Competitiveness and Company Strategy: Issues for Brazil

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ExpoManagement
Sao Paulo, Brazil
November 4, 2003


Additional information may be found at the website of the Institute for Strategy and Competitiveness, www.isc.hbs.edu
Perspectives on Firm Success

- Competitive advantage resides **inside** a company
- Competitive success depends primarily on **company choices**
- Competitive advantage (or disadvantage) resides partly in the **proximate environment** in which a company’s business units operate
  - Cluster participation
- Company choices are strongly influenced by **location**
Competitiveness and Productivity

- Competitiveness is determined by the **productivity** with which a nation, region, or cluster uses its human, capital, and natural resources. Productivity sets a nation’s or region’s standard of living (wages, returns on capital, returns on natural resources).

- The most important sources of prosperity are **created** not inherited.
- Productivity does not depend on **what** industries a region competes in, but on **how** it competes.
- The prosperity of a region depends on the productivity of **all** its industries.
- There are no low-tech industries, only **low-tech firms**.
Comparative Economic Performance

GDP per capita (PPP adjusted) in US-$, 2002

Compound annual growth rate of real GDP per capita, 1990-2002

Source: EIU (2003)
Annual U.S. patents per 1 million population, 2001


International Patenting Output
Selected Latin American Countries

Annual U.S. patents per 1 million population, 2001

Average Growth Rate of Countries shown: 7.9%

Patents per Capita for total of Countries shown: 0.71

Note: Other Latin American countries have negligible rates of US patenting
## Comparison of U.S. Patenting 1997 - 2001

<table>
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<th>Rank</th>
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<th>Massachusetts Institution</th>
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<td>QUANTUM CORP. (CA)</td>
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Source: Global Competitiveness Report 2003
What Causes Competitiveness?

A sound macroeconomic, political, legal, and social context creates the potential for competitiveness, **but is not sufficient**

Competition ultimately depends on improving the **microeconomic capability** of the economy and the **sophistication of local companies and local competition**
Productivity and the Business Environment

Context for Firm Strategy and Rivalry

- A local context and rules that encourage **investment** and **sustained upgrading**
  - e.g., Intellectual property protection
- **Meritocratic** incentive system across institutions
- Open and vigorous competition among **locally based rivals**

Factor (Input) Conditions

- **Presence of high quality, specialized inputs** available to firms
  - Human resources
  - Capital resources
  - Physical infrastructure
  - Administrative infrastructure
  - Information infrastructure
  - Scientific and technological infrastructure
  - Natural resources

Demand Conditions

- Sophisticated and demanding local customer(s)
- Local customer needs that **anticipate** those elsewhere
- Unusual local demand in **specialized segments** that can be served nationally and globally

Related and Supporting Industries

- Access to capable, locally based **suppliers** and firms in related fields
- Presence of **clusters** instead of isolated industries

- Successful economic development is a process of **successive economic upgrading**, in which the business environment in a nation evolves to support and encourage increasingly sophisticated ways of competing

The California Wine Cluster

Grapes

State Government Agencies (e.g., Select Committee on Wine Production and Economy)

Growers/Vineyards

Wineries/Processing Facilities

Sources: California Wine Institute, Internet search, California State Legislature. Based on research by MBA 1997 students R. Alexander, R. Arney, N. Black, E. Frost, and A. Shivananda.

State Government Agencies

Educational, Research, & Trade Organizations (e.g., Wine Institute, UC Davis, Culinary Institutes)

Tourism Cluster

Food Cluster

Winemaking Equipment

Barrels

Caps and Corks

Labels

Public Relations and Advertising

Specialized Publications (e.g., Wine Spectator, Trade Journal)

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Leading Footwear Clusters

**Portugal**
- Production
- Focus on short-production runs in the medium price range

**Italy**
- Design, marketing, and production of premium shoes
- Export widely to the world market

**United States**
- Design and marketing
- Focus on specific market segments like sport and recreational shoes and boots
- Manufacturing only in selected lines such as hand-sewn casual shoes and boots

**Romania**
- Production subsidiaries of Italian companies
- Focus on lower to medium price range

**Vietnam/Indonesia**
- OEM Production
- Focus on the low cost segment mainly for the US market

**China**
- OEM Production
- Focus on low cost segment mainly for the European market

Source: Research by HBS student teams in 2002
The Costa Rica Information Technology Cluster

- **Electronic Assembly**
  - **Other Electronic Components** (e.g., circuitboards)
    - **Passive Electronic Components** (e.g., inductors, transistors)
      - **Semiconductor Production**

- **Specialized Packaging** (e.g., plastics, corrugated materials)
- **Specialized Chemicals**
- **Computer Software** (e.g., ArtinSoft)
- **Venture Capital Firms**
- **Specialized Academic and Training Institutions** (e.g., Instituto Tecnológico de Costa Rica, Instituto Nacional de Aprendizaje)
- **State Government Agencies** (e.g., export and investments promotion agencies: Cinde and Procomer)

Source: Niels Ketelhohn research for Professor Michael E. Porter
Influences on Competitiveness

Multiple Geographic Levels

- World Economy
- Broad Economic Areas
- Groups of Neighboring Nations
- Nations
- States, Provinces
- Cities, Metropolitan Areas
Shifting Responsibilities for Economic Development

**Old Model**

- **Government** drives economic development through policy decisions and incentives

**New Model**

- Economic development is a **collaborative process** involving government at multiple levels, companies, teaching and research institutions, and institutions for collaboration
Brazil’s Competitive Position

- Ranks 30 overall in the Business Competitiveness Index
  - Second highest Latin American country after Chile, but on a negative trend since 2001
  - Company operations and strategy (currently ranked 26) is consistently ranked higher than business environment (ranked 35)

- Key competitive advantages
  - Cluster presence; but largely a legacy of a closed economy
  - Local competition
  - Strong regional governments

- Key competitive disadvantages
  - Trade barriers
  - Human resource weaknesses
  - Cumbersome and inefficient administrative infrastructure
  - Weaknesses in the physical infrastructure
  - Inequality
Implications for Brazilian Companies

- Create a regional company strategy
- Build the cluster
- Take a leadership role in economic development
- Link corporate philanthropy to the competitive context
Brazil’s Exports By Destination
1997-2001

Source: UNCTAD Trade Data. Author’s analysis.
Internationalization Strategy

Hilasal

Value Proposition

- High quality, fashionable printed towels designed for global markets

Set of Activities

- Highly customized products with rapid delivery
- R&D located at production sites to enable rapid implementation of technology improvements
- Design groups organized to provide fast response to custom orders
- Bilingual sales office based in Miami
- Manufacturing located in El Salvador and Mexico to minimize costs while maintaining close access to the U.S. market
- State-of-the-art computer systems to track customer orders from design to shipping
- Highest quality machinery, equipment, cotton, and dyes sourced from Europe and the U.S.

Firm-based competitive advantage in a particular segment

Hilasal developed a successful differentiation-based positioning

Public / Private Cooperation in Cluster Upgrading
Minnesota’s Medical Device Cluster

Context for Firm Strategy and Rivalry
- Aggressive trade associations (Medical Alley Association, High Tech Council)
- Effective global marketing of the cluster and of Minnesota as the “The Great State of Health”
- Full-time “Health Care Industry Specialist” in the department of Trade and Economic Development

Factor (Input) Conditions
- Joint development of vocational-technical college curricula with the medical device industry
- Minnesota Project Outreach exposes businesses to resources available at university and state government agencies
- Active medical technology licensing through University of Minnesota
- State-formed Greater Minnesota Corp. to finance applied research, invest in new products, and assist in technology transfer

Demand Conditions
- State sanctioned reimbursement policies to enable easier adoption and reimbursement for innovative products

Related and Supporting Industries
The Australian Wine Cluster
Trade Performance

Australian Wine Exports in million US Dollars

$0 $100 $200 $300 $400 $500 $600 $700 $800 $900 $1,000


Australian Wine World Export Market Share

0% 1% 2% 3% 4% 5% 6% 7% 8%

Value
Market Share

Source: UN Trade Statistics
The Australian Wine Cluster

History

1930
First oenology course at Roseworthy Agricultural College

1955
Australian Wine Research Institute founded

1965
Australian Wine Bureau established

1970
Winemaking school at Charles Sturt University founded

1980
Australian Wine and Brandy Corporation established

1990
Winemaker’s Federation of Australia established

1991 to 1998
New organizations created for education, research, market information, and export promotions

1950s
Import of European winery technology

1960s
Recruiting of experienced foreign investors, e.g. Wolf Bass

1970s
Continued inflow of foreign capital and management

1980s
Creation of large number of new wineries

1990s
Surge in exports and international acquisitions

Role of the Private Sector in Economic Development

• A company’s competitive advantage is partly the result of the local environment
• Company membership in a cluster offers collective benefits
• Private investment in “public goods” is justified
  - Take an active role in upgrading the local infrastructure
  - Nurture local suppliers and attract new supplier investments
  - Work closely with local educational and research institutions to upgrade quality and create specialized programs addressing cluster needs
  - Provide government with information and substantive input on regulatory issues and constraints bearing on cluster development
  - Focus corporate philanthropy on enhancing the local business environment

• An important role for trade associations
  - Greater influence
  - Cost sharing
The New Role of Corporate Philanthropy

Where to Focus Corporate Philanthropy

- Social and economic goals can be addressed simultaneously by improving a company’s competitive context

How Companies Should Invest in Philanthropy

- Companies should give not just money but leverage the company’s unique capabilities in support of social causes, far exceeding the impact possible by individuals
Advanced Micro Devices (AMD) is a leading semiconductor manufacturer. Due to labor constraints, AMD has difficulty finding skilled workers for its semiconductor fabrication facility in Austin, TX. The cost of recruiting and filling these positions was up to $12,000 per person. AMD invested in the development of a regional training and apprenticeship program for minority students from low-income areas called Accelerated Careers in Education.

**Social Benefits:** Nearly all of the program’s graduates received jobs or continued on to higher education.

**Economic Benefits:** 55% of the graduates came to work for AMD, saving recruitment and training costs that more than paid for the program. The program has also expanded the pool of qualified job candidates for the future.

Source: “Business Development: Aligning Corporate Performance with Community Economic Development to Achieve Win-Win Impacts”, The Center for Corporate Citizenship at Boston College
Selected References


Selected References (continued)


• “Innovation Lecture,” published by the Dutch Ministry of Economics, 2001


