

Does Climate Change Make Industrialization an Obsolete Development Strategy for Cities in the South?

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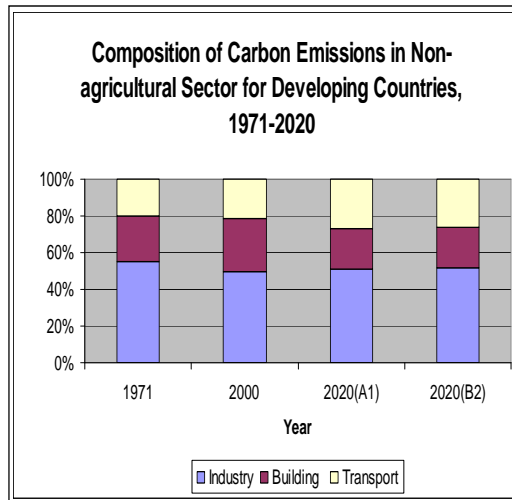
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Put the question in another way...

“Does industrialization still
represent a viable development
strategy for Southern cities in the
context of climate change?”

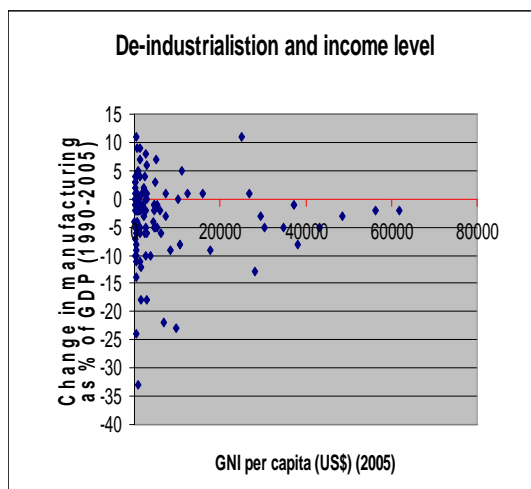
Why is the Question?

- Industry is a key source of carbon emissions in developing countries (see graph)
- Misguided mitigation efforts may lead to no industrialization or exacerbating premature de-industrialisation.
- However, industrialisation is the most dynamic phase of development and has been a cornerstone in national development strategies.



Source of data: Price et al (2006)

Methodology



- This study explores the implications of CC for economic development strategies by drawing together ideas and concepts from different literatures
- Built on the literature and evidence of industrialization and de-industrialization
- Pieces together city-level evidence from Mexico City, Shanghai and Mumbai

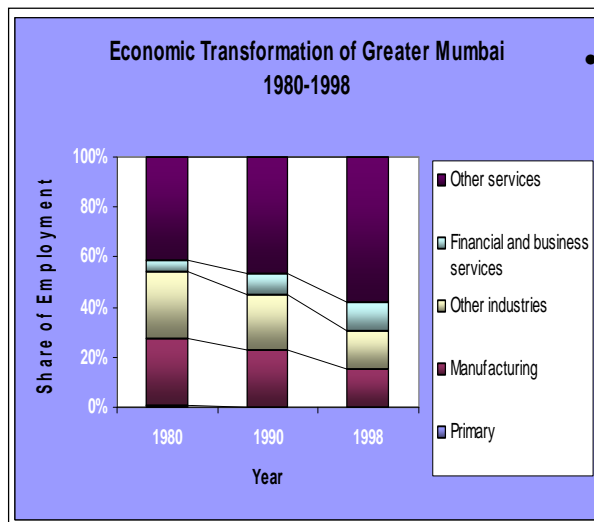
Methodology (conti.)

- It defines three key criteria for identifying CC-sensitized economic development strategies (respectively the potentials of reducing emission intensity, vulnerability and poverty)

Strategies and outcomes	Potential to reduce the following characteristics		
	Emissions intensity	Vulnerability	Poverty
De-industrialization	M	L	L
Decarbonising industrialization	H	H	H

Note: H = High; M = Medium; L= Low. Own elaboration.

Results



- Many cities (even at relatively low income levels) are undergoing premature de-industrialization, with predictable negative impact on M&A as well as wider development

Mumbai Metropolitan Regional Development Authority (2001)

Results (conti.)

- Industry is a major source of emissions, but also has the greatest potential to reduce emissions
- Industrialization coupled with de-carbonisation represents possibly the only way forward.
- Controlling energy use /emissions in the household sector (i.e. consumption) and in service industries a major challenge.

Energy consumption in Shanghai, 2006

Indicators	Unit	Amount	Change over 2005 (%)
Energy /GDP	TSC/Yuan	8370	-3.71
Energy/value added			
- Primary	TSC/Yuan	9840	-7.79
-Secondary	TSC/Yuan	11120	-6.08
Of which: industry	TSC/Yuan	11600	-1.18
- Tertiary	TSC/Yuan	4950	0.13
Household Energy consumption	1,000 TSC	7535.1	14.64

Source: Shanghai Statistical Yearbook. TSC: tons of standard coal

Policy Consequences

- Policies advocating no-industrialization or de-industrialization for the sake of CC are misguided
- Policies advocating 'frog-leaping' should not be identified with skipping the stage of industrialization
- However, efforts must be made to reduce emission intensity of industrial activities and to control emissions growth from other economic activities.

Recommended Future Research

- To understand better the potential and options for mitigation and adaptation at the city level in developing countries, especially about how to seize the historic opportunity of pioneering a new and cleaner production system outside developed countries
- To assess the relative importance of mitigation potentials associated with each of the three key options: energy saving, energy switching and industrial restructuring
- To identify a full range of possible mis-adaptations, with premature industrialization as one example.