

The Mexican Energy Reform of 2013

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Topics to be covered

- Nature, objectives and scope of energy reform
- Drivers of the reform effort
- Principle unresolved issues
- Implementation of reform
- Main risks
- Some implications

Constitutional Amendment

The beginning of the end of a 75/53 year State energy monopoly

Objectives

- Introduction of competition
- Opening of oil and electricity to private investment
- Maintaining State ownership and control of subsoil resources
- Selective privatization with limited Pemex and CFE asset sales
- Modernization of State energy companies
- Reduction of direct government intervention in energy sector
- Development of new regulatory frameworks and institutions

Scope

Oil and natural gas



Electricity



Constitutional Amendments

Art. 25 Establishes exclusive ownership and control of State companies that perform productive activities.

Art. 27 E&P activities can be carried out under licenses (*asignaciones*) granted to NOC and contracts with NOC and private companies; concessions are prohibited

Art. 28 Defines the following activities as strategic:

- Planning and control of national electricity system
- Transmission and distribution of electricity
- Hydrocarbon E&P

Recognizes at a Constitutional level:

- Regulatory Commissions (CRE + CNH)
- Mexican Petroleum Fund

Transitional articles

Give specific instructions with respect to the content of secondary legislation

Drivers of Mexican energy reform

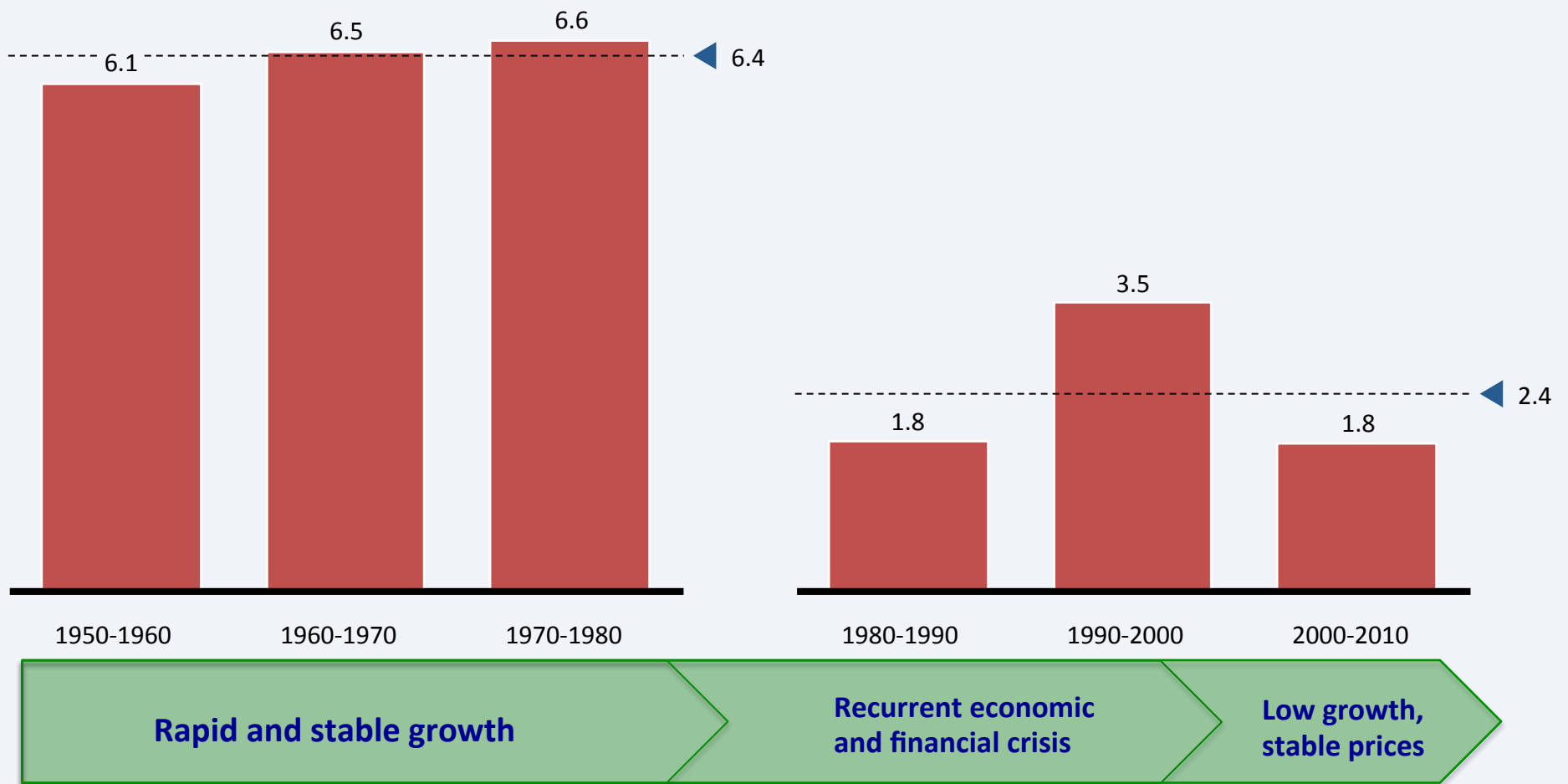
- Slow economic and productivity growth
- Low investment in relation to GDP and in public goods
- Fall in crude oil production and exports
- Natural gas production stagnant and 2012-13 supply crisis
- Increasing oil product and natural gas imports
- Uncompetitive electricity tariffs
- Public finance constraints and financial weakness of the State

Graph 1

Mexico's annual GDP growth from 1950-1980 was more than twice as fast as in the past three decades

GDP growth rates, based on 2012 US\$

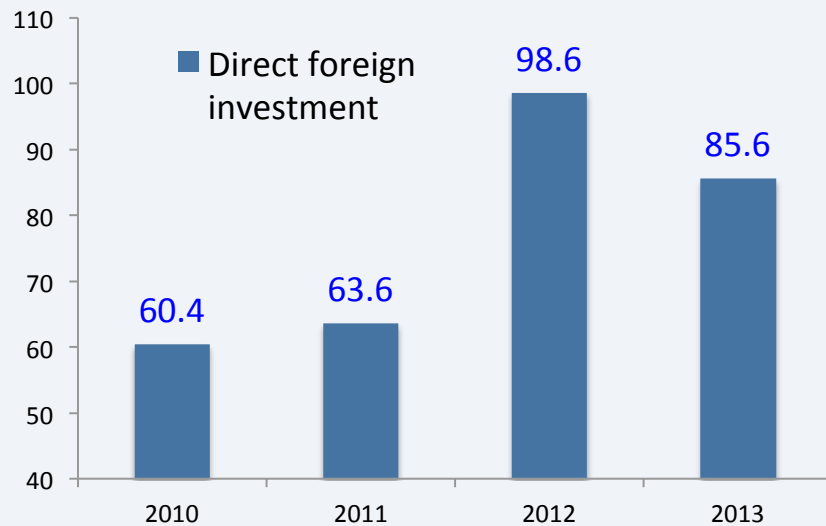
Compound annual growth rate, %



Graph 2

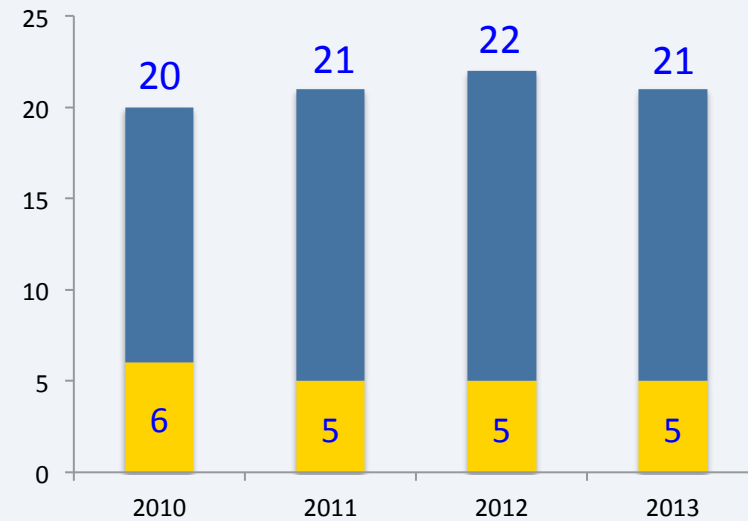
Mexico: investment flows

Direct foreign investment (current US billion dollars)



Source: Banco de México

Gross fixed capital formation (percent of GDP)

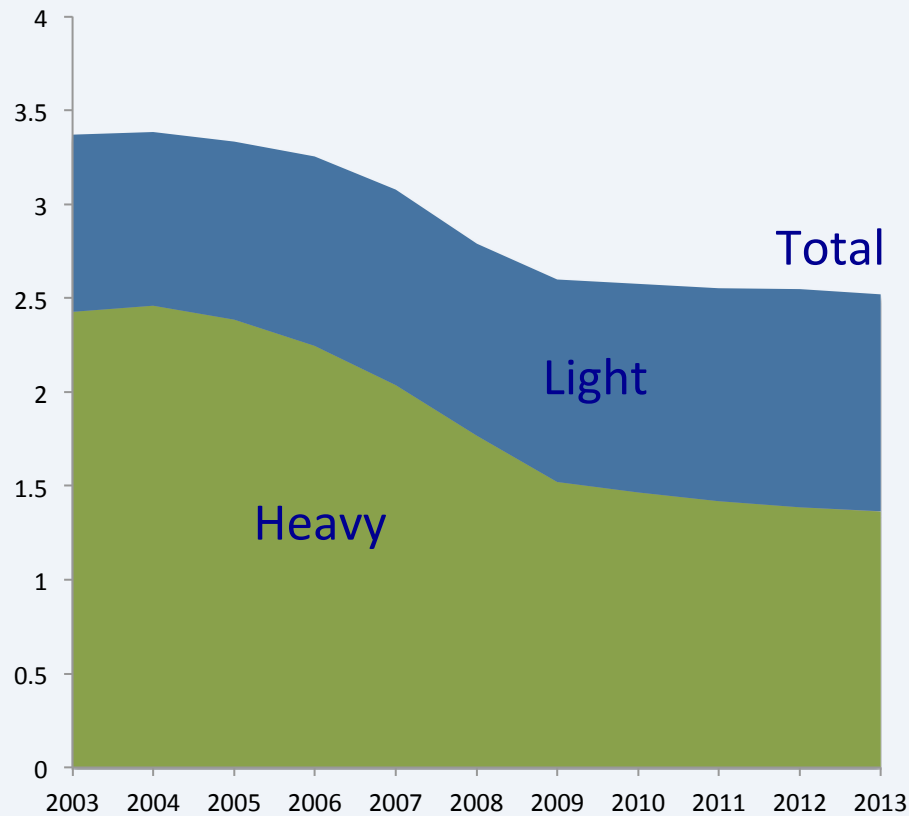


Source: INEGI

Public

Graph 3

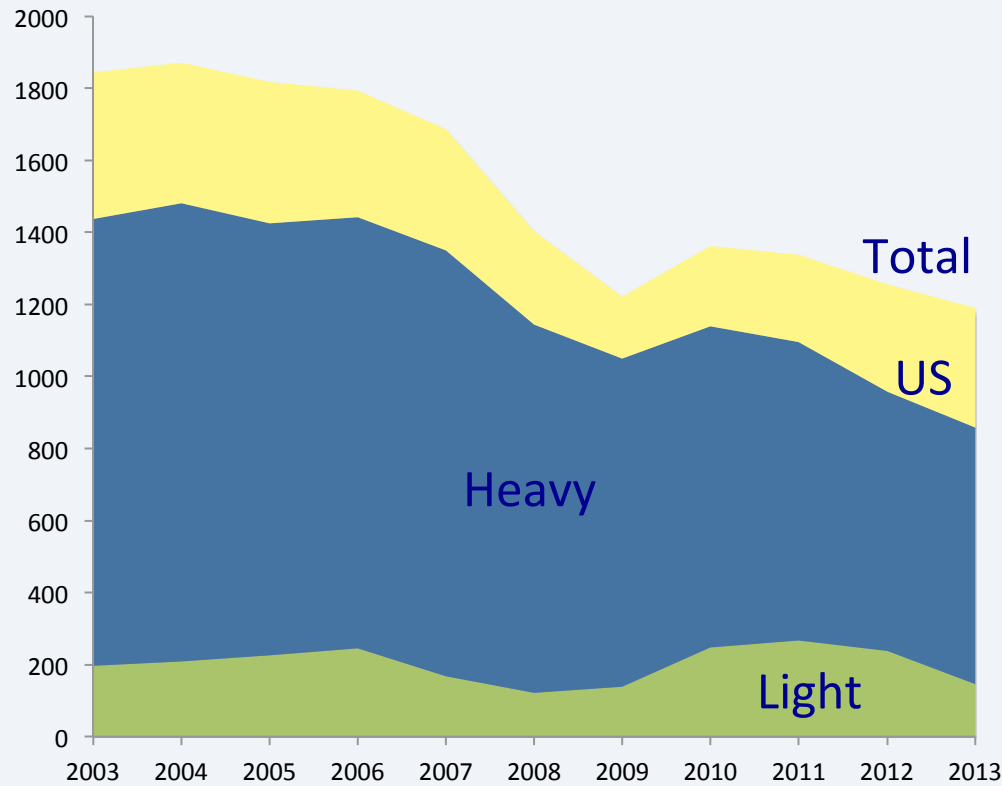
Mexico: crude oil production, 2003-2013 (million barrels per day)



- 25% reduction from 2004 peak
- Fall due to Cantarell's rapid decline
- Partial compensation by increase in Ku-Maloob-Zaap and offshore Tabasco
- Rest of country essentially flat
- Low decline rate since 2010, but underestimated due to measurement issues

Graph 4

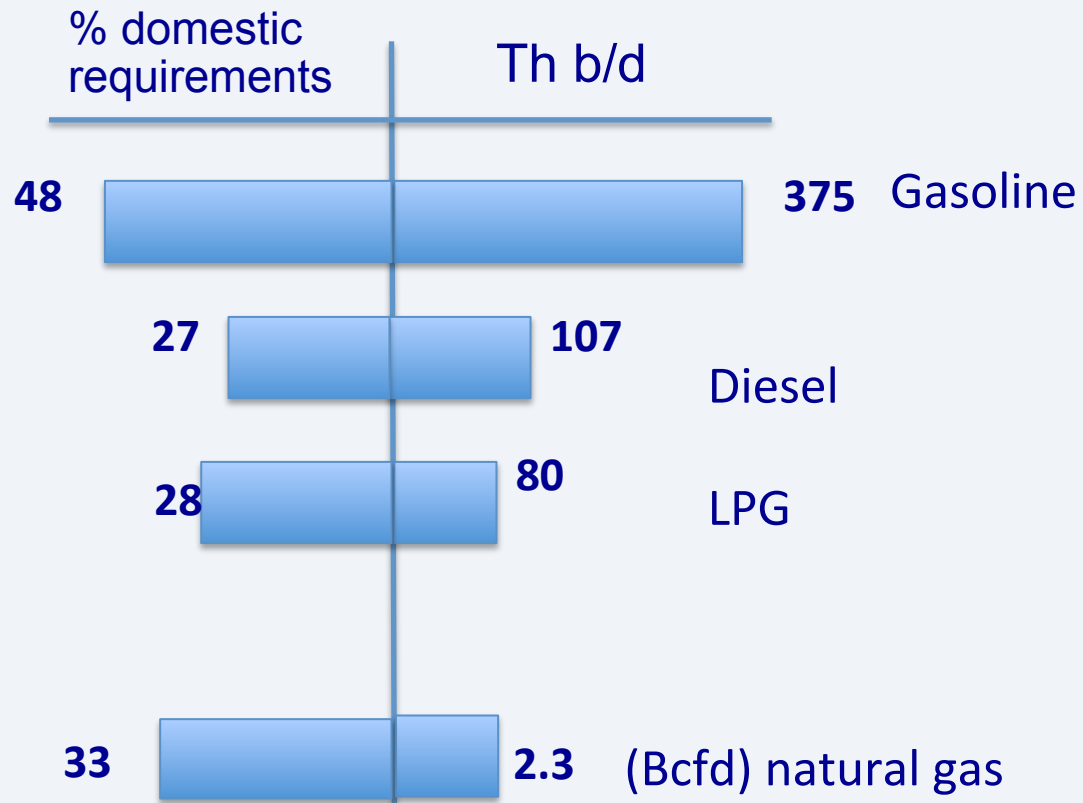
Mexico: exports of crude oil to the US, 2003-2013 (Thousand barrels per day)



- Mexican crude exports have contracted 682 th b/d from their peak, a 36% drop.
- Fall of heavy crude oil exports due to Cantarell's rapid decline
- Recent displacement of Isthmus and Olmeca crude imports in US Gulf Coast
- Potential displacement of Maya crude imports via Keystone XL, other pipelines and rail

Graph 5

Mexico: oil imports, 2003-2012



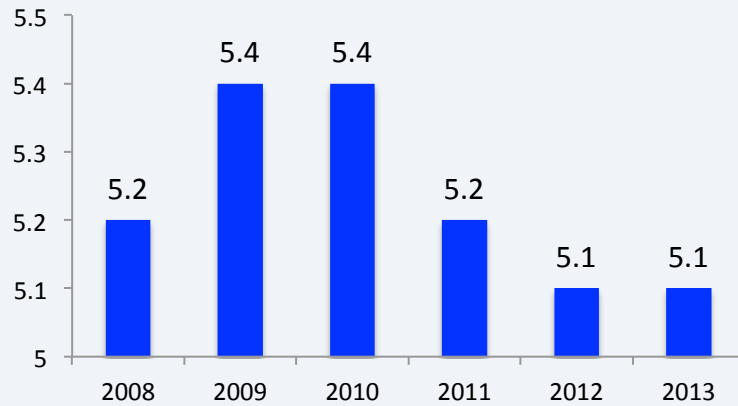
- Value of product imports is 51% of crude oil exports
- Share of exports to Mexico is 15% of total US product exports
- Product imports should continue to increase if economic growth accelerates
- Import growth may be tempered by elimination of subsidies
- Domestic product supply may increase due to better yields, change in crude slate and refinery reconfigurations

Graph 6

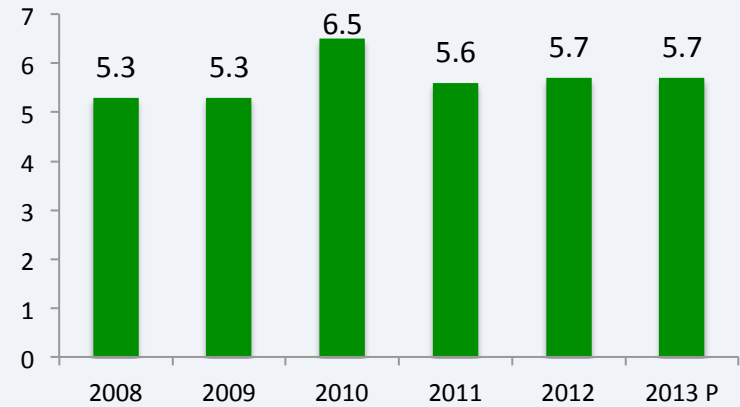
Mexico: natural gas production and consumption

(Billion cubic feet per day)

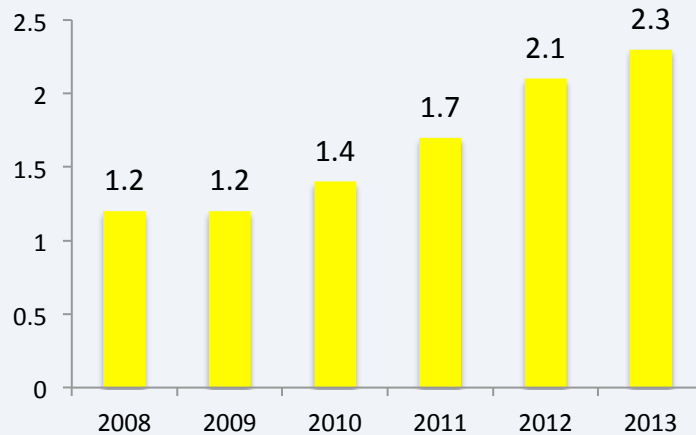
Net production



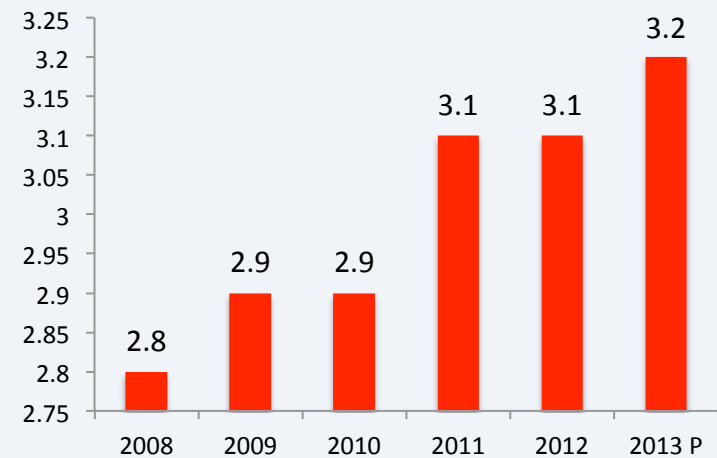
Domestic dry gas sales



Net imports

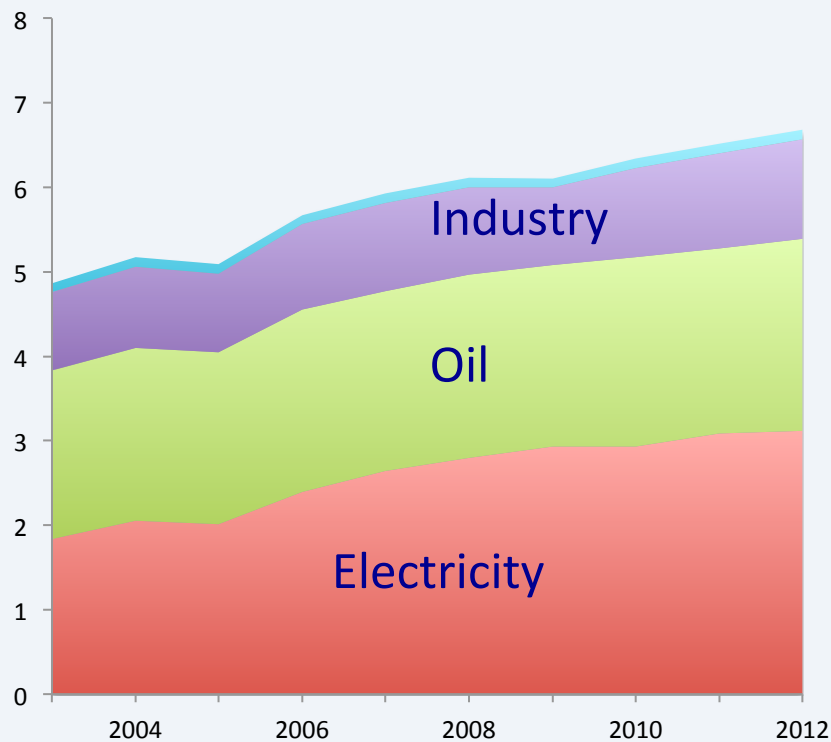


Gas for power generation



Graph 7

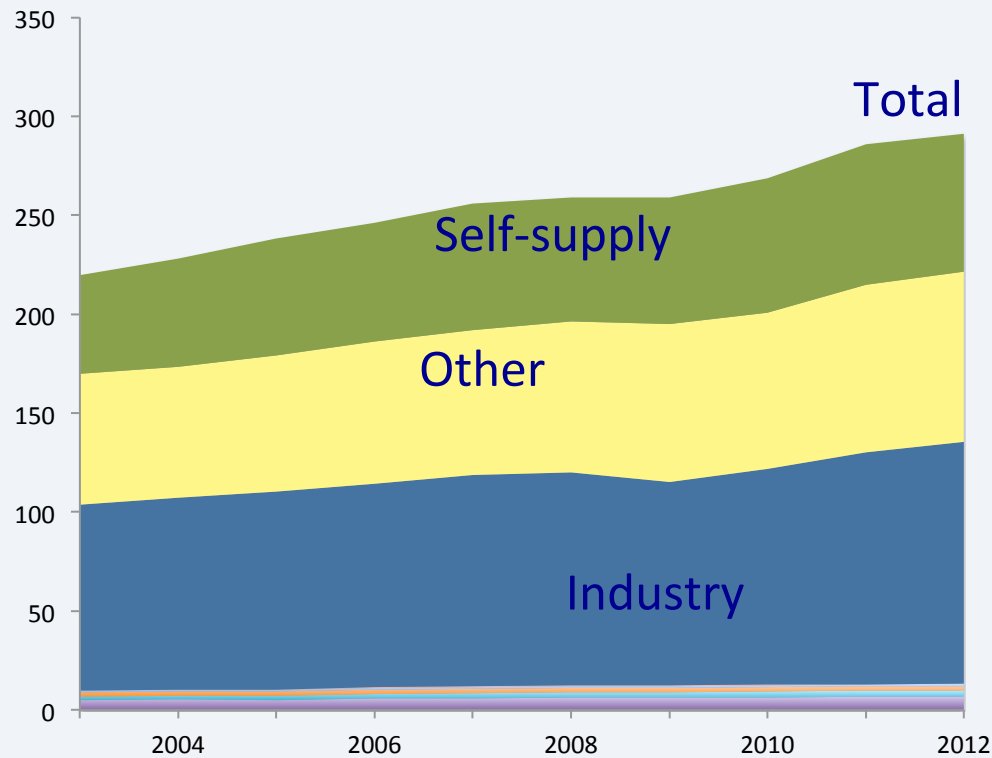
Mexico: natural gas consumption, by sector, 2003-2012 (billion cubic feet per day)



- 50% of power generation used natural gas in 2012, up from 29% in 2003
- 70% of total consumption increase due to electricity sector
- 47% of natural gas was consumed by the electricity sector in 2012
- Industry improved energy efficiency significantly

Graph 8

Mexico: power generation, 2003-2012 (twh)



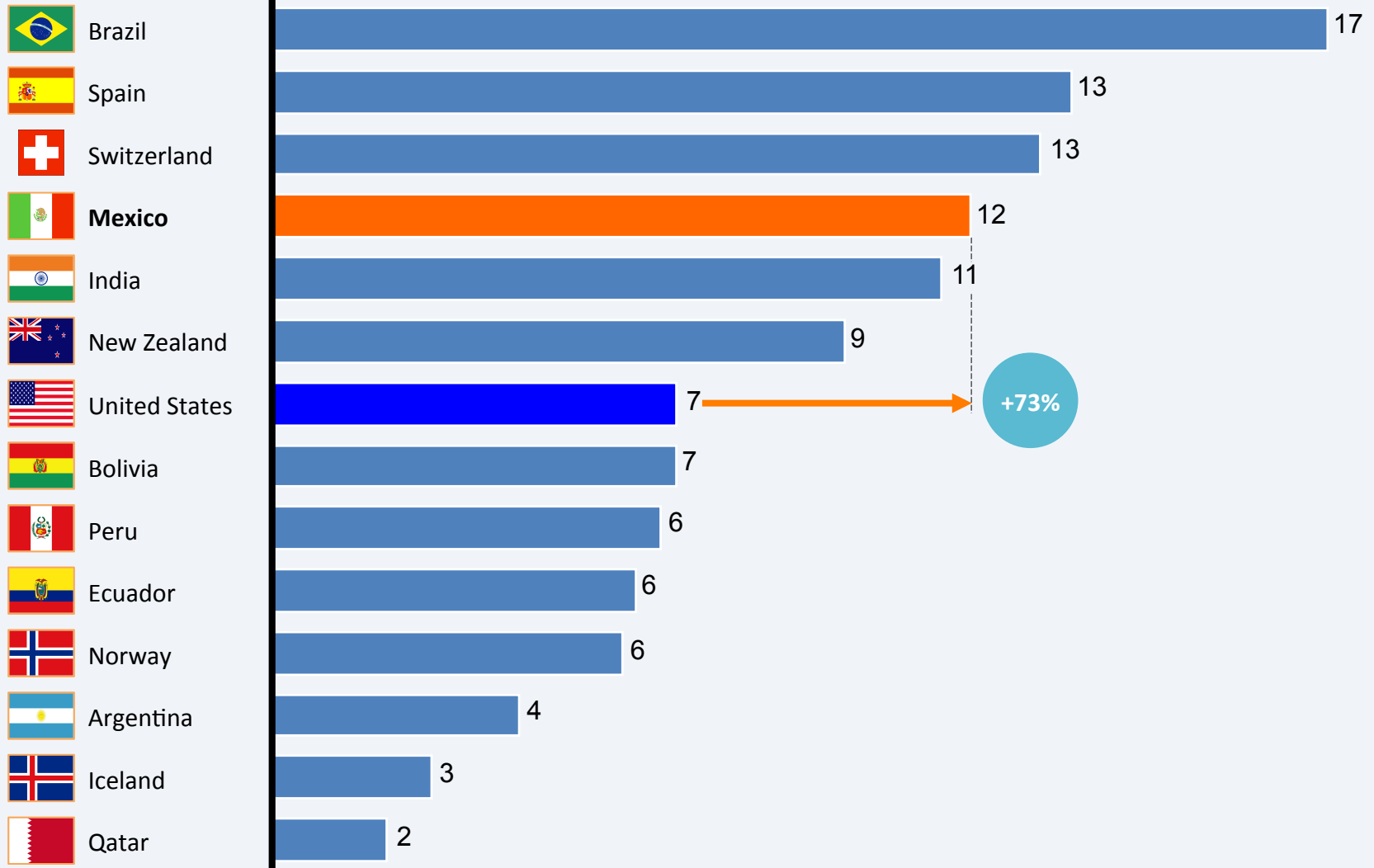
- Extensive subsidies and cross-subsidization
- High losses mainly due to theft
- High cost for industry affects manufacturing industry competitiveness
- Fundamental tariff redesign is imperative

Graph 9

Cost of power in Mexico is relatively high

Commercial electricity cost, 2011–12

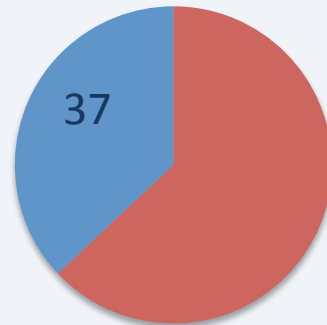
Cents per kWh



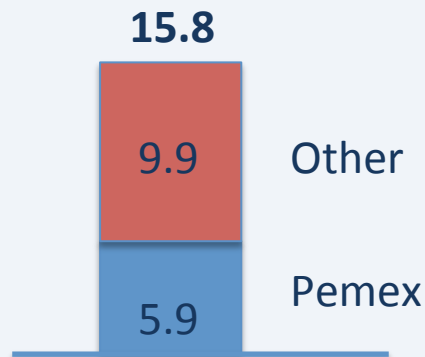
Graph 10

Mexico: oil revenues and taxes, 2013

Pemex taxes

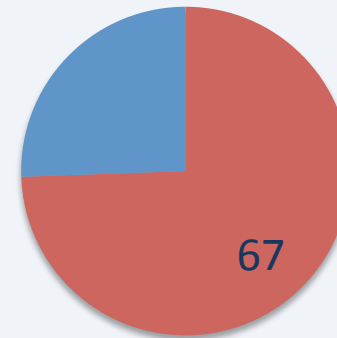


Share of federal revenues

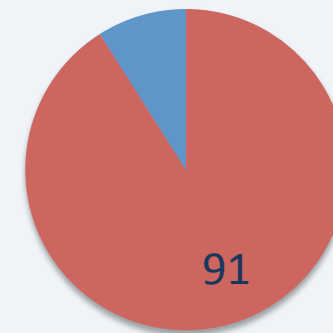


Share of GDP

Pemex E+P taxes



Share of total revenues



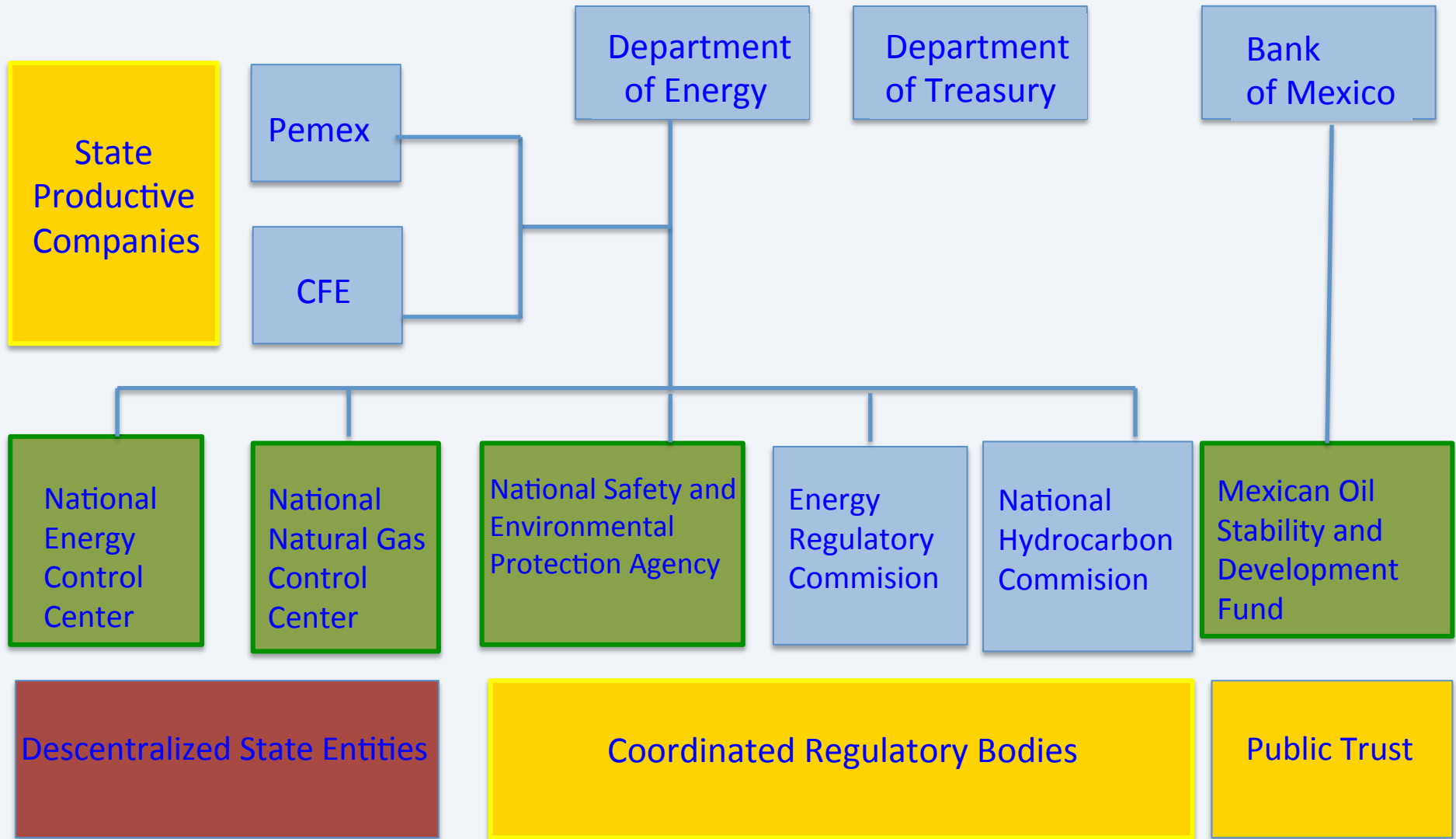
Share in income before taxes

Reform process

- Constitutional amendments were the first step of an ambitious and lengthy process
- Secondary legislation package has yet to be sent to Congress
- From entrenched State monopolies to a more competitive environment with private participation
- Establishment of a new oil regime with own: rules, institutions, players, patterns of engagement and policy options
- Risk that exuberant expectations can be frustrated
- Mid/term elections in July 2015 may delay critical decisions
- Outcomes of reform are difficult to predict and unintended consequences are sure to arise.

Graph 11

New Mexican energy sector structure



Graph 12

Round zero: initial oil and gas asset allocation to Pemex

First step in upstream reform

Timing 2014

Pemex request by March 21
Sener allocation by September 17

Allocation criteria
Producing fields &
exploration areas

- Prove capacity to operate efficiently and competitively
- Demonstrate operative, technical, financial and execution capabilities

Pemex request

- Producing fields
- Commercial discoveries, including undeveloped deepwater assets
- Retains small share of estimated shale resources
- Relinquishes major areas in Chicontepec

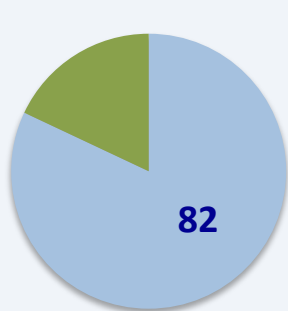
Pemex must compete for additional acreage in subsequent bidding rounds

Graph 13

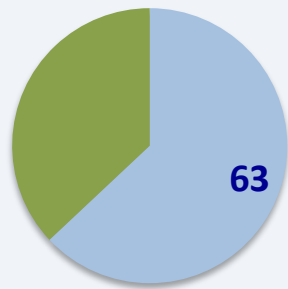
Pemex: request of hydrocarbon assets in round zero

(percent)

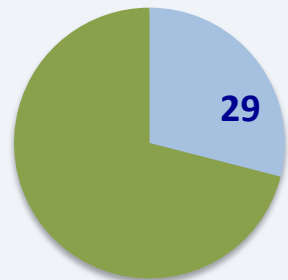
Prospective resources



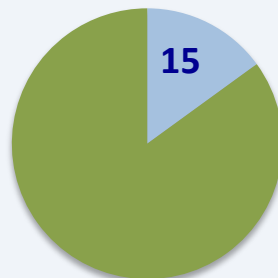
Onshore



Shallow water

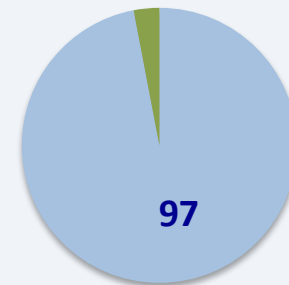


Deepwater

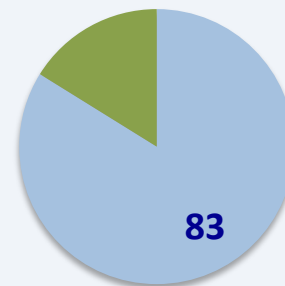


Shale

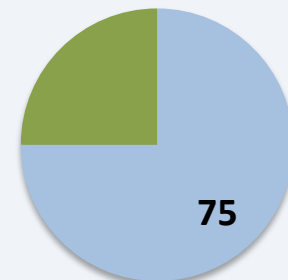
Reserves



1P



2P



3P

Some key industry issues

Upstream

- Concessions vs license contracts
- Pemex joint venture participation in round zero assets and in other bidding rounds
- Contractual variability and adequacy

Midstream

- Common carrier, open access, eminent domain differences in gas and liquids pipelines
- Pemex role in liquids pipelines and logistics infrastructure
- Regulation of oil product road transport

Downstream

- Retail prices that reflect transport costs
- Free third party imports and qualification of importers
- Transition to competitive pricing

Implementation strategies, timing and sequencing

- Priority given to mobilizing upstream private investment
 - Key initial tasks are the execution of round zero and the design of new contracts
 - Government expectation of signing initial round of contracts in the first half of 2015 might not be realistic
- Energy Department and regulators are not adequately equipped for the challenge of reform
 - Must deploy implementation strategy and develop tactical positioning
 - Multitude of tasks require high selectivity
- Government must transmit clear sense direction, with some quick wins to mark advance

Electricity Sector Reform

State sphere

- Planning and control of national electricity system
- Transmission and distribution will remain a public service
- CFE will transit from decentralized State entity to a State company that performs productive activities

Private sector

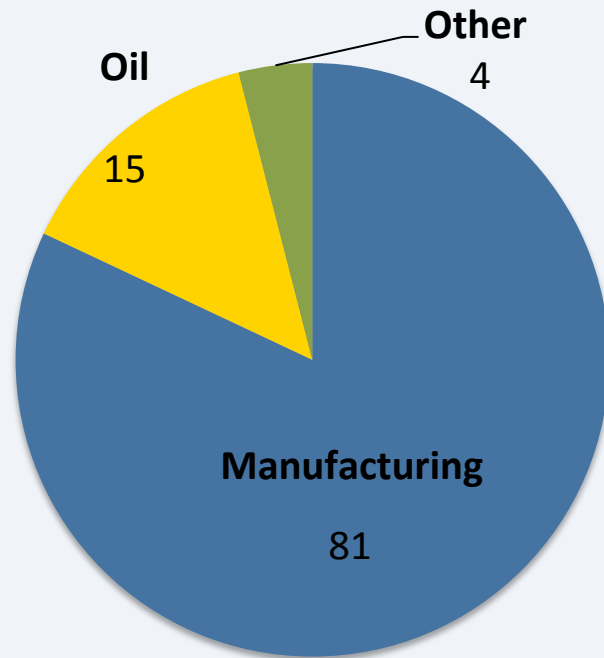
- Permitting regime for private power generation
- Contractual arrangements for financing, building, maintaining, managing, operating and expanding transmission and distribution infrastructure on behalf of the State

Regulation

- Energy Regulatory Commission (CRE) will be the regulator
- National Center for Energy Control will be the independent system operator
- Centralized wholesale energy markets
- Open access to transmission and distribution grids on a cost of service basis

Graph 14

Mexico: merchandise exports, 2013 (percent)



Total: 380 billion dollars

- Explosive growth of exports since 1995
- Growing share of manufacturing
- Predominance of automobile and auto-parts
- High share of exports to US (82%)

Table 1

Mexican manufacturing exports to U.S., 2013

(percent)

NAICS Classification	Share of manufacturing exports	Market share of US imports
Total	81.9	12.3
Transport	28.2	23.6
Computer & electronic	18.8	14.6
Electrical equipment	7.6	23.7
Machinery	5.6	10.7
Primary metals	3.9	11.5
Fabricated metals	2.5	11.1
Food	2.3	11.7
Other	13	

Source: UBS

- Significant overall market share increase in 2009-13 (2.2%)
- China's share increased by 2.4 but its level is almost twice that of Mexico
- Share of local content in exports stable, not growing
- Low value added exports typical of reassembler
- Weak supply chain integration
- Slow growth of domestic demand for manufactures