

BUS373 Big Data for Socioeconomic Issues

Level: 3

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JAN

Synopsis:

BUS373 shows how “big data” can be used to understand some of the key social and economic problems in society. It covers topics, such as social mobility, inequality, life satisfaction, energy, environment, population ageing and technological innovations, etc. Students do not need prior knowledge in these selected topics, but a basic understanding of statistics will facilitate the learning of various methodologies used in the data analysis. This course will provide students with the analytical skills to identify social and economic issues, and evaluate and address them, as well as build their understanding of the practical use of “big data” in the context of social sciences.

Topics:

- Social mobility and its measures using population survey data
- Factors affecting social mobility using regression discontinuity design
- Income inequality and its measures using labour force survey data
- Income gap decomposition using the Oaxaca-Blinder methodology
- Happiness and life satisfaction studies and its impact using World Value Survey
- Factors associated with happiness and life satisfaction using regression analysis
- Energy-growth nexus studies using the Penn World Table
- Granger causal analysis of the relationship between energy and economic growth
- Environment and economic development using World Bank data
- Population ageing and global ageing data
- Population ageing trend analysis using population pyramids
- Artificial intelligence and its impact on the labour market using O*NET

Textbooks:

Ian Foster, Rayid Ghani, et al. (2016): Big Data and Social Science: A Practical Guide to Methods and Tools Taylor & Francis
ISBN-13: 9781498751414

Learning Outcome:

- Examine social mobility issues using quantitative data
- Discuss factors that are associated with income inequality
- Assess factors associated with happiness and life satisfaction using World Value Survey
- Appraise the relationship between energy, environment and economic development using data from the World Bank
- Employ existing survey data to critique policies addressing the issue of population ageing
- Show an understanding of both positive and negative effects of technological innovations
- Apply big data to evaluate current social and economic issues
- Design a research study to assess determinants of the social and economic issues

Assessment Strategies (Evening Class):

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	PRE-COURSE QUIZ 1	2
	PRE-CLASS QUIZ 1	2
	PRE-CLASS QUIZ 2	2
	PARTICIPATION 1	6
	TUTOR-MARKED ASSIGNMENT 1	18
	GROUP BASED ASSIGNMENT 1	20
Overall Examinable Components	ECA-REPORT	32.50
	ECA-VIDEO	12.50
	ECA-POWERPOINT	5
Total		100