

## **Influence of Tax Incentives on Independent Intellectual Property R & D**

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### **Abstract**

*In order to improve the competencies around the world, a large number of countries adopt tax incentives to encourage R&D in independent intellectual properties. China also issued many tax incentives on this base. However, there are quite a few problems in these incentives, such as vague contents, conflicts among treatments. Moreover, many factors also have potential influences on the effectiveness of these incentives. This paper tries to discuss the current problems and the real effects on promoting R&D on intellectual property.*

**Keywords:** Tax Incentives, Independent Intellectual Property, R&D

### **1 Introduction**

Science and technology plays important roles in the development of economy. R&D on intellectual property could bring 5 times of public returns than private returns.[ ] It can benefit science development, improve living level and create job opportunities.[ ] Thus, prompting R&D on intellectual property has always been encouraged by countries. It should be noted that the possibility of successful R&D in independent intellectual property is positively related to the cost of R&D.[ ] However, Chinese enterprises input only a few on R&D. According to Statistical yearbook of china 2015, the Chinese company R&D input is merely 0.90% of revenue. Compared to developed countries, the basic requirement on R&D input of them is 3%. There is a wide gap.[ ] In 2013, R&D input of Chinese high-tech companies is only 1.99% of GDP and, in 2005, is 2.07%. However, in 2003, such indicators of the US are 2.06%.[ ] In addition, the number of independent IP owned by Chinese company is 0.3% of total IP protected in China.[ ] while IP applied by foreign companies in China is more than a half of the total inventions applied in China.[ ] Most techniques need to be sourced from abroad. With the protection system for intellectual property rights built by developed countries perfect, the costs and difficulties to copy core technique from leading companies in developed countries increasingly increase. In order to keep competitive on the global market, developing countries should improve their R&D capacity in independent IP. On the other hand, because of the spillover of an IP R&D, an investor can hardly benefit from R&D activities.[ ] Furthermore, lacking funds, R&D cannot be carried out. Finally, the potential benefits of R&D could not emerge. R&D could not be sustained without support from the government. Usually, the government uses tax incentives to encourage R&D in independent IP. Taxation is one of the basic tools to push economic policies. R&D is a kind of tax-sensitive activity and many parts of it can be easily affected by taxation, such as calculation of depreciation of fixed assets, deductions on R&D costs. Tax incentives have become the main way of developed countries to lower the R&D costs, guide enterprise to boot R&D input, and finally, acquire IP. In this context, the Chinese government also issues a series tax incentive for independent R&D. According to a survey, in 2010, the total credits for manufactures by all levels of Chinese governments is 801.50 billion, which is 11.7% of internal R&D costs in manufacture.[ ] This paper studies China's tax incentives and discuss actual influences on independent IP R&D. In addition, R&D input can also be affected by countries' economic system. In an open economy, company can locate their R&D outside the country to avoid tax based on tax treaties. However, in a close economy, company can only locate R&D in its home country.

[ ] Because of the strict foreign exchange control in China, there would be a barrier for Chinese company to invest R&D abroad. Therefore, this paper will limit the discussion within inbound of China. Firstly, R&D related tax incentives will be introduced. Secondly, it will discuss problems that exist in these treatments. Finally, it will try to offer suggestions based on Chinese special situations.

## 2 Current tax incentives relating to independent IP R&D

There are enormous tax incentives, whose encouragement achieved through the following aspects: the cost of R&D for new technology can be deducted from the calculation of taxable income; depreciation of fixed assets on technical upgrading can be accelerated or shorten the depreciation period; pre-tax deduction of staff education funds in high-tech enterprises; imports of scientific research and technological development supplies are tax free; foreign and domestic income tax rates of high-tech enterprise will be reduced and others. Current tax incentives can be seen as follows:

**Table 1 Current Tax Incentives**

Tax incentive	Number	content	Source
Tax deduction	1	The incomes incurred from the transfer of technologies, which meets the relevant requirements	Order No. 64 of the President of the People's Republic of China
	2	Income obtained of newly high-tech enterprises from special economic zones and Pudong new district of Shanghai can be deducted regularly.	No. 40 [2007] of the State Council
	3	Notice of the Ministry of Finance and the State Administration of Taxation on the Pilot Enterprise Income Tax Policies for Technology Transfer in Zhongguancun Science Park	No. 72 [2013] of the Ministry of Finance
	4	Senior experts who have reached the age of retirement are allowed to appropriately extend their age of retirement due really to the need of work, their wage and salary incomes received during the period of retirement are regarded as retirement wages and are exempt from individual income tax.	No. 020 [1994] of the Ministry of Finance
	5	Incomes from prizes in science, education, technology awarded by provincial people's governments, ministries and commissions under the State Council and units of the People's Liberation Army at or above the army level, as well as by foreign organizations and international organizations shall be exempted from individual tax.	Article 4 of Individual income tax law
	6	Circular of State Administration of Taxation on Issues Concerning the Deduction and Exemption of Enterprise Income Tax on Technology Transfer	Letter No. 212 [2009] of the State Administration of Taxation
	7	Notice of the Ministry of Finance and the State Administration of Taxation on Enterprise Income Tax Policies for Further Encouraging the Development of Software and Integrated Circuit Industries	No.27 [2012] of the Ministry of Finance

	8	Technology transfer or technology development and related technical consultation and technical services provided by pilot taxpayers shall be exempted from VAT	No. 106 [2013] of the Ministry of Finance (expired)
	9	The equipment for self-use imported by enterprises (including enterprises with foreign investment and foreign enterprises) to make products listed in the Catalogue of the State New & High-tech Products and the technology, accessories and the spare parts imported together with the equipment according to the contract and the software charges paid to a person outside our territory as provided by the contract shall be exempt from customs duty and the import-linked value-added tax.	No. 273 [1999] of Finance & Taxation (expired)
	10	The scientific research, scientific and technological development and teaching supplies that cannot be produced domestically or fail to meet the requirements in terms of performance as imported by scientific research institutions, technological development institutions, schools and other entities shall be exempted from import tariff, import value-added tax (“VAT”) and consumption tax. The books and materials, among others, used for scientific research and teaching imported by publication importers for scientific research institutions and schools shall be exempted from import VAT.	No. 70 [2016] of the Ministry of Finance
	11	the property and land used by eligible incubators themselves or provided for incubator enterprises to use without compensation or by lease or in other forms are exempted from property tax and urban land use tax; and revenues arising from leasing venues and buildings to incubator enterprises and from providing incubation services are exempted from business tax.	No. 117 [2013] of the Ministry of Finance
	12	Non-profit scientific research institutions engaged in technology development, technology transfer business and related technical advice, technical services income shall be exempted from business tax and corporate income tax. Non-profit scientific research institutions for their own property, land, shall be exempted from property tax, urban land use tax.	No. 273 [1999] of Finance & Taxation
Preferential tax rate	13	The enterprise income tax on important high- and new-tech enterprises that are necessary to be supported by the state shall be levied at the reduced tax rate of 15%.	Article 28 of Enterprise income tax law

	14	A small meager-profit enterprise, of which the annual taxable income is less than 30,000 yuan (including 30,000 yuan), shall compute the taxable income at the reduced rate of 50% and pay the enterprise income tax at the rate of 20%.	No. 133 [2009] of the Ministry of Finance (expired)
	15	If key software enterprises and IC design enterprises included in the national plan does not enjoy the preferential treatment of tax exemption in the current year, they shall be subject to the enterprise income tax at the reduced rate of 10%.	No. 27 [2012] of Finance & Taxation
	16	Enterprises in the areas of cultural innovation, support technology and other fields of the Zhongguancun autonomous region of independent innovation, which are designated as high-tech enterprises according to regulations, shall be subject to enterprise income tax at a reduced rate of 15%.	No. 595 [2013] of the State Council
Pre-tax deduction	17	Social resources on the non-associated non-profit scientific research institutions of new products, new technologies, new technology research and development funding funded by the competent tax authorities to determine the assessment of its expenditure can be fully deducted in the current year taxable income. The If the taxable income is less than the deductible, the deduction shall not be carried forward.	No. 5 [2001] of Finance & Taxation
	18	For the tax obtained by a software enterprise which enjoys the value added tax policy of immediate refund right after collection, if this refunded tax is only used by the enterprise for R&D and expansion of reproduction of software products and accounted for separately, such an amount of tax shall be considered as tax-free income and be deducted from the total revenue when calculating the amount of taxable income.	No. 27 [2012] of Finance & Taxation
Immediate refund right after collection	19	Staff and workers' training expenses incurred to IC design enterprises and qualified software enterprises shall be calculated separately and deducted when calculating the taxable income according to the actual amount.	No. 27 [2012] of Finance & Taxation
	20	From October 1, 2013 to December 31, 2015, taxpayers selling electrical products produced by themselves by utilizing solar energy shall be subject to the value-added tax policy of immediately refunding 50% upon payment.	No. 66 [2013] of the Ministry of Finance

Accelerated depreciation	21	If general VAT taxpayers sell self-developed and produced software products, after VAT has been collected at a tax rate of 17%, the refund-upon-collection policy shall be applied to the part of actual VAT burden in excess of 3%.	No. 100 [2011] of the Ministry of Finance
	22	VAT may continue to be refunded in full amount to Chinese-funded research and development institutions and foreign-funded R&D centers for their purchase of homemade equipment.	No. 121 [2016] of the Ministry of Finance
	23	Refund the previously levied import tariffs and value-added taxes for the key parts and accessories imported for development and manufacturing of these equipment, and raw materials which cannot be produced domestically.	No. 11 [2007] of the Ministry of Finance, General Administration of Customs and State Administration of Taxation (expired)
	24	For an instrument or equipment that is purchased by an enterprise after January 1, 2014 and is exclusively utilized by the enterprise in research and development activities, if its unit value does not exceed 1 million yuan, it may be deducted in a lump sum in the calculation of the income tax payable; and where the unit value exceeds 1 million yuan, it is allowed to shorten the depreciation period at no less than 60% of the depreciation period as prescribed in the Enterprise Income Tax Law or the double-declining balance method or the sum-of-the-years-digits method may be selected to conduct the accelerated depreciation.	Announcement No. 64 [2014] of the State Administration of Taxation
	25	For software purchased by an enterprise, if it meets the conditions for being recognized as a fixed asset or intangible asset, it may be calculated as fixed asset or intangible asset, and its depreciation or amortization time period may be shortened properly, with a minimum of two years.	No.27 [2012] of the Ministry of Finance
		The depreciation time period for the productive equipment of an integrated circuit production enterprise may be shortened properly, with a minimum of 3 years.	No.27 [2012] of the Ministry of Finance
Weighted Pre-tax Deduction	26	Where the R&D expenses actually incurred by an enterprise when it conducts any R&D activity have not been included in the current loss and profit as intangible assets, another 50% of the amount of R&D expenses actually incurred in this year shall be deducted from the amount of taxable income in this year in addition to the deduction as prescribed to the extent of the amount actually incurred. Where any intangible assets are formed, 150% of the costs of the intangible assets shall be amortized before tax payment.	No. 119 [2015] of the Ministry of Finance

Tax credit	27	An enterprise group may, according to the actual circumstances of its production, operation, and science and technology development, determine in a reasonable manner the methods for amortizing the R&D expenses actually incurred by it for its projects which have high technical requirements and large investment amounts and need to be researched and developed in a concentrated manner under the principles of making rights commensurate with obligations and expenses with benefits, and amortize such expenses among benefited member enterprises, and the relevant member enterprise shall respectively calculate the weighted deduction amounts.	No. 119 [2015] of the Ministry of Finance
	28	Where a startup investment enterprise invests in an unlisted small or medium new- and high-tech enterprise for two years (24 months) or more in the form of equity investment, a tax credit of 70% of the amount of investment in the small or medium new- and high-tech enterprise can be claimed against the taxable income of the year when two full years end since it holds shares in the small or medium new- and high-tech enterprise, and, if the tax credit is less than the taxable income, the tax credit can be carried forward to the next tax year.	No.87 [2009] of the State Administration of Taxation
Others	29	From November 1, 2014 to December 31, 2017, loan contracts concluded between financial institutions and micro and small enterprises shall be exempted from stamp tax.	No. 78 [2014] of the Ministry of Finance
	30	The income obtained by eligible guarantee institutions from engaging in the credit guarantee or re-guarantee business for small and medium-sized enterprises shall be exempt from business tax for a period of three years.	No. 286 [2015] of the Ministry of Industry and Information Technology

According to the contents of these rules, they can be classified into two kinds: "tax rate reduction" and "expense deduction or credit", or they can also be classified as direct and indirect incentives. This paper will discuss the different influences of those kinds of treatments.

### **3 Problems existing in current tax incentives**

Although there are a large number of tax incentives to support R&D in independent IP, in the course of implementation, because of shortcomings of these incentives, some enterprise cannot enjoy preferential policies and moreover, the country's tax base is also at risk of erosion. In addition, the cumbersome and complex applying procedures are another barrier.<sup>[i]</sup>

#### **3.1 Vague provisions for identification to preferential tax qualification**

Notice of the Ministry of Finance and the State Administration of Taxation on the Pre-tax Deduction Policy for the Education Fund for the High-tech Enterprises mentions the high-tech. However, the detailed definitions are found in three documents: *Administrative Measures for the Determination of High and New Tech Enterprises*, *High and new technology areas supported by the state*, *Guidelines for determination of High and New Tech Enterprises*. The separated definitions improve difficulties for an enterprise to apply for the qualification.

Among factors of qualifications that mentioned in those provisions, there are problematic rules about the proportion of R&D employees. Not only do such rules lack for quantifiable standards, but also are the definition of technical staff, support staff, other technical activities ambiguous. Rule-makers did not consider the situation including contract length of employment, rotation of jobs, plural offices. For example, whether short-term employees should be counted in the number of staff. Due to those ambiguous rules, qualified companies find it is hard to enjoy preferential policies, and unqualified company abuse those rule to apply successfully.

### **3.2 Potential conflicts about identifying high-tech enterprise among governments departments**

The technical department adopts formal examination when enterprises apply for tax incentives initially. A tax department will do substantive examination when company pay taxes. If a company do not accord with high-tech identification, after acquiring such qualification from the technical department a period of time later, tax authority will deny the qualification identified by the technical department. However, there are no legal grounds that the decision of technical department can be denied by a peer and non-supervision department. Also, the power of tax authority does not rank higher than that of science and technology department. There are substantial problems in the cooperation between departments.

### **3.3 Controversial provisions on R&D cost accumulation**

These controversial rules make credit and deduction for R&D cost difficult. Because of vague rules on identification R&D staff, accumulation of labour cost of R&D staff is also ambiguous. Also, some key rules lack specific definition, such as the substantive improvements and regular update. In addition, some expenditure for R&D staff are not explicitly mentioned in provisions, such as social and security costs. The accumulation of R&D costs and other costs can be confused. Moreover, different provisions, such as  $\diamond$  and  $\triangleleft$  on R&D cost are inconsistent. Such inconsistency can be found in expenditure name, routine of accumulation, specific item contents. In practice, some R&D costs do not fit with accounting title according to those tax incentives.<sup>[ii]</sup>

### **3.4 Conflict between financial supports and tax incentives**

China uses both financial supports and tax incentives to encourage R&D in independent IP. However, financial subsidies are not universal but targeted. Only can a limited range of enterprises can acquire supports successfully. Moreover, due to the spillover of R&D in independent IP, some companies could invest in pursuing subsidies rather than in doing R&D actually, if the gains from financial larger than that from R&D.<sup>[iii]</sup> Therefore, when tax incentives and financial subsidies apply to one enterprise at the same time, the positive effect of tax incentives on R&D would disappear. To a certain extent, encouragement from tax incentives is offset by financial subsidies. Furthermore, for the entire industry, lacking universal, subsidies create unfairness in market and R&D circumstances. The number of enterprises pursuing subsidies may increase.

### **3.5 Incomplete system of tax incentives for R&D**

Although, there are a larger number of tax incentives and their coverage are wide, a complete system has not been established.<sup>[iv]</sup> In this context, many conflicts among different provisions and department are found. Those provisions are issued by different departments lacking consistency, which makes cross-sectoral cooperation difficult. In addition, compared to tax law, the power of tax policies ranks lower and is unstable. These problems reduce the efficiency of implementation of tax incentives. Except these unfavorable conditions, tax incentives affect different aspects of R&D in independent

## **4 The Impact of Current Tax Incentive on the R&D of independent IP**

In general, the adoption tax incentive to encourage R&D is fairness. It can provide same level support for qualified enterprises. In the market competition, only qualified company can enjoy preferential policies. To acquire more preferential tax policies, companies can optimize resources to enlarge R&D in independent IP. On the basis of reducing the tax burden of enterprises, government provides a guidance for enterprises to invest more internal resources into R&D activities. In the meantime, tax incentives can also influence the investment willing of external resources in some degree. Due to the over pill of R&D, company cannot have returns fully and it is also difficult for company to have investments from outside the company. However, with the help of tax incentives, risks of R&D can be decreased.<sup>[v]</sup> For example, tax free for imported R&D equipment can decrease the cost of R&D; Accelerated depreciation of fixed assets can improve the cash flow.<sup>[vi]</sup> Both incentives reduce the risk and pressure of large cash input, which improve the possibility of success R&D. Thus, enterprises can avoid some risks and uncertainties. Those tax incentives create a better financing environment for enterprise to attract external investment.

In addition, because of the mobility of R&D staff, enterprise also needs to burden the risk of talent loss. Well-trained staff could switch to another company for a better salary or for other reasons, which can be seen as loss for his training company. On the one hand, tax incentives encourage enterprise to provide trains for staff by allowing deductions or credit for training fees. On the other hand, salaries of R&D staff are pre-tax deductible, which can improve their salaries directly. These kinds of incentives can not only enhance willing of staff to stay, but also improve professional skills of staffs. Consequently, the efficiency of R&D could be enhanced indirectly.

## **5 Factors influencing the effects of tax incentives**

The tax policy that encourages enterprises to carry out independent IP R&D is mainly realized in two ways: reducing the tax rate and R&D expenses deduction or credit. These two kinds of incentives have different effects on R&D because of the different intensity of their implementation. In addition to these two types of methods, each specific policy has certain impacts. Moreover, effects of tax incentives are not only affected by the type, strength, scope of incentives, but also affected by the industry, the size of the enterprise.

### **5.1 The effect of stimulus intensity**

Although the tax incentives can promote enterprises to carry out R&D activities, the different intensity of incentives may also have a different impact on it. When the intensity of tax incentives is low, the tax benefits acquired by companies can be limited. Such incentives cannot help enterprises to reduce the cost of R&D and risk. Therefore, the low-intensity incentives could fail to improve the enthusiasm of enterprises to carry out R&D. Nevertheless, when the intensity of tax incentives increased, the enthusiasm of enterprises for R&D will also rise. Whereas, provided that intensity of incentives is strong enough that bring better benefits than R&D output, companies may be more interested in how to meet the conditions of preferential policies. In other words, company can acquire tax incentives fraudulently through carrying out false R&D.<sup>[vii]</sup> This "seeking support" behaviour violated the original intention of tax incentives. Thus, excessive tax incentives can hinder R&D activities. Moreover, in the context of high-intensity tax incentives, if the scope of incentives is wide, the financial burden of the government can be increased, resulting in waste of public resources. Thus, the qualification of enjoying tax incentives can be strict, leading to narrow coverage of the policy. Governments have more willing to support an independent IP R&D project with a better industrialization prospects. Such selective incentive also violates the principle of tax fairness. Therefore, an appropriate strength of tax support should be found to promote R&D.

### **5.2 The effect of different incentive types**

At the same level of incentive intensity, the effects of different types of incentive provisions are various. The change in tax rate can be a vital factor affecting whether the company is actively carrying out R&D. As it is a high risk activity, business enthusiasm for R&D is not high. The tax rate reduction policy can effectively encourage enterprises to start investing in R&D. Enterprises can obtain some certain tax rate concessions by engaged in R&D. Therefore, the reduction of tax rate can increase profits of companies, which is another catalyse for R&D.

Because of the low investment in R&D, China's enterprises have fewer independent intellectual property rights and are at a disadvantage in global competition. Reduction and credit for R&D expense can increase cash flow and reduce the risk of R&D investment.<sup>[viii]</sup> R&D expenses deduction has been adopted by many countries. As an indirect incentive, it has the characteristics of post subsidy, which means a certain portion of R&D expenses invested by enterprises can be deducted or credited after the start of R&D. It can also be seen as a kind of reward for companies. This method can contribute to enterprises with tight R&D funding.

### **5.3 Impacts on enterprises with different scale**

Large enterprises are more likely to enjoy preferential tax rates. For large enterprises, because of its financial strength, their investments in independent IP R&D are larger than small enterprises, such as the equipment update and maintenance. Such kinds of expenses do not belong to R&D. Therefore, these expenses cannot be deducted or credited, although those investments provide a solid foundation for R&D. However, incentives to reduce tax rates can affect such investments. With enormous R&D relevant investments that cannot be seen as R&D expenses, large corporations are more likely to benefit from lower tax rates. Small and medium-sized enterprises tend to invest in relatively simple R&D projects, due to their weak financial strength, R&D capability. Compared with the large enterprises, the fundamental investment in R&D is less, and the tax rate reduction cannot give the SMEs a significant incentive.<sup>[ix]</sup> Therefore, R&D expense deduction and credit can further promote R & D activities of SMEs.

#### **5.4 The effects of regions**

Tax incentives have different impacts in different regions. In addition to the strength of publicity and implementation by local governments, the effects also have a close relationship with the local social environment. First of all, tax incentives will be affected by the market operation of a region. In areas where the market is running well, the process of resource allocation is dominated by the market. Enterprise R&D can attract investment from the market. At the same time, because of the fierce competition in the market, enterprises require gaining certain market competitiveness through the leading edge of science and technology. Thus, enterprises can have greater motivation of carrying out R&D. Under such circumstances, the government's tax incentives are not the only support and motivation for enterprises. To some extent, pure "seeking subsidies" and "seeking support" can be avoided. In the areas with poor marketization, the role of the market in optimizing the allocation of resources is not apparent. Except the government's policy support, it is difficult to obtain resources from the outside the company, which may lead to insufficient R&D investment and low efficiency. In this case, the promotion of preferential tax provisions cannot be seen. Secondly, R&D activities will be affected by the legal consciousness of a region and the degree of legal binding. In a region where enterprises have a high level of legal consciousness, they would not copy or steal their competitors' R&D results. Also, there will not be a strong will to proceed "seeking support". Moreover, the strength of legal binding plays a more critical role. The cost of offending law would be high, which means the gains of enterprises in seeking support may not be enough to cover the losses caused by illegal practices. Therefore, "seeking support" can be suppressed, so that tax incentives can be implemented effectively. Furthermore, if the legal binding is strong, "copycat" infringement can be stopped in a timely manner and the infringed enterprise can be compensated. R&D results can have a better legal protection. Otherwise, if the legal protection is not in place, the cost of infringement is lower than the benefits brought about by imitation or such behaviours would not be punished. In those regions, the lack of legal protection will reduce the enthusiasm of enterprises to carry out R&D. In this environment, the role of tax incentives is extremely limited.

#### **6 Suggestions**

In view of the existing policy issues, as well as the adverse effects, this article will try to offer the following recommendations. Firstly, for the identification of tax incentives, rules-maker should quantify each condition and reduce the ambiguous expression. Also, once an enterprise applies to enjoy tax incentives successfully, technical department should conduct a substantive review of its eligibility or a phased assessment annually. Through this way, enterprises that do not meet the expected R & D goals or no longer meet policy conditions can be excluded. Therefore, conflicts among departments can be avoided. Meanwhile, in order to reduce disagreement, tax authorities should strengthen communication with the enterprises, and provide guidance in advance for the collection of questionable expenses. Moreover, because of the high technology and professionalism of R&D, it is possible for the government to evaluate the information asymmetry, which will undoubtedly create opportunities for "seeking support" behaviour. Sometimes the government would not examine applications substantively, which offset the promotion effects of tax incentives. Therefore, the third party should be involved in examining procedures anonymously and the government should refer to the opinion of the third party to make the decision. Additionally, in order to prevent and correct identification errors, the government should provide enterprises with green channel of administrative reconsideration to reduce the time required and the time cost for reconsideration. Secondly, a completed system for R&D tax incentives should be established. In China, various tax incentives are scattered in different documents. The management of these provisions can be mass. In a completed system, many other policy tools can be included, but it should be noted whether there is any overlap or contradiction in the function of these policies. Policy tools that conflict with each other or overlap should not be applied to the same enterprise at the same time. To avoid potential "seeking support" behaviour, the measures in this system need to be used in a reasonable and orderly way. In addition, due to the large number of current policies, it involves the division of labour and cooperation among several government departments. In the construction of policy system, the functions of various departments should be straightened to improve administrative efficiency. Through this way, qualified R&D enterprises can enjoy the tax benefits conveniently. Furthermore, in comparison with the law, the tax policies lack long-term stability and authority. Changes in policy are a potential risk for firms with longer R&D cycles. At the same time, because the rank of the policy is lower than that of the law, the tax authorities may reject the preferential tax policies that should be enjoyed by the enterprises in accordance with the relevant provisions of the tax law.

Therefore, the government should establish a complete tax incentive system, and formulate special laws and regulations to encourage enterprises to develop their own intellectual property rights.<sup>[x]</sup> In this way, the power of preferential tax policies can be improved. Finally, the use of indirect tax incentives should be increased. In order to encourage the development of new independent intellectual property R&D, indirect tax incentives should be adopted to encourage enterprises to make an initial investment and continuous investment. Such incentives can help enterprises reduce financial pressure and R&D risks. To name only a few, accelerated depreciation of fixed assets can reduce the costs R&D equipment upgrading; R&D expenses tax deduction can enterprises pay more attention to the development process rather than just buying technology; reduce the income tax and business tax rate of VC firm's investment in company that developing independent IP.

## 7 Conclusions

It should be noted that different types of tax incentives have different impacts on enterprises of different sizes. For large enterprises that have already made certain progress in R&D, direct tax incentives, such as lower tax rates, will serve as a better incentive. For small and medium enterprises, indirect tax incentives can reduce their concerns about R&D. On this basis, to avoid the benefits of tax incentives for excess profits from R & D activities, or in other words, "seeking support", preferential policies should be formulated with moderate intensity. The influence of tax incentives on the development of independent intellectual property rights is the result of many factors. For enterprises of different sizes, tax incentives have different impacts. In order to achieve the original aims of tax incentives, the intensity should be within a certain range. Meanwhile, the social and economic circumstances of a region also have significant influences. Tax incentives can operate functionally in a region with highly legal awareness and marketization. Indirect tax incentives can promote the initial investment in independent IP R&D. Moreover, there are quite a few shortcomings in the current tax incentives, such as vague provisions, departmental conflicts, mistaken identification and other issues. Therefore, this paper suggests that the third party organizations should intervene in order to make up for the information asymmetry between the government and the enterprises. Therefore, the false declaration can be avoided. Furthermore, not only should a complete R & D tax incentive system be established, but also should the legalization of R&D tax incentives be achieved gradually to reduce internal conflicts, and improve the legal rank and stability.

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