

# How I would contribute to the teaching and enterprise dimensions of this post

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# Who am I?

- PhD Agricultural Economics The University of Queensland
- Diplom-Volkswirt University of Konstanz (Thesis in Public Finance, Courses: Specialization in Econometrics)
- BA specialized in Economics (Development and Comparative Economic Systems) and Chinese (Mandarin) language.
- Current research focus:
  - Theory:
    - Demand theory
    - Dynamic games
    - Cooperative games
  - Applied game theory:
    - Resource and environmental problems
    - Economic epidemiology
  - Empirical:
    - Agriculture, Resources and Energy, Health (new interest) (I have a number of data sets I am working with)

# What I can teach

- Economics:
  - Microeconomics (have taught all undergrad years)
  - Macroeconomics (have taught at 1st year and second year level)  
use of online macroeconomy simulator for some student exercises.
  - International trade (have taught at second year undergraduate and to MBA's)
  - Research methods (agricultural economics, economics (honours, PhD))
- Electives: Public finance/Public economics (graduate level), Natural resource economics (undergraduate and graduate level), Experimental economics (undergraduate), Environmental economics (MBA), Energy Economics (MBA), Game theory (honours level joint course, Economics and Mathematics Departments at Queensland)

# What I can teach

- Quantitative disciplines:
  - Mathematics for Economists (have taught at second and third year undergraduate level, multivariate calculus, linear algebra, differential equations, calculus of variations and optimal control)
  - Statistics (have taught a two semester sequence up to multivariate regression and ANOVA, 5 years teaching experience in total)

I could teach econometrics if required but have not done this (I was scheduled once to do it at Queensland but was then asked to teach microeconomics instead)

# What I can teach

- Business:
  - Introductory Business Principles (Lectures and exercises including business planning, basic financial calculations overview of business functions including operations, marketing etc.)
  - Project management (I have taught this at undergraduate and graduate level following PMI approach at undergraduate and using project management software, CPM/PERT and covering alternative project management methodologies, and project management office at graduate level).
- Business economics (used Besanko's Economics of Strategy, in French Grande Ecole programme-combines Business economics and strategic management)

# What I can teach

- Business research methods (literature review, systematic review, meta-analysis, quantitative, qualitative methods, mixed methods)
- I could teach operations research, management science, decision theory, business ethics or finance/financial economics but have never done this apart from a single operations research guest lecture.
- Have been actively involved in operations research/management science and a lot of my research combines operations research/management science and economics
- My PhD involved use of Ito calculus and stochastic differential equations (commonly used in finance) and I am a joint winner of the student prize of the Society for Computational Economics for a paper on mathematical finance.
- I have supervised masters and undergraduate theses in business ethics

- Australia
  - Honours supervision: mostly game theory and experimental economics and some natural resource economics (fisheries, water)
  - Masters students: agricultural/development economics, transitional economies (agricultural cooperatives), energy demand analysis
  - PhD (co-supervision): Development economics, Fisheries economics, Energy economics (experimental), Mathematical Finance, Forestry economics.

- Canada
  - MBA's energy economics, operations management, operations strategy in the energy sector (sectors: renewable, nuclear, oil, gas, hydro, green technology, etc.)
- France
  - Undergraduate projects and Masters: Business ethics (intersection with Welfare economics and Social choice, Chinese philosophy and business ethics), Agricultural marketing, Energy economics.



# How do I teach?

- Interactive classes
- Use of technology (integrate web-technology and software into the classroom - all classes - I have all my courses online)
- I have taught using IPads (microeconomics)
- Lecture recording (podcasts - useful for international students)
- Classroom experiments (primarily in microeconomics and experimental economics)
- Blended learning/flipped classroom (use technology as a way to enable this)

# Teaching strategies

- Cooperative learning (Introductory)
  - Collaborative classroom culture students learn from each-other as well as the teacher
  - Students learn how to work both in groups and individually
  - Continuous feedback on progress
  - They learn how to work (workflow)
- Problem based learning (Intermediate)
  - Transition to research-led teaching
  - Interactive in-class exercises
- Inquiry based learning for more advanced classes
  - Research-led teaching
  - Extends JiTT into a flipped classroom setting.
  - Student focussed

- Students need to learn how to work
- This needs to be taught
- Reading, note-taking, doing exercises managing references and report writing need to be integrated
- Need to build 'Reproducible Research' and 'Literate Programming' principles into the student learning experience (Peter Wittek discusses how this works (<http://peterwittek.com/reproducible-research-literate-programming-ipynb-and-github.html>))
- Education for the future use of new technology

- Centre for Applied Business Research (Possible Involvement)
  - Previously I worked at the Centre for Applied Business Research in Energy and the Environment at the University of Alberta, Canada (similar role - some external consulting: 1 project)
  - Would add strengths to energy and sustainability side
  - Would add skills in operations research methods
  - Some recently acquired skills in health economics (Cost effectiveness)
  - Project management
- Administrative experience and committee experience
  - I chaired the departmental research ethics committee at the University of Queensland
  - Member of postgraduate committee at the University of Queensland and coordinator of Honours programme in economics.
  - I was an active committee member of the Queensland branch of the Australian Society for Operations Research (secretary and president)

# International personal network

- Personal network of academics and business people (on all continents except Antarctica)
- Links to potential partner Institutions
- Ability to attract visitors (domestic and international)