

An economic characterization of Sanitation

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A tale of two cities
A pragmatic approach ?
Sanitation as an economic good
Thinking outside nexus
Conclusion



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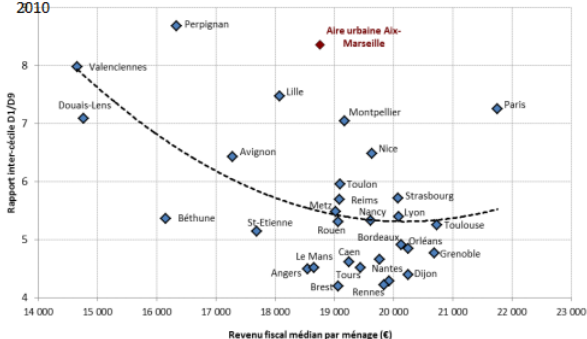
Conclusion



LA PROPRETÉ C'EST NOUS

LE CIVISME C'EST VOUS !

Revenu médian et inégalités dans les 27 aires urbaines françaises les plus peuplées, 2010
 Median Income and inequalities in the 27 most populated french urban areas,
 2010

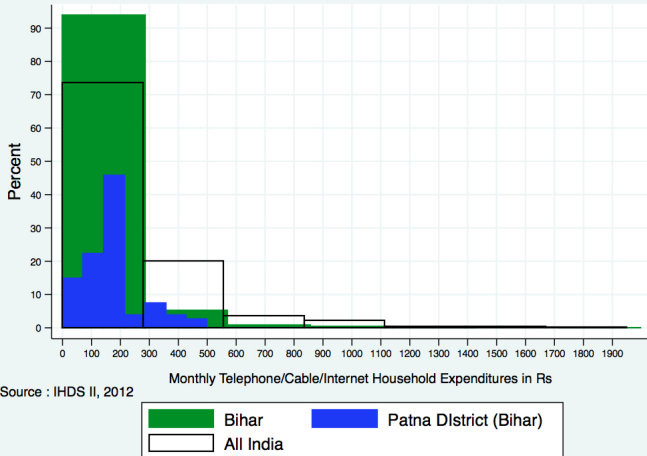


Source : Élaboration OCDE à partir de données Insee-DGI, enquêtes Revenus fiscaux et sociaux (2010)

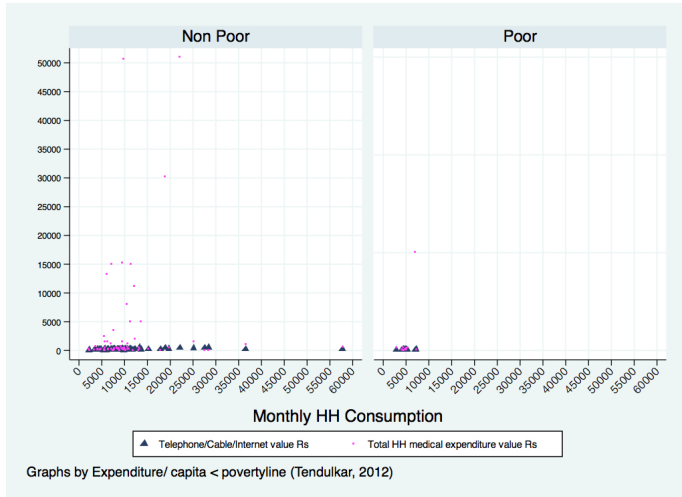
Jean Michel Servet, 2015 : Report 2015 of the World Bank *Mind Society Behavior*

However less expensive instruments (TV ads, cell-phones messages, communication on health risks, peer pressure etc.) target individual behavior or decision; neglecting “collective capacities, exclusion process or structural causes of poverty”

Underserving poor ?



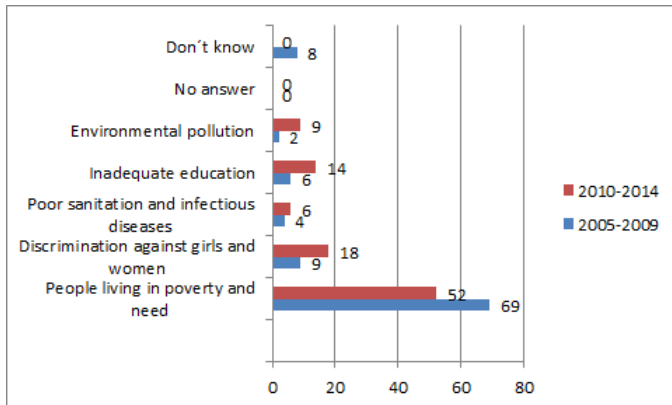
Underserving poor ?



Motivations ?

"Ethnography does what quantitative research cannot: deepen our understanding of the motivations of rural dwellers to change their sanitation behaviors, and the shifting constraints and opportunities they face in making those changes." (O'Reilly and Louis 2014:44)

World Value Surveys



The Bad State ?

- Elite Capture ? (Platteau, 2014)
- Women as policy makers (Duflo, 2004)
- Urban planning ...

The inefficient State ?

Access to public toilet	Public Program to Promote Sanitation/Latrines in the Village		
	No	Yes	Total
None	88.4%	91.3%	90.0%
Shared toilet in bldg	1.0%	1.6%	1.3%
Shared toilet outside bldg	7.4%	3.6%	5.3%
Public Govt toilet	3.2%	3.5%	3.4%
Total	100.0%	100.0%	100.0%
None	45.2%	54.8%	100.0%
Shared toilet in bldg	34.6%	65.4%	100.0%
Shared toilet outside bldg	63.4%	36.6%	100.0%
Public Govt toilet	44.4%	55.6%	100.0%
Total	46.0%	54.0%	100.0%

[Home](#) » [Politics](#)

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Demonetisation effect: 9.1 million new taxpayers

Govt may use increase in taxpayers to justify demonetisation, which critics claim did not help in original objective of curbing black money, terror financing or counterfeit notes

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- “Soucis de soi”
- Experimental/behavioral experiment (Somville, 2016)
- Constraint versus incitation versus nudge (Sunstein, 2016)

Risk for the poor ?

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Demonetisation effect: 9.1 million new taxpayers

Govt may use increase in taxpayers to justify demonetisation, which critics claim did not help in original objective of curbing black money, terror financing or counterfeit notes

- Poor more sensitive to shock in income (Servet, 2015)
- Foucault => bio-power => Gupta (2012), Drèze et Sen (2015)
“Uncertain glory”
- Failor to know the territory ?

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Network construction (09/2015, New Delhi)



Aims of this characterisation :

- Parsimony in the determinant => data issues
- Avoid the tricky hypothesis : “culture” “nature” “cooperation” “benevolent”
- Well-rounded = all the actors should be able to be integrated and can interact
- Flexibility of the framework for allowing local analysis/component analysis

Borraz, 2008

Subtl Balance : tailor-made politics versus incrimination ?

Ces politiques reposent sur une certaine conception de ce qui motive les individus, ce qui les amène à agir, ce qui peut les inciter à changer de comportement.

Changing perception ?

L. Tillin *Politics of Welfare: Comparisons across Indian States* (New Delhi: Oxford University Press, 2015; co-edited with Rajeshwari Deshpande and KK Kailash) examines how political environments across India's states shape the formulation and enactment of social sector programmes on the ground.

Sen, 1997

Choice/preference/demand

Sen, 1997

Normative approach

Good => characteristics => function => utility

J-Pal approach

- Jean Michel Servet, 2015 : Report 2015 of the World Bank
Mind Society Behavior
- A.Deaton : technical solution to political problems
- Ravallion, 2012 “Fighting poverty one experiment at the time” J. Sachs, 2005 : spillover ? scale effect ? => Dupas, 2011 on Health
- Inclusion, scaling-up (Mitlin, 2014)
- Time

A-theoretical approach

- No hypothesis on the preferences (Favereau, 2014)
- Empirical economists have been criticized for focusing on situations that are too “narrow” or trivial (Angrist, Pischke 2010)
- ignorance (from the field) ideology (pro-anti-market) inertia (same policies) (Banerjee and Duflo 2012)

Mobarak, A. M. et al. 2012.

Low demand for nontraditional cookstove technologies

[Ahmed Mushfiq Mobarak](#),^{a,1} [Puneet Dwivedi](#),^b [Robert Bailis](#),^b [Lynn Hildemann](#),^c and [Grant Miller](#)^d

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ABSTRACT

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Biomass combustion with traditional cookstoves causes substantial environmental and health harm. Nontraditional cookstove technologies can be efficacious in reducing this adverse impact, but they are adopted and used at puzzlingly low rates. This study analyzes the determinants of low demand for nontraditional cookstoves in rural Bangladesh by using both stated preference (from a nationally representative survey of rural women) and revealed preference (assessed by conducting a cluster-randomized trial of cookstove prices) approaches. We find consistent evidence across both analyses suggesting that the women in rural Bangladesh do not perceive indoor air pollution as a significant health hazard, prioritize other basic developmental needs over nontraditional cookstoves, and overwhelmingly rely on a free traditional cookstove technology and are therefore not willing to pay much for a new nontraditional cookstove. Efforts to improve health and abate environmental harm by promoting nontraditional cookstoves may be more successful by designing and disseminating nontraditional cookstoves with features valued more highly by users, such as reduction of operating costs, even when those features are not directly related to the cookstoves' health and environmental impacts.

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SOUTH ASIA

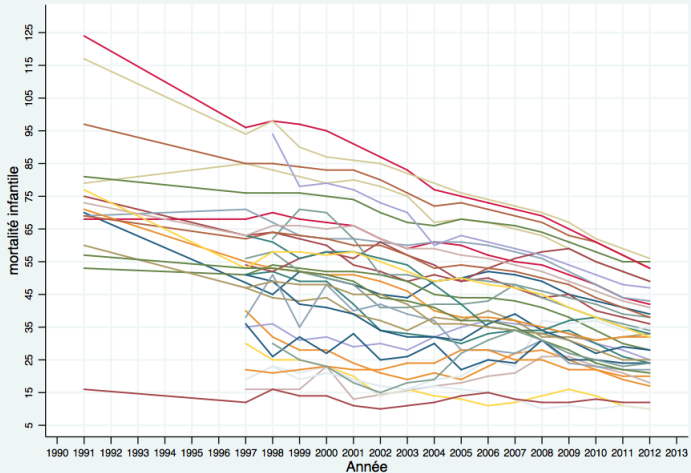
ENVIRONMENT & ENERGY

HEALTH

Cooking Stoves, Indoor Air Pollution, and Respiratory Health India

Esther Duflo, Michael Greenstone, Rema Hanna

Infant health



Source : SPSS

Attribution bias

Fritz Heider 1958 *The Psychology of Interpersonal Relations*
=> explanation in “root causes” (Zimmer, 2011)

Aristotle, Metaphysics B III (995a-996a)

It is necessary (...) that we first describe the questions which should first be discussed. These consist of all the divergent views which are held about the first principles; and also of any other view apart from these which happens to have been overlooked. Now for those who wish to get rid of perplexities (...) release is impossible when we do not know the knot. The perplexity of the mind shows that there is a "knot" in the subject; (...) Hence we should first have studied all the difficulties, both for the reasons given and also because those who start an inquiry without first considering the difficulties are like people who do not know where they are going; besides, one does not even know whether the thing required has been found or not.

Occam Razor

Neutral analysis : useful, fit to respond a human need,
produced

Dual typologies and pitfall

- As a housing commodity, sanitation can be describe as a durable good, the demand depending on its relative price and the income of the household.
- Public good dimension : therefore it cannot be constructed by one household, community can be involved or public bodies, especially to build and maintain the costly, non rivalrous and non excludable infrastructure.

Substitutes ?

Access to public toilet	Public Program to Promote Sanitation/Latrines in the Village		
	No	Yes	Total
None	88.4%	91.3%	90.0%
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Economy of singularity

- prize less important than quality
- information and dealing with lack of it

A political ecology of sanitation

"A political ecology approach examines human/environment relationships at the intersection of economics, social norms, and unequal social relations of power (e.g., gender and caste)." (O'Reilly and Louis 2014:43). "political ecology approaches offer new insights into studies of disease, health discourses, and how health is shaped by relationships between humans and humans, and humans and their environments." (O'Reilly and Louis 2014:43)

Economy of singularity (Karpick, 2007)

- prize less important than quality
- information and dealing with lack of it

Cooperation, social capital, community. IHDS, 2005

	Solve local problems in the "community"		
	Bond together	Each family individually	Total
Conflict in village			
Alot	17.2%	10.6%	14.5%
Some	25.5%	40.3%	31.5%
Get along	57.3%	49.1%	54.0%
Total	100.0%	100.0%	100.0%
Alot	70.6%	29.4%	100.0%
Some	48.4%	51.6%	100.0%
Get along	63.3%	36.7%	100.0%
Total	59.6%	40.4%	100.0%
Conflict among jatis			
Alot	4.8%	4.5%	4.7%
Some	25.5%	27.3%	26.3%
Not much	69.6%	68.2%	69.0%
Total	100.0%	100.0%	100.0%
Alot	61.6%	38.4%	100.0%
Some	58.0%	42.0%	100.0%
Not much	60.2%	39.8%	100.0%
Total	59.7%	40.3%	100.0%

The demand of sanitation

- Demand for health (Grossman, 1982 ; Andersen, 1995)
- Normative aspect (Hurley, 2000) => value, dignity ...
- Household production function
- Information asymetry, complexity => role of the professional

Improved ? IHDS, 2005

Item	Number	Per cent
None,open fields	18,496	72
Traditional latrine	3,327	12
Ventilated Improved Pit latrine	1,294	4
Flush toilet	3,460	12
Total	26,577	100
2012 dataset (IHDS)	<i>For comparison</i>	
No facility belonging to household (or Open fields)	16,335	59
Traditional pit latrine	3,924	14
Semi-flush (Septic tank) latrine	5,976	22
Flush toilet	1,228	4
Total	27,463	100

Klemperer 2008

Dual nature of sanitation : network good

"Network effects arise where current users of a good gain when additional users adopt it (classic examples are telephones and faxes)."

"Direct network effects arise if each user's payoff from the adoption of a good, and his incentive to adopt it, increase as more others adopt it; that is, if adoption by different users is complementary."

Klemperer 2008

- Production side
- Anticipation as key to adoption
- Multiple equilibria
- switching cost

The puzzle of sanitation in India

Item	Number	Per cent
None, open fields	18,496	72
Traditional latrine	3,327	12
Ventilated Improved Pit latrine	1,294	4
Flush toilet	3,460	12

We try to educate villagers we even go to the extent of giving them graphic details on why it's bad and just how harmful it can be to humans. Still they refuse to understand

Source : *Times of India*, 01/2016

Inclusion and Scaling-up (Mitlin, 2014)

- Capacity to reproduce local successes
- “Right to education Act” : debate on the Haryana State’s Measure to make ineligible non educated people or people without toilet.

Spatial **and** individual inclusion

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