



# Productive Development Policies in Mexico

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## Agenda

- Mexico's PDP system
  - CIDAC's proposal
    - Sectors and activities
    - General methodology for analysis
  - Two examples
    - R&D and Innovation activities
    - Aerospace industry
  - Discussion
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## Common characteristics of PDPs in Mexico

- Disparity between perceived failures and actual market failures that justify government intervention
  - Hand-picked policies with limited diagnostic and prioritization
  - Limited strategies for implementation
  - Subject to political cycles (both federal and state-level)
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# Sectors and Activities

	Horizontal	Vertical
Public Input	<ul style="list-style-type: none"><li>• Regulatory improvements to business environment (ongoing)</li><li>• Social security (IMSS, ISSSTE)</li><li>• Basic infrastructure development</li><li>• Public education system including university-level</li></ul>	<ul style="list-style-type: none"><li>• Rural road development</li><li>• Rural electrification</li><li>• Regulation for telecommunications sector</li></ul>
Market Intervention	<ul style="list-style-type: none"><li>• <b>Training programs (Servicio Nacional de Empleo)</b></li><li>• <b>SME policy</b></li><li>• <b>R&amp;D and innovation incentives</b></li><li>• Supplier development programs</li></ul>	<ul style="list-style-type: none"><li>• <b>Tourism support programs</b></li><li>• <b>Support for aerospace industry</b></li><li>• <b>Support for software clusters</b></li><li>• Fiscal incentives for targeted sectors (mostly manufacturing)</li><li>• Subsidies for agricultural sector</li></ul>



## General Methodology

- Questions:
    - What motivates the programs?
    - How effective are they?
    - When and why has the government acted as a promoter as opposed to a facilitator?
  - Methods:
    - Identification of relevant market failures
    - Stakeholder maps with roles and motivations
    - Data gathering to measure success
    - Public budget allocation and disbursement
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# R&D and innovation

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## Perceived vs. market failures

- Market failures preventing investment in R&D:
    - High initial costs
    - Spillovers: probability of not enjoying returns on investment because of copycats/lack of property rights enforcement
  - Perceived failures:
    - Limited access to financing mechanisms
    - Limited availability of specialized skilled workforce
    - Inability to translate research into commercial products
    - Business culture not geared toward innovation activities
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## Mexico's Innovation Policy

- CONACYT & Ministry of Economy:
    - Fiscal credits for R&D investments
    - Project grants
    - Subsidies for entrepreneurs
    - Guarantees (along with Nacional Financiera –NAFIN)
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## Scattered policies have produced limited results

	Mexico	Brazil	China	US
<b>Public investment in R&amp;D (% of GDP)</b>	0.3%	1.1%	1%	0.8%
<b>Private investment in R&amp;D (% of GDP)</b>	0.1%	0.4%	0.8%	1.87%
<b>Patents registered in 2006</b>	135	233	25,077	89,823

*Source: OECD*

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# Analysis strategy

## Hypotheses

- Lack of enabling legal framework
- Limited role of national development bank
- Fiscal credits → evasion > investment
- Limited coordination
- Poor selection criteria
- Reactive rather than proactive

## Analysis

- Effectiveness:
    - Performance indicators national and firm-level
  - Motivations:
    - Interviews with officials
    - Focus groups with representative firms
  - Incentives:
    - Design and implementation strategy
    - Budget allocation
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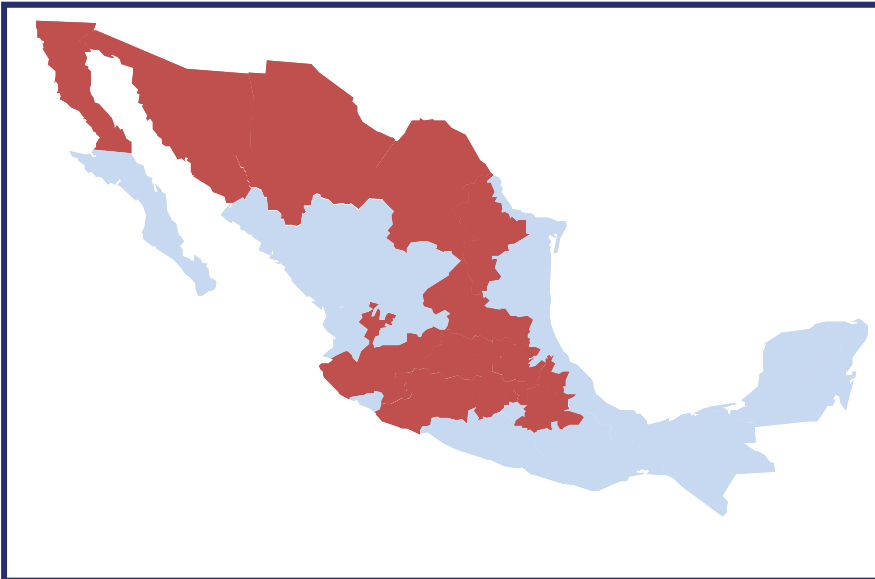
Aerospace

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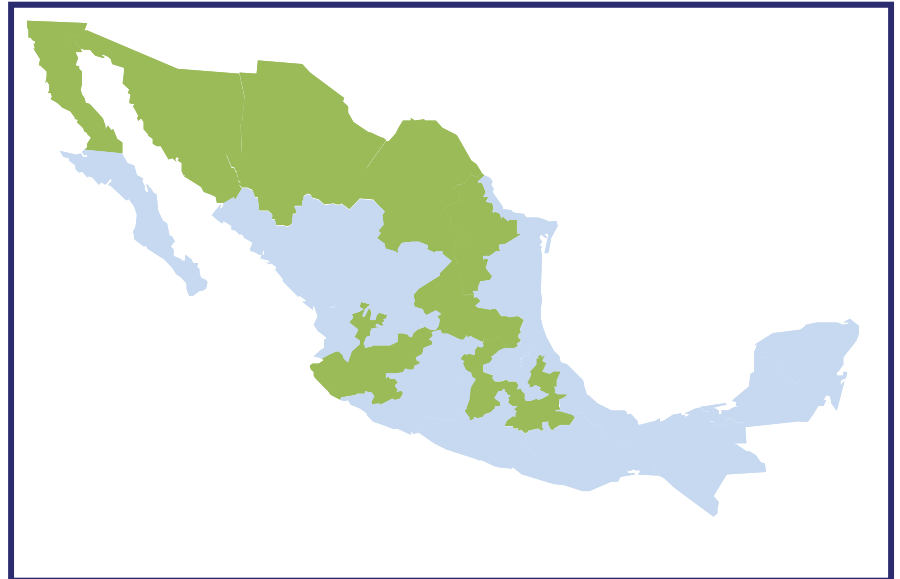
## Why aerospace?

Proximity to US market + Access to Military contracts  
Skilled workforce and basic infrastructure  
Possibly scalable supply chains

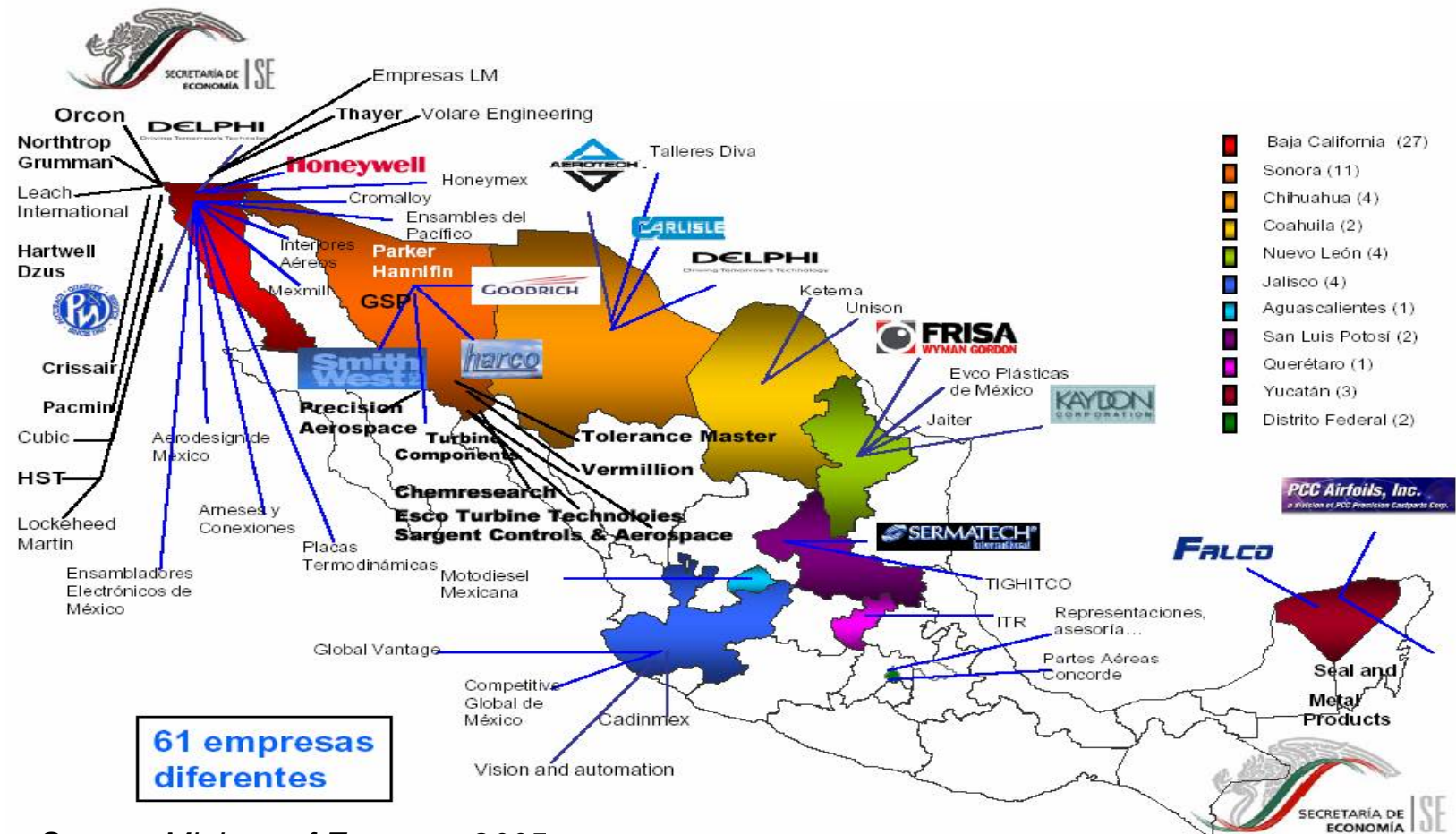
LOCATION OF AUTOMOBILE INDUSTRY



LOCATION OF AEROSPACE INDUSTRY



# Over 60 aerospace manufacturing companies



Source: Ministry of Economy 2005



## Opportunities for growth

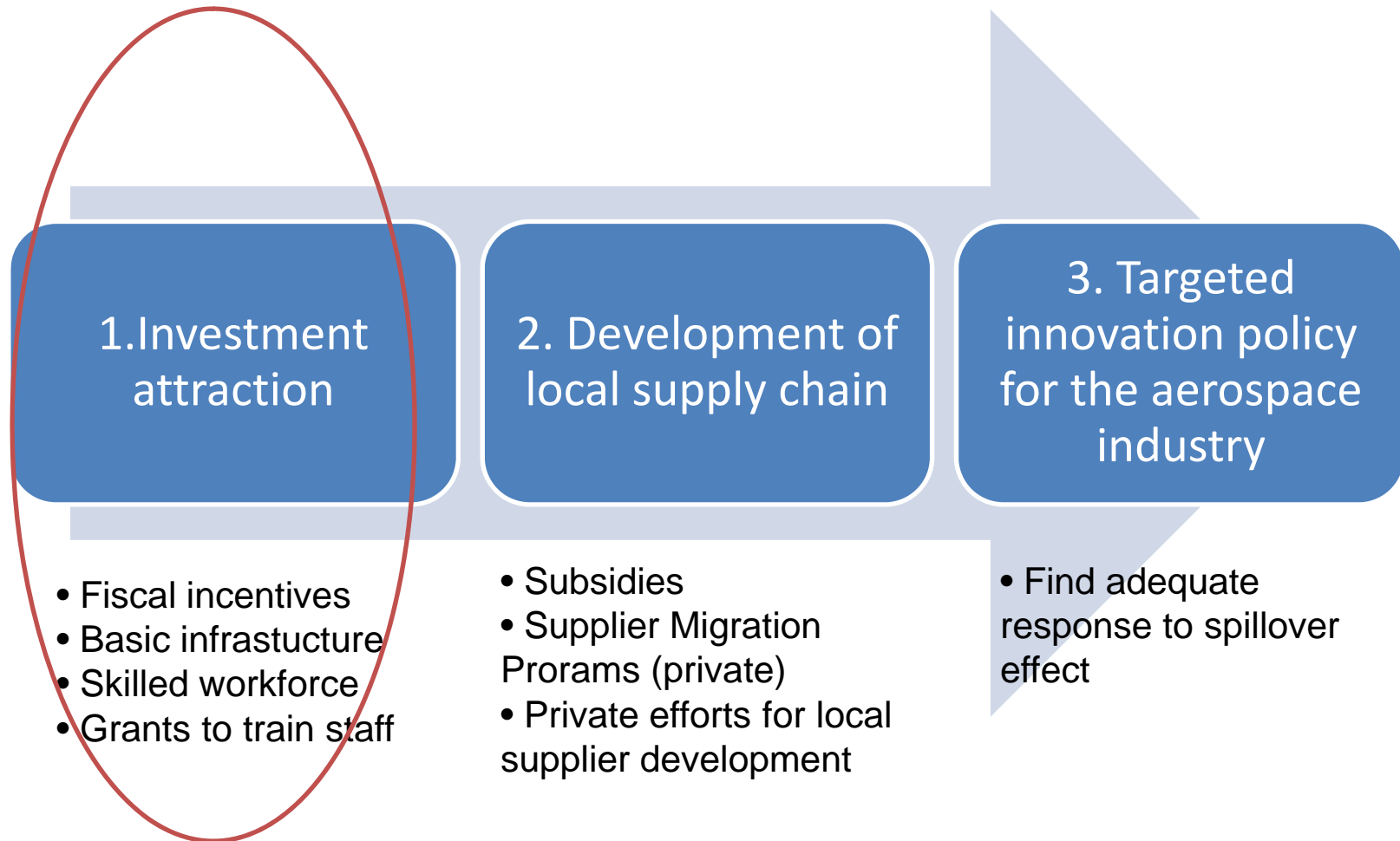
- Nature of industry (few crises)
  - Only Mexico and Canada can tender for US Military contracts
  - Exports to US quadrupled from 1997-2003 (\$77 million - \$354 million)
  - Local supply chain with everything from machining to electro-mechanical
  - Example: Honeywell plans to move all sourcing to Mexico
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## The government can play a role in strengthening the industry

- By addressing market failures:
    - High initial costs for investment in machinery and equipment
    - Spillover effects that hinder innovation
    - Logistical needs (e.g., geographic location, airport and transportation infrastructure, etc.)
    - Need for highly specialized skilled workforce
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# PDPs in industry maturity process







## Effect of current PDPs for the aerospace industry

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Fiscal incentives</li><li>• Infrastructure</li><li>• Local supplier development</li><li>• Specialized universities</li><li>• Certification</li><li>• No tariffs for imported parts</li></ul> | <ul style="list-style-type: none"><li>✓ Investment attraction</li><li>✓ Cluster creation and strengthening</li><li>✓ Solve coordination and information problems for suppliers</li><li>✓ Provide and complement specialized skilled workforce</li></ul> |
|  | <ul style="list-style-type: none"><li>X Subsidies are not targeted</li><li>X Do not solve free-rider problem for innovative activities</li><li>X States still face infrastructure handicaps</li><li>X Certification challenges remain</li></ul>         |
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# Analysis strategy

## Hypotheses

- Short-sighted strategies
- Limited role of national development bank
- Political cycles and predatory behavior by state governments limit coordination

## Analysis

- Effectiveness:
    - Performance indicators national and firm-level
  - Motivations:
    - Interviews with officials
    - Focus groups with representative firms
  - Incentives:
    - Design and implementation strategy
    - Budget allocation
    - Demand analysis
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