

Report on Berlin Research, April 2014

How Berlin grows through Digitalization and Metropolization

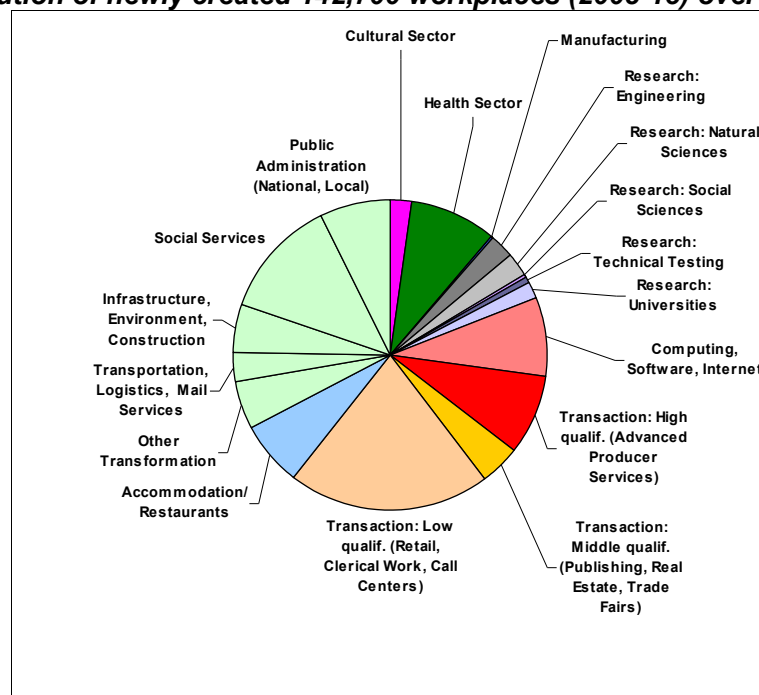
And increases (2008-2013) its share of nationwide employment in many sectors – but not in manufacturing

Summary

The report analyzes employment change in Berlin over the past years to find out what the main sources of economic growth in the city are and in which direction it is evolving. Is the city developing primarily into a center of cultural industries, of sciences and especially technological research & development, or of high level administrative and organizational activities and hence a *global city* in the terms of research on globalization and world cities? The report also examines what role the booming digital economy is playing in Berlin's economic recovery and how digitalization is interrelated with sectoral structure and regional growth.

The analysis shows how the 142,700 workplaces created between 2008-2013 are distributed over 18 sectors of the economy (Fig. 1) and compares local growth with nationwide growth in these sectors (Fig. 2). The 18 sectors are defined in a way that makes it possible to compare their actual development with political goals and strategies set by the city administration for these sectors or clusters (e.g. cultural economy, health sector, sciences and research & development, manufacturing) that are considered as drivers of economic growth. The sectors are composed of 96 narrower defined economic subgroups, for which employment change is calculated, allowing a very detailed analysis. This includes location quotients to compare the regional specialization of all subgroups within Berlin. In addition, location quotients for economic divisions are used to compare Berlin's specialization profile with those of other large German cities.

Figure 1:
Distribution of newly created 142,700 workplaces (2008-13) over sectors

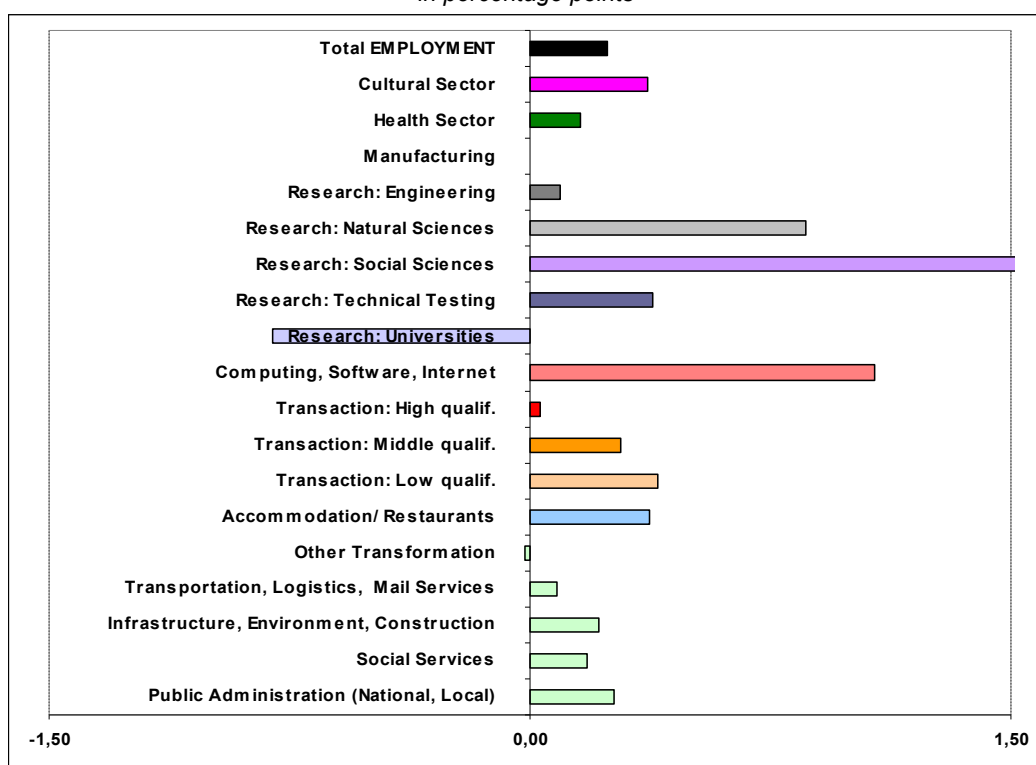


Many economic subgroups, usually categorized as 'services', are grouped into the *transaction sector*, which covers activities of coordination and organization. This large sector is subdivided according to the qualification (high, mid-

dle, low) of typical employees into three subsectors of *transaction activities*. The *higher* qualification subsector contains activities traditionally labeled as *advanced producer services* (e.g. advertising, consulting or legal advice) on which research about *global cities* is focused. The *middle* subsector contains e.g. publishing, trade fair and real estate firms, the *lower* qualifications subsector e.g. retail, clerical work and call centers.

With this definition and categorization of economic activities, it becomes clear that large segments of information and communication technology (ICT) industries and the more narrowly defined sector *computing, software and internet* in essence provide transaction activities, be it for consumers or businesses. Many global players of the internet economy grew rapidly by specializing on single transactional functions (as *eBay* on online auctioneering) or specializing on certain markets (as *Amazon* on selling books). Equally many if not most local firms of this sector in Berlin, and especially many internet start-ups, offer functions that are pure transaction activities such as searching, trading, ordering, comparing or evaluating.

Figure 2:
Change of Berlin's share of national employment (2008-13)
 - in percentage points -



The growth contribution of single sectors can be assessed in comparison with total employment in Berlin, which increased its share of national employment from 2008-13 by respectable 0.24 percentage points (Fig. 2).

- In some sectors Berlin increased its share of national employment *more than this average*, e.g. in *social and natural sciences* focussing on basic research or in the *cultural sector* and in *accommodation & restaurants*, both of which benefit from the continually increasing tourist numbers. The policies targeted towards these sectors thus appear quite successful.

Among sectors dominated by privately owned enterprises, the by far strongest growth occurred in the sector *computing, software and internet* that gained 1.08 percentage points of national employment within the five years under consideration. This boom of the digital economy in Berlin is usually explained by certain favorable locational factors (e.g. relatively low rents, growing labor pool, promotion policies). The report,

however, points out a so far underestimated factor, that is the tremendous expansion of employment in the transaction sector, that offers opportunities for intensified linkages and spillover effects between the digital economy and the wider transaction sector. The correlation of regional specialization between these sectors is shown in a short empirical analysis for the seven largest German cities.

In all subsectors of the *transaction sector*, employment grew significantly in absolute numbers. In the subsectors of middle and lower qualifications, it also grew relatively more than the average of total employment. Especially in the latter subgroup, however, many jobs were created in low wage industries. The subsector of high qualifications (advanced producer services) added as many jobs to the total in Berlin in absolute terms as the booming digital economy, but relative growth in the whole of Germany was still much stronger. Nonetheless, almost all individual branches of the subsector (e.g. accounting, advertising, or consulting) grew in Berlin faster than in the rest of Germany - except for one single branch. That branch comprises mainly firms executing headquarter functions of large companies.

Since highly qualified transaction activities taken together represent core *metropolitan functions*, one can term ongoing structural changes in Berlin as *metropolization*. This process has also been detectable over the long run - ever since the city again became the German capital after the re-unification - and even accelerated in the past ten years. The rapid growth of the digital economy in the city is, as indicated, closely interrelated with this process of metropolization.

- Some sectors, however, which have also been heavily promoted by local policies experienced only *below average growth*. This is true for the *health sector* that added many jobs but did not increase its share of national employment more than average, although the city is specialized in this field stronger than other German cities. Employment in application oriented *research & development*, as conducted by engineering firms, also grew in absolute numbers but far less than employment in general. And in *manufacturing*, ranging high on the political agenda of local policy makers since several years, growth and shrinkage of employment in single branches are largely balanced so that there is hardly any absolute growth and Berlin's share of national employment did not change at all or grow as targeted by the Senate.

Overall the economic profile of Berlin shows more and more characteristics of a *cognitive-cultural economy*, as Allen Scott recently characterized the economic structure of today's large cities. In the case of Berlin, it is mainly the digital economy, natural sciences, the cultural sector and a wide array of branches of the transaction sector that contribute to its growing job base and the city's growing importance compared to the rest of the nation. This includes highly paid employees in advanced producer services, but also a huge segment of low paid workers in the lower tier of transaction activities and other sectors. Manufacturing, however, becomes persistently less important in the employment base of the city compared to these fast growing sectors. Economic growth in Berlin thus comes with relative deindustrialization and growing social cleavages.