

# The Challenge to Rekindle China's Innovative Spirit

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Until AD 800 or 900, China was far ahead of any western country in technology, in science, and in culture and civilization altogether

Peter Drucker, 1989, pp. 245-246

So what happened – why didn't China continue its ascendance?

This is called the Needham Question - after Joseph Needham who wrote the definitive works on China's technological discovery

...This paper traverses the history but importantly also looks at whether China's creative innovation can be rekindled

# Background & synopsis

- Addresses a key issue in China's next stage of development: their propensity to create new things and innovate
- Attempts to take on Peter Drucker's challenge 'of the hard work of thinking' – conceptual paper
- Findings: China has a long history of successful innovation
  - However, Confucian belief, a single despot and a closing off to the rest of the world have thwarted its innovative edge
  - Key to rekindling the entrepreneurial spirit will be based on balancing the institution of Government with the needs of a creative class
  - This article identifies that much of this change will rely on quality-related developments rather than financial stealth
- China's success in innovation will have substantial implications for developed nations both economically and geo-politically

# Introduction

- An unprecedented transition has occurred since Deng Xiaoping changed China's path and identified "to get rich is glorious"
  - China's GDP growth over the last two decades has been maintained at a staggering 9-10%
  - According to the World Bank 500 million Chinese have escaped poverty during this period
- However, arguably China's greatest challenge this century is to rekindle its innovative 'spirit' (Schumpeter, 1939)
  - A battle that will need conquering within (Hutton, 2006; Arrighi, 2007)
- China's rapid development under a planned state but a market economy is one of the greatest experiments in history
  - 'One country two systems'

# Insights from Peter Drucker

- China is a great cost innovator (“factory of the world”) and has a SCA in this area
  - China’s great “longer-term” barrier is to go beyond imitation and cost innovation to imagination, creation and invention
- Given his views on market economies it’s likely Peter Drucker (2002c) would recommend that China focus on *knowledge* and *people*
  - In China’s case this means mobilising a *complex culture* and its *requisite institutions*
- Presciently Drucker (1992, p. 95) identified that we were entering a new story about ‘world history and world civilisation’ and not about a Western-centric worldview
  - Note: Obama’s visit this week; builds on rapid rise since 1978 which includes WTO acceptance, Olympic “flame”, upcoming Shanghai expo and China’s repositioning as Asia’s “middle kingdom”

# The focus here is creative innovation

- Schumpeter (1939) identified innovation as the driving force of an economy - devastates some but rewards others
  - ‘Creative destruction’ is channelled through entrepreneurial ‘free spirits’
- Various views exist on what constitutes innovation.
  - ‘Innovation is the specific function of entrepreneurship...It is the means by which the entrepreneur creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth’. (Drucker 2002a , p. 95)
  - ‘Creativity is thinking up new things. Innovation is doing new things.’ (Theodore Levitt as cited in Shapiro, 2002, p. 7)
- Radical and disruptive innovation (Christensen, 2000) around creative intelligence (Rowe, 2004) using imagination, creativity and invention (Robinson, 2009) is the focus
  - Includes ‘expertise, creative thinking skills and motivation’ (Amabile, 1998, p. 78)

# The focus is also China Inc as a unique institution (organisation)

- North's (2005) suggests informal and formal institutions help shape people's behaviour and interactions
  - Institutions have a potential to affect an 'individual's habits, conceptions and preferences' (Hodgson 2003 , p. 154)
- This has profound implications for China
  - Ricky Yan (1994) offers a key insight into the “softer” attributes of Chinese society
    - Foreigners need to understand *guo qing* or Chinese special local characteristics
    - China is no ordinary society, but one of the last communist frontiers where the institution of Government has a direct role
- Peter Drucker (leading advocate on management organisations) was privy to some of the great conversations in history on such issues
  - The real battle for China is Government-centric and will be a function of how the polity copes with, supports and encourages more liberalised people (potential freer spirits)



# China's cultural traditions (5000 years in one slide)

- Well known philosophers like Confucius and Laozi, strategists like Sunzi, and legalists like Han Fei all played a role in China's development
- Confucius' central thesis proffered the benefits of moral virtue
  - Led to a non-litigious society reliant on the “rule of man” with *xinren* (trust) and *guanxi* (relationships and connectedness) becoming informal surrogates for a lack of formal systems trust
- Confucian and other Chinese values have positive and negative values in relation to aspects like innovation
  - Ritual and observance provide discipline (help convergent thinking) but are likely to hamper eureka moments (hamper divergent thinking)
  - A historical lack of encouragement for merchants and mercantilism as opposed to mandarins and public service has also deviated China off its technological inventive path (Winchester, 2008).

# History of innovation and diverging worldviews

- ‘It is a common-place irony that three inventions which helped to establish western world hegemony – the magnetic compass, gunpowder and the printing press – had been known in China for centuries before they appeared in Europe.’ (Fernandez-Amesto 1995, p. 680)
  - Needham found many more
  - Chinese resourcefulness and way of thinking enabled such early technological development
- Why the Chinese have not harnessed this goes back to institutional changes around 200BC and an Emperor’s catalytic conversion in the 1400s
  - Brown (1991) identified a human universal that he believes is innate to all:
    - West rationalise in a binary dyadic way
      - However, Chinese made a gestalt shift - this variation has its roots in philosophy and the pursuit of holism and harmony and aspects like yin-yang
- Meanwhile the West adopted the technology and added scientific method and industrialisation while China stagnated and the rest as they say...

# China's recent record and global innovation ranking

- The Chinese are trying to catch up - modern China's evolution as an innovative nation can be divided into five key stages (Xie & White, 2006):
  - Stage 1 (1949-1960) started with the emergence of Mao's People's Republic of China and an industrialisation around "bedrock" industries.
  - Stage 2 (1960-1978) saw increasing tensions between the Soviet Union and Mao; and the Cultural Revolution
  - Stage 3 (1978-1991) was the catalyst for the new Open Door Policy (1978)
  - Stage 4 (1992-2000) saw a revitalisation of local industry with FDI channelled to broader activities
  - Stage 5 (2001 onwards) and the *modern Chinese industrial revolution*
- Has lifted China in the global innovation rankings (37<sup>th</sup> on Global Innovation Index) with 2.5% of GDP now targeted at R&D.
  - Other targets include technological advances to 60% and becoming top 5 in the world for patents and science citations
- Pure numbers will help but I argue the key is likely to come from 4 "softer" qualitative elements

# China's future innovative development (1): Learning and innovation

- The Chinese Imperial Examination system is legendary and has provided a solid process of meritocracy and governance (Dreyer, 1996)
- A number of the principles have been adopted in China's modern school based system
- Abundance of social equity can be tapped (China's pure numbers)
- However, it's the *quality* of social capital not the *quantity* that enables creative innovation
- 3 common elements in best systems of education (Barber & Mourshed, 2007):
  - they recruit quality people to teaching;
  - they ensure these people have excellent instruction;
  - they make sure this level of instruction is accessible to every student
- China has to nurture knowledge workers to go beyond "brute force" innovation (Kao 2009) and grow 'creative intelligence' (Rowe, 2004)
- As Drucker (2006, p. 145) would suggest it's 'knowledge workers' who work with their 'minds' rather than hands.

# China's future innovative development (2): Climate for creativity

- *The Rise of the Creative Class* identifies criteria for creative innovation (Florida 2002)
  - Create the right environment and attract and nurture the right people and creative things happen
  - Measures include the number of high tech firms and innovations, the talent pool and diversity
    - China is rising in the patent stakes, regions are competing once again, and university numbers and OS education is rising
- Formal institutional change is important - links to Amabile's idea of setting up in this case China Inc's own 'climate for creativity'
- To attract the right people you need appropriate infrastructure and amenities
  - Social innovation is as important as scientific innovation (Drucker 1992)
  - A challenge but there are inroads (200 million urban new "cool")
    - Changing demographics as Drucker identified is a key to structural change

# China's future innovative development

## (3): Nurturing innovation risk-takers

- Survival in China has meant learning to adapt and being flexible
- Tom Doctoroff (2005, p. 8) notes 'To survive, let alone advance, adaptive traits are required and the Chinese have them in spades'.
  - Believing that 'creativity' is not one of their strengths, he goes on to suggest they revere knowledge and are extremely resourceful, intelligent, patriotic and above all 'analytically and tactically brilliant'
- The Chinese have a history of minimising risk through *guanxi* and trust (*xinren*)
  - Hence, the institution of systems trust in China is quite new in relative terms and is changing these behaviours
- It is probable that individual risk-taking was necessary for successful merchants (in the DNA of OS Chinese)
- The people of Wenzhou provide a classic case (known throughout China for their entrepreneurship)
- Move away from SOEs to private SMEs (some large) – a new breed of risk taker and successful entrepreneur

# China's future innovative development (4): Managing China's informal and formal institution

- Balazs (1965) suggested that it was the State's fault that technological progress was killed off in China by limiting the spirit of inquiry and innovation
- The concept of 'cumulative causation' is an important aspect emanating out of the Institutional Economics literature
  - It suggests that Governments can change pathways and alter trajectories but this is limited to 'incremental change'
  - China may be the first exception i.e. large capital inflows, modern logistics and new forms of communication can speed up change
- Kao (2009, p. 112) suggests a "Large-scale Ecosystem" model of innovation is extraordinarily difficult
  - Intensive and extensive innovation clustering around a National strategy
- Drucker (2002a, p. 102) observed that 'innovation requires knowledge, ingenuity, and, above all else focus'
  - No one seems to doubt China Inc's *focus* but many question their ability to allow people a *freer* spirit (in one country but two systems)

# Discussion and conclusion

- Rekindling China's innovative creative spirit is China's greatest challenge?
  - It's likely to also take "one country and a modified system"
- Drucker (1992, p. 100) is well known for identifying that in an organisation, "People are our greatest asset"
  - Rapid economic progress and income equality will be two key elements - people's propensity is not the issue (Diamond, 1997)
- The issue stems from culture which then became institutionalised
- In a yin-yang paradox, it's the nature of the Government that makes China so strong
  - Hu Jintao (China Inc.'s CEO) and Wen Jiabao (China Inc.'s COO) have the power to orchestrate change (in the organisation)
  - These changes can be enacted more quickly than in the West (Pros and Cons)
  - Stymied China since the mid 1400's but could be a source of major SCA
- It is the *velocity* and *speed* of change that is probably now most at question
  - But how much latitude can the PRC give their "spirits" to run free?



# On that note I will leave the last words to the champion of the Forum - Peter Drucker

- For those that question China's ability to make such a transition
- '...the greatest change of all is probably that in the last 40 years purposeful innovation – both technical and social – has itself become an organised discipline that is both teachable and learnable' (Drucker, 1992, p. 97).

**THANK YOU**

# Questions



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