MECP-101

MASTER OF ARTS
(ECONOMICS)

PROJECT-WORK GUIDE

Faculty of Economics
School of Social Sciences
Indira Gandhi National Open University
Maidan Garhi, New Delhi-110068

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Project Guide
For
Project Work for Master of Arts
(Economics) Programme

INTRODUCTION

As mentioned in the Programme Guide of MA Economics Programme, you have the option to undertake the project work as an optional course MECP-101. In case you opt the project work, you will be required to submit the Project Report to the University.

This guide has been prepared to help you in doing a Project work by familiarizing you with its various aspects. Go through the guide before you begin work on the Project. This Project Guide has three parts. The first part provides general information about the project work; the second part details the different stages of the Project Work; and the third part consists of annexures which shall be used at different stages of the Project work.

PART 1
GENERAL INFORMATION

Project work is an application oriented academic activity and aims to sharpen your theoretical and quantitative skills through their application in the light of theoretical knowledge gained while pursuing the various courses of MA Economics particularly MEC-001, MEC-002, MEC-003, and MEC-109. The project work will enable you to analyse the various economic events and situations observed in real life. In short, **it is a way of applying the knowledge gained through the various courses to the issues and concerns of day to day events in the economy.**

This Project Work is of six credits and you are expected to spend about 180 hours of total work in completing the Project work. We would prefer to receive a **typed and bound copy of your Project Report**. The length of your Project Report may be between 15000-20000 words (50-60 pages). Keep this in mind while choosing the Project theme. The idea is that you should be able to say all that you want to say within these words limit. **You are free to write your Project Report in English or in Hindi language**.

1.1 SUBMISSION OF PROJECT PROPOSAL

After you opt for project work, you are expected to submit hard copy in the typed form of the project proposal along with project proposal form (Annexure 'A' of this manual) on the following address:

Course Coordinator
MECP-101 Course
M.A. Economics Programme
Block 'F'
School of Social Sciences
IGNOU, Maidan Garhi
New Delhi – 110068

The approved Academic Counselors at your study centre or a person actively involved in research activities and associated with the Research Institutions is eligible to become your supervisor.

Make sure that the person who has agreed to act as your supervisor for your project work, has affixed his/her signature on the cover page (Annexure 'A') of your proposal. The bio data of your supervisor should be enclosed along with your project proposal.

The project proposal and the name of your supervisor will be approved by the faculty of economics of the university at the HQs at Maidan Garhi, New Delhi. The approval of your project proposal will be sent by the Faculty of Economics, School of Social Sciences, IGNOU, New Delhi in due course. **In case you submit the project report without approval of the project proposal, your project report will not be evaluated under any circumstances**. Hence, it is in your interest that only after approval of the project proposal, you should begin the project work. In case you are advised to revise the proposal, suggestions and comments made by the faculty should be incorporated in the revised proposal. In case of revision of the project proposal, every student will be given **maximum two chances** to revise the proposal. If any student fails to revise the proposal to the satisfaction of the faculty even after **availing two chances**, he will be required to complete another optional course in lieu of the project work

How to identify the theme of the project and how to prepare the project proposal will be discussed in the next part. However, it is desirable to point out at this stage that your project proposal must include the following:

i) The title of the proposed project,
ii) A clear statement of the problem(s) to be examined,
iii) Objectives of the proposed study,
iv) Research Questions to be raised,
v) The kind of data/information to be used,
vi) Research Methodology, and
vii) Expected outcome.

1.2 PROJECT SUPERVISION

Your Project shall be guided by a supervisor approved by the Faculty of Economics, Indira Gandhi National Open University, New Delhi. All Academic counselors are eligible to act as supervisors for Project Work. A list of supervisors is available with the Coordinator of your Study Centre. Once you have selected a broad area for study (we have listed some areas in Sub-section 2.1), please contact your Coordinator who will assign a supervisor to you, suited to your study. In case the name of supervisor is not approved by the faculty, you will have to give the name of another person eligible to become your supervisor.

You should prepare a Project Proposal with the help of your Supervisor/Academic counselor available at your study centre/any research Institute of your choice.

The supervisor will:

- acquaint you with such local groups and agencies as may be relevant to your work,
- give you letters of authorization which would enable you to make enquiry and investigations in different offices pertaining to your work,
- make accessible to you the library at the study centre for consultation purposes,
- advise you, to the best of his/her efforts, about your theme, location of your data and general work plan, and
- suggest books and articles that you may find useful in your work.

Prepare two copies of your Proposal (preferably typed), get the signature of the supervisor on the format given in Annexure A and send one copy on the following address:

Course Coordinator
MECP-101 Course
M.A. Economics Programme
School of Social Sciences
Block F,
Indira Gandhi National Open University
Maidan Garhi
New Delhi – 110 068
Email ID: narayanprasad@ignou.ac.in

Remember to:

- Keep a copy of the Proposal with you because we shall not send your copy back.
- Send your Proposal through Registered Post only, so that it reaches us for sure.
- Do not change your topic or even its wording after you have sent the Proposal to us. In other words, the topic of your Project Work should be the same as in your Proposal.
- Put the name and code of your course (in this case MECP-101), your enrolment number, the name of your Study Centre and the Regional Centre on the first page. In other words, fill the Proforma given in **Annexure A** very carefully.

1.3 PROJECT EVALUATION

Upon its submission, your Project Report will be sent to an examiner. You must secure a minimum of 40% marks in your Project Work in order to successfully complete your course. **Please note that the evaluation of your project will take a minimum of two months from the date of submission**.

Prepare two hard copies of your Project Work and send only **one hard copy along with a CD containing the soft copy of the report** on the following address for evaluation:

Registrar
SED Division
Block 12
Indira Gandhi National Open University
Maidan Garhi, New Delhi – 110 068

Do keep a copy of your Project Work with yourself as the copy submitted by you shall not send it back to you. Make sure your Project Work also has the declaration, given in Annexure 'C', duly signed by you and your supervisor.

Please note that the Project Work is a part of your term-end examination and 100 marks of the Project Report will be distributed as under for evaluation purpose.

	Distribution of 100 marks of the Project-Work Report	**Weightage**
1)	Clarity of topic	10%
2)	Language, coherence, style, etc.	10%
3)	Clarity of objectives	15%
4)	Methodology	20%
5)	Analysis and interpretation	25%
6)	Conclusions/inferences	10%
7)	References	10%

- Project Work should be original and report should be in your own language,
- You should not copy or reproduce any published or unpublished project or else it would be cancelled,
- Arguments should be substantiated by your logic/data/reports/published material,
- Source should be properly documented,
- The research methodology adopted by you should be stated in the first chapter of your work; and
- Give a bibliography at the end. It should include all your sources like records, documents, reports, interviews, newspapers, magazines, etc. listed under separate heads.

In case you secure less than 40% marks the University will inform you of the same and also send you evaluator's comments. After receipt of the comments, take the following steps:

- Redo your Project Work and report in the light of evaluator's comments.
- Attach Annexures B and C (No need to attach Annexure A).
- Attach a Demand Draft of Rs. 1000/- drawn in favour of IGNOU payable at New Delhi.

Project Work completed in all above respects should be sent for fresh evaluation to:

Registrar
SED
Block 12
Indira Gandhi National Open University
Maidan Garhi, New Delhi – 110 068

PART 2
STAGES OF PROJECT WORK

2.1 FORMULATION OF THE PROJECT PROPOSAL

After successful completion of the various compulsory courses of MA Economics Programme, a question may arise in your mind whether the utility of various courses pursued so far is confined to obtain MA degree or are they relevant in real life situation to understand and analyse the functioning of economy and behaviour of various economic agents like consumer, firm, entrepreneur, labourer etc. Project work provides you an opportunity to understand and apply your theoretical knowledge and quantitative skills to analyse an economic event or phenomenon observed in your day to day life.

As we have said earlier, your project proposal must include the following:

i) The title of the proposed project,

ii) A clear statement of the problem(s) to be examined,

iii) Objectives of the proposed study,

iv) Research Questions to be raised,

v) The kind of data/information to be used,

vi) Research Methodology, and

vii) Expected outcome.

Let us spell out details of these points:

1) **Identification of the theme of the Project and formulation of the problem**

For project work, you may take up such issues which you think interesting to explain with the help of economic theories and statistical techniques. For instance, if you are living in rural area, you might have observed – many workers migrate from your (rural) area to some urban areas. Questions in this regard may arise in your mind: why do they migrate? Whether migration does help them to improve their economic condition? How does migration affect the education of their children and their families? Similarly, you might have observed that some areas are more developed than others. Question may arise what are the reasons for difference in the level of their development. Inequality in the distribution of income in your area may attract your attention and motivate you to know the reasons behind this situation.

If you are working in manufacturing or marketing division of any manufacturing company, you might have come to know the cost of various inputs involved to produce the output of a commodity. You may examine in your project the cost components and price behaviour and see to what extent this is explained by the theory of the firm behaviour? How the price elasticity of demand of the particular product manufactured by a firm/industry is useful to determine its price? Similar type of more questions relating to various situations may arise in your mind. Such type of questions will motivate you how to put your theoretical knowledge into practice.

Depending upon your area of interest you can note down your questions and try to identify the theme of your project. The theme of the project should reflect the focus of the issues of study. Depending upon your research questions, the project may belong to any area of specialization

like agriculture, industry, labour and employment, developmental economics, Human development, environment, money market, capital market, education and skill formulation etc. By specifying the aspect, location and period dimension, you can finally decide the title of your project. It is important to note that you should be familiar with the geographical area you wish to base your topic on. It should be easily accessible to you.

As far as possible, the title of the project should be narrowed down. The area of the study should be at micro/local level to enable you to carry out the project easily in shorter duration.

The problem to be investigated must be defined categorically. Initially the problem may be stated in a broad way subsequently to be narrowed down in operational terms. Thus, two steps are involved in formulating the research problem:

i) Understanding the problem thoroughly, and

ii) Rephrasing it into meaningful terms from operational/analytical point of view.

Discussion with your supervisor and peer group and study of the relevant literature will be helpful in this regard. Further, going through the work done by others in the area of project work will enable you to formulate the project problem.

The availability of data and familiarity of the related literature need to be taken care of at the time of identification of the theme of the project.

Some of the topics that can help you in choosing the theme for your project work are given below:

- The welfare effects of MGNREGA at local level – its impact on rural poverty, insecurity, under nutrition, school participation, economic inequality, social relations, creation of productive assets etc.
- Linkage between rapid growth and poverty reduction at district level by using Time Series Data.
- Incidence of poverty among different social and religious categories of the people at regional level by using – various rounds of NSSO Data.
- Unit cost analysis of educational Institution of your choice.
- Work-life balance for employees working in a multi-national corporation of your choice.
- Corruption in public service department in your area: A case study.
- Child deprivation at local level.
- Women empowerment in your district.
- Child labour in your area and its ill effect on them, on their families and on society.
- Status of Human Development at regional/district level.
- Measurement of inequality among different sections of the society at local/district level.

The above topics are broad themes which may be suitably amended by specifying particular aspect, time and locational dimensions.

Please note clearly that the items listed in the box above by no means exhaust the list of themes on which you can write your project. This is an illustrative list and you can certainly go beyond or make necessary modifications in these themes to suit your local convenience. You can opt any topic of your own choice from your own area of interest. We shall welcome organization/area based projects which study area/sector specific issues.

2) **Objectives of your project study**

Objectives of the project study should be as per the requirements of your research questions.

Keep in mind that the statement of your objectives determine the data/information to be gathered, and the analysis techniques to be applied.

Since the project work is worth to be the load of one optional course and of short duration with a limited purpose, the project should not cover more than **two to three objectives**.

Objectives should be clearly written in a manner these are fulfilled in undertaking the project.

3) **Research questions**

The research questions should aim to investigate the problem identified. A few examples of research questions have already been given above. The questions can be in 'whether, what, why and how' form. If you intend to know the determinants of an issue or seek explanation in terms of cause and effect relationship, 'why' question is relevant. If you want to know the process involved in any phenomena, you may start the question by 'how'.

The question should not be more than **two or three** in your proposal.

4) **Hypothesis, if any formulated**

Keep in mind that it is not necessary to formulate the hypothesis in the project proposal. Hypothesis is a tentative proposition of explanation in terms of cause and effect relationship between two or more variables. In the studies which are exploratory or descriptive in nature, formulation of hypothesis need to be avoided. Your hypothesis if any formulated should be consistent with your research questions.

If you formulate the hypothesis, its number should not **exceed more than two**.

5) **Research Methodology**

Research methodology in your proposal should state the way you will carry out the study. **First of all**, depending upon your objectives and research questions, you have to identify the variables on which you will require information/data to complete the study. The **next step** is to state from where (source) you will get the desired data/information. Data can be collected from secondary sources, for example from the website of various data collection agencies like NSSO, Registrar of census, various Directorate of statistics and Planning Division etc. In case your requirement of data is not met with secondary sources you may collect the data by conducting a small sample survey using questionnaire or any other tool of data collection.

Keeping in view your time constraint and the level of your project study, try to confine very small sample size (not more than **100 observations** (units) for the collection of data for your study.

You have to clearly spell out the particular technique(s) to analyse the information/data proposed to be gathered for undertaking the study. The various techniques which can be applied to analyse the data have been provided in table 2.2

In brief, in your project proposal you have to specify – the sources of the data to be used, method of data collection, size of sample, tools of data collection and analysis technique under the head Research Methodology.

6) **Expected Outcomes**

In the end of the project proposal, you have to state within two to three sentences the likely outcome of your project study.

2.2 EXECUTION OF THE PROJECT

2.2.1 Data Collection and Data Source

In your project work you are expected to examine/study any specific problem/issue through quantitative/qualitative data. Hence, determination of relevant data is foremost task. Data should be relevant to examine the issues raised and to test the hypothesis, if any, formulated in the project proposal. The variables on which data is needed should be identified. You need to find out what kind of data pertaining to the topic of your project is available and to what extent it would be suitable for your project work.

There can be two types of data sources: (i) Secondary Source, (ii) Primary Survey.

i) **Secondary Source**

Unit 20, 21, 22, 23 of **Block 6 – Data Base of Indian Economy** of **MEC-109** Course entitled '**Research Methods in Economics**' deal with various data sources and types of data compiled by various data compilation agencies. You may concentrate on the unit containing the data set relating to your project theme. You are therefore advised to go through this block (Block 6 of MEC-109 Course) for ascertaining the availability of secondary data on your theme. For your convenience and ready reference, the details of different types of the data available on different websites have been provided in Table 2.1.

Table 2.1: The Websites and Data Source

Nature of Data	Data Compiling Agencies	Details of Data Type	Data Websites
Macro-Variable Data: National Income, Saving and Investment	CSO	Input Output Transaction Tables	http://mospi.nic.in/Mospi_New/upload/iott-07-08_6nov12.htm
	RBI	The handbook of Statistics on the Indian Economy	rbidocs.rbi.org.in/rdocs/Publications/PDFs/000HSE13120914FL.pdf
	Private Websites	Macro Variable Data	www.indiastat.com
	System of National Accounts (SNA) 2008	Macro Variable Data	http://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf
Agriculture and Industrial Data	Directorate of Economics and Statistics Dept. of Agriculture and Cooperation	Agricultural Data	http://eands.dacnet.nic.in
	Animal Husbandry Statistics Division, Dept. of Animal Husbandry, Dairy and Fisheries	Animal Husbandry	Dahd.nic.in/dahd/statistics/animal-husbandry-statistics.aspx
	Ministry of Agriculture (Dept. of Agriculture	Statistics on Agriculture and Allied Activities: Agricultural Statistics at a Glance, Agricultural Situation in India	www.data.gov.in
	Dept. of Agriculture	Agriculture Census in India	http://agcensus.dacnet.nic.in
	Dept. of Agriculture	Agriculture Input Survey	http://inputsurvey.dacnet.nic.in/nationalsummary.aspx
	CACP	The Cost of Cultivation Studies Reports and Related Data	http://cacp.dacnet.nic.in/ViewContents.aspx?Input=1&PageId=36&KeyId=0A
	Private Websites	The Data related to the Terms of Trade between Agriculture and Industry	http://articles.economictimes.indiatimes.com/2002-02-04/news/27340862_1_bananas-issue-prices-trade
	Dept. of Agriculture	The Pocket book on Agriculture Statistics	http://eands.dacnet.nic.in/latest_2006.htm
	NABARD	Cooperative Movement and Agriculture Credit	http://www.nabard.org/english/home.aspx
	Ministry of Finance and RBI	Data on Area, Production and Yield of Crops	http://rbidocs.rbi.org.in/rdocs/Publications/PDFs/000HSE13120914FL.pdf

	RBI	The RBI Handbook of Statistics on Indian Economy – 2013-1400	http://dbie.rbi.org.in http://mospi.nic.in/Mospi_New/upload/nsso/ratelist_UnitData.pdf
	NSSO	Periodic Unorganized Sector Surveys	http://www.csoisw.gov.in/CMS/En/1024-asi-manual.aspx
	CSO	Annual Survey of Industries: CMI and SSMI Reports	http://www.csoisw.gov.in/cms/cms/Files/572.pdf
	Indian Bureau of Mines (IBM)	Mineral Data	http://ibm.nic.in/msmpmar13.htm
	UNSD	Energy Statistics of 224 countries of the world	http://unstats.un.org/unsd/energy/yearbook/2011/004-10.pdf
	ILO	Surveys on Employment and Child Labour related issues	http://labordoc.ilo.org/
	International Energy Agency (IEA)	World Energy Outlook	http://iea.org/statistics
	Food and Agriculture Organization (FAO)	Food and Agricultural Related Data	www.fao.org
Trade and Finance	DGCI & S	Detailed Data on India's Foreign Trade	http://www.dgciskol.nic.in/new_registration.asp
	RBI	FDI Data	www.rbi.org.in
	Ministry of Commerce and Industries	Monthly Data on FDI	http://dipp.gov.in/English/Publications/FDI_Statistics/FDI_Statistics.aspx
	SEBI	SEBI Handbook of Statistics of Indian Securities Market	http://sebi.gov.in/sebiweb/home/list/4/32/0/0/Handbook%20of%20Statistics
	RBI	Report on Currency and Finance, Report on Trends in Banking	http://dbie.rbi.org.in/DBIE/dbie.rbi?site=home
	SEBI	Handbook of Statistics on the Indian Security Market – 2014	www.sebi.gov.in
Social Sector	Census of India	Data on Employment and Unemployment	http://www.census.nic.in
	MoSPI	NSSO quinquennial surveys on Employment and Unemployment	www.mospi.gov.in
	MoSPI	The Unit Level Data collected in the Surveyed Households. Also available in CD form	http://mospi.nic.in/Mospi_New/upload/nsso/ratelist_UnitData.pdf
	Ministry of Human Resource Development	Educational Data	http://mhrd.gov.in/sites/upload_files/mhrd/files/statistics/InSCED2014_0.pdf
	NUEPA	Report of the eighth AIES	http://aises.nic.in/surveyoutputs
	Ministry of Environment and Forests	Environment Statistics	http://www.moef.nic.in/sites/default/files/annual_report/AR-2013-14-Eng.pdf

About secondary data, it is necessary to determine and record (i) Who did collect the data? (ii) When was it collected? You should note the following details about every source of information:

i) Full title of the document, book, journal, map, etc.

ii) Department/agency/author who has prepared the document, book, journal etc.

iii) Date/year when the document was prepared, and

iv) Edition, place of publication and publisher for books and articles.

ii) **Primary Survey**

In case, the desired data is not available through secondary sources, you may collect the data at your own. Let us recollect that in Unit 7 of MEC-109 Course, we have studied that there are three methods of data collection – *the Census and Survey Method, the Observation Method and the Experimental Method*. The first is a carefully planned and organized study or enquiry to collect data on the subject of the study/enquiry. We might for instance organize a survey on the prevalence of the smoking habit among high school children – those aged 14 to 17 – in a certain city. One approach is to collect data of the kind we wish to collect on the subject matter of the study from *all* such children in *all* the schools in the city. In other words, we have a ***complete enumeration*** or ***census*** of the ***population*** or ***universe*** relevant to the enquiry, namely, the city's high school children (called the *respondent units or informants* of the study) to collect the data we desire. The other is to confine our attention to a *suitably selected part of the population* of high school children of the city, or a ***sample,*** for gathering the data needed. We are then conducting a *sample survey*. A well known example of Census enquiry is **Census of Population** conducted in the year **2011**, where data on the demographic, economic, social and cultural characteristics of *all persons* residing in India were collected. Among **sample surveys** of note are the household surveys conducted by the National Sample Survey Organization (NSSO) of the Government of India that collect data on the socio-economic characteristics of a sample of households spread across the country.

The Observation Method records data as things occurs, making use of an appropriate and accepted method of measurement. An example is to record the body temperature of a patient every hour or a patient's blood pressure, pulse rate, blood sugar levels or the lipid profile at specified intervals. Other examples are the daily recording of a location's maximum and minimum temperatures, rainfall during the South West/North East mansoon every year in an area, etc.

The Experimental Method collects data through *well designed and controlled* statistical experiments. Suppose for example, we wish to know the rate at which manure is to be applied to crops to maximize yield. This calls for an experiment, in which all variables other than manure that affect yield, like water, quality of soil, quality of seed, use of insecticides and so on, need to be controlled so as to evaluate the effect of different levels of manure on the yield. Other methods of conducting the experiment to achieve the same objective without controlling "all other factors" also exist. Two branches of statistics – The Design and Analysis of Experiments and Analysis of Variance – deal with these.

How do we collect data? We translate the data requirements of the proposed Study into items of information to be collected from the respondent units to be covered by the study and organise the items into a logical format. Such a format, setting out the items of information to be collected from the respondent units, is called ***the questionnaire or schedule*** of the study. The questionnaire has a set of pre-specified questions and the replies to these are recorded either by the respondents

themselves or by the investigators. The *questionnaire approach* assumes that the respondent is capable of understanding and answering the questions all by himself/herself, as the investigator is not supposed, in this approach, to influence the response in any manner by interpreting the terms used in the questions. Respondent-bias will have to be minimised by keeping the questions simple and direct. Often the responses are sought in the form of "yes", "no" or "can't say" or the judgment of the respondent with reference to the perceived quality of a service is graded, like, "good", "satisfactory" or "unsatisfactory".

In the *schedule approach* on the other hand, the questions are detailed. *The exact form of the question to be asked of the respondent is not given to the respondent and the task of asking and eliciting the information required in the schedule is left to the investigator.* Backed by his training and the instructions given to him, the investigator uses his ingenuity in explaining the concepts and definitions to respondents to obtain reliable information. This does not mean that investigator-bias is more in the schedule approach than in the questionnaire approach. Intensive training of investigators is necessary to ensure that such a bias does not affect the responses from respondents.

Schedules and questionnaires are used for collecting data in a number of ways. Data may be collected by personally contacting the respondents of the survey. Interviews can also be conducted over the telephone and the responses of the respondent recorded by the investigator. The advent of modern electronic and telecommunications technology enables interviews being done through e-mails or by 'chatting' over the internet. The mail method is one where (usually) questionnaires are mailed to the respondents of the survey and replies received by mail through (postage pre-paid) business-reply envelopes. The respondents can also be asked (usually by radio or television channels or even print media) to send their replies by SMS to a mobile telephone number or to an e-mail address.

Collection of data can also be done through mechanical, electro-mechanical or electronic devices. Data on arrival and departure times of workers are obtained through a mechanical device. The time taken by a product to roll off the assembly line and the time taken by it to pass through different work stations are recorded by timers. A large number of instruments are used for collecting data on weather conditions by meteorological centres across the country that help assessing current and emerging weather conditions. Electronic Data Transfers (EDT) can also be the means through which source agencies like ports and customs houses, where export and import data originate, supply data to a central agency like the Directorate General of Commercial Intelligence and Statistics (DGCI&S) for consolidation.

The above methods enable us to collect *primary data,* that is, data being *collected afresh* by the agency conducting the enquiry or study. . The agency concerned can also make use of data on the subject *already collected* by another agency or other agencies – *secondary data.* Secondary data are published by several agencies, mostly Government agencies, at regular intervals. These can be collected from the publications / compact discs or the websites of the agencies concerned. But such data have to be examined carefully to see whether these are suitable or not for the study at hand before deciding to collect new data.

Errors in data constitute an important area of concern to data users. Errors can arise due to confining data collection to a sample. (*sampling errors*). It can be due to faulty measurement arising out of lack of clarity about what is to be measured and how it is measured. Even when these are clear, errors can creep in due to inaccurate measurement. Investigator bias also leads to errors in data. Failure to collect data from respondent units of the population or the sample due

to omission by the investigator or due to non-response (respondents not furnishing the required information) also results in errors. (*non-sampling errors*). The *total survey error* made up of these two types of errors need to be minimised to ensure quality of data.

There are various methods to draw sample in various situations. The various sampling methods and how to decide the sample size have been covered in Unit 7 of Block 2 of MEC-109 course. You may go through this unit in case you are planning to collect data through primary survey.

2.2.2 Data Analysis

After tabulation and classification of the data, the next step is to process and analyse the data. Depending upon your need and objectives, the various quantitative techniques ranging from percentage, mean, correlation, regression to advanced techniques like factor analysis, cluster analysis etc. and qualitative methods may be applied to analyse the data. The application of various statistical/quantitative techniques which have been covered in various courses of MA Economics have been provided in table 2.2 below:

Table 2.2: Application of Statistical Techniques for Analysis of Data

Sl. No.	Statistical Technique	Application/Purpose	Unit no. and the Course Code where the technique has been covered
1	Measures of Central Tendency (Mean, Median, Mode)	These techniques are used in uni-dimensional analysis concerning one variable. Mostly these techniques are used in social economic surveys and qualitative research.	Since these techniques are taught at undergraduate level, these have not been specifically covered in our MA Courses
2	Measures of dispersion (like standard deviation, mean deviation, range, quartile deviation etc.	i) To know the characteristics of quantitative data set.	Since these techniques are taught at undergraduate level, these have not been specifically covered in our MA Courses
3	Measures of inequality: Positive and normative measures: Gini Coefficient, Lorenz Curve and other methods.	To measure the income inequality.	Unit 11 of Block 3 of MEC-109 course and Unit 11 of MEC-105 Course
4	Bivariate Analysis 1. Simple Correlation	i) To know the degree and direction of relationship between two or more variables. ii) To know the association of attributes (through coefficient of association and coefficient of contingency.	Unit 13 of MEC-003 Course
	2. Simple Regression (Two variable regression model)	i) To examine the relationship between two variables in terms of estimation of how much change in one variables (independent variables) will bring how much change (effect) in another variable (dependent variable)	Unit 9 of MEC-109 Course
5	Multivariable Regression Model	To know the effects of several variables (independent variables) on dependent variables by way of estimation of coefficient of more than one independent variables.	Unit 10 of MEC-109 Course

6	Composite Index Number	To know the status of developmental issues like human development, child deprivation, happiness (on various areas) which have several dimensions, and are measured in terms of various indicators.	Unit 12 of MEC-109 Course and Block 5 of MEC-004 Course.
7	Factor Analysis	To know the important components or factors which are important in explaining the variation in the dependent variable.	Unit 13 of MEC-109 Course.
8	Cluster Analysis	To provide a simple classification of units into sub groups based on information contained in some variables.	Unit 15 of MEC-109 Course.
9	Canonical Correlation Analysis	To analyse the association between two theoretical concepts like economic inequality and political instability measured in terms of separate set of indicators.	Unit 14 of MEC-109 Course.
10	Correspondence Analysis	To analyse the main features of the contingency table and to interpret patterns in multivariate categorical data.	Unit 16 of MEC-109 Course.
11	Participatory Methods	To conduct the study from the perspective of participants involved in the field (Emic view) – Application of various qualitative methods.	Unit 18 of MEC-109 Course.
12	Content Analysis	To analyse the various economic issues covered in the text books and also in the media.	Unit 19 of MEC-109 Course.
13	Action Research	To analyse the process for change and improvement at local level wherein knowledge is generated in the process of knowing through doing.	Unit 20 of MEC-109 Course.

The various computer software packages can also be used for this purpose. For ensuring the statistical reliability of your results, you may also apply the various statistical tests. Before applying a particular technique, you may consult the relevant unit of the course to have an insight and detailed knowledge. Since most of the data collection and data analysis techniques have been covered in **Block – 3, 4 and 5 of our course MEC-109 (Research Methods in Economics)**, you are advised to pursue MEC-109 Course before taking up the project work (optional course - MECP-101).

With a view to make you understand the methods involved in data collection and analysis of the data, two illustrations are given below:

ILLUSTRATION 1

Tentative Theme of the Project: Status and Measurement of Food Security at District Level

Food Security having several dimensions and various indicators is difficult to analyze in terms of single variable. In order to know the status of the Food Security of a particular area be it block, tehsil or district, we can construct composite index and can analyze the situation of food security by constructing the Composite Food Security Index. The method to construct the Composite Index has been provided in Unit 12 of MEC-109 course (Research Methods in Economics). The Food Security Index can take into consideration the three dimensions of Food Security i.e. food availability, food accessibility, absorption of food. The following indicators can be used to examine these three dimensions:

1) **Availability**: Proportion of net irrigated area to net sown area, per capita value of agricultural output, percentage of inhabited villages having access to paved roads, percentage of forest area to total geographical area.

2) **Access**: Percentage of agricultural labourers to total workers, proportion of ST and SC population to total population, share of Working Age Population, monthly per capita consumption expenditure, rural casual wage rate, female literacy rate.

3) **Utilization**: Percentage of households having access to safe drinking water, percentage of inhabited villages having access to health services in rural areas.

The data source of the above indicators are given as below:

Sl.No	Name of the Variable	Data Source
1	Proportion of net irrigated area to net sown area	Department of Agriculture and cooperation, Ministry of Agriculture, Government of India, Downloaded fromagricoop.nic.in/kharif2012/state//ap.ppt
2	Per capita value of agricultura output	Directorate of Economics and Statistics, Ministry of Agriculture, Government of India, New Delhi, downloaded from http://apy.dacnet.nic.in/crop_fryr_toyr.aspx
3	Percentage of inhabited villages having access to paved roads.	Census of India 2011
4	Percentage of forest area to total geographical area	Ministry of Environment, Government of India, downloaded from www.fsi.nic.in/sfr2003/andhra.pdf
5	Percentage of agriculture labourers to total workers	Census of India 2011
6	Proportion of ST and SC population to total population	Census of India 2011
7	Share of working age population	Census of India 2011
8	Monthly per capita consumption expenditure	68th NSS round 2011-12, by primary survey at local level
9	Rural casual wage rate	68th NSS round 2011-12, agriculture wages in India, by primary survey at local level
10	Female literacy rate	Census of India 2011
11	Percentage of households having access to safe drinking water	Census of India 2011, by primary survey at local level
12	Percentage of inhabited villages having access to Health Services in Rural Areas	Census of India 2011

Similarly the various complex issues like Child Deprivation, Women Empowerment, Human Development, Human Well-being etc. having several dimensions and indicators which are difficult to measure in terms of single variable can be analyzed by using Composite Indexes.

Illustration 2

Tentative Theme of the Project: Invisible Work Force in your Area

Invisible workforce comprises of care-workers who work daily for low/negligible wages. However, their work is critical to the success of the household/enterprise. Primarily constituting of housewives, nannies, cleaners, etc., these workers are engaged in 'care' work and their work is generally under-valued or over-looked. As per Census 2011 figures nearly 160 million women in India aged between 15-59 years reported themselves as not working but were primarily involved in domestic work, care work and rearing families.

From An interpretive perspective you can use qualitative methods to understand the root causes of such women not involved in economic work. Research could begin with penning down research questions like

1) Why the women have not taken up work outside home?
2) Are their social pressures for the women sticking to domestic work?
3) Whether the decision to work at home independent or curbed?

You can select a region/area predominantly populated with invisible workers and can use the participatory method to gather the requisite data. The details of the Participatory method has been provided in **Unit 18** of the course **MEC-109** (Research Methods in Economics). The perspectives on invisible work may differ among the social actors in this case too. For example you are probing the causes of invisible work. You may observe that causes may be social, cultural or at times political too. It would be important to gather perspectives of not only unpaid care-workers but also from their family members as to why they did not try to change their current situation, researcher to understand whether it is due to lack of economic opportunities in the area or illiteracy is the cause of invisibility of women workers.

In undertaking such type of studies, you have to undertake the primary survey and the tools like group discussion, key informants, semi structured interview etc. are to be used for data collection. The descriptive statistics can be used for analysis. By virtue of using the nominal and ordinal scale of data, the quantitative techniques like regression models may not be suitable for such type of studies.

2.2.3 Writing the Project Report

Originality and clarity are the two vital components of your project. The soft copy/CD of your project report will be checked through an anti-plagiarism software to know the originality of your report. Remember your project is a test of your analytical capacity and skills of communication. This kind of writing is not just an exercise in recording your impressions or writing a story. It is also an exercise in the organization of your ideas. Therefore do keep the following points in mind while writing your project report:

- The size of the project report depends on the nature of the theme of the project. However it is desirable to write the project report between 15000-20000 words (between 50 and 60 pages) as a standard size in one and half space typed form. You may write project report in Hindi or in English language.
- Divide your report in about 4 to 5 chapters. Each chapter may be subdivided into sections and subsections. This will give certain coherence to your project and prevents different ideas from spilling into different places.
- Writing an introduction is important as it gives a certain entry point to your project. Afterwards aims and objectives should be stated very explicitly.
- The quality of your project to some extent depends on the strength of your methodology. Therefore, methodology should be stated in a clear manner. For the sake of clarity, methodology refers to (i) theoretical perspectives and the logic of enquiry that guides research, (ii) techniques of data collection, and (iii) tools or methods of analysis of the data.
- Brief review of similar or relevant projects/studies, (if any available) within a maximum of 2 to 3 pages) made by other scholars.
- All your arguments should be neatly tied and logically culminated at the end of each section. The inter-connection between different sections should be clearly maintained.
- Have a paragraph of 'summing up' to each chapter.
- List out your objective wise findings.
- Project should be written in your own language using simple words and short sentences as far as possible. It would be better if you write the first draft and then edit it both in terms of its language and content.
- Use photographs, maps, diagrams and illustrations, in case they are needed.

The following sequence is to be followed in organizing the report:

a) Cover page: On the first page of the report indicate the title of the project, your name, address, year and enrolment number. (as per annexure B of this manual)

b) Second page should cover the contents of the project report followed by the list of tables, maps and figures/illustrations on third page.

c) The fourth page is to give acknowledgements.

d) The fifth page is to list alphabetically a list of abbreviations.

e) From the 6th page onwards, you need to give first introduction to your project, its approach, including rationale of the selection of the project theme, objectives, research methodology including description of techniques or methods adopted for data collection and analysis, limitations of the study etc. This will constitute the first chapter of the project report.

f) From the second chapter onwards the main body of the project will start.

g) In the last chapter, you will state the findings drawn from the project work and your suggestions, if any.

2.2.4 List of References

In the end you need to give a list of references.

The Reference List should begin on a separate page from the text under the label References, centered at the top of the page. References are listed in an alphabetical order of author's surname of first two title words, if there is no author. List the elements that identify the work's author, title, publication data, and its poublisher. For online publications, add elements stating where and when you retrieved the document. For illustration purpose the examples of references are being given below. You may follow this pattern in your project report.

Sl.No.	Bibliography	Citations in Text	Direct Quote/Paraphrase
1	Book 1) Single Author	Bardhan, Pranab. (1984). *The Political Economy of Development in India.* Bardhan (1984) Oxford: Basil Blackwell	If the author's name occurs naturally in the sentence as: agrees with……. If the name does not occur naturally as in: Another study on development policies (Bardhan, 1984)
	2) Three or More Authors	Baxter, Craig., Malik, Y.K., Kennedy, H.K., & oberst, R.C. (1998). *Government and Political in South Asia*. Lahore: Vanguard Books.	First citation (Baxter, Malik, Kennedy & Oberst, 1988, p,122) Subsequent citations (Baxter et al., 1988 p.122) Omit the page number if Paraphrasing
	3) Edited	Goodin, E.R. & Hans-Dieter Klingeman (Eds.).(1996). *A New Handbook of Political Science*. New York: Oxford University Press.	(Goodin & Klingemann, 1966, p.33) or (Goodin & Klingemann, 1966)
	4) Chapter in Edited Almond, G.A., (1996). Book	Political Science: The History of the Discipline. In Goodin, E.R. & Hans-Dieter Klingemann (Eds.). (1996). *A New Handbook of Political Science (50-96).* New York: Oxford University Press.	(Almond, 1996, p.72) or, (Almond, 1996)
	5) Group Author/ Publisher	ISRO (Indian Space Research Organisation). (n.d.) *20 years of Rocketry in Thumba*. Bangalore: Vikram Sarabhai Space Centre, ISRO	(ISRO, n.d., p.3) or (ISRO, n.d.)
II	Government Publications	Country. Government Department. (Year) *Title: Sub-Title*. (Edition) (Government Catalogue Number, if any). Place of Publication: Publisher. India. Atomic Energy Commission (AEC)(1970). *Atomic Energy and Space Research: A Profile for the Decade 1970-1980*. Bombay: Author.	(AEC, 1970, p.7) or (AEC, 1970)

III	Published Conference Proceddings	Sen, Amartya. (1980) Equality of What? In S. McMurrin (Ed.). *The Tanner Lecturers on Human Values*. Vol. 1 Salt Lake City: University of Utah Press.	(Sen, 1980, p.110) or (Sen, 1980)
IV	Encyclopedia	Sills, D.L. (1968) Functionalism and Functional Integration. In *the International Encyclopedia of the Social Sciences* (Vol.7, pp. 534-47). London: Collier Macmillan.	(Sills, 1968, p.110) or (Sills, 1968)
V	Journal Article 1) One or Two Authors	Kochanek, Stanley A. (1986). and Liberalisation Theology in India. *Asian Survey*, Survey, 22, 1284-1308.	(Kochanek, 1986, p.1296) or (Kochanek, 1986)
	2) Three or More Authors	Alesina, A.., Cohen, G & N. Roubini. (1993) Electoral Business Cycles in Industrial Democracies, *European Journal of Political Economy*, 9,1-23.	First citation (Alesina, Cohen & Roubini (1993, p19) Subsequent Citations (Alesina et al., 1993,p19) or (Alesina et al., 1993)
	3) Electronic	Toffler, Alvin & Heidi Toffler. (2003). Why the United Nations is Cracking as the Future Arrives. Parallax: *The Journal of Ethics and Globalisation*. Retrieved October 20, 2004, from http://www.Parallaxonline.org/toffler1.html	(Toffler & Toffler, 2003)
VI	Electronic Document No author, no date year, no page number	Style list for reference. (n.d.). January 1, 2001, from http://www.apa.org	Because these is no date and no author, your text citation would include the first couple of words from the title in quotations and n.d. for no data and the paragraph number, (if provided; alternatively. You could count paragraphs down from the beginning of the document), (e.g., "Style List,: n.d., para 5).
VII	Website	United Nations Development Programme (UNDP). (2003). *Human Development Report*. Retrieved October 20, 2004, from http://www.undp.org.hdr2003/	(UNDP, 2003, p.46) or (UNDP, 2003)

You must retain the Project Guide till you have completed the entire programme

In case of any additional academic query, you may write to:

Programme Coordinator
(M.A. Economic Programme)
Block-F,
School of Social Sciences
Indira Gandhi National Open University
Maidan Garhi
New Delhi-110 068
Email ID: gnpradhan@ignou.ac.in

Course Coordinator
MECP-101 – Course
(Project Work in M.A. Economic Programme)
School of Social Sciences
Block 'F', Room No. 108
IGNOU, Maidan Garhi
New Delhi-110 068
Email ID: narayanprasad@ignou.ac.in

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ANNEXURES

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Annexure A

Project Proposal No._____

(To be assigned by the School)

School of Social Sciences
INDIRA GANDHI NATIONAL OPEN UNIVERSITY
Proforma for Approval of Project Proposal (MECP-101)

Enrolment No. _____ Study Centre Code _____

Regional Centre Code _____

Name of the Student : _____

Address of the Student : _____

_____

Email Address and Phone No. : _____

Title of the Project : _____

_____

Name of the Guide : _____

Is the Guide an Academic Counsellor of M A Economics Programme of IGNOU? Yes/No

If Yes, Name and Code of Study Centre : _____

No. of Students currently working: under the supervision for MECP-101 _____

Signature of Student Signature of Guide

Date: Date:

Please do not forget to enclose the Project Proposal and signed Bio-data of the guide

For Office Use Only

Proposal	Guide
Approved	Approved
Not Approved	Not Approved

(SIGNATURE OF ECONOMICS FACULTY)

Date:_____

Comments of the Faculty if the proposal is not approved:

Annexure B

First Page of the Project Work

Programme Code : **MEC**

Course Code : **MECP-101**

Enrolment No : | | | | | | | | | |

Study Centre Code : | | | | |

Regional Centre : .....

TOPIC OF THE PROJECT WORK

.....

.....

Project Work submitted to the Indira Gandhi National Open University in partial fulfillment of the requirements for the award of the Degree – Master of Arts (Economics). I hereby declare that this work has been done by me and has not been submitted elsewhere.

Signature of the Candidate .....

Name of the Candidate .....

Address, if any .....

.....

.....

Year .....

Annexure C

CERTIFICATE

Certified that the Project Work entitled (Topic of the Project) .....
submitted by (Name of the Candidate) .....
is his/her own work and has been done/redone in the light of evaluator's comments under my supervision.

It is recommended that this Project be placed before the examiner for evaluation.

(Signature of the Supervisor)

Name .....

Address .....

.....

Study Centre: .....

Regional Centre: .....

Date: .....

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Project Guide
For
Project Work for Master of Arts
(Economics) Programme

INTRODUCTION

As mentioned in the Programme Guide of MA Economics Programme, you have the option to undertake the project work as an optional course MECP-101. In case you opt the project work, you will be required to submit the Project Report to the University.

This guide has been prepared to help you in doing a Project work by familiarizing you with its various aspects. Go through the guide before you begin work on the Project. This Project Guide has three parts. The first part provides general information about the project work; the second part details the different stages of the Project Work; and the third part consists of annexures which shall be used at different stages of the Project work.

PART 1 GENERAL INFORMATION

Project work is an application oriented academic activity and aims to sharpen your theoretical and quantitative skills through their application in the light of theoretical knowledge gained while pursuing the various courses of MA Economics particularly MEC-001, MEC-002, MEC-003, and MEC-109. The project work will enable you to analyse the various economic events and situations observed in real life. In short, **it is a way of applying the knowledge gained through the various courses to the issues and concerns of day to day events in the economy.**

This Project Work is of six credits and you are expected to spend about 180 hours of total work in completing the Project work. We would prefer to receive a **typed and bound copy of your Project Report**. The length of your Project Report may be between 15000-20000 words (50-60 pages). Keep this in mind while choosing the Project theme. The idea is that you should be able to say all that you want to say within these words limit. **You are free to write your Project Report in English or in Hindi language**.

1.1 SUBMISSION OF PROJECT PROPOSAL

After you opt for project work, you are expected to submit hard copy in the typed form of the project proposal along with project proposal form (Annexure 'A' of this manual) on the following address:

Course Coordinator
MECP-101 Course
M.A. Economics Programme
Block 'F'
School of Social Sciences
IGNOU, Maidan Garhi
New Delhi – 110068

PART 2 STAGES OF PROJECT WORK

2.1 FORMULATION OF THE PROJECT PROPOSAL

After successful completion of the various compulsory courses of MA Economics Programme, a question may arise in your mind whether the utility of various courses pursued so far is confined to obtain MA degree or are they relevant in real life situation to understand and analyse the functioning of economy and behavior of various economic agents like consumer, firm, entrepreneur, labourer etc. Project work provides you an opportunity to understand and apply your theoretical knowledge and quantitative skills to analyse an economic event or phenomenon observed in your day to day life.

As we have said earlier, your project proposal must include the following:

i) The title of the proposed project,

ii) A clear statement of the problem(s) to be examined,

iii) Objectives of the proposed study,

iv) Research Questions to be raised,

v) The kind of data/information to be used,

vi) Research Methodology, and

vii) Expected outcome.

Let us spell out details of these points:

1) Identification of the theme of the Project and formulation of the problem

For project work, you may take up such issues which you think interesting to explain with the help of economic theories and statistical techniques. For instance, if you are living in rural area, you might have observed – many workers migrate from your (rural) area to some urban areas. Questions in this regard may arise in your mind: why do they migrate? Whether migration does help them to improve their economic condition? How does migration affect the education of their children and their families? Similarly, you might have observed that some areas are more developed than others. Question may arise what are the reasons for difference in the level of their development. Inequality in the distribution of income in your area may attract your attention and motivate you to know the reasons behind this situation.

If you are working in manufacturing or marketing division of any manufacturing company, you might have come to know the cost of various inputs involved to produce the output of a commodity. You may examine in your project the cost components and price behavior and see to what extent this is explained by the theory of the firm behavior? How the price elasticity of demand of the particular product manufactured by a firm/industry is useful to determine its price? Similar type of more questions relating to various situations may arise in your mind. Such type of questions will motivate you how to put your theoretical knowledge into practice.

Depending upon your area of interest you can note down your questions and try to identify the theme of your project. The theme of the project should reflect the focus of the issues of study. Depending upon your research questions, the project may belong to any area of specialization

PART 3 ANNEXURES

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