

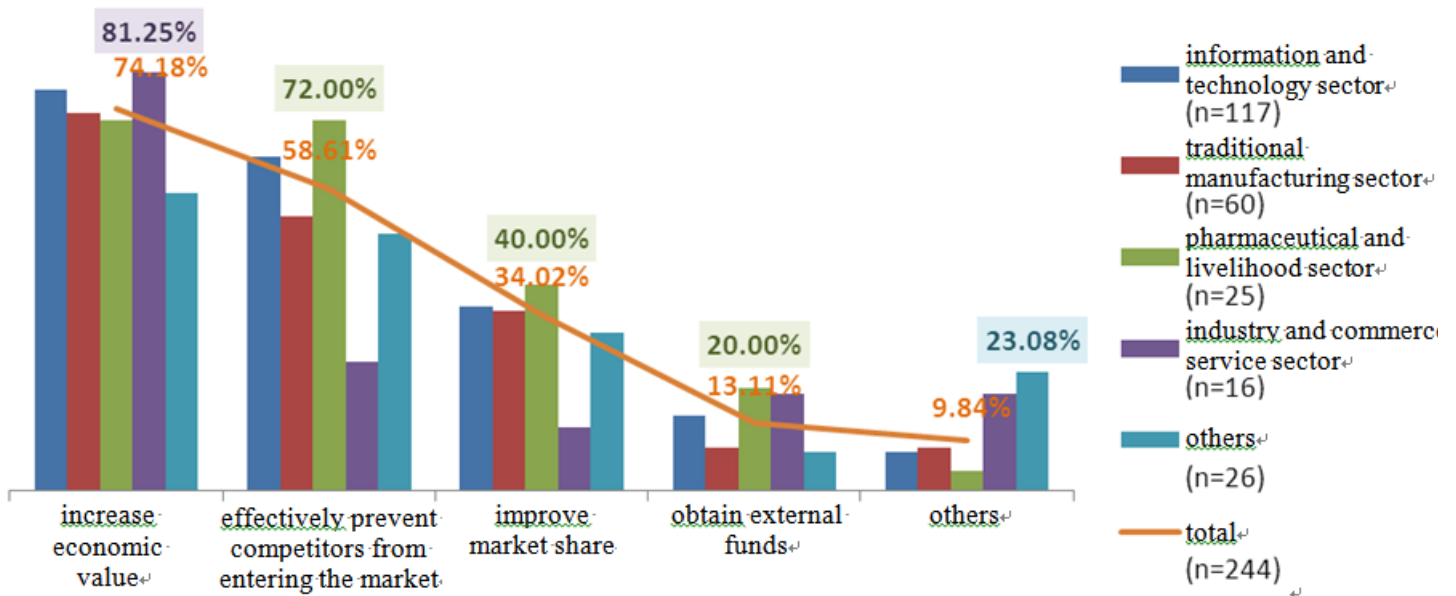
The Demand of Intellectual Property Management for Taiwanese Enterprises

Science & Technology Law Institute (STLI), Institute for Information Industry has conducted the survey of “The current status and demand of intellectual property management for Taiwanese enterprises” to listed companies for consecutive four years since 2012. Based on the survey result, three trends of intellectual property management for Taiwanese enterprises have been found and four recommendations have been proposed with detail descriptions as below.

Trend 1: Positive Growth in Intellectual Property Awareness and Intellectual Property Dedicated Department/Personnel, Budget and Projects

1. Taiwanese enterprises believe that intellectual property plays an important role

74.18% of Taiwanese enterprises believe that intellectual property can increase economic value and 58.61% of those believe that it can effectively prevent competitors from entering the market.

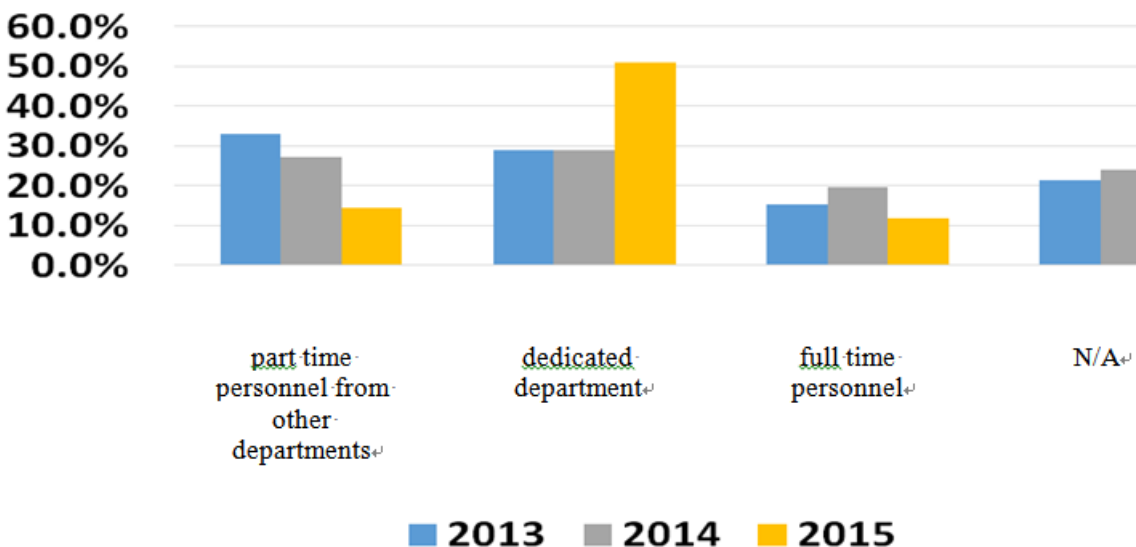


Source: created by project team members

Graph 1 The benefit of intellectual property for the company

2. Taiwanese enterprises increase investment in the dedicated department and full time personnel for intellectual property

Nearly 80% of listed and OTC companies set up full time personnel for intellectual property and over 50% of those have established dedicated department to handle its business that is higher than 30% in 2012.



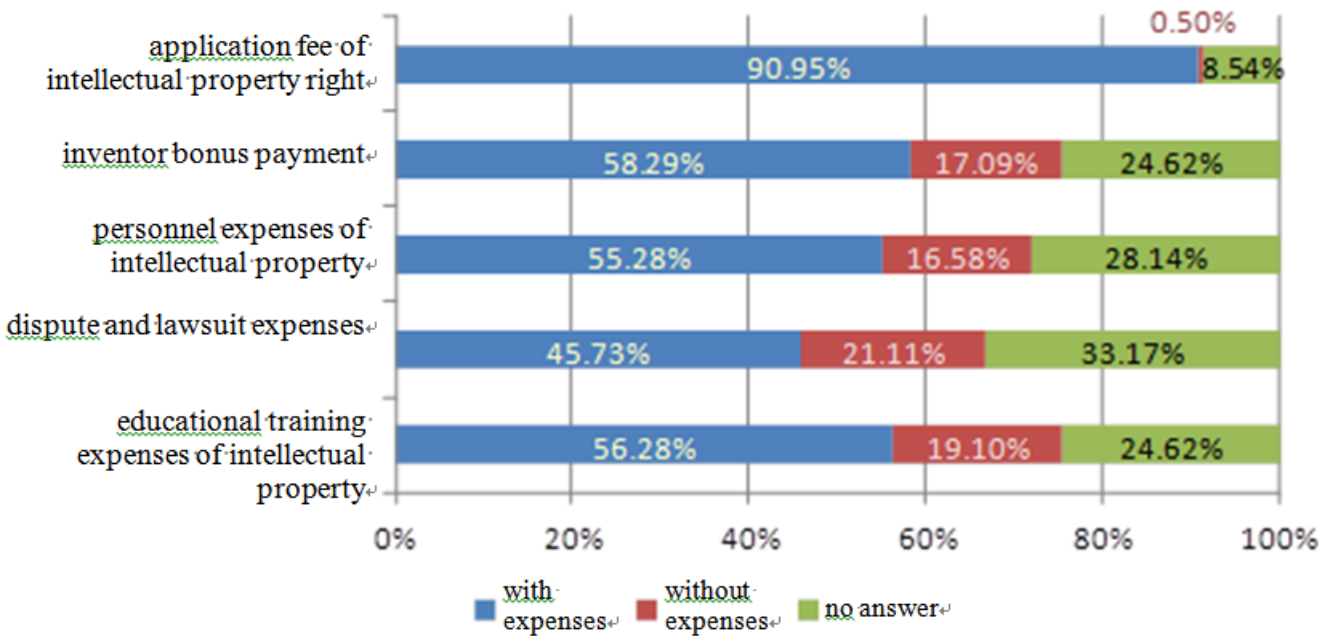
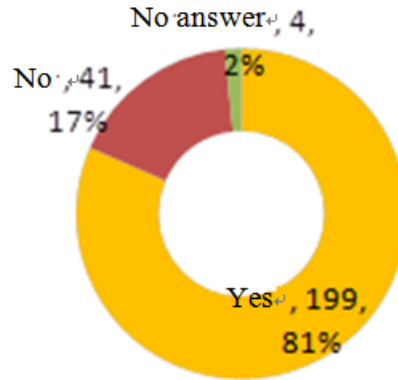
Source: created by project team members

Graph 2 Specialized Department or personnel for intellectual property by year

3. Taiwanese enterprises plan budget for intellectual property each year

81% of respondent companies plan certain budget for intellectual property each year. Among the expenses items, the percentage of 90.95% for intellectual property application is the highest. Next are 58.29% for inventor bonus payment and 56.28% for intellectual property education training.

Do you have fixed budget?



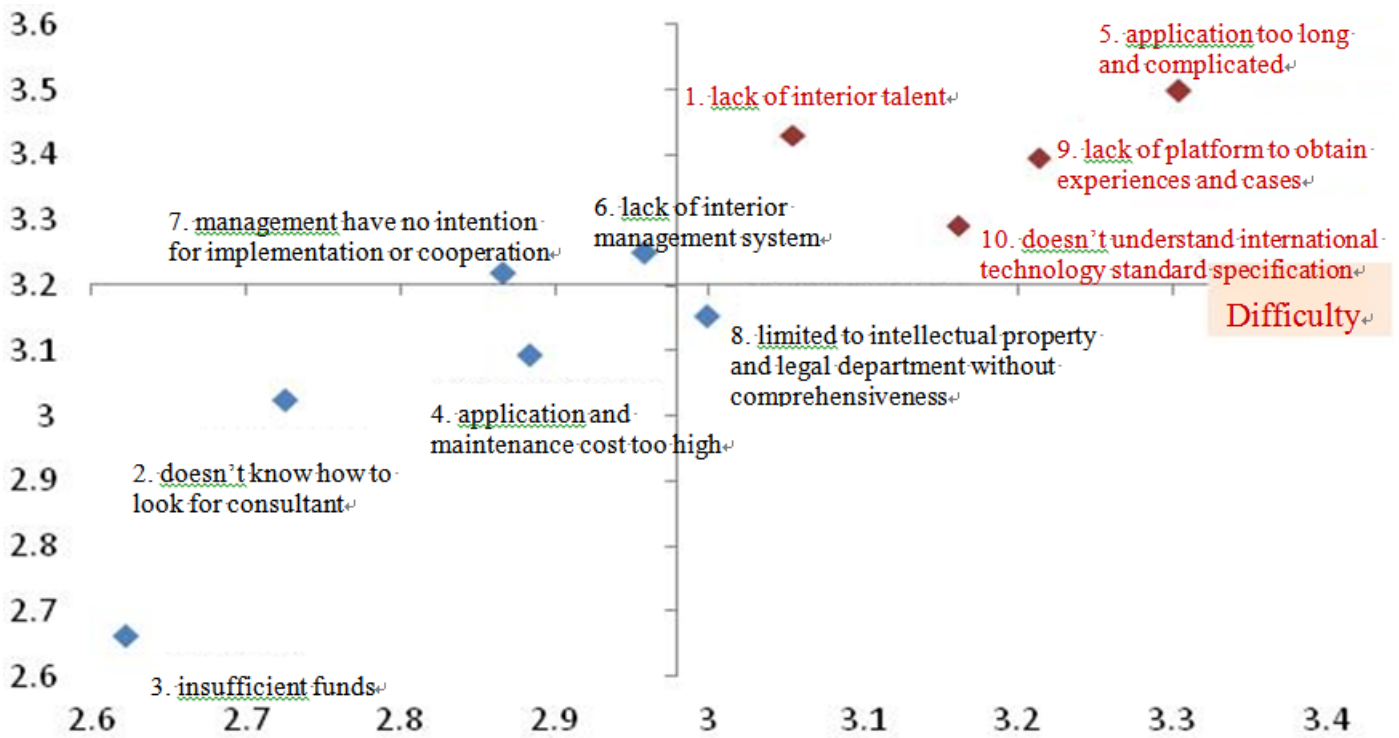
Source: created by project team members

Graph 3 Taiwanese enterprises plan budget for intellectual property each year

Trend 2: Insufficient Positive Activation for Intellectual Property

1. Interior intellectual property personnel is seldom to be involved in the core decision making in Taiwanese enterprises

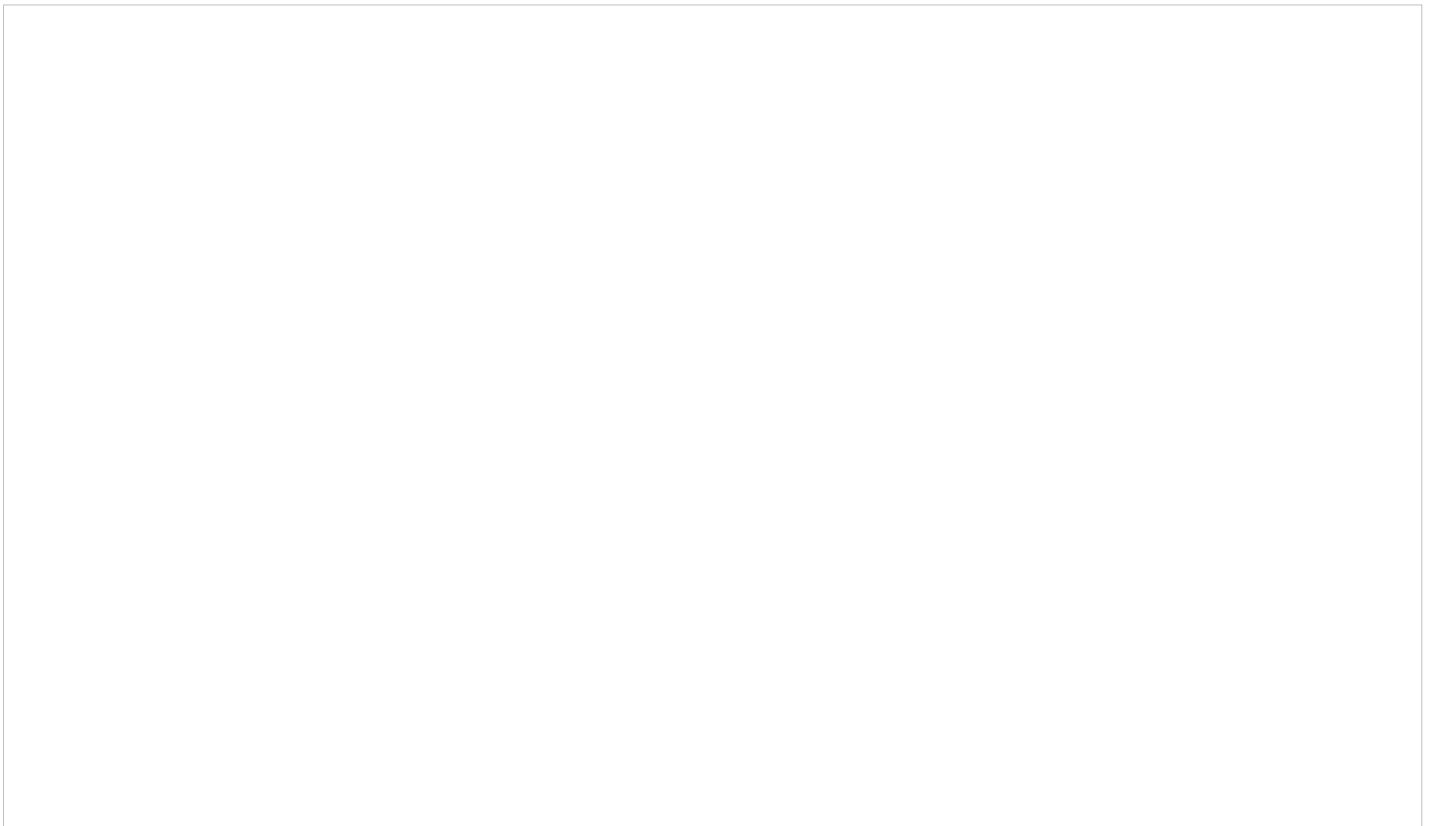
Based on the importance and difficulty of intellectual property, most items in the area of high importance and difficulty are demand of professionals and practical experiences (e.g.: lack of interior talent, do not understand international technology standard and specification, lack of platform to obtain experiences and cases). Only application time is for administrative procedure of Intellectual Property Offices. Therefore, it is known that intellectual property department of respondent companies lacks experienced talents.



Source: created by project team members

Graph 4 Importance and difficulty of intellectual property

In addition, most of the jobs of intellectual property personnel are “keeping close cooperation and communication with R&D department”, “coordinating issues relevant to intellectual property between departments” and “keeping close cooperation and communication with marketing or sales department” instead of “R&D strategy involvement” and “marketing and operation strategy involvement” (see Graph 5). Therefore, it is demonstrated that the work of intellectual property personnel is mainly for providing coordination and assistance to other departments other than corporate strategy with intellectual property as basis. Maybe it is the reason for insufficient activation and lower investment of intellectual property in the business.



Source: created by project team members

Graph 5 The job of intellectual property department or personnel

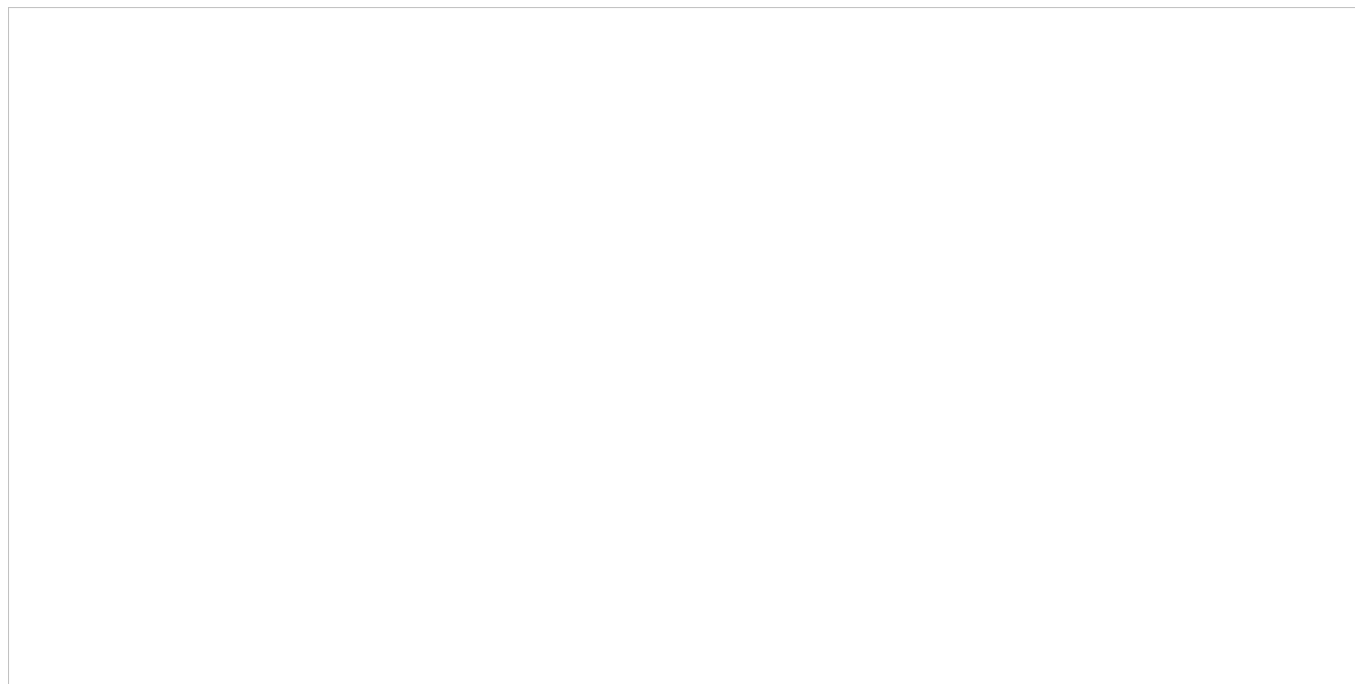
2. Insufficient positive activation for intellectual property in Taiwanese enterprises

It is shown that 60% of firms are without and did not obtain technology transfer (among which the traditional manufacturing sector has the

highest percentage). 22.95% of firms are without but obtained technology transfer and 4.51% of those are with but did not obtain technology transfer. In addition, most of the jobs of intellectual property are administration other than activation such as treatment of authorization contract and transaction and sending warning letter of infringement. Therefore, it is assumed that intellectual property is not the key for profitability in the business.

3. Taiwanese enterprises with higher R&D expenses ratio intend to have more positive activation of intellectual property

Although the entire firms are not positive for activation of intellectual property, it is found that enterprises with higher R&D expenses ratio (the ratio of R&D expenses / total operating expenses is higher than average) intend to have more positive activation of intellectual property. For example, intellectual property department with higher R&D expenses ratio involves more in the decision making of R&D strategy in the business. Compared with the enterprises with higher R&D expenses ratio, the enterprises with lower R&D expenses ratio also has higher ratio in the absence and failure of technology transfer. (see Graph 6)



Source: created by project team members

Graph 6 Presence and achievement of technology transfer in the different sector

4. Most of Taiwanese enterprises R&D on their own so to lack of introduction experience of external R&D results

Among the survey, nearly 90% of firms R&D each item on their own except the copyright part with lower percentage of 78.5%. 15.89% of it is from outsourcing development and 13.08% of it is from authorization. In addition, the outsourcing development and authorization of invention patent part have higher percentage which is 17.34% and 15.61% respectively. However, the speed of self R&D can't meet the speed of product elimination nowadays. Therefore, under global open competition, corporate may try to cooperate with universities and research institutions to speed up R&D progress.

Table 1 Source of Intellectual Property Right

	by self R&D	by authorization	by purchase	by outsourcing or jointly development	others
copyright(n=107)	78.50%	13.08%	11.21%	15.89%	0.93%
Invention patent (n=173)	94.22%	15.61%	5.78%	17.34%	0.58%
Utility model patent(n=162)	93.83%	3.09%	3.09%	9.26%	0.00%
design patent(n=118)	92.37%	3.39%	2.54%	11.86%	0.00%
trademark(n=201)	88.06%	4.98%	1.49%	7.46%	0.00%
trade secrets(n=117)	92.31%	5.98%	3.42%	17.09%	0.00%

Source: created by project team members

Further, among the services that corporate ask for assistance from government, there are high demand for promotion of cooperation between industrial, academic and research sectors as well as assistance provided by academic and research institution to enhance corporate's R&D ability. Based on this, it is clear established that a smooth access can help enterprises to cooperate with academic and

research institutions for R&D instead of doing it on their own.

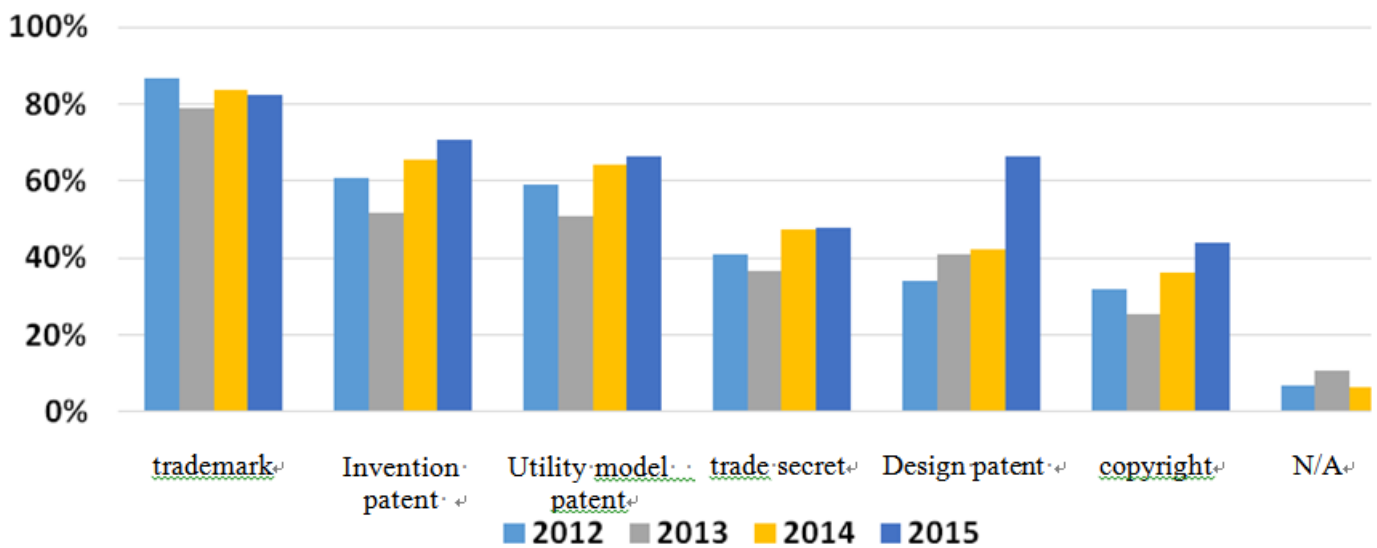


Source: created by project team members

Graph 7 The Government Policy for Intellectual Property

5.Taiwanese enterprises focus only on patent and trademark but ignore trade secret and copyright

From the intellectual property items enterprises possessed each year, it is found that trademark has the highest percentage (over 80% for four-year average) and next items are invention patent and utility model patent. The awareness that corporates have on intellectual property is only limited to patent and trademark. They overlook that their core ability may be protected by trade secret and copyright.



Source: created by project team members

Graph 8 Owned IP right

Trend 3: Increasing Demand on International Intellectual Property Service

1.The overseas intellectual property risk Taiwanese enterprises faced greatly varies from sectors

Among the 2015 survey, 85% of respondent firms developed to overseas. Under which the highest percentage is 79.81% for overseas sale

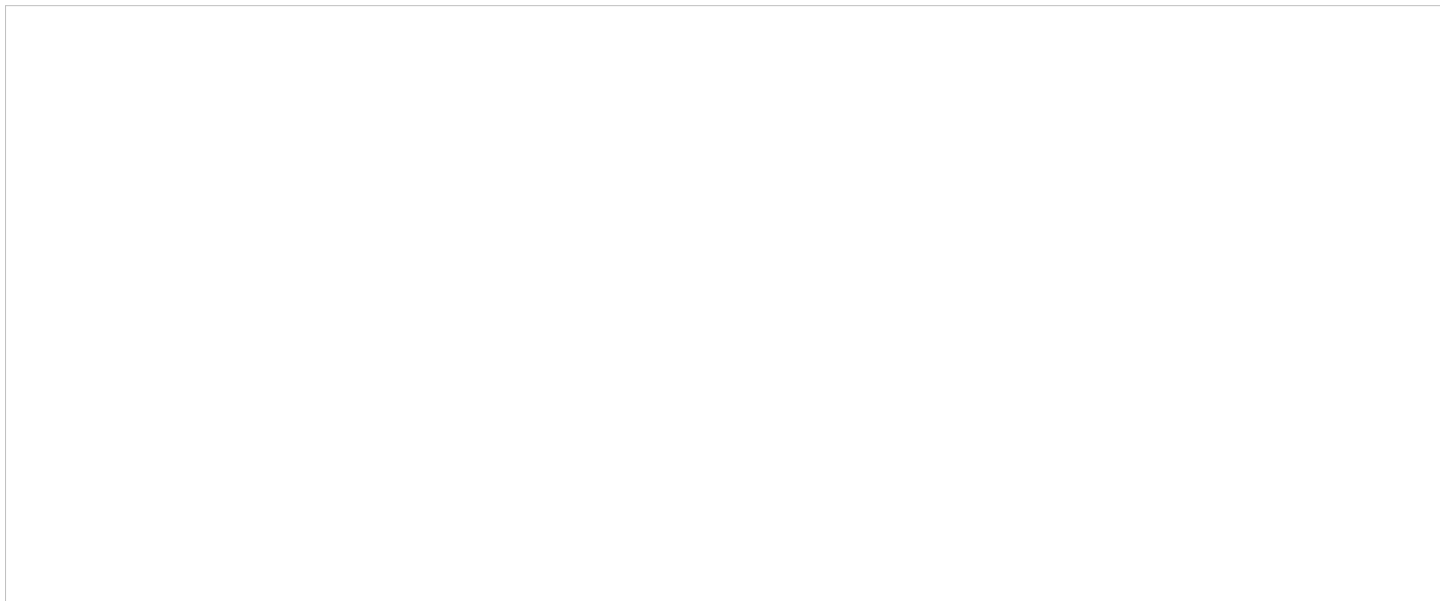
then 56.25% for self-establishment of overseas factory for manufacturing. Furthermore, the percentage of outsourcing in traditional manufacturing sector is the highest than that of other industries which 77.36% of traditional manufacturing firms established overseas factory for manufacturing. The percentage of overseas sale in pharmaceutical and livelihood sector is 91.3% and slightly higher than that in other industries. The result shows that different industry will select different overseas development strategy based on its sector characteristics and R&D difficulty.



Source: created by project team members

Graph 9 The overseas intellectual property risk

As a whole, the highest risk that might be occurred from enterprises developed overseas is leakage of trade secrets. Next risks are 47.12% for being accused of product infringement and 42.31% for patent being registered. Further, the risk control greatly varies from different sector. The risks that industry and commerce service sector regards are quite different from other sectors. For example, its risk of dispute of employee jumping ship or being poached which accounted for 50% is higher than that of other sectors. In addition to the three common risks mentioned above, information and technology sector believes that there might be risk of patent dispute which accounted for 35.29% and is higher than that of other sectors.



Source: created by project team members

Graph 10 The overseas risk control which might be occurred by enterprises

2.The most dissatisfied part that Taiwanese enterprises have to the intellectual property outsourcing service is insufficient experiences on the treatment of international affairs

Based on the 2012 and 2013 data, the too expensive fees is the primary factor that intellectual property outsourcing service didn't meet the demand. However, from the 2014 and 2015 survey result, the experiences on the treatment of international affairs became the primary factor.

It is shown that enterprises increase demand for international intellectual property work but current services from providers can't satisfy it. From survey data, it is found that different sector has different demand on overseas development. Among which the pharmaceutical and livelihood sector has higher demand on the management of overseas trademark use, investigation of overseas infringement risk, contract of overseas patent authorization, contract of overseas trademark authorization, contract of overseas technology transfer and contract of overseas mutual R&D (See Graph 11).



Source: created by project team members

Graph 11 The outsourcing professional resources unsatisfied with demand – annual comparison

Recommendation 1: Taiwanese enterprises shall build intellectual property creation strategy based on a variety of intellectual property rights

Enterprises may apply for patent, trademark, trade secret and copyright. For instance, brand management can be conducted with trademark and copyright and core technology or service can be protected by patent and trade secret instead of using trademark or patent alone as primary strategy.

Recommendation 2: Provide Taiwanese enterprises with assistance of overseas intellectual property consultation

85% of respondent firms have overseas business which greatly varies from different sector so to accompany with different overseas intellectual property risk. Therefore, government may provide enterprises with the information of overseas intellectual property and even real time consultation services of overseas intellectual property risk which is the requirement to be satisfied immediately.

In addition, the actual overseas intellectual property demand of enterprises can be found through this introduction of consultation services. To satisfy enterprises' demand, service providers may need to improve their ability together.

Recommendation 3: Build cooperation access of industry, academics and research to assist Taiwanese enterprises to enhance R&D ability

Under the fast-evolved and competitive environment, enterprises shall not only depend on their own R&D. Moreover, they shall leverage the R&D result of academic and research institutions to improve so to make subsidy of those institutions from government have real impact on them. Therefore, there is demand of cooperation between industry, academics and research. The cooperation access between them should be built to achieve synergy of R&D.

Recommendation 4: Experienced professionals of intellectual property are required to be cultivated and demand of intellectual property human capital is needed to be expanded for Taiwanese enterprises

Enterprises lack of experienced professionals of intellectual property. This demand could be satisfied only through on-the-job training for large personnel other than new graduates of department of intellectual property. Furthermore, enterprises can make department of intellectual property contribute its professional services into R&D and marketing strategy through design of organization work procedure to reduce risk of intellectual property they have to face.

