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## A CITATION ANALYSIS OF PAKISTAN ECONOMIC AND SOCIAL REVIEW

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### **ABSTRACT:**

Selected volumes of *Pakistan Economic and Social Review* were analyzed to find out citation pattern of their articles. Eight volumes of the journal were selected representing two volumes from a decade. The results revealed that a peer local journal *Pakistan Development Review* has been the most cited journal in the cited literature under study. Sixty percent of the citations were single-authored. More than 50 percent of the citations were from non-journal sources mainly books. Although citations from online sources were seen but in a negligible number. The age of about 25 percent of the total citations was five years. Most of the authors used foreign books as citations. Most of the greatly cited journals were from the USA.

### **INTRODUCTION**

Citations represent the pool of archival knowledge from which authors retrieve established ideas and, in turn, generate new research ideas. This knowledge may be disseminated within an area and across disciplinary boundaries. Such an exchange of knowledge represents the passage of ideas within and among academic disciplines. This exchange process has the potential to enhance or expand a field's knowledge development. Archival knowledge may be cited in a manuscript for reasons such as giving credit to related work, substantiating claims, and generally authenticating the manuscript's contribution to knowledge.

Citations are the key elements of citation analysis studies. They occupy an integral part of all kinds of research articles. The author, while writing a research paper, takes the help of a number of documents and finally quotes them with its bibliographical details. Citation implies relationship between a part or the whole of the cited document and a part or the whole of the citing document. Citations can be defined as "the documents, which are referred and quoted by the author for his writing" (Mahapatra, 2000, p. 7). Citations appear in various forms and are described differently such as references, bibliographies, notes, and further

readings. Citations represent the full bibliographical description for paper, which an author has used.

In present day scholarly culture, citation is reported to serve as a label for intellectual property. Martyn (1975, as cited in Mahapatra, 2000) stated possible reasons of citing documents. These include: (a) paying homage to pioneers, (b) giving credit for related work, (c) identifying methodology, equipment, etc., (d) providing background reading, (e) correcting one's own work, (f) correcting the work of others, (g) criticizing previous work, (h) substantiating claims, (i) alerting forthcoming work, (j) providing leads to poorly disseminated, poorly indexed or uncited work, (k) authenticating data and classes of fact, (l) identifying original publications in which an idea or concept was discussed, (m) identifying original publications or other work describing an eponymic concept or term, (n) disclaiming work or ideas of others, and (o) disputing priority claims of others.

Citation analysis may be defined as "a bibliometric technique in which works cited in publications are examined to determine patterns of scholarly communication, for example, the comparative importance of books versus journals, or of current versus retrospective sources, in one or more academic disciplines" (ODLIS, 2002). This technique has been widely employed to empirically investigate the structure of and scholarly activities in many social and natural sciences. It has been used for the determination of research patterns, rankings of departments and researcher productivity, the evaluation of academic science institutions, and core journal lists for collection management or development.

Within the field of economics researchers have been using citation analysis techniques for a variety of purposes. Some recent studies are introduced here. Laband and Piette (1994) ranked economic journals using citation data. Medoff (1996) used citation counts, over the period 1971-1992, to rank the top 250 academic economists in the United States. Schools of economics were ranked by the number of top 250 economists a university had on their faculty. Graduate programs were ranked by those Ph.D. programs which have produced the greatest number of the top 250 academic economists. Smyth (1999) analyzed citation data of five Australian economic journals to identify a list of core journals in the field. Liner (2002) ranked economics journals using the textbook citation method. Theory and econometrics textbooks were used to rank core economics journals. The top nine journals identified in this study were very similar to the top nine journals identified in two other studies.

Blair, Cottle and Wallace (1986) used citation analysis for ranking faculty at economics departments in colleges and universities. Bodenhorn (2003) measured the influence of 439 economists employed at the 50 top liberal arts colleges of the United States and ranked departments and individuals on the basis of citations. Beilock, Polopolus and Correal (1986) used citation data for ranking agricultural economic departments in American and Canadian universities. Sinha

and Macri (2002) used citation data for ranking Australian university economics departments. Costanza, et al. (2004) assessed the degree of influence of selected papers and books in ecological economics using citation analysis. Pieters and Baumgartner (2002) assessed communication flows between journals in economics using citation analysis. Clements and Wang (2003) analyzed citations in the works of Ph.D. students in Australia. Through citation analysis they investigated the degree of communication among various universities and identified highly cited journals, articles and authors. Robinson (1991) argued, giving the examples of economic journals, that citation analysis can be an effective tool of journal selection for submitting research by authors. Lightman and Manilov (2000) evaluated the Northwestern University library's economics journal collection. Their evaluation process, which combined citation analyses with non-statistical techniques, resulted in lists of titles to cancel and to add to the collection. McCain (1991) performed cocitation mapping using a set of economic journals. In Pakistan, citation analysis of documents is not common. One can hardly find one or two articles which have used this technique.

According to an estimate there are between 250-300 economists in Pakistan, either teaching or doing research in universities, at some kind of research institute, or with donors and NGOs. Of these, fifty, can be considered active researchers in the field of economics (Zaidi, 2002). To disseminate the research findings of economists there are some journals and newsletters in this field in Pakistan. Out of these, three research journals have some international significance. *EconLit*, the most comprehensive international index of economic journals, indexes these three titles from Pakistan. These are the *Pakistan Economic and Social Review* (PESR), the *Pakistan Development Review* (PDR), and the *Pakistan Journal of Applied Economics* (PJAE).

The *Pakistan Economic and Social Review* (PESR), the oldest one in three core economic journal in the country, is published by the Department of Economics, University of the Punjab, Lahore. In 1952 the journal was started with the title *University Economist*. In 1959 the title was changed to *Punjab University Economist*. Since 1971 it has been published with the present title. This quarterly journal is published regularly but it is two years behind its schedule. It has published papers from Pakistani and foreign authors.

## OBJECTIVES OF THE STUDY

The aim of this study was to analyze citations given in *Pakistan Economic and Social Review* to assess the pattern of citations. The specific objectives of the study were to find out:

- (a) Period-wise number of citations per article
- (b) Authorship pattern of citations
- (c) Distribution of citations according to bibliographic forms

- (d) Age of cited documents
- (e) Distribution of monographic citations in local and foreign, and
- (f) A list of top most cited journals

## Methodology

One of the core economic journals in Pakistan, *Pakistan Economic and Social Review*, was selected for citation analysis. It was decided to select two volumes of the journal from a decade to cover the volumes published in 40 years. So all issues published during 1969-70, 1979-80, 1989-90 and 1999-2000 were selected for examination. Only full-length articles were examined. Book reviews, shorter notices and editorials were not included. Eight volumes of PESR included 73 articles out of which four had no citation. Citations of remaining 69 articles range between one and 75. Data about 1298 citations was manually collected and then codified and converted to electronic form using MS-Excel Spreadsheet. Data about a citation included number of authors, difference between the year of publication of cited document and of citing article, type of document cited, foreign or local publication in case of monograph, and journal title in case of journals. The SPSS software was used to analyze the collected data.

## FINDINGS AND DISCUSSION

### Citations per article

Period-wise citations of *Pakistan Economic and Social Review* were analyzed. This journal had 1298 citations in 73 articles. Per article score was 17.78 (Table 1). The mean score has significantly risen (from 9.25 to 25.33) between 1969-70 and 1999-2000. This rise can be seen in Figure 1. A previous citation study of a Pakistani journal found that the mean score of citations per article was 13.2 (Majid, 1995). However, MacRoberts and MacRoberts (1989) pointed out that many of the research-based disciplines' average citation rate varies significantly.

Table 1. Period-wise number of citations per articles

Period	Articles	Citations	Citations/Article
1969-70	16	148	9.25
1979-80	20	318	15.90
1989-90	16	300	18.75
1999-2000	21	532	25.33
Total	73	1298	17.78

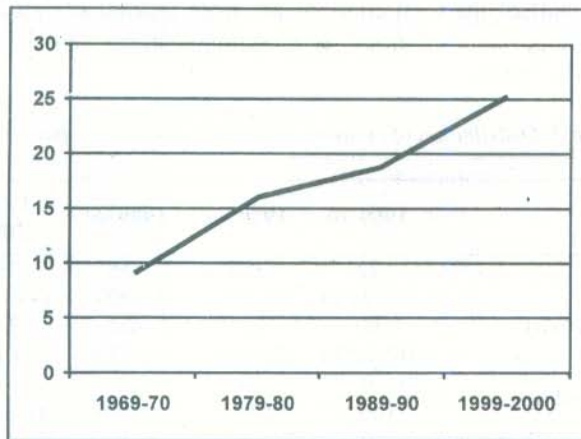


Figure 1. Citations per article average

### Authorship pattern of citations

Table 2 shows the authorship pattern of citations of the journal. The data indicate that 15.63% citations of PESR had no details on the authorship while 59.67% citations were single-authored. Two-authored citations were above 20%. Other studies also show that citations with single-author mostly dominate (For example, Tiew & Kaur, 2000).

Table 2. Authorship pattern of citations

Number of Authors	Citations	Percent
No author	202	15.63
One	771	59.67
Two	264	20.43
Three	40	3.10
Four or more	15	1.16

### Distribution of citations according to bibliographic forms

The relative use of the different types of sources cited by the authors is documented in Table 3. The distribution of references among 10 general forms of sources (journals / serials, monographs / books / government publications, conference proceedings, working / discussion / technical papers, reports, papers presented at some conference / seminar, unpublished material / mimeographed, Internet, theses / dissertations, and others) is given in the table. In the citations under study, the most cited literature has been taken either from journals or from

the books (45.61% and 45.14%). Other studies of international journals indicate that more than half of the total citations are from journal literature as there is a decline in the importance of book as a communication vehicle in most fields (Holsapple, et al., 1993).

Table 3. Distribution of citations according to bibliographic forms

Type	1969-70	1979-80	1989-90	1999-2000	Total
Journal/Serial	33 (23.91%)	164 (51.57%)	156 (52.00%)	234 (44.07%)	587 (45.61%)
Monograph/Book/Govt. publication	90 (65.22%)	123 (38.68%)	122 (40.67%)	246 (46.33%)	581 (45.14%)
Conference proceedings	0 (0%)	0 (0%)	1 (0.33%)	2 (0.38%)	3 (0.23%)
Working/Discussion/Technical Papers	0 (0%)	6 (1.89%)	4 (1.33%)	11 (2.07%)	21 (1.63%)
Reports	3 (2.17%)	5 (1.57%)	4 (1.33%)	16 (3.01%)	28 (2.18%)
Paper presented at some conference/seminar	3 (2.17%)	6 (1.89%)	4 (1.33%)	7 (1.32%)	20 (1.55%)
Unpublished material	3 (2.17%)	7 (2.20%)	3 (1.00%)	2 (0.38%)	15 (1.17%)
Internet	0 (0%)	1 (0.31%)	1 (0.33%)	2 (0.38%)	4 (0.31%)
Thesis/Dissertation	3 (2.17%)	3 (0.94%)	3 (1.00%)	2 (0.38%)	11 (0.85%)
Other	3 (2.17%)	3 (0.94%)	2 (0.67%)	9 (1.69%)	17 (1.32%)

The results show that use of journal citations is very low. Frequent use of non-serial citations, as Majid (1995) mentioned, might be due to problems faced by researchers from developing countries in accessing current journal literature. Some reasons for this problem include availability of a limited number of journal titles in local libraries, rapidly increasing journal prices, frequent budget cuts, restrictions on the use of foreign exchange, lack of union lists of journals, and lack of proper document delivery service in the country. The data reveal that even in latest years, only 0.31% citations were taken from the Internet.

### Age of cited documents

The age of citations was calculated by noting the difference between the year of publication of citing articles and that of cited documents. Price (1970) found that, in research-based disciplines, on the average, 43% of the cited research was derived from research from within the last five years of the publication date of the article. In Majid's study (1995) of *Pakistan Journal of Agricultural Research* this category had 18.7% of the total citations. In the present study, as Table 4

shows, 24.9% of total citations fall in this category. Period-wise mean age of cited literature was also calculated (documented in Table 5 and Figure 2). The mean age for cumulative volumes was 12.96 years.

Table 4. Age of the cited literature

Age in years	No. of citations
Up to 5	303 (24.9%)
6-10	335 (27.5%)
11-15	194 (15.9%)
16-20	153 (12.6%)
21-25	108 (8.9%)
26 and more	124 (10.2%)
<b>Total</b>	<b>1217</b>

Table 5. Mean age of the cited literature by periods

Period	Mean age
1969-70	12.54
1979-80	14.22
1989-90	14.89
1999-2000	11.08
All periods	12.96

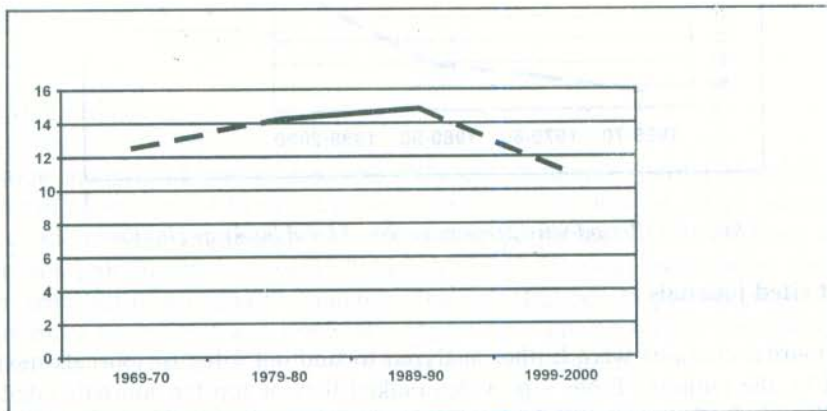


Figure 2. Period-wise mean age of cited literature



### Use of local and foreign monographic literature

Monographic citations were further analyzed to find out if they were local or foreign publications. Table 6 and Figure 3 show that the authors of this journal cited 72.81% foreign books on average. The results reveal that with the passage of time, the trend of citations was decreased significantly. In the year 1969-70, cited foreign books were 93.33% whereas this was decreased to 55.28% in the year 1999-2000. However, the excessive use of foreign books in 1969-70 might be due to the non-existence of local monographic literature.

Table 6. Distribution of monographic citations in local and foreign publications

Period	Local	Foreign
1969-70	6 (6.67%)	84 (93.33%)
1979-80	18 (14.63%)	105 (85.37%)
1989-90	24 (19.67%)	98 (80.33%)
1999-2000	110 (44.72%)	136 (55.28%)
Total	158 (27.19%)	423 (72.81%)

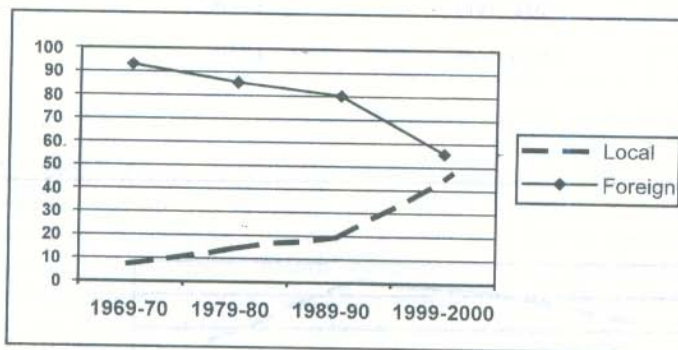


Figure 3. Period-wise percentage use of local books as citations

### Most cited journals

The journal citations were further analyzed to find out a list of journals mostly cited by the authors. Table 7 provides ranked lists of top ten journals cited in PESR with the frequency of citations. It is interesting to note that a local journal *Pakistan Development Review* is at number one in the list of most cited journals. Other journals which are in the top cited list include *Journal of Political Economy*, *World Development*, *American Economic Review*, *Review of*

*Economics and Statistics, American Sociological Review, and Econometrica*. All of these titles are published from the United States. Their frequent citations in Pakistani core economic journal show a huge impact of American literature on Pakistani literature in this field. Most of the top ten journals cited in PESR were among core economic journals identified by various American and international studies such as Burton & Phimister (1995), Conroy, Duşansky & Kildegaard (1996), Golden & Carstensen (1995), Laband & Piette (1994), Mason, Steagall & Fabritius (1997), Smyth (1999), and Tahai & Kelly (1996). It is also worth mentioning that the self-citations of this journal is very low (only 13 citations in 8 volumes). It is interesting to note that PESR itself was also among the top 10 most cited journals.

Table 7. Top ten journals cited in PESR

Rank	Journal Title	Frequency
1	Pakistan Development Review	102
2-3	Journal of Political Economy	23
2-3	World Development	23
4	American Economic Review	20
5	Review of Economics and Statistics	16
6-8	American Sociological Review	13
6-8	Econometrica	13
6-8	Pakistan Economic and Social Review	13
9	Economic and Political Weekly	12
10	Indian Journal of Agricultural Economics	11

## CONCLUSION

Citation analysis of one of the core Pakistani economic journal revealed that *Pakistan Development Review* has been the most cited journal. Sixty percent of the citations were single-authored. More than 50 percent of the citations were from non-journal sources mainly books. Although citations from online sources were seen but in a negligible number. The age of about 25 percent of the total citations of the journal was five years. Most of the authors quoted foreign books as citations. Most of the greatly cited journals were from the USA.

The citations pattern found in this study revealed that the citation of literature by economists of Pakistan is quite behind the international trends. For example, lack of journal-citations might be due to the non-availability of journals in local libraries. Similarly, lack of the use of online resources shows some gaps in the orientation and training of local economists in the use of such resources. A large

number of economists cite old literature. It is imperative to formally study factors that might be responsible for this sad situation. In the light of such studies the facilities provided to the researchers in the field of economics can be improved.

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*Nor should the Believers  
All go forth together:  
If a contingent  
From every expedition  
Remained behind,  
They could devote themselves  
To studies in religion,  
And admonish the people  
When they return to them,---  
That thus they (may learn)<sup>1373</sup>  
To guard themselves (against evil)*

***Sura: Tauba, Aayat: 122***