In Search of Excellence in Research and Policy Advice: Success Factors for International Competitiveness

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When Tom Peters and Robert Waterman published their bestseller *In Search of Excellence: Lessons from America's Best-Run Companies* in the 1980s, it was their goal to respond to the success of Japanese companies at the time and by analysing the best American companies to propagate a recipe for success for Western businesses competing in the global market. Since the appearance of this – perhaps most well-known – book on management, globalisation has expanded at an extraordinarily rapid pace beyond the business world into almost every area of society. This is particularly true for scientific research at universities and non-university institutions, where international cooperation has been an important factor for a long time now. At institutes focusing on research-based policy advice, however, international competition only really began to take off in the mid-1990s. Today a growing number of these research facilities must consider what success factors are necessary to strengthen their position in international competition.

It was Peters und Waterman who saw the need for businesses to free themselves from the rationalistically-based paradigms of management thinking and to return to basic business virtues (especially customer orientation) und to emphasise in their 7 S model, in addition to the hard factors (strategy, structure, systems), the 'soft' factors (skills, staff, style und shared values). For research-oriented institutions the 'soft' factors, especially employee competence, international company culture and the research reputation that is transmitted outside the institution are anything but soft – they are in fact the key factors to success.

The Leibniz Association, to which the Ifo Institute also belongs, is – together with the Max Planck Gesellschaft, the Fraunhofer Gesellschaft and the Helmholtz Gemeinschaft – one of the large and renowned German research organisations. The Leibniz Institutes provide a good example of the increase in international competition and the importance of the soft factors, especially employee competencies, for achieving international competitiveness:

Striving for top performance is an absolute necessity for the institutes in the Leibniz Association, as excellence secures their existence. In order to finance their research, the institutes must compete for funding provided by the federal and state governments as well as for revenue from contract research. Successful bidding on a long-term basis is dependent on top research and research-based services for society (especially policy advice). Top performance, particularly in research, can only be based on international competition. Thus the economic research institutes that are part of the Leibniz Association compete with international and European research facilities not only to acquire revenue from contract research projects but also with respect to their research publications and conceptual contributions to economic policy. Furthermore, the European Commission has contributed to the increase in international competition by instituting their research framework programme in addition to the Europe-wide bidding process for national research projects.

Principles of competition in government research promotion

The success in competing for contract research projects can be seen in terms of the volume of revenue acquired from these projects; here success in the bidding process depends directly on the quality of the research. For the Leibniz Institutes this is also true for the basic financing provided by the federal and state

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governments. This funding has been increasingly distributed on the basis of competition, which is oriented around the standards of top international research. One of the competitive instruments that the federal and state governments have agreed on involves a special fund used by the Leibnitz Senate to grant financing for projects based on a bidding process. The fund is financed by a portion of the annual growth in revenue allocated to the Leibniz Institutes. This instrument, which has had a greater impact on the competition for government funding and the efforts to achieve top performance is, however, also the evaluation method characteristic for the Leibniz Association. Because of its importance – also as an international model – it will be described in detail below.

The federal and state governments support the Leibniz Institutes because of their supra-regional importance and the general interest of the state in the institutes' economic policy research. The Joint Scientific Conference (*Gemeinsame Wissenschaftskonferenz* – GWK), which governs the research funding by the federal and state governments, reviews in regular intervals (at the latest after seven years) whether the institutes still fulfil the prerequisites for the funding they receive. This is generally done by an independent evaluation which concentrates primarily on the research performance of the institutes. This regular evaluation has been carried out for more than thirty years now. The evaluations were originally introduced by the Scientific Council *(Wissenschaftsrat),* which, after introducing high quality research standards despite some resistance, wanted to place the performance evaluation in the hands of an independent group of experts. As a result of the restructuring of the German research landscape after German reunification, the Scientific Council carried out only two sets of evaluations of the institutes now in the Leibniz Association in the course of its nearly 25 years of responsibility. Based on its recommendation in 2001, the federal and state governments transferred this responsibility to the independent and autonomous Senate of the Leibniz Association. In 2002 it began the first round of evaluations, completing them at the end of 2008.

The evaluation procedure is governed by the Senate of the Leibniz Association, which has set up a permanent committee for the preparation and implementation of its decisions – the Senate Evaluation Committee (SAE). The Senate and the Committee are comprised exclusively of voting members who are neither members of the management bodies of the Leibniz Association nor employees of Leibniz Institutes. The members of the Senate include public figures, researchers as well as representatives from the federal and state governments. In the Senate Evaluation Committee there are four members of the Senate, twenty researchers and six representatives from the federal and state governments. This membership mix ensures the independence expected by the federal and state governments in the conceptualisation and implementation of the two-phase procedure. In the initial phase the research performance of a Leibniz Institute is evaluated based on the criteria defined by the Senate and by groups led by members of the Senate Committee, which also chooses external experts from different fields depending on the expertise of the institute being evaluated. The assessment of these groups is based on international quality standards using an extensive and standardised catalogue of questions provided by the Senate. With this catalogue the figures for research output (for example the number of articles published in internationally recognised journals, the number of employees with doctorates and calls to universities as well as the volume of revenue from contract research acquired in a bidding process) are placed in relation to the number of research employees at the institute. Additionally the evaluation groups gather information during a two-day visit at the institute. The groups then document the results of their evaluation in a report that can no longer be altered. The institute, however, has the opportunity to respond to the report.

In the second phase the Leibniz Senate assesses the results of the evaluation group using the Senate Evaluation Committee's prepared materials and issues its decision. The evaluation of the Senate, which usually involves a series of suggestions, comments and proposals directed to the executive boards of the institutes, the advisory boards, supervisory bodies and funding authorities), ends with a recommendation to the federal and state governments, whether and, if applicable, under what conditions the funding provided by the federal and state governments should be continued. The recommendation made by the Leibniz Senate is the basis for the above-mentioned decision of the Joint Science Conference to continue funding the institute.[1]

[1] According to the *Bericht des Senats der Leibniz-Association an den Ausschuss der Gemeinsamen Wissenschaftskonferenz: Evaluierungen von Leibniz-Einrichtungen 2002 bis 2008,* 62 evaluations approving further joint funding were carried out in the first round without the Leibniz Senate requesting further action. For five institutes that received positive votes without reservations the Senate required a report to be made after three or four years on the implementation of certain recommendations. In 13 cases reports were to be linked with a re-examination of the funding requirements before the usual time span of seven years had passed. In two cases the federal and state governments discontinued funding as a result of the Senate's recommendations.

To ensure the high quality of research work in the Leibniz Association, the regular evaluations alternate with internal controls of research performance levels. This is carried out by the scientific advisory council of a Leibniz Institute. The object of the internal evaluation is, among other things, to assess whether the recommendations made by the Leibniz Senate were implemented and to determine if any action must be taken in view of future Leibniz evaluations. Thus the work of the scientific advisory councils has considerable influence on the results of the external evaluation by the Leibniz Senate and should by no means be underestimated.

According to the Leibniz Senate, its evaluation process has attracted considerable attention beyond the Leibniz Association and those directly involved, and the response has been very positive.[2] This view of the evaluation procedure is also shared by the institutes that belong to the Leibniz Association, despite the enormous efforts involved. This is understandable since the results of the evaluation provide not only an objective assessment of the institute in comparison to other facilities in the same field but also help them to implement conceptual, structural and personnel changes to improve overall performance.

For the economic research institutes that are part of the Leibniz Association, this financing and evaluation system means that they can secure their existence with excellent performance in research and research-based policy advice. Top performance in research is measured according to international standards with the help of a performance scale. Of decisive importance is the extent to which the researchers are able to publish their results in internationally recognised, refereed journals or renowned book series with strict peer review procedures. An excellent research basis is a necessary but not sufficient prerequisite for the Leibnitz Institutes to succeed in competing for government research funding. In addition this knowledge has to be used for research-based services provided to society. Part of the mission of the institutes that are part of the Leibniz Association is to participate in political and social planning and decision processes, to contribute to public discourse and to stimulate debate as well as to provide the public with the information required to understand the political discussion. Here, too, there is competition over which institute has the best ideas and is most successful in disseminating this knowledge. Success in this area can be measured by institutions that specialise in media-resonance analyses.

Competencies of employees: basis for and barriers to excellence in research institutes

Excellence in research and research-based policy advice requires that the institute employees have high-level competencies that provide the fertile ground for excellence while at the same time placing boundaries on the institute's output. The success of a research institute and the resulting reputation in the Leibniz Association and the general public as well as its excellence and developmental prospects logically depend on the competencies held by the head of the institute, its senior researchers, post docs and doctorates as well as its non-research personnel. This means that those institutes will succeed in competing for top performance in research and policy advice that recruit the best researchers in their fields of expertise. This is only possible if a research institute is seen as an attractive employer and has a magnetic effect on top researchers.

Developing a magnetic effect: employer branding

Shaping the framework conditions in a research institute such that it can attract the researchers the institute wants to recruit is a challenge that goes considerably beyond personnel-policy instruments. The aim is to create an environment that is attractive to top performers and particularly to young researchers. The more a research institute succeeds in harmonising its goals and activities with the personal goals and expectations of its researchers the more attractive it will be to the very best.

Since the second half of the 1990s management literature has dealt with the increasing shortage of top performers. Highly competent employees as a success factor are becoming increasingly scarce, and money alone is not the answer to recruiting the best. The concept of employer branding assumes that only those employers are in the position to recruit the best experts and managing researchers who are able to establish themselves as the most attractive employer in the minds of the target group. This concept, which

[2] See *Bericht des Senats der Leibniz Gemeinschaft an den Ausschuss der Gemeinsamen Wissenschaftskonferenz: Evaluierungen von Leibniz-Einrichtungen 2002 bis 2008,* adopted by the Senate of the Leibniz Association on 26 November 2009.

was originally developed for businesses, also works well for research institutes for two reasons. Firstly, institutes have considerable leeway in offering – especially for research personnel – attractive (in particular non-monetary) conditions. Secondly, it is possible to influence an institute's 'branding' in the scientific community relatively quickly and without expensive marketing measures.

For non-university research institutes employer branding aims primarily at achieving a reputation in the scientific community of being an employer where first-class research is conducted and university and non-university careers are rigorously supported. For the development of this kind of reputation, it is imperative to provide to the relevant community information that creates a specific image of the employer. That, however, is only one part of successful branding; more effective is when researchers employed at the institute act as 'branding ambassadors' in the scientific community (employee branding). This occurs in two directions: the researchers not only establish their own reputation through excellent publications in journals and lectures at renowned conferences, they also contribute to the reputation of their research institute. As a result of this double effect, employee branding is an effective method for an institute to establish the reputation of being an attractive employer in the relevant target group.

Employee expectations in research

The features that make an employer attractive for potential employees vary considerably. A researcher is interested in different aspects than an employee engaged in non-research activities, and even amongst researchers the attractiveness of an institute is – depending on the individual stage of development – based on different factors:

In many non-university research institutes *junior researchers* constitute a large percentage of the staff. As they have a strong impact on the performance and developmental potential of institutes, it is imperative to recruit the most talented. The following expectations on the part of the candidates influence to a considerable degree which doctoral positions are most attractive:

- speedy completion of doctorate, and especially consultation with the team leader during the doctorate programme;
- high quality education, in particular the participation in a demanding course of graduate studies, summer schools and other possibilities;
- institutional support to promote early international presentation of research results; and
- experience in policy-oriented and empirical projects.

For *post docs* – in addition to payment – prospects for further research development dominate:

- successful further qualification (*habilitation*, publication in top journals), supported by team leaders recognised in the scientific community;
- time for own research and the international presentation of research results;
- international network, especially research abroad as well as cooperation with visiting researchers and co-authors; and
- gaining experience in policy advice and policy debate, media work and taking on first leadership tasks.

The candidates for positions of *head researcher* (head of research departments) are led by the following criteria: reputation of the potential employer, performance-oriented, internationally competitive remuneration and above all by factors that increase their own market value in the scientific community and thus promote their future career:

- close cooperation of the institute with an internationally recognised university and a joint appointment as professor at such a university;
- international scope of the research facility;
- governance structure that facilitates research development as well as performance-promoting framework conditions for the department they are to lead, which includes sufficient freedom to explore their own research; and
- possibility to influence the shaping of policy and social developments.

Based on these expectations there is a clear set of prerequisites that must be fulfilled in order to recruit the best researchers. For doctoral students and post docs, top priority is being integrated into teams in which the head of department is active in promoting their further development in research, in obtaining their doctorate and *habilitation*, and in publishing their results. Thus the choice of department head is one of the most important factors in the attractiveness of a research institute as seen by junior researchers and

secondary level staff. The key factor for the magnet effect of a research institute is the creation of the necessary prerequisites to recruit excellent researchers for department head positions.

Factors involved in attracting potential employees to non-university research facilities

There are a considerable number of instruments that must be used to attract top researchers. The following fields of activity play a dominant role:

- provision of joint professorships and close contacts to universities;
- internationalisation of the institute's research fields;
- performance-promoting governance structure; and
- promotion of the researcher's profile in the scientific community.

For each of these fields of activities there are strategies and measures to be developed:

Provision of joint professorships and close cooperation with universities

It is of central importance that attractive professorships are provided for head researchers. The more recognised a head researcher is and the more involved in the development of his or her employees the greater the chance to recruit highly talented doctoral students and post docs for his or her research department

The fundamental prerequisite for recruiting excellent and internationally experienced department heads is the possibility of a professorship at the highest level of the pay scale. A non-university research institute cannot provide this possibility on its own, of course. To be in the position to offer a joint professorship with a department head at an institute, the institute must have established a close and mutually trusting relationship with one or more universities. To compete with the best as a non-university research institute, it is thus mandatory to maintain close links and to work together with universities.

Cooperation contracts between universities and institutes must be based on the will of both parties to actively work in cooperation with each other. *Pro forma* cooperation contracts and joint appointments are not successful in the long term.[3]

If a joint professorship only serves to provide a head researcher of an institute with an attractive title, it will only interest mediocre researchers. Top scientists who are focused on their career value an active role at the university and the opportunity to use university contacts for research and teaching.

Internationalisation of research institutes

Of similar fundamental importance is the internationalisation of research institutes. The higher the specialisation degree and the demands on the scientific expertise of the researchers the lower the chance to find a suitable candidate for head research positions on the national labour market. This is increasingly true for post docs and junior researchers. This means that the recruitment of researchers must necessarily be transferred to the international level. Especially when in times of demographic change fewer junior researchers are available on the domestic labour market, successful internationalisation of the research institute will always be an enormous competitive advantage.

For researchers from abroad an attractive institute is active in the international scientific community, recognised at an international level and known for its international atmosphere. This kind of environment can develop to the extent that internationality determines the subject matter of the research, the self-understanding of the institute as well as its organisational culture and working environment. This atmosphere cannot be realised immediately but is the result of a comprehensive, long-term strategy that can range from focusing the subject matter of the institute on the expertise of the researchers in the international network to special integration measures for foreign researchers.

An international orientation is best achieved when the institute establishes a worldwide research network and supports its members in their activities, for example, organisation of conferences and publication of research work. That not only strengthens the reputation of the institute in the international scientific community but also leads to the involvement of the institute's employees in the activities of the network members, increases their familiarity with international research standards and expands their inter-

[3] See *Gemeinsame Berufungen von leitenden Wissenschaftlerinnen und Wissenschaftlern durch Hochschulen und universitäre Forschungseinrichtungen,* report and recommendations of the *ad-hoc* working group 'Joint Professorships', adopted by the Committee of the Joint Scientific Conference (GWK) on 16 September 2008.

national contacts. A prime example is the CESifo Research Network, which in its eight areas links 900 worldwide researchers. At its 25 conferences per year, Ifo researchers are given the opportunity to exchange views with experts from all over the world, which has resulted in numerous research cooperation projects.

Performance-promoting governance structure

The most important prerequisite for recruiting excellent department heads lies beyond the sphere of the institute's director – their own calling. Top researchers are internationally in demand and cannot be recruited for the position of department head of a non-university institute if they doubt the professional or personal integrity of the institute's director. And an internationally esteemed researcher will only accept the appointment of director if the concessions he/she is required to make as a researcher are compensated in other areas. Appointing the head of an institution is one of the most important and difficult decisions for the future of the institute, and one which is not easily revoked. Thus the recruitment committees, supervisory bodies and funding authorities who are involved in this decision play a major role in determining the future of the institute.

A governance structure that encourages top performance requires a leader who provides the overall goal-orientation for the institute and is always available to its senior researchers, decides quickly, negotiates clear goals, ensures quality and defines the financial, personnel and professional framework of the research work. Part of a performance-promoting governance structure is the work of the department heads, who, within the governance structure provided by the institute management, have the freedom, responsibility and power to decide how to plan their departments. In an ideal scenario they not only expand knowledge in their specialty area but also become respected opinion-makers in public discourse.

A leadership culture that supports dialogue and scientific discourse and emphasises the responsibility of researchers is also part of a performance-promoting governance structure. As important as the setting and monitoring of goals, ensuring research quality and following the rules of good research are, the development of the individual researchers depends on the trust of the institute's management in the research competence and responsibility of its researchers. Supporting researchers in the process of developing higher research quality leads to the promotion of the individual's competence, but intervention in the individual's area of responsibility as a researcher is counterproductive. This trust in the individual's responsibility must rely on the expertise of the researcher, which has been confirmed in refereed publications.

Enhancing researchers' scientific profiles

The conditions for enhancing the individual scientific profiles of the economists in a research institute are especially important parameters for recruiting the best talent, not only at the level of department heads. Here, isolated measures do not suffice; the creation of an environment for advancing the scientific reputation is an organisational principle for all research institutions. To achieve this, the following measures are important.

(a) Creation of free space for research

A key precondition for the successful advancing of the scientific reputations of economists at research institutions is the creation of free space for research projects that lead to internationally acknowledged academic publications. This is more easily said than done in applied research institutions in which earning the necessary revenue from contract research and the services related to the transfer of knowledge take up a considerable amount of resources. Finding a suitable balance for these different requirements that offers enough free space for generating scientific output is a key success factor for non-university research institutions. This is a matter of the promotion of excellence through efficiency, in which the following and other factors play a role:

- creative selection of contract research projects that expand the free space for research of the research teams;
- energetic fund raising, especially the acquisition of donations and purpose-free grants and professional management of the institute's assets;
- minimisation of overheads especially via an efficient functioning infrastructure and service apparatus; and
- optimisation of research efficiency through optimal technical support. It is mandatory that research institutions employ state-of-the-art information and communication systems and applications and provide high-availability IT instruments with professional user support.

(b) Further scientific education

Advancing scientific reputations is not conceivable without the permanent further development of expertise and recognised publications. This principle holds for the entire working life of a researcher: to stand still is to fall back. The international networking of individual researchers is also part of the promotion of further education. Successful non-university research institutions all enable their research staff to make international contacts at an early stage of their careers with the help of which every researcher can build up his or her own international network.

Indispensable instruments for the promotion of researchers' further education and the international networking of individual scholars are in presentations made at international conferences, stints as visiting researchers at well-known universities or research institutions, especially abroad, the possibility of organising conferences or workshops with international participants as well as invitations extended to co-authors and visiting researchers. Research institutions can support their staff by granting them sabbaticals, by providing them with suitable funds or by supporting them with the acquisition of funding that would allow for research stays abroad.

An institute's own internal discourse culture provides excellent opportunities for expanding the scientific horizon of the researchers in policy-oriented research institutions, at the same time enlarging their sensitivity for the policy relevance of scientific issues. This presupposes that the discourse is at a high scientific level and simultaneously deals in an intense manner with the policy implications of the research. In this way researchers can gain valuable information for their projects but also for contributions to the policy debate. Lunchtime seminars and workshops are particularly suitable formats for these internal discussions.

Especially junior staff should be actively assisted in their presentations of papers at international conferences and in the journal publications that this leads to. This can be done by means of preparation conferences in which the researchers present their work to their institute colleagues and receive their feedback. The targeted support for junior staff from supervisors and senior researchers economists is also important as well as the training of the technical skills that are necessary for the realisation of scholarly papers and their presentation.

Also the participation in graduate-school events at neighbouring universities, at suitable summer school courses as well as internal courses and giving staff the opportunity to teach at nearby universities are all effective measures in helping young researchers advance and should be part of the standard repertoire of research institutions that wish to attract the best talent.

(c) Gaining experiences in policy advising

In the quest for talent, the research institutions stand in competition with the universities, which can also use the instruments described for the promotion of their junior staff. This leads to the question of whether the research institutions have any comparative advantages over the universities in the competition for talent. A possible advantage is the intense promotion of junior staff by research supervisors and senior staff as well as the greater scope for the promotion of international networking of the junior staff. For policy-oriented research institutions there is an additional and equally important advantage: providing opportunities for gaining practical experience in policy advice and participating in policy debate.

Further important factors that strongly influence the attractiveness of a research institute include a competitive pay structure with performance-based elements, the equal treatment of men and women, a healthy work/life balance, the promotion of dual careers as well as career assistance for staff that leaves the institute.

Proven in practice

The above-described concept for increasing the attractiveness of research institutions for excellent staff is not just theory but has been proven in practice. It was the personnel-policy component that propelled the Ifo Institute from its existential crisis in the 1990s to the forefront of economic research in Germany.

In 1996 the Ifo Institute paid the price for not sufficiently promoting its scientific research despite the warnings it had received in the 1980s from the German Scientific Council. After a very critical evaluation by the Scientific Council, the Institute nearly lost its joint funding from the federal and state governments but at the price of a drastic reduction in funding and its conversion to a research-based service

institution, as recommended by the Scientific Council and implemented by the federal and state governments in 1999.

In 1999, the new Ifo Executive Board reduced research capacities by almost half, restructured the Institute and set the goal for its research, policy advice and service of achieving a leading position for the Institute and of gaining a reclassification as a full research institute within ten years. The performance of the 'new' Ifo was put to the test when it was evaluated by the Leibniz Senate. In its official statement of 14 June 2006, it determined that the performance of the Ifo Institute had become 'good and in some areas very good to excellent performance in economic research and policy advice'. At the same time, the Leibniz Senate laid out the course for a reclassification of the Ifo Institute to a full research institution, with a decision to be made in 2009 on the basis of a submitted work programme.

In its recommendation to the Joint Scientific Conference that the Ifo Institute again be funded as a research institution starting in 2010, the Leibniz Senate up-dated its assessment of the Ifo Institute, stating in its comment of 4 March 2009: *"Ifo's research output over the past three years has been excellent. Its performance has again been clearly improved over the level of 2005 without this having come at the expense of its services to the scientific community"*. At the same time the Leibniz Senate recommended that the Joint Scientific Conference reclassify the Ifo Institute as a research institute; this went into effect on 1 January 2010.

Many factors contributed to this turnaround, especially the new strategic orientation aimed at close cooperation with universities, the internationalisation and the excellence in research, policy advice and service. In order to reach these ambitious goals, the personnel basis had to be renewed. The concept presented here was the basis for integrating the remaining economists in the work of the Institute after its downsizing and at the same time for making the Institute an attractive employer for new top-research performers.

References

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