

Im Fokus

Torn between Two (or More?) Lovers: Some Thoughts on Economic Research on China

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Abstract

Social science research in general is confronted with growing pressure to define parameters for research quality. This is especially the case in economic research. Publications in refereed journals have become an important parameter in this process. Consequently, for following up recent trends in economic research on China the paper first presents some 'bibliometric' insights derived from the relevant scientific citation indices. In the second part of the paper major research approaches are identified and necessary conditions for successful research discussed.

Keywords: Economic methodology, Social Science Citation Index, SSCI, Chinese economics, evaluation

Just recently, the *Verein für Socialpolitik*, which is the leading association of German-speaking economists, distributed a questionnaire¹ among its members, asking for their opinions concerning a number of major economic policy issues currently discussed in Germany. Interestingly, the first question asked the members to name those aspects they thought defined a good economist.² We do not have the results of the survey yet, but the first question of the questionnaire and further ones included in it indicate that the economists responsible for the survey were

¹ The questionnaire was developed by Prof. Friedrich Schneider (University of Linz, Austria) and Prof. Bruno Frey (University of Zürich, Switzerland) and distributed to the members of the *Verein für Socialpolitik* by e-mail.

² The question proposed the following criteria, allowing answers such as 'very important,' 'relatively important,' 'not important' and 'don't know': being a good manager and problem-solver; excellence in mathematics; very good knowledge of one specific field (of economics); good relations to prominent professors; interest in and knowledge of empirical research; broad knowledge of economic literature; good knowledge of the current economic situation.

aware of a deep-rooted conflict within the economic discipline concerning the relevance, quality and the methods of economic research. With due simplification, we can summarize the conflict by means of the following questions: Is economic research a science comparable to a natural science, with each researcher looking for specific 'laws' within a narrow field of interest, with an important part of the research being done as 'l'art pour l'art' and communicated mostly among researchers? Or is economic research applied research aimed at understanding and solving economic problems and thus meeting a specified or unspecified demand from politicians, entrepreneurs, etc.?

This conflict is not limited to the realm of the members of the *Verein für Socialpolitik*. It is actually a question debated more or less openly all around the world. This debate has attracted growing attention as the trend to evaluate research, researchers and research institutions has expanded globally in recent years, facing economists (and other social scientists) with the need to define parameters for the quality of their work (Whitley 1991). Today, the ability of a researcher, a university department or a research institute to successfully navigate through this conflict might define his/its academic and institutional future. Not surprising then, this conflict is also heavily influencing the development of economic research on China.

With this in mind, the invitation to briefly present 'innovative theoretical and methodological approaches as well as research *desiderata* in economics with regard to contemporary China' seemed to be an honour, yet at the same time an invitation to get into hot water! In addition, knowing about the vast international literature related to China's economy, not even accounting for articles in Chinese, I wanted to make sure that my judgement would not be too subjective and that I did not overlook any important approaches or topics due to personal limitations regarding research interest, horizon or time.

As a consequence, my statement is divided into two parts. First I shall discuss some impressions or hypotheses of important trends in research concerning China's economy, using empirical data derived from searches within the ISI Web of Knowledge³ that allows for simultaneous and separate searches within the *Science Citation Index Expanded* (SCI EXP), *Social Sciences Citation Index* (SSCI),

³ ISI Web of Knowledge is an information environment developed by Thompson Corp. that provides academic institutions with tools to access, analyze, and manage research information. The citation indices used here cover journal articles starting from 1993. See <http://portal.isiknowledge.com/portal.cgi/wos?Init=Yes&SID=B4J7FfKIn4c@GmK5B7B>

and the *Arts & Humanities Citation Index* (A&HCI).⁴ Based on this discussion, the second part of the paper attempts to characterize different approaches taken by research on China's economy, picking illustrative examples of these approaches and also stressing the implications the different approaches have in terms of research infrastructure, financing, etc.

Some trends in economic research related to China

The three indices used here do not cover the whole spectrum of research and publications in the field of economic research on China. Altogether they include 9,511 journals, though – a vast number of scientific journals. Of the three indices, the SSCI is certainly the most relevant one in terms of economic research on China. The SSCI embraces 1,857 academic journals, 185 of which are listed in the category of 'economics'; 67 of these are categorized as 'business' journals, 44 as 'business, finance' and 75 as 'management' journals. Only 35 of the journals in the SSCI belong to the category of 'area studies' and only 13 of these refer to Asia or China by their name (like *The China Quarterly*). The SCI EXP covers 6,496 journals. The A&HCI accounts for 1,148 journals, 35 of which are included in the category of 'Asian studies.' With only 48 journals explicitly related to Asia or China, these indices are certainly not able to mirror the whole range of research on Asia and China. Economic research on China is not necessarily published in journals related to area studies, and it may well be the case that the research that is published is only printed in such periodicals to a small extent. Thus, in the absence of a better, more representative alternative, it seemed reasonable to probe into the indices to 'test' my original hypotheses.

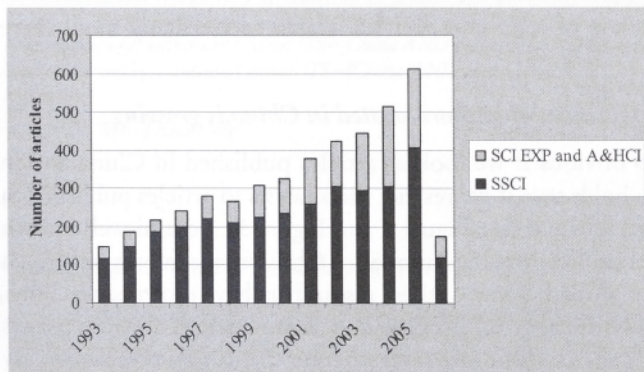
Hypothesis 1: the number of publications related to China's economy is growing

This impression is based on the experience that the number of publications – be it books, reviewed articles or more popular publications – has grown tremendously in recent years, at least for mainstream topics, making it more and more difficult to catch up with the literature and remain up to date in every field of economic research related to China. This trend has been triggered by a number of factors,

⁴ The ISI Web of Knowledge provides further indices. The three indices used here were accessible via the library of the University of Duisburg-Essen. Results presented are based on inquiries made up until 29 March 2006 if not indicated otherwise. As the citation indices are regularly updated, later inquiries will produce different results for the year 2006.

the dynamic economic development of China being the most important one. Consequently, research interest in the reasons for and impact of China's economic 'miracle' has grown. More specifically, the opening up of China's economy, the exposure of foreign enterprises in China and the awareness of China's increasing competitiveness all created a demand for research in the 1990s. But is the growth in literature on China's economy really substantial enough to be reflected by the citation indices that are limited to international refereed scientific journals? As Figure 1 indicates, the trend is indeed visible in the numbers of articles published in refereed journals. For example, the number of articles published during the year 2005 is 406 for the SSCI, more than three times the number (115) counted in 1993, the first year of data provided by the ISI Web.

Figure 1: Number of articles related to China's economy



Note: Inquiry 'TS=(China AND econom*)', articles only, all languages, Year=xxxx. Data for 2006 refers to publications registered in the indices up until 29 March. 'TS' is the field tag used for 'topic'.

Source: ISI Web of Knowledge.

With the exception of the years 2003 and 2004, the number of articles gathered by the SSCI has continuously increased since 1993. The growth in the number of articles is even more impressive if the relevant articles found in the *Science Citation Index Expanded* and the *Arts and Humanities Citation Index* are included. That the expansion has also been quite substantial in relative terms is shown by

the fact that the share of articles related to China's economy with respect to the total number of economic articles has also grown (see Table 1).

Table 1: Share of China-related articles relative to all economic articles

			1993-1999	2000-2006
Inquiry (number of articles)	TS = (econom [*])	SSCI	44,239	50,667
		All three indices	76,028	94,982
Inquiry (number of articles)	TS = (China AND econom [*])	SSCI	1,303	1,927
		All three indices	1,642	2,873
China (per cent)	articles' share	SSCI	2.9	3.8
		All three indices	2.2	3.0

Source: ISI Web of Knowledge. Data for 2006 refers to publications registered in the indices up until 29 March 2006.

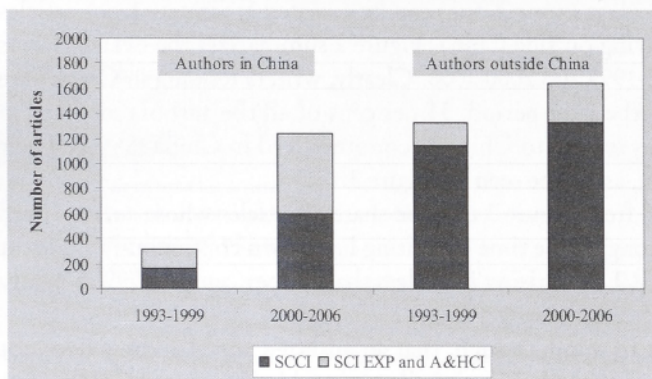
For the period from 2000 to 2006, the share of economic articles related to China is greater than the share of economic articles related to Germany in all three indices.

Hypothesis 2: the importance of authors located in China is growing

This trend is all too obvious if we look at articles published in China and in Chinese.⁵ But it also holds true if we restrict the analysis to articles published in international refereed journals (see Figure 2 and Figure 3). Several well-known factors enhance this trend: a growing number of Chinese researchers have been trained at universities abroad. Some of these researchers have returned to China, while others have remained at foreign universities as professors, etc.; both groups contribute to international economic research. At the same time, university training in economic research – at least at the leading universities in China – has gained in scale, scope and quality. Last but not least, due to the reforms in academic work evaluation and career patterns, Chinese economists now face growing pressure to publish work in international refereed journals (Qiu 2004). Possibly only a small proportion of the home-grown economists are able to compete in the realm of international refereed journals, but in the case of China a small number in relative terms (considering the absolute number of economists living and working in China) can be substantial in absolute terms.

⁵ This paper does not include the inner-Chinese economic discussion for practical reasons. The number of Chinese-language journals included in the indices is very limited.

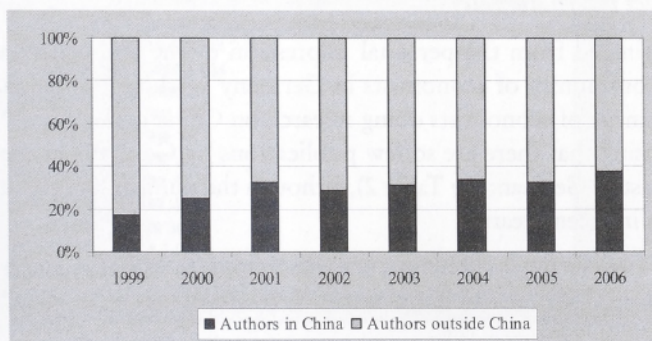
Figure 2: Articles sorted by the authors' address of correspondence (SCI EXP, SSCI and A&HCI)



Note: Inquiry for authors in China: 'TS=(China AND econom*) AND CU=(china)'.
 Inquiry for authors outside China: 'TS=(China AND econom*) NOT CU=(china)'. See also note on Figure 1.

Source: ISI Web of Knowledge

Figure 3: Articles sorted by the authors' address of correspondence (SSCI, 1999-2006)



Note: See Figure 2

The ISI Web of Knowledge does not allow users to search for the place of birth or nationality of the authors, but it is possible to search for the authors' country of residence (according to their postal address). Thus articles written by authors living in China (including Hong Kong) can be counted separately from articles written by authors living outside China. Figure 2 summarizes the overall results for two periods, 1993-1999 and 2000-2006. Clearly, writers residing in China have gained in impact. In the later period, 31 per cent of all the authors involved in the writing of articles related to China's economy lived in China (SSCI). Their percentage is growing, as can be seen in Figure 3.

We can clearly see from Figure 3 that the share of articles whose authors lived in China (or Hong Kong) at the time of writing has grown continuously in recent years according to SSCI data, rising from less than 20 per cent in 1999 to nearly 40 per cent in the first quarter of 2006.

It should be kept in mind, though, that an author's postal address does not necessarily correspond with their nationality; as said before, many Chinese academics are currently working abroad as professors or researchers. In addition, at least some of the authors residing in China and Hong Kong are not Chinese. As the number of Chinese researchers working and writing abroad is supposedly larger than the number of non-Chinese researchers working and writing in China or Hong Kong, referring to the country of residence will probably cause us to underestimate the share of authors who are Chinese nationals.

Hypothesis 3: the economic research on China conducted by authors in Germany has little impact internationally

This hypothesis originated from the personal impression of the author, who is part of the small community of economists in Germany working on China. Given the modest number of economists doing research on China in Germany,⁶ it is not really surprising that there are so few publications by Germans in the citation indices (at least in German; see Table 2), although the number and share has grown somewhat in recent years.

On the other hand, a more comparative perspective (Figure 4) shows that the position of other European countries is also weak, at least as long as 'England'

⁶ For an overview of the development of economic research on China in Germany and current problems, see Fischer (2003).

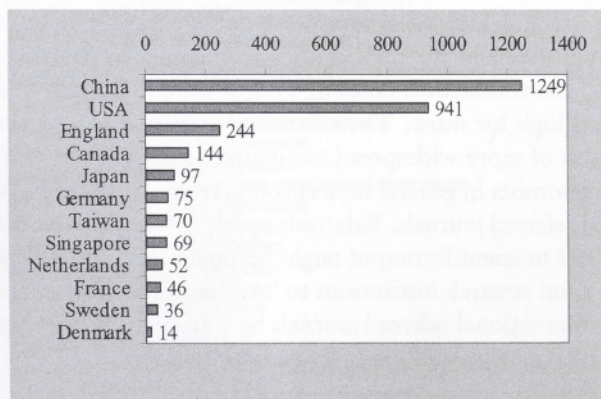
Table 2: The role of German research in research related to China's economy

			1993-1999	2000-2006	Total
1	Number of articles related to China's economy Inquiry: TS=(China AND econom*)	SSCI	1,303	1,927	3,23
		All three indices	1,642	2,873	4,515
2	Number of articles written in German Inquiry: #1 and Language = German	SSCI	12	9	21
		All three indices	17	27	44
3	Number of articles written by authors with a postal address in Germany Inquiry: #1 and CU=(Germany)	SSCI	14	40	54
		All three indices	21	75	96
4	Share of #3 in #1 (per cent)	SSCI	1.07	2.1	1.7
		All three indices	1.3	2.6	2.1

Source: ISI Web of Knowledge. Data for 2006 refers to publications registered in the indices up until 29 March 2006.

Note: TS=Topic; CU=Country of residence according to postal address

Figure 4: Number of articles sorted by authors' country of residence (SSCI, SCI EXP, A&HCI), 2000-2006



Note: Data for 2006 includes publications registered in the indices up until 4 April 2006.

Source: ISI Web of Knowledge

is excluded. Figure 4 shows a clear dominance of authors living in China or in countries with an English-speaking (and writing) population.

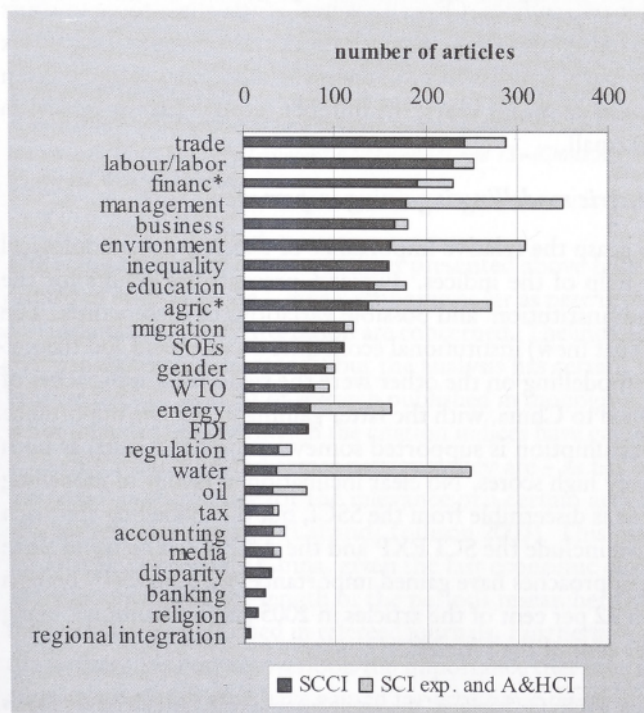
A number of possible explanations for this phenomenon come to mind: (1) German/European research is not good enough, thus articles by German economists are rejected by international refereed journals. This would imply that articles related to China's economy written by German and other European economists whose mother language is not English are generally of sub-standard in an international comparison. In theory, this could be a valid explanation, but if an economist's mother tongue explains their skills, then the large proportion of authors located in China would hint at either an exodus of English native speakers to China or at the fact that Chinese economists generally write in better English than European researchers do. Neither explanation is really tenable. (2) At least for Germany, another explanation might be that the small community of German economists focusing on China's economy lacks the „critical mass“ for absolute specialization, a fact that makes it more difficult to place articles in the international arena. (3) Last but not least, in the past, economists in Germany and presumably in other European countries were unable to rely on the local 'demand' for research on China's economy to any great extent. Given China's economic development and growing international importance, the demand for related expertise kept German economists busy, 'local' publication of research results was very easy, and thus the few experts on Chinese economics were able – or were even forced – to seclude themselves from the international market of publications. With enough demand for publications in their native language and in national journals, the transaction costs of publishing in international refereed journals were too high for most. The situation has changed in recent years, however.⁷ As a result of more widespread evaluation of scientific output, German and European economists in general have encountered growing pressure to publish in international refereed journals. Relatively speaking, the demand the local market has with respect to scientific output might become less important for the struggle of researchers and research institutions to 'survive,' thus the number of publications placed in international refereed journals by European authors not located in English-speaking countries will probably continue to grow.

⁷ Looking at the US in 1999, Harry Harding from the Elliott School of International Affairs expected that the public demand for output from academic 'China watchers' would shrink due to better access to information about China and more know-how being provided by the media, consultancies, etc. (Harding 1999).

Hypothesis 4: certain topics dominate economic research on China

Given the large number of publications worldwide, especially if monographs, articles and working papers beyond the scope of refereed journals are considered, the impression about the topics that dominate economic research on China is easily biased by one's personal research interests. On the other hand, it is often necessary for economists (and other social scientists) working at universities to combine research specialization with a very broad scope of knowledge on China's economy for teaching purposes. Consequently, the impression one gets about

Figure 5: Search results for selected topics/keywords used in the inquiry 'TS=(China AND econom)', articles, all languages, 2000-2006'*



Source: ISI Web of Knowledge. Data for 2006 refers to publications registered in the indices up until 29 March 2006.

dominant topics might not be overly subjective after all. Nevertheless, for the purpose of this paper, it seemed appropriate to check the results the citation indices present for a number of topics and keywords (see Figure 5).

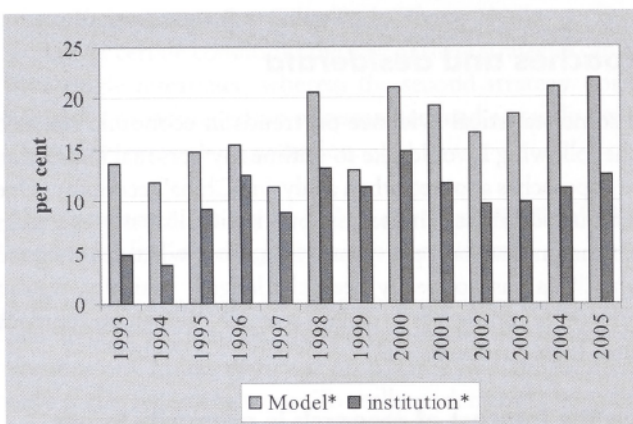
Obviously, China's growing importance in international trade and as an international production centre is reflected by the number of titles related to trade, business and management. What's more surprising given the time span chosen for this inquiry (2000-2006) is the relatively low score obtained for 'FDI' and 'WTO.' The topic of 'labour/labor' got a very high score and 'migration' was also relatively prominent. Although it is not really very surprising, 'financ*' also resulted in a high score.⁸ Quite interestingly, 'environment' is a topic that is already high on the agenda both in the SSCI and the other indices, whereas the topic of 'water' is relatively unimportant in the SSCI publications, but got a high score in the other two indices. Overall, 'water' is actually a topic of some prominence, getting a better score than some classic economic topics such as tax and banking, or the recently popular topic of energy. Rather unexpectedly given the developments in Asia in recent years, the number of publications related to regional integration is small.

Hypothesis 5: econometric modelling is gaining importance

It is more difficult to grasp the relative importance of different methodological approaches with the help of the indices. Figure 6 presents the results for the keywords 'model' and 'institution' and possible variations of these words. The basic assumption was that (new) institutional economics on one hand and theoretical and econometric modelling on the other were the two major approaches of economic theory applied to China, with the latter gaining in relative importance. The first part of the assumption is supported somewhat by the results, as both keywords have relatively high scores. No clear inclination in favour of modelling or econometric analysis is discernible from the SSCI, but the modelling approach has a higher score if we include the SCI EXP and the A&HCI. The trend since 1993 shows that both approaches have gained importance, with 'model*' being a keyword in more than 22 per cent of the articles in 2005 and 'institution*' being related to about 13 per cent of the articles.

⁸ As there are relatively low results for 'banking,' this result seems to reflect the numerous papers dealing with topics related to China's financial markets. One reason why analyses of China's financial markets are popular even though they can hardly be described as booming is the comparatively good database of information available.

Figure 6: The relative importance of different theoretical approaches (1993-2005) (in all three indices)



Note: Search $TS=(China \text{ AND } econom^* \text{ AND } model^*)$, and $TS=(China \text{ AND } econom^* \text{ AND } institution^*)$
 Source: ISI Web of Knowledge.

The results from the citation indices presented above help us to understand the *status quo* of research on China's economy as far as peer review among economists and international standardization are concerned. The indices allow for some objectivity in discussing the trends, but the analysis has certain weaknesses, especially because the vast amount of research published in monographs and working papers is not included. And although the citation indices have gained importance vis-à-vis academic evaluation and career patterns, they are – as has been proven by earlier research – no guarantee for the relevance of a certain article published, as many articles remain unquoted (Laband/Tollison 2003). This might be especially true for articles concerning China, given the fast economic development and change in the country and the length of the periods researchers have to wait for before their articles are published in refereed journals. Furthermore, by concentrating on the indices, it is easy to overlook the importance that international organizations and their research staff have gained for economic research on China. Thanks to their huge research staff and their status, publications by the World Bank, the

IMF, the OECD and other organizations have contributed tremendously to most of the topics listed in Figure 5 and – to a certain extent – have had an agenda-setting function in the past.⁹

Research approaches and *desiderata*

Having summarized some statistical evidence on trends in economic research related to China, in the following I would like to outline my personal impression concerning distinctive approaches adopted when analysing China's economy. One result of my looking through databases, indices and publication lists as preparation for this paper was that the impression I previously had about what defines good economic research on China has not really been challenged: basically, we can distinguish the following three approaches to quality research, though no approach is sufficient to guarantee high quality *per se*:

Approaches where the interest of research is primarily to use China as a means of testing or applying a theory

This approach is important if we concede that standard economic theory has been developed in western market economies and is often implicitly based on the assumption of the famous 'homo oeconomicus.' Testing theories by applying them to the Chinese example might help us to understand the importance of these underlying assumptions for the validity of the theory.

Unfortunately, the attempt to 'test' the theory is often equated with merely feeding Chinese statistical data into certain models and running it through computer programs. As the recent correction of statistical data in China has demonstrated (see Holz 2006), such an approach might be technically sophisticated, but still be misleading in terms of interpretation. Often, this variation of the approach merely leads to technical discussions about the data and possible corrections that have been necessary to make the data fit into the model.

The more interesting examples of this approach are based on data collected specially for the purpose of the analysis (i.e. Brandt/Li/Roberts 2005). Naturally, this always raises the question of how representative the results are and limits the possibilities of reproducing and controlling results. Two strategies used to

⁹ For example, the World Bank published 84 working papers related to China in the period from 2000 to 2006, the IMF produced 31 and the National Bureau of Economic Research (US) 48.

circumvent this question seem to be quite successful: either select a research design that is specific enough to allow for a limited data sample or co-operate with a Chinese research institution that has the possibility and manpower to collect data of a sufficient scope (i.e. Giles/Park/Zhang 2006).

Under certain conditions the first of these strategies can be successfully pursued by a single researcher, whereas the second strategy normally needs at least a network or working group of researchers and certainly benefits if it is initiated by a powerful research organization.

Approaches that try to solve certain 'riddles' about China's economy by looking beneath the surface

This approach, which a German colleague once called the 'Trüffelschwein-Methode' (truffle pig method), is strongly related to the impression that the official versions of Chinese reality as propagated by Chinese media and statistics often only partly reflect the truth. To really understand China's economic phenomena, it is necessary to lift a veil first, be it by analysing and dissecting statistical data and data-compilation processes (i.e. Holz 2005) or by analysing the specific institutional environment and arrangements that determine economic behaviour and economic policy outcomes (i.e. Pearson 2005). Some people might argue that this approach is losing its importance because we have access to more and more information about China. I do not think so personally. Not only is propaganda and control of information dissemination still in practice, but theory and practice indicate that informal rules are important to understand the underlying logic of economic systems in general and for China in particular, I presume.

As far as China is concerned, although this kind of analysis can be conducted by a single person or small research team, the challenge facing researchers is how they can remain connected to the scientific community associated with their discipline, i.e. not become a 'frog in the well' that only knows about the Chinese part of the sky (*zuo jing guan tian*). Thus it would often be helpful to compare the results of such in-depth analyses with other country studies. Again, this latter strategy is difficult to achieve by a single researcher and thus might well benefit from 'scale economies' of research done by a group of researchers or within a larger research institution.

Approaches that combine the two approaches described above

Successfully combining the two approaches described above is very difficult to achieve, yet it may be the most promising thing to do. There are some excellent examples of large research institutions (i.e. Shahid/Kaoru/Perkins 2006) as well as individual researchers who have combined a theoretical approach with in-depth empirical analysis (e.g. Steinfeld 1998). In the latter case, at least, this approach generally takes some time to be achieved.

Based on such in-depth analysis, another variety of combining theory and empirical research can evolve: if we have relatively clear insights into rules and incentives in China, then it is possible to apply theoretical models to understand policy outcomes better (e.g. Yang 2005).

The combination of in-depth analysis and theory will possibly help to achieve what economists in general dream about: contributing to the development of economic theory in a way that allows for understanding real-world economic phenomena better than before. Given China's historical and cultural background as well as the challenge resulting from China's economic miracle, the chances of taking economic theory a step forward by integrating the Chinese experience ought to be good.

To return to the conflict described at the beginning, the first of the three approaches characterized in Part 2 is clearly biased towards the *l'art pour l'art* understanding of economic research, while the second approach is biased towards problem-solving. The synthesis of both, difficult as it is to achieve, would be expedient. It would allow researchers to meet the demands of both 'lovers' – the peers and the (informed) public. It should be stressed, though, that this combination of strong methodological and theoretical foundations with in-depth knowledge of the Chinese realities, sound data and the possibility of applying a comparative perspective that produces theoretical insights as well as findings that are practically relevant not only calls for capable researchers, but also for certain conditions to be met in order to facilitate good research, viz. access to financial resources, technical support, sufficient time to concentrate on research and long-term research activities.

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