

# **Adoption of electronic medical records in Taiwan: A sociological analysis of government's policy imperative**

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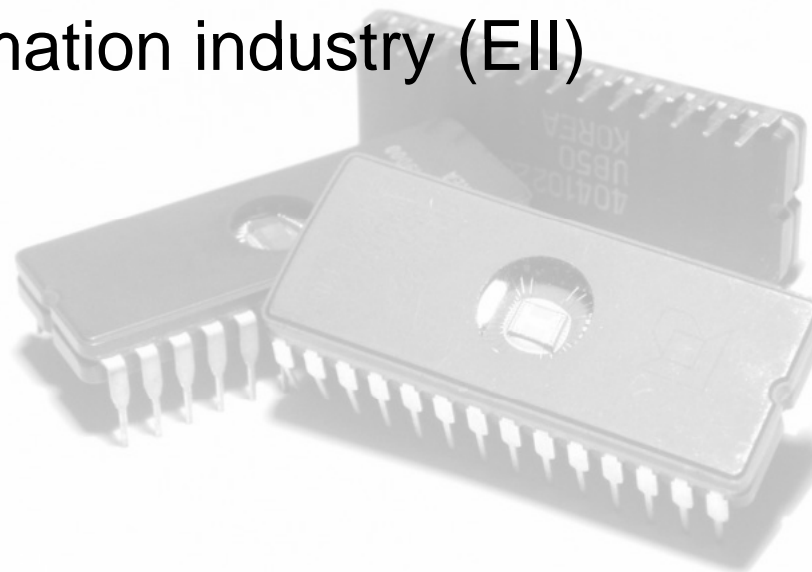
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# Background (1/3)

- EMRs policy is related to
  - Patient
  - Medical industry (MI)
  - Electronic and information industry (EII)
  - Government



# Background (2/3)



- Multi-level barriers for development of EMRs
  - People's information security
  - Technology immaturity
  - Focus of health administrator
  - Resistance from traditional healthcare
  - No immediate improvement of time efficiency on workflow (Berg , 1999; Berner et al. , 2005; Beuscart-Z'ephir et al. , 2005; Poissant et al. , 2005).
- Social and political factors?

# Background (3/3)



- Taiwan government's EMRs policies
  - Launched pilot programs and allocated financial support ***from public sector***
  - Established incentives and promulgated new provisions to induce investment ***from private sector***
  - EMRs may not only improve quality of care and reduce medical cost but also simultaneously ***boost the country's economy.***

# Objective

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- What's the ***social and political underpinnings*** for the development of EMRs policy in Taiwan?
- What's the ***implication from Taiwan's experience*** for other countries to set EMRs policy?

# Methods



- ***A sociological analysis***
  - Focused on the viewpoints from the interaction among the state, industries, and academics.
- **Multiple methods**
  - Literature review, interviews with policy participants, and participatory observation in medical organizations.



# Results

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- Some social factors encourage the adoption of EMRs in Taiwan.
  - From *technology* aspect
  - From *political and economic* aspect

# Technology aspect (1/2)



- Development of electronic industry in 1970s
  - Important original equipment manufacturer (OEM) in global electronic industry since the early 1990s (Tsai, 2001).
  - Provide the technique and better cost-efficiency in establishment of infrastructure of EMRs.
  - Earliest computerizing in medical care through the collaboration between the IBM and big public hospitals in the late 1970s (Yang, interviewed on 2007/2/26).





## Technology aspect (2/2)

- International consensus (Health Level 7 Taiwan, 2002).
- Cumulated experiences on computerization in health care (Fan, 1996; Lee, 2002; Yang, 1997)
- Lay people and social organizations were easily persuaded (Liu, interviewed on 2007/3/15)



# Politic-economic aspects (1/3)



- The ***compulsory National Health Insurance (NHI)*** system covers from 45% of residents in the late 1980s to 97% in the middle 1990s.
- The ***Government is the biggest and single payer*** in health insurance. (Yang, interviewed on 2007/2/26)

# Politic-economic aspects (2/3)



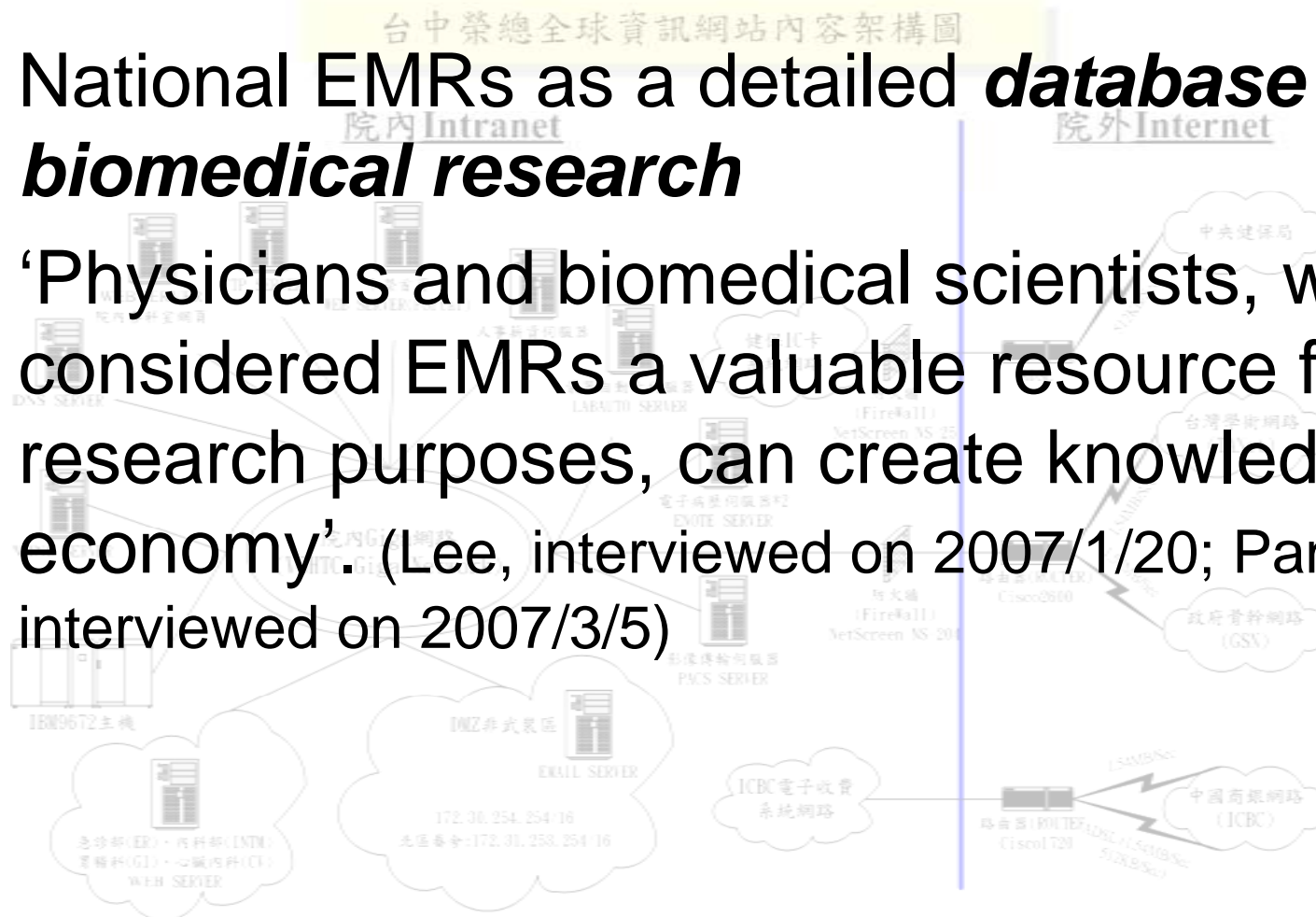
- Facing the rising competence in EII from other countries
- To ***upgrade Taiwan's OEM role*** in global EII (DOH, 2006; Tsai, 2001)





# Politic-economic aspects (3/3)

- National EMRs as a detailed **database for biomedical research**
- ‘Physicians and biomedical scientists, who considered EMRs a valuable resource for research purposes, can create knowledge economy’. (Lee, interviewed on 2007/1/20; Pan, interviewed on 2007/3/5)



# Discussion (1/2)

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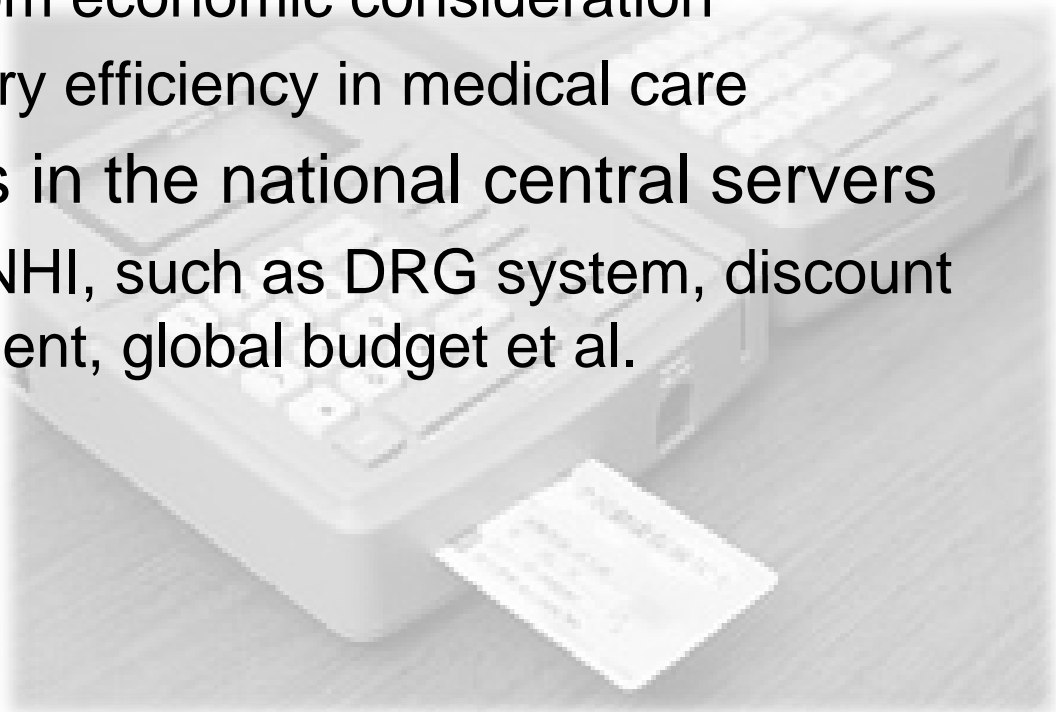
- EMRs policy as an industrial strategy
  - Related to further development of MI and EII
- One-way policy making
  - Elite and bureaucrat oriented-thinking
  - Deficiency of democratic communication with lay people and organizations of medical providers

# Discussion (2/2)



- ***Potential crisis***

- Healthcare Certification Authority
  - Interest conflict from economic consideration
  - Influence to delivery efficiency in medical care
- Accuracy of EMRs in the national central servers
  - Managed care in NHI, such as DRG system, discount of insurance payment, global budget et al.



# Conclusion



- Little resistance to EMRs policy in Taiwan
  - ***Technical and politic-economic*** factors
- Some potential crisis in future implementation of EMRs policy in Taiwan



**Thanks For Your Attention**

