Course Outline

Course Code : BSN4811
Course Title : Strategic Innovation for High Performance
Semester : Semester 2, Academic Year 2024/2025
Faculty : Dr. Lee Kwok Hao
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Overview

A key challenge for Singapore and other developed economies is to sustain economic growth. Growth may arise from working harder (more labour/investment/resources) or smarter (raising productivity). Innovation contributes to working smarter.

As automation and artificial intelligence sweeps the world, what will happen to productivity, innovation, and entrepreneurship? What are the implications for economic policy and business strategy? Four main areas will be discussed: (i) determinants of (Singaporean) productivity; (ii) innovation strategy, personnel motivation, and job design; (iii) the role of spatial and urban geography; and (iv) automation, AI, and their economic implications.

Course Objectives

Broadly, this course aims to develop a manager who understands the determinants of innovation and productivity. Armed with this knowledge, the manager should be able to improve their team's performance, harnessing tools (including but not limited to) artificial intelligence.

General Guide & Reading (e.g. Case preparation guide, project report guide, main textbook & supplementary materials, etc)

Lecture Notes: Posted on Canvas online before each lecture. Please visit the site regularly and download and review the materials before attending class.

Textbooks:

1. **(Main)** None. Course notes suffice.
2. **(Supplementary)** Joshua D. Angrist and Jorn-Steffen Pischke, *Mastering "metrics": the path from cause to effect*, Princeton University Press, 2015. (Central Library: HB139 Ang 2015)

Assessment

Assessment Components	Weightage
Class participation	10%
Assignments (Best 2 of 3)	20%
Midterm test	30%
Final project and presentation	40%

Academic Honesty & Plagiarism

Academic integrity and honesty is essential for the pursuit and acquisition of knowledge. The University and School expect every student to uphold academic integrity & honesty at all times. Academic dishonesty is any misrepresentation with the intent to deceive, or failure to acknowledge the source, or falsification of information, or inaccuracy of statements, or cheating at examinations/tests, or inappropriate use of resources.

Plagiarism is "the practice of taking someone else's work or ideas and passing them off as one' own" (The New Oxford Dictionary of English). The University and School will not condone plagiarism. Students should adopt this rule - You have the obligation to make clear to the assessor which is your own work, and which is the work of others. Otherwise, your assessor is entitled to assume that everything being presented for assessment is being presented as entirely your own work. This is a minimum standard. In case of any doubt, you should consult your instructor.

Additional guidance is available at:
- http://www.nus.edu.sg/registrar/administrative-policies-procedures/acceptance-record#NUSCodeofStudentConduct
- http://nus.edu.sg/osa/resources/code-of-student-conduct

About me . . .

I am an industrial organisation economist working on platform markets and the "smart city". I study e-commerce, transportation, and housing, often through the lens of empirical market design.

I am an (incoming) Assistant Professor (Presidential Young Professor) at the Department of Strategy and Policy at the National University of Singapore (NUS) Business School.

I spent a postdoctoral stint at the Cowles Foundation at Yale University. I obtained my PhD from Princeton University after formative years at the University of Chicago and Washington University in St. Louis.

Schedule and Outline

Week	Topic	Comments/Due
1	Introduction; Are Singaporeans productive?	
2	Games in normal and extensive form	
3	(How) Are larger firms more innovative?	Assignment 1 (Weeks 1-2)
4	Employee motivation; Worker screening; Can workers behave?	
5	Managerial practices; Automation, tasks, and job design	
6	Platform strategy; Digital innovation; A/B testing	Assignment 2 (Weeks 3-5)
	Recess Week	
7	*Midterm Test*	(Weeks 1-6)
8	Innovation procurement: Auctions and R&D contests	
9	Canonical urban models and first-nature productivity	
10	Agglomeration, congestion, and "chance encounters"	Assignment 3 (Weeks 6, 8-9)
11	A manager's guide to harnessing AI tools	
12	Distributional impacts and ethics concerns surrounding AI	Final paper Final presentation (backup date)
13	Policy implications; Future directions	Final presentation
	Reading Week	