THE UNIVERSITY OF THE WEST INDIES
ST. AUGUSTINE
Faculty of Social Sciences
DEPARTMENT OF ECONOMICS
Course Outline

COURSE TITLE: ECON 6003

LEVEL: Graduate

SEMESTER: 1

NO. OF CREDITS: 3

PRE-REQUISITE(S):

COURSE DESCRIPTION/RATIONALE
ECON 6003 consists of two modules, the aim of which is to provide students with the theoretical, practical and technical foundations for undertaking survey-based data-driven research that addresses social and economic problems. The course seeks to impart an appreciation for a seamless process in the conduct of economic research, from inception and data gathering design through to econometric modeling and estimation. The focus of Module 1 is on survey research. Module 2 is based in microeconomics.

CONTENT

MODULE 1: SURVEY RESEARCH AND SURVEY SAMPLING
Lecturer: Ms Linda Hewitt

Objectives

1. To acquaint students with the theoretical foundations, methods and procedures of the survey practice such that they develop competencies in the use of these as tools for understanding economic and social phenomena, through research.
2. To distinguish between various types of survey methods and designs also distinguishing between experimental and non-experimental approaches that seek to investigate problems of an economic and social nature that may also be linked to other fields and disciplines.
3. To understand the importance of data and ways by which they may be derived, used and managed in the pursuit of research, employing a problem-based and solution oriented approach.
4. To develop competencies in the use of robust analytical methods in working with data from social and economic surveys as well as other types of related auxiliary data sets.
5. To develop an appreciation for and engage skills in the application of computational methods and tools for the generation and manipulation of data and interpretation of results.
6. To gain an understanding of finite and super-populations and the sampling method and processes by which segments are derived for study, estimation and measurement of their attributes.
7. To provide some hands-on exposure to actual survey situations that aim to address problems in the local context

General Outline of Sessions

Session 1: Overview of the survey research method focusing on: its underlying theory; quantitative and qualitative approach; design-based and model-based dimensions and inference from the sample survey about the finite population. Principles of the design-based method and utility of the modeling approach will be covered with examples.

Session 2: Distinction between various types of survey methods and designs including experimental and non-experimental approaches which may be used to investigate problems of an economic and social nature that may also be linked to other fields and disciplines. Focus on methods from an economic perspective and translating survey procedures to the socio-economic context.

Session 3: The importance and attributes of data, their sources, and principal collection methods. Analytical tools.

Session 4: Function and use of Sampling in its various dimensions and its application in a selected number of contexts.

Session 5: Methods for the analysis of sample surveys and time series data.

Session 6: Lecture Review and Discussion regarding research project assignment requirements.

Session Details

Session (1) will focus on types of survey research methods and their associated designs. Distinction will be made between design-based and model-based approaches given that modeling has increasingly become an integral part of the research tradition, serving to extend boundaries beyond conventional domains and into areas which earlier posed extreme challenges. The session will seek to awaken sensitivity to statistical thinking and reasoning about economic and social phenomena, making reference to theories regarding causal inference and to the objectivity/subjectivity challenges that are posed by the nature of social and economic phenomena. The availability of computer technology and a wide array of
software packages have now rendered survey research well beyond the exploratory domain unto confirmatory and predictive outcomes. In the session, several concrete examples of the survey method will be discussed and reference to and explanation of actual data sets that are available for further study will be covered. Examples will be: selected types of surveys conducted by the Central Statistical Offices, locally and within the region as well as some notable international surveys. It will be shown how a selected number of social and economic problems have been approached using survey research, utilizing various types of designs.

Session (2) will detail various types of survey research methods across many subject matter domains but principally those pertaining to the economic and social context. Examples of types of surveys are: household sample surveys; survey of business establishment; telephone and web surveys. Reference will be made to other sources of data including those that constitute administrative records, economic time series and longitudinal studies, national economic and environmental accounts. Survey designs and questionnaire items for: the Household Budgetary Survey; the Survey of Business Establishments and the Survey of Living Conditions and their uses will be examined. Ethical Issues regarding data collection, interpretation, dissemination and conversion to policy Instruments will be covered in the session. We will examine several basic questionnaire designs as these pertain to economic and social investigation as well as multidimensional designs incorporating different modules as in the case of the population and housing census and surveys for poverty determination.

Session (3) will focus on the importance of economic and household surveys that provide valuable information about economic and social phenomena. The matter of data quality, principles for the collection of data and their desirable attributes will be covered in the session. Types of data, their mode of collection and particular use of the data for computational purposes, for example, various types of economic indexes such as: the Consumer Price Index (CPI), the Producer Price Index (PPI) and the Price Parity Index, will be discussed and demonstrated.

Session (4) will focus on sampling methods and their application in a variety of contexts. Seeing that it is not always affordable or feasible to undertake total coverage of an entire population, as frequently as one would wish to do, the sample provides a representation of a part of the population that is selected by means of sample surveys. We will examine various types of sampling procedures (probability, simple random sampling, one, two and multiple phase sampling, cluster and stratified sampling), as well as consider cost and give consideration to optimal designs in the contexts in which these are applied. Also, problems posed by very small areas and the absence of sampling frames will be considered. Since a sample is a representative part of a finite population, estimations have to be carried out as well as computations have to be undertaken, before one can draw inference from the results that have been obtained. Thus
estimation procedures and computational methods as applied to sample data will also be covered during the session.

Session (5) will be concerned with methods for the analysis of survey and time series data. Conventional types of measures including ordinal, nominal, interval/ratio scales; types of measurement models used for observed and unobserved (latent) phenomena will be discussed. We will examine various sources of data, generated from surveys as well those used in the compilation of the national accounts, production and consumption behaviours and from agricultural censuses and surveys. These will be examined in terms of analytical methods that are being used in working with such data and the use to which the results are generally put. The aim will primarily be to gain an understanding and interpretation of social and economic phenomena in a problem-based and policy oriented context.

Session (6) will be devoted to a general review of the work that has been covered in previous sessions and to translate these into practice that will be demonstrated in the assignments to be undertaken as part of the course requirements. The specific topics that will be the subjects of the assignments will of course be decided well in advance during earlier sessions such that research work can begin in a timely manner towards completion of the projects by the finishing dates as required.

Recommended Texts and Journals
Abdulah, Norma (1986), Designing Social Surveys in the Caribbean, Institute of Social and Economic Research, the University of the West Indies, St Augustine, Trinidad.
Lalta, Stanley & Marie Freckleton Eds (1993), Caribbean Economic Development, the First Generation, Ian Randle Publishers, Kingston Jamaica
Survey Methodology-A Journal of Statistics Canada, Ottawa
Longford, Nicholas T., Sample Size Calculation for Small Area Estimation, Volume 12, Number 1, June 2006
Hidiroglou M.A. and Sarndal, C.E., Use of Auxiliary Information for Two phase Sampling, Volume 24, Number 1, June 1998

Treatment of Data from Sample Surveys
Byrne, Barbara M., Structural Equation Modeling with Amos, basic concepts, applications and programming, (Second Edition, 2010), Routledge, Taylor and Francis Group, New York, London

Online References
Statistical Journals from IOS Press
www.iospress.com and www.booksonline.iospress.com
Journal of Economic and Social Measurement-ISSN: 1875-8932 (online)
Risk and Decision Analysis-ISSN 1571-4128 (Online)

CRC Press Taylor and Francis Group, (online) at www.crcpress.com
Bell, (2011), Economic Time Series
Cunningham, (2011) Experimental Designs
Panter, (2011) Handbook of Ethics in Quantitative Methodology

Cambridge University Press-www.cambridge.org
Frees, Longitudinal and Panel Data
Couper, Mick Designing Effective Web Surveys
Box, Time Series Analysis: Forecasting and Control
Coleman, Statistical Practice in Business and Industry
Fuller, Wayne (2009) Sampling Statistics
Hahn (2009), the Role of Statistics in Business and Industry

John Wiley and Sons, Inc- www.wiley.com
Bethlehem Handbook of Web Surveys
Biemer, Measurement Errors in Surveys
MODULE 2: MICROECONOMETRIC MODELS AND METHODS
Lecturer: Dr. Ewan Scott

Objectives
This module will provide graduate students with a sound foundation in the application of advanced statistical methods to problems in microeconomics. As such, it will build on the students’ knowledge of probability and distribution theory and basic econometrics. Students are expected to have some basic competence with some econometric/statistical software packages such as *Eviews*, *SPSS* or *TSP*.

Recommended Texts


Syllabus:
Week 1:  
  Review  
  1. Probability and Distribution Theory  
  2. Basic Econometric Theory  
  Greene, chpt. 3,4,6; Any good Introductory Statistics/Econometric text

Week 2, 3:  
  Models with Discrete Dependent Variables  
  1. Introduction: Discrete Choice Models  
  2. Estimation and Inference in Binary Choice Models  
  3. Multiple Choice Models  
  Greene, chpt. 19; Maddala, chpt. 2

Week 4, 5:  
  Limited Dependent Variable Models  
  1. Introduction  
  2. Truncated Regression Models  
  3. Censored Regression Models  
  4. Sample Selection  
  Greene, chpt. 20; Maddala, chpt. 6
Week 6, 7: Estimation of Demand and Production Functions

1. Demand Systems – Functional forms and Estimation
2. Production Functions - Functional forms and Estimation
3. Flexible functional forms


ASSESSMENT
Coursework // Final Exam :: 25% // 75%

Overall assessment of the course will be split evenly between the 2 modules.

Coursework assessment for Module 1 will be on the basis of in-class group presentations worth 13% of the overall course assessment. Groups shall consist of a maximum of three persons though in exceptional cases, individuals can present subject to the approval of the lecturer. All members of the group are awarded the score obtained by the group.

The coursework for Module 2 will account for 12% of the overall course assessment and will take the form of assignments requiring the use of Eviews or another software package, or a 2-hour quiz.

The final exam will be 3 hours in duration and usually requires completion of 4 equally valued questions, two from each module.