

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

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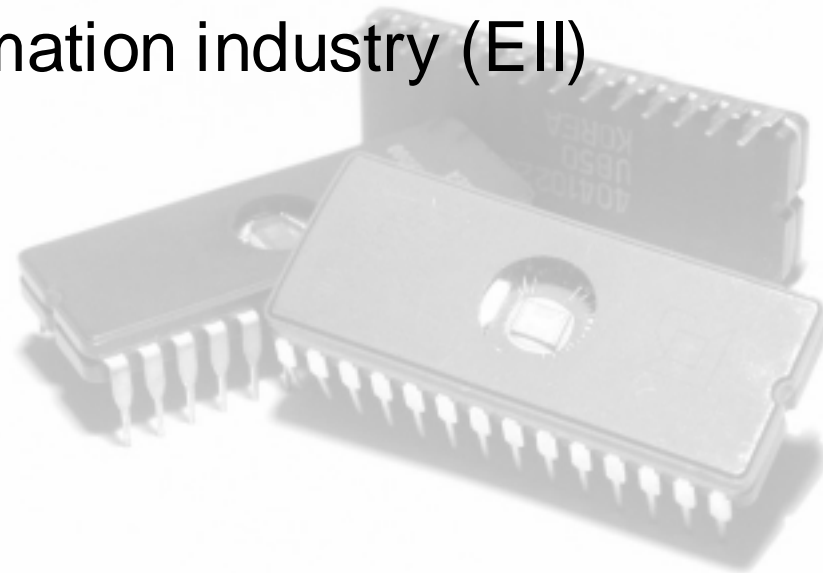
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Background (1/3)

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





Background (2/3)

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



EMRs as an industrial policy

Medical industry Filmless and paperless Portable personal EMR Table for interchange of EMR	Tourism Personal Health Summary Transnational exchange of medical resources Dispatch medical personnel and transport patients
Electronic information industry Hardware: store EMR Software: develop native interchange system Internet: develop tables for health information and personal management of health information	Biotech industry Exploit service for personal medicine



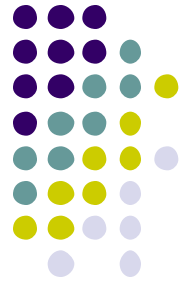
Background (3/3)

- 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?

Objective



- What are 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 government, industries, and academics.
- **Multiple methods**
 - Literature review, interviews with policy participants, and participatory observation in medical organizations.



Results



- 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 (EI) in Taiwan in 1970s
 - Important original equipment manufacturer (OEM) in global chain of EI 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 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 aspect (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 aspect (2/3)

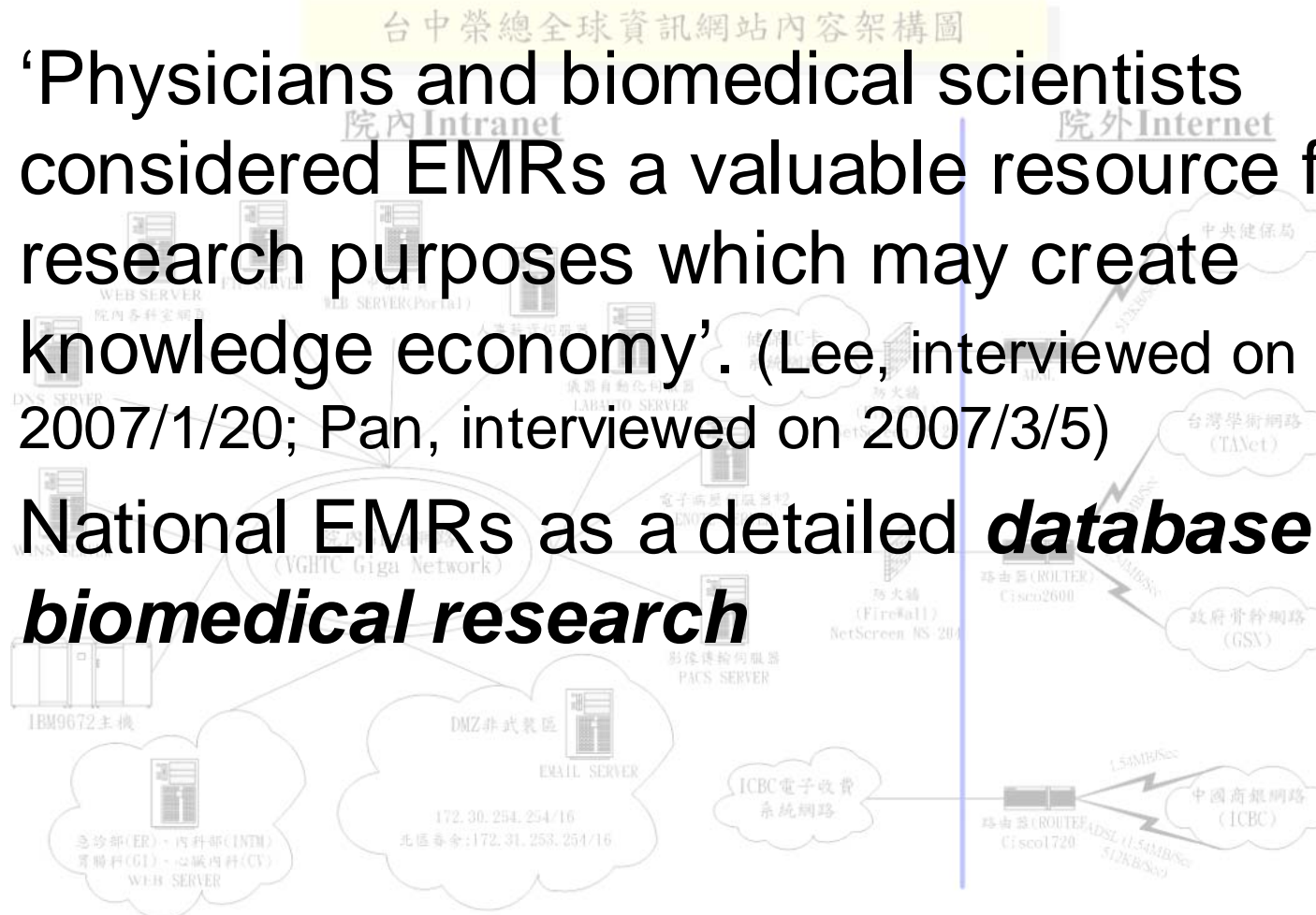
- Facing the rising competence in EII from other countries
- To ***upgrade Taiwan's OEM role*** in global EII (DOH, 2006; Tsai, 2001)





Politic-economic aspect (3/3)

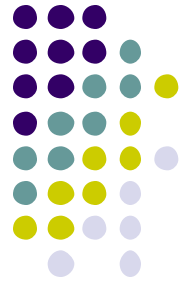
- ‘Physicians and biomedical scientists considered EMRs a valuable resource for research purposes which may create knowledge economy’. (Lee, interviewed on 2007/1/20; Pan, interviewed on 2007/3/5)
- National EMRs as a detailed **database for biomedical research**





Discussion (1/3)

- EMRs policy as an industrial policy
 - 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 related social organizations



Discussion (2/3)

- ***Potential crisis***

- Healthcare Certification Authority (HCA) in 2003
 - Influence delivery efficiency in medical care
- Accuracy of EMRs in future central servers
 - Managed care, such as DRG system, discount of insurance payment, global budget et al.





Discussion (3/3)

- Further study
 - ***How often and why*** the false patient information is keyed into EMRs?
 - How to ***reduce the percentage*** of false information in the NHI database?



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

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