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DEEPENDRA MOITRA CONSULTING

Partners in Global Innovation

CHINA AND INDIA: OPPORTUNITIES AND THREATS FOR THE GLOBAL SOFTWARE INDUSTRY

Helsinki University of Technology | Helsinki | 27 November 2008

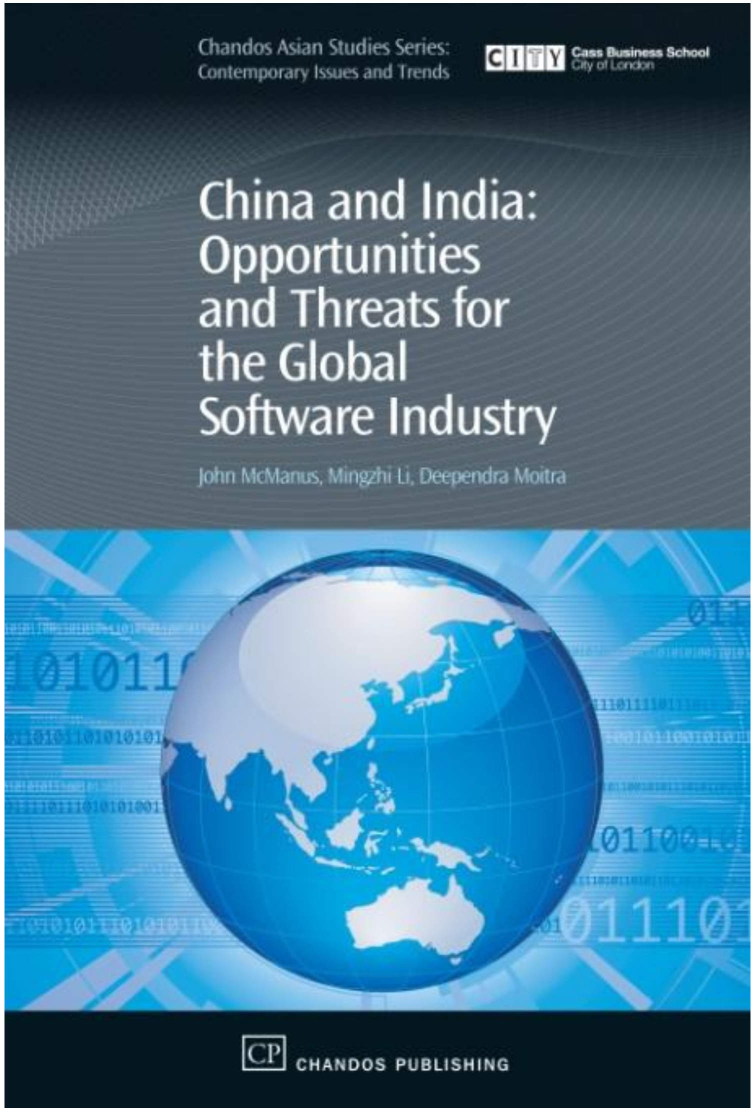
Objectives Of The Talk

This talk will provide answers to two important questions:

1. How does the Chinese software industry compare and contrast with the Indian software industry?
2. How will China and India shape the future of global software industry?

Agenda

- The Competitive Context
- Why Chinese and Indian Software Industries Matter
- Comparative Analysis of Chinese and Indian Software Industries
- China & India: Competitive Strategies and Interrelationships
- China and India: Implications for Global Software Industry
- Questions & Answers



Clarifying The Focus and Nature Of The Talk

- This talk focuses on software industries in China and India, *not* on China and India at a macro level
- The talk makes a deliberate attempt to not overwhelm the audience with data; *instead*, important perspectives, prognosis, and strategic insights derived from large scale qualitative and quantitative data are emphasized

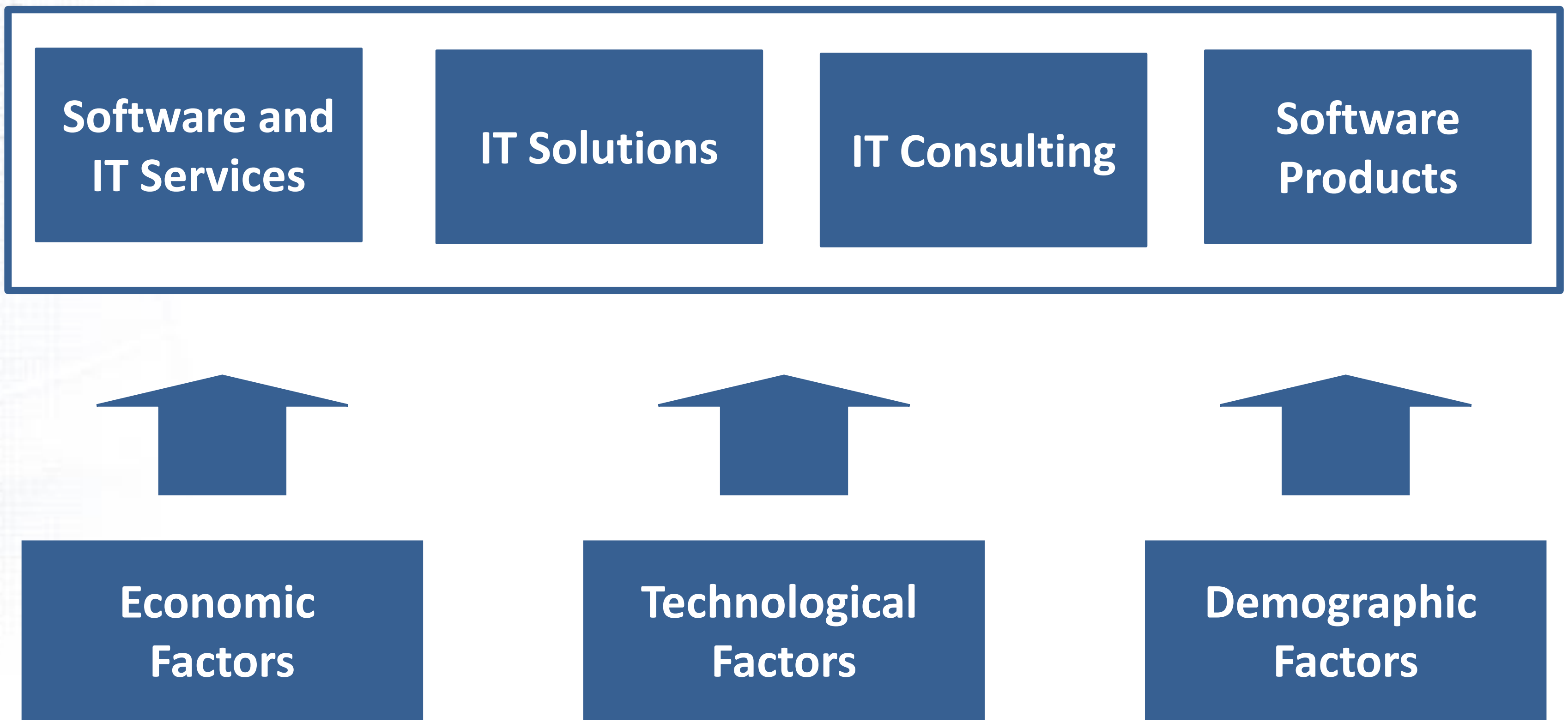
The New Competitive Landscape

- The era of ICT-led globalization…"born global" companies…and flattening of the world
- Emergence of the global village…falling market barriers…global mobility of factor inputs…and increasing economic integration
- The shifting geographies of innovation…emergence of BRIC nations from underdogs to tigers…China and India shaping the new tech world order
- Diminishing importance of national systems of innovation
- The increasingly horizontal future of business…rising cost pragmatism…and multiplying complexity of innovation
- The chief globalization officers are arriving…the dawn of reverse globalization
- Software-centered lives…industries…and competitiveness

Key Trends in the Software Industry

- Software industry is in the midst of a dramatic revolution
  - Accelerated pace of innovation and technological discontinuities (Web 2.0)
  - Googalization of the enterprise and emergence of new business models (Software As A Service)
  - Re-emergence of software factories
  - Blurring boundaries between products and services
- Software consuming 40% of CIO and 60% of CTO budgets

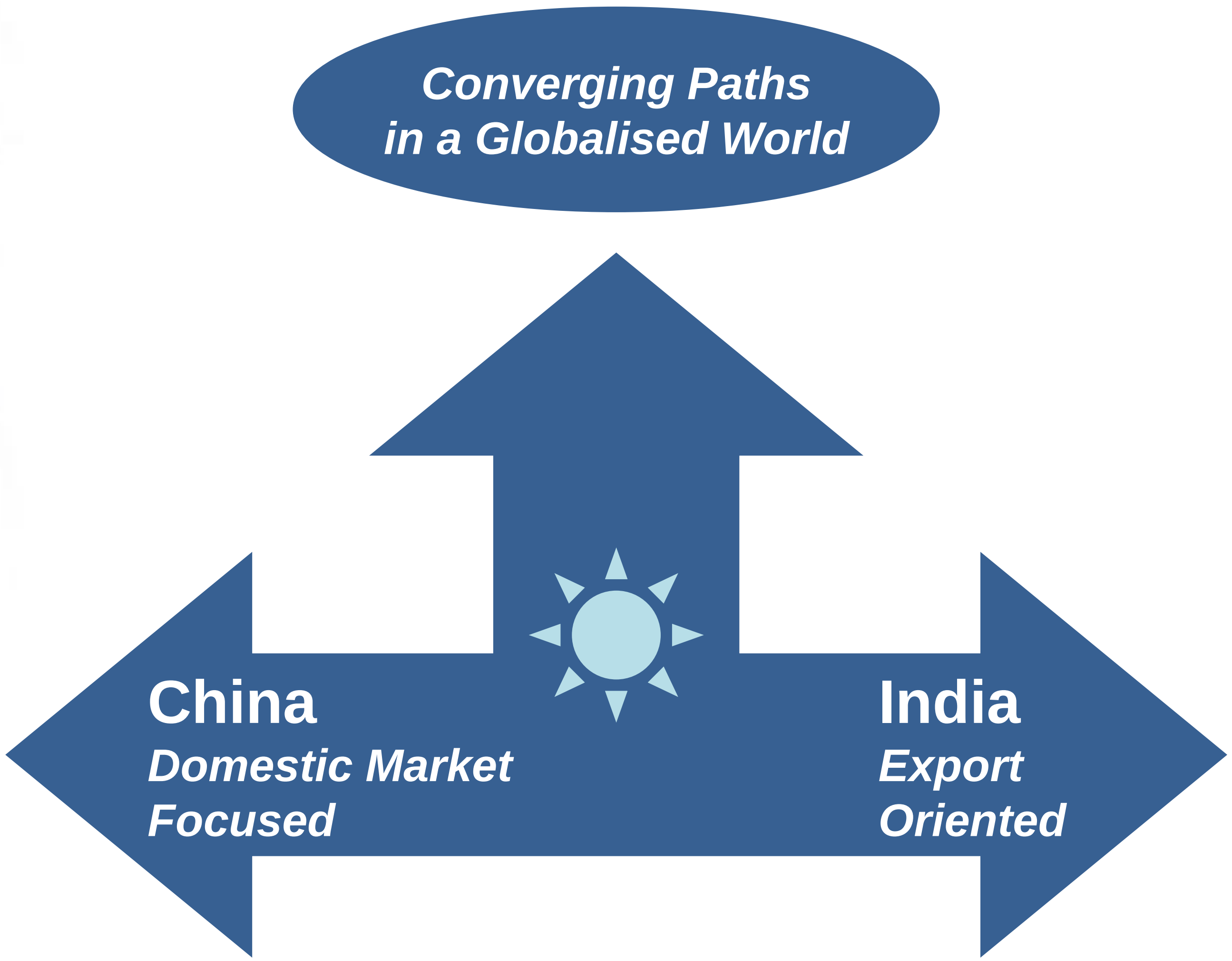
The Software Industry Value Spectrum



Software Industries in China and India—A Snapshot

- China and India are the two fastest growing economies in the world (~ 8% GDP)
- China and India are the two top destinations for global foreign direct investment (FDI), including for software and IT
- China and India both have a heavy concentration of MNEs
- China and India offer burgeoning markets for software and IT services
- The software industry in China and India are growing at a phenomenal rate (5-year CAGR >30%)
- China and India employ 650,000 and 1.5 million people respectively in software industry

Evolution and Growth Trajectories of the Software Industry in China and India



Comparative Analysis of Chinese and Indian Software Industries: The Framework

	Strengths	Weaknesses	Opportunities	Threats
Political				
Economic				
Social				
Technological				
Environmental				
Legal				

Comparative Analysis of Chinese and Indian Software Industries

	CHINA	INDIA
STRENGTHS	• Strong government back-up • Scale and cost advantages • Co-location with manufacturing • Domestic market • Chinese Diaspora • Global FDI due to market opportunities • State R&D investments • World class infrastructure	• Favorable policies (1991 reforms) • Scale and cost advantages • Established leadership in exports • Global FDI due to superior capability • Multi-country footprint • Versatile technical skills base • Multiplicity of business models • Brand and customer relationship capital • Indian Diaspora • Global alliances and partnerships • Major stock market listings
WEAKNESSES	• Fragmented industry and firm stability • IP regime • Operational capability • English language proficiency • Project management and process skills • Experience with business models • Limited access to international markets • Small deals, meager revenues • Convoluted corporate governance • Brand and reputation • Institutional framework	• IPR enforcement • Meager intellectual property reservoir • Relatively lower domain skills • Management of large, complex, integrated deals • Overdependence on US markets • Physical infrastructure • Inflexible labor laws and burdensome taxation rules

Comparative Analysis of Chinese and Indian Software Industries

Continued

	CHINA	INDIA
OPPORTUNITIES	• R&D outsourcing • Embedded systems software • Applications and maintenance deals • Innovative, low cost products • Domestic market boom • BPO for Japanese, Korean, Hong Kong and Taiwanese firms • Develop and harness partnerships • Establish supremacy in select verticals	• R&D and engineering services • Growing global IT spend and offshoring due to cost consciousness • Large, multi-year outsourcing deals • Integrated IT+BPO deals • High-end consulting, business solutions • Rapidly growing domestic market • Leverage global alliances • Globalization and inorganic growth • Niche application products
THREATS	• Firm scale expansion and accumulated learning management • Industry consolidation • Failure to expand services, vertical and geographical footprints • Continued reliance on cost-based positioning • Process maturity and domain capability • Securing large, annuity deals • R&D investments leverage • Handling western customers	• Sustain cost attractiveness • Increasing margin pressure • Growing MNE presence due to proven offshoring model • Changes in immigration regulations • Commoditization of basic IT services • Management of new paradigms and disruptive trends • Failure to accomplish non-linear growth • R&D based differentiation

Market Segmentation of Global Software Industry

Segmentation → Focus → Competitive Strategy

Customer/Market Need Analysis and Spending Patterns
Production Costs
Service/Delivery Costs

Heterogeneous versus Homogenous Markets/Needs
Comparative Advantage (degree of competition)
Competitive Advantage (availability of substitutes)
Profitability Potential

Demographic

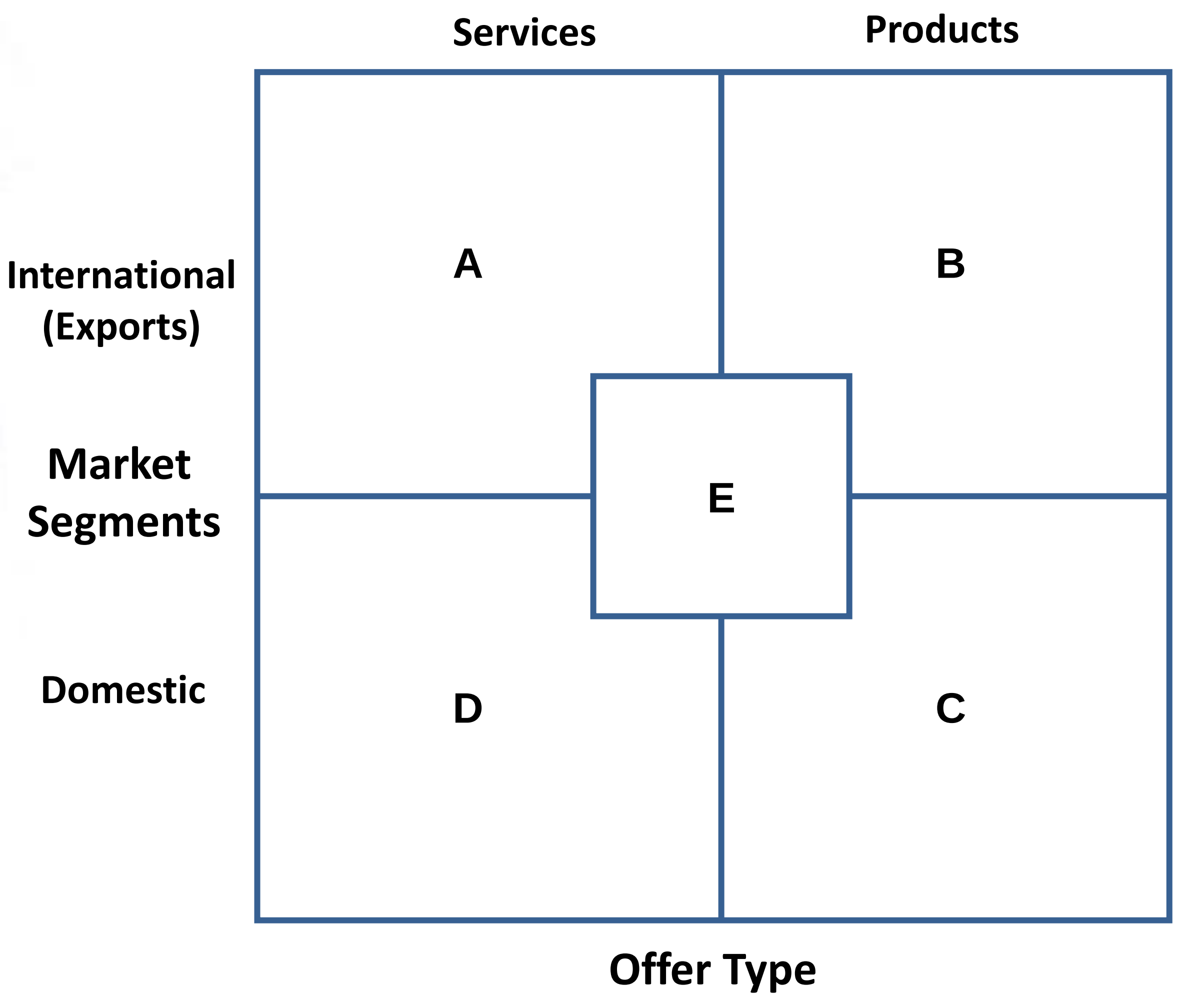
Geographic
Domestic
International

Offer Type
Products
Services

Established
Versus
Emerging

Market Segmentation of Global Software Industry

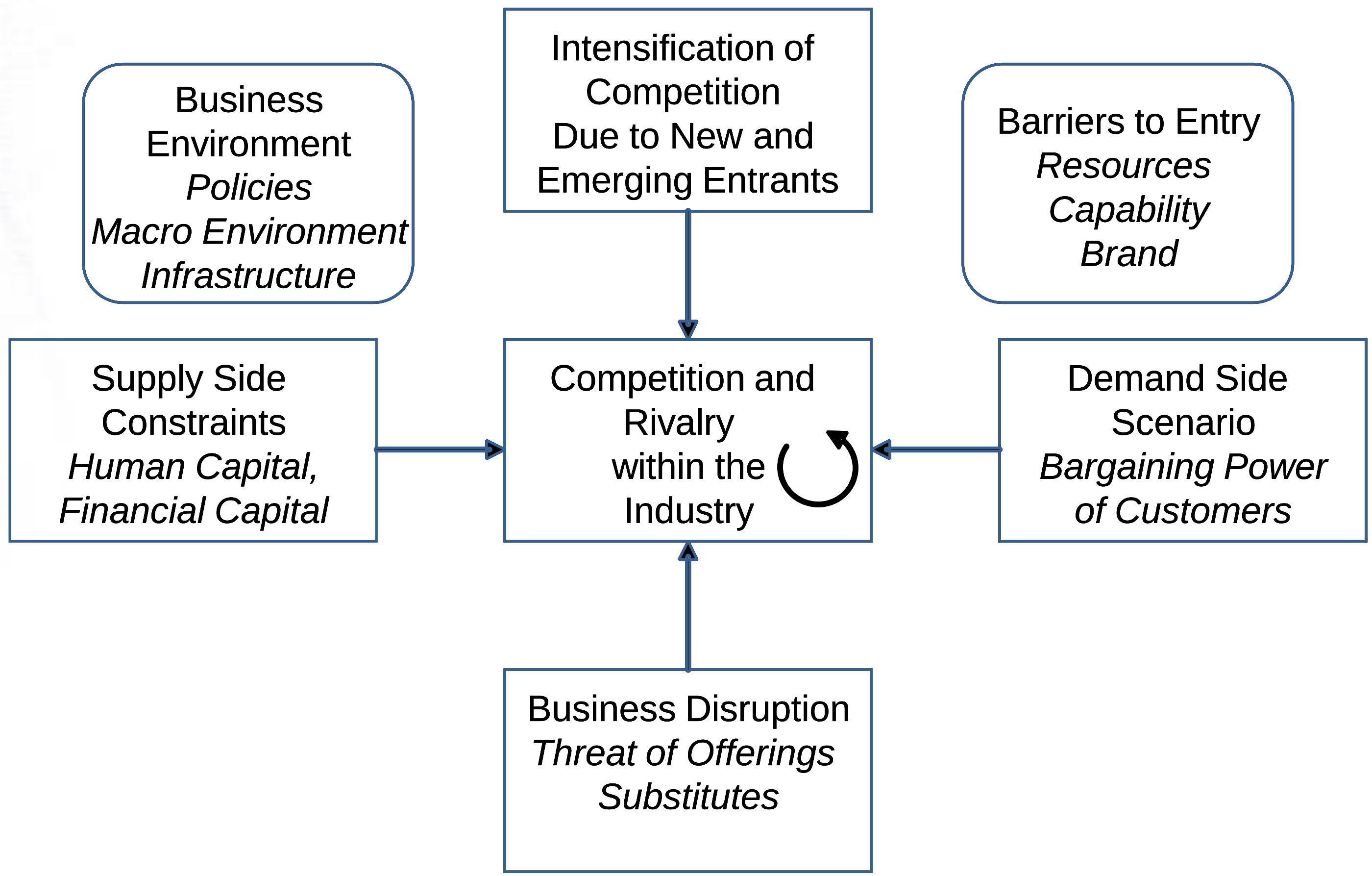
Continued



Adopted from Heeks (1987)

China and India: Competitive Positioning Strategies—Environmental Analysis

Competitive Scenario for the Indian and Chinese Software Industries

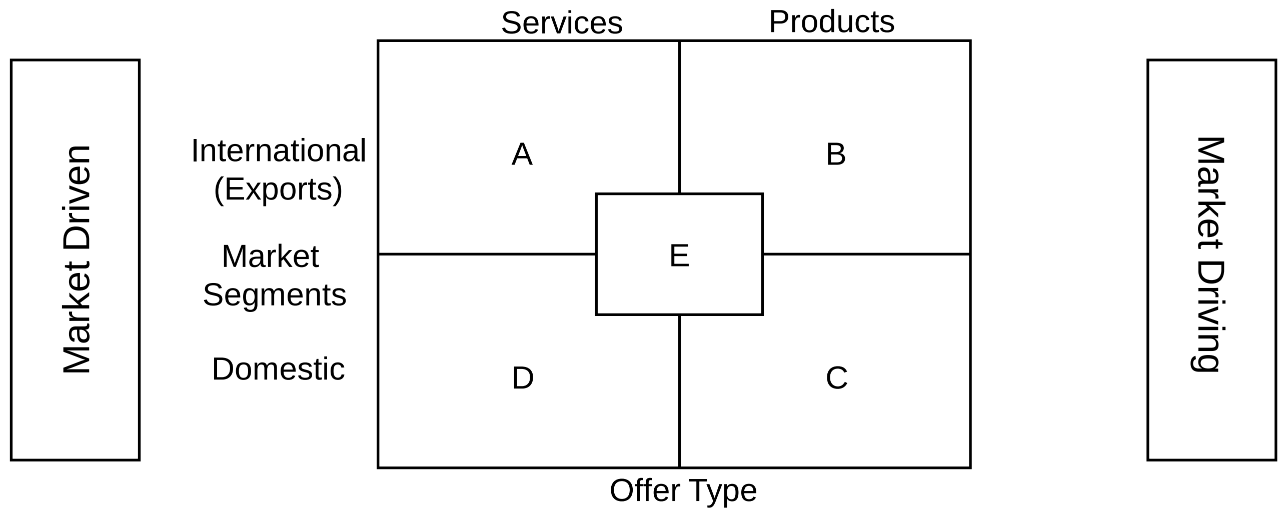


Adapted from Porter (1985)

China and India: Competitive Positioning Strategies—The Framework

Competitive Strategy
- Cost Leadership
- Differentiation
- Focus

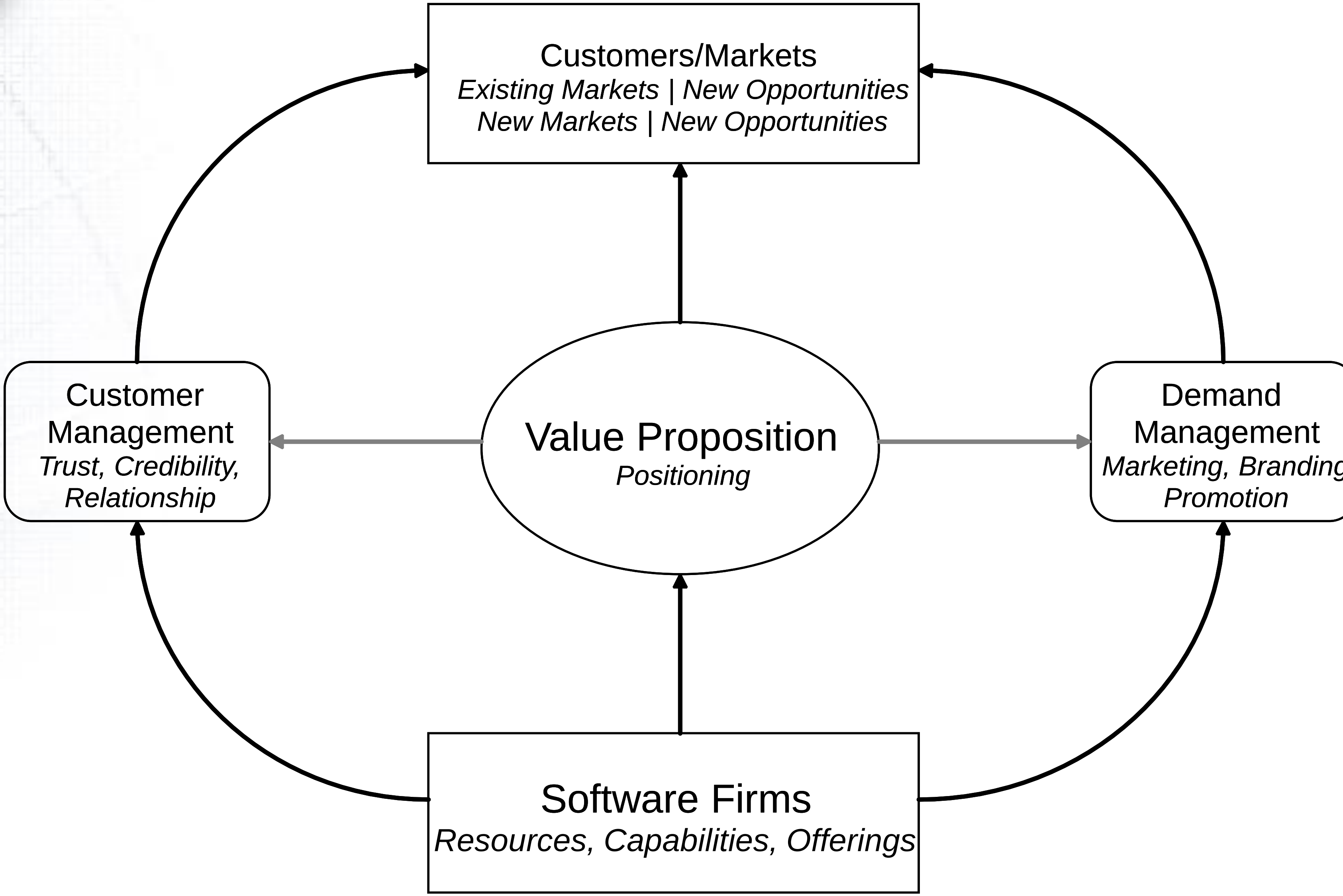
Competitiveness Levers
- Globalization
- Diversification
- Alliances & Partnerships
- Acquisitions



Growth Strategy
- Scaling
- Duplication
- Granulation
- Adaptation

Value Disciplines
- Operational Excellence
- Customer Intimacy
- Superior Performance
- Knowledge Management

Customer and Market-Oriented Strategies for China and India



India – Opportunity Matrix and Competitive Positioning Strategies

Leverage Value Disciplines

Sustain Cost Leadership

Globalization & Acquisitions

Duplication

Disrupt the Large Outsourcing Deals Space

Transformation Play

Granulation

R&D Investments

	Services	Products
International	• High-end consulting • Integrated ADM + BPO • KPO and Analytics • Large outsourcing deals • Vertical business solutions • R&D Services (‘lab on hire’) • SME (Software as Service) • EMEA and APAC	• Applications Products (Retail, Banking, etc.) • Communication software products (mobile/wireless) • Media products, games • IP licensing • Emerging products for the emerging markets
Domestic	• Full range of IT services • Business solutions • Internet applications • Educational services • Mobile applications • SME (Hosted services) • e-Governance	• Application Products (e.g. retail and corporate banking) • Digital media, games healthcare, low-cost ATMs) • Packages for retail, pharma • Products for the defense and space sectors

China – Opportunity Matrix and Competitive Positioning Strategies

Establish Value Disciplines

Cost Leadership

Globalization & Global Partnerships

Duplication

Granulation

	Services	Products
International	• Application development and maintenance services • BPO for the neighboring countries • Open source software economies • SME sector • R&D services	• Internet, cellular and IP telephony products • Automotive products • Digital entertainment products • Open source products • Emerging products for the emerging markets
Domestic	• Full range of IT services • Business solutions • Internet/e-commerce applications • Educational services • Mobile applications • SME sector • e-Governance	• Packages for the domestic markets (e.g. accounting, CRM, SCM, etc. • Games and animation • Low cost products involving embedded systems (consumer electronics, devices)

Interrelationship Between Chinese and Indian Software Industries

- India's success as first-mover in the global software and IT services arena has only catalyzed China's accession to the offshore services space
- Significant concentration of all major MNEs
  - In China, primarily for tapping the local market opportunities and for coordination with manufacturing
  - In India, both for market reasons and global innovation
  - Raging a war for talent but also helping capability build-up
- China and India have the potential to form software-manufacturing alliances, leveraging complementarities and emerging stronger together

Interrelationship Between Chinese and Indian Software Industries

Continued

- The Indian software companies are intensifying their presence in China for
  - Addressing the local and neighboring market opportunities
  - Serving the global clients
  - Intangible interrelationships – transfer of know-how and skills
- Indian companies like NIIT and Apple have strong foothold in the Chinese training marketplace
- Chinese software companies are setting up base in India for access to software capability (e.g. Huawei)

China and India: Implications for Global Software Industry

- The booming services business requires scale that only China and India can offer and replicating years of capability build-up will be challenging
  - *A major portion of the software and IT services pie will be dominated by India and China*
- The dominant product players are likely to retain their foothold in the near term unless the open source phenomenon sweeps the market in a big way and SaaS business models become pervasive
  - *However, the stage is set for reverse globalization disruptions from India and China, especially in niche applications innovation space*

Thank You!

Discussion/Questions

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