# 关于中国高新技术企业认定政策的 研究报告

Report on China's HNTE Program

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# 中国高新技术企业认定的调研报告 Report on China's HNTE Program

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## 1 高新技术企业认定的背景

#### 1. Background of HNTE program

高新技术企业是技术创新的源头和科技成果转化的直接载体,高新技术企业发展对一国或地区经济发展具有较强拉动作用。多年来,西方发达国家在扶持高新技术企业方面不遗余力,从而不断地提升了国家的实力。

High and New Technology Enterprises (HNTE) are the source of innovation and direct carrier for technology transfer, thus the development of HNTE plays a very important role in promoting national or regional economy. Western developed countries have been encouraging HNTE with all manners so as to strengthen comprehensive capability of their countries.

近年来,很多国家都在采取税收激励等政策,鼓励企业加大研发

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投入,以提升企业创新能力,创造新的经济增长点。截至 2011 年,经合组织 34 个成员国中有 27 个国家采取了这种方式,这一数量是 1995 年的两倍。许多非经合组织国家如印度、巴西、南非、新加坡等也提供了研发税收激励政策。2011 年,在经合组织成员国对企业研发的公共支持中,三分之一以上是通过税收激励方式支持的。近年来,许多国家提高了研发税收的激励力度。2006—2011 年间,在可获得数据的 23 个国家中,超过一半国家提高了税收激励的力度,包括澳大利亚、荷兰、以色列、法国、美国、比利时、土耳其、韩国、奥地利、英国、南非、捷克。一些国家的税收扶持力度提高了 25%以上,如法国、比利时、以色列。

In recent years, many countries have been adopting preferential policies like tax incentives to encourage companies to enlarge their investment in R&D so as to enhance innovation capability of the firm and to create a new point for economic growth. By 2011, 27 out of 34 OECD countries have adopted similar measure and this number is twice of the number in 1995. Many non-OECD countries such as India, Brazil, South Africa, and Singapore etc. also provide R&D incentives and favored policies. In 2011, among the public support for enterprises in OECD countries, more than one third are implemented through tax incentives. Lately, many countries enlarge their R&D tax incentives. Between 2006 and 2011, based on the reachable data from 23 countries, more than half of them have strengthened their efforts on tax incentives including Australia, Holland, Israel, France, the United States, Belgium, Turkey, Korea, Austria, Britain, South Africa and Czech Republic. In some countries, national support in tax incentives has increased by over 25% such as France, Belgium and Israel.

随着经济全球化和市场体制的推进,中国已经进入必须依靠科技进步和自主创新推动社会经济发展的新时期。中国于 1991 年开始对高新技术企业开展认定工作。伴随着工作的深入,相关政策得到修订,认定范围不断扩大,认定标准也逐渐提高。2008 年 4 月 14 日,中国科技部、财政部、

国家税务总局共同出台了新的《高新技术企业认定管理办法》,配套文件《高新技术企业认定管理工作指引》也于2008年7月8日正式印发。

With globalization and the proceeding of market-oriented economy, China has entered a new period when the social and economic progress must rely on technology and innovation. China started to implement HNTE Program ever since 1991. With the proceeding of the program, related policies have been amended and corrected. The recognition scope has been enlarged and recognition criteria for HNTE status have been raised. On 14, April, 2008, Ministry of Science and Technology (MOST), Ministry of Finance (MOF) and State Administration of Taxation (SAT) jointly launched *HNTE Assessment Administration Measures* (2008) and a supplementary document entitled *Guideline for Recognition and Administration of HNTE Enterprises* (2008)was printed and issued on 8, July, 2008.

# 2 高新技术企业认定的目标

# 2. Objective of HNTE program

中国开展高新技术企业认定的主要目的是在建设创新型国家的战略指引下,通过鼓励创新的政策导向和新税制优化产业结构的引导功能,进一步增强中国高新技术企业以自主研发为核心的综合创新能力,促进高新技术产业升级发展。这项政策的核心是引导企业加强自主研发活动、创造自主知识产权、加快科技成果转化,促进高新技术企业创新水平和竞争能力。

The objective of China's HNTE program lies in that under the guidance of national strategy to construct an innovative society, through preferential policies for innovation and new tax rate which can optimize industry structure to further strengthen comprehensive innovation ability of Chinese HNTE, to accelerate development and upgrading of high technology industry. The core of this program lies in guiding firms to increase self-held R&D activities, creating

self-held intellectual property, accelerating technology transfer and promoting HNTE's innovation level and competitiveness.

# 3 高新技术企业认定的特点

# 3 Features of HNTE program

高新技术企业认定是中国支持企业创新发展的一次有益尝试,具有以下几个特点:一是这项政策是面向中国境内居民企业的非普惠性政策,强调综合性,只有那些符合条件并集研发、生产、销售于一体的高新技术企业才能享受税收优惠。二是这项政策对内外资企业采取一视同仁的原则,一大批外资高新技术企业平等地享受了税收优惠,外资企业在高新技术企业认定中的地位仍然非常重要。三是这项政策重点扶持了高成长的中小企业。四是这项政策于 2008 年作了一次完善,使认定标准更加科学、管理更加规范、申请更加方便、程序更加透明。五是形成了中央政府监督管理、地方政府主管认定、专家进行评审、中介机构参与的多元化的综合认定管理和执行体系。

HNTE program is a beneficial trial for China support innovation-related activities in enterprises, therefore, it acquires the following features: 1) HNTE policies can not benefit all resident enterprises in China because the policies emphasize on comprehensive functions. Only qualified HNTE with R&D, manufacturing and sales can enjoy favored tax incentives. 2) These policies equalize treatment to both Chinese enterprises and FFEs. Therefore, a large number of foreign-funded HNTE enjoy the same tax incentives as Chinese enterprises and FFEs still play a very vital role in HNTE program. 3) HNTE policies give special support to fast-growing small- and medium-sized enterprises (SMEs). 4) HNTE policies have been amended in 2008, therefore, recognition criteria have been more scientific, management of HNTE program has been more regulated, application process has been simplified and administrative procedures have been more transparent. 5) A

diversified and comprehensive recognition and implementation system has been formed, i.e. the central government supervises and administrates implementation of HNTE program; local governments are in charge of recognition procedure; experts review applications and intermediary organizations join the process.

# 4 企业认定情况

#### 4 Enterprise recognition

中国高新技术企业认定的数量在 2007 年达到峰值 56047 家。2008 年 开始,由于认定标准提高,被认定企业数量呈现下降,2009 年达到谷底 25386 家,随后又开始逐步增加,至 2012 年高企数量达到 45313 家。

The number of qualified enterprises with HNTE status reached a peak of 56,047 in 2007, and then in 2008 when the requirements became stricter, the number of qualified enterprises dropped and hit a low of 23,386 in 2009. Afterwards, the number kept increasing gradually and amounted to 45,313 by 2012.

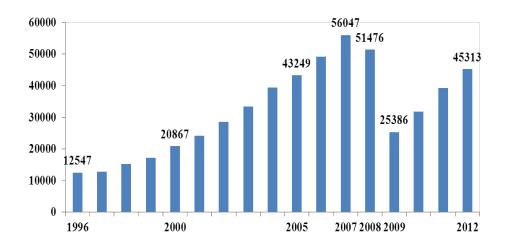


图 1 1996-2012 年中国高新技术企业认定情况 Figure 1 Enterprise Recognition from 1996 to 2012

#### 5 取得的绩效

#### 5 Achievements

#### 5.1 推动企业加大研发投入

#### 5.1 Encourage enterprises to increase R&D input

在高新技术企业认定相关政策的激励下,许多企业加大研发投入。据统计分析,2008年新认定高新技术企业的平均研发强度超过3%,其中58%的企业研发强度超过了6%,27%的企业研发强度约为10%,户均研发投入达到961万元。企业近三年来共开展了15万余个研发项目,平均每个企业每年开展3个项目,每个项目平均规模在300万元以上。

Encouraged by relating policies provided in HNTE program, many enterprises enlarge R&D input. Based on statistics, in 2008, average R&D intensity of qualified HNTE surpassed 3% among which 58% of the firms' intensity surpassed 6%, and 27% of the firms' R&D intensity was around 10%. The average R&D input per enterprise reached 9.61 million Yuan. In the past three years, qualified enterprises have conducted about 150,000 R&D projects. From an average perspective, per enterprise conducts 3 projects per year and average expenditure of per project surpasses 3 million Yuan.

# 5.2 提高企业知识产权保护意识

# 5.2 Enhance enterprise awareness to intellectual property (IP) protection

2010年,高新技术企业累计拥有有效专利 45.6 万件,其中发明专利 11.4 万件,高新技术企业平均每万人拥有的发明专利数量为 86.8 件。当年 申请专利 25.1 万件。其中,申请发明专利 10.7 万件,发明专利申请量占 全国境内发明专利申请量(28.1 万件)的 38.1%。当年授权 12.2 万件。其中,授权发明专利 2.5 万件,发明专利授权量占全国境内发明专利授权总量(7.4 万件)的 33.8%。

In 2010, qualified HNTEs owned 456,000 effective patents among which there were 114,000 patents for invention and 86.8 patents were owned by per

10,000 employees. In that year, patents under applying process amounted to 251,000 items among which patents for invention accounted for 107,000. The number of patents for invention which are under applying process took up 38.1% of the total indigenous patents which are under applying process in China (281,000 items). In that year, 122,000 patents were authorized among which authorized patents for invention accounted for 25,000 items. This number took up 33.8% of the total indigenous patents in China (74,000 items).

#### 5.3 提高企业经济效益

#### 5.3 Improve economic benefit for enterprises

高新技术企业认定对相关企业发展起到了较好的引导作用,营业收入、 产值、利润、上缴利税、出口创汇等指标不断攀升,对经济贡献均保持快 速增长,高新技术产业已成为推动中国经济发展的一支重要力量。

HNTE program can lead development of relating enterprises in terms of business revenue, output, profits, tax, foreign exchange etc. Thus with the above-mentioned indexes increased, HNTEs keep contributing to national economy at a fast pace. In this sense, high and new technology industry has become a vital power to promote national economy in China.

# 6 关高新技术企业认定的调查

# **6** Case study for HNTE program

根据美方专家的建议,中方专家对北京、天津和上海的高新技术企业进行了调研,充分感受到外资高新技术企业对这项政策的广泛欢迎。

According to the suggestions from the US experts, the Chinese experts conducted a case study for HNTE program in Tianjin, Beijing, and Shanghai, which showed that the HNTE program has been welcomed by FFEs.

#### 6.1 天津

# 6.1 Tianjin

2009-2013年,天津市有1629家企业提出高新技术企业认定申请,累

计有 1521 家企业通过认定,排除部分企业未复审,目前有效认定企业为 1426 家。

Between 2009 and 2013, 1,629 enterprises in Tianjin submitted application for HNTE status. An accumulative number of 1,521 enterprises passed recognition process. Apart from several enterprises that did not enter reassessment stage, until now 1,426 enterprises have been granted effective HNTE status.

在被认定的 1521 家高新技术企业中,93%拥有中国批准的专利,7% 享有全球独家许可。根据享有全球独家许可条件被批准为高新技术企业共有 109 家,其中中资企业 82 家,外资企业 2 家,合资企业 25 家。

93% of the 1,521 recognized HNTE own patent granted in China, 7% owns exclusive worldwide IP. According to the requirement for exclusive worldwide IP, 109 enterprises are approved to obtain HNTE status, among which there are 82 Chinese enterprise, 2 foreign-funded enterprises and 25 joint ventures, .

目前,天津市没有高新技术企业(包括外资企业)因知识产权问题被撤销高新技术企业的资格。

At present, no qualified HNTEs (including foreign-funded enterprises) in Tianjin are deprived of HNTE status due to intellectual property issue.

2011-2013 年高新技术企业复审工作中,由于企业兼并重组、破产清算、主营业务调整等原因,分别有 103 家(其中合资企业 16 家,外资企业 10 家,港澳台资 1 家)、69 家(其中合资企业 11 家,外资企业 2 家,港澳台资 3 家)、26 家(合资企业 3 家,外资企业 1 家)企业未提交复审申请。2014 年复审和重新认定工作正在进行,企业申报材料还未提交完成,所以无法确定放弃高新技术企业资格的企业情况。

Reassessment between 2011 and 2013 shows that due to the reason like enterprise merger and reorganization, bankruptcy liquidation, adjustment of major business etc., in respective years, 103 enterprises (16 joint ventures, 10

FFEs, 1 firm from HK, Macau & Taiwan), 69 enterprises (11 joint ventures, 2 FFEs, 3 firm from HK, Macau & Taiwan) and 26 enterprises (3 joint ventures, 1 FFEs) failed to submit reassessment application. In 2014, since reassessment and requalification is proceeding, enterprises haven't finished submitting application files and it is impossible to analyze how many enterprises quitting applying for HNTE status.

#### 6.2 北京

#### 6.2 Beijing

2009-2012 年,北京市共受理认定复审企业 10650 家,共有 10593 家企业被批准为高新技术企业。其中,中资企业占 98%,外资企业占 2%。2013 年第一批认定为例,总数 563 家企业,签订全球独占许可的企业 27家,占比约为 5%。

During 2009 and 2012, Beijing municipality has recognized and reassessed 10,650 enterprises among which 10,593 enterprises were granted HNTE status (Chinese enterprises take up 98% while foreign-funded enterprises take up 2%). Take the first batch of HNTE in 2013 as an example, 27 out of 563 enterprises signed exclusive worldwide IP, which takes up 5% of the total number.

# 6.3 上海

# 6.3 Shanghai

2009-2013 年,上海拥有高新技术企业资格的企业数量分别为 2468, 3059,3512,4179 家,当年享受税收减免企业的比例分别为 58.69%,59.13%, 63.32%,60.07%;当年享受税收优惠的平均额度分别为 41.17,83.78,66.32, 71.93 万元人民币。

Between 2009 to 2013, Shanghai had 2468, 3059, 3512 and 4179 qualified HNTE in each respective year. The firms which enjoyed tax incentives accounted for 58.69%, 59.13%, 63.32%, 60.07% and the average amount of tax incentives was 411,655 Yuan, 837,767 Yuan, 663,214 Yuan and

719,339 Yuan respectively.

2009-2013 年,上海美资高企数量分别为 54,75,80,78 家,分别占全市当年高新技术企业总数的 2.19%,2.45%,2.28%,1.87%;享受税收减免的美资高企数量分别为 31,47,52,34 家,占当年美资高企总数的比例分别为 57.41%,62.67%,65.00%,43.59%;当年平均享受减免税额分别为 86.73,50.03,42.96,97.87 万元人民币,占当年全市高企税收优惠额度的比例分别为 4.51%,1.55%,1.51%,1.84%。

Between 2009 and 2013, US-funded HNTE amounted to 54, 75, 80 and 78 in each respective year which accounted for 2.19%, 2.45%, 2.28%, 1.87% of the total HNTE in Shanghai that year. Individually, 31, 47, 52, 34 US-funded HNTE enjoyed tax incentives which accounted for 57.41%, 62.67%, 65.00%, 43.59% of the total US-funded HNTE. In each respective year, the tax incentives amounted to 867,300 Yuan, 500,321 Yuan, 429,581 Yuan and 978,709 Yuan which accounted for 4.51%, 1.55%, 1.51% and 1.84% of total tax revenue for HNTE in Shanghai.

2009-2013 年,美资高企平均销售收入分别为 8505, 6624, 10846, 2932 万元人民币, 年末平均总资产分别为 4667, 3652, 4042, 2999 万元人民币, 平均净利润分别为 250, 330, 205, 257 万元人民币, 年末从业人数分别为 514, 437, 483, 348 人。

Between 2009 and 2013, average sales income of US-funded HNTE amounted to 85.05 million Yuan, 66.24 million Yuan, 108.46 million Yuan and 29.32 million Yuan in each individual year; average total assets calculated in the end of the year accounted for 46.67 million Yuan, 36.52 million Yuan, 40.42 million Yuan and 29.99 million Yuan respectively; annual net profit amounted to 2.5 million Yuan, 3.3 million Yuan, 2.05 million Yuan, 2.57 million Yuan in each individual year; employment calculated in the end of the year amounted to 514, 437, 483, 348 persons respectively.

# 7几个问题的讨论

#### 7 Discussion on some key issues

#### 7.1 外资企业认定情况

#### 7.1 Recognition of foreign-funded enterprises (FFEs)

目前,外资企业在我国高新技术企业认定中所占的比重仍占到 15%以上。外资企业在高新技术企业认定中在部分地区地位仍然非常重要。2012年,在厦门市 755 家高新技术企业中,外资高新技术企业 218 家,实现总收入占全市高新技术企业总收入的 67.46%,且以出口为主,是拉动厦门市高新技术产业发展的主导力量。

At present, FFEs still takes up more than 15% in HNTE program in China. FFEs still play an important role in some local regions. Take Xiamen as an example, 218 FFEs with HNTE status are included in 755 qualified HNTE in 2012. Qualified FFEs contribute 67.46% of the total income generated by HNTE with a focus on export which is a driving force for the development of hi-tech industry in Xiamen.

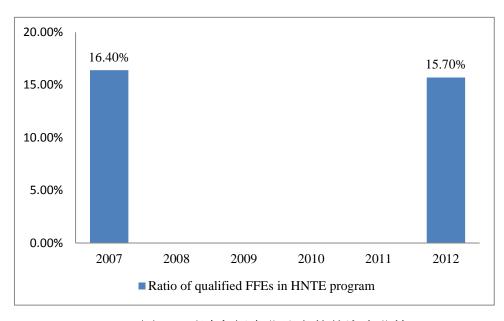


图 2 通过高新企业认定的外资企业情况

Figure 2 Qualified FFEs in HNTE program

从 6.3 数据可以看出,美资独资企业占上海高新技术企业总量的比重并不很高,基本维持在 2%左右,基本保持了平稳发展态势。从享受所得税等税收优惠企业占企业总数的比例来看,美资高新技术企业这一比例除 2012 年较低以外,其它年份均与全部高新技术企业相当; 2010、2011 两年,美资高新技术企业这一比例甚至高于全部高新技术企业。说明在享受所得税得税收优惠上,美资高新技术企业与其它高新技术企业保持了相同水平,享受了公平待遇。

Based on the 6.3 statistics, number of solely US-funded firms does not take up a very high percentage of the total HNTE in Shanghai with a coverage of around 2% showing a stable developing momentum. In terms of the ratio of firms which enjoy tax incentives like corporate income tax exemption and reduction, US-funded HNTE took a relatively lower percentage in 2012, but in other years, the percentage was equal to that of all HNTE; In 2010 and 2011, US-funded firms even took higher percentage than all other HNTE. This evidence can demonstrate that in terms of the income tax incentive, US-funded HNTE enjoy the same fair treatment compared with other HNTE.

进入 2012 年以后,美资高企数量明显下降。究其原因,一是 2011 年 对 2008 年认定的企业进行复审时,有些美资企业由于在国内没有实质性 研发,其研发投入强度不能达标,未能通过复审;二是个别效益不好的企 业 2011 年没有填报统计数据,在 2012 年统计汇总表中没有出现;这些企 业数量不多,但规模较大,导致其资产、从业人员、销售收入等均下降。

It can be concluded that since 2012, number of US-funded HNTE had a drop for the following reasons: 1) in 2011 when reassessment for firms which acquired qualification in 2008 proceeded, some US-funded HNTE failed to pass reassessment because they had no concrete R&D activities in China, thus they failed to meet the requirement for R&D input;2) several US-funded firms with unsatisfactory performance did not fill in statistical data, therefore, there was no data manifested on the summary sheet in 2012. There was only several

such US-funded firms but they are large-scale companies, thus their assets, employment and sales revenue etc. dropped.

一个例子是安集微电子科技(上海)有限公司 2011 年产品销售收入 31.3 亿元人民币,实现净例润-7929 万元,但其在 2012 年统计表中没有出现。这是美资高新技术企业 2012 年销售收入低于 2011 年,而利润高于 2011 年的主要原因。

One example is Anji Micro (Shanghai) Co., Ltd. Its sales revenue in 2011 accounted to 3.13 billion Yuan among which 79.29 million Yuan was net profit, however this did not manifest in the statistic table in 2012. Above mentioned is the major reason why sales revenue of US-funded HNTE in 2012 is lower than that in 2011 but their profit in 2012 is higher than that in 2011.

# 7.2 知识产权不在中国国内

#### 7.2 Patent not registered in China

有些外企在中国没有知识产权,没有研发活动、只从事生产,因此享 受不到税收减免优惠。

Some FEEs which have no patent, no R&D activities and are production-oriented in China can not enjoy tax incentives such as reduction and exemption.

# 7.3 人员比例不符合规定要求

# 7.3 Employee structure fails to meet requirements

中国高新技术企业认定的条件要求大专以上学历的员工需要占企业总人数的 30%以上,其中研发人员需要占总人数的 10%以上。许多生产性大型外资公司由于技术工人数量较多,使得大专以上学历和研发人员比例不符合要求,无法申请认定高新企业资格。

Requirements in HNTE program include that employees with vocational degree or above should account for more than 30% of the total workforce. R&D personnel should take up more than 10%. Since many large-scale

production-oriented FFEs need a large number of technical workers, thus they fail to meet the ratio of employees with vocational degree or above and the ratio of R&D personnel, which leads to a failure in acquiring HNTE status.

#### 7.4 两免三减半优惠政策的取消

# 7.4 Abolishment of "two exemptions and three halves" tax incentive

2008年颁布的新的《高新技术企业认定管理办法》并无内外资的区别。 在对外资企业逐渐取消税收优惠的背景下,外资企业渐渐与内资企业的企业所得税税率相同,都是25%,享受惯了两免三减半的所得税税率的外资企业感到不适应。

In the *HNTE Assessment Administration Measures* which became effective in 2008, Chinese enterprises and FFEs enjoy the same treatment. Under the background that tax incentive for FFEs were gradually abolished, a 25% corporate income tax rate is provided to both. This change of tax rate might cause discomfort for FFEs which have been accustomed to the previous "two exemptions and three halves" tax incentive.

# 7.5 关于核心自主知识产权界定

# 7.5 Definition of core self-held intellectual property

有部分外资企业对核心自主知识产权的界定提出异议。申报的核心自 主知识产权是外国授予的专利权,并未向中国专利行政部门申请授权备案。 关于这个问题仍存在争议。

Some FFEs disagree with the definition of core self-held IP. The core self-held IP refers to the patent granted by foreign patent authorities and not yet applied for authorization in Chinese patent authority. This issue remains arguable.

- 8 高企认定实施中存在的问题
- 8 Problems in the implementation of HNTE program
- 8.1 需要加大政策推广力度

#### 8.1 Intensify policy impact

目前仍有不少中小企业、外资企业对中国高新技术企业认定的相关政策了解还不够深入,或者重视程度不够。一些企业对高新技术企业认定标准理解不准确,或对认定资料准备不充分,出现一些不必要的问题,从而导致企业无法通过认定。因此,在高新技术企业认定实施中,相关部门还需进一步加大宣传和推广的力度,努力使相关企业对认定的程序、内容、范围等方面有充分的了解。

At present, a number of SMEs and FFEs still haven't formed an in-depth understanding of HNTE policies or they don't pay much attention to those policies. Some enterprises don't have an accurate interpretation of the recognition criteria or they don't fully prepare applying documentation for HNTE status, therefore some unnecessary problems arise, which leads to failures for enterprises to get qualified. Therefore, during implementation of HNTE program, relating authorities should reinforce policy promotion and intensify policy impact, trying to help enterprises form a full understanding of procedure, content, recognition scope etc. to acquire HNTE status.

# 8.2 需要适当调整认定领域和范围

# 8.2 Adjust recognition sector and scope

目前,中国高新技术企业认定中重点支持的高新技术领域包括电子信息技术、生物与新医药技术、航空航天技术、新材料技术、高技术服务业、新能源及节能技术、资源与环境技术、高新技术改造传统产业。伴随着新技术的不断涌现,相关部门需要根据新形势的变化,适当调整认定的领域和范围,使其更加符合中国企业创新的实际需求。

Currently, HNTE program in China covers the following key industrial

sectors: electronic information technology, biological and new pharmaceutical technology, aviation and aerospace technology, new material technology, high technology service industry, new energy and energy conservation technology, resources and environmental technologies, high and new technology for traditional industries innovation. However, with new technologies emerge, relating authorities should adjust recognition sector and scope in line with new situation so as to meet actual need of innovation in enterprises in China.

#### 8.3 需要增加地方执行的一致性

## 8.3 Unify implementation at local level

依据《高新技术企业认定管理办法》的规定,高新技术企业资质的认定是由各省、自治区、直辖市、计划单列市分别进行的,在执行过程中存在不一致的现象。应当统一标准,减少不平衡性。

According to *HNTE Assessment Administration Measures* (2008), recognition for HNTE status shall be implemented at, respectively, provincial, autonomous regional, municipal and individually-listed city level. During the implementation, inconsistency at different level arises. Therefore, it is necessary to unify implementation standards in order to reduce unbalance.

# 9 讨论、结论及建议

# 9 Discussion, conclusion and suggestion

# 9.1 讨论

#### 9.1 Discussion

关于税收激励,国内外的专家学者对相关问题进行了研究。Berger (1993)分别通过设置虚拟变量的方式(享受税收优惠的企业为 1,否则为 0),研究发现税收优惠对 R&D产生激励作用。Bloom等(2002)以及Parisi和 Sembenelli(2003)的研究表明,研发支出税收扣除对研发支出有长期影响,研发资金成本每下降 1%,研发支出提高约 1.5%到 1.8%。Stiglitz

(1972)认为税收激励效果取决于税收激励额度的随机属性、税收优惠额度的利用以及税收额度进入投资者效用函数的方式。

Experts from both China and abroad have done research on relating issues. On the issue of tax incentives, Berger (1993) set dummy variables (enterprises which enjoy tax incentives are represented by 1, others which don't enjoy tax incentives are represented by 0) to study stimulating effect of preferential tax policy on R&D. Bloom (2002) and Parisi, Sembenelli (2003) noted that tax deduction has a long-term impact on R&D expenditure, i.e. if R&D capital cost reduces by 1%, R&D expenditure increases by about 1.5% to 1.8%. Stiglitz (1972) noted that effect of tax incentives depends on the random nature of incentivized tax amount, utilization of incentivized tax amount and how tax revenue goes into investor's utility function.

关于不同体制、文化下的创新,Lin et al(2013)指出,发达国家和新兴国家的体质和文化具有显著差异,在促进企业技术创新的政策制定方面也有显著的不同;发达国家更倾向于制定改善技术创新环境的技术创新政策,新兴国家政府往往采取一系列的"供给政策",更加重视国有企业的作用。Fu(2011)和 Sun and Lee(2013)指出,促进国内企业与国际企业的合作,也成为新兴国家激励企业技术创新的重要政策。

As Lin et al (2013) noted that under different system and culture, developed countries and newly-emerging nations have a clear difference in national system and culture. Differences in policy making to support technology innovation in enterprises also remain. Developed countries tend to drew up innovative policies to improve technology innovation environment while newly-emerging nations usually adopt a series of "supply policies" with a focus on the role of state-owned enterprises. Fu (2011), Sun and Lee (2013) noted that it has become an important policy for newly-emerging nations to promote innovation in firms by cooperation between domestic enterprises and international enterprises.

关于不同阶段的技术创新政策,因为创新政策主要关注国家整体经济的创新绩效(Lundvall and Borras, 2005),所以根据本国的不同发展阶段的经济和社会情况,甚至周边区域技术创新状况的变化(Kuhlmann, 2001)政府政策会不断改变创新政策内容,出现政策演化的过程。

In terms of technology innovation policy in different stages, since innovation policies focus on overall economic innovation performance of a country (Lundvall and Borras, 2005), based on different developing stages of economy and social progress of a country, even technology innovation changes in surrounding regions might trigger innovation policy amendment from a government level, thus government policies start to evolve (Kuhlmann, 2001).

#### 9.2 结论

#### 9.2 Conclusion

从近6年运行实践来看,中国高新技术企业认定及相应的配套政策对包括外资企业在内的高新技术企业发展起到了良好的促进作用,是一项好的政策。

Seen from the implementation practice in the past 6 years, China's HNTE program and its supporting policies have had a functional and promoting effect for the development of HNTE including foreign-funded HNTE. HNTE policy is a good policy.

高新技术企业认定政策需要不断发展和完善。1991~2008年间,中国的高新技术企业认定管理办法已修订多次。为适应新形势变化的要求,中国将在创新驱动发展战略的指导下,不断完善相关政策,加快高新技术企业发展。

China's HNTE policies needs further development and improvement. Between 1991 and 2008, China's HNTE Assessment Administration Measures has been revised for several times. In order to meet needs in the new era, under the guidance of strategy by using innovation to promote development, China

would like to perfect relating policies and accelerate HNTE development.

#### 9.3 建议

#### 9.3 Suggestion

下一步,建议中美联合专家研究组对中美两国支持企业创新的财税政策进行更多研究,包括支持中小企业税收政策,继续对中国高新技术企业认定政策进行深入研究,并对美国支持企业创新的政策和做法进行研究。由于高新技术企业认定政策中的有些条款(如全球独占许可的专利权等问题)上尚存在争议和分歧,建议进行进一步研究,通过案例分析和数据统计得出科学结论,提交给有关机构。

Our next move is to suggest Sino-US expert groups to conduct more researches on fiscal policies which support innovation in enterprises both in China and the United States including tax policy to support SMEs. We also would like to continue in-depth research on China's HNTE assessment policies and on innovation policies and practice in the United States. Due to different opinions remain for some HNTE requirements, including the worldwide exclusive IP, we suggest further research by means of case study and statistical analysis to come to a scientific conclusion and then submit that conclusion to relating organization.