

The Road to Competitiveness: The Importance of Database Access at a Research University



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Annotation

The article highlights the place and significance of the information factor in ensuring and building up the international competitiveness of research-intensive universities. It examines current trends and dynamics of the publication activities of scholars in the sphere of economic research. With the aid of a correlation and regressive analysis, the significance of international cooperation for increasing the volume of the publications of researchers in renowned economic journals has been established. The necessity of the expansion of international cooperation between Ukrainian scholars-economists and their foreign colleagues and partners, for the purpose of increasing the competitiveness of Ukraine's research universities has been substantiated.

Key words: the competitiveness of a research university, publication activity, international cooperation in the research sphere, electronic sources of information.

Each year the Swiss business school IMD compiles a *World Competitiveness Yearbook* that ranks the relative competitiveness of economies among a group of fifty to sixty countries¹. The range of criteria upon which the ranking is based includes over 330 factors that reflect the economic performance, business and government efficiencies, and infrastructure conditions within each national economy. Within the subset of infrastructure conditions, numerous aspects of a country's educational system and scientific resources are acknowledged as important sources of economic competitiveness. Among the factors included here are the quality of university and management education, as well as the ability to create knowledge and transfer innovation between academia and business. From a quantitative perspective, the IMD report incorporates such metrics as per capita spending on education, the number of science degrees granted, and the number of scientific articles published. Other, more qualitative indicators, include the effectiveness of language skills, the production of high quality research, and the attractiveness of the environment for researchers.

In a parallel and more detailed manner, recent studies (World Bank 2002, Altbach and Salmi, 2011)^{2, 3} focus on the contributions made by research universities to social, economic, and political progress through the development of human capital, the creation of knowledge, and the generation of technology. For all countries, the ability to nurture and retain a capacity for innovation, along with a proficiency in the application and transfer of knowledge, are essential elements in constructing a productive,

¹ IMD. (2011). *World competitiveness yearbook*. Lausanne: IMD.

² World Bank. (2002). *Constructing knowledge societies: New challenges for tertiary education*. Washington DC: World Bank

³ Altbach, P. G., & Salmi, J. (2011). *The road to academic excellence: The making of world-class research universities*. Washington DC: World Bank.

flexible, and competitive economic environment. As a consequence, faced with the need to attract investment capital, developed and developing countries alike are placing increased emphasis on the enhancement of tertiary education in general and research universities in particular.

Ukraine is not exempt from these global forces. Of the 59 economies ranked by IMD in 2011, Ukraine ranks 57th on the competitiveness scale with a score of 51.45 out of 100 possible points. Ukraine's low competitiveness score correlates with the qualitative and quantitative measures of its educational resources and scientific results. The per capita publication rate for Ukraine (46 articles per million citizens) is below the average found in Western Europe (569), North America (534), Japan (450), Eastern Europe (90), and Middle East (61), but above that in Asia Pacific (39), South America (31), and Africa (9). As a result, the evidence suggests that Ukrainian institutions of higher education need to improve the environment for academic research in ways that better replicate international standards and contribute to national development.

The search for improvement extends beyond the engineering and the hard sciences to include economic and management disciplines. As Ukraine's preeminent research and teaching institution in the areas of economics, finance, business, management, and law, the Kyiv National Economic University named after Vadym Hetman (KNEU) plays an influential role in the development of economics-related research towards international standards. In this regard, KNEU mission recognizes a responsibility to «contribute to the development of society by means of scientific research, the generation and the dissemination of new knowledge, and the training of competitive specialists and creative individuals». It is in the experience of other European universities in the area of economic research that KNEU might find a model to help Ukraine advance beyond its current low position in international competitiveness rankings. As illustrated below, the shift towards greater international collaboration—aided by greater access to world class electronic databases, journals, and reference materials—has enhanced the position of European authors in the global production and dissemination of economic thought. Efforts to embed research at KNEU into the wider European and global networks could produce similar results.

In the field of economics, academic research has for many years been dominated by authors residing at North American universities. (Cardoso, Guimaraes & Zimmermann, 2010) report the share of articles published in economics journals coming from North American authors at 66% in

1991 versus 24% for Western European authors, 3% for Asian authors, and less than 1% for African authors¹. By 2006, Western European economists had increased authorship in economic journals to 40% thereby closing the gap with their North American colleagues whose share declined to 45%. Although, the 2006 share for Asia increased to 9%, no increase was found for African authors. Despite the increase in authorship among a broad range of economics journals, there was markedly less change in the origination of authors among the top economics journals. For the most prestigious journals, North American economists' share of articles decreased slightly to 76% from 81% and Western European economists' share increased to 22% from 14% between 1991 and 2006.

The increased presence of Western European authors across a range of economics journals is a function both of the increased productivity of individual researchers and the increase in the number of recognized economics journals in which to publish. Between the period 1991-95 and 2002-06, Scandinavian countries have equaled or surpassed the US in the per capita number of articles published in economic journals. Despite experiencing significant growth in the per capita number of economics articles published between the two periods, the four largest EU economies remain below the US (40) level with Spain (20), Germany (16), France (13), and Italy (10) at less than half the US rate. A striking feature of the increased presence of Western European authors among the global presence of articles published is the greater prevalence of international collaboration among authors. Table 1 compares the percent share of articles from West European authors that involved international collaboration during 1991-96 relative to 2002-06. In all instances, economists at West European universities have expanded the proportion of their research devoted to international projects with the biggest increases recorded for economists from Denmark (128,3%), Netherlands (89%), UK (87,7%), and Germany (82,5%). American and Canadian economists have also increased the level of research across national borders (77,2% and 39,2% respectively) while Japanese authors generated a slight decline.

For articles published in the top economics journals during 2002–06 (last column in Table 1), the incidence of international collaboration during the 2002–06 period is even more pronounced. As economic research has become increasingly

¹ Cardoso, A. R., Guimaraes, P., & Zimmermann, K. F. (2010). Trends in economic research: An international perspective. *IZA Discussion Paper No. 4785*, Bonn: Institute for the Study of Labor.

Table 1

SHARE OF ARTICLES IN ECONOMIC JOURNALS INVOLVING INTERNATIONAL COLLABORATION BY COUNTRY OF AUTHOR

Country of Author	All Journals			Top Journals 2001—06 Average %
	1991—96 Average %	2001—06 Average %	% Change	
Austria	25,0	43,6	74,4	54,5
Belgium	42,9	56,7	32,2	92,0
Denmark	18,7	42,7	128,3	70,0
France	38,5	45,7	18,7	59,3
Germany	19,4	35,4	82,5	67,2
Italy	31,9	43,8	37,3	76,2
Netherlands	20,9	39,5	89,0	52,1
Norway	18,8	30,8	63,8	86,7
Spain	32,8	35,3	7,6	65,3
Sweden	20,2	29,5	46,0	55,6
Switzerland	33,1	46,6	40,8	77,8
UK	17,9	33,6	87,7	57,9
US	9,2	16,3	77,2	17,9
Canada	28,8	40,1	39,2	58,4
Japan	21,0	20,5	-2,4	39,4

collaborative in scope and international in scale, it is essential that the universities and researchers across the world integrate with global networks. The effect is especially pronounced for economists from smaller countries. Regression analysis in Table 2 shows that the share of articles involving international collaboration in both top journals and all journals is significant and inversely related to the population size of the country. Consequently, economists from smaller countries rely more on international cooperation to advance their research and achieve publication in recognized economics journals. For smaller countries like Ukraine, the results point to increased collaboration between economists across national boundaries as a way to contribute to the dynamism of economic research.

The increase in international collaboration among authors in countries big and small is no doubt the result of advancements in information and communication technology. Over the past 20 years, technological innovation and political reforms have enabled instantaneous communication between researchers across great distances, easier access to databases and journals

in electronic formats, the development of global research networks, and the spread of English as the lingua franca of economic discourse. Consequently, economists are more apt to come into contact with the work of their international colleagues and more able to pursue collaborative projects to advance common research interests. Salmi (2009) recognizes these effects and identifies three interconnected sources of success in developing and maintaining a top research university¹. In addition to maintaining a talented pool of faculty and students and implementing institutional governance that provides for flexibility and innovation, successful universities need to provide resources to conduct advanced research and build a rich learning environment. Not least of these resources is the availability of access to a relevant set of international research databases.

Like their European counterparts, it is crucial that Ukrainian universities like KNEU integrate into the wider international research network.

¹ Salmi, J., (2009). The challenge of establishing world-class universities. Washington DC: World Bank

Table 2

OLS RESULTS FOR INTERNATIONAL COLLABORATION IN ECONOMICS PUBLICATIONS RELATIVE TO COUNTRY SIZE

	All Journals n = 15		Top Journals n = 15	
	Parameter Estimate	t-stat	Parameter Estimate	t-stat
Constant	239,99	4,326	244,159	5,179
Population	-4,981	-3,471	-3,066	-4,197

During the author's visits to KNEU in 2010 and 2011, it became apparent that both faculty and students faced limited access to the standard research tools available to and expected by their international colleagues. A review of the electronic resources available to KNEU faculty and students reveals an eclectic set of electronic research resources that might not fit the mission of KNEU. With the objective of providing the

resources needed to conduct advanced research and foster a rich learning environment, Table 3 contains a partial list of electronic resources (journals, databases, references) commonly used in the economic sciences.

It is not possible, nor recommended, to acquire access to all these sources. Budgetary limits would preclude this for even the most endowed universities. However, some consideration could

Table 3

ELECTRONIC DATABASES

Database	Contents
ABI/INFORM	Scholarly articles in management, industry news, & company information
Alternative Press Index	Covers newspapers, magazines and periodicals relating to politics and economics
Business Source Complete	Full text coverage for over 1,120 business publications
Cairn	196 journals in humanities and social sciences full text (since 1999). The portal covers the following themes: Economics and management, law, history and geography, general interest, letters and linguistics, psychology, education, political science, sociology and society, sport and society, philosophy and information science
EBSCO HOST Research Databases	Bibliographic and full-text databases in the humanities and social sciences, medicine and health
EconLit	Journals, books, and working papers on economics
EIU Market Indicators & Forecasts	For more than 60 countries and regional groupings monitors economic indicators, including indicators of infrastructure, consumption, financial sector workforce demographics, health, political structure, etc
ESDS — European statistics	Information about the statistics provided on its website Statistical Office . Users have access through hyperlinks to the Eurostat statistical databases , to selected publications by subject areas and other useful resources . Freely available
EZB Elektronische Zeitschriftenbibliothek — Electronic Journal Library	A project of the University Library of Regensburg, which aims to create a list of full text scientific and scholarly electronic journals freely accessible online and available by subscription, through licensing and consortia

Continuation Table 3

Database	Contents
FirstSearch	An OCLC collection of scholarly journals
Global Market Information Database	Integrates the entire data base of Euromonitor into a web portal with a searchable data and their aggregation for: statistical information on countries, different sectors of the market, lifestyle indicators (macro / micro indicators), analysis of individual companies
JSTOR	Inter-disciplinary scholarly content. Narrow by discipline, or search across the sciences and humanities for a broader scope
Kompass World	1.8 million companies in more than 72 countries and 23 million products and services referenced
Lexis-Nexis Academic Universe	Full-text articles, company, industry, and financial information
New Palgrave Dictionary of Economics Online	Online economic dictionary contains full texts of eight volumes of the printed version of the dictionary of economic terms are thematically arranged by JEL classification
Oxford Handbooks Online: Business and Management	27 thematic guides focusing on: business, business administration, business groups, human resources management, information and communication technology, innovation, international business, etc
Oxford Scholarship Online: Business and Management	Collection of electronic books from leading authors of business and management (history, administration, knowledge management, human resources, information technology, innovation, political economy, etc.)
Oxford Scholarship Online: Economics and Finance	Collection of electronic books from leading authors in the field of economics and finance (history, international trade, macro and microeconomics, etc.)
ProQuest	All purpose database. Search for information on a broad range of subjects. Science, Humanities, Social Sciences, etc.
SCOPUS	Bibliographic and citation database of scientific literature, mainly oriented to European scientific production
World Bank Data Catalog	Free access to all data collected in the World Bank Open Data Initiative, including the full contents of the World Development Indicators (WDI) and Global Development Finance (GDF) databases. Use the tabs at the top to view data by country, topic, indicator, and more.

be made to making a well considered mix of these electronic resources accessible to KNEU faculty and students. This is especially important in light of the increased weight given to faculty research productivity and KNEU's efforts to be an effective consulting resource for external business, governmental, non-profit partners. Without such access, research at KNEU will be hindered by a lack of awareness of scholarly advances made abroad. Without knowledge of the work of their

international colleagues, KNEU researchers will be precluded from establishing the collaborative contacts and research networks that have so successfully contributed to improving the dynamism and relevance of economic research in other European countries. Simply stated, KNEU will be less able to continue its development as a world class research and teaching university in line with its mission and its commitment to advancing the competitiveness of Ukraine.