A. INTRODUCTION

Since the 1970s, when Deng Xiao Ping opened up the country to foreign investment and limited private competition, and introduced the ‘socialist market reform’, China has – with an official annual GDP growth rate of nigh on 10 per cent – become the fastest-growing economy in human history. With its attractive labour conditions, including the low wages associated with its huge population, and more open policies for foreign direct investment, China has developed at a rapid rate into the country for labour-intensive low-technology manufacturing. At the beginning of the new millennium it was difficult to find a product which was not made in the People’s Republic of China. However, as the century progressed, the Chinese government came to recognise that sustainable growth could only continue at this pace – and China become a global...
player and the world’s biggest economy— if the country was transformed from a manufacturing economy to a manufacturing and knowledge-based economy. The establishment of a strong intellectual property system creating wealth for China and encouraging investment in research and development (R&D) was deemed to be an important part of this transformation.

1.02 To this end, it was important to strengthen the independent innovation capacity of Chinese companies, to enable them to create and protect their own IP rights and free themselves from what was often considered the dominance of IP rights owned by foreign companies, who could set the conditions for the manufacture of their protected products and request licensing fees which left Chinese producers with little profit.

1.03 At the same time, in order to become a knowledge- and service-based economy, China needs access to technological information from developed economies and consequently has to establish an environment which will attract companies from such economies to invest and produce in China. Studies have revealed that foreign direct investment (FDI) to China from developed countries possessing advanced technology and production techniques was and is still limited. In order to improve this situation and to become more innovative, the Chinese government introduced a mandatory work plan in 2008 to bring the country to the level of its European, US and Asian competitors by 2020. This plan is known as the National Intellectual Property Strategy (NIPS).

B. THE NATIONAL INTELLECTUAL PROPERTY STRATEGY (NIPS)

1.04 The adoption of the NIPS was the first time in China that intellectual property had been the subject of an approved policy strategy at the highest political level, and was an indication of the importance that China had begun to attach to this
subject. Before the NIPS\textsuperscript{10} was approved by the State Council, in-depth research and consultation was carried out, particularly with various branches of government and government ministries.

The NIPS includes details of the guiding principles, strategic goals, strategic focuses and specific tasks involved, with timelines for achieving them.

As a strategic goal it was made clear that:

\begin{itemize}
  \item By 2020, China will become a country with a comparatively high level in terms of the creation, utilization, protection and administration of IPRs. The legal environment for IPRs is much better, market entities are much better at the creation, utilization, protection and administration of IPRs, the public awareness of intellectual property is increased greatly, the quality and quantity of the self-relied intellectual property are able to effectively support the effort to make China an innovative country, the role of the intellectual property system in promoting economic development, the culture prosperity and social progress in China become very apparent.
\end{itemize}

There is no doubt about the patent policy’s fundamental role in all this, a role which was confirmed in November 2010 when the Chinese State Intellectual Property Office (SIPO) published the National Patent Development Strategy 2011–2020 (NPDS).\textsuperscript{11}

The NPDS includes detailed measures aimed at enabling China to develop into a powerful country in patent terms.

The following sections deal only with the major patent policy measures which are determined in the NIPS and the NPDS:

\begin{itemize}
  \item revise the patent law and constantly improve it,
  \item increase the capacity to create domestic innovation (‘indigenous innovation’), and
  \item improve the general enforcement of patent rights.
\end{itemize}

\textsuperscript{10} For an outline of the NIPS published in English, see http://www.chinaipr.gov.cn/policyarticle/policy/documents/200806241260_1.html.
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1. The revision of the patent law and its constant improvement

1.07 The third revision of the Chinese Patent Act\textsuperscript{12} was the first important measure of the patent policy triggered by the NIPS which was implemented. The revision was concluded on 1 February 2010 with the entry into force of the Implementing Regulations and the amended Patent Examination Guidelines. The ‘Interpretation of the Supreme People’s Court on Several Issues concerning the Application of Law in the Trial of Patent Infringement Dispute Cases (applicable for all lower courts)\textsuperscript{13} contains important information on interpreting substantive law for lower-level courts.

1.08 The two previous revisions of the Patent Act\textsuperscript{14} – in 1992\textsuperscript{15} and 2000 – were designed to construct a legal framework to attract foreign investors\textsuperscript{16} and prepare the ground for joining, first, the Patent Cooperation Treaty (PCT)\textsuperscript{17} and then the WTO, which meant that the law had to be compliant with the TRIPs Agreement.\textsuperscript{18}

1.09 By contrast, the third revision followed China’s own economic, technological and cultural interests.\textsuperscript{19} The revision was aimed at meeting a number of general objectives derived from the goals of the NIPS:

\begin{itemize}
  \item to improve patent quality,
  \item to safeguard national security and other ‘substantial interests’,
  \item to improve the balance between patent protection and the public interest,
\end{itemize}

\textsuperscript{12} For this history see EU-CHINA IPR 2, \textit{Third revision of China’s Patent Law, Legal texts and documents on the drafting process 2006–2008}, 31.
\textsuperscript{13} Fashi (2009) No. 21 of the Supreme People’s Court. The Judicial Interpretation came into force on 1 January 2010.
\textsuperscript{19} See also Zhang Ping, above note 14, 308, 316 and Yuanshi Bu, above note 17, N 10.
to put in place measures to improve patent enforcement and prevent the unlawful use of rights.20

(a) Changes in the Patent Act aimed at improving patent quality

Patent quality has been a problem for many years. The revised Act contains numerous changes intended to rectify this.

First, it introduced the absolute novelty standard.21 Under the old law, novelty was only destroyed if the technology had been used or was known in China (domestic use or knowledge of the invention), or had already been published, either inside or outside China.22 This new standard allows SIPO to reject patent applications and revoke patents (or utility models) which were no more than a copy of prior art used abroad.23 However, in practice this would appear not to be that easy (see the issue of utility models under 2 below).

The revised law also makes it clear that the subject-matter determined in a patent application is novelty-destroying vis-à-vis a subsequently filed application by the same applicant including the same subject-matter if the first application was published after the subsequent application (‘conflicting applications’).24 Under the old law, the subject-matter of the earlier filed application was not novelty-destroying in such a situation (see also Bu, Chapter 3).

Furthermore, in order to avoid inventions being protected for more than 20 years, under the revised Patent Act an application for a utility model and a patent for the same invention can only be filed on the same day, and the applicant must abandon the previously obtained utility model right in order to have the patent granted.25

20 See also Explanatory notes from SIPO, (I) Legislative objective of the patent law, in EU-CHINA IPR 2, Third revision of China's Patent Law, Legal texts and documents on the drafting process 2006–2008, 50, and Explanatory notes from LAO, ibid., 150 f.
23 Cf. also Peter Ganea, above note 7, 650, 652.
(b) Improved protection of national and public interests

1.13 The most important amendment in terms of improved protection of national interests is the introduction of the confidentiality examination. This examination gives SIPO an overview of the technical areas in which research is being carried out in China and the core technical areas involved.26 According to Article 20(1) Chinese Patent Act, any entity or individual intending to file a patent application abroad for an invention completed in China first has to apply to SIPO for a prior confidentiality examination. The applicant is only allowed to file abroad once SIPO gives its approval (for more information, see Luginbuehl, Chapter 11).

1.14 The revised Patent Act also introduced a mandatory declaration of the source of genetic resources in patent applications for inventions based on such resources. This addition was designed to provide greater protection for the considerable genetic diversity in China.27 Article 26(5) Chinese Patent Act stipulates that an applicant who files a patent application for an invention completed on the basis of genetic resources must indicate the direct and original source of those resources (see also in this regard Bu, Chapter 3 and Chen, Chapter 4). Usually, the genetic material will be from a gene bank, which would be given as the direct source and which should also be able to provide details of the original source of the genetic material. If the applicant is unable to indicate the source he must provide an explanation. Under Article 5 Chinese Patent Act, non-compliance with the rules on the acquisition and use of genetic resources will result in refusal of the application, or revocation of any patent granted.

1.15 In addition, the Chinese Patent Act now includes the so-called ‘Bolar exemption’,28 under which generic products can be launched more quickly after expiry of the patent protecting the generic drug or medical apparatus than would normally be the case, as the company producing the drug or apparatus can perform the necessary studies and tests for administrative approval during the patent’s term without infringing it.

1.16 The strengthening of compulsory licensing29 is another of the stated aims of the NIPS, so, under the revised Patent Act, the grounds for compulsory licensing have been extended. On the one hand, it is now possible to obtain a compulsory licence to exploit the patent if the patent holder has not exploited or has not

26 See also the critical remarks by Ping-Hsun (Quincy) Chen, ‘China as a Technology Exporter: A Question Mark after the Third Amendment of the China Patent Law in 2009’, [2012] 34 EIPR 853, 862 et seq.
29 See No. 20 NIPS.
sufficiently exploited the patent without justifiable reason within three years from the date of grant or four years from the filing date.\(^{30}\) Exploitation of the patent is deemed to be insufficient if the patent holder or his licensee exploits the patent in a manner or on a scale that fails to meet the domestic demands for the patented product or process.\(^{31}\) On the other hand, where the exercise of patent rights is considered to be a monopolistic act under the anti-monopoly law, a compulsory licence may be granted to reduce or eliminate the adverse consequences of this act for competition.\(^{32}\) Furthermore, the Doha Declaration on the TRIPs Agreement and Public Health\(^{33}\) has also been implemented in the Chinese Patent Act. It is now possible to obtain a compulsory licence to manufacture a patented drug and export it to a state which is eligible to import the drug under the Doha Declaration. So far, no such licence has been issued.

Finally, it is also worth mentioning that the revision introduced the international exhaustion of patent rights.\(^{34}\) In other words, importing patented goods does not constitute infringement if the goods have been put on the market anywhere in the world with the consent of the patent holder. The principle of international exhaustion should be removed from the law once the price for Chinese patent products in China is higher than in other countries.\(^{35}\)

\((c)\) Measures to improve the enforcement of patent rights

The revised Patent Act stipulates how damages can be claimed in civil proceedings and defines a mandatory hierarchy of computational methods.\(^{36}\) The first level on which compensation is determined is on the basis of the patent holder’s actual losses. If these are difficult to ascertain, the next calculation is based on the infringer’s profits. Then comes an appropriate multiple licence fee and, finally, statutory damages, which have been doubled from their previous maximum to RMB 1 million (approx. \(\text{€}120,000\)). It is in fact standard practice in many regions to claim statutory damages in patent infringement cases, mainly because of the strict evidential requirements in Chinese courts. It is now

\(^{30}\) Art. 48(1) Chinese Patent Act, see also Art. 5A(4) Paris Convention.
\(^{34}\) Art. 69(1) Chinese Patent Act.
\(^{35}\) More about the exhaustion of patent rights in China, see Gana, Chapter 16.
also possible under the revised law to request interim injunctions and measures to preserve evidence.37

(d) Fourth revision of the Patent Act

In August 2012 SIPO tabled a proposal for new revision of the Patent Act. The proposed changes aim at the further improvement of the enforcement of patent rights. For this purpose it is, inter alia, suggested that the administrative enforcement of patent rights should again be strengthened. In particular damages and compensation could be awarded in administrative proceedings. Furthermore, the introduction of punitive damages which would be three times the costs the patent infringer would have had to pay if he had entered into a licensing agreement and to give immediate effect to decisions of the Patent Re-examination Board in relation to patent validity decisions is suggested. The proposals were criticised by high-level Chinese experts. Mainly the proposal to strengthen the administrative proceedings vis-à-vis the court litigation was identified as problematic. It is thus questionable whether these proposals will become law.

2. The indigenous innovation (zizhu chuangxin) policy and the problem of utility models

The NIPS provides that by 2013:

China will rank among the advanced countries of the world in terms of the patents for inventions granted to domestic applicants while the number of overseas patent applications by Chinese applicants should greatly increase.

The NPDS also states that, by 2015:

the annual quantity of applying for patents, utility models and designs will reach 2 million. China will rank among the top two in the world in terms of annual number of patents for inventions granted to the domestic applicants, and the quality of patents filed will further improve … 38

This policy of self-developed and self-owned technology is usually referred to as ‘indigenous innovation’.39

39 See in this regard also Zhang Ping, above note 14, 308, 343 ff and Fashi (2011) No. 18 of the Supreme People’s Court.
Now, five years after the adoption of the NIPS and its implementation at central and local level, the strategy is bearing fruit, and it looks as if this crucial goal of the Chinese patent policy can be reached. The number of applications for invention patents (in China the term ‘patent’ includes patents, utility models and designs) filed with SIPO rose in 2012 to an impressive 652,777. Of these, 535,313 were filed by Chinese applicants (see Figure 1.1). This is an increase of more than 250 per cent since 2008, and almost 600 per cent since 2005.

Furthermore, the grant rate of SIPO, which is in fact more important than the number of applications, has also risen significantly in the past few years. In 2008, SIPO still granted slightly more patents to foreign applicants (47,116) than to domestic applicants (46,590). In 2012 it granted 143,847 patents to Chinese applicants, almost double that of its foreign competitors and an increase of more than 300 per cent vis-à-vis 2008 (see Figure 1.2).

As far as patent applications filed abroad are concerned, in 2013 China became the third largest user of the PCT system passing Germany, with 21,516 filings.\footnote{WIPO, Who filed the most PCT patent applications in 2013?, available at www.wipo.org.} This represents a 15.5 per cent growth vis-à-vis 2012\footnote{WIPO, 2013 PCT Yearly Review, 27, available at http://www.wipo.int.} and an increase of 86 per cent vis-à-vis 2005,\footnote{WIPO, The International Patent System in 2006, PCT Yearly Review, available at http://www.wipo.int.} when 2,499 filings were of Chinese origin. It is...
also worth noting that in 2013 two Chinese companies ranked once again among the top three PCT applicants with ZTE Corporation in second and Huawei Technologies in third place. Both companies in the meantime have substantial patent portfolios which can no longer be disregarded by their competitors. They have high-level in-house expertise and highly developed IP (in particular patents), which is professionally managed, commercialised and used as strategic value, even against each other. This is no coincidence. Both companies are active in key technology sectors defined by the state and both get support from the Chinese government. The preferential treatment of chosen enterprises in particular, and Chinese companies in general, by the Chinese government is no coincidence.

43 WIPO, Who filed the most PCT patent applications in 2013?, available at www.wipo.org.
45 In a decision rendered by the Paris District Court on 28 March 2013, Huawei was ordered to pay €100,000 in damages to ZTE after dismissing the company’s infringement claim on grounds of lack of novelty over a data card patent, see Emma Barraclough, ‘Paris Court Rules in Chinese Patent Row’, Managing Intellectual Property, 2 April 2013. The court followed similar rulings by the German Federal Patent Court where the patent was revoked. Huawei sued ZTE for infringement of its patents before many European courts. The Düsseldorf district court stayed one case at the end of March 2013 and referred questions to the Court of Justice of the EU concerning the interpretation of EU competition law, in particular on whether the approach taken by Germany on FRAND licensing is in line with EU competition law (case C-170/13).
government has provoked criticism,\textsuperscript{47} with the result that the government had to withdraw its plans to support and enhance domestic companies by reserving preferential treatment in government procurement procedures for indigenously innovated products.\textsuperscript{48}

Support for Chinese companies in obtaining patents in core areas of technology with the aim of facilitating the development of China’s new and high-tech industries in key sectors is one of the tasks laid down in the NIPS.\textsuperscript{49} With a view to making a stronger push for more patents in these technical areas, on 1 August 2012 SIPO introduced administrative measures aimed at prioritising the examination of patent applications, inter alia, relating to innovations in these areas.\textsuperscript{50} If a request for prioritised examination is granted, SIPO will issue the first office action within 30 working days from the date of acceptance of the request\textsuperscript{51}, aiming at completing the examination procedure within one year.\textsuperscript{52}

What is more, SIPO takes part in a number of Patent Prosecution Highway (PPH) bilateral programmes with other patent offices, such as the German Patent and Trade Mark Office, the JPO, KIPO and the USPTO.\textsuperscript{53} Furthermore, SIPO participates in a PPH pilot programme within the IP5 Offices and within a global framework, and in a PPH pilot programme with eased requirements. Under the PPH\textsuperscript{54} an application whose claims have been determined to be patentable in the office of first filing is eligible – at the applicant’s request – for accelerated examination in the office of second filing using a simple procedure. Chinese applicants thus have access to accelerated examination before the PPH partner offices if they first file an application with SIPO and SIPO holds at least one claim to be patentable.

\textsuperscript{47} As regards subsidies for Huawei on electric vehicles see for example: http://greenworldinvestor.com/2010/08/04/china-to-create-green-vehicle-national-champions-with-a-100-billion-yuan-subsidy/.


\textsuperscript{49} See National Patent Development Strategy (2011–2020) No. 16, which qualifies biology, medicine, information, new materials, advanced manufacturing, new energy, oceanography, resources, environmental protection, modern agriculture, modern transportation, aeronautics and astronautics as key sectors.

\textsuperscript{50} Administrative Measures on Prioritized Examination of Invention Patent Applications, Order No. 65 of SIPO, promulgated on 19 June 2012 and implemented on 1 August 2012.

\textsuperscript{51} R. 10, Administrative Measures on Prioritized Examination of Invention Patent Applications, Order No. 65 of SIPO, promulgated on 19 June 2012 and implemented on 1 August 2012.

\textsuperscript{52} Patent Protection and Enforcement in the PRC, 28 January 2014, Bird & Bird, A report commissioned by Huawei Technologies, 11.

\textsuperscript{53} See also Toby Mak, ‘Patent Prosecution Highway in China’, 2013 CIPA Journal 388.

\textsuperscript{54} For more information see http://www.jpo.go.jp/pph-portal/index.htm.
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1.25 Although there is still a high concentration of patent filings from just a few Chinese firms, the figures indicate that Chinese companies, universities and research institutions are becoming increasingly aware of the commercial potential of creating innovation. This is the result not only of far-reaching awareness campaigns run by the government, but also of the attractive incentives afforded to Chinese applicants. Apart from tax reductions (15 per cent instead of 25 per cent corporate income tax) for new and high-technology enterprises which have demonstrated that they are in the possession of IP protected core technology, many fees are reimbursable for Chinese companies and Chinese companies with foreign partners. An innovative government-financed patent pledge and loan system and other subsidies, as well as financial assistance for SMEs applying for patents outside of China, bonuses or promotions for employees who apply for patents, and career incentives at universities, are also provided, as mandated by China’s patent policy.

1.26 However, there are several factors which would suggest that the innovative capability of Chinese companies has remained limited up to date. On the one hand, it is not rarely stated by patent professionals that many patent applications filed by Chinese in China are still of low quality. On the other hand, the number of international applications by Chinese companies is only 4 per cent of the number of domestic applications. This indicates that only a very limited selection of applications are also filed outside

58 Zuo Yuru, Dianzi Zhishi Chanquan, 10 November 2010, 48 et seq.
59 Thomas T. Moga, above note 57, 17 f; Tom Duke, above note 56, 453.
63 Cf. NPDS No. 4; R 100 Implementing Regulations to the Chinese Patent Act, Measures of Reduction of Expenses for patents, promulgated by SIPO on 12 October 2006.
64 Cf. Toby Mak, ‘Recent moves to enhance the quality of patents in China’, 2014 CIPA journal 99; see also Dan Prud’homme, above note 46, 49, suggests that 67% of patent applications are ultimately not granted.
of China (although the number of filings is steadily increasing).\textsuperscript{65} This is also underlined by the relatively low number of patent grants to Chinese abroad. In 2013, the EPO, for example, granted 941 patents to Chinese applicants. By contrast it granted 14,880 patents to US, 13,425 to German and 12,135 to Japanese applicants. In the US too the number of patents granted to Chinese applicants is limited compared to the number of grants to applicants from other countries.\textsuperscript{66}

Furthermore, in China most patents awarded to Chinese only have an average life-span of five years, that is, they are dropped earlier than patents owned by non-Chinese, which are, on average, in force for nine years.\textsuperscript{67} This seems to indicate that patent protected Chinese-owned inventions are less valuable. Additionally, studies have revealed that Chinese patents are rarely cited in patent application literature and non-patent literature, which would suggest that their importance with regard to the state of the art is limited.\textsuperscript{68} What is more, the utility model figures indicate that the pre-determined patent application targets which have to be reached by Chinese companies in the race for innovation lead to a situation where quantity takes precedence over quality.\textsuperscript{69} In other words, the innovation capability of Chinese enterprises and universities has not evolved as fast as the Chinese government envisaged, or at least not at the pace of the benchmarked application figures.

The number of applications and grants for utility models has literally exploded in the past few years. However, due to the fact that utility models are not examined substantively they are often simply copies of existing state of the art, or they involve only slight modifications to protected innovations which do not fulfil the requirements of inventive step, which is already at a lower level compared to patents (see \textit{Bu}, Chapter 3). In 2012, SIPO registered 566,750 utility models to Chinese applicants. In just four years, there was an increase of more than 250 per cent although the number of 203,802 registered utility models in 2009 was already relatively high for utility models (see Figure 1.3).\textsuperscript{70}

\textsuperscript{65} In 2013, the EPO received 4,056 applications from China: 871 Euro-direct and 3,185 PCT applications entering the regional phase. This is an increase of 8.4\% vis-à-vis 2012 and an increase of 97.7\% vis-à-vis 2010. The growth in patent applications from China is consequently slowing down.

\textsuperscript{66} In 2013, 5,030 US patents were granted to applicants from China, more than half of them going to just ten companies, see ‘Why aren’t Chinese companies Filing in the US?’, 30 January 2014, <www.managingip.com>.


\textsuperscript{68} Cf. Dan Prud’homme, above note 46, 53.

\textsuperscript{69} Cf. Song Shenzia and Liu Linlin, ‘Inventors needed’, \textit{Global Times}, 17 March 2013; John L. Orcutt and Hong Shen, above note 4, 65; Toby Mak, above note 64, 100.

\textsuperscript{70} In Germany for example there were 15,491 applications for utility models in 2012 which is a decrease of almost 4\% vis-à-vis 2011, see annual report of the German Patent and Trade Mark Office 2012, 19. In contrast, in 2012 the number of applications for utility models in China had already increased by 250 per cent.
This trend looks like continuing: in 2012, Chinese applicants filed 734,437 requests for the registration of utility models, which is an increase of more than 230 per cent over 2009. In contrast, in 2012 applicants from outside of China only filed 5,853 applications for utility models (see Figure 1.4).

Although more and more non-Chinese applicants are applying for utility models, the statistics show that the huge increase in the number of utility models accounts predominantly for Chinese applicants. This suggests that the Chinese government’s incentives, quotas and awards are geared towards increasing the number of utility model filings instead of invention patent applications. Utility models are thus also used as a catalyst to enable government-set targets to be reached. As long as a utility model does not have to meet any requirements as to quality to entitle its holder to subsidies or tax breaks the number of utility model applications will further increase. However, the many low-quality utility models\(^{71}\) ("junk patents")\(^{72}\) flooding the market – even under the absolute novelty scheme introduced in the revised patent law – seem more suited to hampering or even paralysing innovation rather than

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71 See also Peter Leung, ‘China’s utility model growing pains’, Managing IP, 10 June 2013.
fostering it. Such ‘utility model thickets’ are not only problematic for Chinese companies that would like to be innovative, but also for foreign investors, who are increasingly confronted with high costs:

- for monitoring and evaluating the utility models\(^\text{73}\) that could be a potential danger for the exploitation of a company’s own patent rights, as well as
- for possible negotiations and settlements with the owners of the utility models,\(^\text{74}\) and/or
- for possible litigation, in order to invalidate the utility models.\(^\text{75}\)

This seems also fertile ground for a possible development of so-called ‘patent trolls’, that is, of ‘patent assertion entities’ which are not active in the technological area at stake and which have only the intention to ‘extort’ their often weak patent and utility model rights which they have acquired

\(^{73}\) It is not rare that companies active in certain technical areas are faced with 800 new utility models per month in the same technical field.

\(^{74}\) Often utility models are simply bought in order to avoid litigation.

\(^{75}\) Thomas T. Moga, above note 57, 20 ff.
earlier from other companies and get licensing fees for their possible exploitation.\textsuperscript{76}

\textbf{1.32} All this has an impact on the willingness of European companies to undertake R\&D in China.\textsuperscript{77} However, it seems that the Chinese government became more sensitive to these problems as certain local governments have in the meantime tightened up or removed subsidies for patent and utility model applications,\textsuperscript{78} or plan to do so. For example, applicants who have filed an ‘abnormal’ application\textsuperscript{79} or bad-faith application with SIPO will be required to pay back any subsidies and financial aids issued by local governments in Hebei Province, and be disqualified from receiving patent subsidies or monetary support for two years.\textsuperscript{80}

The notorious quality problem of utility models has also been recognised by SIPO: Since 15 October 2013 an amended version of the Patent Examination Guidelines is in force\textsuperscript{81} which makes it possible for examiners to execute a preliminary examination and reject utility model applications if they obviously lacked novelty, that is, if they obviously contain copied prior art, or if they were a repeat submission of a patent application with substantially identical content.\textsuperscript{82} To this end, the examiner is able to conduct a search or otherwise gather documents to determine whether the application lacked novelty. Furthermore, one of the objectives set out by SIPO in its promotion plan for the implementation of the NIPS in 2013\textsuperscript{83} is to encourage inventors to transfer their focus from quantity to quality. Measures include implementing a revised evaluation system for the State Technological Award and guiding evaluation experts towards a more quality-based approach.\textsuperscript{84} These and other steps to improve the patent quality in China were endorsed by a SIPO opinion on patent quality issued on 25 December 2013. They include taking account of the number of patents (not utility models) and the grant rate in order to determine whether the patent

\textsuperscript{77} Cf. in 2010 EU enterprises invested only 2\% of their foreign R\&D investment in China, Dan Prud’homme, above note 46, 57 f.
\textsuperscript{79} There is no official definition of what an ‘abnormal’ application means. However, this should include simple copies of published patent applications, patents and utility models.
\textsuperscript{81} See <http://www.sipo.gov.cn/zwgg/jl/201311/t20131106_876947.html>.
\textsuperscript{82} See Part I, Chapter 2, Section 11 and 13 Patent Examination Guidelines.
\textsuperscript{84} Ibid.
application targets set were reached, limiting subsidies to granted patents and taking measures against illegal patent attorney work and low-price competition in this area. Time will tell whether these measures will be sufficient to stop the run on utility models and to steer Chinese applicants towards a more sophisticated protection of their inventions.

3. Improvement of patent rights enforcement in general

The accession of China to the WTO strengthened the role of the judiciary in patent litigation. However, even after the Patent Law reform of 2000, the system of dual enforcement was retained. In other words, patent rights holders involved in patent infringement cases can choose between civil and administrative enforcement, the main difference being that damages, as well as provisional and protective measures, can only be requested from the courts. From 2001 to 2007, Chinese courts dealt with more than 17,700 patent cases, gaining valuable experience in IPR enforcement. Nevertheless, the NIPS includes the further improvement of IP law enforcement as one of its goals.

From 2008 to 2010, that is, in three years, it seems that the number of patent cases has reached almost the same figure as in the previous eight years and the speed and quality of the proceedings and judgments have improved. In a 2012 survey of British businesses active in China, 61 per cent of those questioned felt that IP protection against infringement was 'effective' or 'very effective'. Most European companies and lawyers active in China share the view that litigation and customs enforcement have significantly improved in recent years. CIELA, an IP litigation platform which provides a database of more than

85 See http://www.sipo.gov.cn/yw/2013/201312/t20131225_891833.html. Cf. also Toby Mak, above note 64.
86 See Martin Meng and Howard Hao, 'Application and protection of Chinese utility model patents', in China: Managing the IP Lifecycle 2013, 22, IAM and World Trademark Review, who expect that the amendments of the examination guidelines will have no substantial impact in the utility model practice because prior art searches are not required by examiners.
87 See also the recommendations for an improved utility models system by Thomas T. Moga, above note 57, 30 ff and Dan Prud'homme, above note 46, 116 ff, available at www.europeanchamber.com.cn.
89 Cf. Gordon Gao, Dixon Zhang and Fang Q, above note 18, 4.
91 Cf. Peter Ollier, 'China's IP Litigation Rises 40%', Managing IP, 28 April 2011. However, also see Patent Protection and Enforcement in the PRC, above note 52, 37, where it is indicated that the number of patent court cases has decreased over the past years.
95 www.ciel.ca.
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23,000 IP cases (see also Bailey and Wang, Chapter 8), including 6,000 patent cases, reveals that first-instance proceedings before the top ten courts in China are usually concluded within between six and 14 months. Due to good forum shopping\(^96\) opportunities plaintiffs can often choose the court which they feel will provide them with the best chance of success.\(^97\) This is very important as there is still no fully independent judicial system in place in China. It is not unknown for local companies to be favoured over foreign companies, in particular in cases involving strategic or state-owned enterprises,\(^98\) or where local companies hold a strong position at the seat of the court. Furthermore, the low damages awarded by the courts remain a problem for foreign companies litigating their patents in China.\(^99\) Nevertheless, litigators state that foreign parties in big and important centres, such as Beijing, Guangzhou, Nanjing or Shanghai can expect dedicated judges, reasonable quality of decisions, swift proceedings, absence of obvious bias, protectionism or political interference, transparency\(^100\) and reasonable costs.\(^101\) Furthermore, statistics reveal that the success rate for foreign companies in patent cases before the first-instance courts is close to 80 per cent.\(^102\) The problems thus seem to lie mainly at provincial level, where there is still a lack of legal certainty and experience, in particular in patent litigation involving more complex types of technology.\(^103\)

However, it should be noted that in the past few years the administrative route has regained popularity as a means of enforcing patents. The main reasons seem to be that litigating patents before civil courts is getting more and more expensive, while administrative proceedings have become more structured and accessible. Furthermore, SIPO – which, together with the local patent administration authorities, is competent to handle administrative proceedings (see Cao, Chapter 12) – seems to have frequent success in bringing parties to mediation.\(^104\) Depending on the case at issue, administrative proceedings may thus be a good alternative for enforcing patent rights in China.

\(^96\) As regards forum shopping related to patent litigation in general see Stefan Luginbuehl, European Patent Law, Towards A Uniform Interpretation, Cheltenham, UK and Northampton, MA, USA: Edward Elgar 2011, 42 et seq.

\(^97\) See also Beda Bischof and Hussein Noureddine, ‘Chinesisches Haftpflichtrecht bei Immaterialgüterrechts-verletzungen’, 2012 tic! 515, 525 f.


\(^99\) Patent Protection and Enforcement in the PRC, above note 52, 40 f.


\(^102\) See Tim Smith, above note 101; Patent Protection and Enforcement in the PRC, above note 52, 39.

\(^103\) See Patent Protection and Enforcement in the PRC, above note 52, 37 et seq.

\(^104\) As regards mediation for patent disputes in general cf. Stefan Luginbuehl, Uniform interpretation of European patent law with a special view on
C. SUMMARY AND CONCLUSION

China’s IP policy is an important part of the country’s overall economic policy for more growth and less dependence on foreign technology. The NIPS has set clear goals aimed at making China a highly competitive state with a strong knowledge-based economy by 2020. There is no doubt that China, with its many tens of thousands of scientists and engineers educated by top Chinese and Western universities every year, has great innovation potential. This is not least underscored by the many Chinese inventors currently active abroad, doing work for foreign corporations and institutions.105

However, it is clear that more time is needed before China can reach the innovation levels of its Western and Asian competitors in all the core technologies defined by the Chinese government. There is no doubt that the Middle Kingdom is on the right path to becoming the worldwide market leader in certain technological fields,106 such as graphene.107 A great deal of effort has also been put into the development of environmentally friendly technologies, an area where Chinese companies play an important role on the global market. However, in many core technologies there are already many patented innovations, often owned by international companies. Chinese firms thus need to develop inventions in ‘peripheral’ technologies and often get patents for so-called ‘incremental’ innovations (inventions for small innovation). Furthermore, they have to draft patent applications that do not infringe existing patents and, in particular, utility models.108 This of course impacts on the speed of the move towards sustainable and commercial innovation.

Experts believe that the technology transfer rate, that is, the frequency with which inventions born of academic research reach the commercial market, is still too low in China and must be improved.109 What is more, there is still the creation of a common patent court, 185 et seq., available at http://igitur-archive.library.uu.nl/dissertations/2009-0901-200115/luginbuehl.pdf

limited innovation by Chinese companies in technical sectors that require big and long-term financial investments, such as the pharma sector. It is thus interesting to note that SIPO was criticised for protecting local pharmaceutical companies by making it more difficult for foreign applicants in this sector to get their patents granted.\footnote{110}

Nevertheless, the number of patent applications filed abroad is steadily increasing, as is the number of patents granted to Chinese applicants. Recent surveys have revealed that Chinese companies intend to file more patent applications abroad, where Europe seems to be the most popular target region.\footnote{111} This is a clear sign that China is on its way to becoming an increasingly innovative country with companies also active outside the domestic market.

1.37 The current lack of innovation capacity and long-term patent strategies together with the mainly financial incentives to file for patents have resulted in a large number of utility model applications and registered utility models. This has led to a situation where truly innovative companies are increasingly being forced to spend large amounts of money on evaluating the different utility models in their technical area so as to avoid being drawn into litigation. But it also forces them to conclude amicable agreements with the owners of the utility models simply because it would be too much trouble to initiate litigation with regard to all of the utility models surrounding a technical area. This is endorsed by the fact that utility models have a lower standard as regards inventive step and are consequently more difficult to invalidate than patents.\footnote{112} It seems thus crucial that the level of inventive step for utility models is raised in China.\footnote{113}

The fact that more and more utility models are in force could also jeopardize competition and innovation which in turn might endanger China’s drive to foster indigenous innovation. However, it is in many economies precisely SMEs and start-ups which need support and an appropriate environment to become and stay innovative. The same should be the case in China so as to enable China’s ambitious innovation policy to reach through to the entire enterprise landscape, not only a few big players.\footnote{114}

\footnotetext{110}{Patent Protection and Enforcement in the PRC, above note 52, 28.}
\footnotetext{113}{See also Oliver Pfaffenzeller, Ming Deng and Xia Pfaffenzeller, ‘Die Herausforderungen durch chinesische Gebrauchsmuster’, 2014 Mitteil. 101, 105.}
\footnotetext{114}{See also in this regard, Emma Barracough, ‘Chinese IP Owners are not Always What You Expect’, Managing Intellectual Property, 17 June 2013.}
Additionally, the ‘utility model thickets’ and the possible development of ‘trolls’ might also provoke negative incentives on foreign companies who would like to exploit their inventions in China and as a consequence might be reluctant to invest in R&D in China. Consequently, it might be more difficult for China to have access to foreign technology which is crucial for the technological development of the Middle Kingdom.

Another and possibly easier approach to securing foreign know-how and technology is to buy it. The NIPS clearly holds that Chinese entities should be encouraged to obtain intellectual property overseas.115

In 2012, Chinese investors poured a total of $168 billion in FDI overseas, representing a nine times fold in only one decade,116 gaining instant access to the technology of foreign enterprises. This trend is to impact especially on Europe, where Chinese companies can and are going to take advantage of the continuing economic crisis.

The following graph illustrates this sharp increase of Chinese direct investments in the EU during recent years. In 2012, the Chinese FDI stock in the EU amounted to around €77 billion, five times the amount that had been invested in the EU in 2004.

115 See No. 40 NIPS.
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Note: Figures in million Euro

Source: Eurostat

Figure 1.5 Chinese FDI stocks in the EU