

## The impact of SSCI and SCI on Taiwan's academy: an outcry for fair play

Chuing Prudence Chou · Hsiao Fang Lin ·  
Yun-ju Chiu

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**Abstract** The increasing importance of the competition in global university ranking has resulted in a paradigm shift in academic governance in East Asia. Many governments have introduced different strategies for benchmarking their leading universities to facilitate global competitiveness and international visibility. A major trend in the changing university governance is the emergence of a regulatory evaluation scheme for faculty research productivity, reflected by the striking features of the recent changing academic profile of publication norms and forms that go beyond the territories of nation-states in the East and West. With the expansion of the Taiwanese higher education system in the last two decades, the maintenance of quality to meet the requirements for international competitiveness has become a key concern for policy makers. Since 2005,

the Ministry of Education has introduced a series of university governance policies to enhance academic excellence in universities and established a formal university evaluation policy to improve the competitiveness and international visibility of Taiwanese universities. In so doing, the government has legalized a clear link between evaluation results and public funding allocation. Research performance is assessed in terms of the number of articles published in journals indexed by the Science Citation Index (SCI), the Social Science Citation Index (SSCI), and the Arts and Humanities Citation Index and in terms of citation rates and associated factors. Therefore, evaluation has taken on a highly quantitative dimension. Despite the efforts of concerned parties to encourage academic excellence, the abovementioned quantitative evaluation indicators have resulted in bitter complaints from the humanities and social sciences, whose research accomplishments are devalued and ignored by the current quantitative indicators. In this paper, the authors describe the recent petition for collective action initiated by university faculty to protest the privileging of SSCI and SCI publications as critical indicators for academic performance regardless of faculty discipline and specialization. The article concludes its argument with a group petition calling for more diverse and reliable indicators in recognizing the research of different natures and disciplines while creating culturally responsive evaluation criteria for social sciences and humanities in the Taiwanese academe. The article not only sheds light on academic evaluation literature, especially on the uncertain paradox of globalization and market economy, but also proposes alternatives to the evaluation system for humanities and social sciences in higher education.

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In December 2010, a group of academics invited both national and international scholars and students in Taiwan to sign a collectively formulated proposal entitled “STOP Using the Social Science Citation Index as the Best Indicator for Academic Research and Related Public Policy.” The proposal received 2,247 supporters by April 2012. Two months later, the new minister of education and the new minister of the National Science Council recognized the SSCI issue and changed the “Evaluation Indicator First” policy. The following paper is a demonstration of how SSCI and SCI have affected the academia of Taiwan in its pursuit of world-class universities and the internationalization of higher education at the expense of social equity and cultural heritage.

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C. P. Chou (✉)  
National Cheng Chi University, Taipei City, Taiwan  
e-mail: iaeczpc@nccu.edu.tw

H. F. Lin  
Ming Dao University, Changhua, Taiwan

Y. Chiu  
Chang Gung University, Kaohsiung, Taiwan

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## Introduction: changing roles of academic research in times of uncertainty

As the world transforms into a knowledge-based economy and as unprecedented globalization forces affect all walks of life, the quality improvement of higher education has become a national priority to attain international competitiveness. On the one hand, the Internet and scientific community have created a new academic world filled with more accessible and transparent information; on the other, the increasing inequality of educational resources as a result of university expansion has aroused social controversies in many developing societies (Altbach 2004; Yang 2001). Globalization has also transformed public universities into private commodities. Many nations have attempted to restructure their public higher education systems to enhance their institutional autonomy by assuming more responsibilities as individual entities. As a result of governmental deregulation and liberalization, individual universities are required to become more competitive and accountable according to neoliberal ideology, which infuses market mechanism into the educational system (Giroux 2002; Dale 2001). Moreover, universities are mandated to respond by changing their norms, format, operation, management, and even the teaching–learning mission to meet the new global challenges of benchmarking and standardization. Policy makers across the world have also started re-evaluating university budget schemes to promote academic efficiency and increase international competitiveness (Chou 2008).

Along with the abovementioned challenges of higher education, universities in Taiwan have undergone profound transformation since the country enforced governmental restructuring policies after embracing the global neoliberal ideology in the late 1980s. In this paper, the authors explore such issues as the new norms of Taiwanese academic research, the rationale of such changing profiles, major controversies over the response to the new academic standards, and suggestions for more effective research criteria in the Taiwanese academe under the influence of global market economies.

## Social context of Taiwanese higher education

Since the mid-1990s, the Taiwanese higher education system has undergone transformation along with decentralization and marketization (Chou and Ching 2012; Mok 2000; Yang 2001). The Universities Law, as amended in 1994, transformed universities from being under the traditional centralized control of the Ministry of Education (MOE) into more democratic campus environments, reducing governmental academic and administrative

intervention in universities and granting them more autonomy in their admissions, staffing, curriculum, and tuition policies. As the Taiwanese government responded to public demands for “more high schools and universities” and to the pressure for advancement, the number of university students increased to 1.12 million by 2008 (with per capita income of about \$17,000), a 6.5-fold increase in the number in 1984. The number of universities increased to 148 (51 public and 97 private), with an additional 15 vocational/technical colleges for a total of 163. By 2009, the total number of college and university students (including undergraduates, vocational/technical students, and graduate students) reached 1.337 million or 5.8 % of the entire population of Taiwan (about 23 million) (MOE 2011; Chou and Ching 2012). Although the government relaxed its control over the universities, it introduced market competition mechanisms that accelerated the unequal distribution of resources among public and private institutions, causing increased social stratification in higher education institutions (HEIs) and faculty, among others (Mok 2003). This sudden increase in the number of HEIs also generated competition among universities and colleges for internationalization.

The rationale behind the scenario stems from the precedence given by the MOE to university internationalization not only in terms of public resource allocation but also of the facilitation of higher education reform policies, namely, through a call for first-class universities and the evaluation of HEIs by the Higher Education Evaluation and Accreditation Council of Taiwan. For example, in 2003, the MOE adopted international publication indicators, such as the Social Science Citation Index (SSCI), the Science Citation Index (SCI), and the Engineering Index (EI), as the evaluation standards for academic performance. The SSCI, SCI, and EI are citation index databases owned by Thomson Reuters, a for-profit private company in the United States. These standards have long been recognized by major English-speaking universities in Australia, Canada, the United States, the United Kingdom, and New Zealand, especially by their science and engineering departments. By promoting these standards, Taiwanese HEIs can enhance their quality and competitiveness. The primary performance evaluation process involves counting the actual number of faculty publications in the three databases to determine the final ranking of each college and university. The academic faculty members of Taiwanese HEIs are now under great pressure to publish internationally to acquire SSCI, SCI, and EI records for the sake of promotion and accreditation. Moreover, in 2005, the MOE launched the Creating Top-notch Universities with NT\$50 Billion over Five Years Program (i.e., the Five year fifty billion Plan; approximately US\$1.56 billion). Originally named Plan to Develop First-class Universities and Top-

level Research Centers, with the goal of enhancing the competitiveness of Taiwanese universities, this project has been sponsored by the MOE for the second time since 2011 (Chang and Ho 2007). These two programs, based on an extremely competitive scheme, aim to allocate funds and resources to selected leading universities, including National Taiwan University (NTU), which offers more natural science courses than humanities and social science courses. Consequently, excluding the social science-oriented National Chengchi University (NCCU), which receives the least amount of funding; these select universities have rich research facilities and financial assistance in an era of public budget constraints in Taiwan. In an attempt to increase the global visibility and academic network of universities, the MOE launched a series of reform schemes by increasing monetary incentives and resource relocation based on so-called “objective” and “competitive” academic outputs, such as research publication in the SSCI, SCI, EI, and Arts and Humanities Citation Index (A&HCI). The number of papers published in these databases is the standard assessment criterion for research performance.

Since 2005, a series of university evaluations have been conducted against a criterion largely based on quantitative measures. For the first few years, academic research performance was assessed mainly in terms of the number of articles published in the abovementioned indexed journals, citation rates, and associated factors, for public funding and ranking (Chang et al. 2009).

Nevertheless, these educational policies have led to a debate on whether performance indicators overly emphasize global standards and whether international benchmarks are dominated by Western (particularly, American) tradition and practice because increasingly more Taiwanese research publications are geared toward publication rather than public benefit (Mok and Tan 2004; Lai 2004). In other words, these assessment standards have led Taiwanese scholars to focus on publishing in international journals. Academics prefer journals published in English instead of Chinese and choose subjects preferred by international journals rather than those addressing local needs (Chen and Qian 2004). As a direct response to these new policies, NCCU and other Taiwanese HEIs set up administrative offices/centers fully devoted to the development of selected key subject areas and to the promotion of quality research. However, despite the best efforts of concerned parties to encourage academic excellence, the highly quantitative evaluation indicators have had negative effects. For instance, publication expectations are not uniform across all disciplines. Moreover, the distinctive characteristics of particular academic subjects are largely ignored, and the staff of certain departments who feel that they are being subjected to unfair competition have

complained. The goal of such evaluation is to improve research quality; however, the nature of the subject and the effect of the social and cultural context must also be considered (IREG 2010). In the evaluation of scholarship in terms of SSCI and SCI academic publication, more than a single set of standards should be applied to highlight the strengths and weaknesses of published scholarly work.

### What changed the publication norm?

Globalization represents an increased demand from students, employers, and academics for indicators of the international standing of universities (Williams and Dyke 2004). In the widely cited yet controversial ranking reference published by Shanghai Jiao Tong University, the indicators of research quality, namely, articles published in the natural sciences and in the SCI Expanded and SSCI, have a weight of 20 % (Academic Ranking of World Universities 2007). In other words, scholars tend to equate the best research products with studies published in the natural sciences and indexed in the SCI and SSCI, which are products of Thomson Reuters. Similarly, in “Asia’s Best Universities” of *Asia Week*, one important indicator of research performance is citations in academic journals tracked by the Journal Citation Index (*Asia Week*, n.d.). Citation data from the Essential Science Indicators of Thomson Reuters are also used in the World University Rankings of *Times Higher Education* in the United Kingdom.

Despite the popularity of the indexes, Florida State University (2007) argues that citation indexes are only for bibliographic purposes, allowing users to trace research from an article by searching for subsequently cited articles. These databases are presented mostly by bibliometrics, a research method commonly used in library and information science. Researchers who adopt bibliometric methods tend to evaluate and determine the influence and reputation of a single author or the relationship between two or more authors based on publications within a given field or body of the literature. The SCI, SSCI, EI, and A&HCI are some of the most commonly used bibliometric research tools (Palmquist 2001). Although citation indexes are mere tools for information recovery, they are also important, productive, and unique (Garfield 1994a). For example, the SSCI and other citation indexes can also be used to evaluate and rank the quality of journals (Garfield 1972, 1994b).

These indexes can also reveal citations of a particular researcher and the influence of the work of such researcher on the global research community by determining whether a theory has been confirmed, changed, or improved. These indexes also enable researchers to trace and verify topics of interest throughout the years of research literature (Thomson 2008).

Despite the bibliographic purpose of citation indexes, university administrators and public funding agencies still employ them when hiring, promoting, and funding faculty (Kokko and Sutherland 1999; Bauer and Bakkalbasi 2005). Consequently, increasingly more people remain skeptical about the use of these tools to evaluate research performance (Ackermann 2001). According to the founder of Thomson Reuters (Garfield 1994b), a more reliable evaluation system should involve actually reading each article for its quality, although the problem of judgment between peer reviewers then arises. Although citation criteria can be validly used as assessment measures of the impact of scientific scholarship (Lawani and Bayer 1983), some studies still contend that International Statistical Institute (ISI) citation indexes are far from objective that the influence of ISI journals is not reliable, and that the word “global” stretches the truth about the master journal list (Cruz 2007).

Bauer and Bakkalbasi (2005) also observe that ISI citation indexes offer comprehensive coverage of past research, although they are not as useful as Google Scholar in terms of specialized subject areas.

### Why does English prevail in academic publications?

English is regarded as the world’s most commonly used language for communication; therefore, scholars inevitably tend to publish their research articles in English to gain international recognition and networking. The use of English as the medium of academic writing also brings many problems to countries where English is not a first language (Paasi 2005), especially in the humanities and social sciences (Archambault et al. 2006). In the humanities and social sciences, scholars examine subjects concerned more about local culture and social issues based on local needs and thus typically use language most appropriate to their local readers.

Journal articles in the SSCI, SCIE, A&HCI, and EI are written mostly in English. Among the 96 articles listed in the sociology section of the SSCI, 45 are from the United States, 27 from the United Kingdom, 4 from Germany, and 2 from France, which are all written in English. Such statistics have led fewer non-English researchers in the humanities and social sciences to submit their articles to journals ranked by the SSCI, SCIE, A&HCI, and EI because of the language barrier and cultural irrelevancy.

According to Ye (2004), the social sciences and humanities, whose major forms of publication are books rather than journal articles, are concerned mostly with local or national issues. These research fields also have historical and cultural boundaries. Consequently, the articles are difficult to translate into English to break cultural barriers and address social concerns.

### Impact of SSCI on the publication landscape

With the MOE’s adoption of the SSCI, SCI, and EI as the gold standard for the research quality of Taiwanese HEIs, the primary evaluation process has involved the tallying of the actual number of faculty publications in these citation index databases and the evaluation of their impact to determine the final ranking of all colleges and universities.

Upon the release of the first-round results in 2005, the media reported that some traditionally renowned public research universities had “fallen behind.” For example, NCCU has been renowned for its cultivation of national leaders and top researchers in the social sciences over the years, but now it ranks 48th (out of 145) according to the Thomson Reuters SSCI standard. Similarly, most teacher universities/colleges that have long been the base of rich cultural knowledge, expertise, and resources necessary for the training of K–12 teachers now rank near the bottom of the scale (Chou and Ching 2012).

Critics across the Taiwanese academia and society have expressed their dissent, arguing that citation index databases are inappropriate and ineffective evaluation mechanisms for diversified knowledge production and dissemination that are valuable in social science and humanities curricula. The databases designed by Thomson Reuters can serve only as references for science, technology, engineering, and mathematics (STEM) journals published mostly in the United States. However, a broad spectrum of disciplinary knowledge addressing cultural issues, educational equity, and social justice, which are equally valued in American academia, is ignored in these databases. Citation numbers and impact factors in these United States-based databases cannot represent the research quality and social impact of Taiwanese scholars, researchers, and activists who are deeply devoted to investigating knowledge across the social sciences and the humanities (Gingrasb 2006).

Even in the developed world, the number of publications listed in these citation databases is not commonly used as the baseline criterion for university accountability and faculty research performance. In fact, the one-size-fits-all approach of basing the academic evaluations of a nation on the number of publications in Thomson Reuters databases has the potential to highly skew the substance of contributions from local public intellectuals (and their institutions) who dedicate themselves to crossing disciplinary boundaries for new knowledge that can best solve local issues.

Moreover, a significant problem is that the SSCI does not yet include most American and Taiwanese top-tier research and scholarly journals in such fields as public administration and policy, law, and science education, which are equally important to fostering academic learning

and cross-cultural exchange of knowledge necessary to advance democratic public life.<sup>1</sup>

Scholars continue to assert that the number of scholarly publications in these databases can serve only as a piecemeal approach to understanding how scholars have contributed to academic discourse in those journals listed in Thomson Reuters databases. Thus, a serious problem exists when the governing class of a nation bases its evaluation and funding mechanisms on these three databases to judge the quality of multifaceted disciplinary knowledge, which is pivotal to informing and enriching the production of knowledge.

According to Lai (2004), the emphasis on SSCI, SCI, and A&HCI publication numbers has two negative effects. First, colleges and universities compete in recruiting scholars with many publications, thus creating a false appearance of high academic achievement. Second, universities create policies encouraging the faculty to contribute to English-language journals; therefore, professors who publish in Chinese may be regarded as second-tier scholars. Huang (2004) notes that the creation of a Taiwanese SSCI is a good solution to the problem created by the emphasis on the English-language SSCI in the social sciences. Furthermore, publication numbers should not be the only standard by which to evaluate higher education.

Chen and Qian (2004) observe that the use of such publication numbers as a global academic standard has had unexpected consequences in Taiwan: English-language publications have become more important than their Chinese-language counterparts; mainstream international issues, instead of local–regional context issues, are highlighted; publishing in a foreign English-language journal has become a more prestigious accomplishment than that in a local–regional journal; and scholarly books, translated books, and textbooks are devalued and downgraded compared with journal articles. These consequences suggest that the language used (i.e., English) has become more important than the quality of the scholarly paper and that journal articles are more valued than any other form of publication.

### Current publication performance of Taiwan

The recent higher education reform efforts of the MOE have led to the dramatic growth in SSCI-, SCI-, and EI-indexed publications. For example, NTU “officially”

<sup>1</sup> According to the Washington and Lee Law Review Rankings (<http://lawlib.wlu.edu/lj>), the SSCI includes only 20 of the top 50 law review journals. The database contains only a limited selection of legal journals and law reviews. Prestigious journals such as the *Harvard Journal of Law and Technology* and those from Yale University, Columbia University, and UC Berkeley are not yet included in the SSCI.

ranked in the top 100 world-class universities in the late 2000s. Policy makers also pride themselves on the following achievements: (1) Taiwanese secondary students continue to perform well in international comparison assessments of STEM subjects; (2) STEM education has ranked Taiwan in the top 10 publishers of scientific papers in the world; and (3) the citation of Taiwanese STEM papers also ranks among the top five in the world (Chou and Ching 2012).

Within the last decade, the number of Taiwanese journal publications has also increased. However, the number of international citations does not follow this trend, as citations per publication in Taiwan declined from 1996 to 2009. According to Thomson Reuter’s ISI Web of Science and Elsevier’s Scopus (SCImago 2007; Thomson 2010), the number of publications from Taiwan has increased, but the average number of citations per publication decreased from 1996 to 2009. In contrast to the many utility patents of Taiwan (279.25/million people) (Dutta and Mia 2010), its scientific publications are undercited.

Another trade-off of this high investment on publications in science and technology is that the social sciences and humanities suffer, as publications in these fields, take much longer to develop compared with those in the natural sciences. Nowadays, the Taiwanese academia, not only in the sciences but also in the social sciences, is influenced heavily by the Western (American, in particular) model in terms of paradigm replication and borrowing to pursue a higher acceptance and publication rate.

Moreover, college teaching is now giving way to the higher priority of published research in the SSCI, SCI, and EI. Teacher education and preparation programs are no longer the priority of STEM faculty and even that at teachers’ colleges and universities. The faculty members of technological and industrial institutes also spend more time in research than in bringing out the best of the potential contributions of their students to the practical world. The severity of this situation has recently intensified with the emergence of a vicious cycle related to research productivity, teacher education and preparation, and the overall quality of K-12 STEM instruction (Hou 2012).

### Call for a paradigm shift and collective action (The Manifesto)

Appeals have been made for a critical assessment of academic contributions from SSCI-, SCI-, and EI-indexed publications for the betterment of local economies and communities (Yu 2010). These issues have aroused heated controversies often reaching the local media.

Consequently, in a review of the limitations of mainstream Western psychology, Hwang (2012), a renowned Taiwanese

scholar argues that indigenous/local issues should be highlighted to better understand the global community when promoting multiculturalism. Various types of value conflicts exist between Confucian group-oriented heritage and Western individualism. Moreover, the cultural traditions of Confucianism, Taoism, and Buddhism among the Chinese have affected the psychometric approach to handling collective conflict. As a result, the call for academics to endeavor to shift the paradigm by introducing local theories and models suited to Taiwanese features is under way. Another effort is being encouraged to establish a library citation database in Chinese to reduce the hegemony of English databases.

A group of Taiwanese professors initiated a collective action to file the following petitions to prevent government agencies and academic research associations from overemphasizing the SSCI, SCI, and EI as best practices for evaluating academic research and public policy ([www.bgo.tw](http://www.bgo.tw)):

1. Stop using the SSCI as the major criteria for evaluation and funding purposes

We urge both the MOE and the National Science Council (NSC) to stop using the SSCI, or any other index citation databases, as the major criteria for evaluating the quality of academic research in the social sciences and the humanities in higher education institutions. Moreover, the SSCI, or any other imported index citation database, should not serve as the baseline criterion for making major funding decisions related to academic research in the social sciences and the humanities.

2. Recognize the great variety of academic research practices in the social sciences and the humanities

We urge the government to include book publications and other formats of scholarly contribution in the evaluation criteria for the social sciences and the humanities and recognize the social impact of scholars in these areas of research.

3. Establish institutional profiles that recognize local visions and individual differences across disciplines

We urge the MOE to recognize both the horizontal and vertical diversities among Taiwanese higher education institutions and the epistemological diversity within and among natural sciences, social sciences, and humanities. Institution profiles and evaluation criteria should address the ecological complexities of these differences, especially the seemingly divergent educational functions between research universities and institutes of technology.

4. Foster a culture of social responsibility and academic professionalism

We urge the MOE to recognize intellectual responsibility in producing culturally responsive research and

academic practice. Accordingly, the evaluation process should encompass mentoring programs and peer-review mechanisms that also value academic research in responding to local needs.

5. Create culturally responsive evaluation criteria for the social sciences and the humanities

We urge the MOE and the NSC to reassess the validity and reliability of the current evaluation criteria (which have appeared scientifically thin and socially irresponsible) and to expand the dimensionalities of citation indexes, as shown in the following section, as an alternative means of administering comprehensive evaluations of programs in the social sciences and the humanities: (1) journals, (2) books, (3) conference papers, (4) research projects, (5) reviews, (6) prestige scores for serving on national and/or international professional committees, (7) online publications/citations, and (8) other professional experience.

Since its launch in December 2010, the petition has been signed by more than 2,200 academic faculty members, staff, and students across all disciplines. Surprisingly, around 10 % of the petitioners who disagree with the SSCI- and SCI-driven policy come from the field of natural science. Currently, the group continues its lobbying efforts by holding press conferences, sending appeal e-mails to government officials and lawmakers, and visiting key decision makers in the MOE and NSC to demand for change.

### Is there a remedy to the SSCI syndrome of Taiwan?

In his book *The Two Cultures*, British scientist Snow (1959) claims that a division exists between the arts and the natural sciences. Thus, during a university faculty dinner, science and art professors may discuss their research specialties without any connection between them whatsoever. To date, two barriers have existed in Taiwanese society: the University of Arts and the Departments of Science are still entirely dissimilar, although the Department of Science and Technology has traditionally received more resources because of its direct link to development.

In recent years in East Asia, including Taiwan, globalization, standardization, and marketization effects have encouraged a bandwagon movement toward scientific measurement to represent domain, institution, and even faculty effectiveness and productivity. However, the university evaluation system uses and misuses its own system, whether for the arts or for the sciences, measuring faculty members against the SSCI, SCI, and A&HCI and against the number of articles listed in international periodical databases or intellectual property and technology transfer certificates, which could be as good as they could be bad indicators for assessing universities. The MOE, NSC, and

**Table 1** Suggestions for the evaluation criteria for the social sciences and humanities

Index dimensions	Contents
1. Journals	1-1 The number of peer-reviewed journal articles published, nationally and/or internationally <sup>a</sup>
	1-2 The number of serving on journal editorial boards or committees, nationally and/or internationally
	1-3 The number of non-peer-reviewed journal articles published, nationally and/or internationally
	1-4 The number of papers published within one's own home institution
2. Books	2-1 The number of peer-reviewed books published, nationally and/or internationally <sup>b</sup>
	2-2 The number of non-peer-reviewed books published, nationally and/or internationally
	2-3 The number of pieces of creative writing published, academically and/or non-academically
	2-4 The number of books and/or book chapters published and the percentage of contributions made
	2-5 The number of textbooks and/or textbook chapters and the percentage of contributions made
3. Conferences	3-1 The number of papers presented at professional conferences, nationally and/or internationally
	3-2 The number of paper published based on national conference presentations
	3-3 The number of papers published based on international conference presentations
	3-4 Whether serving on the conference executive committees and/or the percentage of contribution to editing the conference publications (i.e., proceedings, newsletters, etc.).
4. Research projects	4-1 Whether serving as the principal investigator of a national research project (i.e., those sponsored by the MOE or NSC)
	4-2 Whether serving as the principal investigator of an international research project
	4-3 The number of research projects sponsored by professional associations and academic institutions, nationally and/or internationally
	4-4 The number of research projects sponsored by government agencies and/or other types of social organizations (other than those listed above), nationally and/or internationally
5. Reviews	5-1 The number of book reviews published
	5-2 The number of textbook reviews published
	5-3 The number of op-ed articles and/or commentary articles published in national and/or international newspapers and magazines
6. Prestige scores	6-1 The number of serving in national and/or international professional committees
	6-2 The number of awards and other forms of recognition received from international organizations
	6-3 The number of awards and other forms of recognition received from national organizations
	6-4 The number of leading professional organizations
	6-5 The number of invited speeches, performances, and/or expositions
	6-6 Whether serving as a visiting scholar at an internationally recognized university
	6-7 Whether serving as a chair professor or visiting professor at a nationally or internationally recognized university
7. Online publications/citations	7-1 The number of published papers, and/or editorial/commentary articles in Google Scholar citation counts
	7-2 The number of papers in the university archives
	7-3 The number of papers in the Airtibrary (i.e., CEPS online journals and CETD publications) and the number of citations indicated by other authors
8. Others	8-1 Whether serving in academic curricular development committees
	8-2 The number of graduate advisees
	8-3 The career development and outcomes of graduate advisees
	8-4 Whether serving as the principal investigator of a governmental project

Source Petition: "STOP Using the Social Science Citation Index (SSCI) as the Best Practice for Academic Research and Public Policy." Available online at: <http://memo.cgu.edu.tw/yun-ju/CGUWeb/NCCUEdu2010/HomeAgainstSSCI.htm>

<sup>a</sup> In the case of education, SSCI has neglected, among others, the Bibliography of Asian Studies Online, Current Index to Journal in Education, Education Resources Information Center Database, Educational Administration Abstracts, Scopus, and Wilson Education Index

<sup>b</sup> For example, Project MUSE serves as a better venue for evaluating scholarly contributions; provide full-text access to current content from over 400 titles representing nearly 100 not-for-profit publishers. As collaboration between the participating publishers and Johns Hopkins University libraries, MUSE also includes a wider range of publications from other prestigious worldwide publishers and professional associations, such as Oxford University Press, Duke University Press, and University of Texas Press, which can serve as a valuable basis for understanding scholarly participation in public life

other government departments have aligned with the “pursuit of excellence” program, the “top universities” program, and the policies of research grants to accelerate internal synchronization with the global academic community of universities.

All these factors promote the wave of publications in international journals oriented to research, resulting in the following trends:

1. The need to write papers in English
2. International issues being emphasized as the mainstream of publication at the expense of local problems
3. Giving more importance to publishing journal articles in English-language periodicals
4. Unequal allocation of resources between the sciences and the humanities because differences in the nature of their research and productivity are overlooked

These trends raise many questions and highlight a misleading faith in creating the so-called global academic standards. For instance, do research papers published in an international database as an evaluation criterion truly enhance academic quality in Taiwan? As noted previously, significant differences exist between art and science models and approaches, and most of the academic community in science and engineering supports the evaluation according to the abovementioned system. On average, nearly 50 % of natural science journals are included in ISI citation databases, but the ratio is less than 20 % of that of the social sciences and humanities. Furthermore, conducting research in the sciences and the humanities is not compatible (Chou and Ching 2012). A fairer and more effective research evaluation paradigm is in great demand in Taiwan so that an alternative to the SSCI and SCI can be found (Table 1).

## Conclusion

The growing competition of global university ranking exercises has changed academic governance by introducing external university evaluation to East Asia. Many governments have launched different policies and funding plans to benchmark their leading universities for global competition (Shin and Harman 2009). With the expansion of the Taiwanese higher education system in the last two decades, the maintenance of quality to meet the requirement of international competitiveness has attracted great attention for policy making. Since 2005, the Ministry of Education has initiated a series of university governance policies, including a formal university evaluation scheme connecting evaluation results and public funding allocation, to upgrade Taiwanese universities to world-class standards. Consequently, evaluation has taken on a highly quantitative

dimension. Faculty research performance has been assessed in terms of the number of articles published in SCI-, SSCI-, and A&HCI-indexed journals as well as of citation rates and associated impact factors. Despite the efforts of concerned parties to encourage academic excellence, the quantitative evaluation indicators have aroused great social debates from the humanities and social sciences, whose research accomplishments are overlooked by the current paper-driven orientation. The present paper is an attempt to describe the response of Taiwanese higher education systems and their counterparts to the unprecedented challenges caused by globalization and neoliberal ideology in terms of changing university governance at a time of uncertainty. The quest for world-class universities and international visibility has transformed Taiwanese higher education institutions into powerhouses for research publication more quantifiably, regardless of disciplinary differences between the sciences and humanities. This paper argues that globalization has changed universities from public goods to private commodities and marketable values. Collective action should be taken to increase social awareness and to challenge the legitimacy of the current evaluation policy in Taiwan to find better solutions and to properly tap into the academic production capacity of faculty in times of global uncertainty. The study concludes with suggestions for more effective research performance criteria in the Taiwanese academe under the influence of global market economies.

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