization (million yen)		Number of patent application		Number of employees	
Electrical	24	less than 10,000	5	less than 100	5	less than 10,000	13
Chemical	9	10,000 ~ 50,000	11	100 ~ 500	14	10,000 ~ 50,000	15
Mechanical	4	50,000 ~ 100,000	8	500 ~ 1,000	3	50,000 ~ 100,000	1
Transport	4	100,000 ~ 500,000	22	over 1,000	31	over 100,000	24
The Others	12	over 500,000	7				
Total	53	Total	53	Total	53	Total	53

The timing when your enterprise file patent applications

Prevent Copying

You need to file many patent applications to prevent copying to your product.

Patent Blocking

You need to file many patent applications to prevent other enterprises from patenting related inventions.

Avoid Suits

You need to file many patent applications to avoid being sued for patent infringement.

For Use in Negots

You need to file many patent applications to improve their position in negotiations.

Licensing Revenue

You need to file many patent applications to obtain licensing revenue.

Motivate Researchers

You need to file many patent applications to motivate enterprise’s researchers.

<i>Enhance Reputation</i>	You need to file many patent applications to enhance the reputation of the enterprises.
<i>Budget Digestion</i>	You need to file many patent applications to digest the budget.
<u>The timing when your enterprise make requests for examination</u>	
<i>Prevent Copying</i>	You need to make requests for examination about many patent applications to prevent copying to your product.
<i>Patent Blocking</i>	You need to make requests for examination about many patent applications to prevent other enterprises from patenting related inventions.
<i>Avoid Suits</i>	You need to make requests for examination about many patent applications to avoid being sued for patent infringement.
<i>For Use in Negots</i>	You need to make requests for examination about many patent applications to improve their position in negotiations.
<i>Licensing Revenue</i>	You need to make requests for examination about many patent applications to obtain licensing revenue.
<i>Motivate Researchers</i>	You need to make requests for examination about many patent applications to motivate enterprise's researchers.
<i>Enhance Reputation</i>	You need to make requests for examination about many patent applications to enhance the reputation of the enterprises.
<i>Budget Digestion</i>	You need to make requests for examination about many patent applications to digest the budget.

We checked whether each average of items is different as ANOVA or t-test. Then, we evaluated those averages by correlation analyses etc. Moreover, we also checked the difference of each industry (electrical industry and chemical industry). We found the specific purposes, for which they don't need to make requests for examination while they have filed many patent applications, and the reason to increase the number of patent applications in Japan.

IV. ANALYSES AND RESULTS

We asked them whether they need to file many patent applications to achieve the specific purposes. Moreover, we asked them whether they need to make requests for examination about many patent applications to achieve the same purposes. Table 4 shows the result of ANOVA to items at filing many patent applications and items at making the requests for examination about many patent applications. ANOVA conduct F-test about the ratio of the variance between group and within group, which tests the ratio of the variance for the null hypothesis assumed that two variance is equal. Between group, the differences refers between eight purposes. Within group, the differences refers within one purpose. SS, df and MS mean sum of squares, degrees of freedom and mean squares. Each average of items in both question groups dis-

tinguished in the timing was different because the null hypothesis was rejected by significant at 1% level.

Fig 3 shows the average of the aggregate result. All items don't have ceiling effect. But, "Budget Digestion" generated floor effect in both timing. In the timing of filing patent applications, the top rank of the purposes for which Japanese enterprises need filing many patent applications was improving their position in negotiations (For Use in Negots) (2.92). "Prevent Copying" (2.81), "Licensing Revenue" (2.66) and "Motivate Researchers" (2.66) followed. Most items except of "Budget Digestion" were over 2.00. Japanese enterprises have considered that it's important to file many patent applications to achieve various purposes. And In the timing of making the requests for examination, the top rank of the purposes for which Japanese enterprises need making the requests for examination about many patent applications was "For Use in Negots" (2.87). "Licensing Revenue" (2.53), "Prevent Copying" (2.51) and "Motivate Researchers" (2.28) followed. Most items except of "Patent Blocking" and "Budget Digestion" were over 2.00. Japanese enterprises have considered that it's important to make requests for examination about many patent applications to achieve various purposes. "Budget Digestion" was the lowest in both timing (1.42, 1.30).

TABLE 4: ANOVA TO ITEMS ON BOTH QUESTION GROUPS

	Factor	SS	df	MS	F
Filing many patent applications	Between Group	80.33	7	11.48	21.74**
	Within Group	219.6	416	0.528	
	Total	299.9	423		
Making the requests for examination about many patent applications	Between Group	88.28	7	12.61	23.42**
	Within Group	224	416	0.539	
	Total	312.3	423		

** p < 0.01

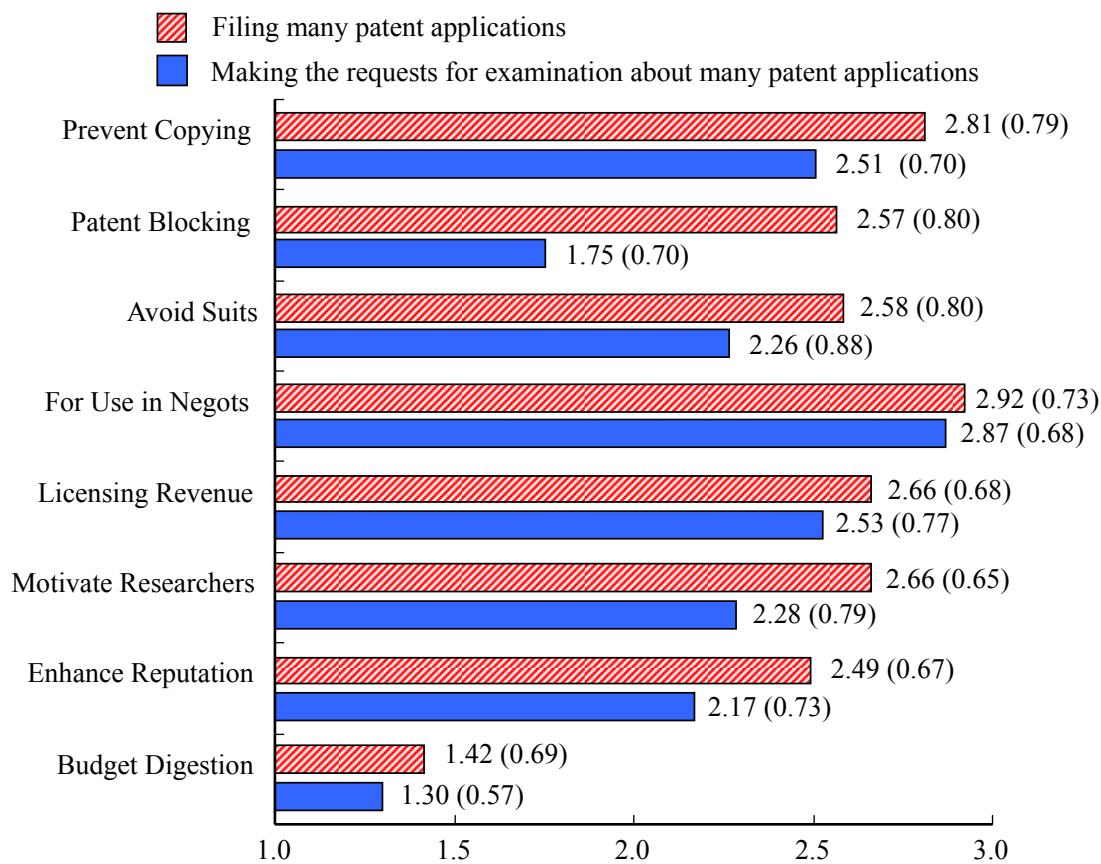


Fig. 3: The purposes for which Japanese enterprises need to file many patent applications, and the purposes for which they need to make requests for examination about many patent applications (Standard deviation in parentheses. N=53)

Moreover, we conducted t-test and analyzed correlation between the items of the same purposes in the different timing. Table 5 shows the result of those. As t-test, each average of items in five purposes was different because the null hypothesis was rejected by significant at 1% level. But, it was unable to judge whether each average of items in three purposes is different because the null hypothesis was adopted by significant at 5% level. Japanese enterprises have had the specific purposes, for which they don't need to make requests for examination while they have filed many patent applications, because five items have the average difference between timing. Therefore our hypothesis 1 was accepted.

We compared the averages difference of five purposes with significances by t-test. The remainder listed as a reference. The purpose with the largest averages difference between filing patent applications and making the requests for examination was "Patent Blocking" (0.81). Patent applications aiming "Patent Blocking" have the lowest necessity to make requests for examination while they have filed many patent applications. "Motivate Researchers" had second largest averages difference (0.38). "Avoid Suits" (0.32), "Enhance Reputation" (0.32) and "Prevent Copying" followed.

TABLE 5: THE RESULT OF T-TEST AND CORRELATION ANALYSES BETWEEN FILING PATENT APPLICATIONS AND MAKING THE REQUESTS FOR EXAMINATION

The purposes	t(52)	the averages difference	Pearson correlation coefficient
Prevent Copying	3.44**	0.30	0.635**
Patent Blocking	6.90**	0.81	0.355**
Avoid Suits	4.27**	0.32	0.792**
For Use in Negots	0.77n.s.	(0.06)	0.715**
Licensing Revenue	1.85n.s.	(0.13)	0.751**
Motivate Researchers	4.61**	0.38	0.676**
Enhance Reputation	3.63**	0.32	0.577**
Budget Digestion	1.77n.s.	(0.30)	0.743**

** Significant at 1% level (two sided-tests) n.s. Not Significant

TABLE 6: THE RESULT DIVIDED BY EACH INDUSTRY

	Electrical industry (N=24)			Chemical industry (N=9)		
	(1)	(2)	(3)	(1)	(2)	(3)
Prevent Copying	2.71	2.38	0.33	2.67	2.33	0.34
Patent Blocking	2.33	1.75	0.58	2.67	1.56	1.11
Avoid Suits	2.50	2.17	0.33	2.44	2.11	0.33
For Use in Negots	3.13	3.08	0.05	2.33	2.56	-0.23
Licensing Revenue	2.79	2.63	0.16	2.22	2.22	0.00
Motivate Researchers	2.63	2.33	0.30	2.44	2.11	0.33
Enhance Reputation	2.54	2.17	0.37	2.11	1.78	0.33
Budget Digestion	1.38	1.25	0.13	1.11	1.11	0.00

(1) Filing many patent applications

(2) Making the requests for examination about many patent applications

(3) The averages difference: (1)-(2)

Looking at the Pearson correlation coefficient, “Avoid Suits,” “For Use in Negots,” “Licensing Revenue” and “Budget Digestion” had strong correlation (0.792, 0.715, 0.751 and 0.743). “Prevent Copying,” “Motivate Researchers” and “Enhance Reputation” had middle correlation (0.635, 0.676, and 0.577). Only “Patent Blocking” had weak correlation (0.355).

As those result, Japanese enterprises have had the specific purposes, for which they don’t need to make requests for examination while they have filed many patent applications. One of the specific purposes is “Patent Blocking,” which have the largest averages difference and weak correlation. However, “Motivate Researchers” is not possible to judge whether it’s one of the specific purposes because of middle correlation. We found that filing many patent applications aiming “Patent Blocking” is the influential factor to increase the number of patent applications without request for examination. Therefore only a part of our hypothesis 2 was accepted.

Moreover, Table 6 shows the averages differences divided by each industry (electrical industry and chemical industry). The averages differences of “Patent Blocking” in both industries were the largest variable of all items (Electrical: 0.58, Chemical: 1.11). We could not determine how the influences of different industries have because the differences of each variable were small. We found that the different propensities by different industries are small.

V. DISCUSSION

As described in the above, we conducted questionnaire to verify our two hypotheses. We asked to the employees in Japanese enterprises whether your enterprises need to file many patent applications to achieve the specific purpose. Moreover, we asked them whether they need to make requests for examination about many patent applications to achieve the same purpose. We selected eight purposes motivating their decision to file patent applications, “Prevent Copying,” “Patent Blocking,” “Avoid Suits,” “For Use in Negots,” “Licensing Revenue,” “Motivate Researchers,” “Enhance Reputation,” and “Budget Digestion.” Each average of items in both question groups distinguished in the timing was

different by ANOVA. Both the top rank of the purposes for which Japanese enterprises need to file many patent applications and need to make requests for examination about many patent applications were “For Use in Negots” (2.92, 2.87). Moreover we conducted t-test and analyzed correlation between the items of the same purposes in different timing. Japanese enterprises have had the specific purposes, for which they don’t need to make requests for examination while they have filed many patent applications, because five items have the average difference between timing. Therefore our hypothesis 1 was accepted.

Moreover, the purpose with the largest averages difference between filing patent applications and making the requests for examination was “Patent Blocking” (0.81). We found that “Patent Blocking” is one of the specific purposes for which they don’t need to make requests for examination while they have filed many patent applications. And “Motivate Researchers” might be also (0.38), but it’s not clear because have middle correlation (0.676). Therefore we found that filing many patent applications aiming “Patent Blocking” is the influential factor to increase the number of patent applications without request for examination. Therefore only a part of our hypothesis 2 was accepted.

As our hypothesis 1 and a part of our hypothesis 2 were accepted, filing patent applications to prevent other enterprises from patenting related inventions (Patent Blocking) have not need to make requests for examination about many patent applications while they have filed many patent applications. To achieve “Patent Blocking”, they need not acquire the right. “Patent Blocking” achieve when the patent application is filed. Filing patent applications aiming “Patent Blocking” are the influential factor to increase patent application without request for examination in Japan. Moreover, filing patent applications aiming “Patent Blocking” are the influential factor of the number of residential patent application in Japan.

The role of patent applications filed aiming “Patent Blocking” is to become prior arts for related inventions of other enterprises. So, applicants achieve the purpose when the patent application is opened to the public. Therefore, they

don't need to make requests for examination to acquire the rights. Moreover, if an enterprise file a patent application in a country, they can achieve the purpose in the world because the effectiveness of a prior art is worldwide in patent law of most countries. If an enterprises files a patent application in Japan, they will have an effective prior art in the global market. Another role filing patent applications aiming "Patent Blocking" is that other enterprises become unable to judge whether they make the product. After an enterprise files a patent application, it's open to the public. When the other enterprises check it, they don't know whether the applicant is likely to acquire the right. They might hesitate in commercialization because of the fear of violating the right

However, if the roles of "Patent Blocking" are only two, filing many patent applications to functions is not best way because of timing of opening to the public lately. It takes to open to the public, published to Japanese Unexamined Patent Application Publication, longer than one and a half years after filing a patent application in Japan. It's very late. To open to the public ASAP, Japanese enterprises must use other way.

Considered including control effect which is one of the roles of "Patent Blocking," using the utility model system in Japan seems the better way. The timing to open to the public is faster than that of patent system in Japan. The utility model system in Japan don't have request for examination system. So, utility model application is registered as the right as soon as filing. And, it takes to open to the public at about 6 month after being registered. Moreover, it's able to have control effect which is the role of "Patent Blocking."

The utility model system in Japan was revised to non-request for examination system in 1994. The number of utility model application has decreased since then, which is about 10,000 every year now [5]. Japanese enterprises hardly use this system. However, when Japanese enterprises decide clearly that their purpose to file is "Patent Blocking," using The utility model system in Japan is very effective.

Filing many patent applications without requests for examination aiming "Patent Blocking" is Japanese unique way of making patent application strategy. Certainly, the US enterprises also file patent applications aiming "Patent Blocking" as Fig. 1 shows. But, it's different from patent applications without request for examination because the US patent system does not have request for examination system. European enterprises and Korean enterprises also don't file many patent applications such as "Patent Blocking" because the ratio of patent applications having request for examination is high in EPO and KIPO. The findings that those "Patent Blocking" is Japanese unique way of making patent application strategy will be helpful to promote effective patent application strategy with global competitiveness.

We should check whether Japanese "Patent Blocking" using patent is the most effective way or not, especially in global market. We should verify how foreign enterprises prevent other enterprises from patenting related inventions besides filing patent applications, and which way is better from

the view point of the speed to open to the public, the resistant for competitor and the cost side. It's profitable to understand the better way aiming "Patent Blocking" for not only Japanese enterprises but also all global enterprises. Managing efficient patent application strategy using those way will promote global competitiveness.

VI. CONCLUSION

Our study focused on the reasons why Japanese enterprises have the tendency not to make requests for examination while they have filed many patent applications. We asked to the industry by questionnaire about the purposes for which Japanese enterprises have many patent applications without request for examination. The result of statistical analyses showed that patent applications aiming "Patent Blocking" are not necessary to be made on requests for examination about many patent applications. Moreover, "Patent Blocking" is most influential factor to have increased the number of residential patent applications in Japan. We assume that filing patent applications aiming "Patent Blocking" is Japanese unique way to define patent application strategy. These findings will be helpful to promote effective patent application strategy to win the global competitiveness not only for Japanese enterprises but also for all global enterprises. However, we think that this is not an effective way from the aspect of timing and way of disclosure of inventions. We will continue our research how foreign enterprises prevent other enterprises from patenting regarding related inventions as a next step.

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