

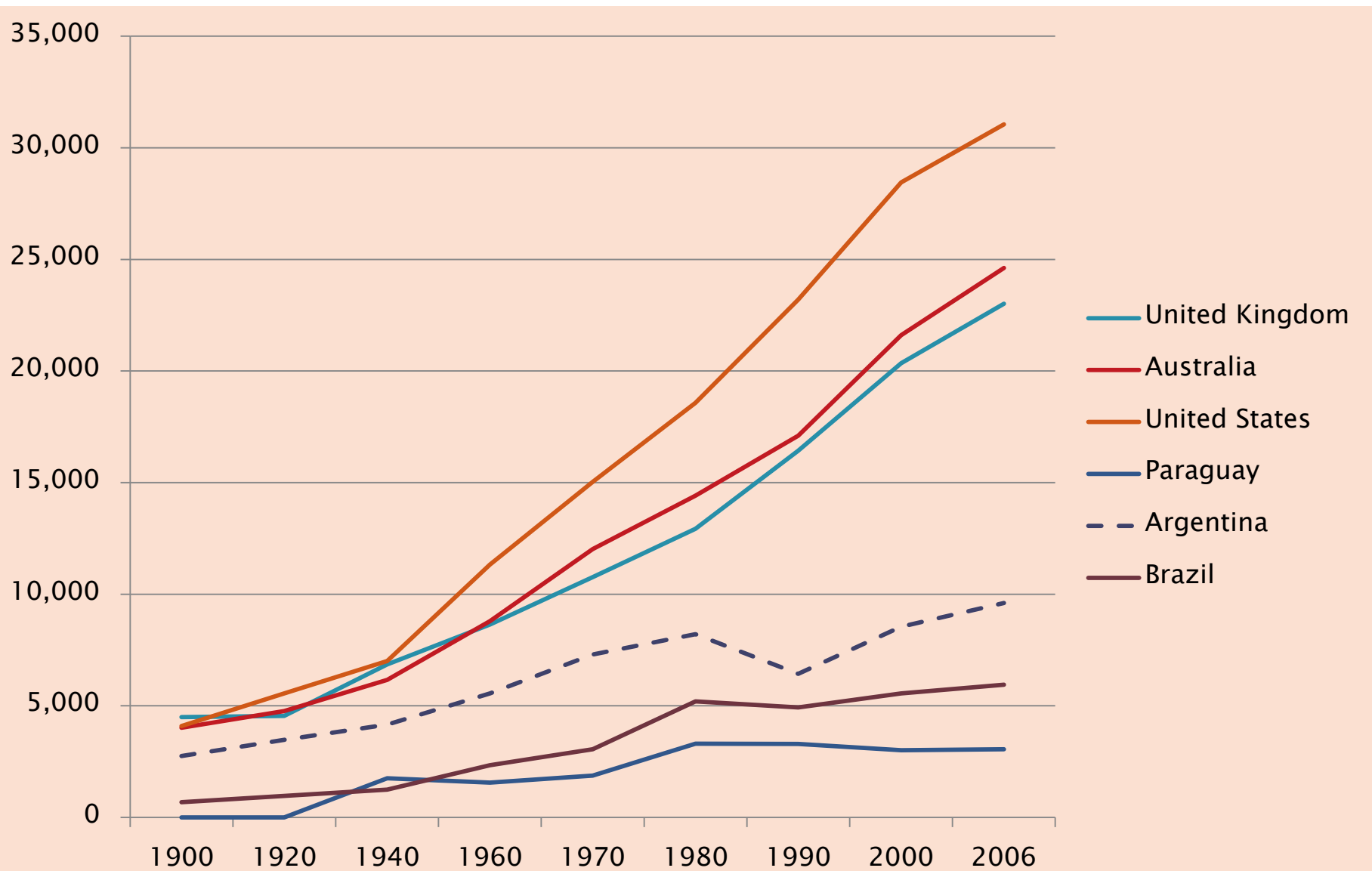
# Historical Perspectives on the Diffusion of Innovations

A Hira  
Technology Policy  
SFU  
Fall 2011

# Overview


- ▶ Recall: Eco growth theories have a hard time explaining sources of growth.
- ▶ Schumpeter offers an evolutionary view that explain discontinuous change through innovation cycles, promoted by entrepreneurs or large scale R&D.
- ▶ Q. we want to move towards today is what explains where innovation breakthroughs occur? (ie why the North)
- ▶ GPTs and history
- ▶ Why is the West rich?
- ▶ Implications for the rest of the world?
- ▶ Key Terms:
  - ▶ Path dependency
  - ▶ General purpose technology
  - ▶ Transactions costs

## Long-term Growth (GDP, 1990 Ps)





# Lipsey– Key Q.s

- ▶ \*For group discussion
  - ▶ A. What GPTS does Lipsey identify in the article as key?
    - ▶ 1. Why was the West so oriented towards trade?
    - ▶ 2. What about that trade created improvements in navigation and arms?
    - ▶ 3. How did those improvements lead to domination of the world?
    - ▶ 4. Why did improvements continue?
    - ▶ 5. Why didn't certain well-developed civilizations, eg the Chinese, follow through on their own inventions?
- 

# Does globalisation change this?

- ▶ \*\* Is the World Flat? T Friedman
- ▶ What are the key developments after World War II that lead accelerate the creation of a global economy?
  - Devt. Of MNCs
  - Transportation
  - Finance
  - ICT
- ▶ Fx on agriculture, manufacturing, services?
- ▶ What are the possible fx of globalisation on developing countries?
  - Greater or less inequality?

# Roger's 5 Factors for Innovation Adoption

Factor	Definition
Relative Advantage	How improved an innovation is over the previous generation.
Compatibility	The level of compatibility that an innovation has to be assimilated into an individual's life.
<u>Complexity</u> or <u>Simplicity</u>	If the innovation is too difficult to use an individual will not likely adopt it.
Trialability	How easily an innovation may be experimented with as it is being adopted. If a user has a hard time using and trying an innovation this individual will be less likely to adopt it.
<u>Observability</u>	The extent that an innovation is visible to others. An innovation that is more visible will drive communication among the individual's peers and personal networks and will in turn create more positive or negative reactions.

## Five stages of the adoption process

Stage	Definition
Knowledge	In this stage the individual is first exposed to an innovation but lacks information about the innovation. During this stage of the process the individual has not been inspired to find more information about the innovation.
Persuasion	In this stage the individual is interested in the innovation and actively seeks information/detail about the innovation.
Decision	In this stage the individual takes the concept of the innovation and weighs the advantages/disadvantages of using the innovation and decides whether to adopt or reject the innovation. Due to the individualistic nature of this stage Rogers notes that it is the most difficult stage to acquire empirical evidence ( <a href="#">Rogers 1964</a> , p. 83).
Implementation	In this stage the individual employs the innovation to a varying degree depending on the situation. During this stage the individual determines the usefulness of the innovation and may search for further information about it.
Confirmation	Although the name of this stage may be misleading, in this stage the individual finalizes his/her decision to continue using the innovation and may use the innovation to its fullest potential.

Homo vs Heterophily? Opinion Leaders/Change Agents

# Rogers S curve– Diffusion of Innovation

