THE LITERATURE CITED IN NIGERIAN JOURNAL OF ECONOMIC AND SOCIAL STUDIES AND ITS AVAILABILITY IN CENTRES FOR SOCIAL AND ECONOMIC RESEARCH IN NIGERIA

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DECEMBER, 1997.

CERTIFICATION

This thesis "The Literature cited in Nigerian Journal of Economic and Social Studies meets the regulation governing the award of the degree of Master of Library Science of Ahmadu Bello University, Zaria ad is approved for its contribution to knowledge.

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DECLARATION

I hereby declare the originality of this work carried out by me in the Department of Library and Information Science, Faculty of Education, Ahmadu Bello University, Zaria under the Supervision of Dr. M. Afolabi and Mr. M.I.H. Zia.

The works of other Investigator were properly acknowledged and cited in the body of the write-up. No part of this thesis has been submitted for a degree previously.

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DEDICATION

This work is dedicated with love and affection to:-

My lovely husband - Moshood

and

My beloved children - Simisola,Oyedeji, Olamide

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My gratitude goes to my supervisor Dr. M. Afolabi for his untiring support, guidance and encouragement making the accomplishment of this work possible.

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ABSTRACT

This study examines the literature cited by social scientists in Nigerian Journal of Economic and Social Studies to identify core literature different. Journal cited, formats, languages and subjects of citations and to find out if there were differences in the pattern of citations. The study determined if materials identified as core from the study were available in two centres ; Centre for Social and Economic Research of Ahmadu Bello University, Zaria and Nigerian Institute for Social and Economic Reseach of University of Ibadan, Ibadan.

Six volumes of the Journal were used for the study at three years interval and the citations in the volumes were analaysed individually to arrive at the findings. Bradford's law was used in analysing the data to arrive at the core of journals cited. The journals arrived at as the core were checked against the holdings of the libraries of Centres for Social and Economic Research in Nigeria. Books (monograph) were the most cited format of publications with 1143 (46.53%) citations followed by journals with 887 (36.11%) citations. Two journals titles were identified as core and these two journals titles were available in the libraries.

When the cited literature were checked against the collection of the libraries, Centre for Social and Economic Research library of Ahmadu Bello University, Zaria did not have books within her collections. While 50 (45.45 %) out of the 110 cited books were available in the library of Nigeria Institute for Social and Economic Research, Ibadan. Economics was identified as the most cited subject with 1176 (57.73%), thereby stressing that the field of Social Sciences is subject centered. English language was most cited language with 2,463 (99.83%) citations.

Social Scientists rely heavily on fairly old materials for their information.

DEFINITION OF TERMS

Age: Refers to the year in which a cited work was published.

Citation Analysis: Refers to the analysis of works or references cited at the end of work.

Citation Frequency: Refers to the number of times reference is made to a particular work.

Core Journals: Refers to the most frequently cited journals determined through the use of Bradford Zipf bibliography.

Format: Refers to the manner in which the cited literature appears. This could be *journals, books or bulletin.*

Language: Refers to d to the medium of communication in which a cited work was published.

Hard Science: Refers to the characteristics of the citations in a subject field when the age of the sources cited within the last five years relative to the total citations is calculated to be 43 percent and above.

Soft Science: Refers to the characteristics of the citations in a subject field when the age of the sources cited within the last five years relative to the total citations is calculated to be between 21-42 percent.

Non-Science: Refers to the characteristics of the citation in a subject field when the age of the sources cited within the last five years relative to the total citations is calculated to be 20 percent and below.

It is used in the content in which Price(1970) used it.

CHAPTER ONE

INTRODUCTION

1.1 Background Information to the Study

With the multiplicity of informational materials being published and with the meagre financial position of libraries, the need to scrutinize materials to be acquired by the library becomes a necessity. The concern to many research libraries is taking the decision on particular titles to secure for their clientele in order to meet their needs. This becomes more pronounced with the proliferation of publications and diminishing library budgets.

Citation analysis points out the types of materials used by authors of papers or articles in journals. No matter the type of analysis performed, the result should point out the relationship between the citing and the cited documents. That is to say, it should indicate whether there is a sort f interrelationship between the different disciplines and to point out the significance of other disciplines to one another.

Weinstock (1971:16) made the observation that "Scientific tradition requires that when a reputable scientist or technologist publishes an article, he should refer to earlier articles which relate to his theme". Analysis of cited literature is mainly to analyses the citations or references which constitute part of the academic means of primary communication.

According to Martyn (1975: 29) "Citation, that is to say, is not a unit but an event and only immediately quantifiable in terms of its frequency of occurrence". A cited information source indicates that the source was utilized in preparing the paper that cited it.

A citation analyses studies of published literature are important to librarians, it is necessary for them to get acquainted with the citation method. Since most libraries these days are faced with the problem of finance, it is necessary to purchase materials of high quality for their clients. Cited items in papers represent items that were utilized. They will be simplified when the librarian has knowledge of citation analysis and it will serve as a useful guide in the selection and acquisition of highly cited information sources.

1.2 Statement of the Problem

The Nigerian Journal of Economic and Social Studies is meant for scholars in the field of social sciences. It publishes recent information in the field covered either in the form of articles, notes, communication or reviews of recently published work, particularly those on developing nations. The journal is published by Nigerian Economic Society and it is issued in the month of March, July and November by the Department of Economic, University of Ibadan. Articles published carry citations, the number of citations varies from one article to another.

Apart from Afolabi's (1976) and Ajayi's (1989) studies on citation pattern of Nigerian Journal of Economic and Social Studies both of the Department of Library and Information Science of Ahmadu Bello University Zaria, there has not been any other study on citation patterns of the journal. These two previous studied like many other citation studies could be considered not static enough in that they examined citation patterns for a given period of time.

Hitherto, there has been no study on changes in the patterns of citations of Social Scientist over a period of time and their implications. If there are changes in the core journals derived, it will affect the collections of the library in that the library have to acquire the new titles to be included in the library.

1.3 Research Questions

1. Are there differences among the frequencies of format of publications, subject cited and cited languages yon Nigerian Journal of Economic and Social Studies?
2. What is the categorization of the cited literature in terms of hard science, soft science and non-science?
3. What is the distribution of citations by form, age, subject and language of publications?
4. Which are the core journals cited in Nigerian Journal of Economic and Social Studies?
5. Are the core journals and books cited available in centre for social and economic research in Nigeria?

1.4 Hypotheses

This study tested the following hypotheses:

1. There is a significant difference in the frequencies of format of publications cited in Nigerian Journal of Economic and Social Studies.
2. There is a significant difference in the frequencies of subjects cited in Nigerian Journal of Economic and Social Studies.

3. There is a significant different in the frequencies of the languages cited in Nigerian Journal of Economic and Social Studies.

1.5 Objectives of the Study

This study was conducted to achieve the following objectives:-

1. To find out the differences in the frequencies of formats of publications cited, subject cited and cited long in Nigerian Journal of Economic and Social Studies.
2. To determine whether the literature cited can be categorised as "hard science", "soft science" or "non-science.

To find out the differences in the frequencies of subjects cited in Nigerian Journal and Economic and Social Studies.

To find out the differences in the frequencies of cited languages in Nigerian Journal of Economic and Social Studies.

3. To find out the distribution of citations by forms of publication, age, subject and language.
4. To determine the core of cited Journals in Nigerian Journal of Economic and Social Studies.
5. To find out whether the core books and Journals cited are available in the libraries of centres for Social and Economic Research in Nigeria.

1.6 Significant of The Study

The importance of the study lies in the fact that it provides information concerning the form of publication, age, subject, language and the various journals that wee cited in writing the articles published in the Nigerian Journal of Economic and Social Studies.

It serves as a guide for social sciences libraries in the selection and acquisition of their materials. This can assist the librarian in knowing the types of materials that are likely to be needed by the users of the library. With this kind of information, the issue of acquiring unrequested form of publication or irrelevant materials will not arise.

From the data collected for the study, age of publications cited was analysed, and this could assist the personnel in charge of selection and acquisition in determining the age of publications to secure. The points out whether to secure current or older materials. This was arrived at using the year of publication provided for each material cited.

The analysis of the citation made in Nigerian Journal of Economics and Social Studies should be useful in selecting materials for the social science libraries. This is because the aim of any library is to devise means of satisfying the needs of the readers. Changes in patterns of citations have important acquisitions implications for libraries with social science collections.

Journals cited by authors were ranked in order to determine their frequency of usage. This is a very important information that can assist the librarian in deciding the journal titles to acquire.

Citation approach provides a valuable tool for collection development since its main strength lies in the literature approach in a library's problem in handling subject literature.

Citation frequency points out the most important articles because the frequency indicates how articles are cited.

The Nigerian Journal of Economic and Social Studies was chosen for the study because it embraces the social sciences and it contains current information. It has a very wide coverage. Furthermore, they journal used for the study is published quarterly, so the tendency of it publishing current information in the field is high.

1.7 Assumption

This study was conducted based on the following assumptions:

1. Citation represents use of an information source.
2. Frequency of a citation is a measure of the significance of the cited information source.

1.8 Scope of the Study

This study examines the Nigerian Journal of Economic and Social Studies in order to determine changes in its citation patterns for the year 1972, 1975, 1978, 1987, 1984 and 1987. The finding arising from the study apply to the years studied. It specifically examines changes in citation patterns by form, age, subject, language, journal titles and the availability core literature in the libraries of centre for Social and Economic Research in Nigeria. This finding of the study therefore apply for the years studied.

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CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

This chapter reviews the literature related to citations. It examines works which are related to the present one to create the means of comparison in order to establish some relationship. The following were discussed in this chapter: conceptual framework, citation analysis, citation frequency, citation studies, format of publication cited, age of citations, journals cited, language of citations, subject of citations and the application of the Bradford"s Law

2.1. Conceptual Framework

Citation analysis has attracted much attention and many writers have expressed general ideas concerning what citation analysis is all about. Some are of the opinion that citation gives information about the source the writer of a work has used for the compilation of his or her work and that it has nothing to do with the intellectual content of the work (Friis, 1955).

The opinion is also held by some authors that citation frequency is an indicator of how often a work is being used by others in the preparation of their own work (Pan, 1978: 207) (Subramanyan, 1980:349).

In the course of writing about citation analysis, some writers made an attempt at either defining or explain what citation analysis is. Among them is Stevens, (1953) who defined citation analysis as "the detail study of the literature used by researchers in a given field usually through citation analysis of references in selected Journals, indexing and

abstracting services or the holding of the libraries". The impression created by this definition is that citation is about the references used in producing a work. Martyn (1975:290) defined citation analysis as the "analysis of the citation or reference which form part of the scholarly apparatus of communication". Garfield (1973:5) wrote that "Citation are the formal, explicit linkages between papers that have points in common".

2.2.1 Citation Analysis

Citation analysis as deduced from the work of Weinstock (1972:241) is that it makes provision for a number of interesting and useful information into the network of journals that serves as the primary formal communication medium of science.

Authors cite works of others for these reasons :

1. Paying homage to pioneers.
2. Identifying methodology, equipment etc.
3. Giving credit to related work.
4. Providing background for reading
5. Correcting one own's work
6. Correcting the works of others
7. Criticising previous works
8. Substantiating claims
9. Alerting researchers to forthcoming work
10. Providing leads to poorly disseminated and poorly index work.
11. Identifying original publication in which an idea or concept was discussed.

12. Authenticating data or classes of facts.

13. *Disclaiming work or ideas of others.*

14. Disputing priority claims of others.

However, Friis, 1955;12) indicated that in the actual sense citation has little to do with the content of a document, thereby pointing out that it is only the analysis of the materials used by authors. Citation analysis is based on the information provided by references in source journals. This is to saying emphatically that references consulted by authors are Journals alone, but could be any form of publications.

Citation analysis can be used as an aid in identifying serial titles which constitute the core of periodicals for different subject areas. Determination of the core journals was possible due to the reason that cited journals were analysed in order to get the frequently cited journals by authors, then the ranking of the Journals were done. Information provided by these findings might be a useful guide to the librarian in deciding the composition of serials concerning subject areas and also giving an insight relating to journals to be acquired.

Through the process of citation analysis it will be possible to determine subjectinterrelationship between disciplines. Information of this nature will serve as an aid to the librarian in identifying journals from other subject areas which might likely be of high interest and value to the patron of the library. This will assist the librarian in deciding whether to separate or bring together collections of the library in the subject which the library lay emphasis on and other related subject fields.

Since most citation analysis studies make provision for the analysis of language of citation, it is an added advantage to the librarian in that it can assist him in deciding whether to subscribe to journals or literature in different languages.

Furthermore, frequency of citation of a work can indirectly means that the work contains some valuable informational content. If the work is not relevant, definitely others will not make references to it in their own work. Pan (1978:25) made the observation that ranked list of journals based on citation are liable indicators for journal usage in libraries.

Citation is a valid indicator of literature use. Subramanyan, (1980: 345) explaining the validity of citation frequency sees it as being dependent on some factors which include frequency of publication, number of citable source items in each issue, its coverage in secondary periodicals, accessibility to users, language of publication, reputation of authors and dissemination of reprint by authors.

Citation is a very important tool in determining the importance of a work Virgo (1977) shared the opinion. It was indicated that the more significant papers on the average are cited in the published literature repeatedly than papers which are not taken to be of much importance. The finding point out that citation frequency is useful in predicting the more significant papers.

2.3 Review of Studies

Review of studies tends to create the means of bringing related works together and comparing them with one another. This was emphasized in the work of Weinstock (1971:16) who stated that it is important to refer to earliest works which have been written

before and are related to one's theme of scientific tradition of writing is to be maintained. According to him, scientific tradition requires that when a reputable scientist publishes an article he should refer to earlier articles which relates to his theme. It is important to refer t works written before in order to be in position to compare with other works.

2.3.1 Use of Citation Analysis

Martyn (1975:290) pointed out in his work that citation analysis provides the means of comparing one's work with others thereby creating means of correcting works produced by another person. It also helps in making the criticism of related works possible and also alerting researchers about forthcoming works, authenticating date and classes of facts and disputing priority claims of others.

Having considered the literature of Economics, Fletcher, 1972:283) stated in his conclusion that the field is a journal-centred subject. This is due to the fact that most of the materials used by economists wee analysed according to the form of publication. From the analysis, it was gathered that journal tops the table. It was clear from the findings that out-dated materials are normally consulted in the process of compiling a work by researchers. This fact was reflected in this study, due to the reason that the form of publication and age analysis was determined.

Friis (1955:12) pointed out that citation is only the analysis of the materials used by authors in writing their work. He pointed out in the work that citation studies provide the librarian with objectives approach in identifying some of the properties of the subject literature that one is dealing with. He explained that the source of citation is normally

references or footnotes in source journals or other type (form) of publications.

In the study of Baird and Oppenheim (1994:2) titled "Do citations matter?" stressed the importance of citation indexing to information scientists. It was pointed out that it is the first example of a commercially successful automatic indexing technique. Citation indexing gives insight into the way of science and also that citation indexes are.tools that information scientists normally exploit when they carry out searches for information. The history of citation indexes was highlighted.

Synder et al 91995:75) pointed out that citation analysis is a major tool for the evaluation of research programs. It was indicated that citation serves as a kind of language system which is of great flexibility than ordinary language. Citation analysis gathering from their study was initially utilized in the field library and information science before it was later been applied to other disciplines apart from library and information science.

2.3.2 Citation Frequency

Subramanyan (1975:367) concluded from his study of the Criteria for Journal selection that citation frequency points out how a particular periodical has been used in a particular situation but that may not necessarily say anything about the content of the work. Investigation carried out in this research is related to that of Subramanyan, (1975) because periodicals cited wee analysed in order to determine the core journals. In this process frequency with which are cited was determined.

Garfield (1973:5) made it clear that "citation frequency is a measure of research activity or of communication about research activity". He explain further hat citation of a particular work or works is not to quantify how important that work is because citing a work does not indicate the significance of a work. There are some authors that share this view, there include Subramaanyan (1975) and Friis (1955).

Martino (1971:146) compared citation frequency with the quality of the work. From the comparison, he was able to conclude that the way in which a work is being cited correlates with the quality of work. Virgo (1977) is also of this view and it is pointed out in the work that the most significant works are cited repeatedly. This view can be taken to be of high values judging from the fact that of a work does not contain valuable information others will not make references to them.

Cole and Cole (1974:32) observed that only few scientists produce works that could later form the basis for further inquiries. It is also rather difficult for an important work to be left uncited especally when scientists do not bother to cite a work which is not of any importance to the work at hand. Their findings are related to that of Martino (1971) and Virgo (1977) who pointed out that citation is a mark of the significance of the work that is being cited repeatedly.

2.3.3 Citation Studies

Wood and Bower (1969:108) in their study of the 'Use of social science periodical literature came out with the findings that social scientists make use of periodical literature in other fields such as periodical literatures in education, management, sociology etc,

thereby showing the interrelationship of the field with other subject disciplines. Both Wood and Bower (1969:108) Fritizigibons, 1980) shared the vies that social sciences is interrelated with other fields, example of such fields were pointed out in the work of Wood and Bower, (1969:108). It is pointed out that citation analysis can be of help to librarians in building up their social sciences collections due to the fact that the subjects made references to by authors can help in deciding on which area to cover and those to be left out.

Baird and Opponheim (1994) indicated in their work that citation studies can be used in the evaluation of scientific research and as a science management tool. It was stressed that citation studies have also been used to access scientists themselves. They did some criticism on the importance of citation. It was mentioned that citation studies reduce citations to only mere numbers but the conclusion was made that citing a work means the paper is important and that high citation counts mean a statistical likelihood of high quality research.

Considering the work of Bush et al, (1974:123) on the comparison of citation ranking of journals in economics with another study using expert opinions to obtain similar ranking, they came out with the finding that the two rankings were remarkably close. Citation stud can be taken to be an objective means of Journal ranking.

Afolabi (1975) used bibliometric method in the analysis of the literature of librarianship in Nigeria. The finding of the work pointed out that journals and books form the bulk of the citations analysed. Thereby stressing the significance of journals and books publications.

Stevens (1953) in his work on bibliometrics identified two basic techniques of analysis, the first involving the counting and analysing the number of publication in a particular field for the purpose of examining some basic characteristics like the number of research in different countries and the number produced at a specific period. The second is the citation analysis of references in selected journals.

Earle and Vickery (1969:125) in their work on "social science literature in the United Kingdom (UK) as indicated by citation" discussed the form of publication, subject, language and date of publication. Their findings indicated that periodicals are used in the social sciences but the rate is less when compared with Sciences and Technology. The reason given for this was that there are relatively fewer periodicals in the social sciences.

Ekere (1980) in the citation study of the Journal and Documentation, identified the properties of the literature of information science. Having done this, he found out that information science has completed transformation from soft science to hard science.

Fritzigibons (1980:238) in her work considered a lot of studies covering psychology, sociology, library and information science, Education and political science. She revealed vital information on the characteristics of the literature, that is, the form language and age. It become evident from the study that social scientists use materials other than materials in the subject fields. Wood and Bower (1969:108) also pointed out in the findings that the disciplines in which materials were cited, thereby stressing the interrelationship of the social sciences. Mahapatra (1994:41) made the discovery from his work that books were more cited than journals and other formats of publication. It was revealed that there were changes in the manner of citations of both books and journals, but the rate at which books and journals were cited were correlated.

2.3.4 Format of Publications Cited

The form in which the literature cited is published is of great value to librarians in taking decisions on which type of library materials to lay more emphasis on in the acquisition of their materials. The need to consider the form of citations is to be able to determine which form of publication is required mostly by the users of the library stock.

Earle and Vickery (1969:125) in their work made the following discoveries concerning the format of publications;

Books: 12,178 representing 20% of the total citations

Periodicals; 39,528 representing 60% of the citations

Other forms; 8,128 representing 15% of the citations.

They compared social sciences with science and technology. It was found out that for social sciences, books accounted for 46%, periodicals 29% while other forms takes 14%. For science, books accounted for 12% of total citations; periodicals 32% and other firms takes 6%. For technology, books takes 14%, periodicals 70% while other forms takes 14%. From the analysis it was evident that periodicals are cited heavily in the sciences. The reason given for this is that, only few periodicals in the social sciences are available. The works of these authors are related to the present one because they are both social sciences.

Wood and Bower (1969:108) in the use of social science periodical literature discussed sources of references in order to make the analysis of format of publication. It was discovered that, abstracting or indexing had 25.1%, Non periodical articles is with 22.5%, private or library index 5.7%; verbal communication is with 13.0% while others

accounted for 12.4%. From the findings, periodicals articles are mostly the course of references.

In the case of LeBoire and Halperin (1978:172) they found out from their work that books account for 42.9% of total citations; journals 23.2%; unpublished materials 21.4%; annual report 3.0% dissertation 2.0% while newspapers and magazines accounted for 2.0%.

Omoruyi (1978) in the analysis of references to articles n selected social science these dissertation submitted to the University of Ibadan during the year 1965 to 1970. He observed that the Nigerian Journal of Economic and Social Studies was the most cited journal. His study is related to the present work in that it was a citation analysis of social science theses.

Ajayi (1989:18) discovered that books were the most cited form of publications with 399 citation, representing 48 percent of the total citations. This was followed by journals with 260 citations which represent 31 percent. This is in line with that of Wood and Bower (1969). The study is relevant to the present one in that it is an earlier citation study of the same journal being examined in this study.

Afegbua (1992) from his study on bibliometric study of sources cited in the past graduate law theses at Ahmadu Bello University, Zaria discovered that books were the most cited form of publication with 6,497 citations representing 90.16 percent. Journals had 300 citations representing 4.92 percent. This study is related to the present one in that law is a social science subject.

2.3.5 Age of Citation

Age analysis is significant in the study of citation analysis in order to be in a better position to determine the recency or retrospectiveness of materials which are frequently used by social scientist. This will show how literature used by authors spread over a long span of time. Some writers are of the view that social scientists make greater use of older literature than the natural scientist and technologist. Authors that share this view include Fletcher (1972:283) and Guttsman (1966:186).

Wood and Bower (1969:108) discovered from their study that recent journals were more used that old ones, and it was stated that requests were made for only recent literature. On the other hand, LeBoire and Helperin (1978:172) pointed out that it depends on the requirement of the research that will determine the age of material that will be required. They mentioned that researchers preparing for historical dissertations will require materials much older while those writing about automation will need to cite very recent information owing to the fact that innovations are made about the subject from time to time.

Earle and Vickery (1969:125) in the study of the use of social science in the united kingdom observed that most materials used were about seven years old (7 years). The finding agrees with that of Wood and Bower (1969:182) that says half-life (years) of prodicals in all objects is about the sources, that is between 3 to 7 years.

Omoruyi (1972) took into consideration the actual usage of references by deducting the years in which the theses or dissertation was written from the year of publication of the journal. The average age derived from the method used for citations was nine years

(9 years). Hafner (1977:19) discovered from his work that physiology is highly dependent on recent literature. Similar analysis done by the above mentioned two authors was carried out in their research work by analysing the age materials used by authors who have their articles published in the Nigerian Journal of Economic and Social Studies. The were analysed in order to determine the recency or retrospectiveness of materials used.

It was discovered from Ajayi's (1989:28) work that social scientists utilise older materials in their work. All materials reviewed are related t the present work because they are citation studies on social studies.

2.3.6 Journal Cited

The list of journals cited was provided and this can assist in determining which journals are used mostly by social scientists. With the analysis of the cited journals, it easily indicates the most used journals which assist in determining the core-journals. The list of core journals might be useful in a library with limited bridgets for current acquisition.

Leith (1969:143), in has study of the analysis of journal articles collected by a Radiation and cell-Bidogist, analysed the journal references and the number of each journal title. It was counted in order to determine its frequency, from this he came out with the ranked list of 30 most frequently cited journals. The conclusion made was that such list of the most frequently cited journals will be valuable to a library that is building up its journal collection.

Hirst (1978:171) made the attempt of determining core journal. He was able to determine the core list of journals citation. From this, he generated what he termed as "Discipline impact factors". It was pointed out in his conclusion that it is more accurate and not time consuming to use this method than other bibliometric techniques.

In using the Bradford -Zipf bibliograph Ajayi (1939"30) discovered that four journal titles form the core of journals cited. These Journals are, Nigerian Journal of Economic and Social Studies, Journal of Political Economy, Journal of finance, and Review of Economic and statistics. Works reviewed are social sciences which are related to the present work.

2.3.7 Language of Citations

The analysis of the language of cited works enable the librarian to know the language of information sources. Such information aids in decision making concerning the appropriate materials to be provided in order to satisfy the needs of users.

After studying the languages of the cited literature, Wood and Bower (1969: 108) discovered that social scientists made little use of foreign language materials if compared with the rate at which natural scientist and technologist utilize foreign language literature. From their analysis, it was reported that 98.4 percent of the materials used by social scientist were in English.

Broadus (1971:236) studied the literature of the social sciences through citation analysis. He came up with the finding that English language informational sources was the most cited. It could be concluded therefore that English speaking researchers do not make

much use of materials in foreign language. Aiyepeku (1973:53) in his study of the language and format of Geographical literature, found out that English accounts for 77.4% of the citations while French had 8.8% with German scoring 8.2%. This is a clear indication that materials published in English language were the most cited sources. This study is relevant to the present one in that it is citation analyses of social sciences.

Hafner (1977:19) discovered that literature cited in physiology were mostly in English. He cited a journal to buttress his findings Acta physiologica Scandanavica. His findings revealed that 0.34% of the materials were published in Danish, 2.04 publish in Dutch while 61.35% in English. Ajayi (1989:23) shares the same view from her finding with that of Hafner 91977). It was pointed out that publications cited were published in English language. Afegbua (1991:70) is also of the view that English language materials like Arabic and French were also cited. He stated that English was heavily cited due to the fact that it is the official language used in the country. The present study will also examine frequency of citations of various languages.

Hakanen and Wolfram (1995:209) in their study of the citation relationship among international mass communication journals came out the conclusion that top citing journal are those of English language which most of them are published in English speaking countries. It was observed that non-english language journals were not cited like journals published in English language. It was pointed out from their study that, United States journals were the most cited. There is a relationship between the work and the present one in that both topics are social science discipline.

2.3.8 Subject of Citations

Citations can also be analysed according to the subjects they treat. The aim of this is to identify subjects cited by authors while doing their research. Earle and Vickery (1969) from their work found that social sciences accounted for 22.8% of the subjects cited; sciences 44% with technology having 32%.

Stevens (1953) stated that the literature of the social sciences and humanities exhibit a great dispersion of publications in different forms on different subjects and comparatively of a long span of time. This pattern will be examined in this study in order to compare the findings with that of Stevens.

From the study carried out by Ajayi (1989:21) Economics was discovered as the most cited subject followed by Geography, Agriculture and sociology. Subject of citations will be a major consideration in this study.

2.4 Application of the Bradford's Law

Law of scatter tends t point out specifically the pattern of journal citations in different subjects. It shows graphically how well distributed journals cited spread across all fields. According to the law formulated by Bradford.

> If the journals containing articles on a given subject are arranged in descending order of the number of articles they carried on the subject the successive zones of periodicals containing the same number of articles on the subject form the simple geometric series. $1:n^2:n3...$

Bradford called the first such zone the nucleus of periodicals particularly devoted to the given subject. Clearly the nucleus is arbitrarily defined because it depends on the number of articles chosen to effect the division of periodicals into zones. Many writers have applied this law in their studies. Brookes (1977:953) indicated that Bradford's law of dispersion seems to offer partial solution to the present problem posed by information explosion which constitute a great problem to libraries. According to Brookes he is of the view that the Bradford's law makes selection of materials carry for libraries in the sense that the important materials to user are easily determined from the core zone. This could be used by the library when the need to acquire new materials arises. His statement (Brookes) could be held to be true in that it is throug citation analysis that the most important materials will recur in most articles, thereby making it an efficient tool in selection and acquisition of library materials Virgo (1977:415) also shares this view.

Worthern (1995:19) applied the Bradford's law to a sample composed of 326 publishers and 770 monograph listed in the National library of Medicine's current catalogue. The samples conformed to the Bradford's law and the authors concluded that the law is not confined to political or economic boundaries. An important implication for acquisition librarian was drawn to the effect that it is possible to determine where the bulk of the literature is being produced and concentration those publisher's lists when new purchases are being considered. Equipped with this information, the acquisition librarian will know the right channel to contact when acquisition of new title are to be made.

Pope (1975:207) used the journal citation in a bibliograph on information science and technology for his study, he identified ten journals as "core". The bibliography was found

to be 72% complete in terms of journals and 83% complete in terms of articles. he suggested two further uses of the Bradford distribution as ranking subject in order of breadth and determining policy for collection development.

Goffman and Morris (1970:922) applied the Bradford's law to the circulation of periodicals in a medical library. They identified core of journals, which assist the library in knowing the needs of the users and on they also identifies the nucleus of users which seems to implies that the journal is being consistently used by the users. And they stated that if the budget allows, those journals that form the nucleus should be purchased by the library continuously.

2.5 Summary

Citation analysis is a valid indicator of the use of literature, it serves as a guide concerning the nature of information sources to acquire in the library.

Analysis of the age of materials indicates the spread of the open of the time of sources cited. That is, it will point out how materials used by social scientists spread across the years. Such information is important in deciding whether to concentrate library acquisition of information resources on current or retrospective materials. Subject analysis makes provision for deciding the interrelationship of a subject and this will create the avenue of knowing which subject are of interest to researchers in a field and efforts will be made in making necessary means of providing the materials. Form of publication analysis gives an insight into the formats of literature used by researchers. The form of materials frequently used may be books, journals, report or dissertation. This information

guides the librarian in knowing which form of publication guides the librarian in knowing which form of publication to concentrate on in his acquisition of information sources. Analysis of journals cited will make it possible to determine core journals in a subject area and those journals that form the core will be reflected in the acquisition of informational sources. Knowledge of the language of citation will enable the Librarian to be aware of the language of information sources to acquire and to decide whether there is the need to make provision for literature in foreign languages.

Citation analysis provides valid information concerning the relevancy of a work, since works that have made significant contribution cannot be left uncited. Cole and Cole (1974:32).

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CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter describes the research, design adopted in conducting the study, instrument for collecting data, the procedure for collecting and analysing data. The characteristics of the material cited were determined from the analysis of the citations. The format, periodicals cited, core journals age, subject cited and language of citations were treated in this chapter.

3.2 Research Method Adopted

The research method adopted in the documentary research method and comparative analysis method. It involves gathering data from the Nigerian Journal of Economic and Social Studies for the years 1972, 1975, 1978, 1981, 1984 and 1987. Data collected were spaced in order to be able to determine if changes occurred in citation pattern of the Journal under study.

Price index was used in determining age of materials cited. The idea behind this context of citation is that a subject is said to be hard science if 43 or more percentage of citations made in a given year dates back to the lst five years. Where citations fall between 21% to 42%, the subject can be considered as soft science. Furthermore, where citations to the last five years are below 21%, then the subject is considered as non-science subject.

3.3 Instrument for Collecting Data

The instrument used for collecting data is documentary evidence. Data were collected from the issues of Nigerian Journal of Economic and Social Studies published in each of the following years, 1972, 1975, 1978, 1981, 1984 and 1987. This instrument is widely used for citation studies.

3.4. Procedure Used for Collecting Data

Citation that appeared at the end of each articles were examined and entries were made on a 5 and 3 inch slip. The frequency with which each work appeared was noted; whether the cited work is a journal, book, thesis, dissertation, report, etc. When a work is discovered to be a journal, it was noted down a journal and the frequency with which the title appears was utilized in determining journal title(s) that form the core journals.

The language of materials, subject and date of publication were recorded the way they appear in the title of the cited work.

The data collection took one month and all the needed information that is the language subject, format of publication, journal titles and year of publication were gathered from the citations as they appear at the end of each article in Nigerian Journal of Economic and Social Studies.

3.5 Procedure for Analysing Data

Slips were sorted out to reflect citation patterns on the following characteristics:

1. Format of publication cited.
2. Age of publication cited

3. Subject cited
4. Language of citations
5. Journals cited

The data were analysed as follows:

1. Format: Citations were examined thoroughly to determine whether the cited work is a book, journal, conference paper, report, thesis, dissertation etc. The unprint provided for each citation was utilized in dividing the format for each entry. The way in each entry was numbered was used in taking the decision whether it is a journal. For reports, if the word 'report' appeared in the title then it was recorded as report. The same manner was used in determining the format for all other citations.

2. Age of Publication cited

The date of publication made available in the imprint was utilized n determining the age of publication. This was then arranged from the oldest year downwards to the most recent Analysis of the age of citations created the means of determining the recency or retrospectiveness of the materials used by social scientists. This approach is similar to that of Hafner (1977:25) which showed that Physiology is highly dependent or recent literature, that is materials published at most 10 years to the time of citation. Price index was used in determining whether the material cited is recent or old. Using the price index, the last five years of the cited years were considered. The citations for the last five years were summed up and

divided by the total number of citations multiplied by a hundred. The result derived was used in deciding whether the materials cited are old or recent. This was performed for all the years considered for the study.

$$\text{Price Index} = \frac{\text{Number of citation to the last five years}}{\text{Total number of citations.}} \times 100$$

0% - 20%	21% - 42%	42% above
Archival or Non-science materials	Soft Science or Older material	Hard Science or Current materials

3. All publications were analysed in order to determine the subject of citations. This was carried out to indicate the subjects used by social scientists apart from the subject background.

4. Citations were analysed to determine the language. The contribution of each language was made clear through the analysis.

5. Journal cited

As aforementioned, citations for journals were determined by the sequence in which they were numbered. After this, all citations identified as journals were coordinated together and sorted out according to individual Journal title. This was done to decide frequency with which each title appeared was arranged from the highest to the lowest. The Bradford's distribution was applied to the list to determine the core Journal title.

Bradford's distribution was applied since it is the most used method for analysing subject literature, specifically at arriving at the core literature. Paradford's distribution is the phenomenon of scattering of articles of a given subject in several periodicals.

The phenomenon was first identified by S.C Bradford while carrying out a study on the periodicals that would be of importance to his patrons in the fields of applied geophysics and lubrication. He termed the formulation as the law of scattering; which states that:

> "If the journals containing articles on a given subject are arranged in descending order of the number of articles they carried on the subject the successive zones of periodicals containing the same number of articles on the subject form the simple geometric series $1:n^2:n3.....$"

Bradford called the first such zone the nucleus of periodicals particularly devoted to the given subject. Clearly the nucleus is arbitrarily defined because it depends on the number of articles chosen to effect the division of periodicals into zones. This law was represented graphically by Bradford which is represented by figure 1.

Brooks (1969:953) provided a mathematical formulation of the Bradford's law. It states that:

> "If scientific journals are arranged in order of decreasing productivity of articles on a given subject, they may be divided into a nucleus of periodicals more particularly devoted to the subject and several groups or zones containing

the same of periodicals in the nucleus and succeeding zones

will be as 1: n: n^2....."

Bradford also drew a graph to illustrate the law represented by Fig 1. Along the x axis he ranted the periodicate 1,2,3.....n in decreasing order of their productivity of papers relevant to the given subject on a logarithm scale; along the y axis he marked cumulative total of papers R(n). When R(n) is plotted on log paper, a graph similar to the graphic formulation of Bradford's law will bearrived at. As a result of the resemblance between the Bradford's law and Zipf's bibliograph, the law is often times referred to as the Bradford - Zipf bibliograph. Several studies have shown that there is deviation in the Bradford -Zipf bibliograph. The deviation shown in Bradford's original graph is usually downwards but in few case upward deviation is reported. The deviation is termed Groos drop, first identified by Groos (1969) This means that when the information from the distribution has been plotted on a graph paper, it is normally a straight lie but it gets to a point where the line stopped being straight. That bank is the point of deviation. Two reasons were given for this droop:

a That all the phenomena conform to simple mathematical laws and the deviation of the plotted graph from the linear indicates that the search was not complete and that further searching would eventually restore the sagging empirical graph to strict linearity.

b. That Bradford's law is correct as far as it goes and that no matter how painstakingly and exhaustively one searches, the Gross drop can never be completely eliminated.

The importance of the Bradford - Zipf distribution lies in the fact that;

i. it can be used in determining the journal titles that form the "core" journal of a specific subjects considering the contribution of quantity of papers.

ii it is useful in planning the acquisition of periodicals in a particular order. Bradford's laws in this study is made to the citations in journals only.

3.6 Hypotheses

All the three hypotheses were tested at 0.05 level of significance using the chi-square. this method was chosen because the hypotheses sought to determine differences among the variables studied. The hypotheses are listed below":

1. There is a significant difference in the frequencies of format of publications cited in Nigerian Journal of Economic and Social Studies.
2. There is a significant difference in the frequencies of subjects cited in Nigerian Journal of Economic and Social Studies
3. There is a significant difference in the frequencies of the language cited in Nigerian Journal of Economic and Social Studies

3.7 Summary

The research method used for the work was highlighted earlier on in this chapter which is the documentary research method and comparative analysis. The data was collected mainly in Nigerian Journal of Economic and Social Studies.

Citations were analysed to determine the characteristics of materials used by

social scientists. The finding of the study would be of importance because it would assist in getting to know the nature of materials to provide for users. Statistical method employed in analysing the data are the percentage and chi-square statistical method.

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CHAPTER FOUR

ANALYSES OF DATA INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter analysed data on the characteristics of the cited literature in the Nigerian Journal of Economic and Social Studies. The characteristics examined include; the format, journal cited, age of materials, language, and the application of the Bradford's Law. In addition, subjects of the articles cited were considered. The journal identified as the core-journals were checked to confirm their availability in centres for Social and Economic Research in Nigeria.

4.2 Analysis of findings

4.2.1 Bibliographic Format of Citations

From the analysis of the years considered, Table 1 presents the pattern of citations of the bibliographic formats of publications

Table 1: Format of cited works (Published and Unpublished)

	SOURCE YEAR					
Format	197	1975	1978	1981	1984	1987
1. Book	59(42.44)	195(58.38)	250(46.55)	399(49.68)	148(50.86)	184(52.27)
2. Journal	51(36.39)	89(26.64)	211(39.29)	260(32.37)	92(31.62)	92(26.13)
3. Other forms	29(20.9)	50(14. 9)	76(14.1)	144(17.9)	57(7.5)76	
Total	139(99.73)	344(99.92)	537(99.94)	803(99.95)	291(99.98)	352(99.9)

Table 2: The Cited formats of Publication (Overall years)

Format	Frequency of Citation	Percentage
1. Book (Monograph)	1235	50.3
2. Journal	795	32.4
3. Other forms	423	17.2
	2453	99.9

From the data analysed that monographs and journals were the most cited. When the source years were considered separately, monograph tops the table. In 1972 monograph was the most cited with 59 citations of the total 139 citations. This represents 42. 44 percent. Considering format of citations for 1975, monographs had 195 citations representing 58.38 percent. In the case of 1978, monograph had 250 citations which accounts for 46.55 percent while monograph had 399 citations in 1981 edition of the journal. This represents 49.68 percent. For 1984 citations, monograph had the highest with 148 citations and this accounts for 58.86 percent of the citations. For 1987 the same format was maintained with monograph having 184 citations representing 52.27 percent. Through the years considered for the study, it was discovered from the analysis of the data that journal is the second most cited format of publication.

Considering the whole years used for the study, it was evident that both journals and books (monograph) were the forms of publications mostly used. Of all the 2453 citations, books (monograph) had 1235 citations representing 50.3%, journal articles had a total of 795 citations representing 32.4%.

The finding conforms to the finding of Earle and Vickery (1969:125) in the study

of social science literature in the United Kingdom. Wood and Bower's study (1969: 108) has a similar result while studying the use of social science periodical literature in the United Kingdom. It was discovered from their study that periodical articles account for 25.1 per cent of the total citations while non-periodical articles had 22.5 percent. From thir findings, periodical articles were the most cited source of reference. In the findings of Omoruyi (1978), it was reported that journals were more heavily cited than other information sources. This might be because books are not available and unaffordable.

Still using the entire data analysed, other forms of publications had 423 citation representing 17.2 percent.

From the findings of this research work, monographs and journals were the most utilized sources by authors who had their articles published in the issues of the journal considered for the study.

There is consistency in the manner in which both monographs and journals were cited. This is because these two forms of publication had the highest number of citations throughout the years considered for the study. In other words, there are no changes in the format of citations. This is evident from the analysed data which are provided in Table 1 and 2.

It is therefore evident from the analysis that the format of literature cited or used by researchers over the years remained unchanged. That is, they relied heavily on monographs and journals as their main source of gathering information for their publications.

4.2.2 Age Distribution of Citations

It is asserted by some authors such as Guttsman (1966:186) that "Social Scientists make greater use of older literature than natural scientists and technologists". Table 3 and 4 provides the details of the age of citations for each year considered in this study.

From the analysis of the years considered for the study, the oldest paper cited was published in 1859. There was a total of three papers published before 1900 which were cited by authors in this study.

Having analysed the age of materials cited, social scientist depend heavily on sources published within the last five years. This implies that they do not utilize current informational materials as a source of reference. They rely on old materials for the information required. This was arrived at using the Price Index where by the last five years of the year of citing source were considered. This was performed for all the journals published in the years considered for the study. The result derived is that the percentage falls within the range of soft science (that is between 21 to 24 percent) which represents old materials going by the Price Index diagram.

For the year 1972 (citing year), citations cited in the last five years (1967-71) accounted for 38 citations representing 40 percent of the total 113 citations. This indicates that materials consulted here could be categorised as soft science. The 1975 (citing year) edition shows that materials cited in the past five years accounted for 101 citations representing 34.7 percent while in 1978 materials cited in the last five years sum up to 106 citations which represent 5.28 percent. In the case of 1981 the number of materials cited in the last five years was 82 citations and this represent 25.23 percent. For 1984 and 1987

materials cited in the last five years represents 25.10 percent and 19.5 percent respectively. It is only in the case of the age of materials cited in the last five years in the 1987 edition of the journal that the percentage of 19.5 was arrived and this falls within the range of archival or non-science materials.

From this study, the conclusion could be reached that social scientists make high use of soft science, that is to say, they depend on older literature than natural scientists and technologists. This view is held by Guttsman (1966).

The pattern of citations considering the age of materials cited does not show changes over the years. The percentage of all the materials cited considering the last five years of citations falls within the same range. From this it could be concluded that Social Scientists depend heavily on soft science literature which is normally materials that are fairly older.

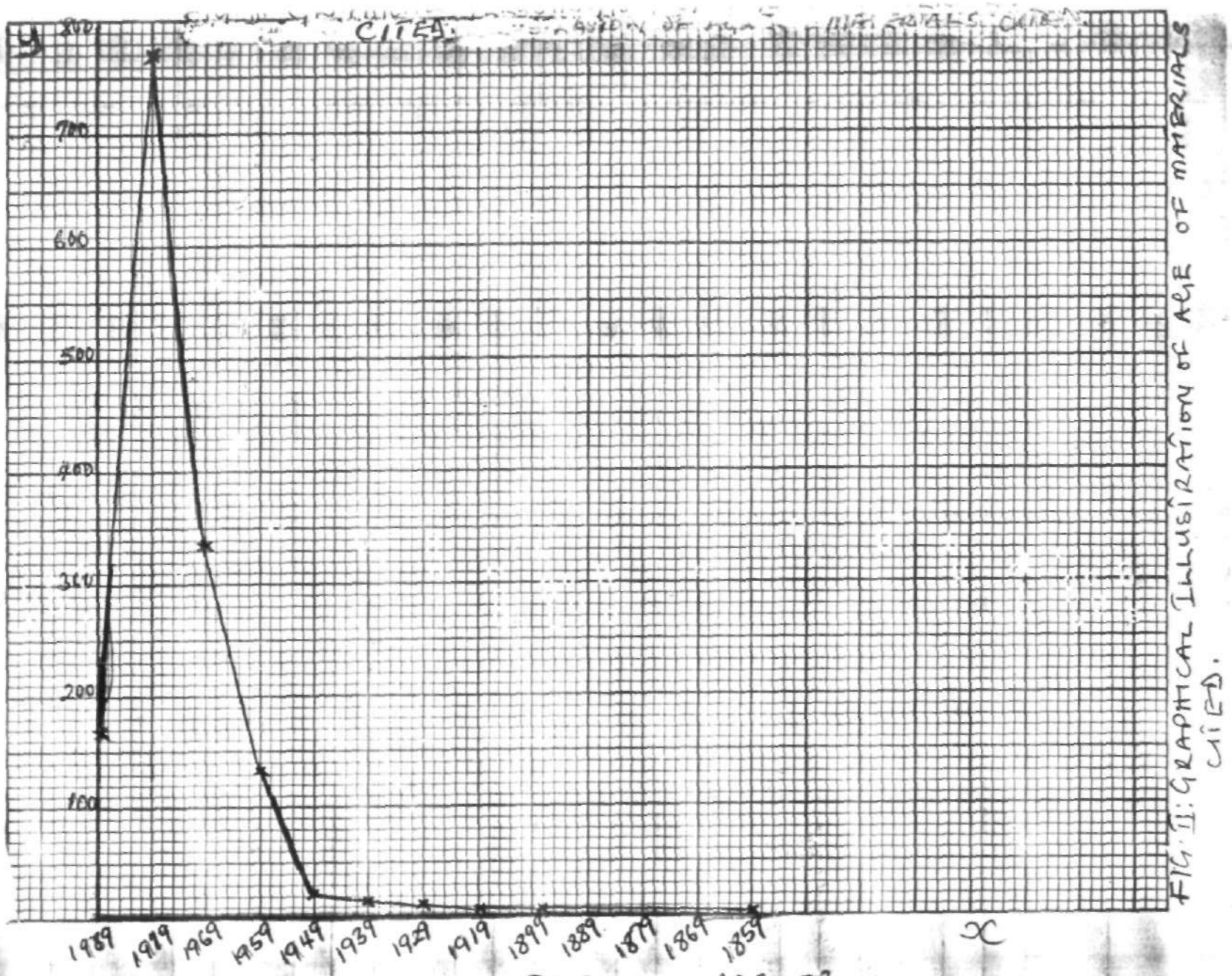


FIG. II: GRAPHICAL ILLUSTRATION OF AGE OF MATERIALS CITED.

FIG. II : GRAPHICAL ILLUSTRATION OF AGE OF MATERIALS CITED

Table 3: Age of articles cited

Yr. of cited source	Yr. of citing source 1978	Yr. of cited source	Yr. of citing source 1975	Yr. of cited source	Yr. of citing source 1971	Yr. of cited source	Yr. of citing source 1981	Yr. of cited source	Yr. of citing source 1984	Yr. of cited sources	Yr. of citing source 1987
1902	1	1924	1	1913	1	1937	1	1900	1	1859	1
1945	1	1925	1	1936	1	1943	1	1921	1	1882	1
1950	3	1933	1	1937	1	1946	2	1945	1	1920	1
1953	1	1935	1	1946	1	1950	3	1948	1	1921	1
1954	3	1940	4	1947	1	1951	4	1950	3	1926	2
1956	2	1942	1	1948	4	1952	1	1951	4	1933	1
1957	2	1943	1	1949	2	1954	1	1952	1	1934	2
1958	3	1944	2	1950	3	1955	3	1953	1	1943	2
1959	2	1953	1	1951	1	1956	6	1956	4	1947	1
1960	2	1954	2	1952	1	1958	1	1957	1	1949	1

Yr. of Cited Source	Yr. of Citing Source 1971	Yr. of Cited Source	Yr. of Citing Source 1975	Yr. of Cited Source	Yr. of Citing Source 1979	Yr. of Cited Source	Yr. of Citing Source 1981	Yr. of Cited Source	Yr. of Citing Source 1984	Yr. of Cited Sources	Yr. of Citing Source 1987
1960	3	1955	2	1959	6	1961	7	1957	5	1949	1
1962	6	1965	2	1955	3	1962	6	1959	8	1954	2
1963	6	1957	15	1956	5	1963	8	1960	4	1955	2
1964	7	1958	7	1957	6	1964	14	1961	7	1956	2
1965	10	1959	4	1958	11	1965	10	1963	5	1957	1
1966	12	1960	1	1959	6	1966	11	1964	5	1958	4
1967	6	1961	10	1960	9	1967	10	1965	5	1960	3
1968	5	1962	3	1961	5	1968	12	1966	5	1961	2
1969	6	1963	15	1962	9	1969	12	1967	4	1962	5
1970	11	1964	6	1963	13	1970	11	1968	7	1963	1
1971	10	1965	15	1964	17	1971	7	1969	8	1964	6
1972	5	1966	20	1965	17	1972	11	1970	10	1965	2
		1967	12	1966	22	1973	9	1971	8	1966	11

Yr. of cited source	Yr. of Citing Cited Source 1973	Yr. of Citing Cited Source 1974	Yr. of Citing Cited Source 1975	Yr. of Citing Cited Source 1976	Yr. of Citing Cited Source 1977	Yr. of Citing Cited Source 1978
1968	20	1967	21	1978	9	1967	82	1967	3
1969	14	1968	92	1973	23	1968	13	1968	16
1970	18	1969	22	1974	21	1969	12	1970	22
1971	27	1970	31	1975	29	1970	19	1971	16
1972	17	1971	20	1976	24	1971	13	1972	20
1973	17	1972	31	1977	20	1972	10	1993	13
1974	22	1973	23	1978	17	1974	11	1979	16
1975	15	1974	30	1979	16	1974	13	1975	10
-	-	1975	25	1970	4	1975	22	1976	22
-	-	1976	9	-	-	1976	9	1977	19
-	-	1977	19	-	-	1977	6	1978	13
-	-	1978	11	-	-	1978	1	1979	15
-	-	-	-	-	-	-	-	1980	15
-	-	-	-	-	-	-	-	1981	20
-	-	-	-	-	-	-	-	1982	18
-	-	-	-	-	-	-	-	1983	6
-	-	-	-	-	-	-	-	1984	3

Table 4:- ge of Materials Cited

Year of Cited Sources	1972	1973	1974	1975	1976	1977
1959	0	0	0	0	0	1
1962	0	0	0	0	0	1
1963	0	0	0	0	0	1
1900	0	0	0	0	1	0
1902	1	0	0	0	0	0
1915	0	0	1	0	0	0
1920	0	0	0	0	0	1
1921	0	1	0	0	0	0
1925	0	1	0	0	0	0
1926	0	0	1	0	0	2
1933	0	1	0	0	0	1
1934	0	0	0	0	0	2
1935	0	1	0	0	0	0
1937	0	1	1	0	0	0
1940	0	1	0	0	0	0
1943	0	0	0	1	0	0
1945	1	0	0	0	1	0
1946	0	0	1	0	0	0
1947	1	1	0	0	0	1
1948	1	1	2	1	0	1
1949	0	0	1	1	0	1
1950	2	2	3	1	3	0

Year of Cited Sources	1972	1975	1978	1981	1984	1987
1951	0	1	1	1	4	0
1952	0	0	2	0	0	2
1953	1	5	2	0	1	0
1954	0	4	6	0	0	0
1955	3	2	3	1	1	2
1956	2	2	4	0	4	2
1957	2	15	6	3	1	1
1958	4	7	11	6	5	4
1959	2	4	9	1	2	0
1960	3	8	9	3	4	3
1961	3	10	5	5	7	2
1962	6	3	9	6	0	5
1963	6	15	13	7	5	1
1964	7	6	17	14	5	6
1965	10	15	27	10	8	2
1966	12	20	22	11	9	11
1967	6	12	21	10	4	3
1968	5	20	22	12	7	16
1969	6	14	22	12	8	13
1970	11	18	31	11	10	22
1971	10	27	30	7	8	16

4.2.3 Subject Distribution of Citations

Citations were classified into specific subjects. The main reason for this is to identify the subjects of citations so that they could be used in judging the subject needs of the researchers in the field of economic and social studies. Table 5 and 6 shows the subjects of citations.

Tsble 5: Subject of Citations per year

Subject	1972	1975	1978	1981	1984	1987
1. Economics	76(57%)	95(37.10)	266(42)	167(50%)	167(50)	255(70)
2. Banking	0	1(0.39)	8(1.68)	0	21(.)	18(4.97)
3. Political Science	15(1.36)	47(18.35)	13(2.73)	25(3.35)	26	0
4. Psychology	0	1(0.39)	1(0.21)	2(0.26)	2(.60)	26
5. Agricultural	26(19.6)	17(6.64)	41(8.61)	65(8.71)	0	0
6. Social Science	1	1(0.39)	0	2(0.26)	0	1(0.27)
7. Management	0	8(3.12)	0	0	0	5(1.38)
8. Architecture	14(0.75)	0	0	0	0	0
9. Medicine	0	19(7.42)	0	10(2.14)	37(11.34)	(5(1.38)
10. Sociology	0	19(7.42)	21(4.41)	46(6.16)	2(0.60)	1(0.27)
11. Geography	0	24(9.37)	47(9.87)	92(12.33)	0	0
12. Education	0	8(3.12)	28(5.88)	39(5.22)	0	1(0.27)
13. History	0	16(6.25)	0	23(3.08)	0	3(0.82)
14. Stastitics	0	0	17(3.57)	0	2(0.60)	6(1.65)
15. Mass Communication	0	0	33(6.93)	0	0	0
16. Pharmacy	0	0	1(0.21)	0	0	00
17. Accounting	0	0	0	15(1.74)	37(11.34)	5(1.38)
18. Finance	0	0	0	5(0.67	8(2.43)	6(1.65)
19. Mathematics	0	0	0	17(2.27)	1(0.30)	1(0:27)
20. Business Administration	0	0	0	19(3.48)	0	0
21. Public Administration	0	0	0	26(3.48)	0	0
22. Law	0	0	0	10(1.34)	0	0
23. Elect. Engineering	0	0	0	5	0	0
24. Petroleum Engineering	0	0	0	4(0.53)	0	0
25. Health	0	0	0	4(0.53)	0	0
26. Christian Religion Studies	0	0	0	4(0.53)	0	0
27. Physics	0	0	0	3(0.40)	0	0
28. Government	0	0	0	3.(0.40)	0	0
29. Aviation	0	0	0	2(0.26)	0	0
30. Philosophy	0	0	0	2(0.26)	0	0
31. Research Mothodology	0	0	0	2(0.26)	0	0
32. Administration	0	0	0	0	12(3.64)	0
33. Transport Technology	0	0	0	0	11(3.34)	28(7.73)

From the analysis, that the bulk of citations was in the subject of Economics. *Throughout the year considered for the study, economics was the most cited.* In 1972 there were 76 citations out of the total 132 citations representing 57.57 percent; in 1975 economics accounted for 95 out of the total 256 citations which represents 37.10 percent, in 1978 economics had 226 citations out the 476 citations which represents 55.88 percent while in 1981 economics had 317 citation of the 746 citations and this represents 42.49 percents. In 1984, economics had 167 citations of the total 329 citations which account for 50.75 percent while in 1985, economics was on top of the table with 255 citations of the total citations and this account for 70.44 percent. There was a tremendous increase in the citations of economics over the years except in 1984 that there was a drop in the number of citations to Economics but it went up sharply in 1987. Apart from Economics; Geography, Agriculture, Political Science. Sociology, Medicine and Education were subjects with high number of citations. The details of other subjects, there frequency and the percentage they represent are provided in Table 5 above.

Table 6 below gives the subject citation pattern of the entire years considered for the study.

Table 6: Subject Citations for all the years

Subjects	Frequency of Citation	Percentage
1. Economics	1176	51.73
2. Geography	163	7.17
3. Agriculture	150	6.
4. Political Science	126	5.54
5. Sociology	89	3.91
6. Medicine	77	3.38
7. Education	75	3.29
8. Banking	48	2.11
9. History	42	1.84
10. Transport Technology	39	1.71
11. Mass Communication	33	1.45
12. Psychology	32	1.40
13. Public Administration	26	1.10
14. Statistics	25	1.09
15. Accounting	25	1.09
16. Finance	19	0.83
17. Mathematics	19	0.83
18. Business Administration	19	0.83
19. Architecture	14	0.61
20. Management	13	0.57
21. Administration	12	0.52
22. Law	10	0.43
23. Science	5	0.21
24. Electrical Engineering	5	0.21

- 2 -

Subjects	Frequency of Citation	Percentage
25. Petroleum	4	0.17
26. Health	4	0.17
27. Christian Religious Study	4	0.17
28. Social Science	4	0.17
29. Physics	3	0.13
30. Government	3	0.13
31. Aviation	2	0.08
32. Philosophy	2	0.08
33. Biology	2	0.08
34. Research Method	2	0.08

Using the table above, Economics had 1,176 citations representing 51.73 percent followed by Geography with 163 citations which account for 7.17 percent. Agriculture accounted for 150 citations representing 6.59 percent; Political science had 126 citations which represents 3.91 percent of the total percentage; Medicine had 77 citations standing for 3.38 percent while Education had 75 citations representing 3.29 percent of the entire subject citations.

The pattern in which the subjects were cited over the years does not differ, that is the same trend of subject citations is maintained. Over the years studied, economic maintained the top position for being the most cited subject thereby stressing the fact that the field of social sciences is a subject centered field.

This information will be very useful in assisting the librarian in identifying which subjects to concentrate his acquisition exercise on. In the long run, it will reduce the issue of wasting meagre resources on the acquisition of materials of which their needs are not evident.

4.2.4 Language of Citations

The language of all cited materials were considered in order to determine the languages in which publications cited were published.

Table 7: Language of Citations

Language	1972	1975	1978	1981	1981	1987
1. English language	139	344	536	803	290	351
2. Spanish	0	0	0	0	1	1
3. French	0	0	1	0	0	0
4. German	0	0	1	0	0	0
Total	139	344	538	803	391	356

From the analysis of the language of materials, almost all the materials cited by authors of articles were published in English language. Though other languages like Spanish, French and German were cited, but the number of citations to them was very small in comparison to materials cited which were published in English language. Table 8 shows the entire data for the language of citations for the years considered for the study.

Table 8: Language Distribution of Citations, 1972, 1975 1978, 1981, 1984, 1987

LANGUAGE	FREQUENCY	PERCENTAGE
English Language	2463	99.83
Spanish	2	0.08
French	1	0.04
German	1	0.04
Total	2467	100.03

The finding from this study is in line with that of Wood and Bower (1969) that social scientists rely heavily on materials published in English Language. In other words, they make a little use of materials in foreign language. From the tables above, it is evident that most materials cited by authors are published in English Language.

4.2.5 Availability of Journals Cited in Centres For Social and Economic Research in Nigeria

From the analysis of the journals cited, seven journals were the most frequently cited, These journals are American Economic Review, Economic Development and Cultural Change, Econometric, Nigerian Journal of Economic and Social Studies, Journal of Political Economy Review of Economics and Statistics All the aforementioned journals are available in the libraries for the two centres that is centre for social and Economic Research of Ahmadu Bello University, Zaria and the Nigerian Institute for Social and

Economic Research of University of Ibadan, Ibadan.

Applying the Bradford's Law, two journals were discovered to form the core journals and they are among the most cited. They were checked against the holdings of the two centres, it was discovered that both journal titles are available in the libraries. The two journals that form the core are American Economic Review and The Nigerian Journal of Economic and Social studies.

Applying the Brandford's law, two journals were discovered to form the core journals and they were the most cited. These two journals which form the core journals were checked against the holdings of the centres for Social and Economic Research libraries in Nigeria. It was discovered that both journal titles were available in the holdings of the libraries of the centres. Two journals that form the score are Nigerian Journal of Economic and Social Studies: American Economic Review.

Table 9: Application of the Bradford-ZipFBibliograph to the Cited Journals

Frequency of citation per journal title	No of titles	Cummulation of titles	Cummulation of journals titles	Log of Titles
128	1	1	128	0
43	1	2	171	0.3010
41	1	3	212	0.4771
38	1	4	250	0.6021
21	1	5	271	0.6990
18	2	7	289	0.8541
17	1	8	306	0.9031
16	1	9	322	1.9542
10	1	10	332	1.0000
9	1	11	341	1.0414
8	3	14	349	1.1461
7	5	19	356	1,2788
6	10	29	362	1.4624
5	10	39	367	1.5911
4	11	50	371	1.6990
3	27	77	374	1.8865
2	40	117	376	2.0682
1	126	243	377	2.3856

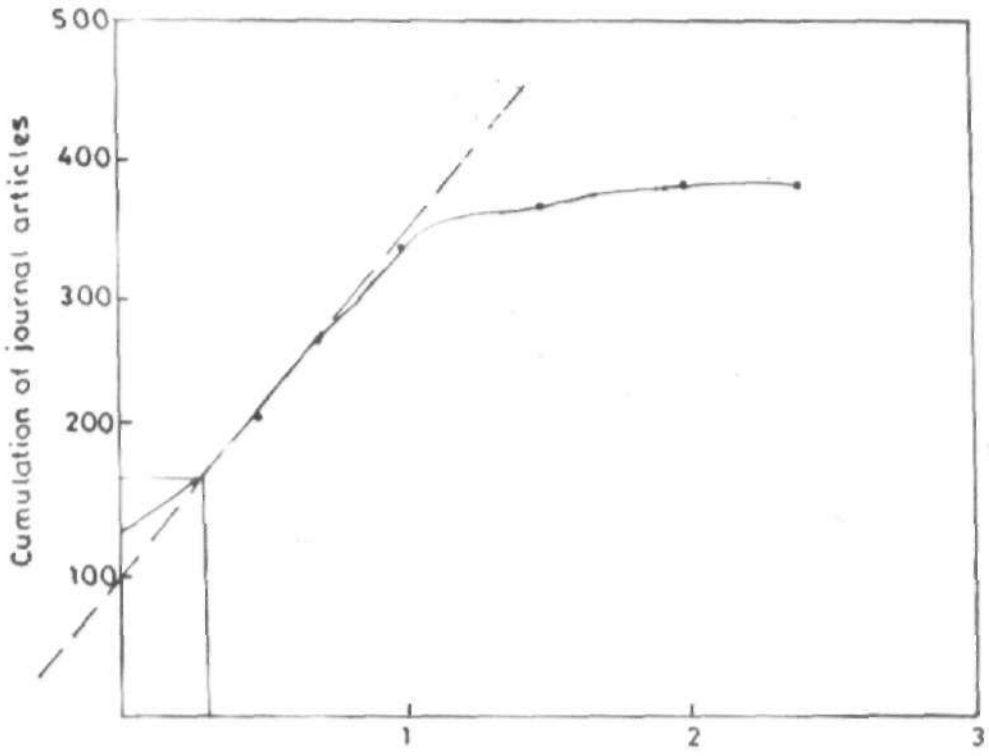


FIG. III: BRADFORD — ZIPF BIBLIOGRAPH FOR CITED JOURNALS IN NIGERIAN JOURNAL OF ECONOMIC AND SOCIAL STUDIES

Table 10: Application of Bradford-Zipf Bibliograph to the cited Journals per year

1972		1972		
Freq. of Citations per journals title	Number of titles	Cumulation of titles	Cumulation of Freq. Journal	Log of Cum. of Tiltle
5	1	1	5	0
4	2	3	9	0.4771
3	2	5	12	0.6990
2	7	12	14	1.0762
1	13	25	15	1.3979

1975		1972		
Freq. of Citations per journals title	Number of titles	Cumulation of titles	Cumulation Freq. of Journ. title	Log of Cum. of title
26	1	1	26	0
5	1	2	31	0.4771
4	1	6	35	0.7782
3	5	11	38	1.0414
2	8	13	40	1.1139
1	28	41	41	1.6128

463571

1978			1978	
Freq. of Citations per journals title	Number of titles	Cumulation of titles	Cumulation Freq. of Journal title	Log of Cum. of title
43	1	1	43	0
17	1	2	60	0.3010
10	1	3	70	0.4771
9	1	4	79	0.6021
7	2	6	86	0.7782
6	1	7	92	0.8451
5	2	9	97	0.9542
4	3	13	101	1.0792
3	6	18	104	1.2253
2	10	28	106	1.4472
1	25	53	107	1.7242

1981			1981	
Freq. of Citations per journals title	Number of titles	Cummulation of titles	Cummulation of Freq. of Journ. title	Log of Cum. of title
33	1	1	33	0
17	1	2	50	0.3010
11	2	4	61	0.6021
8	1	5	69	0.6990
7	1	6	76	0.7782
6	3	9	82	0.9542
5	1	10	87	1.1000
4	3	13	91	1.1139
3	5	18	94	1.2553
2	26	44	96	1.6435
1	49	93	97	1.9685

1984			1984	
Freq. of Citations per journals title	Number of titles	Cummulation of titles	Cummulative Freq. of Journ. title	Log of Cum. of titles
7	1	1	7	0
6	3	4	13	0.6021
5	2	6	18	0.7786
3	2	8	21	1.9031
2	4	12	23	1.0762
1	43	55	24	1.7404

1987			1987	
Freq. of Citations per journals title	Number of titles	Cummulation of titles	Cummulative Freq. of Journ. title	Log of Cum. of titles
16	1	1	16	0
12	1	2	28	0.3010
9	1	3	37	0.4771
7	4	7	44	0.9542
6	1	8	50	0.9031
5	2	10	55	1.0000
4	1	11	59	1.0414
3	3	14	62	1.1461
2	19	33	64	1.5185
1	37	70	65	1.8457

From the graph (Fig.II) the point of intersection is slightly below 200 cumulative titles - 2 titles. Therefore, the number of core journals is 2 titles. These two journals which form the core are Nigerian journal of Economic and Social Studies and American Economic Review. But analysing the journals cited for each year represented by Fig. IV and V, the joint of interaction is below 100 cumulative titles which indicates that the core journal for each year is one. For 1972, the core journal is Journal of Political Economy while in 1975, 1978 and 1987 Nigerian Journal of Economic and Social Studies is the core of journals cited. And in 1984, Journal of Applied Psychology is the core. The implication

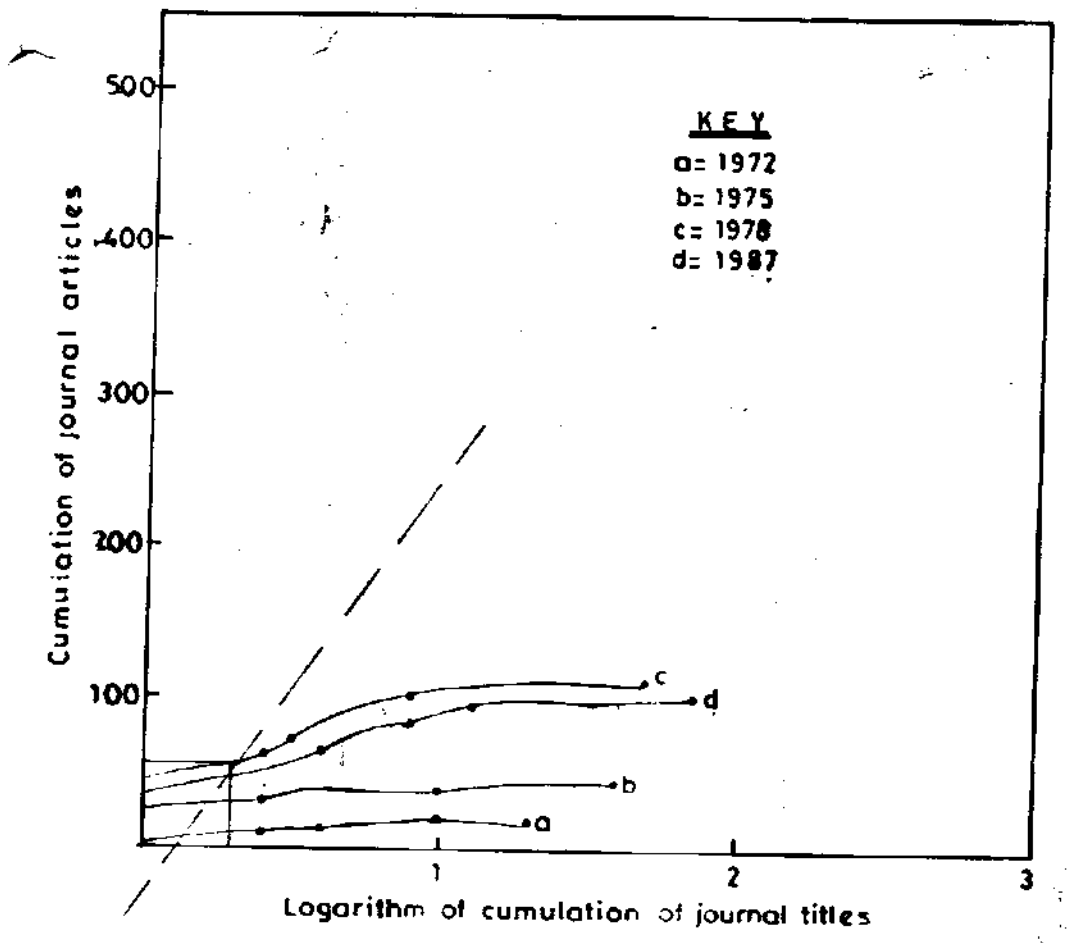


FIG. IV: BRADFORD – ZIPF BIBLIOGRAPH FOR CITED JOURNALS IN NIGERIAN JOURNAL OF ECONOMIC AND SOCIAL STUDIES 72, 75, 78, 87.

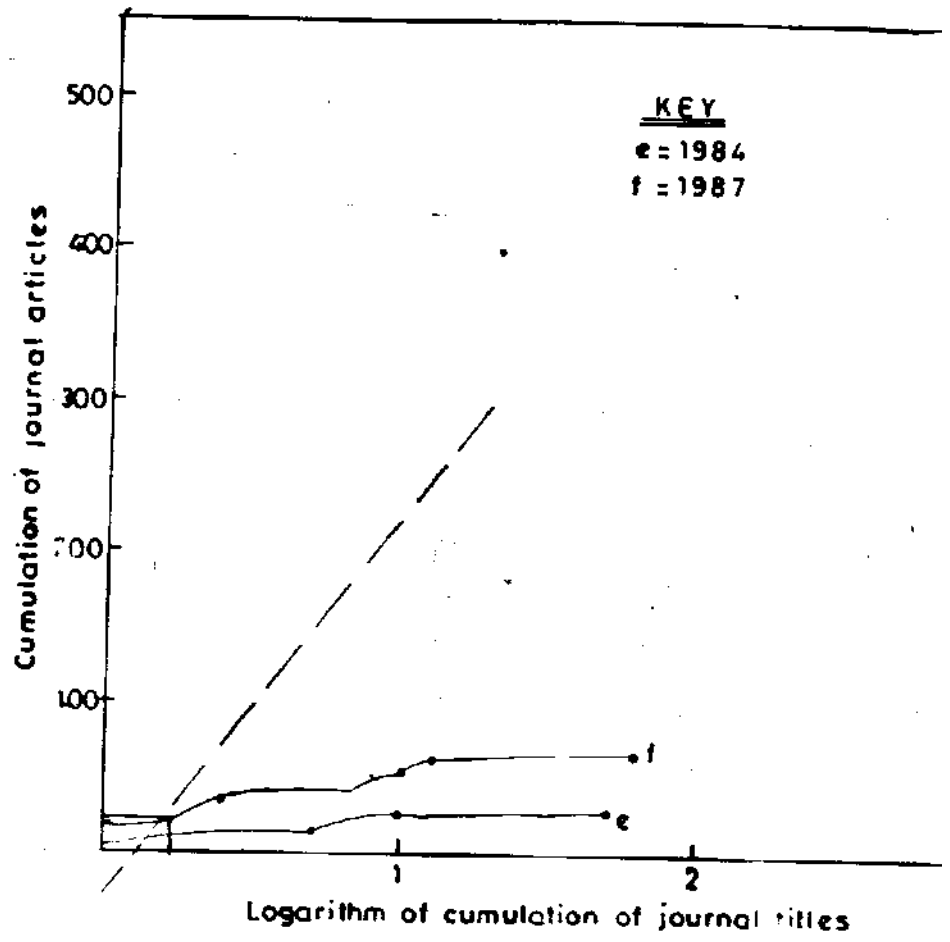


FIG. V: BRADFORD - ZIPF BIBLIOGRAPH FOR CITED JOURNALS NIGERIAN JOURNAL OF ECONOMIC AND SOCIAL STUD 84 AND 87

of the finding is that, there are evident changes in the ranking of the journals cited by researchers in social sciences.

4.2.6 Testing of Hypotheses

Hypothesis I: There is significant difference among the frequencies of formats of publications cited in Nigerian Journal of Economic and Social Studies.

At 0.05 level of significance with 8 degrees of freedom, calculated chi-square value of 4061.3 is greater than the critical value of 15.507. Therefore the hypothesis which states that there is a significant difference among the frequencies of formats of publications cited in Nigerian Journal of Economic and Social Studies is accepted.

Hypothesis 2: There is a significant difference among the frequencies of subjects cited in Nigerian Journal of Economic and Social Studies

At 0.05 level of significance with 30 degree of freedom, the calculated value is 17952 is greater than the critical value of 43.773. The hypothesis which states that there is significant difference among the frequency or subjects cited in Nigerian Journal of Economic and Social Studies is accepted.

Hypothesis 3: There is a significant difference among the frequencies of subjects cited in Nigerian Journal of Economic and Social Studies. At 0.05 level of significance with 3 degrees of freedom, the calculated value of 7961.1 is greater than the critical value of 7.815. The hypothesis which states that there is significant difference among the frequencies of the cited languages is Nigerian Journal of Economic and Social Studies is accepted. The calculations performed in testing the hypotheses is provided in appendix 2.

4.2.7 Availability of Books cited in the holdings of the Libraries of centres for Social and Economic Research in Nigeria

The titles of the books cited were checked against the holdings of the Centre for Social and Economic Research of Ahmadu Bello University, Zaria. None of the titles cited is available in the collection of the library. This represents zero percent. It was discovered during the period of data collections that the collections of the library were in the form of journals, pamphlets and conference papers. From this finding, the conclusion could be made that the collections of the library is inadequate. Since the researchers make use of books mostly, it means the library is not meeting their needs of in terms of resources.

The titles of the books were checked against the holdings of the library of Nigerian Institute for Social and Economic Research, Ibadan. It was discovered that 50 titles representing 45.45 percent of the 110 titles were in the collections of the library. The collections of this library is inadequate since only 50 of the 110 titles are available, it means user has to look for their information from other places apart from the library of the centre. It has been stated earlier on that none of the titles cited is available in the library of the centre for Social and Economic Research of Ahmadu Bello University, Zaria. Therefore the list of books cited provided in appendix 3 were checked against the collections of Nigerian Institute of Social and Economic Research, Ibadan. Those available have held N.I.S.E.R written against it while those not available have "not held" written against the title.

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CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter deals with the results derived from the study, and they are presented in summary. The information given in this chapter is provided under the following: Summary of findings, conclusion, limitation of the study and recommendation.

5.2 Summary of Findings

The summary of this study is listed and summarized as follows:

1. Books (monographs) and journals were the most cited form of publications. Books monograph had 1235 (50.3 percent) citations while journals had 795 citations (32.4 percent). Other forms of publication cited had 423 citations representing 17.2 percent.
2. Using the Bradford"s distribution, the following journals were identified to form the core of journals cited. Nigerian journal of Economic and Social Studies, American Economic Review, Journal of Political Economy and journal of Applied Psychology.
3. The journal titles discovered to form the core are available in the two centres.
4. Economics was the most cited subject throughout the period covered by the study. In 1972, it has 76 citations (57 percent); 95 (37.10 percent) in 1975; 266 (42 percent) in 1978; 167 (50 percent) both in 1981 and 1984 while it had 255 citations in 1987 representing 70 percent. Using the overall data, Economics had 1,176 citation which represent 51.73 percent. Geography and Agriculture came second and

third with 163 citations (7.17 percent and 150 citations representing 6.59 percent.

5. Most materials cited were published in English language except on few cases where materials published in Spanish, French and German languages were cited.

6. Books (monographs) cited were checked against the holdings of centres for social and economic research in Nigeria. The Centre for Social and Economic Research of Ahmadu Bello University, Zaria, does not have any of the books while 50 of the 110 cited titles are available in the library of Nigerian Institute for Social and Economic Research, Ibadan.

7. There is a significant difference among the frequencies of formats of publication cited in Nigerian Journal of Economic and Social Studies.

8. There is a significant difference among the frequencies of subjects cited in Nigerian Journal of Economic and Social Studies.

9. There is a significant difference among the frequencies of cited languages cited in Nigerian Journal of Economic and Social Studies.

5.3 Conclusion

Social Scientists use books and journal articles more than other sources of information like reports, newspapers, conference papers, because both sources consulted by them contain more information and they are more readily available than other sources mentioned above. Social scientists rely heavily on soft science literature, as recent materials are not readily published into circulation unlike in the field of sciences. English language is the most cited language. This is because it is the official language of authors

that have their articles published in the journal under consideration. The findings from this study conform to those of Wood and Bower (1969:108) and Earle and Vicker(1969:125), which point that social scientists make greater use of books; and they indicated also that social scientists make use of old materials published in English language. This indicates that English language materials were utilized more than materials in other languages.

5.4 Limitation of Study

Since the years considered for the study were sampled, the findings of the work therefore could be generalized to other years not included in the study.

5.5 Implication of the Study

From the findings of the work, the collection of the centre for Social and Economic Research of Ahmadu Bello University is inadequate. All the books cited by the researcher in the field, none of the titles is available in the library since the library does not have books in their collection. The implication this has on the user, is that the library is not meeting their needs which the ultimate aim of any library.

5.6 Recommendations

Based on the findings of this study, it is recommended that emphasis be laid on the procurement of the journal titles that form the core. These are Nigerian Journal of Economic and Social Studies, Journal of Political Economy, Review of Economics and Statistics, Journal of Applied Psychology, and American Economic Review.

Libraries should consider the use of citation analysis when building their collections, because it is a very powerful tool in determining the importance of a work. This is because the most significant papers tend to be cited from time to time.

5.7 Further Study

Further work could be carried out on other Social Science journals to compared the findings with those of the present study.

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APPENDIX 1

Journals cited in Ranked Order of Citations

Journal	1972	1975	1978	1981	1984	1987
1. Nigerian of Journal of Economic and Social Studies	4	26	43	33	6	16
2. American Economic Review	4	4	17	8	3	7
3. Review of Economics and Statistics	2	5	10	11	2	12
4. Journal of Political Economy	5	3	6	17	2	5
5. Economic Development and cultural change	3	9	2	1	6	
6. Econometrics	1	5	4	1	7	
7. Transportation Research				2	6	9
8. Journal of Finance			2	11	1	2
9. Journal of Development Studies		3			7	
10. Journal of Farm Economics	2		7			
11. Economic	3	3		2		
12. Journal of Money, Credit and Banking			2		1	5
13. Operation Research			7		1	

Journal	1972	1975	1978	1981	1984	1987
14. American Sociological Review	1	2	3		1	
15. Journal of Modern African Studies	1	2	2	2	2	2
16. Geographical Analysis			7		1	
17. Management Science						7
18. Nigerian Opinion		1				
19. Journal of Accounting Research			1	1	1	4
20. Signs				6		
21. Annals of the Association of American Geographicals			3	2		1
22. The Bell Journal of Economics				6		
23. Journal of Economiic Literature			1	4	1	
24. The Indian Economic Journal			4	1		1
25. Economic Geography				5		1
26. Quarterly Journal of Administration			4	1	1	
27. Kylos			3	1		2
28. American journal of Agricultural Economic			1	1	3	1

Journal	1972	1975	1978	1981	1984	1987
29. Economic and Fiancial Review	1	3	1		1	
30. Pakistan Developmnt Review	3		2			2
31. Review of Economic Studies	2			2	1	
32. Finace and Development	1	2	2			
33. Journal of American Statistical Association			1		2	1
34. Current Anthropology				5		
35. Journal of International Economics				5		2
36. Public Finance				5		
37. Studies in Income and Wealth				5		
38. Journal of Applied Psychology				7		
39. Journal of Transport and Economic Policy				1		3
40. Operation Research Quarterly			4			
41. Professional Geographer	1	8	1	2		
42. Journalism Quarterly				4		
43. The Accounting Review					1	3

	Journal	1972	1975	1978	1981	1984	1987
44.	Journal of Common Market Studies			2		2	
45.	Nigerian Geographical Journal		2	2		1	
46.	Journal of Royal Statistcal society		2	2			
47.	American Political Science Veview	2	1			1	
48.	Economic Record		2			1	1
49.	Quarterly Journal of Economics	1	1	1			
50.	Journal of Institute of Water Engineers			3			
51.	Journal of the Historical society of Nigeria		1	2			
52.	Journal of American Institute of Planners	1			2		
53.	Africa	3					
54.	West Africa	2			1		
55.	Journal of Management Studies	2					1
56.	The Geographical Review			3			
57.	The American Economist				3		

	Journal	1972	1975	1978	1981	1984	1987
58.	Southern Economic Journal			1		2	
59.	Land Economics			1	2		
60.	Journal of Ecology			1	2		
61.	West African Economic Journal			3			
62.	Journal of Regional Science			3			
63.	The African Journal of psychiatry			3			
64.	The Journal of Economic History			3			
65.	Journal of Business				1	1	1
66.	World Development				1	1	1
67.	International			1	2	2	
68.	Accounting and Business Research			1	2		
69.	Journal of Monetary Economy			1		2	
70.	Journal of Developing Economics				1		2
71.	Social Psychistry					3	
72.	Transportation Science						3
73.	Bulletin of Rural Economics and Sociology	2					

Journal	1972	1975	1978	1981	1984	1987
74. Eastern African Economics Review		1		1		
75. Administrative Science Quarterly		2				
76. Journal of Agricultural Economics		1		1		
77. Eastern African Geographical Review			1		1	
78. Nigerian Journal of Quantitative Economics			2			
79. The Journal of Business and Social Studies			1			
80. Public Opinion Quarterly				2		
81. Computer Journal				2		
82. Minerva		1		1		
83. The CPA Journal					2	
84. The Bello Journal of Economics					2	
85. Ugandan Journal					2	
86. Tropical Journal					2	
87. Nigerian Journal of International Studies					2	
88. The Nigerian Journal of of Forestry					2	

Journal	1972	1975	1978	1981	1984	1987
89. International Journal of Production Research				2		
90. American Ethnologist				2		
91. The African Studies Review			2			
92. IDS Bulletin				2		
93. Western Journal of Education			2			
94. Mathematic Programing					2	
95. Journal of Applied Psychology			2			
96. The Journal of Accounting			2			
97. Journal of the American Planning Association	1	1				
98. Acta Pachistrica Scandinavica	1	1				
99. Journal of Pharmacology	1	1				
100. The Business Lawyer				1	1	
101. Decision Sciences					1	1
102. Family Planning Perspective				1	2	
103. Journal of Public Economics					2	

Journal	1972	1975	1978	1981	1984	1987
104. Journal of the Nigerian Institute of Town Planners					2	

Journal	1972	1975	1978	1981	1984	1987
105. Habitat International					2	
106. Charterly Review					2	
107. Applied Economics					2	
108. Financial Analyst Journal					2	
109. Journal of Econometrics					2	
110. Interfaces					1	
111. Journal of child Development					1	
112. Journal of Psychological Research					1	
113. Personnel Psychology					1	
114. Occupational Psychology					1	
115. Australian Journal of Management					1	
116. Journal of Financial Institutions					1	
117. Journal of Federal Mortage Bank of Nigeria					1	

Journal	1972	1975	1978	1981	1984	1987
118. Neerland					1	
119. The World Bank Economic Review						1
120. International abour Review					1	
121. Management Accounting						1
122. Ife Journal of Educational Studies					1	
123. Science and Society					1	
124. Journal of Banking Research				1		
125. Abacus					1	
126. Transport Planning and Technology				1		
127. Traffic Quarterly				1		
128. Progress in Human Geography				1		
129. International Regional Science Review				1		
130. Environment and Planning				1		
131. Urban Studies				1		
132. British of Authro- of social and clinical Psychology				1		

Journal	1972	1975	1978	1981	1984	1987
133. Social Science and Medicine					1	
134. Journal of Authropological Research				1		
135. World Mental Health					1	
136. British Journal of preventive and social medicine				1		
137. Man				1		
138. British Journal of Medical Psychology					1	
139. Journal of Medical Education				1		
140. American Journal of Orthopsychistry	1					
141. Ethics in science and Medicine	1					
142. The West African Medican Journal	1					
143. East African Medical Journal	1					
144. Public Health Report	1					
145. Genieve Afrique	1					
146. Journal of Development Planning	1					
147. Nigerian Trade Journal	1					

Journal	1972	1975	1978	1981	1984	1987
148. Plural societies quarterly				1		
149. Public Administration and Development					1	
150. Nigerian Journal of Public Admin.					1	
151. Crednhill Journal of Administration					6	
152. Current Sociology					1	
153. The Acountant's Journal				1		
154. Savings and Developt.				1		
155. Economics			1			
156. African Studies Review			1			
157. African Review			1			
158. Oxford Review of Education			1			
159 Hydrological Science Bulletin			1			
160. Tijdrift Voor Economiches en Sociale Geographic			1			
161. Inquiry			1			
162. Quarterly Bulletin			1			

Journal	1972	1975	1978	1981	1984	1987
163. Nigerian Medical Journal			1			
164. Bulettin on Narcotics				1		
165. British Medican Journal				1		
166. The Journal of International Addition				1		
167. The Journal of International Addition				1		
168. Eastern African Medical Journal				1		
169. Maxian Economics					1	
170. Computer and Operation Research				1		
171. Journal of Mathematical Physics		1				
172. Heward Educational Review		1				
173. Journal of Financial Economics		1				
174. Journal of Financial and Quantitative analysis		1				
175. Siam Review				1		
176. Intereconomics				1		
177. Industrial Relations			1			

Journal	1972	1975	1978	1981	1984	1987
178. Unasylva				1		
179. West African Magazine					1	
180. Asian Survey				1		
181. Water Resources Research			1			
182. Journal of modern Studies		1				
183. Sociology of Education			1			
184. Geografiska Annals			1			
185. Biometrika			1			
186. Journal of Ecolology			1			
187. Nigerian Journal of Arts and culture	1					
188. Area				1		
189. World Politics				1		
190. Investor's Diges	1					
191. Journal of marketing Research	1					
192. International Journal of Agranian affairs	1					
193. The Economic Bulletin of Ghana	1					
194. Annals of Economics and Social Meassurement						1

Journal	1972	1975	1978	1981	1984	1987
195. Journal of Development Planning			1			
196. Oxford Bulletin of Economics and Stationaries			1			
197. Journal for Educational Planning and Administration			1			
198. Journal of Human Resources			1			
199. Journal of Econology				1		
200. Economic Applique				1		
201. Regional Studies				1		
202. American Journal of Sociology			1			
203. Economics Studies quarterly			1			
204. Journal of Politics		1				
205. Journal of conflict Rsolution		1				
206. British Journal of Psychristry		1				
207. Mawazo		1				
208. Journal of Health and Human Behaviour		1				
209. Journal of Health and social Behaviour		1				

Journal	1972	1975	1978	1981	1984	1987
210. Journal of Social issues		1				
211. Journal of Civilization		1				
212. Nigerian Journal of sociology and Authnopology			1			
213. The Journal of Housing	1					
214. Architectural Association Quarterly	1					
215. The American Review		1				
216. Annals of Mathematical statistics					3	
217. Journal of the Institute of applied Manpower Research					2	
218. American Journal of Psychiatry					1	
219. Development Dialogue			1			
220. Journal of Broadcasting			2			
221. Journal of Educational Psychology		1				
222. Plain Truth		1				
223. Nigerian Journal of Public Affairs		1				
224. Journal of Banking and Finance		1				

Journal	1972	1975	1978	1981	1984	1987
225. Nigerian Journal of quantitative Economics		2				
226. Journal of Civilisation		1				
227. Food Research Institute Studies		1				
228. West African Journal of Agricultural Economics		1				
229. Samaru Agricultural Newslatter		1				
230. Jouranal of West African Studies		1				
231. Weather		1				
232. Journal of Librarianship		1				
233. Nature		1				
234. Nigerian Agriculture Journal		1				
235. Industrial and Labour		1				
236. Relations Review						

APPENDIX 2

Calculation for arriving at th level of Significance of the hypotheses.

Hypothesis 1: There is significant difference among the frequencies of formats of publications cited in Nigerian Journal of Economic and Social Studies.

	FO	Fe	$\frac{(fo - Fe)^2}{fe}$
Books	1143	270	2822.7
Journal	887	270	2.3
Conference Paper	154	270	49.8
Report	100	270	107
Theses	59	270	164.9
Kimeon	33	270	208.0
Miscellenous	31	270	211.6
Newspaper	19	270	233
Research Papers	4	270	262
			X^2 4061.3

df = (r - 1) (c - 1)
= (9 - 1) (2 - 1)
= 8 x 1
degree of freedom = 8
x^2 = 4061.3

Critical Value = 15.507.

Hypothesis 2: There is significant difference among the frequencies of subjects cited in Nigerian Journal of Economic and Social Studies

	FO	Fe	$(fo - Fe)^2$
1. Economics	1176	73.3	16588.6
2. Geography	163	73.3	109.8
3. Agriculture	150	73.3	80.3
4. Political Science	126	73.3	37.9
5. Sociology	89	73.3	3.4
6. Medicine	77	73.3	0.19
7. Education	75	73.3	0.04
8. Management	70	73.3	0.15
9. Banking	48	73.3	8.73
10. History	42	73.3	13.3
11. Transport Technology	39	73.3	16.1
12. Mass Communication	33	73.3	22.1
13. Psychology	32	73.3	23.3
14. Statistics	35	73.3	31.8
15. Accounting	25	73.3	40.2
16. Finance	19	73.3	40.2
17. Mathematics	19	73.3	40.2
18. Architecture	14	73.3	48
19. Law	10	73.3	54.7
20. Science	5	73.3	63.6
21. Electrical Engineering	5	73.3	63.6
22. Petroleum "	4	73.3	65.5

	FO	Fe	$(fo - Fe)^2$
23. Health	4	73.3	65.5
24. Christian R. Studies	4	73.3	65.5
25. Social Sciences	4	73.3	65.5
26. Physics	3	73.3	67.4
27. Government	3	73.3	67.4
28. Aviation	2	73.3	69.35
29. Philosophy	2	73.3	69.35
30. Biology	2	73.3	69.35
31. Research Methodology	2	73.3	69.35
			1795.2

degree of freedom = 30
Calculated value = 1795.2
Critical value = 43.773

Hypothesis 3: There is significan difference among the languages cited in Nigerian Journal of Economic and Social Studies

	FO	Fe	$(fo - Fe)^2$
Engish	2463	616.7	5519
Spanish	2	616.7	612.7
French	1	616.7	614.7
German	1	616.7	614.7
			7361.1

df = (r - 1) (c - 1)

(4 - 1) (2 - 1) = 3

degree of freedom = 3

calculated value = 7361.1

critical value = 7.815

APPENDIX 3

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