This presentation draws on ideas from Professor Porter's books and articles, in particular, "Building the Microeconomic Foundations of Prosperity," in The Global Competitiveness Report 2005-06 (World Economic Forum, 2005); "Clusters and the New Competitive Agenda for Companies and Governments," in On Competition (Harvard Business School Press, 1998); Clusters of Innovation Initiative (www.compete.org), a joint effort of the Council on Competitiveness, Monitor Group, and ongoing research. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means—electronic, mechanical, photocopying, recording, or otherwise—without the permission of the author.

Additional information may be found at the website of the Institute for Strategy and Competitiveness, www.isc.hbs.edu
Prosperity Performance
Selected Countries

GDP per Capita (PPP adjusted), 2006

Compound annual growth rate (CAGR) Growth of Real GDP per Capita (PPP-adjusted), 1998-2006

Source: EIU (2007)
What is Competitiveness?

• Competitiveness is determined by the productivity with which a nation uses its human, capital, and natural resources.
  – Productivity sets a the standard of living (wages, returns on capital, returns on natural resources) that a nation can sustain
    • Devaluation does not make a country more competitive
  – Productivity depends on the prices that a nation’s products and services command (e.g. uniqueness, quality), not just efficiency
  – It is not what industries a nation competes in that matters for prosperity, but how it competes in those industries
  – Productivity requires a combination of domestic and foreign firms operating in the nation
  – Globalization and the productivity imperative create growing challenges for the uneducated and less skilled

• Only business can create wealth
• Nations compete in offering the most productive environment for business
• The public and private sectors play different but interrelated roles in creating a productive economy
Comparative Labor Productivity Performance
Selected Countries

GDP per Employee (PPP adjusted), 2006

CAGR of Real GDP per Employee (PPP-adjusted), 2001-2006

Source: EIU (2007)
Labor Force Participation
Selected Countries

% of Population in the Workforce, 2006

- Brazil
- Cuba
- Bolivia
- Mexico
- Costa Rica
- Panama
- Venezuela
- El Salvador
- Jamaica
- Chile
- Nicaragua
- Colombia
- Argentina
- Paraguay
- Uruguay
- Dominican Republic

Unemployed
Employed
Enablers and Indicators of Competitiveness

Productivity

- Domestic Investment
- Domestic Innovation
- Exports
- Inbound Foreign Direct Investment
- Outbound Foreign Direct Investment

Competitiveness
Investment Rates
Selected Latin American Countries

Gross Fixed Investment as % of GDP

Source: EIU (2007)
International Patenting Output
Selected Latin American Countries

Annual U.S. patents per 1 million population, 2006


Source: USPTO (2006)
Export Intensity
Selected Latin American Countries

Exports as % GDP, 2006

Costa Rica
Chile
Jamaica
Bolivia
Venezuela
Mexico
Ecuador
Honduras
Paraguay
Panama
Uruguay
Peru
El Salvador
Argentina
Nicaragua
Belize
Guatemala
Brazil

Source: WTO (2007)
Foreign Investment Stocks and Flows
Selected Countries

FDI Stocks as % of GDP, 2005

FDI Inflows as % of Gross Fixed Capital Formation, Average 2001 - 2005

Source: UNCTAD (2007)
Determinants of Competitiveness

Macroeconomic, Political, Legal, and Social Context

Microeconomic Competitiveness

Sophistication of Company Operations and Strategy

Quality of the Business Environment

State of Cluster Development

- A sound context creates the potential for competitiveness, but is not sufficient
- Competitiveness ultimately depends on improving the microeconomic capability of the economy and the sophistication of local competition
Governance Indicators, 2006
Selected Latin American Countries

Better

Index of Governance Quality, 2006

Worse

Note: Sorted left to right by decreasing average value across all indicators. The ‘zero’ horizontal line corresponds to the median country’s average value across all indicators.
Business Competitiveness Index
Colombia’s Position over Time

## Improving Company Sophistication
### Relative Position of Colombian Companies 2007

<table>
<thead>
<tr>
<th>Competitive Advantages Relative to GDP per Capita</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of customer orientation</td>
<td>38</td>
</tr>
<tr>
<td>Nature of competitive advantage</td>
<td>44</td>
</tr>
<tr>
<td>Extent of regional sales</td>
<td>46</td>
</tr>
<tr>
<td>Reliance on professional management</td>
<td>46</td>
</tr>
<tr>
<td>Value chain breadth</td>
<td>49</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Competitive Disadvantages Relative to GDP per Capita</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Breadth of international markets</td>
<td>63</td>
</tr>
<tr>
<td>Extent of incentive compensation</td>
<td>61</td>
</tr>
<tr>
<td>Control of international distribution</td>
<td>61</td>
</tr>
<tr>
<td>Production process sophistication</td>
<td>60</td>
</tr>
<tr>
<td>Company spending on research and development</td>
<td>60</td>
</tr>
<tr>
<td>Prevalence of foreign technology licensing</td>
<td>59</td>
</tr>
<tr>
<td>Extent of staff training</td>
<td>57</td>
</tr>
<tr>
<td>Extent of marketing</td>
<td>55</td>
</tr>
<tr>
<td>Capacity for innovation</td>
<td>54</td>
</tr>
<tr>
<td>Willingness to delegate authority</td>
<td>52</td>
</tr>
</tbody>
</table>

**Note:** Rank versus 74 countries; overall, Colombia ranks 52nd in 2006 PPP adjusted GDP per capita and 52nd in Business Competitiveness. Source: Global Competitiveness Report 2007.
Improving the Business Environment: The Diamond

Context for Firm Strategy and Rivalry

- Local rules and incentives that encourage investment and productivity
  - e.g., incentives for capital investments, intellectual property protection
- Vigorous local competition
  - Openness to foreign and local competition

Factor (Input) Conditions

- High quality, efficient and specialized inputs to business
  - Natural endowments
  - Human resources
  - Capital availability
  - Physical infrastructure
  - Administrative infrastructure (e.g., registration, permitting)
  - Scientific and technological infrastructure

Demand Conditions

- Demanding and sophisticated local customers and needs
  - Challenging quality, safety, and environmental standards

Related and Supporting Industries

- Capable, locally based suppliers and supporting industries
- The presence of clusters instead of isolated firms

• Successful economic development is a process of successive upgrading, in which the business environment improves to enable increasingly sophisticated ways of competing
# Factor (Input) Conditions

## Colombia’s Relative Position 2007

### Competitive Advantages Relative to GDP per Capita

<table>
<thead>
<tr>
<th>Factor</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of management schools</td>
<td>39</td>
</tr>
<tr>
<td>Quality of telephone/fax infrastructure</td>
<td>40</td>
</tr>
<tr>
<td>Judicial independence</td>
<td>42</td>
</tr>
<tr>
<td>Efficiency of legal framework</td>
<td>42</td>
</tr>
<tr>
<td>Air transport infrastructure quality</td>
<td>43</td>
</tr>
<tr>
<td>Reliability of police services</td>
<td>43</td>
</tr>
<tr>
<td>University/industry research collaboration</td>
<td>45</td>
</tr>
<tr>
<td>Financial market sophistication</td>
<td>48</td>
</tr>
<tr>
<td>Quality of electricity supply</td>
<td>49</td>
</tr>
</tbody>
</table>

### Competitive Disadvantages Relative to GDP per Capita

<table>
<thead>
<tr>
<th>Factor</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railroad infrastructure</td>
<td>67</td>
</tr>
<tr>
<td>Quality of port infrastructure</td>
<td>66</td>
</tr>
<tr>
<td>Quality of roads</td>
<td>60</td>
</tr>
<tr>
<td>Quality of scientific research institutions</td>
<td>60</td>
</tr>
<tr>
<td>Venture capital availability</td>
<td>58</td>
</tr>
<tr>
<td>Availability of scientists and engineers</td>
<td>56</td>
</tr>
<tr>
<td>Local equity market access</td>
<td>55</td>
</tr>
<tr>
<td>Ease of access to loans</td>
<td>53</td>
</tr>
<tr>
<td>Quality of math and science education</td>
<td>51</td>
</tr>
</tbody>
</table>

Note: Rank versus 74 countries; overall, Colombia ranks 52\(^{rd}\) in 2006 PPP adjusted GDP per capita and 52\(^{nd}\) in Business Competitiveness.
### Context for Strategy and Rivalry

**Colombia’s Relative Position 2007**

#### Competitive Advantages Relative to GDP per Capita

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficacy of corporate boards</td>
<td>41</td>
</tr>
<tr>
<td>Intellectual property protection</td>
<td>46</td>
</tr>
<tr>
<td>Lack of favoritism in decisions of government officials</td>
<td>48</td>
</tr>
</tbody>
</table>

#### Competitive Disadvantages Relative to GDP per Capita

<table>
<thead>
<tr>
<th>Disadvantage</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property rights</td>
<td>72</td>
</tr>
<tr>
<td>Extent of market dominance</td>
<td>65</td>
</tr>
<tr>
<td>Prevalence of trade barriers</td>
<td>64</td>
</tr>
<tr>
<td>Trade freedom</td>
<td>63</td>
</tr>
<tr>
<td>Intensity of local competition</td>
<td>55</td>
</tr>
<tr>
<td>Effectiveness of antitrust policy</td>
<td>50</td>
</tr>
</tbody>
</table>

Note: Rank versus 74 countries; overall, Colombia ranks 52\textsuperscript{nd} in 2006 PPP adjusted GDP per capita and 52\textsuperscript{nd} in Business Competitiveness.  
Ease of Doing Business Indicators
Colombia’s Position, 2006

Enhancing Cluster Development
Tourism Cluster in Cairns, Australia

Public Relations & Market Research Services
Food Suppliers
Property Services
Maintenance Services

Travel agents
Restaurants
Hotels
Attractions and Activities
e.g., theme parks, casinos, sports
Airlines, Cruise Ships

Tour operators

Local retail, health care, and other services
Local Transportation
Souvenirs, Duty Free
Banks, Foreign Exchange

Government agencies
e.g. Australian Tourism Commission,
Great Barrier Reef Authority

Educational Institutions
e.g. James Cook University,
Cairns College of TAFE

Industry Groups
e.g. Queensland Tourism Industry Council

Sources: HBS student team research (2003) - Peter Tynan, Chai McConnell, Alexandra West, Jean Hayden

CAON Colombia 091407.ppt

Copyright © 2007 Professor Michael E. Porter
From Sector Thinking to Cluster Thinking

- Isolated industries or areas of the economy (e.g., agriculture, manufacturing)
- **National** perspective

- Some sectors are superior
- Focus on government “support”
- Government is the driver

- Linkages and externalities across related industries and specialized institutions
- **Regional** perspective

- All clusters are good
- Focus on productivity and innovation
- Private sector is the driver; government is a participant
Cluster Composition
Colombia Export Performance by Cluster

Change in Colombia overall export share: -0.009%

Colombia overall export share: 0.214%

Source: International Cluster Competitiveness Project, Institute for Strategy and Competitiveness, Harvard Business School
Levels of Influence on Competitiveness

- World Economy
- Broad Economic Areas
- Groups of Neighboring Nations
- Nations
- States, Provinces
- Metropolitan and Rural Areas
- Clusters
- Firms

Neighbors

Regions
Economic Coordination with Neighbors
Strategic Opportunities

Factor (Input) Conditions
- Improve regional transportation infrastructure
- Create an efficient energy network
- Interconnect regional communications
- Link financial markets
- Harmonize regulatory requirements for business
- Facilitate the movement of students to enhance higher education
- Coordinate programs to improve security and public safety

Context for Strategy and Rivalry
- Eliminate trade and investment barriers within the region
- Simplify and harmonize cross-border regulations and paperwork
- Coordinate antimonopoly and fair competition policies
- Coordinate macroeconomic policies

Demand Conditions
- Harmonize product safety standards
- Harmonize environmental standards
- Establish reciprocal consumer protection laws

Cluster Development
- Coordinate development of cross-border clusters, e.g.
  - Tourism
  - Agribusiness
  - Transport & Logistics
  - Business services

Regional Governance
- Share best practices in government operations
- Create regional institutions
  - Dispute resolution mechanisms
  - Regional development bank
- Develop a regional marketing strategy
Regional Economic Performance
Colombian Departamentos

Region’s GDP per capita, 2003

Average GDP Growth: 2.54%

Colombia Average, 2003

Note: Size of bubble is proportional to population
### The Composition of Regional Economies
#### United States, 2004

<table>
<thead>
<tr>
<th></th>
<th>Traded</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of Employment</td>
<td>29.9%</td>
<td>70.1%</td>
</tr>
<tr>
<td>Employment Growth Rate, 1990 to 2004</td>
<td>0.7%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Average Wage</td>
<td>$49,058</td>
<td>$30,416</td>
</tr>
<tr>
<td>Relative Wage</td>
<td>136.3%</td>
<td>84.5</td>
</tr>
<tr>
<td>Wage Growth</td>
<td>4.2%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Relative Productivity</td>
<td>144.1</td>
<td>79.3</td>
</tr>
<tr>
<td>Patents per 10,000 Employees</td>
<td>20.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Number of SIC Industries</td>
<td>638</td>
<td>241</td>
</tr>
</tbody>
</table>

Note: 2004 data, except relative productivity which uses 1997 data.
Cluster Specialization of Regional Economies
Select U.S. Geographic Areas

Note: Clusters listed are the three highest ranking clusters in terms of share of national employment
Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School
The Australian Wine Cluster

Time Line

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

The Evolution of Economies
San Diego

Climate and Geography

U.S. Military

Hospitality and Tourism
Transportation and Logistics
Power Generation
Aerospace Vehicles and Defense
Communications Equipment
Analytical Instruments
Education and Knowledge Creation
Information Technology
Biotech / Pharmaceuticals
Medical Devices

Bioscience Research Centers

The Process of Economic Development
Shifting Roles and Responsibilities

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

• Competitiveness must become a **bottoms-up process** in which many individuals, companies, and institutions take responsibility

• **Every** community and cluster can take steps to enhance competitiveness
Defining an Economic Strategy

**Value Proposition**

- What is the unique competitive position of the nation or region given its location, legacy, and existing and potential strengths?
  - What roles in the world, the region, and the neighborhood?
  - What unique value as a business location?
  - For what range and types of businesses, activities in the value chain, and clusters can the nation or region be competitive?

**Developing Unique Strengths**

- What elements of the business environment are essential strengths in the national or regional value proposition?
- What areas of macroeconomic / political / legal / social context can be strengths versus neighbors or peers?
- What existing and emerging clusters must be activated?

**Achieving and Maintaining Parity with Peers**

- What areas of the general business environment must improve to maintain parity with peer countries or regions?
- What macro / political / legal / social context improvements are necessary to maintain parity with peer countries or regions?
Colombia's Competitiveness Challenge
Five Transformations

Projects ➔ A Strategy and Enduring Institutions
Macro ➔ Micro
Economy / Sector ➔ Cluster
National ➔ Regional
Government ➔ Private Sector

While continuing to improve security and stability
Implications for Colombia Competitiveness

- Address continued weakness in Colombian **context** and the **business environment**

- Pursue **targeted** economic coordination with **neighbors**

- Move to a **cluster-based** development model
  - Organize **public policy formulation and implementation** around clusters
  - Use the cluster model to **grow Colombian exports and FDI**

- Institutionalize the **private sector role** in competitiveness

- Drive competitiveness improvement to **regional level**
Address Strategic Weaknesses in the Colombian Business Environment

• Continued improvement in stability and security

• Secure property rights, contracts and reform the legal system.
• Modernize regulatory and taxation structures and reduce their cost to SME´s
  – One stop model
  – Reduce the informal economy

• Aggressive investment in logistical infrastructure

• Eliminate formal and informal trade barriers

• Truly open up domestic competition
  – Facilitate internal specialization

• Improve human resources skills, especially among disadvantage citizens

• Build scientific and technological capabilities to support upgrading the economy
Implications for Colombia Competitiveness

• Address continued weakness in Colombian context and the business environment

• Pursue targeted economic coordination with neighbors

• Move to cluster-based development model
  – Organize public policy formulation and implementation around clusters
  – Use the cluster model to grow Colombian exports and FDI

• Institutionalize the private sector role in competitiveness

• Drive competitiveness improvement to regional level
Implications for Colombia Competitiveness

- Address continued weakness in Colombian context and the business environment
- Pursue targeted economic coordination with neighbors

- Move to a cluster-based development model
  - Organize public policy formulation and implementation around clusters
  - Use the cluster model to grow Colombian exports and FDI

- Institutionalize the private sector role in competitiveness
- Drive competitiveness improvement to regional level
The Role of Government in Cluster Development

• A successful cluster-based development strategy builds on **sound overall economic policies**

• Government should support **all qualifying clusters**, not select among them
  – Criteria for **cluster designation** should qualify a cluster group for matching funds and other support

• Government’s role in cluster initiatives is as **facilitator** and **participant**. The most successful cluster initiatives are public-private partnerships

• Government should **NOT** provide **direct** subsidies, protection, or relaxation of competition laws
Criteria for Cluster Designation

- A **critical mass** of private sector companies
- Including **suppliers, supporting industries, service companies, and banks**
- Involvement of **academic, training, and research organizations**
- A functioning **cluster organization**
Clustering and Economic Policy

- Clusters provide a framework for **formulating and implementing** effective public policies and public investments to foster economic development
Cluster-Base Export and FDI Development

1. Upgrade the quality of existing strong export products

2. Widen exports in existing Colombian clusters

3. Grow in related clusters

Focus FDI attraction around clusters
## Upgrading Established Export Products
### Leading Colombian Export Industries, 2005

<table>
<thead>
<tr>
<th>Industry</th>
<th>Cluster</th>
<th>World Export Share</th>
<th>Change in Share, 2000-2005</th>
<th>Export Value (in US$1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude petroleum oils</td>
<td>Oil and Gas Products</td>
<td>0.71%</td>
<td>-0.58%</td>
<td>$4,031,872</td>
</tr>
<tr>
<td>Coal</td>
<td>Coal and Briquettes</td>
<td>5.44%</td>
<td>1.06%</td>
<td>$2,440,004</td>
</tr>
<tr>
<td>Coffee</td>
<td>Agricultural Products</td>
<td>11.11%</td>
<td>-3.65%</td>
<td>$1,631,481</td>
</tr>
<tr>
<td>Petroleum</td>
<td>Oil and Gas Products</td>
<td>0.47%</td>
<td>0.11%</td>
<td>$1,505,518</td>
</tr>
<tr>
<td>Cut flowers and foliage</td>
<td>Agricultural Products</td>
<td>14.09%</td>
<td>1.15%</td>
<td>$907,459</td>
</tr>
<tr>
<td>Pig iron, spiegeleisen, sponge iron or steel granules</td>
<td>Metal Mining and Manufacturing</td>
<td>3.02%</td>
<td>1.33%</td>
<td>$738,550</td>
</tr>
<tr>
<td>Gold</td>
<td>Jewelry, Precious Metals and Collectibles</td>
<td>2.04%</td>
<td>1.75%</td>
<td>$627,163</td>
</tr>
<tr>
<td>Fruit, nuts</td>
<td>Agricultural Products</td>
<td>1.24%</td>
<td>-0.58%</td>
<td>$544,023</td>
</tr>
<tr>
<td>Passenger transport vehicles</td>
<td>Automotive</td>
<td>0.09%</td>
<td>0.08%</td>
<td>$430,807</td>
</tr>
<tr>
<td>Sugars, molasses and honey</td>
<td>Agricultural Products</td>
<td>1.78%</td>
<td>-0.05%</td>
<td>$289,531</td>
</tr>
<tr>
<td>Men's or boys' trousers, breeches and shorts</td>
<td>Apparel</td>
<td>1.18%</td>
<td>0.61%</td>
<td>$235,697</td>
</tr>
<tr>
<td>Other plastics in primary forms</td>
<td>Plastics</td>
<td>0.36%</td>
<td>0.15%</td>
<td>$222,078</td>
</tr>
<tr>
<td>Polymers of vinyl chloride</td>
<td>Plastics</td>
<td>1.92%</td>
<td>0.64%</td>
<td>$216,029</td>
</tr>
<tr>
<td>Live animals</td>
<td>Agricultural Products</td>
<td>1.47%</td>
<td>1.35%</td>
<td>$182,438</td>
</tr>
<tr>
<td>Miscellaneous medicaments</td>
<td>Biopharmaceuticals</td>
<td>0.10%</td>
<td>-0.18%</td>
<td>$175,258</td>
</tr>
<tr>
<td>Sugar confectionery</td>
<td>Processed Food</td>
<td>2.74%</td>
<td>1.04%</td>
<td>$166,479</td>
</tr>
<tr>
<td>Coke, semi-coke</td>
<td>Metal Mining and Manufacturing</td>
<td>2.56%</td>
<td>2.18%</td>
<td>$158,173</td>
</tr>
<tr>
<td>Electric current</td>
<td>Power and Power Generation Equipment</td>
<td>0.73%</td>
<td>0.73%</td>
<td>$157,367</td>
</tr>
<tr>
<td>Other tubes, pipes of iron or steel</td>
<td>Metal Mining and Manufacturing</td>
<td>0.99%</td>
<td>0.83%</td>
<td>$149,850</td>
</tr>
<tr>
<td>Printed books, maps, globes</td>
<td>Publishing and Printing</td>
<td>0.88%</td>
<td>0.07%</td>
<td>$125,144</td>
</tr>
<tr>
<td>Miscellaneous goods vehicles</td>
<td>Automotive</td>
<td>0.16%</td>
<td>-0.03%</td>
<td>$121,839</td>
</tr>
<tr>
<td>Other plates, sheets, film, foil and strip, of plastics</td>
<td>Plastics</td>
<td>0.36%</td>
<td>0.05%</td>
<td>$112,091</td>
</tr>
<tr>
<td>Miscellaneous articles of pulp, paper and paperboard</td>
<td>Forest Products</td>
<td>0.84%</td>
<td>0.34%</td>
<td>$110,635</td>
</tr>
<tr>
<td>Other vegetable fats and oils</td>
<td>Agricultural Products</td>
<td>0.83%</td>
<td>0.43%</td>
<td>$108,640</td>
</tr>
<tr>
<td>Portland cement, alumino cement and similar products</td>
<td>Construction Materials</td>
<td>1.54%</td>
<td>0.17%</td>
<td>$106,444</td>
</tr>
</tbody>
</table>

**Top 25 Industries as % of Colombia’s total goods exports: 73.2%**

Growth Opportunities within Clusters
Colombian Agricultural Products

Strong Export Share
- Coffee, Tea, Cocoa and Spices
- Plants and Flowers

Weak Export Share
- Sugars, Molasses and Honey
- Vegetables and Fruits

Losing Market Share
- Fertilizers
- Feeding Materials

Gaining Market Share
- Meats and Related Products
- Oils and Fats
- Specialty Agricultural Products

Source: International Cluster Competitiveness Project, Institute for Strategy and Competitiveness, Harvard Business School
Growth Opportunities within Clusters
Colombian Apparel

Source: International Cluster Competitiveness Project, Institute for Strategy and Competitiveness, Harvard Business School
Growth Opportunities within Clusters
Colombian Metal Mining and Manufacturing

- Strong Export Share
  - Metal Furniture
- Weak Export Share
  - Fasteners
  - Primary Metal Products
  - Cutlery
  - Pumps
  - Copper
  - Wire and Springs

Losing Market Share

Gaining Market Share

- Iron and Steel
  - Iron and Steel Mill and Foundry Products
  - Precision Metal Products
- Other Metals
  - Fabricated Metal Products

Source: International Cluster Competitiveness Project, Institute for Strategy and Competitiveness, Harvard Business School
Growth Opportunities within Clusters
Colombian Plastics Cluster

Strong Export Share

Losing Market Share

Polymers of Vinyl Chloride
Asbestos and Friction Materials
Other Plastics in Primary Form
Polymers of Styrene
Plastic Plates, Film Strips
Fittings for Tubes, Pipes
Other Plastic Containers
Polycarbonates in Primary Form
Other Plastic Articles
Glaze, Enamels
Paint Varnishes

Weak Export Share

Gaining Market Share

Other Plastic Containers
Plastic Bags, Sacs
Plastic Plates, Film Strips
Other Plates
Film Strips
Household Plastics
Tubes, Not Reinforced

Source: International Cluster Competitiveness Project, Institute for Strategy and Competitiveness, Harvard Business School
Growth Opportunities in Related Clusters
Colombia's leading Export Clusters

- Agricultural Products
  - Fishing and Fishing Products
  - Transportation and Logistics
- Oil and Gas Products
  - Chemical Products
  - Plastics
- Metal Mining and Manufacturing
  - Automotive
  - Production Technology

Source: Institute for Strategy and Competitiveness, authors' calculations (2007)
Implications for Colombia Competitiveness

• Address continued weakness in Colombian context and the business environment

• Pursue targeted economic coordination with neighbors

• Move to a cluster-based development model
  – Organize public policy formulation and implementation around clusters
  – Use the cluster model to grow Colombian exports and FDI

• Institutionalize the private sector role in competitiveness

• Drive competitiveness improvement to regional level
Role of the Private Sector in Economic Development

• A company’s competitive advantage depends partly on the quality of the business environment
• A company gains advantages from being part of a cluster
• Companies have a strong role to play in upgrading their business environment

• Take an active role in upgrading the local infrastructure
• Nurture local suppliers and attract foreign suppliers
• Work closely with local educational and research institutions, to upgrade their quality and create specialized programs addressing the cluster’s needs
• Focus corporate philanthropy on enhancing the local business environment
• Inform government on regulatory issues and constraints bearing on cluster development
• Take leadership role in national and regional competitiveness organizations and initiatives.

• An important role for trade associations
  – Greater influence if many companies are united
  – Cost sharing between members
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
Implications for Colombia Competitiveness

• Address continued weakness in Colombian context and the business environment

• Pursue targeted economic coordination with neighbors

• Move to a cluster-based development model
  – Organize public policy formulation and implementation around clusters
  – Use the cluster model to grow Colombian exports and FDI

• Institutionalize the private sector role in competitiveness

• Drive competitiveness improvement to regional level
Determinants of Regional Prosperity in Colombia, 2004

Source: Centro de Estrategia y Competitividad, 2006

GDP per Capita, US Dollars, 2003

2004 Competitiveness Index – CEPAL

Source: Centro de Estrategia y Competitividad, 2006
Regional Competitiveness Initiatives
Success Factors

• Focus on the **microeconomic aspects** of competitiveness

• Led by the **private sector** with the participation of all **regional actors** and representation from the **national government**

• Institutionalized through a formal **enabling structure**

• Common **conceptual framework**

• Develop a **regional value proposition** = a strategy

• Prioritized a **sequenced action plan**

• Measure and report **progress**
Colombian Competitiveness:
Moving to the Next Level

Professor Michael E. Porter
Harvard Business School

Expogestion 2007
September 14, 2007
Bogotá, Colombia

This presentation draws on ideas from Professor Porter’s books and articles, in particular, “Building the Microeconomic Foundations of Prosperity,” in *The Global Competitiveness Report 2005-06* (World Economic Forum, 2005); “Clusters and the New Competitive Agenda for Companies and Governments,” in *On Competition* (Harvard Business School Press, 1998); *Clusters of Innovation Initiative* (www.compete.org), a joint effort of the Council on Competitiveness, Monitor Group, and ongoing research. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means—electronic, mechanical, photocopying, recording, or otherwise—without the permission of the author.

Additional information may be found at the website of the Institute for Strategy and Competitiveness, [www.isc.hbs.edu](http://www.isc.hbs.edu)