aforementioned advantages of the German system, might get lost within the framework of a European jurisdiction. Furthermore, capacity building in the new institutions will be time-consuming and require extensive resources. Although the decision to negotiate disputes relating to mechanical engineering at the Court of Munich means that existing experience is drawn on, Germany will still lose out on the opportunity to build and develop competences in other areas of high technology – such as chemistry, biotechnology and information technology – because in future, the relevant patents will be increasingly negotiated elsewhere.

Recommendations

The Expert Commission welcomes the creation of a European patent with unitary effect and the creation of a single patent jurisdiction as a logical consequence of the common European market. It is expected that SMEs in particular will benefit from the new provisions. One of the key factors for the future acceptance and hence the success of the unitary European patent will be the design of the patent fee system. Fees should be attractive enough for the new system to be preferred to the old system of bundle patents, while at the same time remaining at a level that would effectively limit incentives for increased numbers of low-quality patent applications.

In the event that reduced fees will lead to an increased number of patents filed, the European Patent Office will become even more important as the examining institution that serves to secure patent quality. The current high standards shall be guaranteed also in the future by providing the EPO with suitable infrastructure and administrative support. In addition, the EPO should regularly report on quality control and other measures and publish the results of the regular quality checks that are already being conducted at this stage. Given the large number of applications for low-quality patents, the most important task of the EPO will be to identify and reject such applications.[101]

Due to the system's strong focus on the Central Division, it is foreseeable that many patent disputes that in the past would have (also) been dealt with by German courts, will in future be negotiated outside of Germany and heard by the Central Division. It is therefore essential to ensure that only the highest standards are applied to the selection and specialised training of judges and in the ongoing administrative support of the court. Moreover, Germany's technical expertise, acquired over the course of a century, and the advantages of the German system need to be integrated into the new system. The future development of the European patent system must be accompanied by the systematic development of vocational training, further training and research in the field of patent protection. Training and research should be conducted on an interdisciplinary basis and should be designed according to pan-European standards instead of current national standards.

Ultimately, one should by no means expect the new system to lead to a breakthrough. Instead, it is essential to continuously work on the harmonisation of the EU patent system. Therefore the Expert Commission recommends fully replacing the EPO bundle patent in all of the territories of the EU member states with the European patent with unitary effect. The acceptance of the new patent will determine whether national patent protection can play a significant role within the new system in the long term.

INTERNET AND IT START-UPS IN BERLIN A 4

The media are currently depicting Berlin as the internet capital of Europe.[102] And indeed it is the case that in recent years Berlin has seen an increasing number of internet and IT start-up businesses financed through venture capital.

Yet it is not necessarily easy to find consistent facts and figures to support the image of Berlin as Europe's internet capital, as suggested by the media. Depending on the delimitation of industries and depending on the definition of the concept of entrepreneurship, some statistics place Munich at the top of the start-up rankings, while others place Berlin at the top.[103] What distinguishes the Berlin start-up scene from the start-up scenes of other German metropolitan regions can only partially be explained by the number of new enterprises; it is the structure and the specific features of Berlin's start-up scene that sets the city apart from Munich. Thus, for instance, Berlin's start-up scene is strongly focussed

Photoelectron and photo-ion spectroscopy.

Electron microscope image of salt droplets embedded in gel-like structures.

on products that attract the attention of the general public, such as apps and games, e-commerce and social media. In addition to this, Berlin's entrepreneurs closely collaborate with each other and with their investors, which is reflected in the large number of venture capital financed enterprises. Finally, Berlin's start-up scene is also characterised by a very high degree of internationalisation.

In recent years in Berlin, the use of venture capital has increased more than in any other city in Germany. In 2011, venture capital providers invested EUR 116.8 million in new Berlin-based enterprises. Since 2009, investments have in fact more than doubled. No other city in Germany has been able to attract such high amounts of early-stage venture capital.[104]

Investments are not only being made in the internet and IT industry, but increasing amounts of resources are also flowing into health care enterprises.[105] The fact that growing numbers of investors are establishing branches in Berlin is further evidence of Berlin's increasing attractiveness.[106]

Berlin's start-up boom owes more to social and cultural factors than to exceptionally favourable political-administrative framework conditions. For many years, Berlin has been characterised by its low apartment and commercial real estate rents and its overall low cost of living. Complemented by its rich cultural and recreational offers, the city has developed a strong appeal to artists, university students and, ultimately, founders of high growth potential companies.

In retrospect it can be said that the lack of a broad industrial base and the absence of large corporations – which would compete on the labour market – have also been supporting factors in the unfolding of Berlin's start-up boom. Thus, founders in Berlin do not have to compete with as many as seven DAX companies in attracting qualified staff, as it is the case in Munich. Berlin's labour market, in combination with the four major state-owned universities and a number of other tertiary education institutions, guarantees a continuous flow of well-educated young people.[107] Berlin's international appeal provides the opportunity to hire people from different countries. When compared with other German cities, this makes it easier to establish companies with an international outlook.

Meanwhile, Berlin's start-up boom has created momentum that seems to reinforce itself. Today, renowned internet companies such as Soundcloud, Wooga, 6 Wunderkinder, Zalando, Betterplace, ResearchGate or Rocket Internet have their headquarters in Berlin, which will certainly attract additional numbers of entrepreneurs and capital providers.[108]

With its thriving internet and IT scene, the city has a favourable competitive position within the innovative internet economy.[109] For Germany alone, it is expected that the economic output of the internet industry – based on EUR 75 billion in 2010 – will total EUR 118 billion in 2016. The internet sector thus represents an important source of growth.[110]

Berlin is an example of how the internet economy can generate significant value creation and employment opportunities within a short period of time. The majority of internet businesses employ but a small number of workers, and yet several start-ups have been able to multiply their staff levels over a period of only a few years, thanks to their dynamic growth.[111] It remains to be seen if this positive trend will continue in the long term.

To foster the positive development of Germany's internet and IT industry, it is particularly important to improve framework conditions for financing growth of new enterprises[112] The Federal Government should create an infrastructure for entrepreneurs and investors with structures that can compete internationally and persist in the long run. The Expert Commission has already presented an outline of the design of such infrastructure in their preceding Annual Reports.[113]

CROWDFUNDING A 5

Crowdfunding is an innovative form of financing for projects or small enterprises, designed to accumulate financial contributions from numerous individuals within a relatively short period of time. Crowdfunding activities are often conducted via the internet, e.g. by the use of social networks and other online platforms. Crowdfunding can take many different forms (cf. Box 5); financial contributions can e.g. be in the form of donations. Due to the large audience