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Instruction Manual: Research Methodology

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Muhammad Mahboob Ali, PhD
Md. Kamrul Hossain, PhD

To
Eminent Educationist

Professor Abdul Mannan

Chairman

University Grants Commission of Bangladesh

with respect

Instruction Manual: Research Methodology

Volume 2

Muhammad Mahboob Ali, PhD
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(This book will be used as a Training Material for Training of Teachers (TOT) Program or Workshop on Research Methodology for young faculties.)

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CHAPTER ONE

RESEARCH PROPOSAL AND REPORT

A research proposal is a proposed framework which includes research questions, objective of the study and how the work will be conducted whereas research report is a document prepared by an analyst or strategist who is a part of the investment research team. A research report may focus on a specific stock or industry sector, a currency, commodity or fixed-income instrument, or on a geographic region or country. A research proposal is a concise and coherent summary of a proposed research. It sets out the central issues or questions that you intend to address. It outlines the general area of study within which your research falls, referring to the current state of knowledge and any recent debates on the topic. It also demonstrates the originality of your proposed research. The proposal is the most important document that you submit as part of the application process. It gives you an opportunity to demonstrate that you have the aptitude for graduate level research, for example, by demonstrating that you have the ability to communicate complex ideas clearly, concisely and critically. The proposal also helps us to match your research interest with an appropriate supervisor.

Steps to Writing an Academic Research Proposal

Some of the important parts of a good quantitative or qualitative research proposal include:

- Determining the general topic;
- Performing a Literature review on the topic;
- Identifying a gap in the literature;
- Identifying a problem highlighted by the gap in the literature and framing a purpose for the study;
- Writing an Introduction to the study;
- Framing research hypotheses and/ or research questions to investigate or guide the study;
- Determining the method of investigation,
- Outlining the research design,
- Defining the Sample size and the characteristics of the proposed sample;
- Describe the procedures to follow for data collection and data analyses.

An example of research proposal is given in the appendix. Research reports generally, but not always, have actionable recommendations such as investment ideas that investors can act upon. Research reports are produced by a variety of sources, ranging from market research firms to in-house departments at large organizations. When applied to the investment industry, the term usually refers to sell-side research, or investment research produced by brokerage houses. Such research is disseminated to the institutional and retail clients of the brokerage that produces it. Research produced by the buy-side, which includes pension funds, mutual funds and portfolio managers, is usually for internal use only and is not distributed to external parties.

Report Preparation/ Writing

The market research is normally outsourced to third party agencies by organizations and in turn they create a professional report to the organization. These reports are preferably provided to senior officials who are the critical decision makers of the organization. Hence these reports need to be exclusively efficient and well formatted and the matter should be limpid, analytical and directive. Initially in the report, the actual facts must be depicted clearly and it is desirable that the data and results are furnished in graphical or tabular format which could create a substantially good impression and is unambiguous to understand. The reports must be essentially capable to compare related information in the report so that conclusions can be derived potentially and easily.

It is necessary for a report to contain following details to be called a good report:

- Information collected in the report must be relevant and focused to derive desired results. Pictorial and graphical presentation of data and related information help to understand the details easily.

- There is a possibility that the collected data in the report needs to be represented at many places in different formats to fulfill the report goals. The ultimate goal is to determine all the issue and make suitable strategies to cope up with these issue or problems.
- Report should follow the exact predefined goals and objectives. If there is any sort of divergence of related information which does not match the goals then the results are of no use. In fact there is a probability of landing up in making negative or out of focus strategies, which will be very dangerous.
- The report should always contain the executive summary of the work. This is generally kept before the actual report starts as it shows the summary of the desired business plan.
- Apart from the actual analysis the report should also depict the reasons of making this report and what advantages and profit it can provide after successful implementation of business plans described inside the report.
- It should also contain the methodology of the research which shows the overall process adopted to create the report.
- It is important that the report contains the possibility of errors in any of the module or process so that immediate measures could be taken to cope up with these errors.
- The report should contain the description of the questionnaires used in analysis and the way it has been prepared.
- The methodology used in the interviews should also be elaborated and what was achieved in this should also be described.
- If the information show that some aspects need to predict the future trends then the reports should depict that prediction.
- This prediction should have scale of success so that the accuracy could be judged efficaciously. The report should also define each and every variable and element used in creating these predictive analyses.
- The report should be flexible enough to be changed accordingly. The analytical information described inside the report should be maintained in such a way that there is no extra effort labored if any strategy or process is to be changed in future. It should necessarily mould the changes without changing the structure of the report.
- The analytical report creation is very important phase of market research which acts as a blueprint of the business plan which is to be executed. By following the above guidelines while report generation process can be efficiently taken care of.

Characteristics of a Good Report

- Clarity of thought
- Conceptual clarity
- Explicit statement of research problem
- Simple and appropriate language
- Detailed and orderly presentation
- Size
- Chapter wise
- Quotations and footnotes
- Summary
- Limitations
- Acknowledgement

Qualities of Good Reports

Report provides factual information depending on which decisions are made. So every care should be taken to ensure that a report has all the essential qualities. A good report must have the following qualities:

Precision: In a good report, the writer is very clear about the exact and definite purpose of writing the report. His investigation, analysis and recommendation are directed by this central purpose. Precision provides unity to the report and makes it a valuable document.

Accuracy of facts: Information contained in a report must be based on fact. Since decisions are taken on the basis of information of the report, any inaccurate information will lead to wrong decision.

Relevance: The facts presented in a report should not only be accurate but also relevant. Irrelevant facts make a report confusing and likely to be misleading.

Conciseness: A good report should be concise but it does not mean that a report can never be long. Rather it means that a good report is one of that transmits maximum information with minimum words. It avoids unnecessary detail and includes everything significant.

Reader- Orientation: A good report is always reader oriented. While drafting any report, it is necessary to keep the person in mind who is going to read it. Readers' knowledge and level of understanding should be considered by the writer of the report.

Simple Language: A good report is written in a simple language avoiding vague words. The language of the report should not be influenced by the writer's emotion. The message of a good report is self-explanatory.

Grammatical Accuracy: A good report is free from errors. Any faulty construction of a sentence makes its meaning different to the reader and sometimes becomes confusing or ambiguous.

Unbiased Recommendation: If recommendations are made at the end of a report, they must be impartial and objective. They should come as a logical conclusion for investigation and analysis.

Clarity: A good report is absolutely clear. Clarity depends on proper arrangement of facts. Reporter should make his purpose clear, define his sources, state his findings and finally make necessary recommendation.

Attractive presentation: A good report provides a catchy look and creates attention of the reader. Structure, content, language, typing and presentation style of a good report should be attractive to make a clear impression in the mind of a reader.

Financial Analyst Research Reports

Financial analysts may produce research reports for the purpose of supporting a particular recommendation, such as whether to buy or sell a particular security or whether a client should consider a particular financial product. For example, an analyst may create a report in regards to a new offering being proposed by a company. The report could include relevant metrics regarding the company itself, such as the number of years they have been in operation as well as the names of key stakeholders, along with statistics regarding the current state of the market in which the company participates. Information regarding overall profitability as well as the intended use of the funds can also be included.

Research Reports

Research reports present the results of formal investigations into the properties, behavior, structures, and principles of material and conceptual entities. Almost any physical phenomenon or concept may be investigated in a research framework. The following are some key differences between formal research, and other less structured kinds of inquiry.

1. **Problem Definition:** the rigorous reduction of the inquiry to a narrow question with a quantifiable answer. The most significant preliminary phase of research writing is that of effective problem definition. This process is one of identifying an interesting question and narrowing the research inquiry to a manageable size.
2. **Research Approach:** the structuring of the research according to a methodology associated with a specialized field of inquiry. Specialized fields have research methodologies that are followed in

investigating problems. These range from general methods of interviewing and literature researching to highly specialized procedures for using materials and mechanical devices to establish appropriate conditions for generating data. Adapting a sound research methodology to the investigation of your problem is a major milestone in the conduct of your inquiry.

3. **Research Report:** the presentation of the research and its results in a rigorously formatted document that follows a conventional structure. In presenting your research, you pull all its elements together into a focused, coherent document. Research reports contain a standard set of elements.

Research Reporting Guidelines and Initiatives

Deadline Dates for Submission

The dates are posted at the Graduate School for both deadline to apply for graduation and the submission of papers. These deadlines are firm dates and no extensions will be given.

Organizational format should be as follows:

1. Title page
2. Approval page
3. Abstract (optional)
4. Acknowledgments/Dedication (not required)
5. Table of Contents
6. List of tables with page references
7. List of figures with page references
8. Text
9. Exhibits (tables, figures, photographs, etc. when not distributed in the text)
10. Bibliography (or appropriate title prescribed by style manual chosen)
11. Appendices (not required)
12. Human subjects committee approval form when required (photocopy)
13. Vita sheet (should have a page number)

Maps

Oversize maps may be included as a supplemental file.

Appendices

List of terms, definitions, questionnaires, and other supplemental information which is useful, but not essential to the body of the thesis or dissertation but may be included in an appendix.

Margins are flexible within the appendix but keep in mind that the left binding edge will cover approximately 1 ½ inches of data. Page numbers need to continue within the appendix with the same font and the same position on the page as in the text. The Graduate School consultants can advise you about this if needed.

Color

Color is permitted.

Additional Files

You may upload multimedia files (video or audio files).

Fonts

- The document should be readable. The type face should be letter quality. Font style should be standard and not an unusual style such as Cursive, Script or Italic. Some standard fonts are listed below. Ariel, Bookman, Courier, Times New Roman
- The body of the document should use a 10 or 12 point font. Headings and subheadings may go up one size and up to 14 point but must be of the same font style as the body of the text.
- **Bold** format may be used only as specified by the style manual chosen.
- *Italics* may be used only as specified by the style manual chosen. In general, it may be used for Genera, species, letter, word or phrase cited as a linguistic example and foreign words.

Spacing

- The body of the document must be double spaced.
- Extended direct quotations, should be presented consistently with the style manual selected.
- Opening pages (Table of Contents, Chapters, Bibliography, etc.) that are required by the manual style to have a set top margin may have a larger than one inch top margin on those pages. Charts, tables and figures may have greater margins than listed but may not go into the required margins.
- Paragraph indentations should be uniform five spaces. There should be no extra spacing.

Preparing a Research Report

A research experience provides undergraduates a problem-solving activity unlike anything else in the curriculum. It provides exposure to research methodology and an opportunity to work closely with a faculty advisor. It usually requires the use of advanced concepts, a variety of experimental techniques, and state-of-the-art instrumentation. Ideally, undergraduate research should focus on a well-defined project that stands for a reasonable chance of completion in the time available. A literature survey alone is not a satisfactory research project. Neither is repetition of established procedures. The Committee on Professional Training (CPT) strongly supports efforts by departments to establish active and vibrant undergraduate research programs, recognizing the role that research can play in developing a wide range of student skills. The 2015 guidelines allow for the use of undergraduate research both as in-depth coursework, as well as a means of meeting 180 of the 400 laboratory hours required for certification provided that a well-written, comprehensive, and well-documented research report is prepared at the end of a project (samples of such research reports must be submitted with the periodic reports.) The CPT has a separate supplement outlining the components of successful research programs and projects.

Preparation of a comprehensive, well-documented and appropriately referenced written research report is an essential part of a valid research experience, and the student should be aware of this requirement at the outset of the project. Interim reports may also be required, usually at the termination of the quarter or semester. Sufficient time should be allowed for satisfactory completion of reports, taking into account that initial drafts should be critiqued by the faculty advisor and corrected by the student at each stage. It may be expected that concrete outcomes of any research project would be student presentation of research results at a professional meeting and/or co-authorship on a journal publication. While desirable outcomes, they are not a substitute for a well-written comprehensive report that demonstrates that the student has a full grasp of the scope of the problem, the techniques/instrumental methods used, and the ramifications of the results generated (much as might be expected for a capstone paper or a B.S. thesis). The student report should receive substantive critique and correction by the faculty mentor in its development.

Guidelines on how to prepare a professional-style research report are not always routinely available. For this reason, the following information on report writing and format is provided to be helpful to undergraduate researchers and to faculty advisors. Much of what follows is similar to what authors would find in many 'guidelines to authors' instructions for most journal submissions. The most comprehensive student research reports examined by CPT have been those student reports reviewed by more faculty than

just the supervising research advisor. In some cases, programs require an approval of the report by several faculty members; in such cases, student research reports are often of high quality.

Organization of a Research Report

Most scientific research reports, irrespective of the field, parallel the method of scientific reasoning. That is: the problem is defined, a hypothesis is created, experiments are devised to test the hypothesis, experiments are conducted, and conclusions are drawn. The exact format of scientific reports is often discipline dependent with variations in order and content. The student is encouraged to adopt the format that is most appropriate to the discipline of the research. Many journals offer a formatting template to aid the author. One example of such a framework is as follows:

- Title
- Abstract
- Introduction
- Experimental Details or Theoretical Analysis
- Results
- Discussion
- Conclusions and Summary
- References

Title and Title Page

The title should reflect the content. It should be as short as possible and includes essential key words. The author's name (e.g., Mary B. Chung) should follow the title on a separate line, followed by the author's affiliation (e.g., Department of Chemistry, Central State College, Central, AR 76123), the date, and possibly the origin of the report (e.g., In partial fulfillment of a Senior Thesis Project under the supervision of Professor Danielle F. Green, June, 1997). All of the above could appear on a single cover page. Acknowledgments and a table of contents can be added as preface pages if desired.

Abstract

The abstract should concisely describe the topic, the scope, the principal findings, and the conclusions. It should be written at last to accurately reflect the content of the report. The length of abstracts varies but seldom exceeds 200 words. A primary objective of an abstract is to communicate the essence of the paper to the reader. It should provide sufficient information to describe the important features of the project in the absence of the rest of the document. The reader will then be the judge of whether to read the full report or not. If the report were to appear in the primary literature, the abstract would serve as a key source of indexing terms and key words to be used in information retrieval. Author abstracts are often published verbatim in Chemical Abstracts.

Introduction

"A good introduction is a clear statement of the problem or project and the reasons for studying it." (The ACS Style Guide. American Chemical Society, Washington, DC, 2006.) The nature of the problem and why it is of interest should be conveyed in the opening paragraphs. This section should describe clearly but briefly the background information on the problem, what has been done before (with proper literature citations), and the objectives of the current project. A clear relationship between the current project and the scope and limitations of earlier work should be made so that the reasons for the project and the approach used will be understood.

Experimental Details, Computation Procedures, or Theoretical Analysis

This section should describe what was actually done. It is a succinct exposition of the laboratory and computational details, describing procedures, techniques, instrumentation, special precautions,

characterization of compounds and so on. It should be sufficiently detailed that other experienced researchers would be able to repeat the work and obtain comparable results. In theoretical reports, this section would include sufficient theoretical or mathematical analysis to enable derivations and numerical results to be checked. Computer programs from the public domain should be cited. New computer programs should be described in outline form. If the experimental section is lengthy and detailed, as in synthetic work, it can be placed at the end of the report so that it does not interrupt the conceptual flow of the report. Its placement will depend on the nature of the project and the discretion of the writer.

Results

In this section, relevant data, observations, and findings are summarized. Tabulation of data, equations, charts, and figures can be used effectively to present results clearly and concisely. Schemes to show reaction sequences may be used here or elsewhere in the report.

Discussion

The crux of the report is the analysis and interpretation of the results. What do the results mean? How do they relate to the objectives of the project? To what extent have they resolved the problem? Because the "Results" and "Discussion" sections are interrelated, they can often be combined as one section.

Conclusions, Summary and Future Direction for Research

A separate section outlining the main conclusions of the project is appropriate if conclusions have not already been stated in the "Discussion" section. Directions for future work are also suitably expressed here. A lengthy report, or one in which the findings are complex, usually benefits from a paragraph summarizing the main features of the report - the objectives, the findings, and the conclusions. The last paragraph of text in manuscripts prepared for publication is customarily dedicated to acknowledgments. However, there is no rule about this, and research reports or theses/ dissertations frequently place acknowledgments following the title page. Future direction of research is very important to mention.

References

Thorough, up-to-date literature references acknowledge foundational work, direct the reader to published procedures, results, and interpretations, and play a critical role in establishing the overall scholarship of the report. The report should include in-text citations with the citations collated at the end of the report and formatted as described in The ACS Style Guide or using a standard established by an appropriate journal. The citation process can be facilitated by using one of several available citation software programs. In a well-documented report, the majority of the references should come from the primary chemical literature. Since Internet sources are not archival records, they are generally inappropriate as references for scholarly work. They should be kept to a bare minimum.

Preparing the Manuscript

The personal computer and word processing have made manuscript preparation and revision a great deal easier than it is used to be. It is assumed that students will have access to word processing and to additional software that allows spelling to be checked, numerical data to be graphed, chemical structures to be drawn, and mathematical equations to be represented. These are essential tools of the technical writer. All manuscripts should be carefully proofread before being submitted. Preliminary drafts should be edited by the faculty advisor (and/or a supervising committee) before the report is presented in final form.

Research report must be tested by anti-plagiarism software, some of them are as follows:

Viper plagiarism scanner

Grammatically it is an automated proofreader and plagiarism checker.

Duplicity checker

Useful Texts

Writing the Laboratory Notebook, Kanare, H.M., American Chemical Society, Washington, DC, 1985. This book describes among other things the reasons for note-keeping, organizing and writing the notebook with examples, and provides photographs from laboratory notebooks of famous scientists.

ACS Style Guide: Effective Communication of Scientific Information, Coghill, A.M., Garson, L.R.; 3rd Edition, American Chemical Society, Washington, DC, 2006. This volume is an invaluable writer's handbook in the field of chemistry. It contains a wealth of data on preparing any type of scientific report and is useful for both students and professional chemists. Every research laboratory should have a copy. It gives pointers on the organization of a scientific paper, correct grammar and style, and accepted formats in citing chemical names, chemical symbols, units, and references. There are useful suggestions on constructing tables, preparing illustrations, using different fonts, and giving oral presentations. In addition, there is a brief overview of the chemical literature, the way in which it is organized and how information is disseminated and retrieved. A selected bibliography of other excellent guides and resources to technical writing is also provided. See also *The Basics of Technical Communicating*. Cain, B.E.; ACS Professional Reference Book American Chemical Society: Washington, DC, 1988.

Write Like a Chemist, Robinson, M.S., Stoller, F.L., Costanza-Robinson, M.S., Jones, J.K., Oxford University Press, Oxford, 2008.

- This book addresses all aspects of scientific writing. The book provides a structured approach to writing a journal article, conference abstract, scientific poster and research proposal. The approach is designed to turn the complex process of writing into graduated, achievable tasks.

Guidelines for Footnotes and Bibliography

The Footnote

Content footnotes give additional information about the content, and bibliographic notes provide additional sources related to the content. The footnote is found at the bottom or foot of the page. It is marked by a superscript number within the body of the text. The superscript number also appears at the bottom of the page, along with the additional explanatory or bibliographic information. If specific sources are used to write content footnotes, this information should be cited through parenthetical citations within the footnote and then with full citation information within the Works Cited, or Bibliography, page. Bibliographic footnotes point your readers to specific, related outside texts without providing much commentary on them. Full citation information for these sources should also be included on the Works Cited page.

The Bibliography

The Bibliography, or Works Cited, page is the last section of a paper. It compiles information of the full citation for any source cited in or consulted for the paper into one location and allows your readers to get an overview of the works informing your thinking. The full citation information found in this section tells your readers when and where a source was published, whereas a footnote might only include the title of the work. Additionally, no information besides the citation information is included within the bibliography.

The Use of Footnotes

Footnoting is an acceptable method of acknowledging material which is not your own when you use it in an essay. Basically, footnoted materials are of three types:

1. Direct quotations from another author's work which must be placed in quotation marks.
2. Citing authority for statements (not quoted directly).

3. Material of explanatory nature which does not fit into the flow of the body of the text.

In the text of an essay, material to be footnoted should be marked with a raised number immediately *following* the words or ideas that are being cited.

Example:

"The only aspect of Frontenac's conduct the king...did not condemn was his care for military security," Eccles stated, condemning Frontenac's administration. The footnotes may be numbered in sequence on each page or throughout the entire essay.

Form and Content of Footnotes:

A. From a book:

¹W. J. Eccles, *Frontenac The Courtier Governor* (Toronto: McClelland and Stewart Limited, 1959).

[The information given in a footnote includes the author, the title, the place (city) of publication, the publisher, the date of publication and the page or pages on which the quotation or information is found.]

B. From an article in a journal:

¹Peter Blickle, "Peasant Revolts in the German Empire in the Late Middle Ages," *Social History*, Vol. IV, No. 2 (May, 1979), 233.

C. From a book containing quotations from other sources:

¹Eugene A. Forsey, "Was the Governor General's Refusal Constitutional?", cited in Paul Fox, *Politics: Canada* (Toronto: McGraw-Hill Company of Canada Ltd., 1966), 186.

D. From a standard reference work:

¹Norman Ward, "Saskatchewan," in *The Canadian Encyclopedia*, 2nd ed., Vol. 3, 1935.

²J. K. Johnson and P. B. Waite, "Macdonald, Sir John Alexander," in *The Dictionary of Canadian Biography*, Vol. 12, 599

E. From the Internet:

In citing material read on the Internet, it is not sufficient to indicate the website alone. You must provide information about author, title, and date of the document you are using, as follows:

¹T.J.Pritzker, (1993). "An Early Fragment from Central Nepal" [Online]. Available: <http://www.ingress.com/~astanart/pritzker/pritzker.html> [1995, June].

The final date [1995, June] is the date the website was consulted.

For more information about how to cite electronic information see Xia Li and Nancy Crane, *The Handbook for Citing Electronic Resources* or <http://www.uvm.edu/~ncrane/estyles/>.

II. Rules to Remember in Writing Footnotes:

Titles of books, journals or magazines should be underlined or italicized.

Titles of articles or chapters—items which are only a part of a book—are put in quotation marks.

III. Abbreviating in Footnotes:

The *first* time any book or article is mentioned in a footnote, all the information requested above must be provided. After that, however, there are shortcuts which should be used:

(a) Several quotations in sequence from the same book:

The abbreviation to be used is "Ibid.," a Latin word meaning "in the same place." (Notice that Ibid. is not underlined). Ibid. can be used by itself, if you are referring to the same page as the previous footnote does, or it can be combined with a page number or numbers.

Example:

¹Gerald Friesen, *the Canadian Prairies: A History* (Toronto: University of Toronto Press, 1984).

²Ibid.

³Ibid, 351.

(b)Reference to a source that has already been cited in full form but not in the reference immediately preceding, is made by using the author's last name (but not the first name or initials unless another author of the same surname has been cited), the title--in shortened form, if desired--and the page number.

Example,

¹William Kilbourn, *The Firebrand* (Toronto: Clark, Irwin and Company Limited, 1956), 35.

²John L. Tobias, "Canada's Subjugation of the Plains Cree, 1879-1885," in *Sweet Promises: A Reader on Indian-White Relations in Canada*, ed. J. R. Miller (Toronto: University of Toronto Press, 1991), 224.

³Kilbourn, *The Firebrand*, 87.

⁴Tobias, "Canada's Subjugation of the Plains Cree," 226.

Bibliography and References

A bibliography encompasses all works you consult in writing your paper, whether or not you quote the authors of those works or refer to their ideas. A reference list should include only those works quoted or "referred to" directly within the context of your paper. The information is separated for the most part by periods (rather than by commas, as in the footnotes) and the parentheses enclosing the facts of publication are dropped. References is also called annotate bibliography.

Example:

Eccles, W. J. *Frontenac The Courtier Governor*. Toronto: McClelland and Stewart Limited, 1959.

Johnson, J. K. and P. B. Waite. "Macdonald, Sir John Alexander." In *The Dictionary of Canadian Biography*, Vol. 12, 91-612. Koenigsberger, H. G. and George L. Mosse. *Europein the Sixteenth Century*. London: Longmans, 1971.

Laslett, Peter. "The Gentry of Kent in 1640," *CambridgeHistorical Journal*, Vol. IX, No. 2 (Spring 1948):18-35.

Pritzker, T. J. (1993). "An Early Fragment from Central Nepal," [Online].<http://www.ingress.com/~astanart/pritzker/pritzker.html>. [1995 June].

Tobias, John L. "Canada's Subjugation of the Plains Cree, 1879-1885." In *Sweet Promises: A Reader on Indian-WhiteRelations in Canada*, ed. J. R. Miller. Toronto: University of Toronto Press, 1991: 212-240.

Ward, N. "Saskatchewan." In *The Canadian Encyclopedia*, 2nd ed., Vol. 3, 1931-1938.

The Chicago Style uses two methods for citing resources. The Notes and Reference List (Bibliography) method uses numbered footnotes or end notes to cite resources and usually a corresponding bibliography at the end of the paper. The Author-Date method uses in-text parenthetical references and a corresponding "Reference List," similar to APA and MLA style. You should check with your instructor or class syllabus to determine which method to use. Parenthetical references are used within the text of your paper to lead the reader to your reference list. Typically the parenthetical reference will consist of the author's last name followed by the publication date of the article you are citing. Some examples of parenthetical references are below.

Author-Date

Examples:

In his study on brown algae Smith (2006), found that... In 2006, Smith found that brown algae... Brown algae has been found to be detrimental to the shellfish harvest (Smith 2006). Brown algae has been found to be detrimental to the shellfish harvest (Smith, 2006, 24-38). The oxygen intake of scallops was measured to be lower in brown tide infested waters (34).

Abbreviations and Acronyms

An *abbreviation* is a shortened form of a name or term (e.g., *postop* for *postoperative*, *kg* for *kilogram*, *UN* for *United Nations* etc.). An *acronym* is an abbreviation formed from the initial letters of a term e.g., *FBI* for *Federal Bureau of Investigation* (Jeff Hume Prutch, 2015). All acronyms are abbreviations, but not all abbreviations are acronyms. Since the mid-20th century, acronyms have generally formed pronounceable words (e.g., *laser*, from *light amplification by stimulated emission of radiation*); however, the rage for acronyms has outstripped the bounds of pronunciation, and this is no longer a requirement.

Examples:

- Minnesota Multiphasic Personality Inventory (MMPI)
- Conditional stimulus (CS)
- Interatrial interval (ITI)
- Consonant–vowel–consonant (CVC)
- Short-term memory (STM)
- Reaction time (RT)

Does using the abbreviation provide an advantage over not using it?

Abbreviating lengthy or complex, frequently repeated terms can speed reading comprehension. For example, a review of a test instrument (e.g., the Wechsler Adult Intelligence Scale) might involve numerous references to the name; using its abbreviation (WAIS) would be likely to help the reader. However, a multitude of unfamiliar abbreviations can reduce rather than enhance the clarity of your writing. Even a quite intelligent reader might have trouble deciphering “limited value due to SSS” and prefer the concept to be expressed as “small sample size” instead. In general, it is good to limit the use of abbreviations to cases where the abbreviation is familiar to the reader and saves space and time.

How many times does the term appear?

In APA Style, a term should not be abbreviated unless it appears three or more times after its first mention in a paper; once a term is abbreviated, the abbreviation must be used consistently thereafter. Note also that there is no rule requiring you to abbreviate a term that appears three or more times.

Does the abbreviation carry an unintended meaning?

However, the Wisconsin Tourism Foundation was not so fortunate; it had to change its name and logo when it became aware of the popular meaning of WTF. Moral: Before you create an abbreviation, look twice (or three times) to make sure it can’t be interpreted in a way that would detract from your meaning.

Use of Abbreviations in Text

Use the abbreviation consistently thereafter. Strictly speaking, APA Style does not allow the abbreviation to be reintroduced in subsequent sections of an article or paper. However, the *APA Publication Manual* was designed primarily with journals articles in mind. In longer works that are broken into chapters such as books and dissertation. To maximize clarity, APA prefers that authors use abbreviations sparingly. Although abbreviations are sometimes useful for long, technical terms in scientific writing, communication is usually garbled rather than clarified if, for example, an abbreviation is unfamiliar to the reader.

Examples

First use: (American Psychological Association [APA], 2009)

or American Psychological Association (APA; 2009)

- *Subsequent use:* (APA, 2009)
The corresponding reference list entry should contain the author’s full name, not the abbreviation.
- *Correct:* American Psychological Association. (2009).

- *Incorrect:* American Psychological Association (APA). (2009).
- *Incorrect:* APA. 2009.

Important note

Avoid the use of abbreviations in the title of your paper. It is fine to use them in headings if they have already been introduced, but do not introduce them for the first time there. In general, abbreviations should also be avoided at the beginning of a sentence, unless this would produce an awkward construction.

Acronym

An acronym is a word formed from the initial letters of a name or phrase. It is pronounced as if it were a word. Essentially, initializes are shorter forms of words or phrases that can come in handy when you need to repeat the same word or phrase a number of times throughout the same piece of writing. Examples of common acronyms include “SARS” (severe acute respiratory syndrome) and “UNICEF” (United Nations International Children’s Emergency Fund)—imagine having to write that out each time in a 10-page document on the organization’s initiative to improve educational opportunities for young girls in Africa!

Important things to consider before using an initialize or acronym

Short forms are not always the best way to avoid redundancies. So, if you are going to use initializes and/or acronyms in your business writing, remember: the first time you use an initialize or acronym in your document, the words should be written out with the short form placed in parentheses immediately after. This way, it is clear to the readers exactly what the letters mean.

Here's an example:

A New World Order (NWO) came into effect after 9/11.

Need of Consistency

Readers will then be aware that any future reference to the "NWO" in your document really refers to the New World Order. After you have established an initialize or acronym in your paper, you must consistently use the short form in place of the words.

Stick to One Definition of the Initialize or Acronym

Always clarify in your own mind the exact definition of each acronym you use. If you define SEM as "scanning electron microscopy" (which is a process), your acronym should refer only to the process throughout your paper. For example, the following sentence would be incorrect if included in the same paper: If you have already defined SEM as standing for the process, you cannot use SEM to refer to the item (i.e., a scanning electron microscope, which you use to perform the process of scanning electron microscopy), even though the first letters of each word are the same. In short, the same initialize or acronym can only refer to one thing in a document.

Examples:

We used SEM in our experiments.

Initializes or acronyms still require articles (i.e., "a," "an," or "the"). Let's use the New World Order again:

Incorrect: NWO has emerged in the 21st century.

Correct: An NWO has emerged in the 21st century.

Remember that NWO stands for a noun "New World Order," and nouns require articles before them.

Difference between a monograph, a book, a journal, and a magazine⁴

A **monograph** is a specialist book on a single subject written by one author. For example: Jai Arjun Singh's monograph on the film Jane Bhi Do Yaaro, Jane Bhi Do Yaaro: Seriously Funny Since 1983.

A **research paper** is written to record insights in a particular topic in an academic area either in the arts, the sciences or the social sciences. The tone of a research paper is serious and no nonsense. It usually deals with serious topics, are very detailed and follow a strict format of referencing other books or papers or sources mentioned. This depends on the discipline. English literature prefers the MLA style of documentation. Social sciences prefer the APA style of documentation. Research papers are published in a journal. They can be authored by one person or several people. For example: papers published in the journal Nature.

A **journal** is a collection of academic research papers or writing from several people based on a theme and published from time to time (either weekly, fortnightly, monthly, bimonthly, annually, biannually). The tone of a journal is serious. A journal has multiple authors. They are numbered or given seasonal names to keep track of the issues. For example: Granta Autumn 2014.

A **magazine** is a collection of articles not based on an academic subject but rather a theme either in print or electronically or both. There are magazines based on news (the Week, India Today), features (Open), science and technology (Wired), natural history (National Geographic), travel (Outlook Traveller), fashion (Elle, Cosmopolitan) and photography (Photographer) among others. They are published from time to time (either weekly, fortnightly, monthly, bimonthly, annually, biannually) The tone of a magazine can be either serious or light. Magazines are also numbered to keep track of the published issues.

A **book** - in an academic sense - is a detailed exploration running into many pages on a particular subject. They can be a collection of papers penned by one author or several authors. For example: A.L Basham's 'The Wonder That was India'. PhD theses can be published as academic books. There are books written on pretty much any subject under the sun and in any tone.

Structural Equation Model (SEM)

Structural Equation Modeling is a very general, very powerful multivariate analysis technique that includes specialized versions of a number of other analysis methods as special cases. Major applications of structural equation modeling include:

Causal modeling, or path analysis, which hypothesizes causal relationships among variables and tests the causal models with a linear equation system. Causal models can involve either manifest variables, latent variables, or both;

Confirmatory factor analysis, an extension of factor analysis in which specific hypotheses about the structure of the factor loadings and inter-correlations are tested; second order factor analysis, a variation of factor analysis in which the correlation matrix of the common factors is itself factor analyzed to provide second order factors;

Regression models, an extension of linear regression analysis in which regression weights may be constrained to be equal to each other, or to specified numerical values;

Covariance structure models, which hypothesize that a covariance matrix has a particular form. For example, you can test the hypothesis that a set of variables all have equal variances with this procedure;

Correlation structure models, which hypothesize that a correlation matrix has a particular form. A classic example is the hypothesis that the correlation matrix has the structure of a circumflex (Guttman, 1954; Wiggins, Steiger, &Gaelick, 1981).

Beware predatory Academic Publishers/Journals

CHAPTER TWO**STATISTICAL ANALYSIS**

Statistical analysis is fundamental to all experiments that use statistics as a research methodology. Most experiments in social sciences and many important experiments in natural science and engineering need statistical analysis.

Statistical Test Based on Nature of Variable

Number of dependent variables	Nature of independent variables (IVs)	Nature of dependent variable(s)	Tests
One variable	No IVs (1 population)	Interval & normal	One sample t test
		ordinal	One sample median
		dichotomous	Binomial test
		Two or more categories	Chi-square test
	1 IVs with 2 levels (independent groups)	Interval & normal	2 sample independent t-test
		Ordinal or interval	Wilcoxon-Mann Whitney test
		Categorical	Chi-square test
			Fisher's exact test
	1 IVs with 2 or more levels (independent groups)	Interval & normal	One-way ANOVA
		Ordinal or interval	Kruskal Wallis
		Categorical	Chi-square test
	1 IVs with 2 levels (dependent/matched groups)	Interval & normal	Paired t-test
		Ordinal or interval	Wilcoxon signed ranks test
		Categorical	McNemar test
	1 IVs with 2 or more levels (dependent/matched groups)	Interval & normal	One-way repeated measures ANOVA
		Ordinal or interval	Friedman test
		Categorical	Repeated measures logistic regression
	2 or more IVs	Interval & normal	Factorial ANOVA

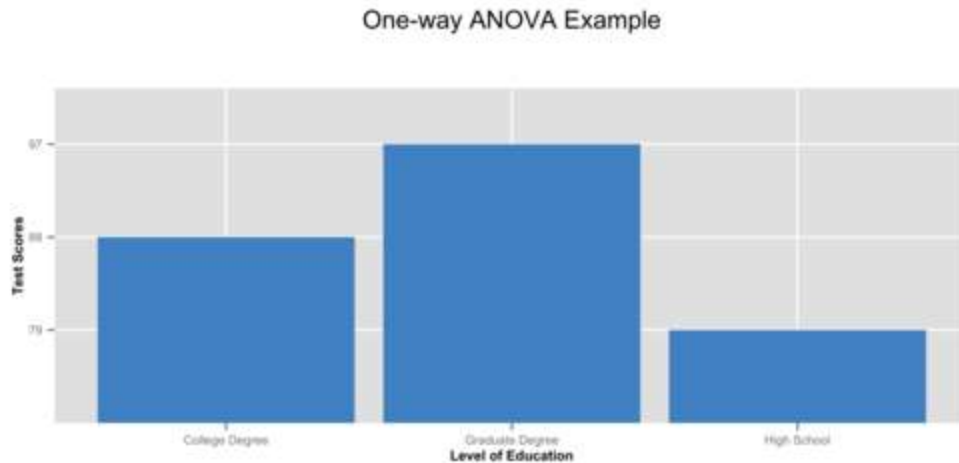
	(independent groups)	Ordinal or interval	Ordered logistic regression
		Categorical	Factorial logistic regression
	1 interval IV	Interval & normal	correlation
			Simple linear regression
		Ordinal or interval	Non parametric correlation
		Categorical	Simple linear regression
	2 or more interval IVs and/or more categorical IVs	Interval & normal	Multiple regression
			ANCOVA
		Categorical	Multiple logistic regression
			Discriminant analysis
Two or more variables	2 or more categorical	interval	MANOVA
			Path analysis

The distinctions between ANOVA, ANCOVA, MANOVA, and MANCOVA can be difficult to keep straight. Before one can appreciate the differences, it is helpful to review the similarities among them.

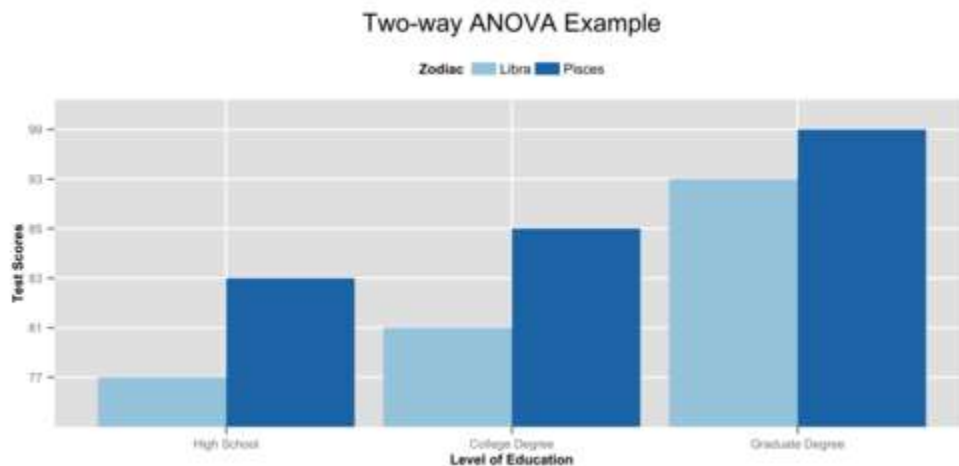
ANOVA

The core component of all four of these analyses (ANOVA, ANCOVA, MANOVA, and MANCOVA) is the first in the list, the ANOVA. An "Analysis of Variance" (ANOVA) tests three or more groups for mean differences based on a continuous (i.e. scale or interval) response variable (a.k.a. dependent variable). The term "factor" refers to the variable that distinguishes this group membership. Race, level of education, and treatment condition are examples of factors.

There are two main types of ANOVA: (1) "one-way" ANOVA compares levels (i.e. groups) of a single factor based on single continuous response variable (e.g. comparing test score by 'level of education') and (2) a "two-way" ANOVA compares levels of two or more factors for mean differences on a single continuous response variable (e.g. comparing test score by both 'level of education' and 'zodiac sign'). In practice, you will see one-way ANOVAs more often and when the term ANOVA is generically used, it often refers to a one-way ANOVA. Henceforth in this blog entry, I use the term ANOVA to refer to the one-way flavor.



One-way ANOVA has one continuous response variable (e.g. Test Score) compared by three or more levels of a factor variable (e.g. Level of Education).



Two-way ANOVA has one continuous response variable (e.g. Test Score) compared by more than one factor variable (e.g. Level of Education and Zodiac Sign).

ANCOVA

The obvious difference between ANOVA and ANCOVA is the letter "C", which stands for 'covariance'. Like ANOVA, "Analysis of Covariance" (ANCOVA) has a single continuous response variable. Unlike ANOVA, ANCOVA compares a response variable by both a factor and a continuous independent variable (e.g. comparing test score by both 'level of education' and 'number of hours spent studying'). The term for the continuous independent variable (IV) used in ANCOVA is "covariate".

ANCOVA is also commonly used to describe analyses with a single response variable, continuous IVs, and no factors. Such an analysis is also known as a regression. In fact, you can get almost identical results in SPSS by conducting this analysis using either the "Analyze > Regression > Linear" dialog menus or the "Analyze > General Linear Model (GLM) > Univariate" dialog menus.

A key (but not only) difference in these methods is that you get slightly different output tables. Also, regression requires that user dummy code factors, while GLM handles dummy coding through the "contrasts" option. The linear regression command in SPSS also allows for variable entry in hierarchical blocks (i.e. stages).

MANOVA

The obvious difference between ANOVA and a "Multivariate Analysis of Variance" (MANOVA) is the "M", which stands for multivariate. In basic terms, A MANOVA is an ANOVA with two or more continuous response variables. Like ANOVA, MANOVA has both a one-way flavor and a two-way flavor. The number of factor variables involved distinguishing when comparing two or more continuous response variables by a single factor, a one-way MANOVA is appropriate (e.g. comparing 'test score' and 'annual income' together by 'level of education'). A two-way MANOVA also entails two or more continuous response variables, but compares them by at least two factors (e.g. comparing 'test score' and 'annual income' together by both 'level of education' and 'zodiac sign').

A more subtle way that MANOVA differs from ANOVA is that MANOVA compares levels of a factor that has only two levels (a.k.a. binary). When dealing with a single response variable and binary factor (e.g. gender), one uses an independent sample t-test. However, a t-test cannot estimate differences for more than one response variable together, thus a MANOVA fills that need.

MANCOVA

Like ANOVA and ANCOVA, the main difference between MANOVA and MANCOVA is the "C," which again stands for "covariance." Both a MANOVA and MANCOVA feature two or more response variables, but the key difference between the two is the nature of the IVs. While a MANOVA can include only factors, an analysis evolves from MANOVA to MANCOVA when one or more covariates are added to the mix.

SPSS NOTE: When running either a MANOVA or MANCOVA, SPSS produces tables that show whether response variables (on the whole) vary by levels of your factor(s). SPSS also produces a table that presents follow-up univariate analyses (i.e. one response variable at a time - ANOVA/ANCOVA). This table shows which response variables in particular vary by level of the factors tested. In most cases, we are only concerned with this table when we find significant differences in the initial multivariate (a.k.a. omnibus) test. In other words, we first determine if our set of response variables differ by levels of our factor(s) and then explore which are driving any significant differences we find. (Jeremy J. Taylor <http://www.statsmakemecry.com/smmctheblog/stats-soup-anova-ancova-manova-mancova> (Viewed on 12 September, 2016))

Strength Weakness Opportunity and Threat (SWOT) Analysis

SWOT analysis is one of the most popular strategic analytical tools that used for strategic decision making. The acronym stands for strengths, weaknesses, opportunities, and threats associated with a particular business. Example of SWOT analysis on PepsiCo SWOT is presented on table below:

Strengths	Weaknesses
<ol style="list-style-type: none"> 1. Large, yet focused brand portfolio in food, snack and beverage industry. 2. Strong leadership from CEO 3. High level of customer loyalty for most of the brands within product portfolio 4. Extensive experiences in mergers and acquisitions 5. Integrated supply-chain and distribution practices across PepsiCo brands 	<ol style="list-style-type: none"> 1. Overdependence on domestic market in the USA 2. High level of dependence on large supermarkets such as Wal-Mart 3. “Aquafina” tap water scandal and product recall cases 4. PepsiCo brand perceived as ‘unhealthy’ 5. No presence outside of food, snack and beverage industry
Opportunities	Threats
<ol style="list-style-type: none"> 1. Improving health implications of products 2. Business diversification into other industries 3. Increasing presence in emerging economies 4. Increasing the effectiveness of CSR strategy 5. Focusing on research and development 	<ol style="list-style-type: none"> 1. Intensification of competition 2. Rapid decline in the sales of carbonated drinks 3. New product recalls due to quality scandals 4. High amounts of sugar or salt in products being criticized by government and non-government health organizations

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CHAPTER THREE

DETAILED GUIDELINES FOR INTERNSHIP REPORT

During the Internship in an organization you should prepare a report under the guidance of your academic supervisor. You must meet your supervisor at least o preparation are given below:

1. **Introduction:** Give a brief description of the organization. Usually, it should cover the origin, chronological progress, and current activities of the organization. Basically, the title of the internship will help determine the direction of the description in this section. A significant part of the introduction will focus on the topic you have chosen for study purpose.
2. **Background:** In a nutshell, describe the nature of the study. If possible, do literature review and establish research gap to determine your contribution area. You can also identify some factors that could be considered the foundation factors of the study.
3. **Scope of the Study:** The scope of the study is confined to the organization you are working for. The study will investigate different areas which are related to your title of the study.
4. **Problem Statement/ Objective of the Study:** Describe how worthwhile the problem is to be a research study. Then, define the problem with a broad or general statement. After making a broad statement of the problem, split the problem into different component factors.
 - **Broad Statement:** You have to make a general statement on the problem/research issue you are addressing. For example, “To have a broad idea of different activities of the organization.”
 - **Specific Objectives:** Specific objectives must be derived from the broad statement of the problem. For example, the specific objectives of the study are as under:
 1. To know different activities of the organization;
 2. To evaluate all the activities of the organization;
 3. To identify different problems of the organization; and
 4. To prescribe some solutions.
5. **Methodology/ Design of the Study:** First, mention what type of study it is. (e.g. This research is an exploratory or descriptive or conclusive research in nature.
Then, mention the types of data used (e.g. primary data and secondary data or both) to conduct your study. If secondary data have been used, then mention the secondary sources properly.
If primary data have been used, then you have to clearly mention the following.
 - a) Who is the target population of your study?
 - b) What is your sample size? (If possible, give the technique of sample size determination.)
 - c) What sampling techniques have you applied to select your sample (respondents)? If you apply non-random sampling technique, then clarify why you have applied it instead of random sampling? Remember, random sampling should be the first choice.
 - d) To reduce bias/error (sampling or non-sampling error), what measures have you taken?
 - e) If necessary, give the description of sample element, sample unit, sampling frame, extent, time etc. (Please consult some books like Marketing Research by Malhotra, Chapter 11 & 22.)
 - f) Method of data collection (questionnaire method, observation method, direct interview method etc.)
 - g) If you have used questionnaire, then mention the type of questions you have used, how you have prepared the questionnaire etc.
 - h) If you have used any scale of measurement, then give its description, i.e. how you have prepared it, how many categories you have used, etc.

- i) For data analysis, what statistical tools you have used. If you have used any software, give the description of the software briefly.
- 6. Limitations of the Study:** Give very short description of the limitations of the study. Most typical limitations are like time limitations, lack of experience, lack of confidential data etc.
- 7. Discussions, Analyses and Findings:** This is the main part of the report. This part should be 10 to 15 pages. There will be a number of sub-headlines which will depend on the objectives of the study. Usually you have to make subheadings, depending on each specific objective.
- 8. Recommendations/ Policy Implications:** This part should be specific. Here, you will mention ‘what to do?’ and ‘how to do it?’ You can number your recommendations.
- 9. Conclusions:** It should be more concrete.
- 10. Appendices:** Appendices are provided to give supplementary information, which is included in the main text and may serve as a distraction and cloud the central theme.
 - Appendices should be numbered using Arabic numerals, e.g. Appendix-1, Appendix-2, etc.
 - Tables and References appearing in appendices should be numbered and referred to at appropriate places just as in the case of chapters.
 - Appendices shall carry the title of the work reported and the same title shall be made in the contents page also.
- 11. References:** The listing of references should be typed 4 spaces below the heading “REFERENCES” in alphabetical order in single spacing left-justified. The reference material should be listed in the alphabetical order of the first author.

A typical illustrative list (following APA format) given below related to the citation example mentioned above:

Kim, H.J., McCahon, C., & Miller, J. (2003), Assessing service quality in Korean casual-dining restaurants using DINESERV. *Journal of Food service Business Research*, 6(1), 67-87.

Lee, S., Kim, Y., Hemmington, N., & Yun, D. (2004). Competitive service quality improvement (CSQI): A case study in the fast-food industry. *Food Service technology*, 4, 75-84.

Sulek, j.M., & Hensley, R.L. (2004), The relative importance of food, atmosphere, and fairness of wait: *The case of a full service restaurant*. *Comell Hotel and Restaurant Administrative Quarterly*, 45(3), 235-248.

In case of articles downloaded from the Internet, reference should be as follows:

Bond, M. A., & Pyle, J. L. (1998). The ecology of diversity in organizational settings: Lessons from a case study. *Human Relations*, 51, 589-623. Retrieved from

World Wide Web: <http://www.humanrelations.html> on June 5, 2005.

Note: The report must be written impersonally (without using I, we, my, etc.). The report must maintain right time-view point (like past, present).

▪ **Arrangement of Contents:**

The sequence in which the Internship Report should be arranged and bound will be as follows:

1. Cover Page
2. Inner Cover (detailed identification page)
3. Letter of Transmittal (From the Student)
4. Certificate of Approval (From the Supervisor)
5. Preface or Forward
6. Abstract (Summary of the report in approximately 150 words, if needed)
7. Table of contents

8. List of Figures/Tables, Symbols, Abbreviations and Graphs (If there is any)
9. Introduction
10. Background of the Study
11. Scope of the Study
12. Problem Statement/ Objectives of the Study
 - Broad Statement
 - Specific Objective
13. Methodology/ Design of the Study
14. Limitations of the Study
15. Discussions, Analyses and Findings
16. Recommendations
17. Conclusions and Future Works
18. Appendices (If there is any)
19. References / Bibliography

Only important tables, figures and graphs should be used in suitable places throughout the paper. Large tables, figures and graphs may be presented in the appendices.

▪ **Page Dimension and Binding Specifications:**

The dimension of the internship report should be in A4 size. The internship report should be bound using suitable binding materials with prior approval from the concerned supervisor. The cover should be printed neatly and clearly. **Preparation Format:**

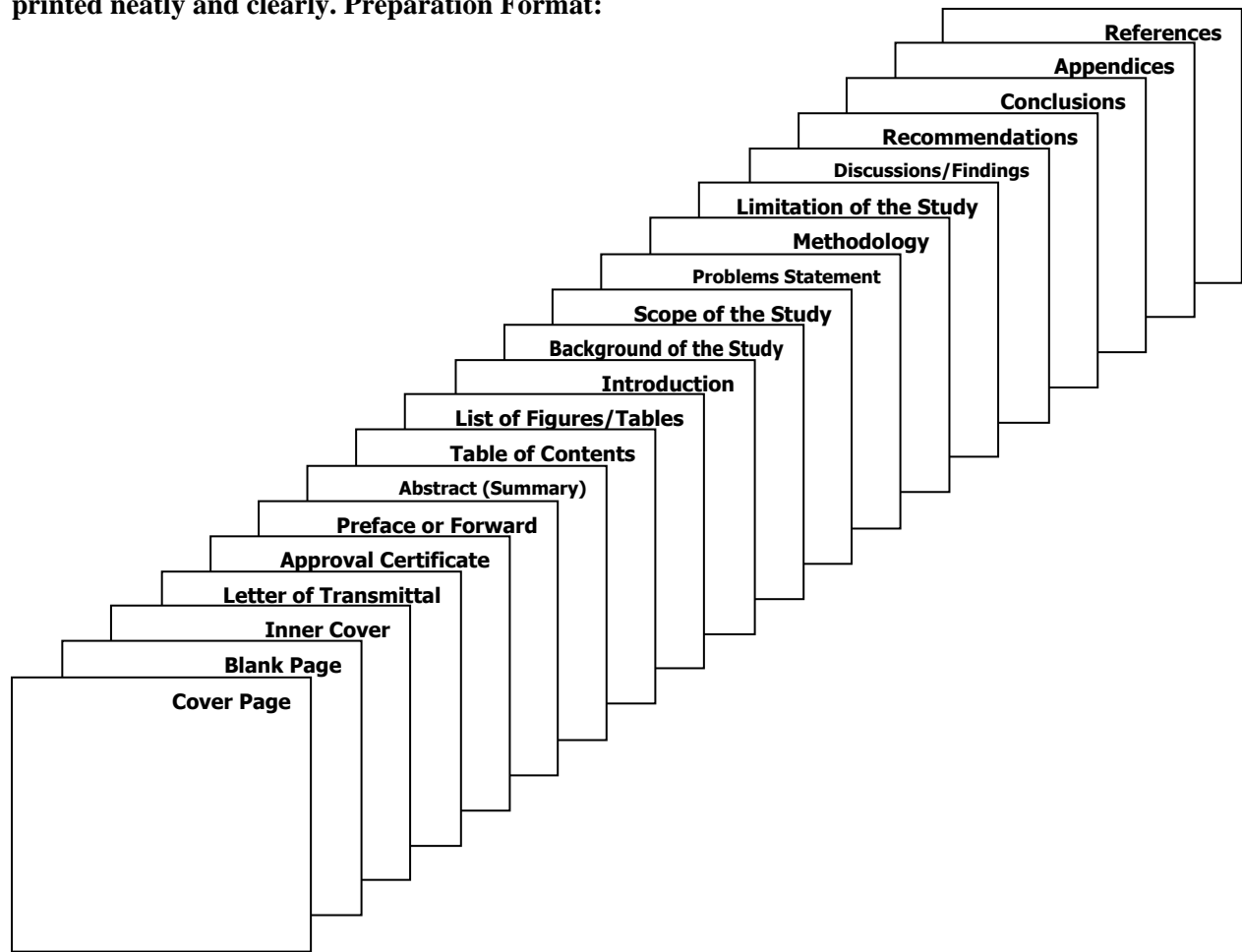


Fig-1: Sequential arrangement of pages

The following shows the pattern that should be used for the Internship Report:

- **Cover Page:** The Cover page of the internship report should include only the title with Arial/Times New Roman font of size 24.
- **Inner Cover (Detailed identification page):** Leaving a blank page after the cover page, there should be an inner cover containing the detailed identification of both the student and the supervisor. The inner cover should also contain the academic details of the Internship Report. For all necessary academic purposes the information provided in this page will be used.
- **Letter of Transmittal (From the Student):** After the cover page there should be a letter of transmittal duly signed by the student.
- **Certificate of Approval (From the Supervisor):** A letter of approval issued and properly signed by the supervisor should be attached with the report.
- **Preface or Forward:** There can be a separate section acknowledging the helps and supports received from various sources. This section might also include the personal evaluations of the candidate regarding the selected topic. Relevance of topic and formal language has to be carefully taken care of. However, inclusion of this section is optional.
- **Abstract (Summary):** Abstract should be a one page synopsis of the Internship Report (suitably around 150 words) typed using double line spacing, Font Style “Times New Roman” and Font Size 12. This section is optional.
- **Table of Contents:** The table of contents should include all materials as well as any material which precedes it. The title page and Letter of Transmittal will not find place among the items listed in the contents but the page numbers of which are in lower case Roman letters. One and a half spacing should be adopted for typing the matter under this head.
- **List of Tables, Figures and Graphs:** The list should be used exactly the same captions as they appear above/below the tables in the text. One and a half spacing should be used for typing the matter under this head.
- **List of Symbols, Abbreviations and Nomenclature:** One and a half spacing should be used for typing the matter under this head. Standard symbols, abbreviations etc. should be used.
- **Chapters:** The chapters may be broadly divided into 3 parts – (i) Introductory chapter, (ii) Chapters developing the main theme of the Internship work and (iii) Recommendations and Conclusion (If there any).
- **Typing Instructions:**
 - The impression on the typed copies should invariably be black in complexion.
 - Single / one and a half (1.5) line spacing (depending on the nature of the text) should be used for typing the general text. The general text of the Internship Report should be typed in the Font style: “Times New Roman” and Font size: 12 (twelve).
 - Throughout the entire text there must be margins of at least 1 (one) inch on all four sides of the paper.

Structure of Theses and Dissertations

This document describes UBC's structural and formatting requirements for both master's theses and doctoral dissertations. For brevity, the term “thesis” is used here to include both types of document.

1. Title page (required)

2. Abstract (required - maximum 350 words)

The abstract is a concise and accurate summary of the scholarly work described in the document. It states the problem, the methods of investigation, and the general conclusions, and should not contain tables, graphs, complex equations, or illustrations. There is a single abstract for the entire work, and it must not exceed 350 words in length.

3. Preface (required)

<https://www.grad.ubc.ca/current-students/dissertation-thesis-preparation/resources-thesis-preparation-checking> The Preface must include a statement indicating the student's contribution to the following:

- Identification and design of the research program,
- Performance of the various parts of the research, and
- Analysis of the research data.

Certain additional elements may also be required, as specified below.

- If any of the work presented in the thesis has led to any publications or submissions, all of these must be listed in the Preface. Bibliographic details should include the title of the article and the name of the publisher (if the article has been accepted or published), and the chapter(s) of the thesis in which the associated work is located.
- If the work includes publications or material submitted for publication, the statement described above must detail the relative contributions of all collaborators and co-authors (including supervisors and members of the supervisory committee) and state the proportion of research and writing conducted by the student. For further details, see “Including Published Material in a Thesis or Dissertation”.
- If the work includes other scholarly artifacts (such as film and other audio, visual, and graphic representations, and application-oriented documents such as policy briefs, curricula, business plans, computer and web tools, pages, and applications, etc.), all of these must be listed in the Preface (with bibliographical information, if applicable).
- If ethics approval was required for the research, the Preface must name the responsible UBC Research Ethics Board, and report the project title(s) and the Certificate Number(s) of the Ethics Certificate(s) applicable to the project.

In a thesis where the research was not subject to ethics review, produced no publications, and was designed, carried out, and analyzed by the student alone, the text of the Preface may be very brief. Samples are available on this website and in the University Library's online repository of accepted theses.

The content of the Preface must be verified by the student's supervisor, whose endorsement must appear on the final Thesis/Dissertation Approval form.

Acknowledgements, introductory material, and a list of publications do not belong in the Preface. Please put them respectively in the Acknowledgements section, the first section of the thesis, and the appendices.

4. Table of contents (required)
5. List of tables (required if document has tables)
6. List of figures (required if document has figures)
7. List of illustrations (required if document has illustrations)
8. Lists of symbols, abbreviations or other (advisable if applicable)
9. Glossary (optional)
10. Acknowledgements (optional)

Students may include a brief statement acknowledging the contribution to their research and studies from various sources, including (but not limited to)

- Their research supervisor and committee,
- Funding agencies,
- Professional or community collaborators,
- Fellow students, and
- Family and friends.

11. Dedication (optional)**12. Document Body**

The text of the thesis must contain the following elements, presented to conform to the standards and expectations of the relevant academic discipline. In some cases, the ordering of these ingredients may differ from the one shown here.

A. Introduction. The thesis must clearly state its theme, hypotheses and/or goals (sometimes called “the research question(s)”), and provide sufficient background information to enable a non-specialist scholar to understand them. It must contain a thorough review of relevant literature, perhaps in a separate chapter.

B. Research/Scholarship Chapters. The account of the scholarly work should be presented in a manner suitable for the field. It should be complete, systematic, and sufficiently detailed to enable a reader to understand how the data were gathered and analyzed, and how to apply similar methods in another study. Notation and formatting must be consistent throughout the thesis, including units of measure, abbreviations, and the numbering scheme for tables, figures, footnotes, and citations. One or more chapters may consist of material published (or submitted for publication) elsewhere, or other artifacts (e.g., film, application-oriented documents) placed in a scholarly context. See “Including Published Material in a Thesis or Dissertation” for additional details.

C. Conclusion and Future Work. In this section the student must demonstrate his/her mastery of the field and describe the work's overall contribution to the broader discipline in context. A strong conclusion includes the following:

- Conclusions regarding the goals or hypotheses presented in the Introduction,
- Reflective analysis of the scholarly work and its conclusions in light of current knowledge in the field,
- Comments on the significance and contribution of the scholarship reported,
- Comments on strengths and limitations of the research/scholarship,
- Discussion of any potential applications of the findings, and
- A description of possible future research directions, drawing on the work reported.

A submission's success in addressing the expectations above is appropriately judged by experts in the relevant discipline. Students should rely on their research supervisors and committee members for guidance. Doctoral students should also take into account the expectations articulated in the University's “Instructions for Preparing the External Examiner's Report”.

13. Bibliography/References (mandatory)

There must be only one Bibliography or References section for the whole thesis.

14. Appendices

Appendices must be limited to supporting material genuinely subsidiary to the main argument of the work. They must only include material that is referred to in the document.

Material suitable for inclusion in appendices includes the following:

- Additional details of methodology and/or data
- Diagrams of specialized equipment developed
- Copies of questionnaires or surveys used in the research
- Scholarly artifacts (e.g., film and other audio, visual, and graphic representations, and application-oriented documents such as policy briefs, curricula, business plans, computer and web applications, etc.) not included in the body of the thesis

Do not include copies of the Ethics Certificates in the Appendices.

Material supplemental to the thesis but not appropriate to include in the appendices (e.g., raw data, original plan for research and analyses) can be archived in cIRcle as Supplementary Materials.

Research work must be Plagiarism free. (Source: [https:// www.grad.ubc.ca/handbook-graduate-supervision/you-start-write](https://www.grad.ubc.ca/handbook-graduate-supervision/you-start-write))

Chapter Four

Guidelines for Preparing Presentation Slides



Final Year Defense

Presentation Outline

- ❖ Title Slide: «backstory»
- ❖ Outline
- ❖ Introduction/Motivation
- ❖ Problem
- ❖ Background/Literature review
- ❖ Objectives of the Study
- ❖ Methodology
- ❖ Findings
- ❖ Recommendations
- ❖ Future work and conclusions

Presented by

Supervised by



Final Year Defense

Saturday 17, December 2016

Introduction/Motivation


Your Goals

1. Explain the subject area
2. Motivate your problem
3. State your contributions


Problem Definition

Formal Problem statement must be found in your talk

- ⇒ May be fully covered in Introduction
- ⇒ May be fully covered in Background
- ⇒ May need to be formally stated separately



Final Year Defense



Final Year Defense

Background/ Literature review

Committee members must understand what your work is about


1. (Relatively) short
2. Explain all necessary things
3. Sufficient to explain/introduce/define your problem
4. Should assume
 - ✓ General CS knowledge within curriculum
 - ✓ No special topic knowledge

Objectives of the Study


General Objective
Broad Goals to be Achieved

Specific Objective

- Short term & narrow focus
- General objective can logically broken in connected part



Final Year Defense



Final Year Defense

Methodology		Methodology	
<p>DO:</p> <ul style="list-style-type: none"> • Think about it... • Come up with a narrative • Concentrate on ideas • Explain <p>DON'T:</p> <ul style="list-style-type: none"> • Jump from point to point • Leave crucial pieces out 	<p>Remember:</p> <ul style="list-style-type: none"> • Highlight that this is your work! • Formal description of your work is called thesis • Presentation = high level description • You get (at most) one chance to go technical Use it wisely • A picture is worth a thousand words 	<p>Final Year Defense</p>	<p>Final Year Defense</p>
Findings		Findings	
<ul style="list-style-type: none"> - How did you evaluate? <ul style="list-style-type: none"> - Experiment - Case Study - Software V&V - Testimony + What did you do? + What results did you obtain? + What do results mean? 	<ul style="list-style-type: none"> + How did you evaluate? - What did you do? <ul style="list-style-type: none"> - Hypothesis/Objective of study - Experimental/Case study design - Validation activities, ... + What results did you obtain? + What do results mean? 	<p>Final Year Defense</p>	<p>Final Year Defense</p>
Findings		Findings	
<ul style="list-style-type: none"> + How did you evaluate? + What did you do? - What results did you obtain? <ul style="list-style-type: none"> - Graphs, charts, tables, ... - Program output + What do results mean? 	<ul style="list-style-type: none"> + How did you evaluate? + What did you do? + What results did you obtain? - What do results mean? <ul style="list-style-type: none"> - Hypothesis confirmed? - What worked? - What didn't? 	<p>Final Year Defense</p>	<p>Final Year Defense</p>
Recommendation		Future Work and Conclusion	
<ol style="list-style-type: none"> 1. Fix known weaknesses/incompleteness 2. Add new features 3. Apply to something else 	<ul style="list-style-type: none"> ❖ What you did ❖ What you achieved ❖ What you learned ❖ What you published ❖ Reference 	<p>Final Year Defense</p>	<p>Final Year Defense</p>

APPENDIX

Manual of Chicago Style

Any citations you add to your bibliography will appear here! If you need, you can edit or delete any of your citations.

The Ultimate Guide to Citing Anything in Chicago Style

Everything you ever needed to know about citing sources from the Chicago Manual of Style

The Basics of Citing in Chicago Style

The Chicago Manual of Style, currently in its 16th edition, was created to help researchers properly cite their sources. There are two types of referencing styles in Chicago: 1). Notes and Bibliography and 2). Author-Date. This guide displays the Notes and Bibliography style of referencing.

Creating a Bibliography in Chicago Style

The bibliography is a list of all the sources used in the paper. The list includes the important publication details of the sources. The bibliography must also follow the following format:

- The citation list or bibliography must be single spaced.
- The last names of the authors must be arranged alphabetically.
- The second line of the source must be indented.

Examples of Citing Different Sources in Chicago Style

Generally, Chicago citations require:

- Author
- Title of book/article
- Title of newspaper/journal
- Publication year
- Publication month and date
- Publisher
- City of publication
- Date of access
- Page numbers
- URL or DOI (for some online sources)

How to create footnotes and endnotes for Chicago Style

Chicago's Notes and Bibliography formatting requires writers to use footnotes and endnotes when using in-text citations. These footnotes and endnotes acknowledge the different sources used in the work. When a source is used in a research paper, a roman numeral is placed at the end of the borrowed information as superscript (it is smaller than the normal line of text and raised). That number correlates with a footnote or endnote.

- Footnotes are found at the bottom of the page
- Endnotes are added at the end of the chapter or project
- A footnote or endnote contains the complete citation information.
- The matching number in the footnote or endnote is normal sized and not raised.
- It is up to the discretion of the writer to either place the citation at the bottom of the page where the superscript is placed (a footnote) or to place all citations together at the end of the work (endnotes).

Example: One would wonder, "Would young Einstein be characterized as belonging somewhere on the autism spectrum? Would Erdos have been given a diagnosis of A.D.H.D.?" ¹ Footnote (placed at the

bottom of the page) 1. Silver, Nate. "Beautiful Minds." The New York Times. July 13, 2013. Accessed August 04, 2015. http://www.nytimes.com/2013/07/14/books/review/the-boy-who-loved-math-and-on-a-beam-of-light.html?ref=books&_r=0. If a source is used more than once in a research project, follow these guidelines:

- When used again, instead of writing out the complete citation for a second time in the footnote, only include: the author's last name, the title or a phrase for the title (if it's more than four words), and the page number(s) that were used. This will reduce the bulk of citation information in the paper.

Example: 1. Cohen, Micah, "Rubio is Losing Support Among Republican Voters." FiveThirtyEight. July 09, 2013. Accessed August 04, 2015. <http://fivethirtyeight.com/features/rubio-is-losing-support-among-republican-voters/> 2. Wolf, Leon H. "Marco Rubio's Campaign Must Adapt or Die." RedState. August 04, 2015. Accessed August 04, 2015. <http://www.redstate.com/2015/08/04/marco-rubios-campaign-must-adapt-die/>. 3. Cohen, "Rubio Losing Support" If a source is used consecutively, follow these guidelines:

- When the same source is used consecutively, instead of typing in the citation information for a third time, use the abbreviation for ibidem: "Ibid." Ibidem is a latin word that means "in the same place." Add the page numbers immediately following.
- If the same source AND same page number is used consecutively, simply write "Ibid." Ibid. stands for the latin word, ibidem, which means "in the same place"

Example: 3. Rosnay, Tatiana De. *Sarah's Key*, 24-27. 4. Ibid., 44. 5. Ibid. 6. Ibid., 133-134. 7. Doerr, Anthony. *All the Light We Cannot See*, 397-401. 8. Ibid., 405. 9. Ibid., 411. For further clarification on Notes and Bibliography citations, consult the Chicago Manual of Style's website.

Creating Your Citations in Chicago Style

As mentioned, when you're following The Chicago Manual of Style, you'll be required to create a list of all sources used on your paper. Even though full bibliographic information can be found in the footnotes and endnotes, it is still acceptable, and often required by instructors, to create a bibliography. The bibliography is placed at the end of an assignment.

How to Cite a Print Book in Chicago Style

In the footnotes and endnotes:

First name Last name. *Title of Book*. (Publication Place: Publisher, Year).

In the bibliography:

Last name, First name. *Title of book*.

Example of Chicago Style for Books with One Author

In the footnotes and endnotes:

1. Sam Staggs. *Born to Be Hurt: The Untold Story of Imitation of Life*.

In the bibliography:

Staggs, Sam. *Born to Be Hurt: The Untold Story of Imitation of Life*.

Don't forget, Citation Machine allows you to generate Chicago citations for books quickly and accurately.

Example of Chicago Citation for Books with Multiple Authors

When citing e-books, include the URL or the DOI. The URL or DOI should be the last part of the citation.

2. Ella Shohat and Robert Stam. *Unthinking Eurocentrism: Multiculturalism and the Media*.

In the bibliography:

Shohat, Ella and Robert Stam. *Unthinking Eurocentrism: Multiculturalism and the Media*.

How to Cite Chapters or Articles from a Book in Chicago Style

In the footnotes and endnotes:

First name, Last name of Chapter Author. "Chapter or Article Title," in *Book Title*,

In the bibliography:

Last name, First name. "Chapter Title." In *Book Title*,

Example of Chicago Citation for Chapters in a Book

In the footnotes and endnotes:

3. Laura Aymerich-Franch and MaddalenaFedele, "Student's Privacy Concerns on the Use of Social Media in Higher Education," in *Cutting-Edge Technologies and Social Media Use in Higher Education*,

In the bibliography:

Aymerich-Franch, Laura and MaddalenaFedele. "Student's Privacy Concerns on the Use of Social Media in Higher Education." In *Cutting-Edge Technologies and Social Media Use in Higher Education*,

How to Cite Online E-books in Chicago Style

When citing e-books, include the URL or the DOI. The URL or DOI should be the last part of the citation. In the footnotes and endnotes:

4. First name Last name, *Title of e-book* (Place of Publication: Publisher, Year), doi: or url:.

In the bibliography:

Last name, First name. *Title of Book*.

Example of Chicago Citation for E-Books

In the footnotes and endnotes:

5. Michael J. Baker, *The Marketing Book*.

In the bibliography:

Baker, Michael J. *The Marketing Book*.

How to Cite E-books in Chicago Style E-books from a Kindle or E-book Reader

In the footnotes and endnotes:

6. First name Last name, *Title of the Book* (Place of Publication: Publisher, Year), Type of E-reader, chapter or page range.

In the bibliography:

Last name, First name. *Title of book*.

Example of Chicago Citation for Kindle or E-book Reader

In the footnotes and endnotes:

7. Corina Bomann, *The Moonlight Garden* (Washington: Amazon Crossing, 2016), Kindle Edition.

In the bibliography:

Bomann, Corina. *The Moonlight Garden*.

How to Cite Print Journals in Chicago Style

In the footnotes and endnotes:

8. First name Last name, "Title of Article," *Journal Title* Volume Number, No. of issue (Year): Page range.

In the bibliography:

Last name, First name. "Title of Article," *Journal Title* Volume Number, No. of issue (Year): Page range.

Example of Chicago Citation for Print Journals

In the footnotes and endnotes:

9. Damien O'Brien and Brian Fitzgerald, "Digital Copyright Law in a YouTube World," *Internet Law Bulletin* 9, no. 6 (2007): 71-74.

In the bibliography:

O'Brien, Damien, and Brian Fitzgerald, "Digital Copyright Law in a YouTube World." *Internet Law Bulletin* 9, no. 6 (2007): 71-74.

Don't forget, Citation Machine allows you to generate Chicago citations for books quickly and accurately.

How to Cite Database Journals in Chicago Style

In the footnotes and endnotes:

10. First name Last name, "Article Title," *Journal Title* Volume Number, Issue No.(Year): Page range. doi or url.

In the bibliography:

Last name, First name. "Article Title." *Journal Title* Volume Number, Issue No.(Year): Page range. doi or url.

Example of Chicago Citation for Database Journals

11. Trine Schreiber, "Conceptualizing Students' Written Assignments in the Context of Information Literacy and Schatzki's Practice Theory," *Journal of Documentation* 70, no. 3(2014): 346-363. url: <http://www.emeraldinsight.com/doi/full/10.1108/JD-01-2013-0002>

In the bibliography:

Schreiber, Trine. "Conceptualizing Students' Written Assignments in the Context of Information Literacy and Schatzki's Practice Theory." *Journal of Documentation* 70, no. 3(2014): 346-363. url: <http://www.emeraldinsight.com/doi/full/10.1108/JD-01-2013-0002>.

How to Cite Print Magazines in Chicago Style

In the footnotes and endnotes:

12. First name Last name, "Article Title," *Magazine Title*,

In the bibliography:

Last name, First name. "Article Title." *Magazine Title*,

Example of Chicago Citation for Print Magazines

In the footnotes and endnotes:

George J. Church, "Sunny Mood at Midsummer," *Time*,

In the bibliography:

Church, George J. "Sunny Mood at Midsummer" *Time*,

Don't forget, Citation Machine allows you to generate Chicago citations for books quickly and accurately.

How to Cite Online Magazines in Chicago Style

In the footnotes and endnotes:

4. First name, Last name, "Article Title," *Title of Magazine*,

In the bibliography:

Last name, First name. "Article Title" *Magazine Title*,

Example of Chicago Citation for Online Magazines

In the footnotes and endnotes:

5. Meryl Gordon, "Night of the Long Knives," *Title of Magazine*,
Gordon, Meryl. "Night of the Long Knives" *New York*,

How to Cite a Web Page in Chicago Style

In the footnotes and endnotes:

5. First name Last name of Author, "Title of Article or Page," *Title of Website*,

In the bibliography:

Last name, First name. "Title of Article or Page." Title of Website. Month Day, Year of Publication or last modification. url or doi.

Example of Chicago Citation for a Web Page

In the footnotes and endnotes:

7. Sujan Patel, "15 Must-have Marketing Tools for 2015," *Entrepreneur*,
Patel, Sujan. "15 Must-have Marketing Tools for 2015." Entrepreneur. January 12, 2015.
<http://www.entrepreneur.com/article/241570>.

Don't forget, Citation Machine allows you to generate Chicago citations for websites quickly and accurately.

How to Cite The Bible or Religious Texts in Chicago Style

In the footnotes and endnotes:

2. Book, Chapter : Verse, (Edition).

In the bibliography:

Title of Bible, Edition. ed. Vol. Number, City: Publisher, Year Published.

Example of Chicago Citation for Bible

In the footnotes and endnotes:

6. 2 Kings 11: 7 (New Standard Version).

In the bibliography:

The Holy Bible, King James Version, Philadelphia: National Publishing Company, 1997.

How to Cite Blogs in Chicago Style

*According to the Chicago Manual of Style, 16th edition, blogs are not typically cited in bibliographies. They are cited in the footnotes/endnotes section. A frequently cited blog, however, may be included in the bibliography. In the footnotes and endnotes:

1. First name Last name, "Title of Blog Post," *Title of Blog* (blog), Month Day Year of post, url.

In the bibliography:

Last Name, First Name, "Title of the Blog." *Name of Blog Site*,

Example of Chicago Citation for Blogs

In the footnotes and endnotes:

1. Shannon Miller, "Valentine Ideas Using Digital Tools, Hands, Creativity, and a Little Love for Padlet," *The Library Voice* (blog), January 20, 2016, <http://vanmeterlibraryvoice.blogspot.com/2016/01/valentine-ideas-using-digital-tools.html>.

In the bibliography:

Miller, Shannon, "Valentine Ideas Using Digital Tools, Hands, Creativity, and a Little Love for Padlet." *The Library Voice*,

How to Cite Broadcasts in Chicago Style

* There is no official citation in the 16th edition of the Chicago Manual of Style for TV or radio broadcasts. Citation Machine has created this citation based on recommendations from librarians. In the footnotes and endnotes:

2. "Episode Title." *Name of TV or Radio Broadcast*.

In the bibliography:

Name of TV or Radio Broadcast. "Title of Episode." Episode Number (if it's available). Directed by First name Last name. Written by First name Last name. Network name, Month Day Year of first air date.

Example of Chicago Citation for Broadcasts

In the footnotes and endnotes:

3. "Eric Pryd and Jeremy Olander." *Essential Mix*.

In the bibliography:

Essential Mix. "Eric Prydz and Jeremy Olander." Hosted by Pete Tong. BBC Radio 1, January 1 2015.

How to Cite a Case Study in Chicago Style

In the footnotes and endnotes:

First name Last name. *Title of Case Study*. (Publication Place: Publisher, Year).

In the bibliography:

Last name, First name. *Title of Case Study*.

Example of Chicago Citation for Case Study

In the footnotes and endnotes:

4. Peter Finn. *Disulfiram*.

In the bibliography:

Finn, Peter. *Disulfiram*.

How to Cite Conference Proceedings in Chicago Style

If the conference paper was included in a published proceeding, cite it like a chapter in a book. If the conference paper was published in a journal, cite it the same way as a journal article.

How to Cite Court or Legal Cases in Chicago Style

According to the Chicago Manual of Style, 16th Edition, almost all legal works use notes for documentation and few use bibliographies. Any work cited in the text does not need to be listed in the bibliography. For that reason, only the footnotes and endnotes format and examples are included. In the footnotes and endnotes:

5. Plaintiff v. Defendant, Court Case Number (Abbreviated Name of the Court. Year).

Example of Chicago Citation for Legal Cases

Michael Clum v. Jackson National Life Insurance Co., 10-000126-CL (Ingham Cty. 2011).

How to Cite Dictionary and Encyclopedia Entries in Chicago Style

According to the Chicago Manual of Style, 16th Edition, well-known reference books, including major dictionaries and encyclopedias, are normally cited in notes rather than bibliographies. Lesser known reference books can be cited in the bibliography. The abbreviation s.v. means sub verbo, which is latin for "under the word." In the footnotes and endnotes:

1. *Name of dictionary or encyclopedia*,

If found online:

2. *Name of dictionary or encyclopedia*, s.v. "referenced word," Accessed Month Day Year, url.

In the bibliography:

Last name, First name of Author. *Title of Dictionary or Encyclopedia*.

Example of Chicago Citation for Dictionary Entries

In the footnotes and endnotes:

1. *Encyclopedia Britannica*,

In the bibliography:

Gover, Emily. *Encyclopedia of Birds*.

How to Cite Dissertations in Chicago Style

In the footnotes and endnotes:

First name Last name, "Title of Dissertation" (degree, school, year), url.

In the bibliography:

Last name, First name. "Title of Dissertation." Degree, School, Year. Database(Identification Number).

Example of Chicago Citation for Dissertations

In the footnotes and endnotes:

2. Michele Kirschenbaum, "Young Students' Online Searching Capabilities" (master's thesis, Drexel University, 2009).

In the bibliography:

Kirschenbaum, Michele. "Young Students' Online Searching Capabilities." Master's thesis, Drexel University, 2009.

How to Cite DVDs, Video, and Film in Chicago Style

In the footnotes and endnotes:

3. *Title*,

In the bibliography:

Title. Directed by First name Last name. Publication Place: Publisher, Year. Medium.

Example of Chicago Citation for Film, DVDs, or Videos

In the footnotes and endnotes:

3. *Home Alone*,

In the bibliography:

Home Alone. Directed by Chris Columbus. Los Angeles, CA: 20th Century Fox, 1990. DVD.

Don't forget, Citation Machine allows you to generate Chicago citations for films quickly and accurately.

How to Cite Facebook Pages in Chicago Style

In the footnotes and endnotes:

Title of Facebook page, accessed Month Day Year, url.

In the bibliography:

Title of Facebook Page. Accessed Month Day Year. url.

Example of Chicago Citation for Facebook Post

In the footnotes and endnotes:

4. Awakenings, Accessed February 15, 2016, [https:// www.facebook.com/awakenings/ ?fref=ts](https://www.facebook.com/awakenings/?fref=ts).

In the bibliography:

Awakenings. Accessed February 15, 2016. [https:// www.facebook.com/awakenings/ ?fref=ts](https://www.facebook.com/awakenings/?fref=ts).

How to Cite Government Publications in Chicago Style

In the footnotes and endnotes:

Firm/Department, *Title of Publication*,

In the bibliography:

Firm/Department. *Title of Publication*.

Example of Chicago Citation for Government Publication

In the footnotes and endnotes:

6. Department of Justice, *Audit of the Federal Bureau of Prisons Annual Financial Statements Fiscal Year 2014*,

In the bibliography:

Department of Justice. *Audit of the Federal Bureau of Prisons Annual Financial Statements Fiscal Year 2014*.

How to Cite Interviews in Chicago Style

Published Interviews are treated like an article in a magazine or a chapter in a book. Use one of those formats to cite your interview.

How to Cite an E-mail in Chicago Style

According to the Chicago Manual of Style, 16th edition, personal communications, such as letters, e-mails, text messages, and phone calls are usually referenced in the footnotes and endnotes. They are rarely listed in the bibliography. In addition, an e-mail address belonging to an individual should be omitted, unless given permission by its owner. In the footnotes and endnotes:

5. Individual's First name Last name, type of communication, Month Day Year of correspondence.

Example of Chicago Citation for E-mail

5. Michele Kirschenbaum, e-mail message to Emily Gover, January 18, 2016.

How to Cite Musical Recordings in Chicago Style

In the footnotes and endnotes:

First name Last name of performer, "Title of Song," Year of recording date, *Title of Album* , *Publisher, medium*.

In the bibliography:

Last name, First name of performer. *Title of Album*,

Example of Chicago Citation for Recordings

In the footnotes and endnotes:

4. Tiesto, "Secrets" (Feat. Vassy), 2015, *Club Life: Volume 4, New York City*,

In the bibliography:

Tiesto. *Club Life: Volume 4: New York City*,

How to Cite Online Images or Videos in Chicago Style

Title of images are italicized. In the footnotes and endnotes:

First name Last name of creator, "Title of work", medium, Name of website, url.

In the bibliography: Last name, First name. "Title of work." Creation Month Day Year. Website. url.

Example of Chicago Citation for Online Image or Videos

Title of images are italicized. Videos are placed in quotations. In the footnotes and endnotes:

6. Pan Pot, "Awakenings Gashouder Carl Cox And Friends," online video, YouTube, <https://youtu.be/Jk3gGeFuX6A>.

In the bibliography:

Pan Pot. "Awakenings Gashouder Carl Cox And Friends." March 30 2013. online video. YouTube. <https://youtu.be/Jk3gGeFuX6A>.

How to Cite Photographs in Chicago Style

In the footnotes and endnotes:

First name Last name, *Title of Photograph*,

In the bibliography:

Last Name, First Name. *Photograph Title*.

Example of Chicago Citation for Photographs

In the footnotes and endnotes:

Jerome Liebling, *May Day*, New York, 1948, The Jewish Museum, New York City, NY.
Liebling, Chris. *May Day*, New York. 1948. The Jewish Museum, New York City, NY.

How to Cite Plays in Chicago Style

In the footnotes and endnotes:

First name Last name, *Title of Play*,

In the bibliography:

Last name, First name. *Title of Play*.

Example of Chicago Citation for Play

In the footnotes and endnotes:

Lin Manuel-Miranda, *Hamilton*,

In the bibliography:

Manuel-Miranda, Lin. *Hamilton*.

How to Cite Podcasts in Chicago Style

When citing podcasts in Chicago Style, treat it as an article in a periodical or a chapter in a book. If found online, include the url.

How to Cite Poems in Chicago Style

When citing poes in Chicago Style, cite it as you would a chapter in a book.

How to Cite Presentations and Lectures in Chicago Style

In the footnotes and endnotes:

First name Last name of presenter, "Title of Lecture," (type of presentation, name of organization, location, Month Day Year of lecture).

In the bibliography:

Last name, First name. "Title of Lecture." Information about lecture including reason for lecture and meeting place, location, Month Day Year.

Example of Chicago Citation for Lecture

Danny Chan, "Optimizing SEO," (lecture, General Assembly, New York, NY, June 8, 2015).

In the bibliography:

Chan, Danny. "Optimizing SEO." Lecture presented at General Assembly, New York, NY, June 8, 2015.

How to Cite Sheet Music in Chicago Style

According to the Chicago Manual of Style, 16th edition, cite sheet music the same way as you cite books.

**Sample of Research Proposal
For Post-Doctoral Fellowship****Research Topic:
Factors affecting Entrepreneurial Management in Bangladesh: an Empirical
Analysis****Researcher: Muhammad Mahboob Ali, Ph.D.
Supervisor: Assistant Prof. Dr. Vichayanon Rattanawiboonsom**Faculty of Business, Economics and communications
Naresuan University, Thapao, Phitsanuloke.
THAILAND. 65000.**Introduction**

Bangladesh became independent in the year 1971. When the country was independent, entrepreneurship among the local people was only two percent of the total population (Ali, 2007). After forty-four years of independence of the country, lack of entrepreneurial management is one of the obstacles to developing the economy of Bangladesh. According to the Governor of Bangladesh Bank (Central Bank of Bangladesh), 99% of the private sector enterprises are Micro, Small and Medium Enterprises (MSMEs). MSMEs contribute up to 30% to GDP. MSMEs are providing employment to 25% of total labor force while 80% of industrial jobs come from MSMEs (Rahman, 2014a). Hence, micro, small- and medium-sized enterprises are playing a vital role in the economic development of the country and how these enterprises are managed is worthy of further investigation. The principal aim of this study is to identify the factors contributing to the success of entrepreneurship in Bangladesh.

Entrepreneurship is closely linked with awareness, creativity, startup ventures, technological advancement and originality (Runge, 2014). Entrepreneurial activities can expedite the process of economic growth of a country through creating self-employment as well as employment opportunities. As such macro factors (such as financial intermediaries, infrastructural and institutional development, gender and micro foundation of macro factors (such as characteristics of entrepreneur, dedication and drive) will create sustainable competitiveness of the country. The extent to which macro factors and micro factors affect entrepreneurial activities in the country is subject to further investigation.

Economic support is one critical factor needed to start any sort of businesses or ventures. Economic support requires channelizing savings and investment into the productive sector. As mentioned by Khatun (2010) unemployment rate remained remarkably low in Bangladesh only at 4.5 percent in 2010 quoting the reference of Labour force Survey 2010, BBS (Bangladesh Bureau of Statistics) but unemployment rate for 2010 becomes as high as 24.0 percent if underemployment is added to unemployment rate. Entrepreneurial management will not only create self-employment opportunities but also creates employment. Now question arises whether economic support is providing either by financial intermediaries or government to create entrepreneurial management will be required to assess.

In Bangladesh, still gender discrimination prevails. After independence, to remove gender disparity various steps were taken. Around one-half of the total population is women (Bangladesh Orthonoitik Samikhya, 2014). Women entrepreneurs constitute less than 10% of the total business entrepreneurs in Bangladesh (Chowdhury, 2011). Social obstacles and norms of participation of women in the main stream of work force of Bangladesh has been gradually changing. But question arises whether current entrepreneurial activities of women are fulfilling the country's need or they should act in a wider range of participation for developing the country require to be assessed.

Infrastructural and institutional requirements are prerequisite to attain macro environmental forces for business activities. Khatun (2012) argued that enhancing growth and employment creation in Bangladesh will require removal of obstacles such as infrastructural bottlenecks, institutional weakness and political

instability. As such the study wants to examine whether infrastructural and institutional facilities of the country is sufficient to support entrepreneurial activities?

The study intends to assess factors affecting entrepreneurial activities by considering economic factor, contribution of women entrepreneurs as well as male entrepreneurs, infrastructural and institutional requirements.

Statement of the Problem

After independence of the country, the then government nationalized commercial banks, industries, mills, and factories and so on. As savings and investment were very low, to channel savings and investment through the formal sector and to expand banking services in the remote areas of the country, nationalization of the banking sector was one of the major objectives at that time. As a result, bank branches have expanded rapidly particularly in the rural areas (Ali, 2006).

Though industrialization process started after the independence, but given the enormous damages of the liberation war, the country was in a transitory situation during the period 1972-75. However, under the state patronage, industrial activities started to emerge. From the year 1976, greater emphasis was given towards the private sector and it was largely expedited after 1990 (Ali, 2009). Such emphasis included a focus on the development of entrepreneurship in Bangladesh.

As noted previously, lack of entrepreneurship development is one of the reasons contributing to the slow progress in economic development of Bangladesh (Ali, 2009). This is due to the fact that opportunities for self-employment in high-growth potential service/innovation oriented small firms would multiply, and would raise the rate of self-employment. Sustained growth will then depend only on how entrepreneurial ability interacts with the availability of opportunities (Source: Naudé, 2008).

Existing research in the area

Entrepreneurship requires Economic support

Economic support means financing to start the business or venture by the financial institutions including bank and non-bank financial intermediaries and also by the government. Fry (1995) argued that in Germany, the banking system was the primary source of both capital and entrepreneurship. Patrick (1980) depicted that in underdeveloped countries, a considerable portion of the saving is being used mostly in unproductive areas through a large number of poor people. According to Khan and Hyder (2006) small enterprises are the lifeblood of any economy and are at the forefront of government efforts to promote entrepreneurial activities, innovation and increased productivity. Simpeh (2011) observed that the economic entrepreneurship theories explore the economic factors that enhance entrepreneurial behavior. Portela, Rozas, Neira and Viera (2012) analyzed the relationship between entrepreneurship, social capital and growth. At the aggregate level, both theoretical and empirical studies acknowledge the need to extend the economic growth model adding variables like R&D expenditure, industrial structure, university research, social capital and entrepreneurship. Cumming, Johan and Zhang (2013) tested the hypothesis that the economic activity that results from entrepreneurial activity is relatively more pronounced in newly established firms, and therefore new business entry has a positive impact on GDP/capita, exports/GDP, and patents per population, and a negative impact on unemployment. Further, they found evidence of a moderating impact of legal and institutional impediments to risk taking for the strength of the relationship between new business entry and economic outcomes for both creditor rights and cultural uncertainty avoidance. According to Rahman (2014) The central bank has expanded SME financing to create new entrepreneurs and employment opportunities in addition to empowered the women. He also commented that during the period from 2010 to 2014 they have extended (Small and Medium Enterprise) SME loans of Taka 3340 billion (\$42.8 billion) to 2.2 million entrepreneurs whose 5 percent represents women. In addition, 15 percent of SME refinancing facilities have been devoted to form the 'Women Entrepreneurship fund; The SME loan program has provided Taka 500 billion (\$6.4 billion) to more than 250 thousand new entrepreneurs who in turn created around 1.5 million new employment opportunities (Rahman, 2014b).

Role of Women as Entrepreneur

Chowdhury (2001) argued that in relation to Bangladesh that the importance of women's entrepreneurship development focuses on women's development in general and their participation in income generating activities in particular and their participation in income generating activities in meticulous, while it deserves a special consideration in rational development planning on counts. Solaiman and Sohel (2007) from their study observed that there is a bright future for rural women entrepreneurship development especially in dry fish sector of Bangladesh. However, the presence of women entrepreneurs in the formal sector in Bangladesh is not yet significant. The Government is acting as the catalyst for mainstreaming gender in all areas. Yet women entrepreneurs are mostly concentrated in the low-productivity and low-profit margin sectors. Ascher (2012) described that a growing number of women participating in entrepreneurial activities, reflects the transformation in economic and social fields. Women are increasingly crossing the economic and social barriers. They have greater confidence in their skills and abilities to build their enterprises equally, if not more successfully, than men. Delancey (2014) observed that women's attitude toward their economic contribution to the nation are affected by traditional cultural barriers which prevent them from breaking the glass ceilings. Kumar (2014) argued that entrepreneur's socio – cultural status, their residential background has significant impact on the opinion, views and behavior of women entrepreneurs, research also concluded that socio-cultural factors such as gender discrimination, social acceptability significantly affect women entrepreneurs and their contribution towards state economy. Many of the socio-cultural factors are identified to be highly influential in affecting the degree of entrepreneurship in a nation.

Infrastructure and Institutional support for Entrepreneurship

Latif and Chowdhury (1997) observed that in Bangladesh at the time of initiating an enterprise, an entrepreneur faces many problems such as shortage of skilled workers and infrastructural facilities. Sardar (1999) found that all government agencies are overly bureaucratic in their functioning unlike private support agencies. He suggested that some sort of institutional networking, (which is currently almost nonexistent), is necessary to ensure effective support to the small and medium enterprises sector in the context of Bangladesh. Akhtaruddin (2000) observed in the selection of industry, the influence of demand for product and availability of raw materials were important factors. Hoque (2004) observed that as a development bank, the Bangladesh Shilpa (Industrial) Bank, while delivered industrial credit, was not accompanied by adequate and efficient entrepreneurial guidance, supervision and direction. Jahur and Azad (2004) mentioned that in Bangladesh, small business enterprises are believed to have employed 87% of the total working forces and to produce large number of goods and services. Khanka (2006) argued that creation of infrastructural facilities involves huge funds which the small entrepreneurs do lack. Moazzem (2006) opined that Government has to adequately distribute its resources through different budgetary measures in different sectors, preferably on SME-related and employment-enhancing activities. Considering the extent of importance of various sectors, priority is usually given to some important sectors, such as Readymade Garments (RMG), agriculture, livestock, agro-based industries, textiles, and jute industry etc. Chong (2012) depicted that entrepreneurs believe that individual factors such as skill, dedication are more important than environmental factors. Hisrich, Peter and Shepherd (2013) commented that each entrepreneur needs to establish both a moral and a professional support network. These contacts provide confidence, support, advice and information. Khan (2013) argued that in Bangladesh lack of political commitments and absence of creation of healthy environment required for entrepreneurial growth are the limiting factors in the process of adequate supply of reasonable number of entrepreneurs.

Justification for the Research

We observe from the aforesaid literature review that aforesaid articles cover mainly in a particular area - such as Patrick (1980) , Fry(1995), Khan and Hyder (2006) and Simpeh (2011), Portela, Rozas, Neira and Viera (2012) and Cumming, Johan and Zhang (2013) deals with entrepreneurship requires on economic factors. Similarly Chowdhury (2001), Solaiman and Sohel (2007), Ascher (2012), Delancey

(2014), Kumar, (2014) deals with role of women as entrepreneur. Latif and Chowdhury (1997), Sardar (1999), Akhtaruddin (2000), Hoque (2004), Jahur and Azad (2004), Khanka (2006), Moazzem (2006), Chong (2012), Hisrich, Peter and Shepherd (2013), Khan (2013) discussed on Infrastructural and institutional requirement for assisting entrepreneurial management of the country. Actually entrepreneurship development depends on interrelationship factors.

On the basis of a review of relevant literature, the current study intends to undertake a study of entrepreneurial management, as it is of vital importance for the faster and further development of the economy. From the aforesaid literature review, there is a gap in interrelationship research work in the area of entrepreneurial management which requires economic support, role of women as entrepreneur and infrastructure and institutional support for entrepreneurship in the country. The current study will examine the interrelationship among the three sets of factors.

Furthermore, the research work will focus on entrepreneurs and compare differences between men and women in terms of the factors contributing to their success and those that act as barriers to entrepreneurial success. The factors will include macro level variables as well as micro level variables.

Though there are other factors such as political stability, technological progress, risk taking behavior, religious factor, startup venture, geographical location, location economy, to ease in doing business, innovative ideas, dedication, inspiration and so on, such factors are beyond the scope of the present study.

Research Objectives

Major Objectives of this study are given below:

- To assess the effectiveness of economic factors of the emergences Entrepreneurial management schemes with the help of government and /or financial institutions of Bangladesh;
- To examine entrepreneurs and compare differences between men and women in terms of the factors contributing to their success and those that act as barriers to entrepreneurial success;
- To provide strategies and policies of the government and financial institutions for increasing effective and efficient entrepreneurial activities in Bangladesh.

Methodology

The study will be based on both primary and secondary data sources. The study will involve both quantitative and qualitative research. Secondary data has been collected from research reports, journals, newspapers, websites, and statistical reports of various organizations as indicated in the references. The study will consider economic factors, the contribution of male and female entrepreneurs, barriers of entrepreneurial activities, infrastructural and institutional requirements.

Primary data will be collected through a questionnaire survey. The respondents will be randomly selected during the period from 1 August, 2015 to 30 September, 2015.

The questionnaire which is concentrated on both men and women Entrepreneurs only, wants to assess the demander side views of the entrepreneurs'. Entrepreneurs will be randomly selected from different areas of the country.

The study will use hypothesis testing considering two or more factors of entrepreneurial facilities such as male and female entrepreneurs, infrastructural and institutional requirements, economic factor will help to enhance growth of entrepreneurial management of the country.

The response scales will be dependent on the questionnaire items. After gathering data, we shall tabulate the data and prepare Chi- square test as well as factor analysis.

Hypothesis Testing

Four hypotheses testing will be done. The study will accept or reject the null hypothesis based on findings, which are:

Type of Hypotheses	Hypotheses	Type of test
H ₁ : Alternative Hypothesis	Economic factors have positive impact on Entrepreneurial management.	Chi-Square test
Ho: Null hypothesis	Economic factors do not have positive impact on Entrepreneurial management.	Chi-Square test
H ₁ : Alternative Hypothesis	There are significant differences between men and women in terms of the factors contributing to their success as Entrepreneurs.	Chi-Square test
Ho: Null hypothesis	There are no significant differences between men and women in terms of the factors contributing to their success as Entrepreneurs.	Chi-Square test
H ₁ : Alternative Hypothesis	Men and women Entrepreneurs based on gender face barriers to entrepreneurial success.	Chi-Square test
Ho: Null hypothesis	Men and women Entrepreneurs based on gender do not face barriers to entrepreneurial success.	Chi-Square test
H ₁ : Alternative Hypothesis	Infrastructural and institutional factors are simultaneously working for Entrepreneurial management of the country.	Chi-Square test
Ho: Null hypothesis	Infrastructural and institutional factors are not working for Entrepreneurial management of the country.	Chi-Square test

Besides above mentioned chi-square test, we shall do factor analysis and reliability test.

Expected outcome

The study will give some implications to determine the factors and obstacles of entrepreneurial management of the country. In addition it may indicate efficiently and effective management of entrepreneurial activities through combining strategic leadership by the government as well as Bangladesh Bank (central Bank of Bangladesh), and also private sector through strategic formulation and strategic implementation. And hope to suggest some policy guidelines for expansion of management of entrepreneurial activities in Bangladesh. Results of the research may be helpful to advocate policy towards reduction of unemployment, creating self –employment opportunities, contribution in the rise of Gross domestic product, adding value creation, accumulation of competitive advantage, increasing competitiveness, and crafting sustainable development of the country. And any benefit for entrepreneurs?

Research milestones

The study will be undertaken over a period of one year, tentatively from March 2015 to February 2016. The research milestones are outlined below.

March – July: literature review, development of web-based questionnaire, preparation of distribution list of respondents, deliverables: questionnaire

August – September: Questionnaire administration

October– mid December: data entry, data analysis, and deliverables: preliminary findings

Mid December– February: write up of results, deliverables: The research is expected to result in several conference papers and journal articles.

Gantt chart

Following Gantt chart of the research milestone can be shown below:

	March – July, 2015	August – September, 2015	August – mid October, 2015	Mid December, 2015– February, 2016
Literature review, development of web-based questionnaire, preparation of distribution list of respondents, deliverables				
Questionnaire administration				
Data entry, data analysis, deliverables				
Write up of results, deliverable				

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Sample of Research Paper

The Great Recession of 2008: Impact on the Bangladesh Economy and International Business Implications¹

Muhammad Mahboob Ali,
Anisul Islam, Victoria Wise

Executive Summary: *This paper examines the current global financial crisis (GFC) and its impact on Bangladesh's macro economy and discusses international business implications for the country within an institution-based analytical framework. The paper finds that the macro economy of Bangladesh has showed remarkable resilience in the face of this massive global crisis and the impact has been minimal and limited to moderate slowdown of the economy. The country thus could be poised for taking advantage of international business opportunities as the global economy begins to recover. Further, JPMorgan's Frontier Five and Goldman Sachs Next Eleven classification of Bangladesh indicates enormous potential for growth and development. The paper suggests that Bangladeshi diaspora living overseas could serve as a connecting hub so that 'brain gain' could be achieved through labor migration and remittances. Strategic alliances among home and foreign firms are also emphasized in building the country. Authors argue, however, that institutional, structural, and policy reforms would be critical for the country to develop a business-friendly environment conducive of taking advantage of evolving global opportunities and realizing its full potential.*

Keywords: *International Business; Bangladesh; Global Recession; Strategic Management; Institutional framework; Human Capital Gain*

JEL Classifications: *F24, F33, G01*

Introduction and Background

Located in South Asia, Bangladesh is one of the poorer developing countries in the world and has become moderately interlinked with the global economy from the time various internal and external reforms were carried out since the 1990s. These reforms were designed internally to strengthen market forces and the private sector, and externally to open up the economy to the rest of the world. As a result of this global integration, the country has become more vulnerable to external shocks emanating from abroad. As such, the global financial crisis (henceforth GFC) that began in the US in 2007 and subsequently spread throughout the world in 2008 has significant implications for Bangladesh. Unfortunately, the country has faced this global meltdown on the heels of two other severe crises affecting the country since 2007, one being a political crisis and the other being substantial price hikes for food and energy.

The economy of Bangladesh suffers from problems from both the supply and demand sides of the economy. It is one of the least developed countries in the world suffering from continuous disequilibria in the economy with low per capita income (about 690 US\$ in 2009 as shown in Table 1), high unemployment and poverty, a weak political and administrative structure, an inefficient tax administration, heavy dependence on the external sector, and low savings and investments, among others. Further, it is a densely populated country with a population of 144.2 million in 2008 (Table 1) living in a small surface area with a population density of about 977 persons per square km, one of the highest densities in the world. Further, the country faces continuous balance of trade and payments deficits and hence a continuously depreciating currency. The country's agricultural and the industrial sectors are yet to be developed fully and its transport, telecommunication and energy sectors are quite underdeveloped. On top of these, the country is technologically deficient and managerially inefficient with an acute shortage

¹ The authors' would like to thank the editor and the guest editor and the reviewers for constructive suggestions and helpful comments on an earlier version of the paper. However, the usual disclaimer about authors' responsibilities applies. Citation: The Great Recession of 2008 : impact on the Bangladeshi economy and international business implications. Muhammad Mahboob Ali Anisul M. Islam Dr Victoria Wise (2011) vol. 53, pp. 263-276, Thunderbird international business review, Hoboken, N. J., C1

of strategic leadership skills. At the macro level, the country's monetary and fiscal policies are not well-coordinated, causing serious problems for the macro management of the country.

Following its independence (from Pakistan in 1971), Bangladesh has experienced a long period of political instability which has had a negative impact on its domestic economy. But since the 1990's reforms, the country has become increasingly more integrated with the rest of the world (trade ratio of about 46% in recent years which is between a low 23% for Brazil and 143% for Vietnam as shown in Table 3) and the country's economy is much more stable than before. The country has made modest progress in recent years with 5-6% rate of real GDP growth and moderate inflation of about 6% and interest rates on deposits of around 6% and gradually rising real per capita income as demonstrated by recent data presented in Table 1 below based on information collected from the Bangladesh Bank (the central bank of the country) publication sources. Table 1 also shows rising trade and payments deficits with the rest of the world, but rising remittances from expatriate workers (about US\$10 billion in 2008-09) have partially cushioned the country against continuous and rising trade and payments deficits.

Table 1: Selected Recent Economic Indicators for Bangladesh: 2003-2009

Year	Growth Rate of Real GDP (%)	Per capita Real income (US\$)	Inflation Rate (%)	Foreign Remittances* (US\$ m)	Balance of Trade* (US\$ m)	Interest on Deposits (%)
2003-04	6.27	440	5.83	3,259.43	-2,035.19	5.65
2004-05	5.96	463	6.48	3,709.17	-2,977.72	5.62
2005-06	6.63	476	7.16	4,630.33	-2,765.18	6.68
2006-07	6.43	523	7.20	6,002.69	-3,492.62	6.85
2007-08	6.19	608	9.94	7,923.94	-5,200.54	6.95
2008-09**	5.88	690	6.66	9,654.86	-4,718.91	7.01

Source: Bangladesh Bank, Economic Trends, February, 2010.

Notes: * estimated; ** provisional

Table 2: Economic Snapshots of BRIC and N-11 Countries

Country	GDP (US\$bn)	Average 2001-06 GDP Growth (%)	GDP Per Capita (US\$)	Population (million)	Urban Pop. (%)	Trade (% of GDP)	FDI (% of GDP)	Current Account (% of GDP)	Inflation Rate (%)
Bangladesh	65	5.7	427	144	25.0	45.8	1.1	-0.3	6.8
Brazil	1,068	2.3	5,085	187	84.2	22.7	1.7	1.4	4.2
China	2,701	9.8	2,041	1,314	40.5	65.2	3.2	8.6	1.5
Egypt	101	4.2	1,281	72	42.3	58.9	6.4	1.8	7.3
India	915	7.2	696	1,113	28.7	33.2	0.8	-2.4	5.6
Indonesia	350	4.8	1,510	222	47.9	58.1	1.9	2.4	13.1
Iran	212	5.7	3,768	70	68.1	54.5	0.0	10.0	14.0
Korea S.	887	4.5	18,484	48	80.8	72.5	0.9	0.7	2.2
Mexico	839	2.3	7,915	104	76.0	56.6	2.4	-0.4	3.6
Nigeria	115	5.6	919	150	48.3	71.0	3.5	15.7	9.4
Pakistan	129	5.3	778	155	34.8	39.4	2.0	-3.9	7.9
Philippines	118	5.0	1,314	87	62.6	101.0	1.2	3.1	6.3
Russia	988	6.2	6,908	143	73.3	43.4	1.9	10.3	9.9
Turkey	403	4.6	5,551	73	67.3	55.1	2.7	-8.0	10.2
Vietnam	61	7.6	655	84	26.7	143.2	3.8	0.1	7.6

Source: Goldman Sachs (2007), p. 135.

As shown in Table 2, Bangladesh is a large country in terms of population, but small economy in terms of GDP and a poor country in terms of per capita compared to the BRIC and the N-11 countries. However, it has demonstrated moderate levels of GDP growth rate over recent years (2001-2006) and a moderate level of inflation compared to these BRIC and N-11 countries, both indicating a sound and stable economy. Table 2 also shows Bangladesh is a moderately open country in the trade sector as measured by the trade-GDP ratio of about 46% but the degree of openness of foreign investment is quite low at 1.1% in terms of FDI-GDP ratio. The latter low ratio shows enormous scope and potential for foreign direct investment (FDI) in the country.

The purpose in this study is to primarily assess the macro impact of the ongoing GFC on the Bangladesh economy and, secondarily at the micro level, to discuss some international business implications for the country to take full advantage of the evolving opportunities that arises as the global economy begins to recover from the worst crisis in decades. The macro impacts on the economy will consider the impact of the GFC on the overall economy (GDP), agricultural and industrial production, money and capital markets, trade (exports, imports), remittances, and exchange rates and the micro implications will focus on identifying business areas where the country can build upon its strengths and overcome weaknesses and constraints to achieve higher economic performance.

In spite of Bangladesh being a poor developing country, the study will be important for policy makers and international business academics, researchers, policy makers, and practitioners because the country has been identified by various international organizations, agencies, and countries as having enormous future potential for growth and development. In fact, Bangladesh could be a highly attractive place for international business and foreign investment in the coming decades. For example, the country has been identified by JPMorgan as one of the “Frontier Five” countries based on its macroeconomic and demographic trends, particularly the potential of its economically active population and labor force (JPMorgan, 2007).

Further, the well-known and prominent global investment banking and securities firm Goldman Sachs evaluated many countries including Bangladesh on the basis of macroeconomic stability, political maturity, education, and openness of trade and investment and has identified it as one of the “Next Eleven” countries with enormous potential for growth and development and ample opportunities for international business and investments and has the potential to mimic the growth and development of the BRIC (Brazil, Russia, India, and China) countries (Goldman Sachs, 2007). The report said, “Bangladesh, the world's tiny economy with most corrupt brand, will power the global economy something of the magnitude of the BRICs economies” (Goldman Sachs, 2007). Additionally, some major international organizations such as the World Bank and the International Monetary Fund (IMF), and major countries such as the United States (US) and country groups such as the European Union (EU) also see enormous potential for this country to develop as a democratic and moderate Muslim country. The country has the potential to improve the standard of living of its people and reduce poverty by achieving very high growth rates as has been achieved by Goldman Sachs’ BRIC countries.

In conducting this study, data and information were utilized from various secondary sources. The major sources of data include the publications of the IMF, the World Bank, the Bangladesh Bank, and other publicly available sources. Relevant perspectives drawn from various journal articles and other publications are also synthesized and presented.

FRAMEWORK OF ANALYSIS

Globalization is not a new phenomenon and has evolved over many decades, but its pace has accelerated in the 1990s and beyond. With globalization came increased interdependence among nations and many positive benefits from increased trade, investment and capital flows, technology transfers and increased flows of managerial skills and labor mobility. However, increased interdependence and integration has also created an environment for increased vulnerability to external shocks and crises to spread from country to country as the most recent global financial and economic crisis demonstrate. To understand the

global crisis and its impact on the Bangladesh economy and business, it is useful to have an appropriate analytical framework as a reference point.

Globalization, global crises, and responses to crises could be understood better and important insights could be obtained for developing international business implications for a country if the analysis is conducted within an institutional perspective and policy framework. Although institutional framework in terms of the existence of a well-functioning perfect market system is assumed to exist and to allocate resources in an optimal manner in a classical/neoclassical world, in a real world, such institutions may be imperfect or even missing. Since the pioneering work of North (in Peng, 2002; Peng, 2003), it is now recognized in the literature that “institutions” and “policies” matter and matter significantly in determining economic outcome and performance at both macro (country-level) and micro (firm and industry) levels. At the macro level, the institutions and policies can have a strong impact on the growth and development (or lack of it) of a country (Acemoglu, 2008; Acemoglu, 2009; Acemoglu & Robinson, 2006).

At the micro-level, business strategies and performance can be significantly influenced by the institution-based view in addition to the traditional emphasis on the industry-based competition view of Porter and firm-specific resource-based view of Barney (Peng, 2002; Peng, 2003; Peng, Wang & Jiang 2006). Having an appropriate institutional framework is even more important and relevant for poor developing countries like Bangladesh and various other emerging economies where institutions are either missing or weak at best and where institutions and policies are continuously evolving to influence firm strategy and performance (Peng, 2002; Peng, 2003; Peng, Wang & Jiang, 2008; Hitt et. al., 2004). In addition, choices and policies in developing strategic alliances and partnerships across the globe could be strongly influenced by the institutional framework and policy environment in the country (Peng, 2003; Hitt et. al., 2004; Saebi & Dong, 2008). It is also to be noted that there are micro foundations for the evolution of macro institutions (Acemoglu, 2008) in addition to macro institutions influencing micro-level strategies and performance (Peng, 2003; Gammeloft, Barnard & Madhok, 2010) including macro-micro institutions coevolving together (Gammeloft, Barnard & Madhok, 2010). In the ensuing discussion, we will keep this institution-based framework in mind to analyze and understand the impact of the GFC on the Bangladesh economy and business and the country’s approaches and strategies to dealing with the crisis, and how to take advantage of global opportunities as the global economy recovers from the GFC.

THE GFC – CAUSES AND IMPACTS

The GFC and its causes and impacts are being studied by many researchers, commentators and analysts as we seek to understand the root causes of this significant economic event. This analysis is likely to continue for some time to come. In this section, we present a range of perspectives relating to the causes of the GFC, keeping the institutional and policy framework in the background.

Loser (2009) argued that the financial crisis that erupted in August 2007 after the collapse of the US sub-prime mortgage market badly shook confidence in global financial institutions and markets. Most dramatically, intensifying solvency concerns triggered a cascading series of bankruptcies, forced mergers, and public interventions in the US and Western Europe, which has resulted in a drastic reshaping of the financial landscape. Wynne and Kersting (2009) reported that this recession has been dubbed as the Great Recession by some. They found that the world trade decline in this recession surpassed that of the Great Depression period in the first year of the crisis, a decline of 32% during the first year of this recession compared to a 15% fall in the first year of the Great Depression period.

The World Bank (2009a) observed that the global economic disaster has created risks for increased poverty in many developing countries. In the World Bank’s *Global Monitoring Report* (GMR) (World Bank, 2009b) it was reported that the deepening of the global recession, rising unemployment, and volatile commodity prices in 2008 and 2009 were seriously affecting progress toward poverty reduction - the recent food crisis has thrown millions into extreme poverty and deteriorating growth prospects in developing countries will further slow the pace of poverty reduction. The GMR report (World Bank,

2009b) suggests around 40% of developing countries may be highly exposed to the poverty effects of the crisis. In a further study conducted by the South Asia region of the World Bank (World Bank, 2009c) it is argued that the crisis will severely impact many developing countries with Pakistan, India, Sri Lanka, and the Maldives being more vulnerable from the first stage effects of the crisis than some other South Asian countries such as Bangladesh, Nepal, and Bhutan. The IMF in its *World Economic Outlook* (IMF, 2009a) predicted that international trade as measured by the sum of exports and imports of goods and services would decline by 11.9% in 2009 with advanced economies declining by 13.6% compared to a more modest fall of 7.2% in emerging and developing economies.

Islam (2009) considered the impact of the GFC on the capital markets in India and argued that it will take time to nurse its wounds because of low demand for investments in emerging markets, and the impact will be felt for some time in the trade and capital account. Goelton (2009) examined the impact of the crisis on the Indonesian economy. He concluded that the adverse effects may continue and even become worse in the near future through indirect effects such as reduction in employment and hence labor share of income and subsequently through their impact on consumption and GDP. When considering the impact of the GFC on Philippines, Yap, Reyes, and Cuenca (2009) suggested the emerging markets could face similar problems to those they faced in the 1997 Asian financial crisis.

Several studies have examined the impact of the GFC on the Bangladesh economy. Ahmed and Mujeri (2009) found that economic growth in Bangladesh has slowed, and exports and remittance inflows, two of Bangladesh's critical parameters of macroeconomic strength, have grown at slower rates relative to pre-crisis projections. They argued that the quantitative nature of these impacts on Bangladesh were much less severe compared with impacts experienced by comparable countries especially those in the Asia-Pacific region. Moreover, Bangladesh's growth prospects remain relatively less affected by the crisis. Murshid et al. (2009) argued that the benefits of lower world prices are already being felt in Bangladesh, especially through lower inflation, including lower food and energy prices. Another channel that can help lower the inflation rate of Bangladesh is the declining trend of inflation in major trading partners. The headline inflation rate of Bangladesh declined from 10.82% in July 2008 to 6.03% in December 2008 (Murshid et. al., 2009).

In another paper, Talukder (2009) observed that the total number of persons going abroad in July-March of the fiscal year 2008-09 was about 26.4% less than that of the comparable period of the previous fiscal year. Bangladeshi workers abroad are being laid off in the Middle East, in South East Asia and in other countries where Bangladeshis find low-skilled and low-wage work. In a keynote speech on the GFC, the Bangladesh Bank Governor (Rahman, 2009) argued that the sluggishness that was caused by the crisis would continue in fiscal year 2009-10 but output and investment activities will gain momentum in the next fiscal year subject to global recovery not losing pace. In a study based on survey data, Rahman, Hossain and Saifuddin (2009) found that due to decelerating global demand, the price of export products and some categories of textile products was perceived to have declined by some 5 to 8% during the study period. Further, they found that a large number of entrepreneurs had taken various cost-cutting measures to cope during the GFC including increasing work hours, reducing fringe benefits, reducing the firm's capacity utilization, and the closure of some production units.

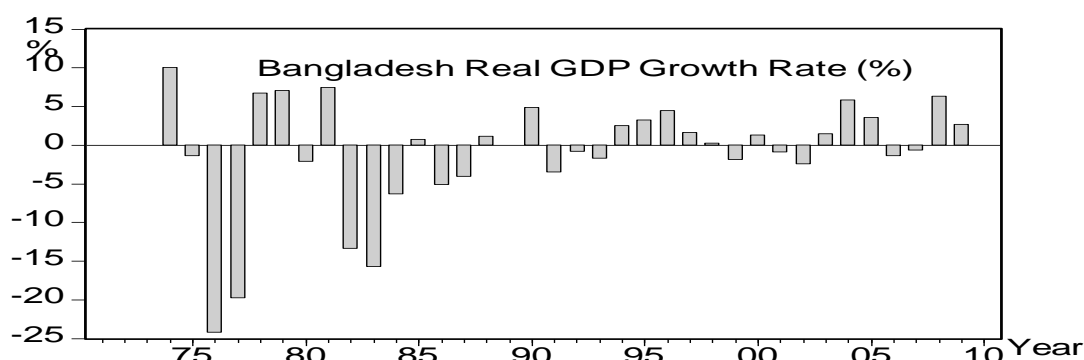
Acemoglu (2009) raised concerns and argues that the current institutional response to deal with the current crisis may be implanting the seeds for the next crisis because the responses are not properly structured and the underlying institutional weaknesses that led to the crisis have not been properly and adequately addressed.

The GFC and the Bangladesh Macroeconomic

Through a series of institutional and policy reforms over the years since the 1990s the Bangladesh economy became more integrated with the global economy and hence became more vulnerable to external crises. The country's economy is now linked with the global economy through various channels such as overall GDP, industrial production, the financial and capital markets, trade, remittances, foreign

investments, international reserves and exchange rates. As such, the domestic economy is highly vulnerable to shocks emanating from global economic disorder. The Asian Development Bank (ADB, 2009) reported that Bangladesh's GDP growth rate was 5.9% in the fiscal year 2008-09 compared to a higher rate of 6.2% in 2007-08 (see Table 1). This study examines in more detail the possible impacts of the global crisis on the Bangladesh economy as follows. Figure 1 shows the year-to-year percentage growth rate of real GDP. The real GDP growth rate is still positive in 2009, but the growth rate is much smaller compared to above 6% in 2008. This is corroborated from the data presented earlier in Table 1.

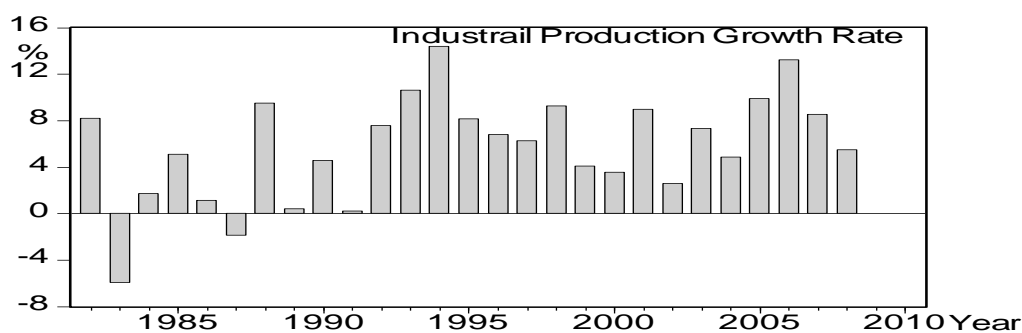
Figure 1: Estimated Real GDP Growth Rate (%) of Bangladesh



Source: Authors' calculations based on data from IMF (2009c): International Financial Statistics CD Rom.

Figure 2 shows the year-to-year percentage growth rate of industrial production index. Although the industrial production growth rate is still positive around 5.5% in 2008, the growth rate is much smaller than before. A similar result was reported by the Asian Development Bank (ADB, 2009) when it showed that the growth rate in the industrial sector was lower at 5.9% in 2008-09 compared to 6.8% in 2007-08.

Figure 2: Industrail (sic) Production Growth Rate (%)



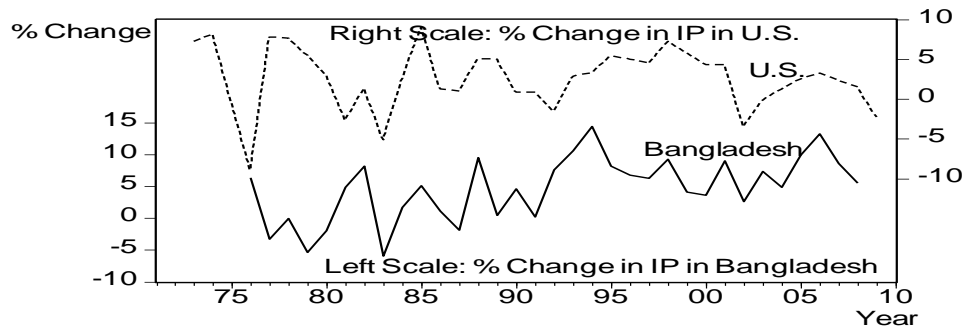
Source: Authors' calculations based on data from IMF (2009c): International Financial Statistics CD Rom

A comparison of Figures 1 and 2 shows clearly that the industrial production representing the manufacturing sector has declined more than the decline in real GDP. This is perhaps due to some mitigating factors occurring in some other sectors of the economy such as rising remittances and exports. Another mitigating factor was the country's agricultural sector, the major sector contributing to GDP, which performed remarkably well. This sector was somewhat affected by the 2007 energy and food price hikes, but quickly turned around and showed a strong and higher growth rate of 4.6% in 2008-09 compared to a lower rate of 3.2% in the previous year (ADB, 2009). This helped mitigate the slowdown in the industrial sector and may have helped in part to keep the overall GDP growth healthy.

Next the degree of economic synchronization of the Bangladesh economy with the global economy is examined in order to get a better picture of the degree of vulnerability of the Bangladesh economy to the

GFC. In the absence of a readily available variable to represent the global economy the US industrial production index is used as a proxy for global indicators. This proxy is not unreasonable given that US is the world's largest economy and it is also Bangladesh's largest trading partner (Islam & Quddus, 2008). A percentage change in industrial production index for Bangladesh and the US is presented in Figure 3, and the co-movement between the Bangladesh and US economies from 1973 to 2009 is also portrayed.

Figure 3: Changes in Industrial Production Index: Bangladesh versus the US: 1973 - 2009



Source: Authors' calculation based on data from IMF CD Rom (2009c)

The overall correlation coefficient of $r = 0.4135$ is not very high. Further, when the US economy and the world economy went into recession after late-2007, Bangladesh industrial production appears to have slowed but still showed healthy and positive growth in 2008 and 2009. From this it seems clear that there are some co-movements between the two economies but that the co-movements are quite weak. This perhaps explains why the Bangladesh economy remained quite resilient and was able to escape from any serious repercussions from the US economic crisis and the GFC. This resilience can also be traced partly to the reasonably strong performance of some major sectors of the Bangladesh economy in spite of the GFC.

Turning now to examine the impacts of the GFC on some sensitive sectors, the focus is on some important but vulnerable sectors. These include the financial and capital markets, exports and imports, remittances, foreign investments, international reserves, and home currency exchange rates. Within the financial markets the banking sector has played the most dominant role in Bangladesh. It seems that the banking sector in particular did reasonably well and stayed quite stable despite the GFC. The Bangladesh capital markets also performed quite well with the country's two main stock price indices recording gains and as a result, the market capitalization has increased during this crisis period. Figure 4 shows the improvement in the stock index for four years to June 2010. Further, the Asian Development Bank reports that market capitalization of the Dhaka Stock Exchange, the largest stock exchange in the country, rose in value from Tk (Taka – home currency) 970.4 billion in July 2008 to Tk 1,312.8 billion by the end of June 2009 (ADB, 2009). This represents a remarkable increase of 35.3%. Similar gains were recorded in the Chittagong Stock Exchange, the second largest exchange, with market capitalization rising by 26.1% during fiscal year 2008-09.

These results in Figure 14 are contrary to what has been experienced by many emerging economies such as in Indonesia (Goelton, 2009; Yap, Reyes & Cuenca, 2009), and in South Korea and the Philippines (Yap, Reyes & Cuenca 2009), where large declines in market capitalization have been observed. The Bangladeshi financial and capital markets remained resilient and strong partly because of the fact that these markets were not greatly exposed to foreign investments and as such were not as vulnerable. The Bangladesh banking sector has only a few foreign banks in operation and the magnitude of foreign portfolio investment in the stock markets remains low at around only 2.83% of total market capitalization (ADB, 2009). This relatively low foreign exposure in fact acted as a blessing in disguise in that these sectors were relatively less exposed to the toxic asset values arising from the GFC.

Figure 4: Market Capitalization in Dhaka Stock Exchange: Recent 1460 days graph

Source: http://www.bdstock.com/bdstock1/stock_graph.php, 2010

Moreover, there are reports of liquidity surplus prevailing in the commercial banks that may also hurt the financial sector. According to the Asian Development Bank report (ADB, 2009), the banking system had a large liquidity surplus of Tk 347.6 billion at June 2009. Further, the capital markets also have serious structural weaknesses with ailments such as market manipulation, insider trading, lack of transparency, weak and ineffective oversight and regulation, and domination by few but powerful vested interests typical of developing countries.

Turning to the trade sector, it was anticipated that the export sector of the country would be highly vulnerable and would have suffered a massive adverse impact from the GFC. This is because the export sector is highly concentrated both country and commodity-wise. A very high percentage exceeding 90% of total export earnings of the country is derived from the US and the European Union (EU) countries and about 75% of total export earnings are derived from the readymade garments (RMG) sector alone (Islam & Quddus, 2006; Islam & Quddus, 2008), making the export sector highly vulnerable to the GFC. However, in spite of the GFC affecting the US and EU countries severely, the Bangladeshi export sector in general and the RMG sector in particular remained quite resilient. This is partly because Bangladesh's export items generally face low price and income elasticity of demand in foreign markets, and partly because these products are mainly destined towards relatively lower income groups in those major importing country markets. Thus overall export growth has remained positive but has slowed somewhat. The Asian Development Bank reports (ADB, 2009) that the rate of export growth has declined to 10.3% in fiscal year 2008-09 compared to a much higher rate of 15.9% in fiscal year 2007-08. In this area, Bangladesh performed quite well compared to India and other South Asian countries (ADB, 2009; World Bank, 2009c).

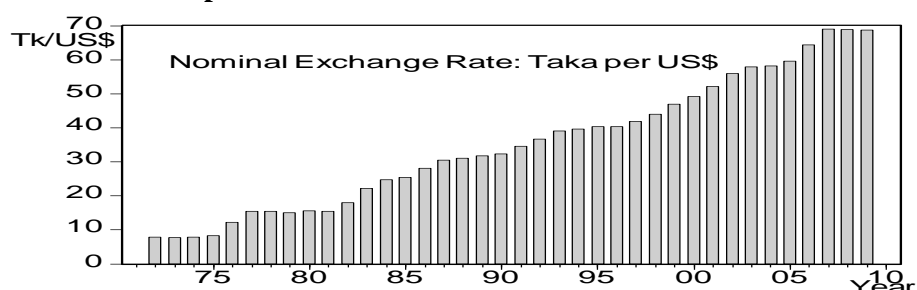
In spite of resilience in the export sector, the garment sector may face some difficulties ahead in terms of possible delayed effects of the GFC. For example, in a recent survey-based study it was reported that some factory owners have been experiencing 5-10% fewer buy orders from overseas buyers. As a result, this sector is reported to be facing price and profit squeeze due to the GFC and are forced to take some severe cost-cutting measures, and is also contemplating the shut-down of some production factories (Rahman, Hossain & Saifuddin, 2009). If that happens on a wide-scale, many workers, particularly female workers may be hard hit. Although these concerns are only anecdotal in nature, they cannot be ignored as they are genuine concerns expressed by industry leaders. Therefore, the policy-makers and exporters may need to remain vigilant that some major foreign buyers may place fewer buy orders in the days ahead, potentially further slowing down export growth.

In the import sector of foreign trade, Bangladesh relies on foreign markets for many products, including raw materials, industrial machinery, energy, and food, among others. As such, the country is highly import dependent which causes big trade deficits for the country year after year (see Table 1). But the GFC, which has lowered many commodity prices in global markets including food and energy, may have created some beneficial effects for the country in this front particularly in lowering import volume and in keeping home inflation down. The country may be able to import some sensitive commodities such as food and energy at a much lower cost than before, helping to improve its trade deficit position as well as enhancing domestic production with cheaper imports of raw materials and energy. According to the Asian Development Bank, imports in the fiscal year 2008-09 rose at a much slower rate of only 4.1 percent in 2008-09 compared to a much higher rate in 2007-08 (ADB, 2009). The overall home inflation rate has also stayed subdued as a result of lower import prices (see Table 1). Similar effects also occurred in India and some other South Asian countries (ADB 2009; World Bank, 2009c).

Another very important but sensitive and vulnerable sector for Bangladesh is the worker remittances sent from abroad by overseas Bangladeshi workers. Over the years, this sector has grown quite fast and provided a strong source of foreign exchange earnings. However, some experts and policy-makers have raised concerns that the remittance flows from expatriate Bangladeshi workers may be severely affected as many workers may lose jobs abroad and others may be hit by salary cuts due partly to the GFC and partly to falling oil prices, both adversely affecting labor importing countries. For example, in a recent conference organized by the Economic and Social Commission for Asia and Pacific (ESCAP) on overseas migration held in Bangkok, Thailand, it was reported that Bangladeshi workers are the main players in sending remittances from abroad estimated at US\$9 billion to the country in 2008 (Talukder, 2009). Talukder also reported that the majority of workers are deployed in three Middle Eastern countries, Saudi Arabia, Kuwait, and the United Arab Emirates with 48% of workers being employed in low-skill jobs. Many of these workers are being laid off in these countries and are returning home. He reported that about 54,000 workers lost jobs overseas in 2008 and about 30,000 lost jobs in the first four months of 2009 alone.

However, the good news is that, in spite of job losses in some of the countries, overall overseas employment of Bangladeshi workers was up by 5.1% and remittances were up by 37.21% in 2008 compared to 2007 (Talukder, 2009). These increases are smaller compared to the previous year, a sign that overseas employment and the concomitant remittance flows have slowed down. According to the Asian Development Bank the remittance inflows grew by 22.4% in the fiscal year 2008-09, down from 32.4% in the year 2007-08 (ADB, 2009) (see Table 1). In fact, some countries such as Lebanon and Libya opened up their job markets for Bangladeshi laborers while some expatriate workers were returning home from other Middle Eastern countries such as Saudi Arabia, Malaysia, and Mauritius, the former thus offsetting the latter at least to some extent. However, the remittance flows remain vulnerable and may slowdown even further if the global crisis is prolonged.

Bangladesh is also doing quite well in the area of international reserves. The foreign exchange reserves held by the Bangladesh Bank have increased compared to previous years (IMF, 2009c; Bangladesh Bank, 2010). However, the irony is that the country is still taking loans from the IMF, perhaps as a precautionary step. Given that the exports, remittances, and foreign exchange reserves remained at good levels, the home currency (Taka) maintained its value in the global markets, despite the massive global crisis. The currency in fact appreciated somewhat against the US dollar, which is remarkable in that the currency has been continuously declining against the US dollar for many years since the country's independence. The currency exchange value of the Taka against the US dollar from 1975-76 to 2008-09 is provided in Figure 5 which shows stable currency value with slight appreciation of Taka against the US dollar in 2008-09 of Tk 68 = 1 US\$ compared to Tk. 70.00 = 1 US\$ in 2007-08. The recent currency appreciation, however, is a double-edged sword in that it may adversely affect the export and the remittance sectors, two major foreign exchange earners. As a result, exporters and foreign exchange earners are pressing the government hard to deprecate the Taka against the US dollar.

Figure 5: Trends in Taka per US Dollar: 1973 – 2009

Source: IMF (2009c), International Financial Statistics CD Rom.

It is thus clear from the above analysis that the overall Bangladesh economy measured in terms of GDP and industrial production has slowed down somewhat due to the GFC, but the economic impact has been limited to a modest slowdown, and has not become a full-blown recession. Several factors have been beneficial for Bangladesh in this respect. One of the reasons is that growth in the country's dominant agricultural sector was higher due to good weather leading to good harvests and strong and quick public support to farmers to increase production. Strong agricultural performance partially mitigated the slowdown of the economy from the manufacturing sector. Further, the financial and capital markets remained resilient in the face of this crisis, the export sector including the RMG sector showed stability, and the fall in import prices acted as a mitigating factor in keeping the domestic inflation rate down. Also remittances and the international reserve position improved compared to previous years. As a result of the above and possibly other factors, the currency exchange value was maintained at a strong level and even appreciated somewhat against the US dollar. These are quite noteworthy performances for a poor and vulnerable country like Bangladesh in the face of such a massive global crisis.

GOVERNMENT POLICY INITIATIVES

Just emerging out of an energy crisis and the political turmoil since 2007, the GFC could not have come at a worse time for Bangladesh. The present government that emerged through a general election in the wake of these crises, had to face the GFC immediately after assuming power in 2009. There was a lot of pressure on the government from the business community, civil society, policy experts and international organizations to act quickly. Considering micro and macro perspectives, the government of Bangladesh began to develop policy responses to mitigate any adverse effects that may emanate from the global turmoil.

The national budget for the fiscal year of 2009-10 that was adopted by the government projected that the GDP growth rate would probably slow down to around 5.5% (GOB 2009), but later, the Finance Minister expressed hope that the growth rate may improve to 6%. The analysis conducted in this paper shows that the growth rate has eased because of the global turmoil, but the economy remains resilient and is maintaining a reasonably strong performance. In spite of these "not too bad" scenarios for the country, the government decided to take some concrete fiscal and monetary measures, as pre-cautionary steps. This is perhaps also due to the advice and pressure from different business and other interest groups including prominent international organizations such as the World bank, the Asian Development Bank, and the IMF (Rahman, 2009; World Bank 2009b; 2009c). These groups and organizations made predictions that Bangladesh may be badly affected by the GFC and hence would need to take firm measures to deal with the fallout from crisis. As such, the government initially decided to organize a task force to develop strategies and to take measures to deal with possible adverse impacts of the GFC.

On the fiscal front, the government of Bangladesh on 19th April, 2009 declared an initial fiscal stimulus package of Tk 3,424 Crore (The Daily Star, 2009) (1 Crore = 10 Million). Later the government allocated a special financial package of Tk 5,000 Crore in the budget for the fiscal year 2009-10 (Financial Express, 2009). On November 25, 2009, the government again declared a series of additional fiscal stimulus

initiatives worth over Tk 1,000 Crore for the export sector to offset possible adverse impacts of the GFC on the domestic economy (Financial Express, 2009). However, business groups, academics, civil society, and political leaders have been demanding stronger stimulus packages arguing that the current levels are inadequate.

On the monetary front, the Bangladesh Bank adopted easy (expansionary) monetary policy stance to keep liquidity high and interest rates low. The most recent monetary policy stance as of 2009 is designed to support the attainment of highest sustainable output growth without triggering inflation and to deal effectively with the crisis. Also, the Bangladesh Bank and the government adopted precautionary measures to mitigate at least some institutional weaknesses (such as weak regulation and oversight, lack of transparency, endemic corruption, and management inefficiency) of the financial markets, particularly the banking system. However, due to business pessimism and weak demand for credit, the banking system is currently facing a serious liquidity surplus, potentially threatening banking sector viability. The Bangladesh Bank Governor (Rahman, 2009) stated that Bangladesh Bank has maintained easy monetary conditions to facilitate investment activities allowed banks to reschedule non-performing export loans on lenient terms, widened its foreign exchange lending window to banks for financing imports and exports, and has also launched elaborate refinance support networks for promoting bank lending to under-served sectors such as agriculture, SMEs (small and medium-sized enterprises), and sustainability/renewable energy related projects.

Bhattacharya and Khan (2009) argued that given the current large liquidity overhang in the system, the central bank believes it can adequately serve the needs of both the public and the private sector. This is possibly the essence of the declared “accommodative monetary policy”. Further, to strengthen the financial sector, the Bangladesh Bank has recently decided to strengthen the regulations under the guidance of the Bank for International Settlements such as raising the quality, consistency and transparency of the Tier 1 capital base; introducing a leverage ratio as a supplementary measure to the risk-based framework; introducing a minimum global standard for funding; incorporating a framework for counter-cyclical capital buffers above the minimum requirement; and, issuing recommendations to reduce the systemic risk associated with the resolution of cross-border transactions (BIS, 2009). The Bangladesh Bank has also released a directive to all commercial banks and non-bank financial institutes to follow BASEL-II from 1st January, 2010.

INTERNATIONAL BUSINESS IMPLICATIONS

The evidence presented in this paper shows that overall the macro economy of Bangladesh has demonstrated remarkable resilience with only modest slow down of the growth rate as a result of the GFC. This by itself is a remarkable achievement, which may be noticed by foreign investors in diversifying their investment portfolios. The designation of Frontier Five by JPMorgan and Next Eleven by Goldman Sachs would also be noticed by foreign investors, major international organizations, and advanced countries in the world. These are expected to bring greater attention of foreign investors and multinational corporations to invest in this low-income, large-population but hitherto little-known country in the future. As such, the country has great potential for growth and development and could be poised to take advantage of greater global opportunities as the global economy begins to recover. The country has some bright spots and strengths on which to build upon and move forward to take advantage of the evolving global opportunities, but also suffers from many institutional, policy, and structural weaknesses which may prevent the country from realizing its full potential.

The evidence is emerging that the global economy has been stabilizing and may start the recovery process with some major economies such as China and India beginning to restore their high growth performance (IMF, 2009a; World Bank, 2009b; 2009c). As the global economy recovers from this massive crisis, a number of opportunities may open up for Bangladesh to explore these opportunities, it is suggested in this paper that the country needs to build on its key strengths, always mindful of emerging threats, and try to overcome various institutional, policy, and structural weaknesses.

A few strengths and bright spots on which the country can build upon are now discussed. Being a large population low-wage country, Bangladesh has comparative advantage in labor-intensive products. The readymade garments (RMG) industry is a bright spot for the country. The industry began its journey in the late-1970s with strategic partnership between a Bangladeshi new start-up firm Desh Garments, with Daewoo Corporation, a multinational company, from South Korea and with critical policy and institutional support from the Bangladesh government. The industry has very quickly become successful and has become the major foreign exchange earner providing millions of jobs for poor Bangladeshi female workers thus contributing greatly to the country's GDP growth (Islam & Quddus, 1996; Islam & Quddus, 2008). Since the industry exports low-price low-elasticity products, the exports from this sector did not decline even in the face of the massive global financial crisis and thus provided a cushion to keep the country's overall exports strong. In this industry, however, exports are concentrated in low-value products and also geographically concentrated in a few rich country markets mostly in the US and EU markets. Bangladesh needs to gradually move up the value chain to produce and export higher quality, higher value-added product lines. The country also needs to diversify its export base to hitherto unexplored markets in Japan, South and Central America, and Africa (Islam & Quddus, 2008).

Over the years as the industry grew and developed, many more entrepreneurs have evolved in the garment industry and have gained valuable international experience in global trade and business. Additionally, seeing the success of this industry, hundreds of international buying houses representing major global corporations (Wal Mart, K-Mart, J.C. Penney, Levis to name a few) have their physical presence inside the country. The home entrepreneurs and business leaders can take advantage of these agencies and organizations to develop connections and build alliances and partnerships to develop new labor-intensive industries for exports. These international agencies can provide critical financial resources, knowledge and skills, technology, marketing and managerial skills to help develop new export-orientated industries in the country.

However, there might also be opportunities to be explored if the garment sector can become more efficient and hence more competitive in the global markets by producing and supplying at a lower cost. Traditionally, Bangladesh companies are not that efficient technologically and managerially. To produce high quality goods and develop distributional channels as well as to improve technological and managerial efficiencies and effectiveness, local companies need to enter into more strategic alliances with foreign companies to gain added entry to more foreign markets and to compete effectively in the global market (Islam & Quddus, 1996; Islam & Quddus, 2008; Peng, 2003; Hitt et. al., 2004; Saebi & Dong, 2008).

Another key bright spot is that a large number of Bangladeshi workers are working abroad in Middle East, East Asia, Europe, and North America. As Table 1 shows, the expatriate workers repatriate large remittances (about US\$10 billion in 2009, up from about US\$8 billion in 2008 – see Table 1).

Bangladesh has not yet realized its full potential in this area. Firstly, the rising remittances have not been efficiently utilized in productive channels, mostly going into real estate and consumption. Public policy and institutional supports would be needed to channel these flows into productive investments in sectors such as health and education. Second, some view emigration of Bangladeshi workers as a 'brain drain'. As recent literature has shown, this should not be viewed negatively as a brain drain, but viewed rather as a 'brain gain' and brain circulation (Bhargava et. al., 2008; Chand, 2009; Dunnewijk, 2008; Lee, 2008). As experienced in the case of India and China, emigrant workers can provide critical bridges providing foreign connections, encouraging foreign investments, knowledge and skills transmission, and technology transfers, and can provide critical links in creating strategic alliances and partnerships with overseas investors and corporations, all of which can contribute positively to the economy. As such, Lee's (2008) observation can be utilized to create core competencies through international labor migration which may help transfer technology across borders and can be beneficial for host as well as expatriate countries.

An opportunity exists in the area of attracting foreign direct investments into the country. The experiences of China and India have demonstrated that foreign investments can provide critical resources, knowledge,

and technology. While China is attracting around US\$50-60 billion a year in foreign investments, Table 2 shows that Bangladesh has attracted only a meager amount (less than US\$1 billion).

Bangladesh cannot fully realize its potentials because of various institutional, policy, and structural weaknesses that have been and continued to constrain its growth potential. The significance of these factors, particularly for the poorer and emerging developing countries have already been emphasized and well-documented in the recent literature, which are important from both macro (Acemoglu 2008; 2009 ; Acemoglu and Robinson 2006) and micro (Peng 2002; Peng 2003; Peng, Wang and Jiang 2008; Hitt et. al. 2004; and Saebi and Dong (2008) perspectives. Many of these weaknesses facing Bangladesh have been already mentioned earlier. Institutional reforms in opening up the country further to foreign trade, business, and investments, and to create a business-friendly environment by improving law and order, strengthening legal, administrative, and regulatory systems, reducing red tape and delays, among others and in investing and improving physical (roads and highways), educational (colleges and universities), and technological infrastructures (telecommunications, broadband, and information technology) would be critical in attracting foreign investments, in encouraging strategic alliances and partnerships with overseas corporations to help country remain competitive and thus move the country forward at a much higher speed than before.

FURTHER DISCUSSIONS AND CONCLUSIONS

The evidence presented in this paper shows that overall the macro economy of Bangladesh has demonstrated remarkable resilience with only modest slowdown of the growth rate as a result of the GFC. Major segments of the economy such as manufacturing, agriculture, financial and capital markets, exports, remittances, international reserves and exchange rates have also shown remarkable resilience and the most vulnerable variables such as exports and remittances continued to grow, but at a somewhat slower pace. A few segments such as the agricultural sector and the capital markets even showed higher growth rates in the current 2008-09 fiscal year than the pre-crisis year.

There are still segments and sectors where some jobs were lost and the poverty level may have increased among vulnerable groups (such as the unemployed, some garment workers and overseas workers losing jobs) when the economy slowed down. In the immediate short-run, therefore, government should continue taking strong measures to help these vulnerable groups by providing social safety nets through public spending programs and by generating employment opportunities through various public infrastructure projects. Further, financial market regulations should be strengthened and public sector governance needs to be improved in order to reduce inefficiency, mismanagement and rampant corruption. Since power and energy shortages remain a critical threat, the solar, wind and other alternative energy initiatives including nuclear energy sources should be pursued side by side along with the fuel and gas sources.

In addition, both the government and the country's emerging private sector need to maintain strong cooperation and alliances with other countries, major international organizations, and various foreign multinational corporations in promoting the country's trading and commercial interests abroad and in mitigating other possible adverse effects of the GFC. The government should utilize its diplomatic missions more effectively in promoting the country's commercial and trading interests abroad. These missions should also try to improve communication with expatriate Bangladeshi diaspora living abroad to encourage more home-bound investments and utilize their skills and expertise towards transfer of technology and managerial skills for the benefit of the country.

Further, the Bangladesh government has been under pressure from various western countries and international organizations to reform and open up its financial markets. But here, the government needs to be extra careful while considering policy options for reforming the financial markets, particularly with respect to the possible opening up of the capital markets. There are some valuable lessons that had been derived from the experiences of the 1997 Asian crisis and the experiences derived from the current GFC. Bangladesh should be cautious in opening up the financial markets in a gradual manner with proper sequencing of reforms rather than doing it quickly and abruptly and along with prudent regulatory

structure and oversight mechanism. This approach will help the country to avoid a repeat of the severe and sudden meltdown of the financial system as occurred during the Asian financial crisis of 1997.

Although Bangladesh has not been as severely affected by the GFC as many other countries, the scenario could be different in the medium and long term as there could be delayed effects of the global turmoil on its economy, more so if the global recovery is weak and slow to gain momentum (FRB-Dallas, 2009). The government needs to keep a close eye on this front. In other words, instead of being complacent, the government should remain ever vigilant and be prepared to take any necessary step to deal with any possible delayed but unpredictable adverse effects as the situation demands.

As mentioned in the introduction, Bangladesh is a large-population poor developing country, but it has been identified by JPMorgan as one of the Frontier Five countries and by Goldman Sachs as one of the “Next Eleven” countries with enormous potential for growth and development and ample opportunities for international business and investments. Major international organizations such as the World Bank and the IMF, and major countries such as the US and country groups such as the EU also see enormous potential for this country to develop as a democratic and a moderate Muslim country and serve as a model for other developing and Muslim countries. The country has the potential to improve the standard of living of its people and reduce poverty by achieving a double-digit growth rate as has been achieved by Goldman Sachs’ BRIC countries.

However, these potentials have not yet been realized nor will be realized in the future because of well-documented institutional weaknesses involving unstable political system, weak judicial and legal environment to enforce property rights and contract enforcements, inefficient and corrupt public administration, ineffective regulatory framework, inadequate and ineffective policies and policy implementations, and severe infrastructural deficiencies, among others. Because of these limitations and constraints, doing international business in Bangladesh is quite difficult and is reflected in the low ranking by the World Bank based on various indicators of doing business in Bangladesh vis-à-vis other countries in the world (World Bank 2009d). These institutional weaknesses are considered as primary stumbling blocks for the country to realize its full potential for success both at home and in global markets and to encourage foreign investments. If these potentials are achieved, Bangladesh could truly become one of JPMorgan’s Frontier Five or Goldman Sachs’ Next Eleven countries and become a model for other developing countries in terms of promoting global business and commerce and achieving prosperity for its citizens.

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Exploratory results of Green production, sale, willing to pay and financing: case of Bangladesh

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Abstract: *Green production, sale, willing to pay and financing is related to green business. Bangladesh, a developing country in South Asia, is the most fertile delta-region and identified as one of the frontline country to suffer from the adverse consequences of climate change. Research question of the study is limited to examine several relationships related to green business production, sale, and willingness to pay. Primary data was utilized to test the hypothesized relationships. Based on the literature review, several conceptual relationships are presented and empirically tested. Findings conclude that production and sale of green products was related to the plan to produce and sell green products in Bangladesh and those consumers who are environmentally sensitive are willing to pay premium prices for green products and purchase these products frequently. Paper recommends that government, civil society organizations and the financial institutions should take a more active role in promoting and encouraging businesses to produce and market green products. Authors suggest that there is still room for the government to set up community banking in the rural areas including informal sector, micro savings, and investment through green financing in the area of green production, green transportation and green consumption.*

Key words: *Bangladesh, Community banking, Environment, Green Business, Green Consumer, Green Producer, Green Financing.*

JEL classification codes: *L1, Q5*

1. Introduction

“Green” is associated with environment friendly initiatives in production, distribution and consumption. Green business relates to an initiative as a sign of the green economy, leading to the sustainable development and growth of a country. The UNEP green economy definition, which includes improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities (UNEP, 2012&2015). That means the pathways of green economy are a complete process for making a foundation for sustainable development, socio-economic and environmental sustainability of a country by encouraging policy makers to support inclusive green investment initiatives for poverty eradication (UNEP, 2012). The Bangladesh Bank (2011) launched the TK.2 billion green banking refinance scheme in August 2009 to help set up solar panels, biogas plants and industrial Effluent Treatment Plants (ETPs), to reduce industrial pollution and increase the green power supply. Bangladesh, in South Asia, is identified as one of the victim countries, which is considered to be in the frontline to suffer from the adverse consequences of the climate change. Environmental Performance Index (EPI) of Bangladesh in 2016 value was 41.77, while in 2006 the value was 25.43 (EPI, 2016). The Appellate Division on 9th April warned that action would be taken against the government of Bangladesh in the event of the Dhaleshwari River getting polluted by effluents from the tannery park at Savar (New Age Bangladesh, 2017).

Global warming is at least partly due to human activity on earth, it is happening, and it is causing significant climate change and affecting the lives of island economies, coastal communities and countries

with low continental shelf like Bangladesh. Historically, the main contributors to the global warming/climate change has been attributed to carbon emissions in the rich industrialized countries such as the U.S., Western Europe, Canada, Japan, and Australia. In recent decades, Brazil, Russia, India, China, and South Africa and few other emerging developing countries are also identified to be major contributors to this phenomenon. Bangladesh is also trying to introduce green concepts in consumption and production, though in a slower pace. The Central Bank of Bangladesh's Banking Regulation & Policy Department wide circular no.02, dated February 27, 2011 introduced detailed policy guidelines for Green banking to be implemented in three phases by December 31, 2013 (Bangladesh Bank, 2011). Hahnel (2011) described that a big part of a successful response to climate change will take the form of investment planning administered through a public controlled sector.

Bangladesh has included more sectors under its green banking refinance scheme, taken up four years ago, in the wake of growing demand for renewable energy and environmental friendly activities in the country. For example, plants for solar mini grids, a solar irrigation pump system, hydropower, producing organic fertiliser via vermi-composting, PET (polyethylene terephthalate) bottle reprocessing, solar battery reprocessing, LED bulb and Hybrid Hoffman Kilns in brick kilns for reducing carbon emergence. The fund is named as the "solar energy, biogas and effluent treatment plant sector refinance scheme." (Dhaka Tribune, July-2-2013). A recent report shows that the banks and non-banking financial institutions have so far lent 580 billion Taka for green financing of various development initiatives and projects in Bangladesh (Financial Express, 2017). According to International Labour Organisation (ILO, 2015) green businesses help to reduce, prevent and enhance capacities to cope with climate change risks. Unfortunately, most business organizations in the U.S. and other countries have generally lagged behind, and in many cases have taken active roles in opposing such initiatives. One glaring example is Exxon Mobile Inc. in the U.S., which has funded and actively supported climate change denial studies as well as suppressed its own climate change findings (Banerjee, Song & Hasemyer 2015).

Fortunately, some economists, policy makers and even some prominent management gurus have challenged negative business views in recent years. In case of Australia, New South Wales (NSW) regional development strategy has been to develop a green economic growth by encouraging green business projects. The definition adopted by the NSW Government on green business is about focussing on "Green businesses incorporates a wide range of technologies, products and services that create environmental benefits, reduce environmental risks and impacts, minimises pollution, energy and resources use, and provides sustainable alternative to current impact practises" (NSW Government, 2012, p. iii).

On the basis of the above discussion, research question of the study is to examine several relationships related to green business production, sale, willingness to pay and financing.

2. Literature Review

Practice of environmentally friendly ("green") policies represents a form of socially responsible behavior by business firms (Jones, 1996). Kirchhoff (2000) model is about a monopolist's voluntary over compliance with legal environmental standards, under asymmetric information. Zsolnai (2002) asserts that the green business paradigm is not sufficient for achieving ecological sustainability but the community economy might be able to meet the requirements of ecological sustainability. Chowdhury (2006) described that the environmental marketing and management integrate all the three areas of business-society-environment relationships, which is the triple bottom line economy-society-environment. Adams (2009) argued that green development focuses on the right of the individual to choose and control his or her own course for change, rather than having it imposed.

Environmental management systems (EMS) and green strategies have been adopted by businesses to reduce market failure and show the relationships between adoption of green strategies and various motivational factors in various developed countries. Such as competitiveness, ethical and rational reasons, ecologically responsible initiatives, social responsibility, and empirical studies have been undertaken in various European and South-American countries (Bansal & Roth, 2002; Potoski & Prakash, 2005; Prajogo et al., 2012). Empirical studies also show that by adopting EMS and green strategies, firms and businesses get the benefit of reduced operational costs and increase productivity, sale and innovative green products and technology to minimise negative environmental impact (Demirel & Kesidou, 2011; DeOliveria, Serra & Salgado, 2010; Khanna, Deltas & Harrington, 2009; Rehfeld, Rennings & Ziegler, 2007).

Research has focused on developing alternative energy sources, automotive technologies or waste disposal techniques, however, we often ignore the fact that the ability to optimize (existing) operations to reduce their emissions impact is fundamental to this exercise (Ghose, Hoesch-Klohe, Hinsche & Le, 2010). Business process management (BPM) technology, with its focus on understanding, modelling and improving/optimizing business processes, is a key starting point. As business continues to do more with less, green business opportunities are here to stay (Kabiraj, Topkar & Walke, 2010). Smith and Perks (2010) found that the functions least impacted by green business practices are general management/human resources, purchasing/supply chain management and finance/information technology. Companies that ultimately succeed in growing green will be distinguished by their commitment to corporate wide sustainability as well as the performance of their green products (Unruh & Ettenson, 2010).

Information system ties together the various elements to provide a complete solution to attain environmental sustainability (Watson, Boudreau & Chen, 2010). Environmental concerns have an important place in the sustainable development strategies (Karagülle, 2012). Competitiveness levels of private companies may be affected by various barriers and green policies because of regulations regarding environmental concerns, resulting in market failure where the market for goods and services does not deliver the most optimal outcome (OECD, 2011). McPeak and Guo (2014) described that an external pressure on automotive companies; “go green” initiatives attracted attention of the market to these automakers and encouraged them to take more responsibility for social sustainability, like reducing CO₂ emission and fuel consumption. Nairand [http:// www.sciencedirect.com/ science/article/ pii/ S0301421513010562](http://www.sciencedirect.com/science/article/pii/S0301421513010562) - aff0010 Paulose (2014) opined that business models often function at the intersection of various industries, with global views, and the resulting systems have distinct social, political, environmental, economic, technological, and business dimensions under holistic approach. The willingness of users to pay extra cost for proper management of e-waste provided that there is proper cost sharing between consumers and producers (Kwatra, Pandey & Sharma, 2014).

Dai, Kesternich, Loschel and Ziegler (2015) argued that perceived experiences with extreme weather events alone are strongly correlated with climate change beliefs and those physical or financial damages due to these events, lead to even stronger relationships. Gevrek (2015) found that Turkish people prefer a carbon tax with a progressive cost distribution rather than one with a regressive cost distribution. The private cost has a negative effect on the probability of choosing the tax. Information about taking action in carbon reduction needs to be disseminated to the public regarding how to live an environmentally friendly lifestyle (Hsuand & Lin, 2015). Various studies show that motivations to adopt comprehensive environmental management system (EMS) practices to reduce negative environmental impact, of business operations is positively influenced by relational motivations as firms consider their image, compliance and prevention of environmental incidents as significant drivers to implement EMS practices (Singh, Jain & Sharma, 2015; Banerjee et al., 2015; Sangle, 2010; Banerjee, Iyer & Kashyap, 2003; Projogo, Tang, & Lai, 2012; Bansal & Roth, 2000; Dasgupta, Hettrige & Wheeler, 2000).

Chen and Wu (2014) observed that different types of enterprises exhibit significant differences in the strength of the impact of perceived benefits, risks, and control of green business on their intention to implement green business, which tends to be influenced by the perceived benefits, while the manufacturing is more affected by the perceived risk and perceived control. There are parallels to formal private sector engagement advocated in relation to the green economy (Brown & McGranahan, 2016). Eusuf and Shahan (2016) commented that RMG sector in Bangladesh can promote green growth without relying on any external support; succeeded in raising awareness about the necessity of green growth. Banks can ensure sustainability for itself and greener world for communities by taking care of its infrastructure development and accelerating its existing green movements (Masukujjaman & Akhtar, 2013). Bocken, Short, Rana & Evans (2014) argued that Sustainable Business Models (SBM) incorporate a triple bottom line approach and consider a wide range of stakeholder interests, including environment and society. Čekanavičius, Bazytė, Dičmonaitė (2014) argued that the shift of a business to the green-trend should be regarded as the outcome of the interaction of three main agents of the process: consumers, governments, and the business itself, the first two contributing to the formation of “green request” to business and the latter implementing green practices. President Trump announced recently that the United States would withdraw from the Paris climate accord, weakening efforts to combat global warming and embracing isolationist voices in his White House who argued that the agreement was a pernicious threat to the economy and American sovereignty (Shear, 2017).

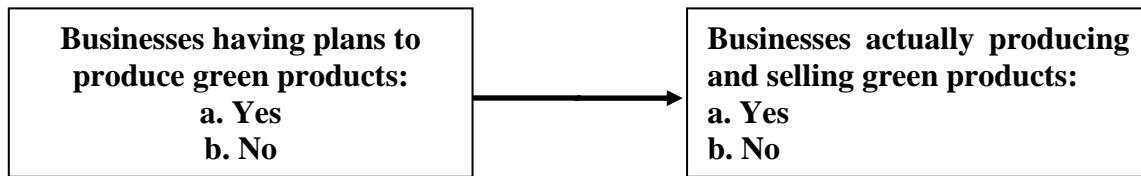
2.1 Justification for doing research

The research question is to examine whether and to what extent such strategies can be replicated particularly in low group of middle-income country like Bangladesh which is a victim of climate change. Research gap was identified that all the empirical primary sources of studies were done by developed nations. However, in Bangladesh, there are few studies and such in-depth study based on survey-based primary data collection were not undertaken earlier. From the literature review, we observed that green business, green products and green financing are vital for environmental protection and for inclusive economic development and growth of the country as well as the bottom line for green business enterprises.

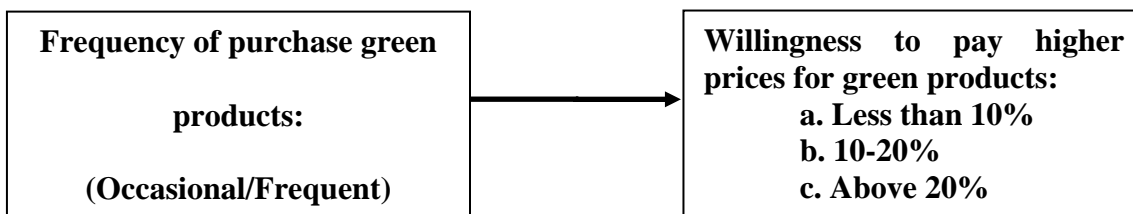
3. Data Analysis and Research Methodology

3.1 Sample and Data: Primary data was utilized to empirically test the proposed conceptual hypothesized relationships. Based on the literature review, a questionnaire was designed with was four parts requiring responses from 3 groups of participants. The first part measures demography of the respondents. The second part measures responses of the consumers. The third part measures responses of the producers. The forth part includes banks and non-bank financial institutions. A total of 200 questionnaires were posted to respondents and out of which 121 questionnaires were returned. Six (6) questionnaires were incomplete, so they were excluded from the study and the remaining 115 were retained for data analysis. This constituted a 57.5% response rate which is acceptable. The survey was conducted in two major metropolitan areas of the country: (i) Dhaka Metropolitan area, and (ii) Comilla Metropolitan area of Bangladesh. Since the data was discontinuous in nature, non-parametric statistical analyses was more appropriate. As such, cross-tabulation of data by variables and the associated non-parametric Chi-Square tests and some other non-parametric tests were conducted for hypothesis testing.

3.2 Hypotheses Testing: This section, proposes two hypotheses regarding green business in Bangladesh. The first hypothesis is to understand if actual production and sale of green products by businesses is related to the business plan to produce green products. This hypothesized relationship is depicted in Figure-1 below.

Figure1: Relationship of business plan to actual production of green products

The second hypothesis is to understand if there is a relationship between purchase type (occasional versus frequently purchased) to respondent's willingness to pay higher price for green products as shown in Figure-2.

Figure 2: Relations of Purchase type to willingness to pay higher prices for green products

The above mentioned two hypothesized relationships are formulated in testable format in terms of null and alternative hypotheses shown in Table-1 for non-parametric testing.

Table 1: Null Hypotheses

Hypotheses	Framing of Null Hypotheses
Hypothesis-1	Ho: Production and sale of green products are not related to Business' plan to produce and sell green products
Hypothesis-2	Ho: There is no relationship between the purchase type of green products and the willingness to pay higher price for these products.

3.3.Estimated Results: The cross tabulation of the data showing the frequencies and relative frequencies of the two variables related to Hypothesis-1, i.e. the plan to produce green products and actual production and sale of green products are shown in Table-2. The last column of this table shows that 55 of the 115 sample firms (47.8%) has actual production and sale of green products whereas the remaining 60 firms (52.3%) do not do so. The last row in the same table shows that, of the 115 firms, 66 firms (57.4%) had plans to produce green products whereas the remaining 49 firms (42.6%) did not have any such plans. The results in Table-2 are based on an analysis of the previous Table-1, Hypothesis-1, which appear to give some preliminary indication that the two variables would be related to each other.

Table 2: Cross tabulation: Relation between plan to produce green products with actual production and sale of green products

Count		Plant produce green products		Total
		1 (Yes)	2 (No)	
Produce and sale green products	1 (Yes)	25 (45.5)	30 (55.5)	55 (47.8)
	2 (No)	41 (68.3)	19 (31.7)	60 (52.3)
Total		66 (57.4)	49 (42.6)	115 (100.0)

Source: Authors estimation from survey data

The non-parametric Chi-square test of independence is reported in Table-3 below showing a statistical significant relationship. The estimated Chi-square value of 6.142 with one degree of freedom clearly shows that the null hypothesis of “independence”, i.e. “no relation between these two variables” is rejected at better than 1% level of significance, indicating acceptance of alternative hypothesis i.e. the test result shows that “plan to produce green products” is strongly related to actual “production and sale of green products”.

Table 3: Chi-Square Tests related the Cross tabulation shown in Table 2

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6.142 ^a	1	.013	.015	.011
Continuity Correction ^b	5.242	1	.022		
Likelihood Ratio	6.191	1	.013		
Fisher's Exact Test					
Linear-by-Linear Association	6.089	1	.014		
N of Valid Cases	115				

Notes: a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 23.43. b. Computed only for a 2x2 table; c. Percentages are reported in the parentheses

Source: Authors estimation from survey data.

Table-4 reports the cross tabulation of the relationship between purchase type and willingness to pay higher price for green products (Hypothesis-2 in Table 1). Purchase type is categorized into two groups: whether the green products are “occasionally purchased” or “frequently purchased”. The other variable, willingness to pay higher price is categorized into three groups: “1-10%”, “10-20%” and “above 20%”.

Table 4: Cross tabulation: Relation between purchase type and willingness to pay higher price for green products

		Purchase type		Total	Chi-square
		Occasionally Purchased	Frequently Purchased		
Willing to pay higher Price	1 - 10%	4 (7.0)	53 (93.0)	57 (50.0)	19.61 *** with df 2
	10 - 20%	15 (46.9)	17 (53.1)	32 (28.1)	
	more than 20%	5 (20.0)	20 (80.0)	25 (21.9)	
	Total	24 (21.1)	90 (78.9)	114 (100.0)	
Notes: Percentages are reported in the parentheses and *** indicates significant at 1% level.					
Source: Authors estimation from survey data.					

Focusing on the last row of this table, 24 of the 114 respondents (21.1%) purchase green products only occasionally, whereas 90 of those respondents (78.9%) reported to purchase these products frequently. Looking at the second to last column of this table, it appears that of those 114 respondents, 50% are willing to pay a premium price of 1-10%, 28% are willing to pay price premium of 10-20%, and the remaining 22% are willing to pay a premium price above 20%. The above discussion appears to give some indication that the two variables “purchase type” and “willingness to pay higher price” are related to each-other. This relationship is expressed in Hypothesis-2 in Table-1 above. The non-parametric Chi-square test of independence is carried out and reported in the last column of Table-4 to test statistically this hypothesized relationship. The estimated Chi-square value indicates that the alternative hypothesis is agreed i.e. it seems that the respondents who buy green products frequently are more willing to pay higher price for these products, compared to those who tend to buy these products occasionally.

Sample Adequacy and Factor Analysis

Further, in order to examine how suited the data is for Factor Analysis, Kaiser-Meyer-Olkin (KMO) test (Keiser 1974) was undertaken.

Table5: KMO and Bartlett's Tests

Kaiser-Meyer-Olkin (KMO)	Measure of Sampling Adequacy	0.428
	Approx. Chi-Square	192.980
Bartlett's Test of Sphericity	Df.	15
	Sig.	.000

Source: Authors estimation from data analysis

The KMO test of sample adequacy for factor analysis is reported in Table-5. Since the KMO measure is greater than 0.4, the sample size is enough for factor analysis, whose results are shown in Table-6 and Table-7. Table-6 represents the proportion of total variation explained by the principal (or significant) components. The first three components appear to be very significant as these three explained cumulatively about 80% of the total variation.

Table6: Total Variance Explained

Components	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.043	34.054	34.054	2.043	34.054	34.054	1.762	29.366	29.366
2	1.514	25.225	59.279	1.514	25.225	59.279	1.590	26.505	55.871
3	1.195	19.912	79.191	1.195	19.912	79.191	1.399	23.320	79.191
4	0.702	11.692	90.884						
5	0.356	5.933	96.817						
6	0.191	3.183	100.000						

Source: Authors estimation from data analysis

As shown in the rotated component Table-7 below, the first component is government involvement which is formed by a linear combination of “government encourage green business” with “government investigate and enforce the quality of green product labelling”. Second component is consumer involvement, that is a linear combination of “willingness to buy and pay higher price for green products” and “business produce and sale green products” and the third component is “government certification of green product labelling”.

Table 7: Rotated Component Matrix

	Components		
	1	2	3
Government involvement to encourage green business	0.929	-.049	0.176
Government Investigate and enforce the quality of green products	0.834	0.049	-.380
Consumer's Willing to buy green products	-.167	0.841	-.056
Business' Capability to produce green products	0.120	0.682	0.466
Consumer's willing to pay higher price for green products	0.399	0.641	-.511
Government Certify and label business' claim of green Products	-.048	0.030	0.862

Source: Authors estimation from data analysis

Based on the results reported above, we find that the production and sale of green products is significantly related to the plan to produce and sell green products. As such, production of more green products needs strong government involvement through subsidies, incentives and regulation to encourage businesses to adopt green production methods. To this end, making green financing more easily available could help businesses plan and produce more of these products. Further, customer's awareness by green marketing about the green products and their willingness to pay higher prices for these products could provide further incentives to producers to bring more of those products in the market. Results show that there is highly significant association between purchase types of green product and willing to pay higher for green products, businesses should feel more comfortable to produce these products-an encouraging sign indeed.

Table 8: Opinion of the Stakeholders regarding Government Support to Green Product

Government is doing enough to:	NGO	Supplier	Consumer
1. <i>investigate & enforce the accuracy and truthfulness of claims of green products by businesses</i>	18.5%	44.3%	28.8%
2. <i>encourage businesses to produce and sell green products in Bangladesh</i>	13.0%	18.3%	41.5%
3. <i>label & certify green products so that consumers can make informed decisions to buy green products</i>	68.5%	37.4%	40.2%

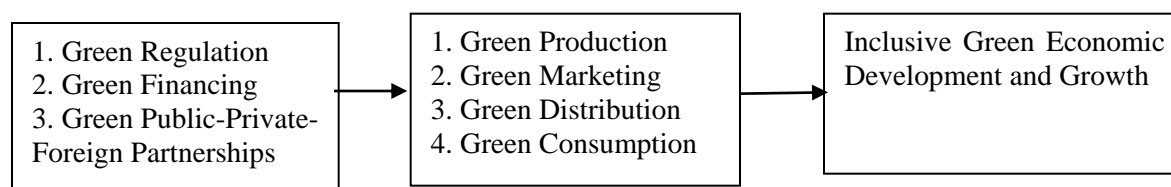
Source: Authors estimation from survey data.

Table-8 summarises the survey responses by the NGO's suppliers and consumers, related to government's role in Green products truthfulness of claims of the green product, production and labelling, certification and marketing of the green products. In relation to, ensure accuracy and truthfulness of the green claim by the producers, 44.3% of suppliers were most concerned, that government should investigate regrading false claims, which could affect their credibility and sale of green products. Nearly 41.5% of consumers were concerned that Government should enforce regulation to encourage production and sale of green products. 68.5% of NGO's and 40.2% of consumers were concerned that government should enforce regulation for *labelling and certifying green products so that consumers*, can make informed decision whilst purchasing green products.

Factor analysis found that the proportion of total variation was 80%, explained by the first three components, being significant in encouraging green business in Bangladesh. To give more emphasis on production of green products, green financing should be increased by Bangladesh Banks as a mandatory requirement, for all businesses in the form of corporate social responsibility (Chowdhury, 2006; Eusuf & Shahan, 2016; Hsu & Lin, 2015).

For human prosperity and sustainability, greater emphasis should be given to green customers, green products and green financing. Adams (2009) rightly observed that development crisis and environmental crises exist together, and hence both of these crises need to be tackled simultaneously. In February 2017, Central Bank of Bangladesh, updated its Environmental and Social Risk Management Policy (ESRM) guidelines and stressed that investing in high environmentally risky projects should be avoided, related to social and climate change risks and encourage Green Banking. (Bangladesh Bank, 2017).

Based on our results we have proposed a 'Model of Inclusive Green Economy' for coastal and island economies in Figure 3.

Figure 3: Proposed Model of Inclusive Green Economy

Source: Constructed and proposed by authors

Figure-3 indicates that incentives and motivation for green production, sale, marketing, distribution and consumption of green goods and services will result in an inclusive green economic development and growth for the country, including coastal areas, hill tracts with the goal of innovative solutions for sustainable production, distribution and consumption and embracing a sharing all-inclusive green economy for common goal.

4. Conclusions and Implications

Bangladesh is amongst the few countries, which is susceptible to natural disasters. Consumers and producers need to be aware of green concept. Perception of the people and cognizance behaviour should be to minimise the adverse impact of environmental disaster, which may reduce the risk of vulnerability of the people, living in the low lying coastal areas of the country, barely above the sea level. Horror strikes hills due to heavy rain caused by destruction of hills, trees caused the disaster in the Hill tract of the country.

The empirical results of this study found that: i) consumers who buy green products frequently are willing to pay higher price, compared to the consumer who buy green product occasionally, ii) a good percentage of business firms have no plans to produce and sell green products. Therefore government and financial institutions can take a more active role in providing encouragement and tangible incentives to the businesses to produce and sell green products in the country.(iii) Those who purchased frequently could be more sensitive to the climate change issues, and are willing to support the production and sale of green products even at the expense of paying higher prices. This could be interpreted as a good sign in the sense that businesses should feel more confident to produce more green products, supported by government subsidies.

Bangladesh Government in 2012, prepared a draft national environmental policy, which was published in the year 2013, due to bureaucratic red-taps remains in deep freeze. This draft policy did not effectively address various problems such as: waterlogging, river management international rivers, climate refugees' rehabilitation process, grabbing and pollution of rivers by criminals, adverse impact on disaster on crop, livestock and fisheries, transformation from informal to formal economy and antagonistic influence which may be offset by green economy, strategies to overcome climate change problems etc. No policy ever have any value unless environment protection law is enacted by the parliament and implemented effectively on time.

There is still room for the government and the Bangladesh Bank in partnership, to set up community banking in the rural areas, collect micro-savings, and invest through alternative banking system (Rural Post office, Palli Sanchay Bank, Karmasangshtan Bank and Bangladesh NGO Foundation)in 'Green' production, transportation and consumption. Preservation of nature through strategic alliances with Green public-private-foreign-partnership (Green-PPFP)and foreign initiatives for promoting green business and environment should be a top priority and add value in both domestic and global Green-Value-Supply-Chain (Green-VSC).

Top-down approach and bottom-up approach for creating social networking to reduce the risk of natural calamities and increasing adaption capability and green start-up nano, micro, small and medium enterprises and green technology should be encouraged via Green-PPFP. From this empirical study, we found that the respondents in Bangladesh are also quite supportive for green business development to protect the country and the economy from environmental disasters.

Future research may be undertaken to examine whether gradual transformation from informal economy to formal economy, will have negative impact on green economy (Brown & McGranahan, 2016).A survey should be conducted in both rural and urban areas to identify the nature of green product, consumer awareness, cost-benefit analysis and Green-VSC Management. Moreover, an in-depth study could be undertaken so that coastal areas and island economy consumers and producers can be included in the future research on impact assessment of Green businesses, and adaptation capability of global warming.

Keeping green production and consumption as goal, future green finance initiatives should be dynamic in nature to minimise carbon emission, familiarization with renewable energy sources, use of surface water,

emphasis on tree plantation and afforestation, provision for greenroofto capture rainwater, drainage, solar panels and irrigation arrangements by the Green-PPFP. People would be able to achieve better livelihood in a green sustainable environment. Green production, sale and willing to pay must act as holistic approach on acceleration accompanied with multiplier effect on fast-tracking inclusive growth in a greener scenario for environmental sustainability.

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Sample of Theory Developing Process:

Community banking and Social networking for empowerment of People: A Conceptual view

Muhammad Mahboob Ali*

Abstract: Poor and underprivileged people should come under the banking system so that equitable distribution and social justice can be achieved. Informal sector is playing vital role than formal sector of the country. Micro savings should under the working purview of the micro investment for which social networking and community banking is needed. Sen's (1999) capability approach refers to not only freedom but also put emphasis on micro savings and micro insurance and other non financial services programs. Research question of the study is whether community banking and social networking can transform from micro savings to micro investment towards empowerment of the people? Time period of the study is from 1st January 2016 to 25th June, 2017. The theory was developed for considering financial inclusion, to attain income equality, equitable distribution and social justice. A theory was developed by Ali (2016) which need to be tested. The theory was also interlinked with the goals of Sustainable development goal. This theory was developed to remove poverty, creating equitable justice, eliminating income inequality through arranging linkage between social networking and community banking for empowerment of people. The theory which is in a process of development by Muhammad Mahboob Ali on Social networking, community banking and empowerment of people may be empirically tested in different countries of the world and also at Bangladesh by various researchers to give a structural formation, cost-benefit analysis, shadow pricing, validation and reliability of the theory in the real life scenario both global and domestic perspectives with a request to inform the result to the author. World Bank or any other International financial organization may test the model in a greater extent.

Keywords: Micro savings, Community banking, Social networking, empowerment of People, Gender equality

Introduction:

Poor people of the country often did not getting any sort of banking services. Without banking involvement they have to depend on informal sector. As such informal sector have been playing vital role in the economy without accountability and transparency. Micro savings ought to come under the operational purview of the micro investment through social networking and community banking based system is required. Otherwise micro savings cannot give good results rather it will have some problems which was raised in Uganda, Rwanda, Kenya etc. countries. Noose et al. (2011) argued that the double bottom-line business approach of savings banks is a powerful driver for financial inclusion. The promotion of access to financial services, especially micro savings, for all unbanked communities and individuals and maintaining a broad retail distribution network are parts of this social approach to banking.

In case of Pareto's optimality criteria of utility theory, Hicks, Kaldor and Scitovsky described that social welfare could be increased without making value judgments.

As such Pareto optimality of the people can be attained in line of social welfare so that compensation package can be attained (<http://vle.du.ac.in/mod/book/print.php?id=12779>, viewed on 1st June, 2017). In the free market economy govt. can intervene at least invisible manner. For poorer people, govt. need to set up some procedure of redistribution, arranging equitable righteousness, removing income inequality

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and to attain social justice. A community bank is a depository institution that is typically locally owned and operated. Community banks tend to focus on the needs of the

businesses and families where the bank holds branches and offices. Lending decisions are made by people who understand the local needs of families, businesses and farmers. Employees often reside within the communities they serve. **Social network** is a sociological concept for a set of **social relations between network elements** that interact and which are in particular individuals. Social groups or teams, organizational units or whole organizations can also be network elements in the organization. Basic types of **social network** in the organization are: Formal organizational structure, Informal organizational structure (<https://managementmania.com/en/social-network> on 1st June, 2017). As such the study wants to bring a linkage between community banking and social networking for the empowerment of people, attain income equality, ensuring social justice and equitable distribution. If micro foundation is stronger than macro economy will be in search stabilization for the society as a whole.

Social networking is the exercise of intensifying the quantity of one's business and/or social contacts by constructing acquaintances from side to side entities, often through social media along with social capital, social business and social investment. Social entrepreneurs are the

people most able to deliver that innovation (Leadbeater, 1997). This is a social structure entailing of persons or collections who are associated to each other, for example through relationships. When these networks are characterized in a database and with a web interface, it is frequently mentioned to as a "social network service". However, in traditional system there is no web interface or social media but social capital, social business and social investment works

simultaneously. A social network perspective on strategic alliances can have both descriptive and normative outcomes that provide valuable insights for theories of strategic management, organizational theory, and sociology. Incorporating social network factors into our account of the

alliance behavior of firms not only provides us with a more accurate representation of the key influences on the strategic actions of firms, but has important implications for managerial practice as well, many of which have yet to be explored (Gulat, 1998). Interest rate on lending in the informal sector is very much high in Bangladesh than the formal sector of the country (Ali, 2016).

Rahman (2013) described that financial inclusion promotes inclusive growth, productive capacity, youth employment and combats poverty by unblocking advancement opportunities for the disadvantaged poor. Lack of access to basic financial services may lead to important extent of social exclusion in education, employment opportunities and social safety net. Bangladesh economy is progressing but to sustain in the long run there is no other alternative to create employment opportunity with growth. However, recent report suggests that Bangladesh scored a rank of 120 out of 157 countries in the SDG Index and Dashboards Report 2017 by the UN Sustainable Development Solutions Network. Its overall performance on the index was 56.2, lower than the regional average score of 63.3. Bhutan, India, Nepal and Sri Lanka all scored higher than Bangladesh on the index, while Pakistan and Afghanistan scored lower (Source: <http://bdnews24.com/economy/2017/07/10/bangladesh-lags-behind-its-peers-in-progress-report-on-sustainable-development-goals>, Viewed on 25 July, 2017). Actually to attain Sustainable development goals in Bangladesh needs some policy reformulation and involve participatory representatives in the all corner including Member of the parliaments, grass root leaders, economists, industrialist, entrepreneurs, academicians, engineers.

FDIC (2014) described that as community leaders, community bank officials can work to gain the support of regional, state, and local government leadership for their bank/CDFI (Community Development Financial institutions) partnerships. Banks can encourage these and other economic development stakeholders to support bank/CDFI partnerships by directing resources to the partnerships' targeted areas. The local government may be helpful in providing financing tools, such as credit enhancements for loan pools to support bank/CDFI partnership activities. In rural areas, regional councils of government, state agencies, and some utility companies can provide support for bank/CDFI partnerships and other community development activities.

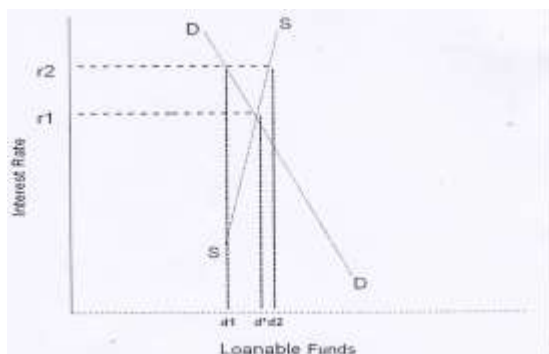
The finance minister of Govt. of Bangladesh AMA Muhith has proposed to increase the volume and coverage of the government's social safety net programmes in the 2017-18 fiscal year to improve the living standards of the poor in the national budget speech. He proposed to raise the number of recipients of old age allowance to 3.5 million from 3.15 million, widow and oppressed women allowance to 1.27 million, disability allowance to 825,000, education stipend for students with disability to 10,000 at both primary and secondary levels, and maternity allowance to 600,000. Tk11.35 crore has been allocated as a special allowance for transgender people, while the allowance for financially insolvent disabled people has been increased to Tk700 per month. In addition, the government will continue the existing social protection programmes, including the Vulnerable Group Development (VGD) programme. The government has already employed emergency schemes to provide 30kg rice every month to each of the 330,000 bona fide destitute and flood-affected families in Haor areas, the finance minister said in his budget speech. In addition, Tk57 crore has been allocated to provide cash assistance to the affected people on a monthly basis. Tk82.07 crore has been allocated for 91,447 beneficiaries under the Employment Generation Programme for the Poorest (EGPP). (Source: Dhaka Tribune, 2nd June, 2017)

Rutherford (accessed on 1st June 2017) observed that in Bangladesh poor people manipulate their savings through a wide range of methods of saving up, saving down, and saving through, and they do it frequently and intensively. They found no less than 33 different money management systems in use. At the most formal end of the spectrum were banks, insurance companies, and NGOs. Less formal methods included savings clubs, moneylenders, buying goods on credit, and obtaining wage advances from employers. At the most informal end of the spectrum were loans between family members.

Still in Bangladesh informal sector is much larger than formal sector where employment opportunity is very high in Bangladesh. In the country, 87 per cent of the labor force is employed in the informal economy according to the labor report on 2010. Those who working in the informal economy include wage laborers, self-employed persons, unpaid family labor, piece-rate workers, and other hired labour (Source: <http://ilo.org/dhaka/Areasofwork/informal-economy/lang--en/index.htm>, viewed on 1st March, 2017).

Informal credit market in the absence of regulatory framework is working without any sort of hindrance in the country which needs to bring under supervisory framework. Siddique (2008) described that in the country credit is provided by informal lenders who may be friends and relatives, by mahjans who are intermediaries with trade and/or production relationships with enterprises, and by traditional money-lenders. The informal market is potentially large and expanding. Below we have seen the informal credit market of the country in Figure:1

Figure:1 Bangladesh Informal credit Market



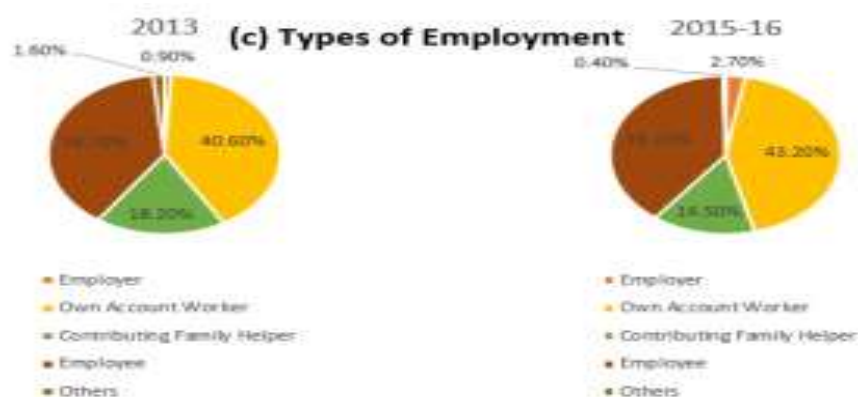
(Source: Siddique, 2008)

Interest rate in the informal market is much higher than formal market and job security as well as obtaining direct taxation from the informal sector is not feasible. As such social networking and community banking may help to convert formal sector.

Rahman (2017) quoting labor force survey 2015-16, majority of employment is generated in the agriculture sector, but employment is gradually shifting to the services sector. Contribution of service

sector employment has been growing, with 36.9% of employment generated in 2015-16, compared to 34.1% in 2013 is shown in following Figure: 2.

Figure:2 Types of Employment in Informal sector



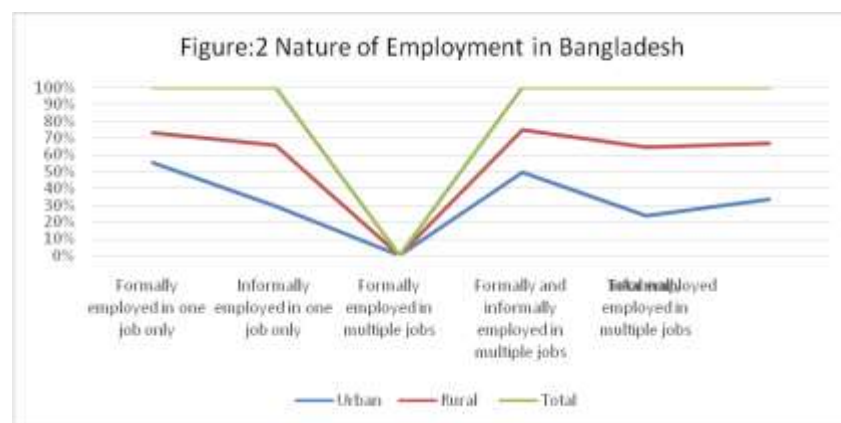
(Source : Rahman, 2017)

In the informal sector 87.8 percent totally is working while 11.4 percent is working in the formal sector. As per the following data formally employed in multiple job is zero percent. Formally and informally employed in multiple jobs is 0.1 percent in totality basis. Informally employed multiple jobs are totality basis is 0.6 percent. On the basis of Table:1 we have shown Figure:2 below.

Table: 1 Number of Employed Persons by Nature of Employment and Urban/Rural

Nature of Employment	% of Employed		
	Urban	Rural	Total
Formally employed in one job only	23.9	7.7	11.4
Informally employed in one job only	75.5	91.5	87.8
Formally employed in multiple jobs	0	0	0
Formally and informally employed in multiple jobs	0.2	0.1	0.1
Informally employed in multiple jobs	0.4	0.7	0.6
Total employed	100	100	100

(Source:<http://www.wiego.org/sites/default/files/publications/files/Asian-Devt-Bank-informal-sector-informal-employment-bangladesh.pdf>, Viewed on 1st June, 2017)



(Source: Drawn by author based on Table:1)

Entry towards the formal monetary system left to a contest for the underprivileged people of the country as existing financial system mostly ignoring them. Current banking system of the country has missing link to provide services for a larger portion of the rural people and participating in decision making process and creating empowerment of the people. As such Bangladesh needs alternative banking framework at a least cost combination and helping the underprivileged people at the grass root level. Moreover, some NGOs are not working due roles as they are charging higher interest rate which is not feasible for borrowers to repay without cutting welfare and social ignorance. Micro savings need to be encouraged to bring the unprivileged people to the banking system. With the introduction of the electronic banking current commercial banking rate is much higher.

We have shown Gini index of Bangladesh from 1986 to 2010 in Figure:3 below:

Figure:3 Gini Inde of Bangladesh



(Source:<https://tradingeconomics.com/bangladesh/gini-index-wb-data.html>, Viewed on 1st June, 2017)

Research question of the study is whether community banking and social networking can transform from micro savings to micro investment towards empowerment of the people?

Literature Review

UNCDF & UN DESA (2006) suggested that in a particular national context, processes to build inclusive financial sectors would include: Taking stock of the state of financial sector development and access; Analyzing constraints; Collaborating with external partners; Mobilizing technical and financial support from development partners; Mobilizing policymakers and stakeholders, and fostering their ownership of a dialogue process; Building a shared vision; Analyzing policy options and policy formulation; Ensuring implementation and ongoing review.

Acemoglu and Ozdaglar (2009) described that social and economic networks refers to a set of people or groups of people with some pattern of contacts or interactions between them. Facebook, friendship networks, business relations between companies, intermarriages between families, labor markets. Recent years witnessed a substantial change in network research. From analysis of single small graphs (10-100 nodes) to statistical properties of large scale networks (million-billion nodes). Motivated by availability of computers and computer networks that allow us to gather and analyze large scale data. Gangopadhyay and Dhar (2014) described that social networking and online privacy seriously turn out to be a serious concern when sensitive information is being shared and with the changing definition of 'social networking' in this internet age. Riggio (2014) described that Social intelligence (SI), is mostly learned. SI develops from experience with people and learning from success and failures in social settings. It is more commonly referred to as "tact," "common sense," or "street smarts". Lake and Huckfeldt (1998)

argued that politically relevant social capital is generated in personal networks, that it is a by-product of the social interactions with a citizen's discussants, and that increasing levels of politically relevant social capital enhance the likelihood that a citizen will be engaged in politics. Further, the production of politically relevant social capital is a function of the political expertise within an individual's network of relations, the frequency of political interaction within the network, and the size or extensiveness of the network. The consequences of social relations within networks are not readily explained away on the basis of either human capital effects or the effects of organizational engagement. Actually social relations are very important. As such social intelligence and social entrepreneurship works with social networking. Social mixing should form an integral part of social intelligence development in teenagers. It argues that parents may have an important role to play, as older generations own circles also remain relatively closed to different cultures, backgrounds and upbringing. (Source:

<http://movingonmagazine.co.uk/has-too-much-social-networking-stunted-your-social-intelligence/> (Viewed on 1st January, 2017). The success of a new venture often depends on an entrepreneur's ability to establish a network of supportive relationships.

Leadbeater (1997) argues that social entrepreneurs need to lead the way with schemes for self-help, particularly by promoting local, national and international twinning arrangements between projects to share ideas, contacts and staff. For liberal feminists, the optimum level of gender arrangement is one that facilitates the individuals to adopt the life style that suits him or her and also accepted or respected (Ritzer, 2001) by the society at large. However, liberal feminists are not in favor of structural change to a great extent. Furthermore, some of liberal feminists think that individual woman cannot make change; therefore, state intervention is prerequisite. Smith (2002) argued that the social networks of senior executives account for 11–22 % of the variance in the degree to which firms engage in alliances, depending on the type of alliance. Results also show that the number of inter firm alliances is positively related to several networking properties (propensity to network, strength of ties, and network prestige. Hunt and Kasynathan (2002) pointed out that only a few number of women receiving credit had the ability to control their loans. Many women received loan by their own name and passed on the full amount of their loans directly to their husbands, sons or sons-in-law. Swain (2006) conducted a study following experimental research design in rural India and assessed the potential impacts of a microfinance institution named Self Help Group (SHG). The concept of women empowerment was defined as the process in which the women challenge the existing norms and culture to effectively improve their well-being.

Barr (2005) argued that community Reinvestment Act (CRA) has enhanced access to credit for low-income, moderate-income, and minority borrowers at relatively low cost, consistent with the theory that CRA is helping to overcome market failures. I argue that the form of CRA's legal directive, more akin to a standard, is preferable to more rules-based approaches, on grounds of both efficiency and legitimacy.

Sen (1999) commented that freedoms are not only the primary ends of development, they are also among its principal means. In addition to acknowledging, foundationally, the evaluative importance of freedom, we also have to understand the remarkable empirical connection that links freedoms of different kinds with one another. Political freedoms help to promote economic security. Social opportunities facilitate economic participation. Economic facilities can help to generate personal abundance as well as public resources for social facilities. Freedoms of different kinds can strengthen one another.

Karnani (2007) summarized following problems of microcredit from various studies: Microloans are more beneficial to borrowers living above the poverty line than to borrowers living below the poverty line microcredit; seems to do more harm than good to the poorest; microcred it is the businesses it is intended to fund. Williams & Durrance (2008) found that across a number of instances of community technology, technology use is directly influenced of social networks, and social networks are directly influenced by technology use. Perron (2011) examined case by case the various approaches from companies, public sector entities, philanthropy, etc., and also institutional and private investors in their availability as well as their specific legal capacities and limitations to deliver the funding required supporting the growth. Such initiatives are vital in the fight against poverty and income inequalities. Batool (2013) commented that

implementation of emotions intelligently in any organization by a leader to be effective and efficient plays a vital role to leader effectively. Emotional intelligence is one of the useful tools which helps a leader to judge people more clearly and closely and build a connection between people.

Bhattacharya et al. (2014) described that social networking has affected the process of marketing and how present day marketing activities is highly dependent on this phenomenal process of social networking. Also focus has been laid on how social networking affects the process of market signaling and hence reduces the possibility of asymmetric information within a market and lowers the possibility of market failure for a particular product. Yang et al. (2014) observed that social intelligence and technology explore the roles of information, the Internet, and mobile technology in improving our understanding about human behaviors and social interaction in human society at the individual, interpersonal, and community levels—building a sustainable social environment, developing social intelligence, and having practical applications with major impacts in solving societal problems such as health, security, energy, and the environment. Ali (2016) suggested that establishment of integration fund to encourage creative entrepreneurship so that poor downtrodden people can come out with innovative business process through financial inclusion process, to remove poverty.

Rattanawiboonsom and Ali (2016) more intensive and pragmatic policy should be developed for the development of the social enterprises particularly for self-motivated entrepreneurs. Experiences from the research work, they observed that the rural poor are mobilized and working together in self-controlled community based organizations which ensures social welfare and Pareto optimality. Not only small and medium enterprises but also micro enterprises should get special priority and inclusion through financial organizations are being required for developing proper steps to poverty alleviation, public-private and foreign strategic alliances are required in the small and medium enterprise sector with special emphasis on micro enterprises of the country.

This alternative framework was an attempt to develop a theory on how social networking facilitates to empower people which were developed by Muhammad Mahboob Ali (2016) to test any country. The study will extensively tries to display an integral part regarding different dimensions of empowerment before involving in social networking and after involving in social capital, social along with business and social investment along with social intelligence, social enterprises along with micro savings transformed to micro investment. Social intelligence is also one of the key components to readdress to come out from poverty. In Current century a greater role is being played by social media for which interpersonal connectivity is vital. Environmental scanning for doing the business is vital especially to ease the business process and local economies. Empowerment of people rises from decision making process when people do have purchasing power capability. Community banking framework should be developed under a regulatory framework which will work starting in joint effort of Pali Sanchya bank, Karmasonsthan bank, Bangladesh NGO Foundation and postal savings deposit and creating investment environment at nano and micro level.

Community banking idea is larger than agent banking or mobile banking. It will give the scope of financial inclusion and current 80% people who are working informal sector will gradually transformed to the formal sector. This will also help to raise direct taxation as well as employees' job satisfaction and job security.

Technological diffusion, innovation, creativity and suitable regulations by the local level planning with local level law of the province are the key to deepening financial inclusion analysis where nano saving must be transformed to nano investment. Community banking will help to expedite the process of social networking and ultimately empowerment of people.

The Rabobank view (2005) described that Rabobank was founded in the Netherlands more than a hundred years ago as a co-operative bank providing access to financial services for small farmers and offering a secure option for savings to the local community. The driving force behind the Rabobank Group has always been to create opportunities for individuals and organizations to participate fully and independently in economic activities. Rabobank has developed an integrated concept of sustainable rural

financing in developing countries. In addition, Rabobank participates through its different departments in international platforms and partnerships concerning the challenge of economic development in developing countries.

Dupas and Robinson (2006-07) depicted that the Bumala branch of the Financial Services Association (FSA) is a community-owned and operated “village bank” that receives support (in the form of initial physical assets and ongoing audit and training services) from the Kenya Rural Enterprise Development Agency (K-REP). They provide following results and following policy lessons: Impact on Bank Account Take-up: Eighty seven percent of study participants offered a free account agreed to open one, but 40 percent never made a deposit after opening the account. Of the 47 percent who did utilize their account, women (all market vendors) made significantly larger deposits, with a mean total deposit of 2,840Ksh (US\$40.57) for women, compared to 1,290Ksh (US\$18.42) for men (most of whom were bicycle-taxi drivers). Impact on Savings: Access to a bank account significantly increased savings among market women, but not among male bicycle-taxi drivers. Market women in the treatment group deposited 9.36Ksh per day in their account on average, while bank savings in the comparison group were zero since almost none of them opened an account on their own. Informal savings mechanisms (such as investments in livestock or participation in savings clubs) did not decrease for market women in the treatment group, suggesting a net increase in savings. Impact on Business Investment: Access to a bank account increased how much market women were able to invest in their business, on average. Impact on Expenditures: Access to a bank account significantly increased expenditure levels for market women.

Mallick (2009) found that money lender interest rates go up with the percentage of households borrowing from Micro Financial Institutes (MFIs). Productive investment of loan lowers moneylender interest rates. But MFI program expansion increases moneylender interest rates in the villages in which more loans are invested in productive economic activities. As loans are utilized in productive purposes, the likelihood of repayment increases so that moneylenders are able to charge lower interest rates.

Morduch (2010) observed that in banks profit from loans and want to hold on to customers’ savings; the Rebuilder product reduces loan-taking and encourages withdrawals. Still, a bank with a strong social mission – or a belief that the product will encourage saving on net by making deposit accounts more useful – may be enticed to give customers better choices.

Dupas et al.(2012) depicted that while simply expanding access to banking services will benefit a minority, broader success may be unobtainable unless the quality of services is simultaneously improved. There are also challenges on the demand side, however. More works need to be done so that savings and credit products are best suited for the majority of rural households.

Ngalemwa (2013) described that village Community Banks (VICOBA) have benefited people in reducing their income poverty by playing an important role in enabling the poor to save and access credits. VICOBA lending model is a unique and an effective tool for development of rural communities.

Ahmad (2016) depicted that a necessary condition for successful poverty alleviation and sustained growth is poverty increase.

Halim et al. (2016) found that the series of income inequality and savings demonstrate a nonlinear relation in Bangladesh. Savings behave differently at different level of income inequality. Moreover, this nonlinear relationship is due to changes in economic policy. From our data set we can see that economic liberalization has improved the inequality situation of our country and caused savings GDP ratio to increase.

Valkenburg and Piotrowski (2017) argued that the negative spin that youth and media research often receives in the news can give most people the idea that media primarily have negative effects on children and adolescents.

Pulido and Italia (accessed on 2017) described that in the light of Sen’s capability approach - where poverty is understood as a capability deprivation to live a good life – the best design for a microfinance program is not to provide microloans, but to provide micro savings and micro insurance, along with other

non-financial service programs. Practices of community managed financial capital (strictly interconnected with social capital) implemented in developing countries stimulate a reflection on the possibility of reaching a social and economic balance in European countries, capable of recreating or extending the network of resources of those people whom the current economic system is forcing towards social exclusion and financial illiteracy.

The Sustainable Development Goals (SDGs) possesses 17 Goals build on the successes of the Millennium Development Goals, while including new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities. The goals are interconnected – often the key to success on one will involve tackling issues more commonly associated with another. The SDGs work in the spirit of partnership and pragmatism to make the right choices now to improve life, in a sustainable way, for future generations. They provide clear guidelines and targets for all countries to adopt in accordance with their own priorities and the environmental challenges of the world at large. The SDGs are an inclusive agenda. They tackle the root causes of poverty and unite us together to make a positive change for both people and planet. “Supporting the 2030 Agenda is a top priority for UNDP,” said UNDP Administrator Helen Clark. “The SDGs provide us with a common plan and agenda to tackle some of the pressing challenges facing our world such as poverty, climate change and conflict. UNDP has the experience and expertise to drive progress and help support countries on the path to sustainable development.”(Source: <http://www.undp.org/content/undp/en/home/sustainable-development-goals.html>, 1st March, 2017)

Ali (2017) suggested that Bangladesh NGO Foundation (BNF) may set up a business incubator as well can organize training, counseling and financial support to prospective nano and small entrepreneurs in performing with the sustainability in the long run. This will in turn play vital role for the socio-economic development of the country for which community banking is necessary. Micro savings should be used as Micro investment through arranging community banking in the formal sector under structured rules and regulations.

Ali et al.(2017) commented that policy makers should come forward to think how community banking with the applicability of the social networking can be used in local level planning system of the country. They also argued that people must be cautious about misuse of social media as reported by different dailies.

Justification of the Study:

From the literature review it is pertinent that though there are various studies in the area of community banks or social networking but how these two can act as interlinked manner for empowerment of people doesn't discussed. The study arises to develop a theoretical framework how social networking which is working for long historical background can help community based development purpose so that poor income strata of the people can have better livelihood. If only micro savings is accumulated but allocation and distribution cannot occur then it will be a burden for those who keep the money at their hand due to time value of money. Moreover, sometimes in the country multilevel marketing (MLM) companies are preying on regulatory and human weaknesses. They are managing funds and doing banking business illegally, but openly. Asset managers, merchant bankers, brokers or portfolio managers who manage others' wealth are subject to government license to operate (Daily Star, 2011). As such if community banking can be used under a regulatory basis then it may have a larger impact on transformation process of micro savings to micro investment and risk of theft-burglary will reduce.

Objectives of the Study:

The study has been undertaken with following objectives:

- i) To assess whether any need for a new theory for doing economic development of poorer segment;

- ii) To examine how social networking and community banking can help for attaining empowerment of people;
- iii) To provide some implications of the study for arranging distributional economic benefits and transformation from informal sector to formal sector.

Methodology of the study

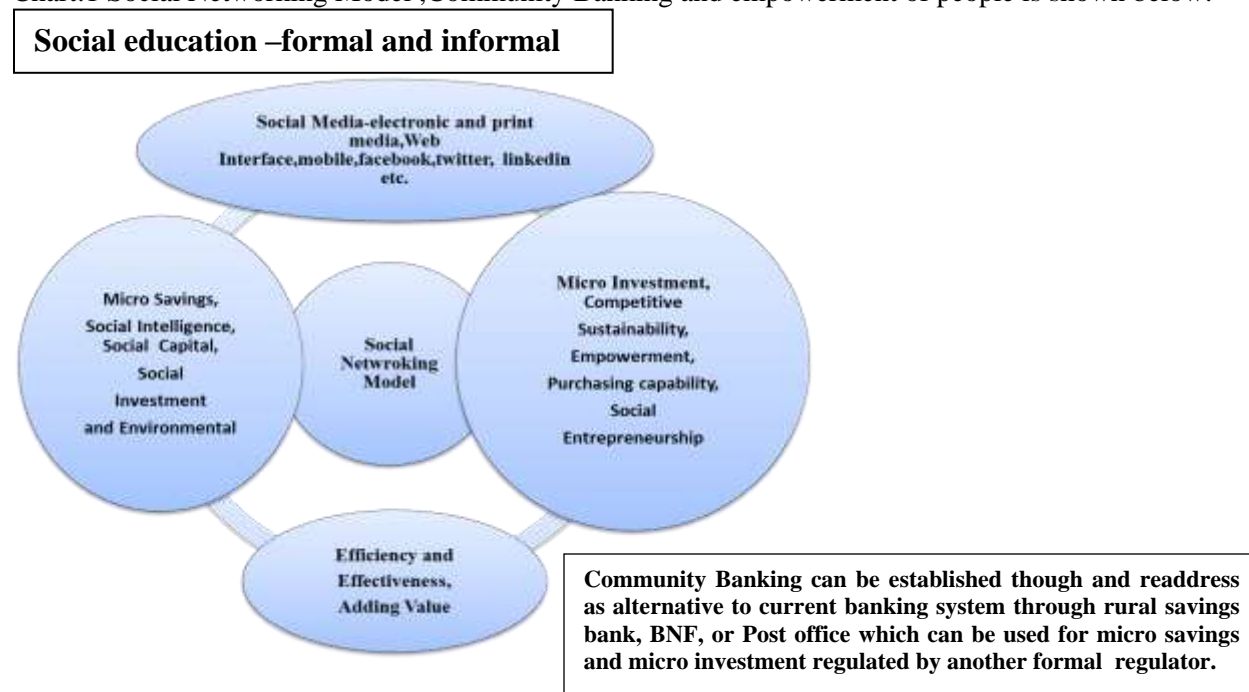
Based on aforesaid literature review and also objectives of the study, we observed that there is no clear study on impact of social networking and community banking for transforming micro savings to micro investment. As such the study intends to develop the theoretical model. The study used secondary sources. Time period of the study is from 1st January 2016 to 25th June, 2017. The study tried to consider objectives of the study through conceptually for formulating the model. Further, through reviewing different literatures this study tried to develop some theoretical framework which helped to develop a proposed model. This is just a qualitative analysis not quantitative analysis.

In future a separate study may be done considering social networking as a dependent variable while another study may be done considering community banking. Independent variables may be social capital, social media, social business, social education, social entrepreneurship, purchasing capability, adding value, education level, and rise of income level among the people. Further another model can be done considering micro savings while independent variable will be social capital, social networking and community banking, competitive sustainability, efficiency, effectiveness, and micro investment. Through framing questionnaire, the future study may collect data and can do binary logistic regression equation, chi square test, and factor analysis. Otherwise structural equation may be done.

However, this study only develops a proposed model as it is a conceptual study.

Proposed Model

Chart:1 Social Networking Model, Community Banking and empowerment of people is shown below:



(Source: Concept of a model built by Muhammad Mahboob Ali, 2016)

Aforesaid proposed model indicates how micro savings can be transformed into micro investments.

Chart: 1 Social Networking Model ,Community Banking and empowerment of people through transformation of Micro savings to micro investment .

In Chart:1 we have seen a model as concept developed by Ali(2016) based on aforesaid discussion in this section as Social Networking Model and empowerment of people through transformation of Micro savings to micro investment with the help of community banking .Social capital and social business will work as a push factor. As an outbound logistic, social entrepreneurship can work along with creating purchasing power as well as sustainability when competitive advantage can be added and micro investment works in a feasible method. Social media along with Internet and web interface should play vital role. However social education in the form of formal or non-formal is very important to act as a complementary factor. Without social intelligence investment cannot be made positive i.e. return on investment may not be positive. Efficiency and effectiveness will add value in the domestic as well as global value chain if both primary and supportive activities work together.

Note: Aforesaid model may be tested by other researchers of various countries and inform to the author so that it can be scrutinized and further improvement of the model can be done, if necessary.

Analysis of the Findings and Discussions

The result from the study tried to describe those people's empowerment which is closely related with Social Networking, Social intelligence and social entrepreneurship along with social capital and social investment all work as a holistic approach. Community bank will help to attain financial inclusion which in turns endorses wide-ranging development, creative ideas and ventures, increasing occupational opportunities and contests lacking by releasing progressive changes for the underprivileged and deprived people of the country with the help of digitalization process. This will also reduce the fraudulent activities of the cooperative banks and fraud syndicates due to lack of proper supervision and monitoring. As such Govt. should take initiatives to set up community banking for the unbanked people at a cheaper rate but effective manner. Acemoglu and Ozdaglar (2009) comment on social and economic networks for improving the livelihood of the people as well as creating employment opportunity is feasible through using social networking and community banking. Social welfare is needed for the betterment of the poorer group of the country. Multilevel marketing (MLM) companies are doing different sorts of fraud by taking greediness and oppression among poorer section of the country. Morduch (2010) observation on banks profit is still prevailing in the traditional or conventional banking process. Alternatively we are suggesting community banking for the services of the poor income strata.

Ngalemwa(2013) findings on village Community Banks (VICOBA) which has benefited people in reducing their income poverty by playing an important role in enabling the poor to save and access credits can also be possible in Bangladesh if we try through community banking under separate regulator.

However, there has been report that by a section of the people that misuse occurs in case of social media towards less than 18 years and female group. Further some reports indicated that social media misuse by terrorists. Constant monitoring on social media is required to be arranged by the competent authority and cyber police of the respective country. Social integration should form an essential part of community aptitude expansion in adolescents. Guardians should have a significant role to play as adult age group hold loop so that staying comparatively closed to dissimilar societies, surroundings and rearing up in a meaningful manner when global world is opened.

Pulido and Italia (accessed on 2017) suggested that community managed financial capital (strictly interconnected with social capital) implemented in developing countries stimulate a reflection on the possibility of reaching a social and economic balance which is much needed in Bangladesh especially in rural areas. As such community banking with the help of social networking can act more enthusiastic way.

Social relationship is very much important. People's environments is not virtuous before accomplishment tangled in social networking and after attainment convoluted in the income of the family had been

increasing. After involving in social networking the women started to participate in different income generating activities. Then, they also started to control over income, expenditure, credit and savings. They could then participate in household decision making more than before. Rural savings will be turned to rural investment lead to social entrepreneurship for which we need implementation and help from local level planning. It will be found that in dimensions the people started to become more empowered than before involving in social networking. This may be supported by Technology, innovation and suitable regulations -the key to deepening financial inclusion analysis where nano saving must be transformed to nano investment. Leadbeater (1997) proposed social entrepreneurship can be systematically developed through community banking which can act for social welfare. Community banking will reduce the informal lending at the rural area. Mallick's (2009) observation on Micro Financial Institutes (MFIs) needs to reduce interest rate and his observation for involving in the productive production process can reduce the interest rate. Sen's (1999) capability approach should be considered by the policy makers.

Rabobankat Netherlands works as a co-operative bank providing access to financial services for small farmers and offering a secure option for savings to the local community which may create an example for our country. Ngalemwa (2013) suggestion can be followed as village Community Banks (VICOBA) have benefited people in reducing their income poverty by playing an important role in enabling the poor to save and access credits. Employment opportunities with economic growth must be ensured at the formal sector for which informal sector should be gradually replaced by the formal sector. Strong political will associated with proper planning and implementation process is important in this aspect.

Concluding Remarks and Implications:

Social networking and community banking may be applied for transforming micro savings to micro investment through creating social capital. This will also help to transfer to formal sector from informal sector. Employment opportunity accompanied with economic growth should be raised in the formal sector. This will help to attain equitable growth, social justice and removing income inequality. If we cannot take the benefits of demographic dividend then it may transform to demographic bomb. Actually financial inclusion is feasible thorough arranging community banking under regulatory measures otherwise it may create a disorder. As present government of the country is pro people so they need to take initiative to arrange community banking with a separate and strong regulator and reducing percentage of informal sector to formal sector. Emotional intelligence should be used to judge people and to empower themselves. This will also help to attain sustainable development goals.

Social welfare and grand utility will be tangent when equitable distribution can be attained. As such micro savings must be transformed to micro investment both rural and slum dwellers of the urban area. However, service charges and cost of transaction of the community banking must be kept very low so that the compensation criteria provided by the Hicks, Kaldor and Scitovsky. Noose et al. (2011) comment should be counted as it has a positive impact on financial inclusion. Community banking in Bangladesh can help to attain the goal as supply chain management of the banking sector for the unbanked people can be attained and add value in the society. Macroeconomic stabilization depends on successful implementation of investment and positive return on investment. Situation of the Gini coefficient ought to improve so that social justice and equitable distribution can be arranged and removing income inequality can be attained in the country. Empowerment of people may arrange the aforesaid situation to attain. Virtually to have dynamic economic situation along with people's welfare may be attained through converting collecting savings and channeling it in the investment procedure for which shall deposit can also help and as such a spate regulator is needed before establishing community banking. Multilevel marketing (MLM) companies should not be permitted to work as they are working without any legal status and doing fraud. Systematic procedure and legal status for community banking should be developed which will replace current agent banking system also. To implement sustainable development goal there is no other alternative but to creative alternative banking system in the rural areas so that poor people can not only save but also interested to invest in the local level planning process for which employment can be generated. As such productive investment through social entrepreneurship in the rural

areas and changing the structure of the rural economic dynamics is very much important to add value in the domestic and global value chain with efficiency and effectiveness. Social education is also work as an important component to come out from the vicious circle of poverty. This theory was developed to remove poverty, creating equitable justice, eliminating income inequality through arranging linkage between social networking and community banking for empowerment of people.

Limitations of the Study:

The study is developed theoretically. With some co-authors in another paper we tried to test only two villages of the country and found it will have immense benefit for economic development. But to formulate the theory it needs more empirical tests not only Bangladesh but outside the country. If it is found workable than implementation of the theory into real life scenario is to be needed for which policy makers may take proper steps to implement.

Future Research Direction:

The theory which was developed by Ali (2016) through presenting in a workshop on” social networking, community banking and empowerment of people: alternative framework for welfare of human being” may be empirically tested in different countries of the world and also at Bangladesh by various researchers to give a structural formation considering cost-benefit analysis, shadow pricing, chi square test, factor analysis, validation and reliability of the theory in the real life scenario both global and domestic perspectives with a request to inform the result to the author. Moreover, in this model if researchers can check the relationship among the variables of this model both exogenous and endogenous factor as well as pull factors and push factors by using regression technique or SEM or factor analysis , then this theory can add more contribution towards research. To test this theory in real life in a greater extent huge monetary and time factor is also being needed. World Bank or any other International financial organization may test the model in a greater extent.

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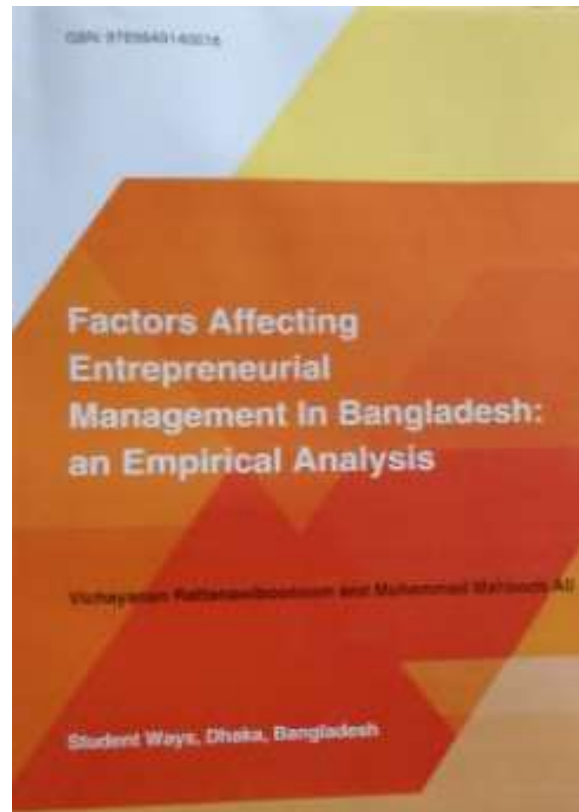
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Sample of Book Review:

**Factors Affecting Entrepreneurial Management in Bangladesh:
An Empirical Analysis**

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ISBN: 9789849140016, Price: BDT 500,USD 50

Publisher: Student Ways, Dhaka, Bangladesh, Total pages:91, Publication date:21 Septemebr,2016.

A well conceptualized book based on the empirical study carried out by the authors Dr.Vichayanon Rattanawiboonsom of Thailand and Professor Muhammad Mahaboob Ali, in Bangladesh. The book visualises the evolution of entrepreneurial undertakings in Bangladesh and numerous strategies implications impacting entrepreneurship besides fundamental concepts and theories related to entrepreneurship. It also captures the motivation, challenges and way forward pertaining to women entrepreneurship in Bangladesh.

The book came out with strong implications with respect to creating awareness and fostering entrepreneurial culture in Bangladesh. Some of the areas draw the attentions of the readers are starting up micro-enterprise, social networking, conducive policies at local and national level, social mobilization, legal assistance, technology support etc. The book was divided into Five Chapters: Introduction, Historical Progress of Entrepreneurial activities in Bangladesh, Methodology, Findings and Result Discussion, Conclusions and Implications.

Authors considered four factors: women, economic factor, infrastructure and institutionalization for economic development through entrepreneurial management. The book took in depth study how entrepreneurial management can work in Bangladesh. This research work introduces a special issue on the theme of entrepreneurship and infrastructural institutional change and its development in view of past present and future interventions. This study also contributes to a better understanding of business creation by women and the factors which are instrumental in their success, together with a better understanding of the potential obstacles and barriers. Entrepreneurs are the gale of creative destruction. They are the engines of the local economy and contribute to a country's wealth to a great extent. Accordingly it is of utmost importance, to create educate and motivate young adults to become entrepreneurs and start their own enterprises. Several studies and aid programs claim the contribution to welfare resulting from female entrepreneurship to be higher than that resulting from the activity of men. Unfortunately, however, the number of women entrepreneurs is significantly lower than that of men. Although quite a bit of attention has been paid to the existence of gender differences in entrepreneurial behaviour, the causes of such differences are significantly less understood. All markets were created by, often operated by, and sometimes destroyed by entrepreneurs.

In Chapter:1 authors commented that higher growth of the Small and Medium Enterprises (SMEs) can help cut poverty to a satisfactory level by eliminating various prejudices against labor-intensive and creating jobs for the skilled manpower in the SME sector(Page:23).Authors observation in the perspective of Bangladesh seems correct.

Chapter: Two dealt with Historical Progress of Entrepreneurial activities in Bangladesh. Authors found that only 12.7 percent women are self-employed in manufacturing, which has higher potential to generate employment for other women. It is to be noted that 20 per cent of self-employed women are involved in wholesale and retail trade. If we consider entrepreneurship to be running an enterprise having capacity to generate employment for others, then the women who are involved in manufacturing and trading meet the requirement. Thus 32.7 per cent of total self-employed women or 8.3 per cent of total employed women are entrepreneurs (page:42).

Chapter: Three of the book contained Methodology. The study used hypothesis testing considering four factors of entrepreneurial facilities such as male and female entrepreneurs, infrastructural and institutional requirements, economic factor to assess their role to enhance growth of entrepreneurial management of the country. The response scales dependent on the questionnaire items. After gathering data, then tabulate the data and prepare Chi- square test as well as factor analysis(Page:54).

Findings and result discussion was given at Chapter :Four. Researchers have identified variables that constrain the entrepreneurship development and success in SMEs on the basis of opinions of entrepreneurs (both male and female) and review of existing literatures . The researchers have collected opinions from 105 sample professionals on five point Likert scale in order to identify the factors that constrain the entrepreneurship development in SMEs. The study has identified the variables undertaken for the study as most significant to less significant based on mean score, opinions taken from both male and female entrepreneur in five point Likert scales. Thirty two constraints have been found as the constraints of the entrepreneurship development and success by the authors. These are quite justifiable.

In the Chapter: Five of the book Conclusions and Implications was given. , social enterprise activities may have potentials to resolve the existing poverty alleviation problems. Authrs observed that the nature

of SE activities is less favourable for men particularly women entrepreneur vulnerable in position in the society. This may be due to high degree of discrimination, insufficient resource utilization and less capital investment and poor status of SME development and in sufficient capital and logistic support of both government and private sectors Page:72).

Besides five chapters, references, and in the appendix questionnaire were given.

Authors suggested that more intensive and pragmatic policy should be developed for the development of the social enterprises particularly for self-motivated entrepreneurs. Experiences from the research work, they observed that the rural poor are mobilized and working together in self-controlled community based organizations which ensures social welfare and Pareto optimality. Not only small and medium enterprises but also micro enterprises should get special priority and inclusion through financial organizations are being required for developing proper steps to poverty alleviation, public-private and foreign strategic alliances are required in the small and medium enterprise sector with special emphasis on micro enterprises of the country.

For this book Prof. Mahboob received Post-doctoral fellowship from Naresuan University, Thailand under Dr. Vichayanon Rattanawiboonsom, Asst. Prof. Business, Economics and Communications.

The book is a good source to understand entrepreneurship and its impact on the national growth. It gives a holistic picture of entrepreneurship in Bangladesh and various factors affecting the growth of entrepreneurial activities. I recommend the book for the booklovers, researchers, new beginning entrepreneurs, journalists, and also policy makers of Bangladesh to attraction implications while creating strategy or captivating start-up actions in overall and specifically in Bangladesh. The book may also serve as a reference book.

Sample of Referee's Report on Manuscript:



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Overall recommendation:

- ☐ Publishable as it is.
- ☐ Publishable with minor revisions specified in "Comments" section.
- ☐ Reject, but encourage to re-write and re-submit with major revisions specified in "Comments" section.
- ☐ Reject without further consideration.
- ☐ Reject, but advise submission to some other journal, such as "Problems and Perspectives in Management", "Investment Management and Financial Innovations", "Innovative Marketing", "Insurance Markets and Companies: Analyses and Actuarial Computations", "Environmental Economics", "Public and Municipal Finance".

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	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	Not applicable
1. Topic is significant to the article's field of inquiry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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7. Manuscript is well organized and clearly written	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Manuscript represents a contribution to knowledge about Topic of the article	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments point by point (*Please use another piece of paper if needed to write all your comments*)

Manuscript's originality and contribution to the literature:

Literature review and theoretical background:

Data and methodology:

Presentation of results (structure, style/language):

Conclusions:

Reference list:

Comments (if any) for the Editor's use only:

Date of receipt:

Revision date:

Sample of Questions for Exam

Question 01

Program: MBA		Semester: Spring 2017	
Examination: Midterm		Section: A	
Course: Research Methodology		Code: MBA 6501	
Instructor: Muhammad Mahboob Ali			
Name:		ID No:	
Time: 15 minutes		Invigilator: Total Marks: 10	

Part-I: Objective

Section-01: True or False _____ (3 pts)

Place T for true or F for false, whichever is appropriate in the space provided at the left of each statement.

- ___1. Research is a complete process to answer questions through collecting, analyzing and interpreting information to answer questions.
- ___2. Inductive reasoning refers to general to particular.
- ___3. Example of Harvard referencing style of two authored book is as follows: Helleiner, E and Pagliari, S 2008 'Towards the G20 Summit: from financial crisis to international regulatory reform', *Centre for International Governance Innovation Policy Briefs*, no. 9, pp.1-11
- ___4. Following is the example of Two tail test: $H_A: \mu \neq 7.5$
- ___5. APA referencing and Chicago referencing is same.

Section-02: Completion _____ (3 pts)

Fill in the blanks with the most appropriate words or phrases.

- 1. A _____ is a survey of relevant literature on a particular research topic or question to know the research gap.
- 2. A Type I error is _____.
- 3. Write a name of plagiarism testing software: _____
- 4. Chi Square test is used when data is _____.
- 5. Give an example of research question: _____

Section-03: Multiple Choice _____ (4 pts)

For each item below, select the best answer from the choices that follow. Write the letter of that choice in the space provided at the left of each item.

- ___1. All of the following are Steps in Research, except:
A) Observation, B) Preliminary information gathering, C) Theory Formulation,
D) Hypothesizing, E) Valid and verifiable, F) Further Scientific, G) Data Collection & Data Analysis, H) Interpretation
- ___2. Some ethical principles, except:
A) Objectivity ,
B) Confidentiality
C) Openness
D) Plagiarism

_____3.All of the following are considered plagiarism, except:

- A) Turning in someone else's work as your own
- B) Copying words or ideas from someone else without giving credit
- C) Failing to put a quotation in quotation marks
- D) Giving incorrect information about the source of a quotation
- E) Changing words but copying the sentence structure of a source with giving credit

_____4.Research Proposal doesn't match any one of the following:

- A)It is a informal plan of a study.
- B)It spells out in detail what the researcher intends to do.
- C)It permits others to learn about the intended research and to offer suggestions for improving the study.
- D)It also helps the researcher clarify what needs to be done and to avoid unintentional problems

_____5) In general, the source material is appropriate if it has, except:

- A) Relevance, B) Authority, C) Ambiguity, D) Recent research

Part II

Instructions:

Answer any Four Questions of the following. Point value of each question number is 5

Please ensure that this question paper is returned with your answer script.

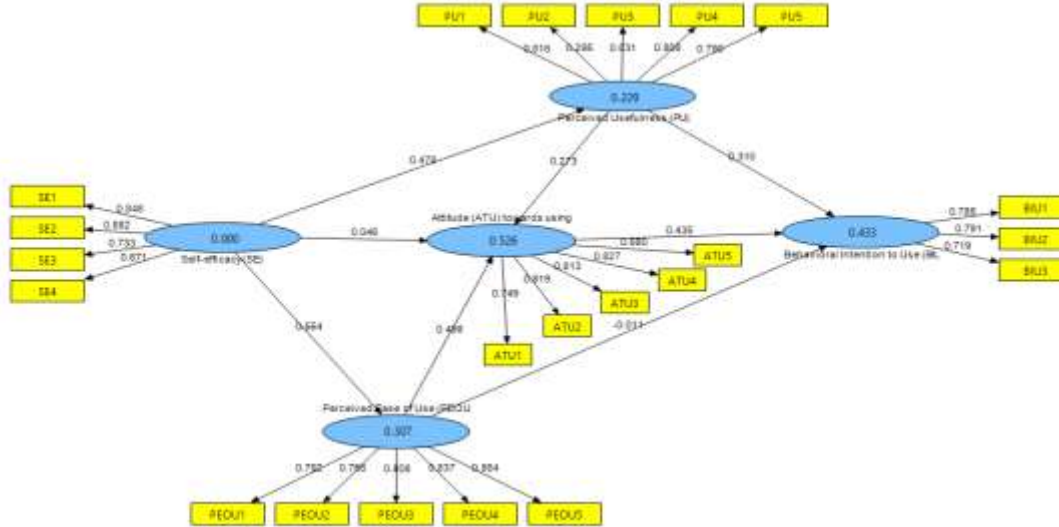
- Q – 01. Distinguish between: 5
- i) Qualitative and Quantitative Research;
 - ii) Endogenous variable and Exogenous variable;
 - iii) Type I and Type II error.
- Q – 02. i)What are the problems encountered by doing research in Bangladesh? 2.5
- ii) Discuss Anti-Plagiarism Strategies for Research Papers. 2.5
- Q – 03. Suppose you have been entrusted with doing a research topic:” Price rises but no product remain unsold in the market”. Briefly describe steps in preparing research proposal. 5
- Q – 04. i) What are the basic features of Literature review? 2.5
- ii) Discuss the process of building theory. 2.5
- Q – 05. i) Why research question is so important? 1
- ii) Discuss different types of research. 3
- iii) What is the reliability test? 1

Part-I: Objective

Section-01: True or False _____ (3 pts)

Place T for true or F for false, whichever is appropriate in the space provided at the left of each statement.

- ___1. Following formula is used for known population size: $n = (Z^2 * \sigma^2) / ME^2$.
- ___2. To accurately portray the characteristics of a particular individual, group, or a situation is known as ethical consideration.
- ___3. To find out what has been written about the selected research topic is a part of research question.
- ___4. Following indicates path Diagram:



- ___5. Longitudinal Study refers to a research method in which data is gathered for the same subjects repeatedly over a period of time.
- ___6. Quasi-experimental Research is known as study for examine the relationship between variables of interest as they exist in a defined population at a single point in time or over a short period of time

Section-02: Completion _____ (3 pts)

Fill in the blanks with the most appropriate words or phrases.

3. _____ is the name, usually applied to a set of questions, which are asked and filled in by the investigator in a face to face situation with another person.
4. _____ is a qualitative data analysis (QDA) computer software package produced by QSR International.
3. An investigation which has lack of randomization and control group is known as _____ research.
4. _____ indicates the degree of an instrument and measures what it is supposed to measure.
5. Quantity based on sample data and null hypothesis might be used to test between null and alternative hypotheses is known as _____.
6. _____ scale which has an arbitrary zero, but it is not possible to determine an absolute zero or the unique origin.

Section-03: Multiple Choice (4 pts)

For each item below, select the best answer from the choices that follow. Write the letter of that choice in the space provided at the left of each item.

____ 1. All of the following are Procedure for Hypothesis Testing, except:

- i) State the null hypothesis
- ii) Choose the statistical test
- iii) Select the desired level of significance
- iv) Compute the calculated same value
- v) Obtain the critical test value
- vi) Interpret the test

____ 2. All of the following are Measurement scales, except:

- (a) Nominal scale ; (b) Ordinal scale; (c) Continuation scale; (d) Ratio scale

____ 3. Types of Tests of Good Measurement is as follows, except:

- (a) Test of Validity; (b)Test of Honesty; (c) Test of Reliability; (d) Test of Practicality

____ 4. A good hypothesis is as follows, except:

- (a) should be reasonable
- (b) should be consistent with known facts / theories or some theoretical orientation.
- (c) should be unestablished tested and found to doubt true or false.
- (d) should have conceptual clarity.

____ 5. A good theory has to include the following criteria, except

- (a) generality, (b)integration, (c)thickness, (d)ambiguity.

____ 6. Literature reviews must contain basic elements, except:

- (a) an introduction or background information section;
- (b) the body of the review containing the discussion of sources;
- (c) not limited to evaluate the literature
- (d) A conclusion and/or recommendations section to end the paper.

____ 7. The main purposes of schedule are as follows, except:

- (a) To provide objective tool for objectivity
- (b) To act as a memory tickler
- (c) To facilitate the work of tabulation and analysis
- (d) To have Long questions.

____ 8. Main activities involved with the process of theory building, except:

- a) Conceiving a theory
- b) Disarrangement of the theory
- c) Justifying or evaluating the theory

Question 02

Program: MBA	
Examination: Final Exam	Semester: Spring 2017
Course: Research methodology	Code: Section:
Instructor: Muhammad Mahboob Ali	
Time:	Total Marks: 30

Part-II: Comprehensive

Instructions:

Answer any Five Questions of the following. Point value of each question number is 6
Please ensure that this question paper is returned with your answer script.

- Q – 01. Write a research report on “Haor area and environmental *hazard* in Bangladesh”.6
- Q – 02. Write following using Chicago reference styling: 6
- 1) Single Authored Book;2)Edited Book;3)Journal Article;4)Newspaper report;
5) Web site use;5)Double writers book.
- Q-03.a) Discuss methodology design of the study. 4
- b) Distinguish between MANOVA and MANCOVA 2
- Q – 03. a)Prepare at least 6 structured questionnaire in likert scale on “Green Business in Bangladesh”.
b) What does demography in a questionnaire comprised of? 2
- Q – 04. Why reliability analysis, Chi Square test ,factor analysis and validity were discussed? 6
- Q – 05. a)What are the basic slides for preparing presentation purpose? 3
- b) Distinguish among short report, long report, thesis, Project report. 3
- Q-06. Suppose you have incomplete explanation of table. Based on the following table, Please answer detail explanation: 6

Table 3

Results of the women garment workers opinion Survey

Description	Category	Total Number	Percentage
Hours of work per day	(a) 8 hours	11	4.96
	(b) > 8 hours	29	13.06
	(c) > 10 hours	75	33.78
	(d) 11 > 12 hours	107	48.20
Weekly holiday	(a) Yes	8	3.60
	(b) No	214	96.40
Job training	(a) Before joining service	33	14.86
	(b) On job training	189	85.14
Work Evaluation	(a) Hard work	21	9.46
	(b) Quantity of work	39	17.57
	(c) Quality of work	23	10.36
	(d) Both quantity & quality of work	120	54.05
	(e) Good relations with owners and senior staff	19	8.56
Wage increment	(a) Showing output	11	4.95
	(b) Doing more work	103	46.40
	(c) Expertise in work	83	37.39
	(d) Good relations with owners and senior staff	25	11.26
Other benefits	(a) Yes	204	91.89
	(b) No	18	8.11
Motivating factors	(a) For doing work	11	4.95
	(b) Higher remuneration	28	12.61
	(c) Physical security	17	7.66
	(d) Job security	56	25.23
	(e) Livelihood security	101	45.50
	(f) Appreciation	9	4.05
Years of service	(a) Up to 1 year	67	30.18
	(b) 1-5 years	106	47.75
	(c) > 5 years	49	22.07
Overall working environment	(a) satisfactory	73	32.88
	(b) unsatisfactory	149	67.12
Security, safety for uncertainty and emergency	(a) Yes	12	5.41
	(b) No	210	94.59
Alternative job/source of Income	(a) Yes	19	8.56
	(b) No	203	91.44
Self — efficiency	(a) Yes	132	59.46
	(b) No	90	40.54
Health Training program	(a) Yes	137	61.71
	(b) No	85	38.29
Awareness of women [29] labour act 2013	(a) Aware	24	10.81
	(b) Unaware	198	89.19
Fire safety system at the garment factory	(a) Yes	43	19.37
	(b) No	179	80.63

Source: Developed for this research.

spondents, while 89.19 % of respondents were not aware of this amendment. 19.37 % of respondents supported to having fire safety systems at the garment factory while 80.63 % of responded that they did not have safety measure from fire and the factor building collapsed.

tent&task=view&id=475&Itemid=543 (retrieved from: 21st October), (Bengali).

Results of the opinion survey of owners of the garment industries are given in Table-4. Out of the twenty nine (29) owners, 24.14 % had ISO-9000 certification. While 75.86 % said that they did not have ISO-900 certification. 41.38 % of owners thought that they have already taken good initiatives to improve working environment while no initiatives were supported by 24.14 % of owners and those owners who supported and took in-

Question 03

Program: MBA		Semester: Spring 2017	
Examination: Final exam		Code: Section: A	
Course: Research methodology			
Instructor: Muhammad Mahboob Ali			
Name:	ID No:		
Time:	Invigilator:	Total Marks: 10	

Part-I:

Section-01: True or False _____ (3 pts)

Place T for true or F for false, whichever is appropriate in the space provided at the left of each statement.

- ___1. Following formula is used for multiple regression: $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$
- ___2. Experimental research is what we call a true experiment.
- ___3. A *research problem* is the main organizing principle guiding the analysis of your paper.
- ___4. A descriptive survey was selected because it provides an *accurate portrayal* or account of the *characteristics*
- ___5. Like many surveys a *longitudinal study* is observational
- ___6. Most research reports cast the problem statement within the context of a *conceptual* or theoretical framework.

Section-02: Completion _____ (3 pts)

Fill in the blanks with the most appropriate words or phrases.

1. The *questions* asked of the suspect will be more direct and less _____ ended.
2. Facebook or Twitter that *apply* in relation to _____ meetings.
3. A _____ trial is a type of scientific experiment which aims to reduce bias when testing a new treatment.
4. _____ refers to the correctness of the mean value
5. Creating a new variable in SPSS *based on* _____ variable.
6. Interval scales can have _____, *but it is not possible to determine* for them what may be called an *absolute zero or the unique origin*.

Section-03: Multiple Choice _____ (4 pts)

For each item below, select the best answer from the choices that follow. Write the letter of that choice in the space provided at the left of each item.

- ___ 1. In hypothesis testing we make assumptions about the level of measurement of the variable, the sampling method, the shape of the population distribution, and the sample size. In our example, we made these assumptions:
 - a) We used a random sample.
 - b) Our variable, *price*, is at the interval-ratio level of measurement.
 - c) $N > 30$, so we need not assume a normal population.

_____2. *Properties of Measurement Scales, except:*

- a) Identity.
- b) Magnitude.
- c) Equal intervals.
- d) A minimum value of zero.
- e) Integrity.

_____3. The levels of nominal scale variables are simply _____.

- a) rank-ordered items
- b) numbers
- c) different categories or groups
- d) physical measure

_____5. The correlation between a combined set of predictor variables and a given criterion variable is called _____ correlation.

- a) multiple-outcome
- b) Pearson Product-Moment
- c) regression
- d) multiple

_____6. Identify the scale of measurement for the following: military title -- Lieutenant, Captain, Major:

- a) nominal ,
- b) Ordinal
- c) ratio
- d) Interval

_____7. *The peer review process is an important component of conducting quality assurance research. Which of the following statements most accurately describes this process?*

- a. It assures that the research has significant statistical power*
- b. it assures that the research is unbiased*
- c. it assures that the research is replicable*
- d. it assures that the research has measurable outcomes*

_____8. How are quantitative and qualitative research approaches different

- a. reality is viewed objectively in qualitative research and constructed by the individual in quantitative research
- b. Design is highly controlled in quantitative research and adaptable in qualitative research
- c. sampling is population-based in qualitative research and restricted to individuals in quantitative research
- d. Analysis is deductive in qualitative research and inductive in quantitative research

Question 04

Program: MBA	
Examination: Final Exam	Semester: Spring 2017
Course: Research methodology	Code: Section:
Instructor: Muhammad Mahboob Ali	
Time: 1 Hour and 45 minutes	Total Marks: 30

Part-II: Comprehensive

Instructions:

Answer any Five Questions of the following. Point value of each question number is 6
Please ensure that this question paper is returned with your answer script.

- Q – 01. Write a research report on “Informal sector employs more people than formal sector” .6
- Q-02. a) Discuss importance of research methodology. 4
b) Distinguish between open ended and close ended question. 2
- Q – 03. a) Prepare at least 6 structured questionnaire in Likert scale on “Community banking can help micro savings” 5
b) Why research question for doing research is required? 1
- Q – 04. a) Distinguish between t stat. and z stat. 3
b) Differences between one tail test and two tail test. 3
- Q – 05. a) What is the difference between thesis, research paper and project? 3
b) What are the basic components of research proposal? 3
- Q-06. a) How to avoid plagiarising the writings of another? 4
b) How do you check plagiarism of a report? 2

Econometrics and Statistics for Research

Econometrics differs both from mathematical statistics and economic statistics. In economic statistics, the empirical data is collected, recorded, tabulated and used in describing the pattern in their development over time. The economic statistics is a descriptive aspect of economics. It does not provide either the explanations of the development of various variables or measurement of the parameters of the relationships. Statistical methods describe the methods of measurement which are developed on the basis of controlled experiments. Such methods may not be suitable for economic phenomenon as they don't fit in the framework of controlled experiments. For example, in real world experiments, the variables usually change continuously and simultaneously and so the set up of controlled experiments are not suitable. Econometrics uses statistical methods after adapting them to the problems of economic life. These adopted statistical methods are usually termed as econometric methods. Such methods are adjusted so that they become appropriate for the measurement of stochastic relationships. These adjustments basically attempt to specify attempts to the stochastic element which operate in real world data and enters into the determination of observed data. This enables the data to be called as random sample which is needed for the application of statistical tools. The theoretical econometrics includes the development of appropriate methods for the measurement of economic relationships which are not meant for controlled experiments conducted inside the laboratories. The econometric methods are generally developed for the analysis of non-experimental data. The applied econometrics includes the application of econometric methods to specific branches of econometric theory and problems like demand, supply, production, investment, consumption etc. The applied econometrics involves the application of the tools of econometric theory for the analysis of economic phenomenon and forecasting the economic behaviour.

To get started you can use this chart below to help you determine the correct statistical technique to use for the research scenario you are involved in. The Row numbers refer to the row in the table found on the next page which provides additional details. A List of Statistical Techniques

Estimate a population mean μ , using a t-statistic.

Test of a hypothesis about a population mean μ , using a t-statistic.

Estimate a population proportion p using a z-statistic.

Test about a population proportion p using a z-statistic.

Estimate the differences between two population means μ_1 and μ_2 for independent samples using a 2-sample t-statistic. You also need to specify whether to use pooled t-procedure or nonpooled t-procedure.

Test to compare two population means μ_1 and μ_2 for independent samples using a 2-sample t-statistic. You also need to specify whether to use pooled t-test or nonpooled t-test.

Estimate the difference of two means in a paired comparison study using a t-statistic.

Test to compare two means in a paired comparison study using a t-statistic.

Estimate of difference of two populations proportions p_1 and p_2 using a z-statistic.

Test to compare two population proportions p_1 and p_2 using a z-statistic.

Test the dependence of two categorical variables using a Chi-square test of independence.

Finding the best fitting line to a set of data with a quantitative explanatory variable X and a quantitative response variable Y and examining the slope of the regression line.

Test to compare several population means.

Test whether two population variances are different using the homogeneity of variances test (F test if normality is assumed or Levene's test if normality is not assumed)

To get started you can use this chart below to help you determine the correct statistical technique to use for the research scenario you are involved in. The Row numbers refer to the row in the table found on the next page which provides additional details. A List of Statistical Techniques

Note: Refer to the Summary Table for Statistical Techniques on the previous page; the following numbering scheme corresponds to the numbering in the table.

Estimate a population mean μ , using a t-statistic.

Test of a hypothesis about a population mean μ , using a t-statistic.

Estimate a population proportion p using a z-statistic.

Test about a population proportion p using a z-statistic.

Estimate the differences between two population means μ_1 and μ_2 for independent samples using a 2-sample t-statistic. You also need to specify whether to use pooled t-procedure or nonpooled t-procedure.

Test to compare two population means μ_1 and μ_2 for independent samples using a 2-sample t-statistic. You also need to specify whether to use pooled t-test or nonpooled t-test.

Estimate the difference of two means in a paired comparison study using a t-statistic.

Test to compare two means in a paired comparison study using a t-statistic.

Estimate of difference of two populations proportions p_1 and p_2 using a z-statistic.

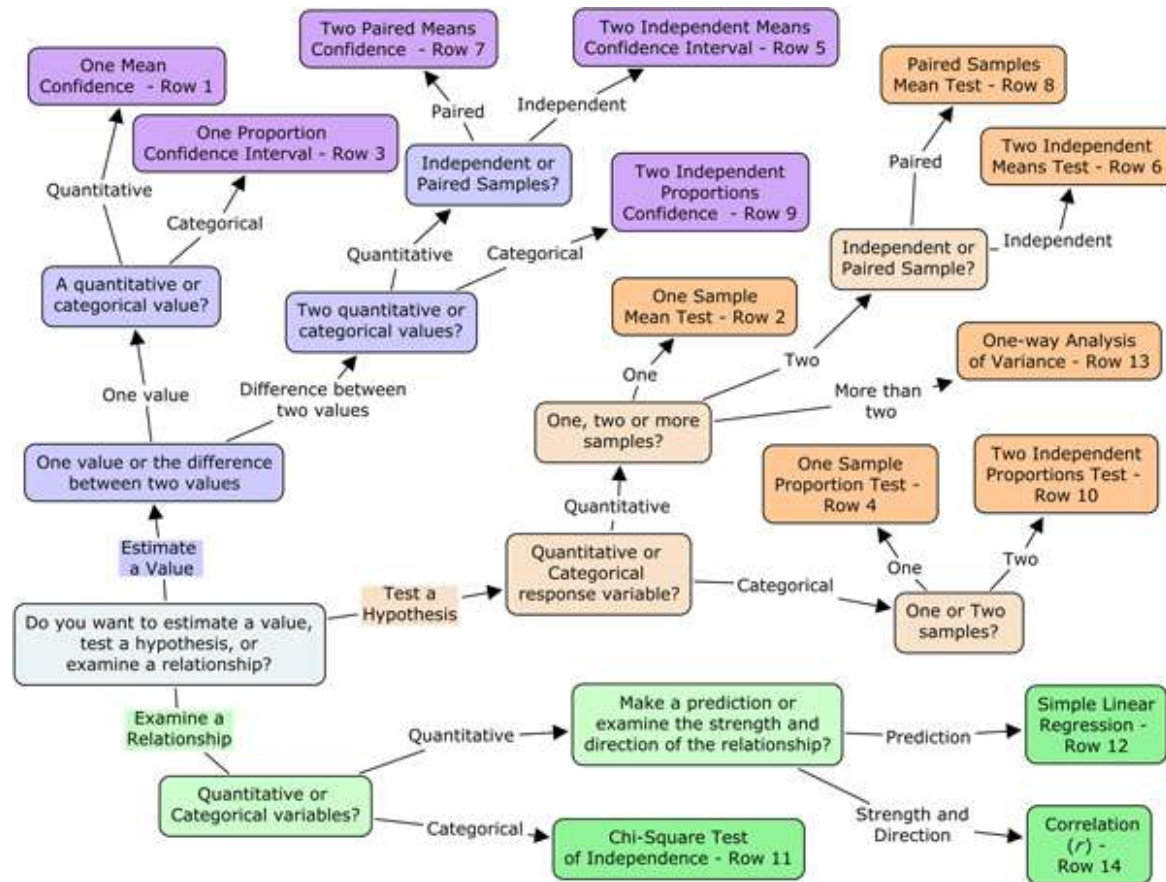
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Finding the best fitting line to a set of data with a quantitative explanatory variable X and a quantitative response variable Y and examining the slope of the regression line.

Test to compare several population means.

Test whether two population variances are different using the homogeneity of variances test (F test if normality is assumed or Levene's test if normality is not assumed)



(Source: Internet)

Methodology of econometrics

The methodology of econometrics is the study of the range of differing approaches to undertaking econometric analysis. https://en.wikipedia.org/wiki/Methodology_of_econometrics - cite_note-1

Commonly distinguished differing approaches that have been identified and studied include:

- the Cowles Commission approach https://en.wikipedia.org/wiki/Methodology_of_econometrics - cite_note-2
- the Vector autoregression approach https://en.wikipedia.org/wiki/Methodology_of_econometrics - cite_note-3
- the LSE approach to econometrics - originated with Denis Sargan now associated with David Hendry (and his general-to-specific modeling). Also associated this approach is the work on integrated and cointegrated systems originating on the work of Engle and Granger and Johansen and Juselius (Juselius 1999)

• the use of calibration - Finn Kydland and Edward Prescott https://en.wikipedia.org/wiki/Methodology_of_econometrics - cite_note-4

• the *experimentalist* or difference in differences approach - Joshua Angrist and Jörn-Steffen Pischke. https://en.wikipedia.org/wiki/Methodology_of_econometrics - cite_note-5

Econometrics may use standard statistical models to study economic questions, but most often they are with observational data, rather than in controlled experiments.

https://en.wikipedia.org/wiki/Methodology_of_econometrics - cite_note-Introductory_econometrics-7

In this, the design of observational studies in econometrics is similar to the design of studies in other observational disciplines, such as astronomy, epidemiology, sociology and political science. Analysis of

data from an observational study is guided by the study protocol, although exploratory data analysis may be useful for generating new hypotheses. Economics often analyzes systems of equations and inequalities, such as supply and demand hypothesized to be in equilibrium. Consequently, the field of econometrics has developed methods for identification and estimation of simultaneous-equation models. These methods are analogous to methods used in other areas of science, such as the field of system identification in systems analysis and control theory. Such methods may allow researchers to estimate models and investigate their empirical consequences, without directly manipulating the system.

One of the fundamental statistical methods used by econometricians is regression analysis. Regression methods are important in econometrics because economists typically cannot use controlled experiments. Econometricians often seek illuminating natural experiments in the absence of evidence from controlled experiments. Observational data may be subject to omitted-variable bias and a list of other problems that must be addressed using causal analysis of simultaneous-equation models. https://en.wikipedia.org/wiki/Methodology_of_econometrics - cite_note-10

Experimental economics

In recent decades, econometricians have increasingly turned to use of experiments to evaluate the often-contradictory conclusions of observational studies. Here, controlled and randomized experiments provide statistical inferences that may yield better empirical performance than do purely observational studies. https://en.wikipedia.org/wiki/Methodology_of_econometrics - cite_note-11

Data

Data sets to which econometric analyses are applied can be classified as time-series data, cross-sectional data, panel data, and multidimensional panel data. Time-series data sets contain observations over time; for example, inflation over the course of several years. Cross-sectional data sets contain observations at a single point in time; for example, many individuals' incomes in a given year. Panel data sets contain both time-series and cross-sectional observations. Multi-dimensional panel data sets contain observations across time, cross-sectionally, and across some third dimension. For example, the Survey of Professional Forecasters contains forecasts for many forecasters (cross-sectional observations), at many points in time (time series observations), and at multiple forecast horizons (a third dimension). https://en.wikipedia.org/wiki/Methodology_of_econometrics - cite_note-12

Instrumental variables

In many econometric contexts, the commonly used ordinary least squares method may not recover the theoretical relation desired or may produce estimates with poor statistical properties, because the assumptions for valid use of the method are violated. One widely used remedy is the method of instrumental variables (IV). For an economic model described by more than one equation, simultaneous-equation methods may be used to remedy similar problems, including two IV variants, Two-Stage Least Squares (2SLS), and Three-Stage Least Squares (3SLS). https://en.wikipedia.org/wiki/Methodology_of_econometrics - cite_note-13

Computational methods

Computational concerns are important for evaluating econometric methods and for use in decision making. https://en.wikipedia.org/wiki/Methodology_of_econometrics - cite_note-14 Such concerns include mathematical well-posedness: the existence, uniqueness, and stability of any solutions to econometric equations. Another concern is the numerical efficiency and accuracy of software. https://en.wikipedia.org/wiki/Methodology_of_econometrics - cite_note-15 A third concern is also the usability of econometric software. https://en.wikipedia.org/wiki/Methodology_of_econometrics - cite_note-16

Structural econometrics

Structural econometrics extends the ability of researchers to analyze data by using economic models as the lens through which to view the data. The benefit of this approach is that any policy recommendations are not subject to the Lucas critique since counter-factual analyses take an agent's re-optimization into account. Structural econometric analyses begin with an economic model that captures the salient features of the agents under investigation. The researcher then searches for parameters of the model that match the outputs of the model to the data. There are two ways of doing this. The first requires the researcher to completely solve the model and then use maximum likelihood.^[17] However, there have been many advances that can bypass the full solution of the model and that estimate models in two stages. Importantly, these methods allow the researcher to consider more complicated models with strategic interactions and multiple equilibria.^[18]

A good example of structural econometrics is in the estimation of first price sealed bid auctions with independent private values.^[19] The key difficulty with bidding data from these auctions is that bids only partially reveal information on the underlying valuations, bids shade the underlying valuations. One would like to estimate these valuations in order to understand the magnitude of profits each bidder makes. More importantly, it is necessary to have the valuation distribution in hand to engage in mechanism design

The probability that a bid wins an auction can be estimated from a data set of completed auctions, where all bids are observed. This can be done using simple non-parametric estimators. If all bids are observed, it is then possible to use the above relation and the estimated probability function and its derivative to point wise estimate the underlying valuation. This will then allow the investigator to estimate the valuation distribution.

SPSS for Classroom

IBM SPSS Statistics is software for managing data and calculating a wide variety of statistics. This document is intended for students taking classes that use SPSS Statistics or anyone else who is totally new to the SPSS software. Those who plan on doing more involved research projects using SPSS should follow up this brief intro with more in-depth training.

For information about SSCC lab accounts, the labs, Winstat and more see Information for SSCC Instructional Lab Users.

The SPSS software is built around the SPSS programming language. The good news for beginners is that you can accomplish most basic data analysis through menus and dialog boxes without having to actually learn the SPSS language. Menus and dialog boxes are useful because they give you visual reminders of (most of) your options with each step of your analysis. However, some tasks cannot be accomplished from the menus, and others are more quickly carried out by typing a few key words than by working through a long series of menus and dialogs. As a beginner, it will be strategic to learn a bit of both SPSS programming and the menus.

In the long run, you will want to learn to just work directly in the programming language, because this is how you document your work, and good documentation is key to both trouble-shooting and replicating complicated projects. For now, we assume you are just carrying out very simple tasks.

Part two discusses common statistics, regression, and graphs.

Starting SPSS Statistics

The SSCC has SPSS installed in our computer labs (4218 and 3218 Sewell Social Sciences Building) and on some of the Winstats. If you work on a University-owned computer you can also go to DoIT's Campus Software Library, and download and install SPSS on that computer (this requires a NetID, and administrator privileges).

To run SPSS, log in and click **Start - Programs - IBM SPSS Statistics - IBM SPSS Statistics 23**.

When SPSS is first started you are presented with a dialog box asking you to open a file. Pick a recently opened file or pick "Open another file" from the list on the left.



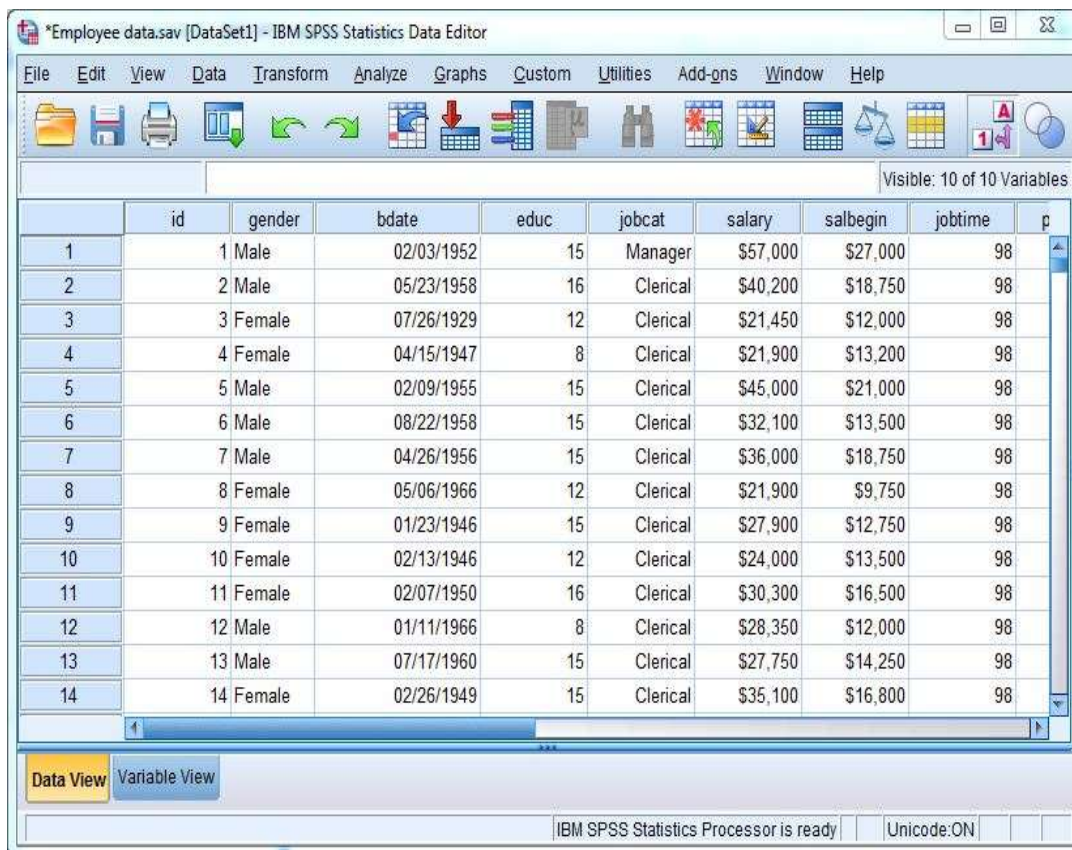
Typically you start your SPSS session by opening the data file that you need to work with.

The SPSS Windows and Files

SPSS Statistics has three main windows, plus a menu bar at the top. These allow you to (1) see your data, (2) see your statistical output, and (3) see any programming commands you have written. Each window corresponds to a separate type of SPSS file.

Data Editor (.sav files)

The Data Editor lets you see and manipulate your data. You will always have at least one Data Editor open (even if you have not yet opened a data set). When you open an SPSS data file, what you see is a working copy of your data. Changes you make to your data are not permanent until you save them (click **File - Save** or **Save As**). Data files are saved with a file type of **.sav**, a file type that most other software cannot work with. When you close your last Data Editor you are shutting down SPSS and you will be prompted to save all unsaved files.

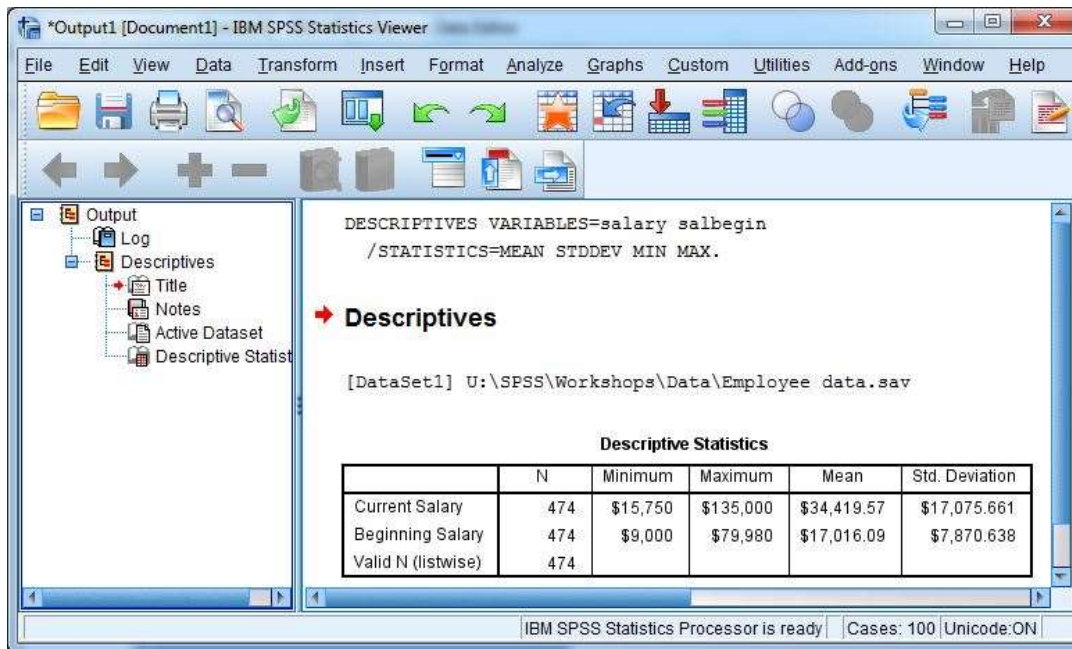


	id	gender	bdate	educ	jobcat	salary	salbegin	jobtime	p
1	1	Male	02/03/1952	15	Manager	\$57,000	\$27,000	98	
2	2	Male	05/23/1958	16	Clerical	\$40,200	\$18,750	98	
3	3	Female	07/26/1929	12	Clerical	\$21,450	\$12,000	98	
4	4	Female	04/15/1947	8	Clerical	\$21,900	\$13,200	98	
5	5	Male	02/09/1955	15	Clerical	\$45,000	\$21,000	98	
6	6	Male	08/22/1958	15	Clerical	\$32,100	\$13,500	98	
7	7	Male	04/26/1956	15	Clerical	\$36,000	\$18,750	98	
8	8	Female	05/06/1966	12	Clerical	\$21,900	\$9,750	98	
9	9	Female	01/23/1946	15	Clerical	\$27,900	\$12,750	98	
10	10	Female	02/13/1946	12	Clerical	\$24,000	\$13,500	98	
11	11	Female	02/07/1950	16	Clerical	\$30,300	\$16,500	98	
12	12	Male	01/11/1966	8	Clerical	\$28,350	\$12,000	98	
13	13	Male	07/17/1960	15	Clerical	\$27,750	\$14,250	98	
14	14	Female	02/26/1949	15	Clerical	\$35,100	\$16,800	98	

To open a different data set, click **File - Open - Data**. (It is also possible to open some non-SPSS data files by this method, such as Excel, Stata, or SAS files.) SPSS lets you have many data sets open simultaneously, and the data set that you are currently working with, the *active* data set, is always marked with a tiny red "plus" sign on the title bar. In order to avoid confusion it is usually a good strategy to close out any Data Editors you're done using.

Output Viewer (.spv files)

As you ask SPSS to carry out various computations and other tasks, the results can show up in a variety of places. New data values will show up in the Data Editor. Statistical results will show up in the Output Viewer.

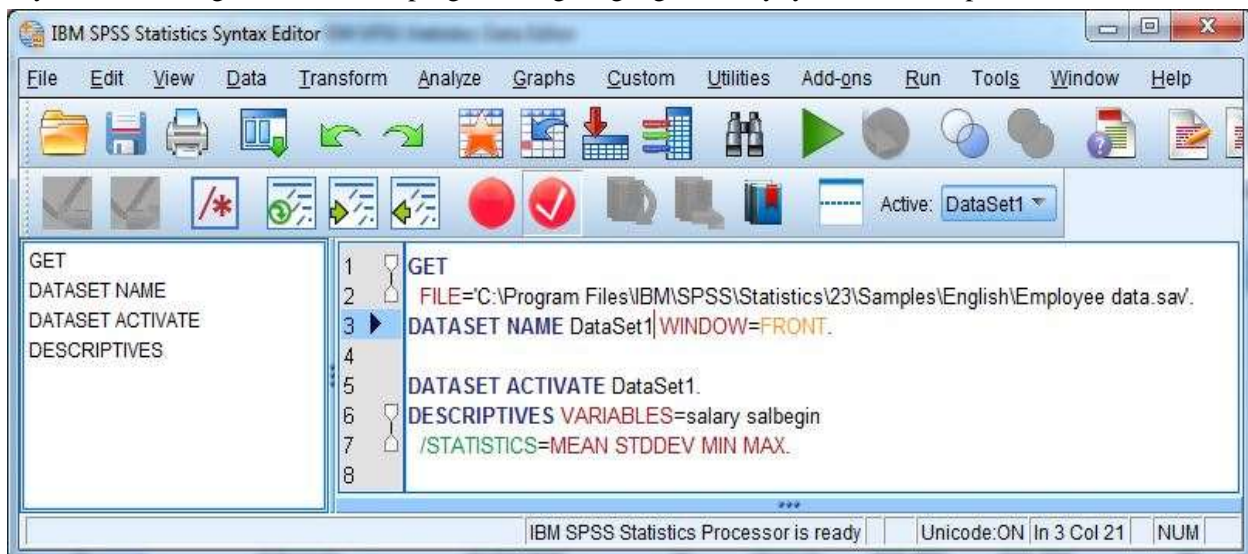


The Output Viewer shows you tables of statistical output and any graphs you create. By default it also shows you the programming language for the commands that you issued (called *syntax* in SPSS jargon), and most error messages will also appear here. The Output Viewer also allows you to edit and print your results. The tables of the Output Viewer are saved (click **File - Save** or **Save As**) with a file type of **.spv**, which can only be opened with SPSS software.

As with Data Editors, it is possible to open more than one Output Viewer to look at more than one output file. The *active* Viewer, marked with a tiny blue plus sign, will receive the results of any commands that you issue. If you close all the Output Viewers and then issue a new command, a fresh Output Viewer is started.

Syntax Editor (.sps files)

If you are working with the SPSS programming language directly, you will also open a



Syntax Editor.

The Syntax Editor allows you to write, edit, and run commands in the SPSS programming language. If you are also using the menus and dialog boxes, the **Paste** button automatically writes the syntax for the command you have specified into the active Syntax Editor. These files are saved as plain text and almost any text editor can open them, but with a file extension of **.sps**.

As with the other types of windows, you can have more than one Syntax Editor open and the *active* window is marked with a tiny orange plus sign. When you paste syntax from dialog boxes, it goes to the active Syntax Editor. If you close out all your Syntax Editors and then paste a command, a fresh Syntax Editor is opened.

Issuing Commands

Unless you command SPSS to do something, it just sits there looking at you. In general commands may be issued either through menus and dialog boxes that invoke the programming language behind the scenes, or by typing the programming language in a Syntax Editor and *running* the commands.

Dialog Boxes

Although each dialog box is unique, they have many common features. A fairly typical example is the dialog box for producing frequency tables (tables with counts and percents). To bring up this dialog box from the menus, click on **Analyze - Descriptive Statistics - Frequencies**.



On the left is a variable *selection list* with all of the variables in your data set. If your variables have variable labels, what you see is the beginning of the variable label. To see the full label as well as the variable name [in square brackets], hold your cursor over the label beginning. Select the variables you want to analyze by clicking on them (you may have to scroll through the list). Then click the arrow button to the right of the selection list, and the variables are moved to the *analysis list* on the right. If you change your mind about a variable, you can select it in the list on the right and then click the arrow button to move it back out of the analysis list. On the far right of the dialog are several buttons that lead to further dialog boxes with options for the frequencies command. At the bottom of the dialog box, click **OK** to issue your command to SPSS, or **Paste** to have the command written to a Syntax Editor.

If you return to a dialog box you will find it opens with all the specifications you last used. This can be handy if you are trying a number of variations on your analysis, or if you are debugging something. If you'd prefer to start fresh you can click the **Reset** button.

Working with the Data Editor

The main use of the Data Editor is to show you (a portion of) the data values you are working with. It can also be used to redefine the characteristics of variables (change the type, add labels, define missing values, etc.), create new variables, and enter data by hand.

The Data Editor gives you two views of your data set: a *Data View* and a *Variable View*, selected by clicking on the appropriate tab in the lower left corner of the window.

1 : gender m Visible: 10 of 10 Variables

	id	gender	bdate	educ	jobcat	salary	salbegin	jobtime	p
1	1	Male	02/03/1952	15	Manager	\$57,000	\$27,000	98	
2	2	Male	05/23/1958	16	Clerical	\$40,200	\$18,750	98	
3	3	Female	07/26/1929	12	Clerical	\$21,450	\$12,000	98	
4	4	Female	04/15/1947	8	Clerical	\$21,900	\$13,200	98	
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9	9	Female	01/23/1946	15	Clerical	\$27,900	\$12,750	98	
10	10	Female	02/13/1946	12	Clerical	\$24,000	\$13,500	98	
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12	12	Male	01/11/1966	8	Clerical	\$28,350	\$12,000	98	
13	13	Male	07/17/1960	15	Clerical	\$27,750	\$14,250	98	
14	14	Female	02/26/1949	15	Clerical	\$35,100	\$16,800	98	

Data View Variable View

Go to variable IBM SPSS Statistics Processor is ready Cases: 100 Unicode:ON

*Employee data.sav [DataSet1] - IBM SPSS Statistics Data Editor

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align
1	id	Numeric	4	0	Employee Code	None	None	8	Right
2	gender	String	1	0	Gender	(f, Female)	None	6	Left
3	bdate	Date	10	0	Date of Birth	None	None	13	Right
4	educ	Numeric	2	0	Educational Lev...	(0, 0 (Missi...	0	8	Right
5	jobcat	Numeric	1	0	Employment C...	(0, 0 (Missi...	0	8	Right
6	salary	Dollar	8	0	Current Salary	(\$0, missing...	\$0	8	Right
7	salbegin	Dollar	8	0	Beginning Salary	(\$0, missing...	\$0	8	Right
8	jobtime	Numeric	2	0	Months since H...	(0, missing)	0	8	Right
9	prevexp	Numeric	6	0	Previous Experi...	(0, missing)	None	8	Right
10	minority	Numeric	1	0	Minority Classif...	(0, No)	9	8	Right
11									
12									
13									
14									
15									

Data View Variable View

IBM SPSS Statistics Processor is ready Cases: 100 Unicode:ON

Data View

In the Data View, the data are laid out in the standard rectangular format for statistical software. Each row represents a unit of observation, sometimes also referred to as a *record* or in SPSS as a *case*. The case (observation) number in the leftmost column is assigned automatically and is not saved as data. Each column represents a variable. All of the data in a column must be of the same *type*, either *numeric* or *string* (also called character).

Each data cell holds a data value. If data are missing, they are displayed as a period (".") or as a blank (" "). Data values may be displayed as either the actual value or as a *formatted* value. For example, a data value about a person's income might be 15000, while its formatted value might be shown as \$15,000. Formats can also take the form of value labels, for instance, data recorded as 1's and 2's might be labeled as "Male" and "Female." While formatting makes it easier to interpret results, it is important to remember that the data values are what SPSS actually processes. In particular, when you set up a command that requires you to specify one or more data values, you use values and not formatted values.

You can switch the Data View between formatted and unformatted data by clicking on the **Value Labels** button on the Toolbar, the fourth button from the right when in the Data View. With value labels on you can also see the actual values for a given variable by clicking on a cell and then looking at the bar just above the data. The box to the left indicates the observation number and variable selected, e.g. *1:gender*, while the center box shows you the actual value, e.g. *m*.

Data values can be edited or added by typing them directly into the Data View. To enter data, type in the actual data value. However, aside from very small data sets for class exercises, you should almost never need to do this.

Variable View

In the Variable View you can see and edit the information that defines each variable (sometimes called *meta-data*) in your data set: each column of the Data View is described by a row of the Variable View.

The first attribute of each variable is its **Name**. The variable name is how the data column is identified in the programming language, and in order for the programming language to work gracefully variable names have to abide by certain restrictions: names must begin with a letter, and may be made up of characters, numerals, non-punctuation characters, and the period. Capitalization is ignored. Variable names may be up to 64 characters long. Other restrictions may apply - no coupons please. Variable names may be added or changed simply by typing them in.

The basic variable types are either *numeric* or *string*. However, just to make things confusing, SPSS allows you to select among several different standard formats for displaying numeric data (e.g. scientific notation, comma formatting, currencies) and calls this **Type**. You set the variable type by clicking in the column, then clicking on the gray button that appears and working in a dialog box.

The **Label** attribute allows you to give each variable a longer description that is displayed in place of the variable name, analogous to value labels for data values. Both variable labels and value labels are useful for giving you more intelligible output.

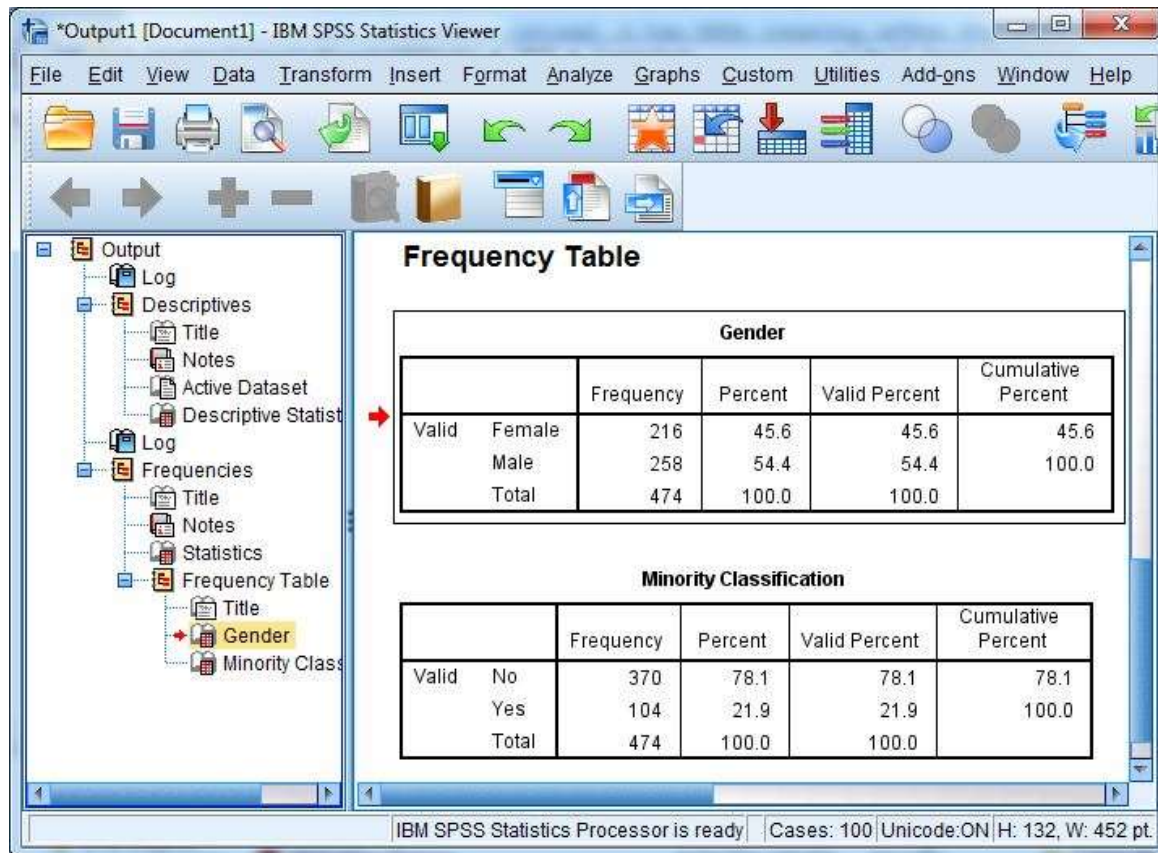
The **Values** attribute allows you to create a list of value labels. Often several variables will share a common set of value labels, and in this window you can copy and paste value label sets. Variable labels are set by simply typing them in, value labels work through a dialog box.

The **Missing** attribute is a place for you to designate certain data values that you want SPSS to ignore when it calculates statistics. For instance, in survey data it is common practice to record a data value of 8 when a respondent says "I don't know" in response to a question, and you can have SPSS treat the 8's in a variable as if they were missing data.

The other attributes, **Width**, **Decimals**, **Columns**, **Align**, **Measure**, and **Role**, are minor settings related to data display. Although Measure (level of measurement) is statistically a very important concept, it has little meaning within the SPSS software.

Working with the Output Viewer

The Output Viewer collects your statistical tables and graphs, and gives you the opportunity to edit them before you save or print them. The Output Viewer is divided into two main sections, an outline pane on the left, and a tables pane on the right. When you print your output, it is the tables pane that is printed.



When SPSS creates output (tables, syntax, error messages, etc.) it adds them to the tables pane as *objects*, and each object is noted in the outline pane. Individual objects may be opened and edited, deleted, hidden, rearranged, or printed. To select an object to work with, you can either click on it in the tables pane, or click on the corresponding entry in the outline pane. A red arrow appears next to the object in both panes.

To edit objects, double-click on them in the tables pane. Depending on whether you are trying to edit a simple object like a title (which is just a box with some text in it), or something more complicated like a table or a graph, you may be able to simply change the object in the Output Viewer, or another window may open. Except for editing the look of graphs, it will often be easier to edit your output by exporting it to Microsoft Word first, but in principle you can change anything you can see in your output, down to deleting columns and changing numbers. (But if your intent is to fake your results, you should attend our Simulations workshop for better methods of doing this.)

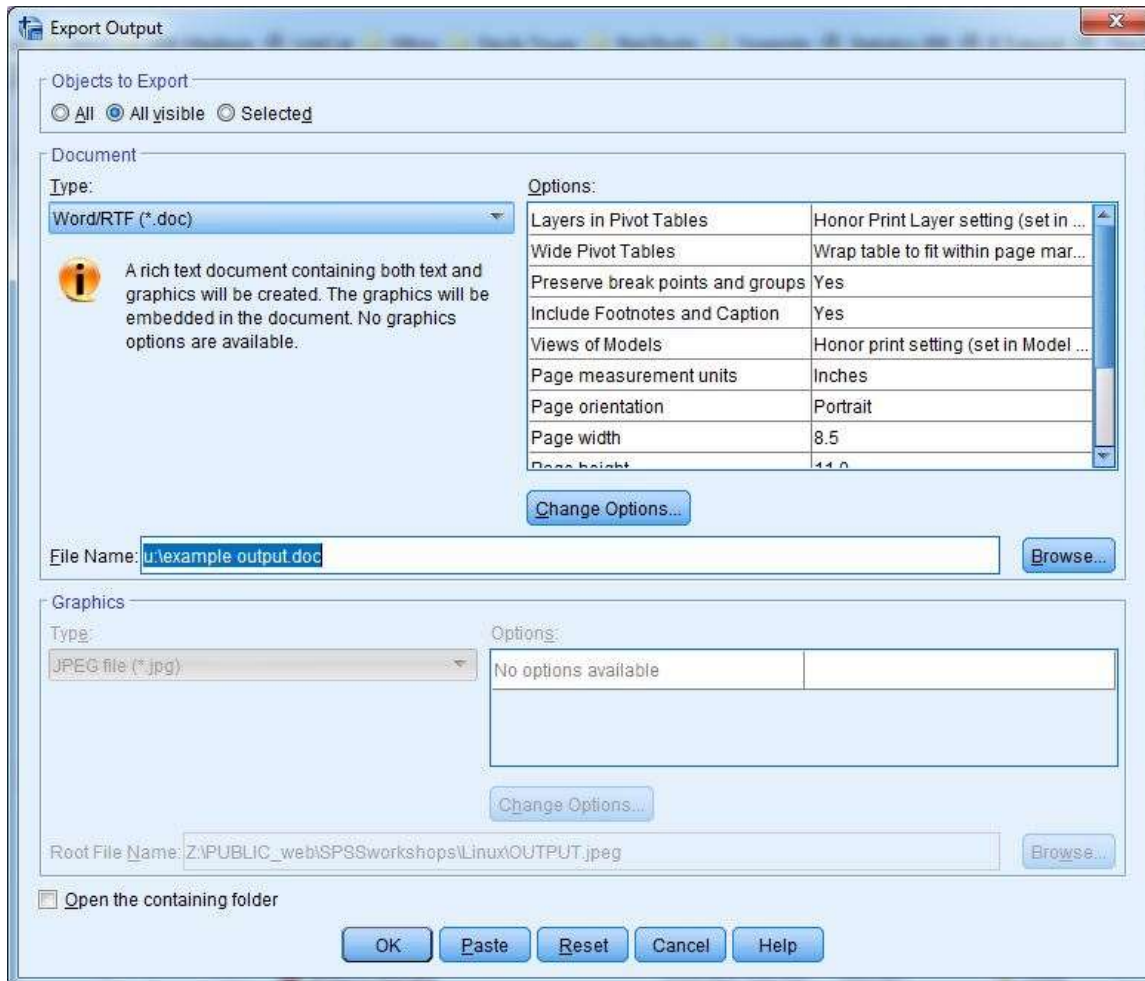
To delete objects, select them in either pane and use the **Delete** key.

To hide objects, double-click on the icon for each object in the outline pane. To make them visible, just double-click again. You can hide a whole section of the outline by clicking on the minus sign to the left of the group in the outline pane. Hidden objects are not printed, but are saved with the output file.

To rearrange objects, select the object (or group of objects) in either pane, and drag them until the red arrow points to the object below which you want them to appear.

To export your output, you go through a special procedure. In the Output Viewer click **File - Export** to invoke the Export dialog box. There are three main settings to look at. First, pick the type of file to which you want to export: useful file types include Excel, PDF, PowerPoint, or Word. Next, check that you are exporting as much of your output as you want, the **Objects to Export** at the top of the dialog. If you have a part of your output selected, this option will default to exporting just your selection, otherwise you typically will export all your visible output. Finally, change the default file name to something meaningful, and save your file to a location where you will be able to keep it, like your U:\ drive.

Once your options are set, click **OK**.



Working with the Syntax Editor

Learning SPSS programming syntax is a separate topic; the fundamentals are addressed in our SSCC training workshops. But you don't have to memorize a whole new language in order to paste and run SPSS syntax.

The fundamental unit of work in the SPSS language is the command: think of commands as analogous to well-formed sentences. In this language, commands begin with a keyword and end with a period. Commands should begin in the leftmost column in the editor. If they are wrapped onto more than one

line, the continuing lines should begin with a blank space. Capitalization does not matter. The Syntax Editor displays syntax that SPSS cannot interpret in red type.

Like the Output Editor, the Syntax Editor has two panes. The tables pane on the right is what is actually saved in the **.spss** file.



Running syntax. To have SPSS actually carry out your command(s), you must *run* them. Click **Run**, and then one of the menu options. There is also an icon on the Toolbar to run your program, a right-facing triangle ("play"). You can run all the commands in the editor, or select a group of commands and run just that (be careful that you highlight full commands, from the first keyword through the final period). You can also run the *current* command, which is whatever command the cursor is located within.

Pasting and running. From most dialog boxes you have the option of *pasting* commands instead of simply running them. SPSS then writes the command into a Syntax Editor. The syntax tends to be verbose, specifying many options that are the defaults - syntax you write yourself tends to be much shorter and simpler. After you have pasted a command, you still need to run it to get any output.

Source: http://ssc.wisc.edu/sscc/pubs/spss/classintro/spss_students1.html , Viewed on: 1st May, 2017

Thesis Writing Guidelines

1. Language and Format

The thesis should be written in English. Quotations should normally be in English, with the original language included in a footnote where appropriate.

1.1 Ordering of parts

Parts of the thesis should be ordered as follows:

Title page **Required**

Copyright notice (if required by department)

Abstract or executive summary (as required by department)

Acknowledgements or dedications Optional

Table of contents **Required**

List of Figures, Tables or Illustrations Where required

List of Abbreviations Where required

Body of the thesis **Required**

Appendices Where required

Glossary Where required

Bibliography/Reference list is being Required

Students should consult their department as to whether any other discipline specific components should be included and if so where.

1.2 Layout and Appearance

The thesis should be computer printed on white A4 paper in Times New Roman, Garamond or Arial 12pt. The thesis may be printed double-sided or single-sided depending on departmental requirements. Double-spacing should be used in the abstract and text of the thesis. Single spacing should be used in long tables, block quotations separated from the text, footnotes, and bibliographical entries. Paragraphs should be indented, or an empty line left between paragraphs, depending on departmental requirements.

Margins should be one inch or 2.5 cm on all sides, and page size should be set to A4, not US letter. Pages should be numbered at the bottom in the centre, using Arabic numerals (1, 2, 3) starting with the first page of the thesis proper (i.e. the first page of the introduction). Pages prior to this should be numbered with lowercase Roman numerals (i, ii, iii.)

Chapters should start on a new page, but sections and subsections should not.

See the sample thesis page at the end of this document for an example of page layout.

1.3 Structure of initial parts**1.3.1 Title page**

The title page should provide the following information in the following order:

The full title of the thesis

The candidate's name

The department and name of the university

The statement: "In partial fulfilment of the requirements for the degree of Masters of Arts/Sciences"

The supervisors' names

The place of submission

The year of submission

See the sample title page at the end of this document for an example of title page layout.

1.3.2 Declaration of Authorship/Copyright Notice

Some departments require a declaration of authorship or copyright notice. Students should consult their department for the specific wording.

1.3.3 Abstract or Executive Summary

For an MA thesis, the abstract should be between 100 and 250 words, depending on departmental requirements. For the length of a PhD abstract, please consult departmental requirements. The abstract should normally include the following information: (1) a statement of the problem the research sets out to resolve; (2) the methodology used; (3) the major findings. Other information is optional unless required by the department.

1.3.4 Acknowledgements

This is an optional page acknowledging people who provided the author with assistance in the thesis project, notably, but not only the thesis supervisor.

1.3.5 Table of Contents

The thesis must have a table of contents page listing chapter headings, section headings and sub-headings, Appendices and references as well as their corresponding page number. The 'Table of Contents' feature of Microsoft Word (or other word-processing software where permitted by the department) should normally be used to create a table of contents and this should be done after final editing so that pages referred to in the table of contents are correctly numbered.

1.3.6 List of Figures, Tables or Illustrations

If appropriate, a separate list of figures, tables, or illustrations should be included on a separate page immediately following the table of contents.

1.3.7 List of Abbreviations

If the thesis makes use of a large number of abbreviations that may be unfamiliar to a reader, providing a list of them can act as a useful guide.

1.4 Structure of final parts

1.4.1 Appendices

Appendices may be needed for formulae, maps, diagrams, interview protocols, or any similar data that are not contained in the body of the thesis. These should be provided after the conclusion in the logical order they are mentioned in the main body. A list of appendices should be drawn up, each being given a consecutive number or a letter, and placed in the table of contents. If there are several appendices each should receive a title. If the thesis includes non-paper appendices such as computer data, software, or audio-visual material, students should consult departmental guidelines as to how to append and refer to these.

1.4.2 Glossary

A list of special technical words or acronyms may be necessary. This is particularly true if the subject deals with a new area with a specialised vocabulary that the average reader in the discipline might not be familiar with, such as the Internet. This list should come after the appendices.

1.4.3 Bibliography/Reference List

A list of the sources used in the thesis must be supplied which complies with the same departmental style guidelines used in the body of the thesis – this list should include *only* those sources cited in the thesis.

2. Structure of the thesis

The thesis should be divided into logical chapters and include an introduction and a conclusion. The introduction and conclusion may or may not be counted as chapters, depending on departmental requirements. Excluding the introduction and conclusion, the thesis will normally be expected to have not less than three and not more than six chapters, unless this has been agreed with the supervisor. The chapters should reflect the nature and stages of the research.

Depending on the department, the introduction and conclusion may either be given titles and counted as the first and last chapter, or alternatively be entitled ‘Introduction’ and ‘Conclusion’ and the first chapter after the introduction numbered Chapter 1. Students should familiarise themselves with departmental guidelines on this point.

2.1 Organisation of the thesis

2.1.1. Introduction

The following information is meant to serve as a general suggestion for those uncertain how to structure their work, not as a rigid prescription. Particularly at PhD level the supervisor may be a better guide as to how the dissertation should be structured.

2.1.1. Introduction

The thesis should normally begin with a general introduction presenting an overview of what it is about and situating it in the existing research. The introduction should show why the topic selected is worth investigating and why it is of significance in the field. This will normally be done with reference to existing research, identifying areas that have not been explored, need to be explored further, or where new research findings justify a reconsideration of established knowledge. At MA level, a significant contribution to the field is not expected, however, the thesis should claim to make a contribution in the sense that it goes beyond summarising the work of others and contains original analysis and thinking towards the solving of a relevant problem. It is also recommended that this contribution be made explicit.

At PhD level, the contribution of the work to the discipline should not only be significant but explicit. The nature of this contribution should be discussed with the supervisor.

Having precisely defined the research problem, the introduction should propose a response to this problem, normally in the form of a solution. This response should make explicit the objective of the research, not simply state an intention to explore or discuss. The thesis statement may include a brief indication of the author's position or overall findings, depending on the department. If appropriate to the nature of the research, the chosen methodology may also be introduced after the thesis statement. The final section of the introduction should briefly outline the structure of the body of the thesis. Where appropriate, this can be linked to and follow logically from the description of the methodology.

2.1.2. Conclusion

The introduction and conclusion are closely related to each other, thus students should take care in drafting and revising to ensure that these parts reflect and do not contradict one another. The conclusion should provide answers or solutions – to the extent this is possible – to the questions or problems raised in the introduction. The argumentation of the thesis should be summarised briefly, and the writer's main argument or findings restated clearly, without going into unnecessary detail or including additional arguments not dealt with in the body. The conclusion will normally be expected to return to the wider context from which the thesis departed in the introduction and place the findings in this context. The writer should, if appropriate, elaborate on how the research findings and results will contribute to the field in general and what sort of broader implications these may have. There is no need to hide the limitations of the thesis to the extent that these are appropriate to a work of this type (e.g. constraints of space, depth of research, etc.). Suggestions may be made for further research where appropriate, but this is not a requirement. It may be that some disciplines (notably mathematics) require a different approach to this part of the thesis. In such cases the discipline specific guidelines should overrule these guidelines.

2.1.3. Literature Review

Depending on the discipline and the nature of the research, the existing literature may be reviewed in the introduction or part of a chapter, or a separate literature review chapter may be appropriate. At PhD level the last option is the most likely, but again this should be discussed with the supervisor. The purpose of the literature review is to summarise, evaluate and where appropriate compare those main developments and current debates in the field which are specifically relevant to the research area, according to the guiding principle embodied in the thesis statement. In effect, the literature review shows that the writer is familiar with the field and simultaneously lays the ground for subsequent analysis or presentation and discussion of empirical data, as appropriate. Well-selected sources should convince the audience that research gaps have been identified correctly and that the writer has posed the right research questions, which will then be further addressed in subsequent chapters. Rather than simply summarising other authors' work, the chapter should make clear the writer's position in relation to the issues raised. The literature review should have a logical structure (whether by chronological, thematic or other criteria) and this should be made explicit to the reader. Like any other chapter, a literature review chapter should have its own introduction and conclusion.

2.2 Appropriate use of headings and subheadings

Headings should be distinguished from the surrounding text by a larger point size, a different font, bolding, italics, or a combination of these. All headings of the same level should use the same style, and headings at lower levels should be less prominent than those at higher levels. If there are departmental style guidelines for headings, these should be followed.

Example (not department specific):

Chapter 2 – Title (Arial Bold Small caps 14 point)
 2.1 Heading for section (Arial Bold Italic 12 point)
 2.1.1 Heading for sub-section (Times Bold 12 point)
 2.1.1.1 Heading for part of sub-section (Arial Bold 10 point)

All headings should be left-aligned, except chapter headings, which may be centred. A heading at the bottom of the page must have at least two full lines of text below it. Otherwise, the heading should begin on the next page. Captions related to visual material (graphs, tables, maps) should appear on the same page as the material itself. Chapter and section headings should be consistently numbered according to the numbering system recommended by the department. It should not normally be necessary to go beyond three levels of sections in an MA thesis, though this is possible in a PhD dissertation. When in doubt, students should consult their supervisor.

There are two types of heading numbering:

Chapter 1, section 1.1, subsection 1.1.1, sub-subsection 1.1.1.1 (*more typical for social sciences*)

or

Chapter I, section A, subsection 1, sub-subsection a) (*more typical for humanities*)

Please consult your department as to which is preferable.

All tables and figures should also be numbered, either sequentially within each section e.g. 1.1, 1.2 and then restarted sequentially in the next section e.g. 2.1, 2.2. Alternatively, they can be sequentially numbered from Table 1, Table 2, etc., throughout the whole work.

Headings should clearly reflect what the chapter or section is about, and should be expressed in the form of a concise noun phrase (normally less than one line), not a sentence. Information which is present in a higher level heading need not be repeated in a subordinate heading. Where possible, headings at the same level of hierarchy should have similar structure (e.g. *3.1 Common Law*, *3.2 Continental Law*, and not *3.1 Common Law*, *3.2 The Supreme Court*).

3. Text Development and Coherence

The MA thesis should be written for a reader who is a specialist in the discipline but not necessarily a specialist on the specific topic or question, even if the immediate supervisor is a specialist in exactly this narrow topic. The PhD dissertation should be written for a more specialised audience but should remain comprehensible to any member of the defence committee. The writer should take care to ensure that sentences and paragraphs flow logically from each other and do not demand knowledge the reader might not be expected to share in order to make these relationships clear. Where there is doubt as to the connection between two ideas, the onus is on the student to make this explicit not on the reader to try to deduce the connection.

3.1 Paragraph Development

A paragraph is a text unit of several sentences dealing with a single issue, topic or aspect. It should not therefore (except in special circumstances), be a single sentence, nor should it deal with a range of topics. The paragraph should develop one idea, through illustration or analysis, to a conclusion. It should normally start with a topic sentence indicating what it is about, develop this topic through further sentences until the topic is concluded and a new topic or a different aspect is ready to be broached. In linking sentences logically and coherently to one another, the writer should ensure that transition devices (e.g. *however*, *similarly*, *in consequence*, etc) are used appropriately wherever there is a danger that the connection between two sentences may be unclear. Reference back to previous sentences (e.g. *this*, *these*, *such*, *this question*, *these issues*, *this situation*) should also be used wherever it can help make the flow of logic clearer. When an already mentioned theme and new information about it are dealt with in one sentence, the theme should normally come first and the new information second, so as to facilitate the reader's understanding.

For more detailed guidelines on paragraph development, students should refer to the Writing Center course materials or the relevant webpage <http://www.ceu.hu/writing/para.html>, or consult a writing instructor.

3.2 Transition between paragraphs

Although a well-structured paragraph is a unit in itself, paragraphs should also logically develop and flow from each other using devices similar to those that link sentences within the paragraph. Where the reason

for a shift of topic or approach might be unclear to the reader, this should be explained. Sections, like paragraphs, should have both coherence and cohesion, and should make use of appropriate linguistic devices to lead the reader logically and clearly through the stages of the writer's analysis or exposition.

4. Language and Style

The thesis should be written in an appropriate formal academic style. While it is not possible to prescribe the use or avoidance of the first person or the passive, or the length of sentences, students should make efforts to use the resources available to them, such as style manuals recommended by their department, the Writing Center course materials or the relevant webpage <http://www.ceu.hu/writing/style.html> to assess whether their written style is appropriate to their discipline. Excessive or superfluous use of jargon or technical terms should be avoided and any term or acronym that would not be understood by a non-specialist reader *within the discipline* should be explained and/or included in a glossary. The thesis should wherever possible use gender neutral language, avoiding the use of male-specific words such as 'man' or 'chairman' where these could be considered inappropriately exclusive or discriminatory.

Students should make every effort to ensure that the thesis is free from grammatical, lexical and punctuation errors. Not only should a computer spellchecker be used, but the student should also proof-read the thesis to check that errors do not remain that are not detected by the spellchecker. The thesis should consistently use **either** American **or** British spelling but should not alternate between the two. Students should also be aware that the punctuation rules of English are almost certainly different from those of their own language and should familiarise themselves with and apply the rules of English.

When using numbers in the text, numbers up to one hundred should normally be written in words, and if the first word of a sentence is a number it should be written in words. Numbers above one hundred are usually written as numerals (101, 102). For precise guidance, students should consult the style manual recommended by their department.

It is the student's duty to use the available resources during the year so as to master the skills necessary to write a thesis that is as far as possible error free, and so as to be able to proof-read that thesis and correct their own errors. Details of the precise use of punctuation can be found in "A Manual for Writers of Term Papers, Theses, and Dissertations" by Kate Turabian as well as on the grammar section of the Center for Academic Writing website under <http://www.ceu.hu/writing/sfaccess.html#Grammar>. The website also includes resources for the learning and correction of grammar points. Further grammar resources are available in the CEU Multimedia Library.

5. Use of sources and citation style

All source materials, primary or secondary, published or unpublished that are the intellectual property of authors or institutions other than the writer of the thesis must be credited and correctly cited in full, including illustrations, charts, tables, etc. *Failure to do so constitutes plagiarism and will result automatically in a failing grade.* Students' attention is drawn to the following extract from CEU's policy document, "Academic Dishonesty and Plagiarism"

Plagiarising, that is, the offering as one's own work the words, ideas, or arguments of another person without appropriate attribution by quotation, reference or footnote [is a violation of the academic integrity code]. Plagiarism occurs both when the words of another are reproduced without acknowledgement, and when the ideas or arguments of another are paraphrased in such a way as to lead the reader to believe that they originated with the writer. It is the responsibility of all University students to understand the methods of proper attribution and to apply those principles in all materials submitted.

5.1 Use of Citation Styles

All citations should include a reference in the body of the text to the author as well as an entry in the bibliography/reference list. How this should be done is indicated by the citation style chosen for the thesis (e.g. Chicago, Harvard, APA, Blue Book etc.) The thesis should consistently use a single citation style as specified by the department, (or agreed with the supervisor, if the department permits flexibility). For precise details on citation style, students should always consult the style manual recommended by their

department. For further information on the use of sources, students should refer to Writing Center course materials and/or the following webpages:

<http://www.ceu.hu/writing/sources.html>

<http://www.ceu.hu/writing/sfaccess.html#Sources>

5.2 Quotation, paraphrase and summary

Source material should be quoted where the precise wording is specifically relevant or significant, and the quotation always clearly marked as required by the citation style, including page numbers. Sources may be paraphrased or summarised where exact wording is not essential, but care should be taken not to change the original meaning through paraphrase, and all paraphrased and summarised sources must be fully cited, including page numbers. Where a quotation has been changed (for example, capitalisation, punctuation, emphasis changed or a pronoun replaced by a noun), the changes should be clearly indicated according to the citation style used.

Although interaction with existing research in the field is a requirement for all academic writing, no part of the thesis should normally consist purely of summarising the work of others, unless approved by the supervisor. Summarised or quoted source material should not be left to stand on its own, but should be introduced, explained, analysed and the purpose of its use made clear. Where different sources are compared or contrasted, it should be made explicit to the reader both that this is being done and why.

Care should be taken to ensure that the reader is in no doubt as to where a cited author's ideas end and the comments of the author of the thesis begin. Where there is doubt, the cited author's name (or s/he) can be used in the sentence with an appropriate verb reporting what that person has said so as to distinguish it from the ideas of the author of the thesis.

5.3 Data Commentary

Where data is provided in the form of charts, figures or tables, it should be effectively commented. This includes not only a clear reference in the text to the table or figure in which the reader can find the data (e.g. 'as table 1 shows'), and a summary of what the data shows. Trends or irregularities should also be highlighted and the more important findings separated from those that are less important. The commentary should not simply repeat in sentences all the information presented in the diagram but should also discuss implications, problems and/or exceptions in relation to the data in question. As with any other material taken from the work of other researchers, the source of the table, graph, illustration, figure or related materials must be stated at the bottom or in a footnote as specified in the departmental style guidelines.