

**INTERNATIONAL-JOURNAL-ARTICLE PRODUCTIVITY OF
ECONOMICS DEPARTMENTS IN KOREA :
1970-1994**

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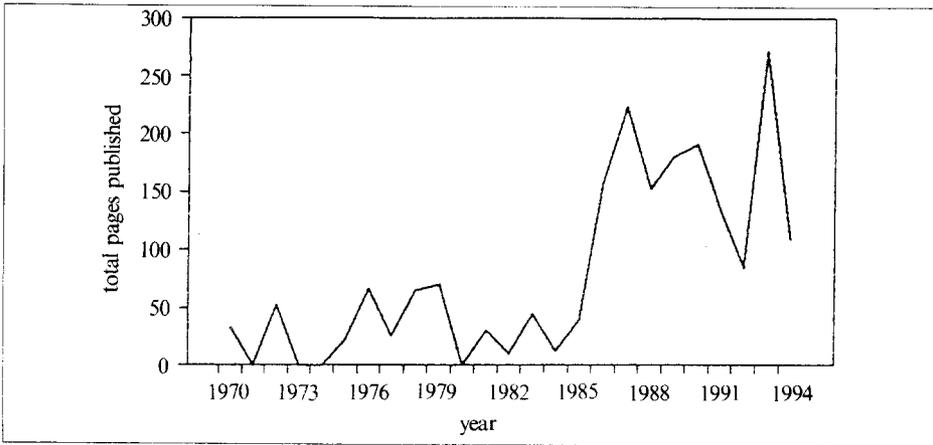
I. INTRODUCTION

Until recently, the beneficial effects of quality teaching for undergraduate students were taken for granted. It was commonly assumed that a good teacher who just teaches trains well students' intellect and hence must be good for all undergraduate students. The Korean government and universities also recognize that teaching is important in the development of higher education. Indeed, a much larger portion of emphasis has been attributed to teaching. However, some economists have questioned the desirability of sustaining teaching schools for all Korean universities, since some of the universities could be led to research institutions in Korea. Specifically, Ph.D granting universities are suggested to enhance research productivity, because quality research is inevitable in an era of increasing openness and globalization.¹⁾

The issue has been the subject of heated debate in public since the early 1990's, but little has been resolved. When a fine research scholar enters a job market, the scholar is selling his or her future flow of research as well as the stock of past and current research the scholar brings to a department. There is, however, some disagreement as to whether fine research scholars are much appreciated in the Korean job market. Figure 1 presents overall research productivity in Korea over the period 1970-1994. The economics profession in universities were found to be inactive in academic research until the mid-1980's, because until then total publications hovered around 50 pages per year. In 1986, the publication

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¹ Here, the research means academic research rather than contract research.

[Figure 1] Research Productivity

increased sharply and reached a peak in the following year. After that, the productivity tends to fall in recent years except for the spike in 1993.

Greater disagreement, however, arises over the probable causes for the observed research decline. Some economists argue that the lack of research incentives is the primary cause for the research decline, whereas most others put the blame on the rigidity of a tradition in higher education. Departmental ranking based on research productivity would be indicative of answering these questions, perhaps directly, but none has been done for this sort of assessment in Korea.

This paper aims to rank economics departments in Korea based on research productivity. The methodology used is as follows. First, departmental rankings are based upon page counts of articles published in international refereed journals over the period 1970:1-1994:12.²⁾ The EconLit CD-ROM (June 1995) includes all international journals that have been appeared in the *Journal of Economic Literature (JEL)*. Total pages are counted only for the articles clearly subjected to a refereeing process. Excluded are conference proceedings, special issues, and book reviews.

Second, the EconLit CD-ROM also includes monographs, books, collective volume articles (i.e., chapter contributions to edited books), Ph.D dissertations, and working papers. These are basically not counted for the ranking. Exceptions are NBER Working Papers, IMF Staff Papers, and Carnegie-Rochester Conference Series on Public Policy, which are not refereed but frequently cited in the literature.

² It would be desirable to employ "standardized page counts" which convert total pages to AER-equivalent length pages (see Graves et al., 1982, among others). This was not done since no reliable conversion ratio is available for all other journals. However, top-24 journal articles have been converted to AER-equivalent pages only for top two schools (see Table 3).

Third, if a journal article is coauthored by 'n' people, one-nth of the pages are given credit to each coauthor.

Fourth, as suggested by Hogan (1984) and Scott and Mitias (1996), the "stock" of articles that is published by faculty members affiliated to each department is counted. Faculty names were taken from the Korean Economic Association's (KEA) *Directory of KEA Members* (1994).³

Fifth, a department is included in the ranking if the number of faculty members are at least five, and at least two of them should be active in research. This criterion is employed, since the rank of a department could be high due to only one "superstar" in the department. If this is the case, it will bias average productivity of the department as well. Since consistently high performances across all faculty members are desirable, the department is excluded if only one member plays and the rest of them just watch. In addition, a small-sized department with less than five faculty members is fairly newborn and is found inactive in research. One exception is the Hallym University in which three out of four faculty members are active in research.

Sixth, only economics departments are rated. Although there are research-active economists in the departments other than economics such as international trade, agricultural economics, and finance, it is a formidable task to include all of them. One exception is the Seoul National University in which the economics department and the department of international economics do not have an obvious reason to split. The size of the two departments appears relatively large in sum, but the departmental size can be adjusted by computing per capita productivity.

Finally, the branch campus is not independently counted.

The paper is divided in four sections. Following the introduction, section II presents departmental rankings based on journal article productivity in all refereed journals as well as in some quality journals. The assessment in quality journals then allows inference of the extent of relative quality changes among schools. Section III discusses annual average productivity which sheds light on questions of how productive economics professions are in Korea. The research pattern is also discussed. Section IV offers concluding remarks.

II. RANKINGS OF ECONOMICS DEPARTMENTS

Table 1 presents the departmental rankings based on page counts. The first column shows total pages published in all international refereed journals. Among 182 universities and colleges in Korea, only twenty schools are included. The remaining 162 schools do not appear in this ranking, either because no publication

³This is the most reliable and updated data set available at the outset of this research. If no entry is found in the KEA's directory, the faculty members are presumed to be inactive in research.

[Table 1] Economics Departmental Rankings Based on Page Counts of International Refereed Journal Articles, 1970-1994

Rank	School	All Journals	Top-30 Journals	Top-10 Journals	Top-4 Journals
1	Seoul	583.3 (707.8)	96.5	30.5	30.5
2	Korea	444.0	82.0	22.0	4.0
3	Yonsei	285.3	37.8	6.3	6.3
4	Sogang	128.8	7.0	5.0	5.0
5	Dongguk	107.5	21.5	—	—
6	Sungkyunkwan	106.0	24.0	—	—
7	Pusan	41.5	—	—	—
8	Hallym	39.5	6.5	—	—
9	Hanyang	32.0	22.0	—	—
10	Chung-Ang	28.5 (510.3)	16.0	—	—
11	Konkuk	28.5	—	—	—
12	Chonnam	28.0	—	—	—
13	Ah-Joo	27.0	27.0	15.5	—
14	Hankuk	24.0	8.0	—	—
15	Hong-Ik	22.0	—	—	—
16	Kyung-Hee	17.5	—	—	—
17	Chongju	15.4	—	—	—
18	Jeonbook	11.2	3.7	3.7	—
19	Soonchunhyang	9.7	—	—	—
20	Youngnam	9.5	—	—	—

Note: The values are total pages published. The numbers in parentheses represent total pages that include the pages published in *SJE* for the Seoul National University and *JED* for the Chung-Ang University, respectively.

is found or because the department's performance is of one faculty only.⁴ As expected, Seoul, Korea, and Yonsei Universities are ranked on the top-three schools in order. The improvement of the Dongguk University is impressive. Relatively new private schools also enter the ranking. For example, Hallym and Ah-Joo are ranked among top-20 schools. In contrast, several national universities do not appear in this ranking; a few exceptions are Seoul, Pusan, Chonnam, and Jeonbook National Universities. It is also surprising to find that several Ph.D granting universities like Kyungnam are inactive in research.

⁴ Although twelve more schools including the Dong-A University have some publications, these schools are excluded from the ranking since their publication is only one faculty member's performance.

Notice that the Chung-Ang University would rank second (510.3 pages in total) if the papers published in the *Journal of Economic Development (JED)*, whose editorship is housing in that school, are counted. However, checking individual output of the department reveals that more than 94% of the total pages has been published in its own journal, *JED*. This contrasts with the Seoul National University in which less than 18% of total pages has been published in its own journal, *Seoul Journal of Economics (SJE)*. For this reason, papers published in their in-house journals are not counted for these two schools. Even with this criterion, Seoul remains top, while the rank of Chung-Ang falls to tenth.

One might object to this ranking because all journals were equally weighted. It is commonly known that the difficulty of publishing in "A" journals significantly differs from the one in "B" or "C" journals. Thus, quality-adjusted rankings are presented in the next three columns in Table 1, which count total pages published in top-thirty, top-ten, and top-four journals, respectively. It is quite obvious to include in the top-four journals *American Economic Review*, *Econometrica*, *Journal of Political Economy*, and *Quarterly Journal of Economics*. For top-ten journals, however, Figlio (1994) includes, in addition to the top-four journals, six more general-interest journals: *Economic Journal*, *Economic Inquiry*, *Economica*, *Rand Journal of Economics*, *Review of Economic Studies*, and *Southern Economic Journal*. The choice of thirty top journals is, however, open to question. The criterion employed here for the top-thirty journals relies on the choice of top-24 journals in Graves et al. (1982)⁵ plus six competitive journals found more recently in Laband and Piette (1994).⁶

Seoul, Korea, and Yonsei Universities still remain on the top in this quality ranking of top-thirty journals. Note that Chung-Ang ranks eighth in this quality-adjusted ranking, which is similar to the quality-unadjusted rank of the tenth. Other than this, considerable variability is observed especially for the schools in the lower ranks. Eight schools drop out in this quality ranking. When the top-ten journals are counted, even more schools disappear. Similar patterns are found for the quality ranking of top-four journals. Only the Sogang Univer-

⁵The top-24 journals include *American Economic Review*, *Econometrica*, *Economic Development and Cultural Changes*, *Economic Inquiry*, *Economic Journal*, *Economica*, *Industrial and Labor Relations Review*, *International Economic Review*, *Journal of Business*, *Journal of Economic History*, *Journal of Economic Theory*, *Journal of Finance*, *Journal of Human Resources*, *Journal of Law and Economics*, *Journal of Money, Credit, and Banking*, *Journal of Political Economy*, *Journal of Regional Science*, *Journal of American Statistical Association*, *National Tax Journal*, *Oxford Economic Papers*, *Quarterly Journal of Economics*, *Review of Economic Studies*, *Review of Economics and Statistics*, and *Southern Economic Journal*.

⁶The six additional journals are *Journal of Development Economics*, *Journal of Econometrics*, *Journal of Financial Economics*, *Journal of Monetary Economics*, *Journal of Public Economics*, and *Journal of International Economics*.

sity has an entry in addition to the top three schools.⁷⁾

III. AVERAGE PRODUCTIVITY AND RESEARCH PATTERN

Total productivity of a department could be high due to a large size of the department. The total productivity indicates the productivity of a whole department but gives no indication of an average individual's productivity. Table 2 presents per capita productivity in which a wide range in the size of the department is adjusted. The first column shows annual averages of the pages that one faculty member has published in all international refereed journals over the period 1970-1994. The Korea University is found to be the top, and the Seoul National University is next. A faculty in the Korea University is found to be, on average, more productive than a faculty in the Seoul National University. Surprisingly, however, the average productivity is too low across the universities. A faculty of the Korea University, for example, has published 0.74 pages per year. In other words, it takes, on average, more than thirteen years for one faculty of the Korea University to publish a ten-paged, single-authored paper. An extreme case is the lower-ranked schools, in which the same sort of paper can be published by a faculty in 330 years.

To check on the robustness of the results, the sample is split into two sub-periods based upon the degrees of openness of research activity in Korea. Since the early 1980's, the Korean government has implemented an open-door policy to encourage domestic students to study abroad. Since then, many quality Ph.D's from abroad have returned to the domestic job market, and research productivity has improved. This is analogous to an export expansion policy in the process of economic development. Thus, the sample period beginning from 1985 may be thought of as representing an "export-led" research, whereas the sample period prior to 1985 may be thought of as representing an "import-substitution" research.

The second and third columns in Table 2 presents the per capita productivity for the two sub-periods. It is not surprising that the average productivity increases sharply for the years characterizing an export-led research. This suggests that the low productivity for the entire sample period is caused primarily by the low productivity in the 1970s. In particular, the average productivity appears to be trivial prior to 1985, but it jumps three to tenfold for the 1985-94 period. One exception is the Konkuk University, in which average productivity even falls.

The last column in Table 2 also presents the per capita productivity of the most recent years, 1990-1994. The improvement of the Hallym University is im-

⁷ The rank of the Yonsei University would be improved if the special, complementary issue of *JPE* (1990, No. 5, Part 2) was counted. However, that special issue is not usually counted for quality ranking (see, for example, Bairam, 1994).

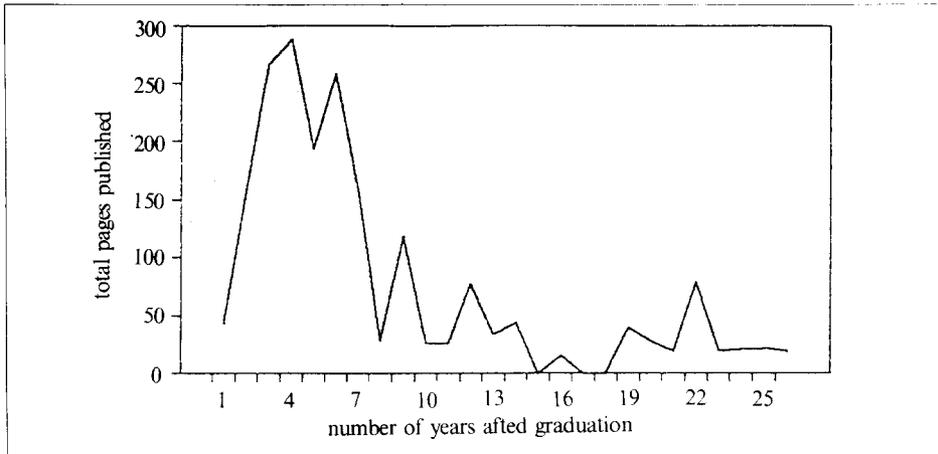
[Table 2] Per Capita Productivity of Economics Departments by School, Annual Averages

Rank	School	1970-1994	1970-1984	1985-1994	1990-1994
1	Korea (24)	.74	.27	1.43	1.34
2	Seoul (35)	.67	.25	1.29	1.22
3	Dongguk (9)	.48	.16	.95	.76
4	Yonsei (25)	.46	.13	.95	.81
5	Hallym (4)	.40	.00	.99	1.84
6	Sungkyunkwan (13)	.33	.17	.55	.22
7	Sogang (17)	.30	.15	.54	.84
8	Ah-Joo (6)	.18	.00	.45	.00
9	Pusan (11)	.15	.00	.38	.75
9	Hong-Ik (6)	.15	.00	.37	.73
11	Chonnam (10)	.11	.00	.28	.56
12	Chongju (6)	.10	.00	.26	.51
13	Hankuk (11)	.09	.05	.15	.00
14	Kyung-Hee (9)	.08	.03	.16	.00
14	Konkuk (15)	.08	.10	.04	.00
16	Chung-Ang (16)	.07	.06	.09	.18
17	Soonchunhyang (6)	.06	.00	.16	.32
18	Hanyang (20)	.06	.03	.11	.18
18	Jeonbook (13)	.03	.02	.06	.12
20	Youngnam (12)	.03	.00	.08	.11

Note: The values are pages published. The numbers in parentheses represent the number of faculty members.

pressive. Several universities including Sogang have also improved their productivity during this period. However, the average productivity of higher-rank schools tends to fall. The productivity in some lower-rank universities is even more serious. While there may well be other interpretations of this exotic behavior, one explanation for this finding would be that publications are little appreciated in our profession and university professors are not motivated to publish in international refereed journals.

The lack of research motivation is further indicated in the "life-cycle" pattern of academic research. In Figure 2, the number of years after an author obtained his or her Ph.D's are counted for each publication. The total productivity increases at the beginning and reaches a peak at four years. After seven years, however, the productivity dramatically falls to 29 pages in total. After that, it simply fluctuates around 50 pages for longer horizons. This suggests that the economics profession in universities are short-lived in academic research. Most papers

[Figure 2] Life-Cycle Pattern of Research

published in early stage might be from their Ph.D dissertations. Since then, little has been found for their own independent research.⁸

Table 3 compares the research productivity in Korea with those in Japan, United Kingdom, and United States. Of course, no simple methodology can compare the research productivity across countries. Following Hirsch et al. (1984), the number of pages published in the top-24 journals are standardized to the average length of a page in the *American Economic Review*. The sample period includes 1978-94 for Korea, since academic research was not active until the mid-1980's. Only top two schools are evaluated. Despite the longer sample period, the research productivity of the two Korean universities is relatively low. The productivity is less than one-third to Japan, less than 5% to the U. K., and less than 2% to the U. S. A.

[Table 3] AER-equivalent Pages in Top-24 Journals, 1978-1983

Rank	Korea ^a	Japan ^b	U. K. ^b	U. S. A. ^c
1	Seoul 42.6	Kyoto 154.8	LSE 1878.0	Chicago 2976.1
2	Korea 41.5	Tokyo 138.7	Oxford 817.4	Harvard 2427.4

^a The sample period includes 1978-1994.

^b See Table 2 in Hirsch et al.(1984).

^c See Table 1 in Hirsch et al.(1984).

⁸ A few exceptions are those from abroad, whose research was done in the United States.

IV. CONCLUDING REMARKS

This paper has ranked economics departments in Korea based on page counts of articles published in international refereed journals. The page counts were employed to capture many variations in the length of articles. Some quality journals were also employed to evaluate research quality among the departments. In addition, a wide range in the size of the departments was adjusted by computing per capita productivity.

The key findings are summarized in the following. First, several Ph.D granting universities do not appear in this ranking, while relatively new and small universities rank among top-20 schools. Second, economics departments are, in general, less productive in national universities than in private universities. Specifically, several national universities other than Seoul are found inactive in research. Third, total productivity has been increased since the mid-1980's, but it recently tends to fall. This suggests that most schools are no longer interested in buying the stock of current and past research those in the market would bring to the department. The future flow of research is not appreciated as well. Fourth, the low average productivity begins to rise in the late 1980's, but it again falls in 1990's. The observed decline of research productivity may be caused primarily by the lack of research incentives in Korea. Fifth, the research life of economics profession in universities seems relatively short in Korea. This contrasts with high, long-lasting research productivity in industrialized countries.

Therefore, one of the research incentives commonly used in the United States is suggested to motivate faculty to participate in research activities. Based on research productivity, teaching load can be discriminated. Less teaching would be assigned to research-active faculties, while more teaching is assigned to inactive faculties. In this way, research motivations would be enhanced. Finally, departmental ranking is an approximate indication of the productivity of economics profession in Korea, but it may not be generalized to a university ranking.

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