

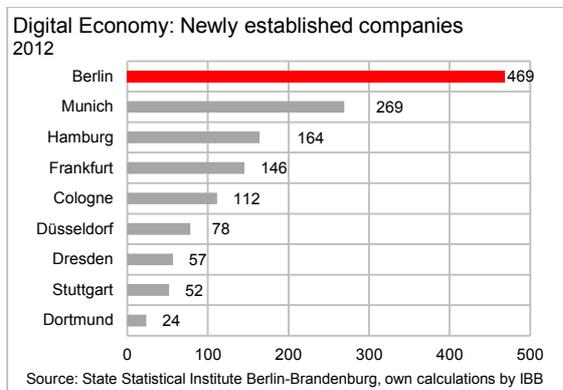
Berlin *aktuell*

Digital Economy
– Analysis by comparing German cities

November 2013

Germany's start-up capital

In recent years, an extensive and increasingly dense network has developed around the digital economy in Berlin comprising banks, investors, coaching centres and incubators. The companies operating in this network co-operate with each other, exchange experience, recommend investors and even help each other with job placements. The network in Berlin is increasingly developing new life from within. And Berlin's end consumers are also moving in the same direction: around 80% of people living in Berlin use the Internet whereas the average figure for the rest of the country is only 76%.

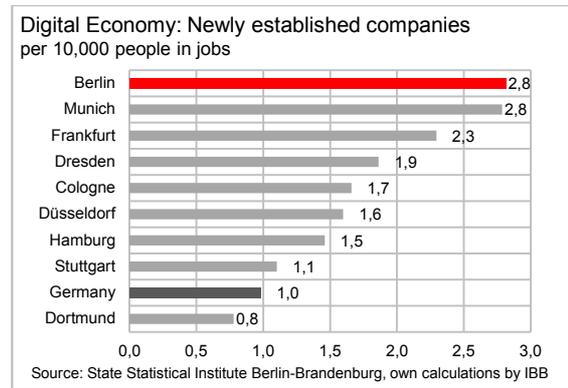


But Berlin is not just a digital city, it is also a city of start-ups. Especially when it comes to the digital economy where a thriving and creative start-up scene has developed and also found widespread international recognition. It is this scene, in particular, which is attracting well-educated people with new ideas to the city, along with capital for investments from all over the world.

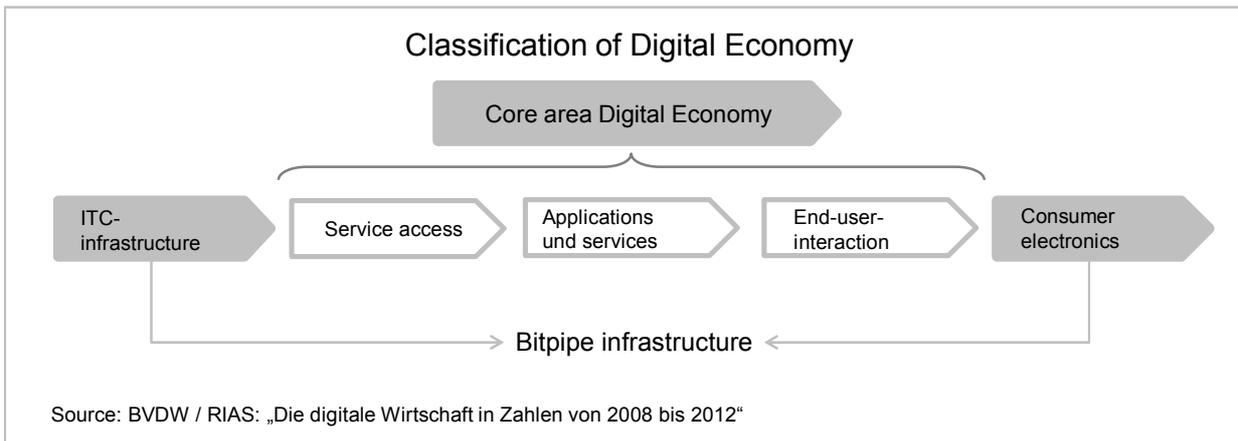
One new Internet company every 20 hours

According to the official statistics on business start-ups, on average, one new Internet company is founded every 20 hours in Germany's capital city.

Last year, Germany ranked among the top German cities in the digital economy with 469 new companies, or in other words, 2.8 newly established companies for every 10,000 people in jobs.

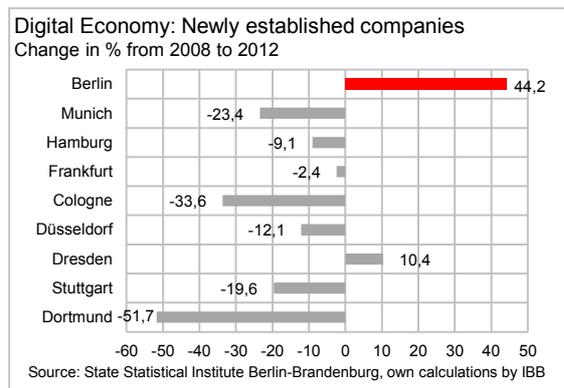


Compare this to the figure for Germany on the whole which shows just one new Internet company set up for every 10,000 people in jobs. Munich, with its enormous economic muscle, is the only other city in Germany capable of keeping pace with Berlin's performance. This is followed by Frankfurt am Main (2.3 Internet start-ups per 10,000 people in jobs), Dresden (1.9), Cologne (1.7), Düsseldorf (1.6), Hamburg (1.5), Stuttgart (1.1) and Dortmund (0.8). Even an intertemporal comparison shows that Internet start-ups have developed very well in Berlin, rising between 2008



and 2012 from 144 to 469 companies (+44.2%).

All of Germany's other cities, however, saw the number of Internet start-ups decline significantly, with Dresden being the only city to still record growth of 10.4%. However, this corresponds to just five start-ups more compared to 2008 and a total of 57 start-ups in 2012.



Berlin is attracting more and more new entrepreneurs from outside who either find investors on site or who are, for their part, drawing in a growing number of important investors. We are talking about private investors with rather small investment companies or, for instance, large publishing houses who are looking to invest in new digital business in order to compensate for difficulties in their core business. But there are also trading companies coming to Berlin who want to make use of new opportunities in eCommerce.

Start-up activities are benefiting from the effects of urban agglomeration. Distances are comparatively short and there are many large sales markets. New Internet companies can especially find employees with the sought-after special qualifications in the capital city. In addition to this, there is the spatial concentration of companies that enables the transfer of knowledge between start-ups along with the exchange in technology-oriented clusters with other companies.

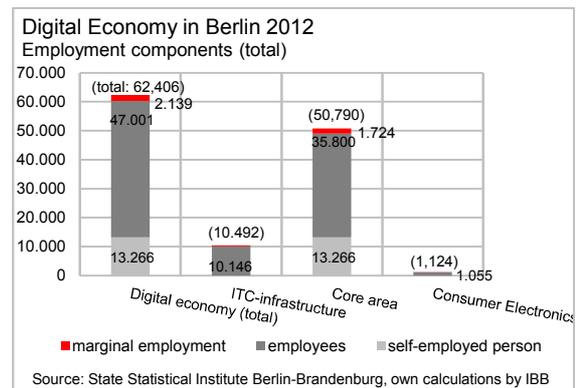
Digital Economy matters in Berlin

The digital sectors in Berlin have now advanced to become relevant economic factors. Gross value added for the entire Internet economy reached €3.9bn and hence a share of 4.2% in Berlin's total economic output. Compare this with Berlin's construction industry which only recorded economic output of around €3.3bn (share: 3.7%).



Digital Economy creates valuable jobs

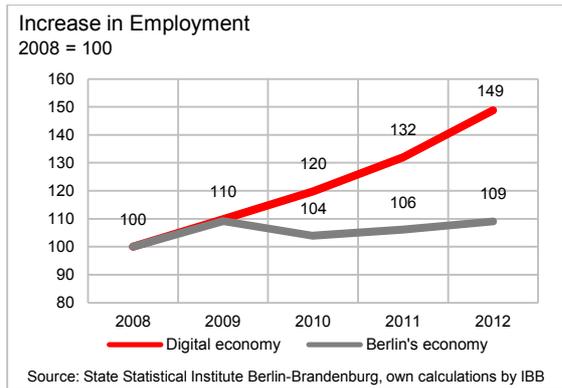
All in all, around 62,400 people work in the various sectors of Berlin's digital economy. Around 75% of these people are employed in registered jobs (47,000) compared to 21% who are self-employed in this field (13,266).



Only 3.4% of people working in Berlin's Internet sectors are solely employed in marginal jobs (2,139). Looking at just the strictly core area of the digital economy (in this case the three areas of: Service Access, Applications and Services, and End-

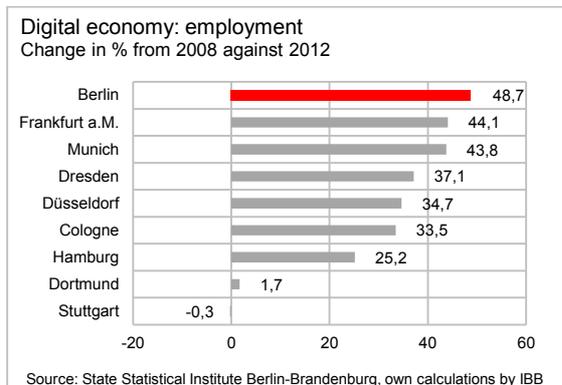
User Interaction), the number of people in jobs rose between 2008 and 2012 by a total of 12,300 (+48.7%). By comparison, the rate of increase for Berlin's economy as a whole totaled just 9.1%.

Above average job growth in the Digital economy



Due to the high number of start-ups and companies moving to Berlin, the core area of the digital economy is the most dynamic area. On the whole, 50,790 people are employed in the strictly core area of the digital economy (total share in employment in the digital economy: 81.4%).

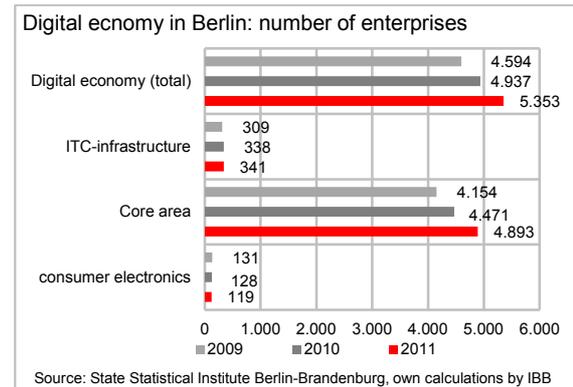
Even compared to other major cities, Berlin's employment figures in the digital economy are impressive. The only other city in the same league as the capital city is Munich.



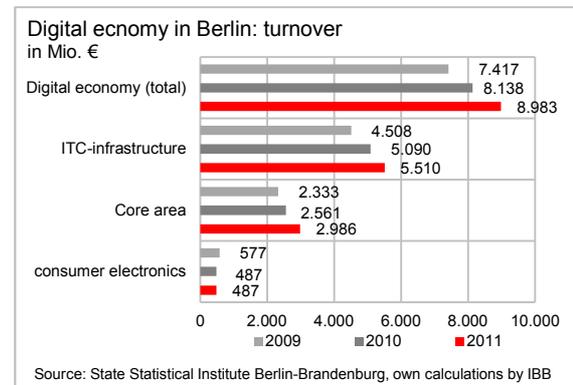
With its strong growth and jobs up by 10,940 (+43.8%) between 2008 and 2012, the city is very much on par with Berlin. Lagging a considerable distance behind these two are Frankfurt am Main (+5,961 jobs or +44.1%, resp.), Hamburg (+5,947

jobs or +25.2%, resp.), Cologne (+4,209 jobs or +33.5%, resp.), Düsseldorf (+3.175 jobs or +34.7%, resp.), Dresden (+2,055 jobs or +37.1%, resp.) and Dortmund (+107 jobs or +1.7%, resp.). Stuttgart is the only city in the comparison to show a

negative result in the digital economy for the period from 2008 to 2012 (-35 jobs or -0.3%, resp.). To sum up, in all of the nine cities compared Internet companies accounted for 34.3% of jobs in Germany's digital economy.



The excellent environment for the digital economy in Berlin is also reflected by sales development. While the number of companies rose between 2009 and 2011 by 16.5% from 4,594 to 5,353, sales during the same period actually rose by 21.0% from €7.42bn to €8.98bn. Compare this with the increase in sales of just 17.9% during the same period for Berlin's economy as a whole.

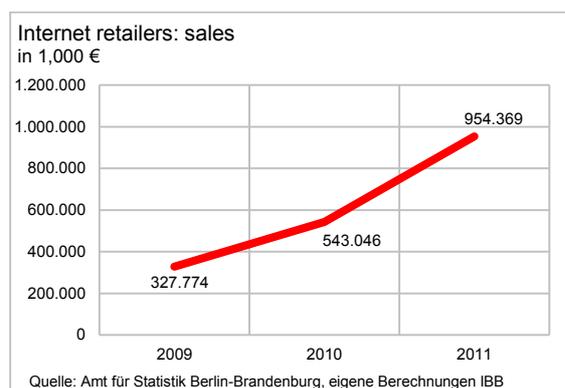


Internet companies with sales of more €5m accounted for the lion's share (+35.8%) in this increase in sales. In 2011, these companies had a share of around 60% in sales. The distribution of sales ac-

ording to company size differs significantly in the Internet sector compared to distribution for Berlin's economy as a whole. Companies in the digital economy with sales of more than €50m have a smaller share in sales than is the case in the overall economy. In 2011, they held just a 24.5% share in sales.

In Berlin's overall economy, on average companies of this size held a share of 60.6% in sales. This difference in distribution in the case of companies working in the digital economy is, however, due to the fact that there are comparatively fewer big companies and that large companies operating in Berlin's Internet sector still have considerable upward potential as regards sales. The share of companies in the Internet recording sales of more than €50m is almost just as high as in the overall economy in Berlin. On the other hand, average sales per Internet company of this size merely totally €122m. In Berlin's overall economy, the corresponding figure for sales is three times higher, totaling €396m.

If we widen this view of the digital economy, which focuses primarily on technological aspects, to include Internet-related trade areas which are not included in the study in question (mail order and Internet retail), this would mean an additional 616 companies with sales of €954.4m. This includes Internet retailers selling textiles, clothing, shoes, leather goods and other items. In 2011 alone, these Internet retailers operating out of Berlin were able to significantly increase their sales by €411m (+75.7%) to €954.3m.



The share in sales recorded by the digital economy (with retail included) in total sales for Berlin then even reaches a total 5.9% with a sales volume totaling €9.9bn compared to 5.3% without Internet retail. Due to the many Internet start-ups in recent years in this area, Internet sales can be expected to increase considerably in the years to come.

Exciting start-ups from Berlin

If we take a look at the many reports published on Berlin as the Internet capital and at the many successful start-ups in the digital economy, we can see exciting and expanding companies. However, start-up stories like that of Facebook have yet to be found in Berlin. That being said, Berlin is the most important city for Internet start-ups according to the German start-up map published by the online magazine *deutsche-startups.de*. At the beginning of January 2012, the *Financial Times Deutschland* also reported on Berlin's growing reputation as "Europe's Silicon Valley". Just a few days later, a headline in *Handelsblatt* read: "Berlin is more than just politics and culture. The capital city has become the creative centre of the Internet world. Nowhere else in Europe are investors putting so much money into start-ups like in Berlin." In a series dedicated to Berlin's start-up scene, *Süddeutsche Zeitung* told its readers that Berlin had achieved something that other centres were unable to do: Berlin is considered to be hip, creative and young, unlike Hamburg which is seen by many as yesterday's news. The reasons for the start-up boom in the capital city are obvious: Berlin has a lot to offer and is not expensive: well trained staff, many nationalities – rents and the cost of living are relatively low as is the wage structure. Combined with a diverse range of cultural and leisure activities, the city is increasingly attracting artists, students and ultimately start-ups with high growth potential. Analysts see Germany's capital city in the same situation as New York just a few years ago.

Although start-ups in Berlin are not yet writing Facebook history, they are having an impact on donations, for instance. Up to now, the donation market has been marked by major charity organisations like Caritas, UNICEF or the Red Cross. In recent years, however, more and more collection points have made a name for themselves on the Internet. Betterplace, for instance, has developed a professional site. The platform operates as a marketplace for donors: anyone can place aid projects on the site and advertise them. Potential donors can browse through the offers and find the best project for their donation. Betterplace guarantees that 100% of the money donated goes to the projects. Betterplace considers this to be its USP compared to established charity groups which often spend vast amounts of money on advertising and administration. Since its launch, Betterplace has distributed more than one million euro in donations and is financed by patrons and through donations.

Since the turn of the century, no other start-up in Germany has grown as fast as Berlin-based online retailer Zalando which was founded in 2008. The company sells shoes and fashion items on the Internet. At the end of 2012, Zalando reported that it had opened Europe's largest logistic centre for shoes and clothing in Erfurt. Zalando serves around 10 million customers in 14 European countries. Last year, seven new countries were added, so that Zalando is now present on all major markets in Europe. €600m was invested. Sales last year more than doubled from €510m (2011) to €1.15bn, according to the company. The online retailer employs more than 1,000 people in Berlin. According to preliminary figures, earnings before interest and taxes (EBIT) totalled €-90m after €-60m in the previous year. Zalando's fast growth has a strong attraction for investors. At the end of 2012, for instance, the company again acquired Swedish investor Kinnevik. The shareholder acquired another 10% from previous investors Holtzbrinck Ventures, Tengelmann Ventures and Rocket Internet, thus raising its stake to 26%.

The *absolventa.de* job portal is not quite as well known. Students, graduates and young professionals can also use the Absolventa job exchange to send passive job applications to companies. To do this, they place their CV in the CV database. Using the personnel search function, companies can then search the database for potential employees and send job queries to suitable candidates. Since early 2010, Absolventa GmbH has been growing continuously and now employs a staff of 60. In 2013 alone, 30 new jobs are to be created. In 2013, Absolventa received funds from Investitionsbank Berlin (IBB) under the Support programme for research, innovation and technologies (ProFIT). Thanks to this IBB support programme, Absolventa can now continue to develop its Internet platform further.

GetYourGuide is one of the fast-growing start-ups in tourism. Get YourGuide AG is a spin-off from the Swiss Federal Institute of Technology in Zurich that was founded in 2008 and has branches in Berlin, Zurich and Las Vegas. Since 2009, GetYourGuide has had backing from Zürcher Kantonalbank and the Swiss innovation promotion agency. Tours, events and outings at holiday destinations can be booked via the platform. By its own account, GetYourGuide offers a choice of more than 16,900 products at more than 1,680 destinations around the world. Most recently in January, GetYourGuide received USD14m from US venture capital companies Spark Capital and Highland Capital Partners Europe. This financing is one of the biggest investments that a European start-up company has ever received from a US venture capital company.

Many start-ups are being supported by so-called incubators so that they can mature to become entrepreneurs. The incubator operators are often entrepreneurs with considerable capital and high demands. Marc, Oliver and Alexander Samwer are one example. Since the turn of the century, this trio has set up several Internet companies and then sold them for a lot of money. As early as 1999, they founded a German version of the online auction house Ebay called Alando. After just a

good one hundred days, they sold the company to Ebay. They went on to do the same with Jamba, StudiVZ, Citydeal, Groupon, Facebook, Parship, eDarling, MyVideo, Wimdu, HelloFresh, GlossyBox, Zalando and many other Internet companies. Together with Christian Weiss, they set up the company Rocket Internet in Berlin in 2007. Rocket Internet is one of most famous and successful start-up incubators in Europe. According to their own reports, Rocket Internet has set up at least 140 companies with an exit rate of 25%. Rocket Internet focuses specifically on the development of international markets. The company has 27 sites on five continents, for instance, in the US, Brazil, South Africa, Sweden, Indonesia and China. Around 15,000 people around the world work for companies in which Rocket Internet holds a stake. In addition to Rocket Internet, there are other international companies in Berlin working with start-ups.

Team Europe Ventures in Berlin's Mitte district is the second-largest incubator in Berlin after Rocket Internet. The 38 employees and two CEOs are housed on Mohrenstraße. A good ten years ago, Team Europe set up Spreadshirt, an online T-shirt printing company. The small firm run by students has now become a company with recent sales of a good €40m, employing a staff of 300 and with offices in places like London, Paris and Boston. Team Europe has no external investors, but puts its own money into new start-ups which then returns through exits from old investments.

Investor Partech International sees Berlin as the gateway to new markets. This company from Silicon Valley has been investing in young Internet companies since 1982. Seed investments of between €250,000 and €1m are available for start-ups with sums of between €1m and €10m possible in later rounds. Partech now has six generations of funds. Partech is investing in Berlin, for instance, in the successful Brands4Friends shopping club. The company, which was set up in September 2007, now employs 200 people and is one of the biggest online retail platforms. Five

million customers shop for fashion in limited sales campaigns. At the end of 2010, the Partech brand was sold to eBay for €150m. Partech is also investing in "Smeet". This platform from Berlin's Kreuzberg district offers browser-based social games in 3D animation.

Other US venture capital companies in Berlin include Spark Capital (founded in 2005, the portfolio features companies like Twitter, Tumblr, Foursquare, AdMeld, OMGPOP, ThePlatform and 5Min) as well as US investment fund Highland Capital Partners Europe with its focus on Europe (founded in 1988). According to the latest survey by BVK, the association of private equity and venture capital companies, more than half of all venture capital for start-ups (€240.8m) is invested in the capital city. In 2012, young Internet companies in Berlin received venture capital in the order of €133.3m. In 2009, only €34.2m had been invested in the city on the river Spree.

IBB Beteiligungsgesellschaft, a subsidiary of Investitionsbank Berlin, has an important role to play in the capital city. Since 1997, IBB Beteiligungsgesellschaft has been providing venture capital to young companies in Berlin with high growth potential. With its VC Technology Fund Berlin and VC Creative Sector Fund Berlin, IBB Beteiligungsgesellschaft provided financing amounting to more than €12m in 2012 which, combined with investments by private partners, amounts to a total venture capital of €63m. The 47 financing rounds in 2012 marked an increase of 20% against the record level achieved the previous year. In addition to 13 new investments (previous year: 16), 34 follow-up investments (previous year: 23) were also made. IBB Beteiligungsgesellschaft was hence once again among the most active German venture capital investors in 2012. Its investment portfolio increased from 62 to 69 companies (+11%). Funds from exits are used again to finance new young companies.

Conclusion

Berlin with its economic and scientific potential is one of the promising centres in Europe and can benefit from a series of important developments:

- as a city for media and services, it can benefit from the growing importance of media, company-orientated services and the growing number of political, government and interest-group representations in the capital city,
- as a centre for biotechnology and medical technology, IT and telecommunications, as well the solar sector, it can benefit from demographic change, from growing digitisation and the persistent increase in demand for energy-saving products,
- as a metropolis, it can benefit from the many culture centres and tourist flows,
- as a dynamically growing city, it can benefit from a rising population with a high number of migrants and commuters,
- as an investment centre, it can benefit from the existing scientific institutes and the considerable investments in infrastructure in Berlin, for instance, the Berlin-Adlershof Science and Technology Park or the future BER airport,
- as an international centre for foreign trade and logistics, it can benefit from growing global trade and close proximity to the growth markets of central and eastern Europe and the Middle East.

With this kind of potential at its doorstep, Berlin offers excellent preconditions and perspectives for companies in the digital economy.

A sector which plays an important part in Berlin's economy and in 2012 provided jobs for around 62,400 people in Berlin. This corresponds to 3.5% of people in jobs. All in all, the digital economy accounts for €8.9bn or 5.3%, resp., of overall sales in Berlin.

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