

Foreword

Competing: important stimuli for knowledge cities to become prosperous

Peter Franz

KNOWLEDGE CITIES: ONLY BY CHANCE?

There is a common sense that amongst the cities that have decided to pursue a 'knowledge city' developmental strategy, those housing universities and research institutes dispose of an advantageous endowment for this strategy. There is a growing number of 'virtual universities', but as long as the vast majority of universities and research institutes locate within the jurisdictions of towns and cities, this potential advantage will continue to exist. On the other side it has to be stated that the sheer fact of science institutions existing in a city is not a sufficient condition for strategic 'knowledge cities' action. Activities like these are still a rare exception. The normal state of affairs is a 'living side by side' of a primarily locally oriented city administration and a science institution with a predominant global, or at least extra-regional, orientation. Since spatial transport costs for bits and bytes have shrunk to a negligible size, the next place to connect with may be a foreign university in the far distance, but where the fellow scholars are dealing with the same puzzles of the discipline. The more the scientific staffs are linked with the global scientific community, the more local rootedness remains isolated and neglected. In some countries, such as Germany, the publicly financed universities and research institutes – as corporations under public law - are even exempted from their duties as land tax payers. This means that the cities gain economically only indirectly by the expenditure of the staff and the students among local retailers and services, but only insofar as they reside within the city region.

An initial situation like this will raise the question of what events or forces may help to overcome this 'living side by side' without consequences for urban development. Sometimes an individual may walk on

stage, driven by a special mission or conviction that universities should engage more in political or economic issues of the city region. Or a mayor, perhaps a graduate of the university in the town, builds up an idea that some university departments might hold knowledge valuable for the solution of pressing urban problems, and thus starts communication with scientists in those departments. If convictions like these come up with a sort of charismatic leadership this could be a recipe to overcome the suboptimal 'steady state' of institutional inertia in specific cases. Such processes take place by chance – they are based on a special constellation of local conditions, and elude systematic political intervention. Considering this unsatisfactory situation, a plea is made in the following sections for more profound scrutiny of the suitability of competitive procedures as a potential path to a more systematic transition to a 'knowledge cities' strategy.

POLITICAL INTERVENTION BY MEANS OF COMPETITIONS

Nowadays, after a financial crisis attributed partly to deregulation trends forced by exponents of neoliberal thinking, advocates of competitive procedures have to be prepared for harsh criticism, as their plea can be interpreted as an argument for increasing penetration of everyday life by elements of the economic sphere. The arguments to follow demonstrate that such reproaches of commodification and 'economic imperialism' are unfounded in the present case.

From the viewpoint of political science, competitive procedures present several promising features for flexible handling. In many modern societies the political system can be described as a multi-level system with (at least) national, regional and municipal dimensions. According to the 'from government to governance' debate a multitude of studies indicate the dwindling usefulness of traditional hierarchical measures for the attainment of complex political goals. A knowledge city development strategy can hardly be initiated by top-down command; it requires the voluntary involvement of a vast number of actors at different political levels. In contrast to that in launching competitions, the higher-level political actor replaces command with strategic 'management by objectives', places confidence in regional or urban self-organization, and in the ability of local actors to identify crucial local strengths. The act of publishing a call for tenders implies political framing through (1) the delimitation of the target group of competitors, (2) setting the standards for the desired deliverables from the competitors, and (3) setting incentives for the succeeding com-

petitors. Simultaneously it is the initiator's task to point out a transparent and understandable evaluation procedure for the contributions of the competitors.

Beyond that, can interventions in the shape of competitions be brought into play, not only by political actors representing public government, but also by other actors such as NGOs, non-profit organizations, or regional development agencies? A precondition for such actors to apply this measure is their legitimacy, perceived by the public, to be active and to pursue political goals in the subject area in question. Last but not least, an organization's capability to endow their calls for tender with sufficient financial and/or reputational incentives has to be mentioned.

From the view of economics, competition is primarily conceived as a general mechanism that helps societies or economies find the way to an efficient organization of production and consumption. This theory of competition as a discovery procedure goes back to Hayek ([1968] 2002). To become effective, competition is in need of the constitutional environment of a free market society. This interpretation of competition as a continuous mechanism differs from the view of competition as a spatially and chronologically restricted (confined) measure.

Both views, however, agree with the function of competition as a mode to discover new and yet unknown potentials and solutions. This feature might be a reason for the relatively frequent application of competitions as a measure in innovation policy and in regional policy. As a rule, political interventions in this domain are based on the innovation systems approach (Lundvall 1992; Cooke 1998). According to this approach a region's innovativeness is dependent on the networking and cooperation of a variety of actors (amongst them firms, universities, chambers, technology transfer units, patent commercialization agencies). In this context competitions are expected to stimulate (a) intensified information flow and division of labour in existing networks, (b) the foundation of new industry or technology networks, or (c) new R&D bi- or multilateral cooperation between regional actors. Frequently these processes are summarized under the heading of 'cluster formation'. Systematic evaluations of competitions in the domain of innovation policy have shown an enhanced cooperation and communication between the participating regional key actors (Dohse 2000). In several cases the activities stimulated by the prospective incentives continued after terminated competition even on the side of the non-winners, and some submitted projects were realized without additional grants (Eickelpasch and Fritsch 2005). Results like these indicate that the measure of competitions is suited for the activation of endogenous potentials in regions with a relatively low level of innovative activities.

COMPETITIONS AS TRIGGERS FOR KNOWLEDGE CITIES STRATEGIES

With the general reflections from the section above in mind, we now can return to the topic of knowledge cities. The screening of science policy and urban development policy in diverse countries arrives at the conclusion (result) that already some competitions have been practised at the national and at the international level. There is a yearly nationwide ‘City of Science’ competition in Germany, held since 2005 (see Wesselmann et al. in this volume; Hohn and Meyer 2011), and a yearly worldwide ‘Most Admired Knowledge City’ (MAKCi Awards) competition organized by the World Capital Institute (WCI), a non-profit professional organization having organized also four ‘Knowledge Cities World Summits’ since 2007. Within the EU context a group of larger European cities with 123 full and 17 associated members called ‘EUROCITIES’ offers a yearly award for one of the member cities. The applications have to be submitted by local government authorities (<http://www.eurocities.eu/main.php>; accessed 10 February 2011).

These international and national competitions are complemented by calls for tenders with a local focus. Frequently they center around the development of a special science quarter, campus or district within the territory of a larger city. Similar to other urban development projects they involve the task of combining elements of architectural, public transport, social and economic planning to a concise development concept. An example of this type of competition is the ‘International ideas competition’ for a science city in Copenhagen, issued by the University of Copenhagen and the Danish University Property Agency in 2010 (http://campus.ku.dk/english/vidensbydel/ideas_competition/; accessed 10 February 2011). Silberberger et al. (2010) refer to the fact that these ‘design competitions’ force the competitors to compile pieces of knowledge from diverse sub-fields and to combine them in a practicable ‘know-how’ proposal. Thus the submitted proposals help to advance promising ‘knowledge city’ strategies, and even the discursive processes of the juries by ‘selecting, rejecting, evaluating, critically considering possibilities, good or bad designs and future scenarios’ (ibid., p. 293) can be conceived as contributions to this kind of knowledge creation.

Whereas competitions of the Copenhagen type strive primarily for development concepts from professional planners – similar to architectural competitions – other ones are launched as a trigger for the activation of actors from different local subsystems (economy, science, local politics, education), and so are more similar to competitions in innovation policy. Local actors, as yet un- or under-connected, are expected to develop com-

mitment and to cooperate for the product – in most cases an outline for a local knowledge city strategy – to be submitted. As the following section shows, this desired networking effect becomes an especially important precondition for urban contexts with *several* universities and/or research institutes.

Networking serves as an opener for further add-on effects to take place. In the course of networking activities new synergies, undiscovered until now, may be realized. Continued networking helps to strengthen the identification of outstanding actors with their city and may lead to enduring constellations capable of quick collective response even in the post-competition phase and with regard to new problems. This ‘activation effect’ may occur in any cities taking part in the competition, and not only in the winner cities.

SCIENCE-SPECIFIC COMPETITIONS: COMPETING FOR EXCELLENCE

Based on the principle of science as a public good nearly all countries finance their (public) universities with budgetary resources. Besides this basic funding more and more countries have started since the 1990s to practice complementary modes of university financing. With this new strategy governments try to stimulate the universities to produce higher quality research and teaching. A common feature of these new modes of financing is their selective nature. Only those universities that pass a systematic evaluation (criterion: scientific achievement in the past) successfully (Gläser 2007), or present the best concepts for future academic activities, get the benefit of complementary grants. The usual arrangement for the latter mode of financing takes place in the form of competitions, e.g. initiatives for excellence. Examples for these are ‘Brain Korea 21’ (Moon and Kim 2001), the program ‘Centers of Excellence’ of the Australian Research Council (http://www.arc.gov.au/ngcp/ce/ce_default.htm; accessed 4 March 2011) or the recent ‘Exzellenzinitiative’ (Leibfried 2010) in Germany.

In Germany this new initiative mobilized 70 universities submitting 253 concepts for graduate schools, 283 concepts for (research) excellence clusters and 47 action plans for the future (Neidhardt 2010). A remarkable networking effect of the ‘Exzellenzinitiative’ was the – in Germany unusual up until that time – cooperation between universities and non-university research institutes who had to pool their resources in order to demonstrate a ‘critical mass’ in their plans for excellence clusters. Another effect was the partial adoption of this competition on the national level by

the Land governments at the federal level. These Land-specific regulations oblige universities (full universities and universities of applied sciences) in the respective Land to compete for additional grants. In the case of Saxony-Anhalt, the framing agreement between the government and the universities stresses the cooperation with non-university research institutes and the cooperation with private firms in Saxony-Anhalt as important preconditions for eligibility (<http://www.sachsen-anhalt.de/index.php?id=47926>; accessed 4 March 2011).

WHAT ARE THE CONNECTING LINKS OF THESE INITIATIVES FOR EXCELLENCE TO KNOWLEDGE CITY STRATEGIES?

First, the publicity around the winning academic institutions and their rising reputation has a positive effect in the short run for the respective cities presenting themselves as locations for science. There is an additional long term effect if the winning universities and research institutes succeed in converting their additional funds into higher quality in research and teaching. These gains in reputation feed back to the city image as a renowned science location.

Second, in cities with a multitude of science institutions it cannot be assumed that their managers have at their disposal a precise conception and a common vision of the specific strengths and weaknesses of the local science system. In order to gain capability to coordinate action the representatives (or a legitimized committee) have to detect, to negotiate and to agree to a specific strength–weakness profile of their science location. This sounds easy, but may prove a difficult step, because the actors that are going to take stock of the local science institutions' profile (a) have to demonstrate a legitimate concern, and (b) must have the support of academia's vast majority with respect to the results presented. Sometimes it takes several attempts to reach this required legitimacy in a city (Franz 2009). The agreement on such a strength–weakness profile is also a prerequisite for related efforts in marketing the city as a science location.

Third, as far as excellence-oriented competitions involve criteria for science institutions to build up links with private firms of the regional economy, universities and research institutes are forced to focus their attention on at least parts of their environment. Science institutions have a choice of diverse linking channels suitable for their purposes: intensified technology transfer, intensified support of spin-offs, joint R&D ventures, common conception of a course of studies or extended vocational training, visiting stays of firm employees at research institutes and vice versa.

In choosing one or more of these activities the science institutions should also consider some structural features of the surrounding firms. An environment with predominating small-size firms and less absorptive capacity provides few arguments for choosing technology transfer and R&D cooperation as the most suitable measures.

NO DISADVANTAGES?

It seems to be a matter of argumentative fairness that a proponent for applying competitions in order to initiate knowledge city strategies, and laying stress on the advantages of such a procedure, should say some words about potential disadvantages. Apart from the general critical attitude towards competitions as a further penetration of everyday life with economic principles (commodification), already mentioned in the introductory section, the main criticism is that the installment of competitions distracts from optional changes in the regulatory framework (Dohse 2000; Franz 2008). This means, for example, that deregulatory steps for universities in national or federal university laws might lead to higher autonomy for the university managers to communicate and to form coalitions with local politicians and business leaders, in comparison to a competition that seeks to overcome the existing regulatory hurdles to cooperation with a high sum of prize money. Such hurdles may consist in the dependence of universities on departmental bureaucracy when the future use of certain real estate parcels of the university's property are negotiated with the city officials, or when the decision to establish a new course of studies in agreement with representatives of a certain industry first has to be approved by super ordinate authorities. As long as such regulatory hurdles exist the implementation of even the most advanced prize-winning concept bears the risk of failure, because it cannot escape from the task of tackling these hurdles in some way.

Finally, it should not be withheld that deregulatory efforts in university laws have increased in recent years, at least in the Western hemisphere. This may come from an international learning effect by comparing 'best practice' elsewhere, but also from the experience that more autonomous science institutions will become faster in realigning their quality profiles, and more responsible regional players.

From this perspective the increasing diffusion of knowledge city strategies serves as a push factor for more autonomy on the side of the science institutions. Competitions and contests have the potential to speed up this process, but they should not be conceived as a surrogate for required changes in the regulatory framework.

REFERENCES

- Cooke, Phil (1998), 'Introduction: origins of the concept', in Hans-Jürgen Braczyk, Phil Cooke and Martin Heidenreich (eds), *Regional Innovation Systems: The Role of Governances in a Globalized World*, London: UCI Press, pp. 2–25.
- Dohse, D. (2000), 'Technology policy and the regions – the case of the BioRegio Contest', *Research Policy*, **29** (9), 1111–1133.
- Eickelpasch, A. and M. Fritsch (2005), 'Contests for cooperation – a new approach in German innovation policy', *Research Policy*, **34** (8), 1269–1282.
- Franz, Peter (2008), 'From University Town to Knowledge City: strategies and regulatory hurdles in Germany', in Tan Yigitcanlar, Koray Velibeyoğlu and Scott Baum (eds), *Knowledge-Based Urban Development: Planning and Applications in the Information Era*, Hershey, PA: IGI Global, pp. 101–115.
- Franz, Peter (2009), 'Knowledge City Berlin? Potenziale und risiken einer stadtentwicklungsstrategie mit dem fokus wissenschaft', in Ulf Mathiesen and Gerhard Mahnken (eds), *Das Wissen der Städte. Neue stadregionale Entwicklungsdynamiken im Kontext von Wissen, Milieus und Governance*, Wiesbaden: VS Verlag für Sozialwissenschaften, pp. 95–110.
- Gläser, Jochen (2007), 'The social orders of research evaluation systems', in Richard Whitley and Jochen Gläser (eds), *The Changing Governance of the Sciences: The Advent of Research Evaluation Systems*, Dordrecht: Springer, pp. 245–265.
- Hayek, Friedrich A.V. ([1968] 2002), 'Competition as a discovery procedure', reprinted in *Quarterly Journal of Austrian Economics*, **5** (3), 9–23.
- Hohn, Stephanie and Clas Meyer (2011), 'Key factors for the success of knowledge cities in Germany: findings of an empirical study, 2010, http://www.melbourneknowledge summit.com/portals/14/proceedings/documents/16_Hohn.pdf, accessed 31 March 2011.
- Leibfried, Stephan (ed.) (2010), *Die Exzellenzinitiative. Zwischenbilanz und Perspektiven*, Frankfurt and New York: Campus.
- Lundvall, Bengt-Åke (ed.) (1992), *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*, London: Pinter.
- Moon, M. and S. Kim (2001), 'A case of Korean higher education reform: the Brain Korea 21 Projects', *Asia Pacific Education Review*, **2** (2), 96–105.
- Neidhardt, Friedhelm (2010), 'Exzellenzinitiative – Einschätzungen und Nachfragen', in Stephan Leibfried (ed.), *Die Exzellenzinitiative. Zwischenbilanz und Perspektiven*, Frankfurt and New York: Campus, pp. 53–80.
- Silberberger, J., J. van Wezemael, S. Pasiou and I. Strebel (2010), 'Spaces of knowledge creation: tracing "knowing in action" in jury-based decision-making processes in Switzerland', *International Journal of Knowledge-Based Development*, **1** (4), 287–302.