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Globalization of E-Commerce

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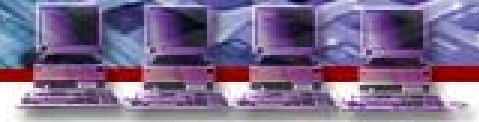


Motivation

- **Creation and diffusion of new technologies like Internet and e-commerce is considered a source of growth and productivity gains for national economies.**
- **The rate at which countries adopt technologies is very important to achieving benefits.**
- **Therefore, there is interest in understanding the factors that drive technology diffusion.**



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Theory

- **Neoclassical theory.**
 - Technical innovation is an external, independent force that acts with more or less the same impact on all economies, thus producing common social and economic outcomes (Solow, 1956; Bell, 1973; Ohmae, 1991).
- **New growth theory.**
 - Country responses to new technologies are uneven.
 - Due to national characteristics such as industry structure, information infrastructure and financial systems, and national policies, which create different economic and legal environments and infrastructure investments (Romer, 1990; Boyer, 1996; Wade, 1996).



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Research

- **Environmental and policy variations influence innovation outcomes in different national contexts (Berger and Dore,1996).**
- **Diffusion of new technologies takes place unevenly across countries with different environments (Freeman and Soete, 1997; Dosi, 1998, Mowery and Rosenberg, 1989, Nelson, 1993).**



Research Questions

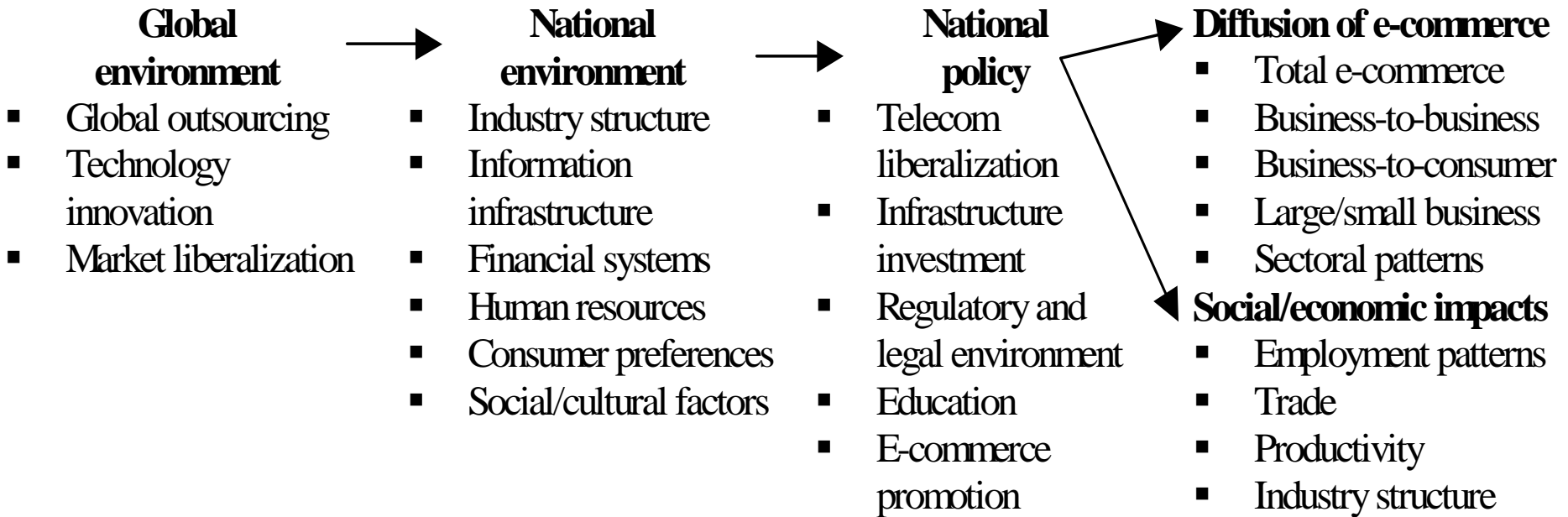
- **How do global trends such as economic liberalization and outsourcing influence global productions systems and the international diffusion of the Internet and e-commerce?**
- **What is the influence of national environments and policy on the diffusion of e-commerce in different countries?**
- **What are the social and economic impacts of e-commerce, and how are they affected by different national environments and policies?**



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Conceptual framework





Levels of Analysis

Country	40+ developed & developing
Industry	3 sectors - manufacturing, distribution, finance
Firm	2100 – large, small; by sector; 200 per country

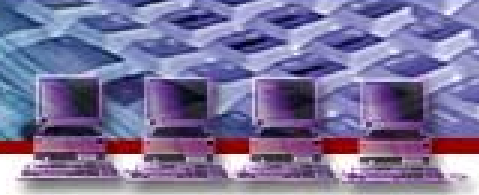


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Methods

Secondary data analysis – UN, ILO, IMD, IDC etc	Diffusion of IT across countries, national economic variables
Cross-sectional survey with IDC	Industry & firm diffusion, use & impact
Case study with country experts	Five year history of diffusion & impact in country



Country experts

Brazil - Paulo Bastos Tigre, University of Rio de Janeiro

China – Ouyang Wu, Chinese Academy of Social Sciences

Denmark – Niels Bjorn-Andersen, Copenhagen Business School

France – Eric Brousseau, University of Nancy

Germany – Wolfgang Koenig, University of Frankfurt

Japan - Denis Tachiki, Tamagawa University

Mexico – Juan Palacios, University of Guadalajara

Singapore – Wong Poh Kam, National University of Singapore

Taiwan – T.J. Chen, National University of Taiwan

U.S. – John Leslie King, University of Michigan



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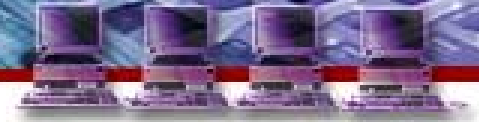


Early Findings

- **National environments create incentives and barriers**
 - Information infrastructure at both national and firm level are needed.
 - Society's lack of trust discourages online shopping in China & Taiwan.
 - Geography: high density of stores (France, Taiwan, Japan, & Singapore) makes online shopping less attractive compared to low density U.S.
 - Business practices: strong emphasis on face to face; inability to make needed organizational changes limits use.



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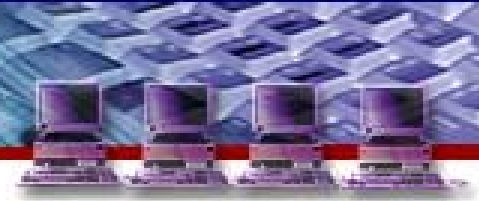


- **Policy**

- Elites in 10 countries believe Internet and e-commerce important to economic development.
- All countries developing policy towards Internet, but not necessarily e-commerce.
- Key policies: legislation (dig sig, IPR, security), telecoms, procurement, taxation
- Enabling legislation is necessary but not sufficient for e-commerce; govt can enable but business & consumers implement.
- Biggest issue may be telecoms liberalization to create competition and lower access costs.



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- **E-commerce Diffusion**

- **Matches patterns of IT diffusion.**

- Led by US, northern Europe, Singapore
- Large firms are faster to adopt than SMEs

- **Leading sectors vary by country**

- Usually the more competitive or global sectors for B2B, e.g., banking in Brazil, electronics in Taiwan
- Consumer e-commerce usually follows US pattern: travel, books, music, computers.
- C2C is big in Latin America

- **Mobile commerce taking off in Japan (I-mode) but slow elsewhere**



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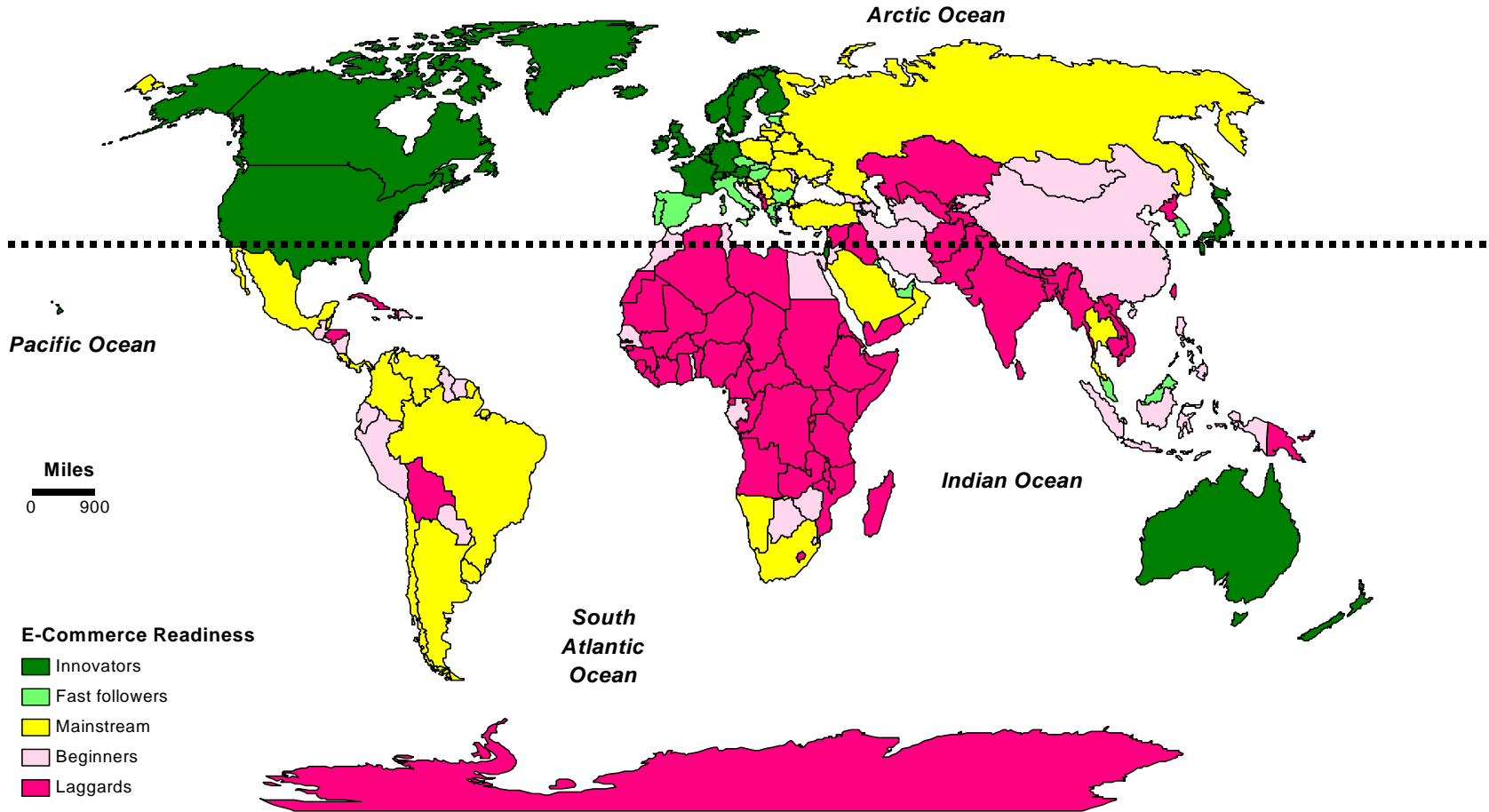


- **Impacts**

- E-commerce facilitates some forms of globalization such as global production networks, but *local services* are still needed.
- Reinforces existing business relationships vs. creating new marketplaces.
- Impacts of Internet are significant, but e-commerce is too small to have major impacts yet.
- Digital divide – e-commerce may reinforce existing economic and social divisions.

E-Commerce Readiness of Countries

A Digital Divide?



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Summary

- **Project in first year of five.**
- **Country baseline papers near complete; will be on www.crito.uci.edu.**
- **Special issue of *The Information Society* for focused country papers.**
- **10-country survey begins in February 2002.**
- **Might add 10 plus European countries in 2002.**