

INDIVIDUAL EMPIRICAL PROJECT 2023/ 24

1. General Information

Students taking this module must carry out an empirical project. This project accounts for 60 % of the final mark. The word count must not exceed 3000 words. The project must be your own work. The main aim of this project is:

- To gain skill in the use of available specialised software to carry out an empirical project. This include Python, SPSS, R and Eviews.
- To acquire (improve) research skills including finding relevant literature and data sources.
- To be able to apply in practice different econometric models acquired using real world data.

2. Required

You can choose any topic as long as it is consistent with the content of the MSc course you are undertaking. You might want to choose a topic based on an interesting data set or a published article. Do not agonise too long over choosing a topic. Once you have chosen a topic and collected the required data, do not be tempted to switch.

A replication study can be a good option. Get a published paper that use models similar to those taught in Predictive Analysis for Decision Making (or can be replicated using taught methods). A replication study involves repeating similar empirical exercise using (i) extended data sets, (ii) the same model on different data, (iii) testing the robustness and sensitivity of the published results and/ or (iv) any other extension – minor or otherwise – that one may add or make on the existing work.

Alternatively, you may start thinking of a topic that can be developed into a dissertation.

In any case, the coursework is an empirical exercise, which requires the following:

- i. Applying econometric models taught in this module.
- ii. Interpreting econometric findings in line with existing/ known theory or conceptual framework.
- iii. Finding data suitable for the study. The sample size need to be relatively large. Remember this module and the methods taught require a large data set. Here is a rough guide for you to follow:

Data Type	Frequency	Sample Size (at least)
Cross Section	NA	100 individuals/ units
Time Series	Annual	50 years
	Quarterly	25 years
	Monthly	15 years
	Weekly	7 years
	Daily	5 years
Panel Data	Time	10 years
	Cross-sections	20 individuals/ units
Others (e.g. Text)	Sample must be reasonably large. Please check with module leader for further guidance.	

Finding the appropriate data can be the most difficult part. Make it your first priority and check that the data is available before deciding on a topic. There are various databases from the university (DataStream, Bloomberg) and other credible websites.

Make sure you have enough observations and variables. The sample size plays an important role in the precision of your results and what you can do. Make sure that you know the exact definition of the data. Terms like income and prices are not acceptable. Are the variable in constant or current prices? What is their base year? What is their coverage (Net or Gross, National or Domestic)? Are they seasonally adjusted?

3. Structure

The final project must be typed, structured and well organised. Do not just transcribe the results of performing dozens of regressions. Try to structure the interpretation of the results, pose questions and explain how the regressions provide answers to them. As you write up the results you are almost certain to think of something else you need to do. Therefore, start writing up early.

You should inform the reader about the things they are not expected to know and will need to know in order to understand what you have done. Do not copy out large chunks from econometric textbooks. It is likely I know most of that, just give a reference.

I strongly recommend that the project takes the following form. The length of each section will differ from project to project.

(I) First page (5 Marks): This should contain your name, title of the project and a short abstract of no more than 100 words. Give any acknowledgements for any help that you may have received whilst working on your project.

(II) Introduction (10 Marks): Introduce the subject and give some background information and refer to any relevant literature. This should follow the questions that you are going to attempt to answer and the significance of the results from this study.

(III) Theory/ Literature Review (20 Marks): Set out very briefly the economic theory or motivation for the topic. Use it to specify a model. Discuss the interpretation of the parameters (e.g. elasticities, marginal propensities, etc) and set out any a priori expectations of the signs

and magnitude of the parameters if necessary. Also comment on the hypotheses to be tested (e.g. efficient market, stability of parameters, etc).

(IV) **Data (10 Marks):** Discuss the sources of the data, the sample size and frequency of the data, definitions of the variables. Describe the main features of the data with graphs. Submit the data and codes you used directly to the module leader (i.malki@westminster.ac.uk).

(V) **Econometric/ Statistical Model (15 Marks):** Use the economic model and the structure of the data to choose an econometric model (e.g. linear regression, ARIMA, GARCH, Probit/ Logit etc.). Explain why you choose a particular econometric model. Report the results briefly.

(VI) **Interpretation (15 Marks):** Evaluate your chosen empirical econometric model in the light of the theory/ framework that was postulated and compare your results with those of past studies.

(VII) **Conclusion (10 Marks):** Explain the significance of your results and how they relate to the questions posed in the Introduction. Discuss future avenues for research.

(VIII) **References¹ (10 Marks):** There should be a list of works cited at the end. Statements, assertions and ideas made in the project should be supported by citing relevant sources. Sources cited in the text should be listed at the end of the assignment in a reference list. Any material that you read but do not cite in the report should go into a separate bibliography. Bibliography though is not needed. Unless explicitly stated otherwise by the module teaching team, all referencing should be in **Westminster Harvard** format. If you are not sure about this, the library provides guidance (available via the library website pages).

(IX) **Appendices:** Report further and additional results when appropriate. The appendices are not part of the word count. The main results should not be reported here.

The remaining 5 marks are for the overall presentation.

Before you hand your project in check that your project has your name, a title, an abstract, page numbers, references, the pages are numbered in the right order, the tables are numbered properly, and the data are submitted.

Re-read it a final time to check.

4. Report Submission Instructions

Only an electronic copy should be handed in. The copy should be submitted via the blackboard site of the module by **1:00 p.m. on THURSDAY 9 MAY 2024**.

Difficulties in submitting assignments on time

If you have difficulties for reasons beyond your control (e.g. serious illness, family problems etc.) that prevent you from submitting the assignment, make sure you apply to the Mitigating Circumstances board with evidence to support your claim as soon as possible. The WBS Registry or your personal tutor can advise on this.

¹ This also includes citing literature within the text.

Submitting your coursework - checks

You must include your name, student ID and word count on the first page of your assignment.

Unless indicated otherwise, coursework is submitted via Blackboard. On the Blackboard home page for the module, you will find a button on the menu called 'Submit Coursework'. Clicking this will take you to the submission link.

Note: *At busy times the coursework submission process may run slowly. To ensure that your submission is not recorded as a late submission, avoid submitting very close to the deadline.*

To submit your assignment:

- Log on to Blackboard at <http://learning.westminster.ac.uk>;
- Go to the Blackboard site for this module;
- Click on the 'Submit Coursework' link in the navigation menu on the left-hand side
- Click on the link for the assignment;
- Follow the instructions.

Academic integrity

What you submit for assessment must be your own current work. It will automatically be scanned through a text matching system to check for possible plagiarism.

Do not reuse material from other assessments that you may have completed on other modules. Collusion with other students (except when working in groups), recycling previous assignments (unless this is explicitly allowed by the module leader) and/or plagiarism (copying) of other sources all are offences and are dealt with accordingly. If you are not sure about this, then speak to your class leader.

5. General Threshold Criteria

The descriptions below are indicative of what is needed to merit a mark at a given level:

	Percentage	General Criteria
D i s t i n c t i o n	90-100% (exceptional)	As below, with highly sophisticated level of theorization and innovative conceptualization or methodology
	80-89% (superior)	As below, with greater insight/originality and wider/deeper engagement with the literature
	75-79% (confident)	Authoritative grasp of conceptual context Insight or originality in way topic is conceptualized or developed Comprehensive integration of relevant literature/debates Advanced scholarly style (of publishable quality)
	70-74% (solid)	Strong grasp of conceptual context Insight in way topic is conceptualized or developed Good integration of relevant literature/debates Scholarly style (publishable with minor revisions)
M e r i t	65-69% (very good)	Good conceptual understanding Critical analysis using an appropriate range of sources Clarity and precision in presenting arguments
	60-64% (competent)	As above, with less depth and criticality
P a s s	55-59% (promising)	As below, plus stronger on analysis
	50-54% (passable)	Basic grasp of essential concepts/theory/sources Some analysis/interpretation Reasonably clear and orderly presentation

Fail	45-49% (borderline fail)	Largely descriptive; limited interpretation; limited range of sources; lack of coherence and clarity
	40-44%	As above, with less interpretation
	30-39% (poor)	Descriptive, unfocused work, lacking in interpretative or conceptual dimension and use of sources
	0-29% (inadequate)	Incomplete or very poorly attempted work

Appendix 1: Data Links

The following are some useful websites that provide access to data. Most of these data are also available from DataStream and Bloomberg.

- [ArchivaL Federal Reserve Economic Data \(ALFRED\)](#), Economic Data Time Travel from the St. Louis Fed's Economic Research Division
- [American Bureau of Statistics \(ABS\)](#)
- [Australian Bureau of Statistics \(ABS\)](#)
- [Bank of England Database](#)
- [Bank for International Settlement \(BIS\) Statistics](#)
- [BP Energy Statistics](#)
- [Bureau of Economic Analysis \(BEA\)](#)
- [Bureau of Labor Statistics](#)
- [Carbon Dioxide Information Analysis Centre](#)
- [China Health Statistics](#)
- [China Statistical Year Book](#)
- [Doing Business \(The World Bank\)](#)
- [EconData.uk](#)
- [Economagic.com](#): Economic Time Series Page
- [Economic and Social Commission for Asia and the Pacific \(ESCAP\) Statistical Database](#)
- [Electronic Data Delivery System \(EDDS\)](#), is a dynamic and interactive data dissemination system providing access via internet to the statistical data produced and/or compiled by the Central Bank of the Republic of Turkey
- [European Central Bank Statistical Data Warehouse](#)
- [Eurostat](#)
- [Federal Reserve Bank of Dallas](#)
- [Financial and Macroeconomic Connectedness](#)
- [Groningen Growth and Development Centre \(GGDC\)](#), offers a range of comprehensive databases on indicators of growth and development, divided in three main research areas: productivity, value chains and historical development
- [Harvard Dataverse](#)
- [International Center for Finance](#)
- [International Monetary Fund \(IMF\) eLibrary Data](#)
- [Maddison Historical Statistics](#)
- [Microfinance MIX Market](#)
- [National Bureau of Economic Research \(NBER\)](#)
- [Office of National Statistics \(UK\)](#)
- [Organisation for Economic Co-operation and Development \(OECD\) Data](#)
- [Polity Political and Democracy Data](#)
- [Quandl](#)
- [Robert Shiller Online Data](#)

- [S&P Dow Jones Indices](#)
- [The Penn World Table](#) provides purchasing power parity and national income accounts converted to international prices for 189 countries/territories for some or all of the years 1950-2010
- [United Nations data](#)
- [UNCTADstat](#)
- [Varieties of Democracy](#)
- [World Bank Open Data](#)
- [World Income Data](#)
- [Yahoo finance](#)

Appendix 2: Topics

You may choose any topic of interest. Some topics can be approached using modelling methodologies such as an event study or applying structural break tests. Below are some suggested topics. The titles are very general. Thus, you need to do some reading and research to narrow down the topic of your interest.

Financial development, inequality and poverty.

Foreign Direct Investment (FDI) and stock market.

Exchange rate and Purchasing Power Parity.

Exchange rate volatility.

The exchange rate determinants.

Football and stock returns.

Football stock returns, volatility and their drivers.

Stock returns and weather effect.

Day effect and stock returns.

The relationship between corporate social responsibility and firms' returns.

The relationship between corporate social responsibility and firms' risk.

Efficient market hypothesis and crypto currency market.

The Fisher Effect.

Volatility and risk in renewable energy market.

Volatility in the Cryptocurrency market.

Investor sentiments and stock returns.

Calendar anomalies in equity market (many effects including Halloween effect, Sell in May and Go Away etc).

Predicting stock market volatility using economic variables.

Risk-Return trade-off.

The role of speculation in commodity futures markets.

Macroeconomic announcements and asset prices.

Monetary policy effect on the stock market.

Financial markets: interest rate parity contagions and integration

Predicting bankruptcy and its determinants.

The impact of company listing in bankruptcy.

The price-dividend relationship.

Determinants of Wage.

Financial Expectations.

News and sentiments.