CHAPTER THREE

METHODOLOGY

Introduction

This chapter provides a description of the methodology employed for the collection, compilation, and tabulation of bibliometric data and other relevant information from within the contents of *JMBRAS* 1987-1996. As mentioned in Chapter 1, the purpose of this study is to examine bibliometrically *Journal of the Malaysian Branch of the Royal Asiatic Society (JMBRAS)* by way of analysing references, footnotes, notes, citations or bibliographies, biographical notes, title of articles, book reviews and other relevant information appended between 1987-1996. Apart from that membership information and records maintained by MBRAS at its office were referred and analysed too.

For this very purpose, two methods were employed, namely descriptive statistics and bibliometric analysis. Descriptive statistics is used to describe the characteristics, quantities and research trends of the articles and book reviews published in *JMBRAS* 1987-1996. This provides a holistic picture of the development of the contents of these articles and book reviews. Bibliometric techniques were employed to show and determine the spread and character of the literature used by the authors, apart from the study of gender, occupation, affiliation (geographic and institutional) and extent of authorship collaboration.

Sample Frameworks

The sample frameworks for this study are the references, footnotes, notes, citations and bibliography of 111 articles, 103 biographical notes, 78 book reviews and other relevant information pertaining to membership of MBRAS appended in *JMBRAS* between 1987-1996. Table 3.1 shows the distribution of articles, biographical notes and book reviews covered in this study.

Table 3.1
Number of Articles, Book Reviews and Biographical Notes
in *JMBRAS* 1987-1996

Year	Part	Articles	Book Reviews	Biographical Notes
1987	1	6	6	4
1987	2	5	5	5
1988	1	3	0	4
1988	2	5	6	6
1989	1	7	3	8
1989	2	4	3	4
1990	1	6	4	6
1990	2	5	6	6
1991	1	5	4	4
1991	2	4	3	4
1992	1	5	5	5
1992	2	6	4	5
1993	1	4	5	4
1993	2	6	5	7
1994	1	7	2	7
1994	2	4	4	4
1995	1	8	0	7
1995	2	7	5	0
1996	1	7	3	6
1996	2	7	5	7
Total	20	111	78	103

Methodological Limitations

This study was conducted with the following limitations:

1. The references, footnotes, notes, citations or bibliographies were sometimes ambiguous and missing; thus the researcher made his judgement when analysing these citations. For example, it was sometimes difficult to determine the bibliographic format of an item especially of foreign language documents cited by the authors.

2. Only references, footnotes, notes, citations and bibliographies appended in the articles were categorised and analysed. Cited references found in appendices of articles and book reviews were not taken into account.

3. The biographical notes appended at the back of the journal were not complete at times. Some were also missing probably due to non-submission of such data by the authors themselves causing some problems in the study of geographical and institutional affiliation. Hence, the study was conducted with whatever information was available in *JMBRAS* and those collected from elsewhere.

4. The non-conformity to the house style of citation as given in the Notes to Contributors gave rise to many different citation styles by the various authors. Hence, the researcher faced some problems when analysing such data.

5. The cited references and biographical notes could not be routinely verified as to accuracy.

Collection of Data

The researcher studied the references, footnotes, notes, citations and bibliographies of 111 articles, 103 biographical notes, 78 book reviews and other relevant information appended in *JMBRAS* between 1987-1996 housed in the researcher's own personal library. Copies of these journals are also available in most public or academic libraries in Malaysia. The bibliometric data such as titles of articles , names of authors, number of authors, occupation of authors, geographic and institutional affiliation of authors, gender of authors, length of articles, subject of articles, and references, footnotes, notes, citations or bibliographies were collected, compiled and tabulated after careful deliberations and countercheck. Apart from that, names of book reviewers, their country of affiliation and their membership to MBRAS were also collected, compiled and tabulated. Two forms were designed to gather the necessary information for easy reference and to facilitate compilation of data. After that, these data were tabulated for analysis where elements and the relevant portions of each records were extracted according to the needs of this study. All these processes of data collection, compilation and tabulation were done manually. Figure 3.1 shows the Data Input Form where bibliometric data and other relevant information obtained from articles and biographical notes of *JMBRAS*. On the other hand, Figure 3.2 shows the Data Input Form used to collect bibliometric data relating to the book reviews.

Figure 3.1
JMBRAS Articles 1987-1996
Data Input Form

JMBRAS Articles 1987-1996
DATA INPUT FORM

1. Article No:_____
2. Author Name:_____
3. Authorship Pattern:_____
4. Gender:_____
5. Occupation:_____
6. Geographical Affiliation:_____
7. Institutional Affiliation:_____
8. No. of Words in Title:_____
9. No. of Pages:_____
10. Subject:_____
11. Contribution (Local / Foreign/Multinational/Undetermined):_____
12. No. of Notes:_____
13. Acknowledgement:_____
14. Appendix:_____
15. Abstract:_____
16. MBRAS Membership:_____
17. No. of Journal Articles:_____
18. No. of Books/Monographs:_____
19. No. of Theses:_____
20. No. of Conference Papers, Data Papers, etc.: _____
21. No. of Newspaper items:_____
22. No. of Interviews:_____
23. No. of Govt. Documents:_____
24. No. of Incomplete References:_____
25. No. of Other References:_____
26. Total No. of References:_____

Figure 3.2
JMBRAS Book Reviews 1987-1996
Data Input Form

JMBRAS Book Reviews 1987-1996
DATA INPUT FORM

1. Year & Part: of *JMBRAS*:_____
2. Name of Reviewer: _____
3. Gender : _____
4. Contribution (Local / Foreign / Multinational / Undetermined) : _____
5. MBRAS Membership: _____
6. Country of Affiliation: _____

JMBRAS Article 1987-1996 Data Input Form

Collection and compilation of bibliometric data as required in this form begin with the transferring of relevant information from the content pages , the articles and biographical notes appended in each part of the journal for each year. Some of the information was obtained rather easily without much difficulty while others have to be determined and counted which at times involved a lot of laborious work. Hence, extra time in compiling these data was required. The structure of the _JMBRAS_ Articles 1987-1996 Data Input Form includes:

1. **Article Number**. This is an identification code assigned to each article using the year, part and the number of the article concerned in each journal.

2. **Author Name**. This refers to the name of the author of the article and was counterchecked with the biographical notes.

3. **Authorship**. This information is regarding the number of authors for the article. The number of authors is entered 1 for single author, 2 for two authors, 3 for three authors and so on.

4. **Gender**. This refers to the sex of the author. This is determined by referring to the names, membership records and other secondary sources available to the researcher. It is entered as F for female and M for male.

5. **Occupation**. This refers to the current occupation of the author or authors. To facilitate analysis, the data is entered by using the following code.

Code   Description

1   Academician. Person teaching and doing research in
           academic institutions, for example, universities, institutions of
           higher learning, colleges, schools and seminary.
2   Curator. Person in charge of the museum or art gallery.
3   Undergraduate, postgraduate student and researcher
           (non-teachers).
4   Librarian. Person working in libraries.
5   Member of Societies, Associations or etc. holding honorary
           positions.
6   Others. Person holding occupations other than 1-5.
7   Not available. When the information is not obtainable from
           the journal or other secondary sources, the occupation is
           deemed not available.

6. **Geographical Affiliation**. This field captures the country of affiliation of the author or authors as noted in the biographical notes appended at the back of the journal concerned. A total of 103 biographical notes were collected of which some were duplicate as certain authors had contributed more than one article in the period under study. However, there were some authors whose biographical notes were not appended either due to technical error or because they were not furnished by the authors themselves. The geographical affiliation is determined from these biographical notes. For those without biographical notes, other secondary sources were searched by the researcher. The name of the country is entered in abbreviated form using the following code.

Code	Country
AUST	Australia
BRUN	Brunei
FRAN	France
GERM	Germany
HK	Hong Kong
INDO	Indonesia
MSIA	Malaysia
NA	Not Available
NETH	Netherlands
NZ	New Zealand
SIN	Singapore
THAI	Thailand
UK	United Kingdom
USA	United States of America

7. **Institutional Affiliation**. This field records the type of institutions the author is affiliated to at the time of contributing the article. The codes used were:-

Code	Institutional Affiliation
AI	Academic institutions
AR	Archives
L	Libraries
M	Museums
S	Societies, Associations, etc.
O	Others
NA	Not Available. When the address does not indicate any institution, it is assumed that there is no affiliation. However, attempts were made to locate such information from other secondary sources for confirmation.

8. **Number of Words in Title**. This information is regarding the number of words found in the title of the articles concerned. When counting the number of words in the title of the articles, all words are considered except articles, prepositions and conjunctions.

9. **Number of Pages**. This refers to the length of the article in terms of the number of pages contributed by each author or authors of the article concerned.

10. **Subject**. The subject area refers to the discipline of history. The following codes were employed.

Code   Subject Area

Code	Subject Area
1	Colonial History (The British in Malaya)
2	Malay Political History (Colonial Period)
3	Malay Social History (issues pertaining sociology, education, architecture and other social themes)
4	Chinese and Indian Social History
5	General Social History
6	Economic History
7	Archaeology
8	Anthropology and Ethnography
9	Natural History
10	Traditional Malay Historical Works
11	Others (themes not falling under any category above)

11. **Contribution**. The contribution indicates the geographical distribution of the article whether it is a local, foreign, multinational or undetermined. It is determined by noting the geographical affiliation of the author at the time of writing the published article. It is entered as L for local, F for foreign, M for multinational and U for undetermined.

12. **Number of Notes**. This refers to the number of notes appended in the article by the author. The process of counting the notes takes a considerable amount of time as the researcher has to go through each page of the articles to determine whether the footnotes, references and notes written by the author are deemed notes or not. This is because certain authors append their footnotes, endnotes and notes at the end of their articles while others append these on the same page itself. In addition, certain notes contained citations or references.

13. **Acknowledgement**. This information is regarding the existence of any acknowledgement stated formally in the article by the author to express thanks or appreciation for the successful completion of the article. It is entered as Y for Yes, indicating the existence of an acknowledgement and N for No, indicating no acknowledgement.

14. **Appendix**. This refers to the existence of extra information appended at the end of each article. It is entered as Y for Yes and N for No for any appendices appended.

15. **Abstract**. This refers to the inclusion of an abstract for the article concerned. It is entered as Y for Yes and N for No.

16. **MBRAS Membership**. This information is regarding the author's membership to MBRAS. It is entered as Y for Yes and N for No.

17. **Number of Journal Articles**. This field captures the number of journal or magazine articles (including forthcoming) cited in the references, footnotes, notes, citations, and bibliography of the article.

18. **Number of Books/Monographs**. This is in regard to the number of books/ monographs (including forthcoming) which include encyclopaedias, dictionaries, bibliographies, catalogues and book chapter cited in the article.

19. **Number of Theses**. This field includes the number of academic exercises, Master's and Doctoral dissertations cited in the article.

20. **Number of Conference Papers, Data Papers, etc**. This field refers to the number of conference papers, occasional papers, data papers, professional papers, research papers, working papers and miscellaneous papers cited in the article.

21. **Number of Newspaper Items**. This refers to the number of newspaper items or articles cited by the author in the article.

22. **Number of Interviews**. This refers to the number of interviews conducted by the author when gathering information for the article.

23. **Number of Government Documents**. This includes the number of enactment, government files, minutes, circulars, reports and publications of the government ministries, both at state and federal level. The documents may either be printed by the government printer or otherwise.

24. **Number of Incomplete References**. This refers to the number of references cited by the authors whereby sufficient information was not given to ascertain correctly the bibliographic format of the document concerned. Hence, it is grouped together as incomplete references.

25. **Number of Other References**. This refers to the number of all cited materials other than the format mentioned above in the article.

26. **Total Number of References**. This denotes the total number of references cited by the author in the article. Any reference, which was, cited more than once in an article was considered one.

JMBRAS Book Reviews 1987-1996 Data Input Form

Bibliometric data were collected and compiled according to the Data Input Form. It involves the transferring of relevant information from the book reviews in each journal. Among the information gathered was the year and part of the journal, the name of the reviewers, the reviewers gender, type of contribution and country of affiliation which were

obtainable from the book review itself. The membership records were checked to see whether the author concerned is a member of MBRAS. In addition, the total contribution of each reviewer in various volumes and parts of the journals between the period under study was noted and tabulated.

Compilation of Data

After collecting all the Data Input Forms, the data regarding *JMBRAS* Articles 1987-1997 and *JMBRAS* Book Reviews 1987-1996 were transferred into them. The next process was compiling these data into separate tables to facilitate the extraction of records for data analysis. Each separate category compiled in these tables was then totalled.

Double-checking was done by totalling the number of documents in each article. From the two Data Input Forms as shown in Figure 3.1 and Figure 3.2, three tables were created, namely Article Table (Figure 3.3), Source Table (Figure 3.4) and Review Table (Figure 3.5). As shown in Figure 3.3, Article Table information pertaining to the name of authors, authorship, occupation, gender, geographical and institutional affiliation, number of words in title, length of each article, subject area of the article, type of contribution, number of notes, and the existence of acknowledgement, appendix and abstract and membership to MBRAS were recorded. On the other hand, the Reference Table (Figure 3.4) consisted of the number of different types of bibliographic format, namely journal articles, books/monographs, theses, conference papers,

newspapers, interviews, government documents, incomplete references and other references for each article. In addition, the total of all the documents was also recorded for each article. The Review Table, as shown in Figure 3.5 has information regarding the name of the reviewers, gender, geographical distribution of review, their membership to MBRAS, country of affiliation and number of contributions per reviewer.

Figure 3.3
Article Table: *JMBRAS* 1987-1996

No	AUTHOR 1 / AUTHOR 2	AUTHORSHIP	GENDER	OCCUPATION	GEOGRAPHICAL	AFFILIATION	IF TITLE IN ANOTHER NATIONAL LANGUAGE	• NO OF WORDS IN TITLE	NO OF PAGES	SUBJECT	CONTRIBUTION	NO OF NOTES	ACKNOWLEDGEMENT	APPENDIX	ABSTRACT	MBRAS MEMBERSHIP

Figure 3.4
Source Table: *JMBRAS* 1987-1996

Article No.	Journal Articles	Books / Monographs	Theses	CONference Papers etc.	Newspaper Items	Interviews	Government Documents	Incomplete References	Other References	Total No of References

Figure 3.5
Review Table: *JMBRAS* 1987-1996

No	Name of Book Reviewer	Gender	Contribution Local/Foreign/ Multinational/ Undetermined	MBRAS Membership	Country of Affiliation	Number of Contribution

Output from Data Compiled

From Table 3.2, Table 3.3 and Table 3.4, the following information was obtained and analysed :

JMBRAS Articles, 1987-1996

(i) the quantitative growth of articles by year-wise

(ii) the volume-wise distribution of citations

(iii) the distribution, range and mean number of citations per article

(iv) the ranked list of citations by types of document

(v) the authorship pattern of articles

(vi) the author's productivity of articles

(vii) the author's gender of articles

(viii) the ranked list of most prolific contributors (articles)

(ix) the ranking of authors by occupation (articles)

(x) the ranked list of authors by geographical affiliation (articles)

(xi) the ranking of authors by institutional affiliation (articles)

(xii) the range and mean number of words in the titles of articles

(xiii) the range and mean length (pages) per article

(xiv) the geographical distribution of articles (in percentage)

(xv) the subject trend (content analysis) of the articles

(xvi) the range and mean number of notes in the articles

(xvii) the extent of formal acknowledgement to articles

(xviii) the extent of appendices to articles being included

(xix) the extent of abstract to articles being provided

(xx) the relationship between MBRAS membership and *JMBRAS* articles
   contributors

JMBRAS Book Reviews, 1987-1996

(i) the quantitative growth, range and mean number of book reviews by year-wise

(ii) the gender of book reviewers (in percentage)

(iii) the geographical distribution of book reviews (in percentage)

(iv) the relationship between MBRAS membership and *JMBRAS* book reviewers

(v) the ranking by country affiliation of book reviewers

(vi) the book reviewer's productivity

(vii) the ranked list of most prolific book reviewers

JMBRAS Articles and Book Reviews, 1987-1996

(i) the quantitative growth of articles and book reviews by year-wise

(ii) the productivity of *JMBRAS* contributors (articles and book reviews)

(iii) the ranked list of the most prolific contributors (articles and book reviews)

(iv) the contributor's gender (articles and book reviews)

(v) the geographical distribution of articles and book reviews

(vi) the contributors membership to MBRAS

Conclusion

This chapter has described the methodology used in carrying the bibliometric study of *JMBRAS* 1987-1996 where Data Input Forms were created to compile the bibliometric data for tabulation and analysis. From these Data Input Forms, three tables were generated namely Article Table, Source Table and Review Table to organise the data for easy extraction during the process of data analysis. However, it must be made clear that these data will remain constant but its analysis might differ as the analysis of data is determined by the definition of terms as described in this section.