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CHINESE HEALTHCARE AND PHARMA INDUSTRIES 1980-1990s denationalization

Guanxi + incentives = widespread doctor bribery (bao hu san)

Opaque corporate crime laws and lax enforcement...



...until 2014, when British drugmaker GSK was fined \$500M by a Chinese court

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-> Why did the state punish GSK *in particular*?
-> What can this case tells us about the ways
China sanctions corporate crime?

Method:

Close-reading of Xinhua, China's state-run, English-language media source



FINDINGS

Policy-shift:

- Re-nationalization of healthcare insurance (cost concerns)
- Wider anti-corruption drive

Crackdown:

- Preference for sending a 'signal' of intended behavioral change rather than structural change
- Exploit murky corruption laws
- Multinationals are not interdependent (no protective umbrellas)

Targeting:

- High-profile
- High cost center (vaccines)
- History of malfeasance (e.g. FCPA)

UPSHOT FOR ECONOMIC DEVELOPMENT

For economic developers advising businesses expanding internationally:

- Critical attention to *business culture* and *rule of law*
- Corruption as a cost of doing international business? Or peril?

For economic developers, everywhere:

- Local business cultures matter, and are not necessarily benign
- Corruption is a depressant of growth, but it is often tolerated/ encouraged by regulators





New technology innovation is outside the control of workers, who are basically 'victims' at the 'mercy' of technical progress



Therefore, artificial intelligence-based automation poses a serious threat to major swaths of the labor force

But this ignores that many workers:

- Have some control over the development and implementation of new technology
- Have some power to resist new technology
- Frequently discuss implications of new technologies on workplace organization (despite unintended consequences)—can adapt/learn/plan

And, that advancing technology can a way for other workers to gain...

THE CASE OF RADIOLOGY

- Specialized medical discipline concerned with diagnosing illness using sophisticated radiation-based body scanners
 - Significantly more dependent on technology than other medical disciplines
- Today, considered high-status and prestige



METHODS & RESEARCH DESIGN

Identification of three main automating technologies in radiology:

- 'Raw material': x-ray radiographs
- Digital production: computed tomography (CT)
- Digital distribution: picture archiving and communications (PACS)
- Digital interpretation: supervised deep learning

Content analysis of 600+ journal articles in *Radiology* (leading disciplinary journal)

- What is the development arc of each technology?
- What are the principal concerns of radiologists as they develop each technology?

KEY FINDINGS

Each innovation has very nearly entailed the next one

Technology *is* initially exogenous, but radiologists play a large role in developing applications and testing viability/usability of new systems

As each system is developed, radiologists are mostly concerned with:

- Improving technical systems' specifications
- Evaluating systems against those existing in radiology *and* other medical specialties (cheaper, faster et c.)
- Understanding organizational implications (e.g. effects on technologists and nonradiologist clinicians, department organization, workflow)

Yet, early equipment purchase and development necessarily precedes these findings

Predicted, undesirable results effects do in fact (particularly, alteration of relationships between radiologists and colleagues)

With each new system, radiologists have re-defined their medical roles to adapt to the new organizational realities, but these roles have been progressively higher-status and more central to medicine

IMPLICATIONS FOR ECONOMIC & WORKFORCE DEVELOPERS

EDers must not commit the exogeneity mistake:

- Historical patterns influence current conditions
- Resources that workers have to mobilize varies enormously
- Technological innovation alters relationships between workers/organizations/ occupations in complex ways
- Therefore, forecasting future job/economic growth/contraction due to technology is very difficult
- Especially re: new technologies/automation/artificial intelligence
- Extreme forecasts for disappearance of radiologists have not been accurate

THANKS!

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