

# Income/Consumption Maps:

A powerful tool for increasing policy effectiveness

By Miguel Székely

Prepared for presentation at the Conference on "*More than a Pretty Picture: Using Poverty Maps to Design Better Policies and Interventions*",  
The World Bank, Washington DC, May 11, 2006

# Starting from the end...

## Maps used in Mexico for

- 1. Budget allocation to States and Municipalities.** ○
- 2. Multi-program intervention in selected priority areas.** ○
- 3. Program design.** ○
- 4. Program implementation** ○

Result: Challenge the status quo;  
Re-opening of the discussion of budget  
distribution to States and Municipalities

1. Existing methods:

- a) marginality index (9 variables from Census)
- b) basic needs index (5 variables from Census)

2. New methods:

- c) HDI (income map)
- d) Poverty map



## Poverty ranking

1	Edo. de México	13,89
2	Veracruz	11,09
3	Chiapas	8,07
4	Puebla	7,78
5	Oaxaca	7,08
6	Guerrero	5,87
7	Jalisco	5,52
8	Guanajuato	4,53
9	Michoacán	4,33
10	San Luis Potosí	3,12
11	Hidalgo	3,10
12	Yucatán	2,50
13	Sinaloa	2,38
14	Tabasco	2,34
15	Tamaulipas	1,90
16	Sonora	1,70
17	Durango	1,56
18	Zacatecas	1,55
19	Querétaro	1,43
20	Morelos	1,40
21	Tlaxcala	1,14
22	Coahuila	1,14
23	Campeche	1,08
24	Nuevo León	1,02
25	Nayarit	1,00
26	Chihuahua	0,88
27	Quintana Roo	0,87
28	Aguascalientes	0,60
29	Baja California	0,47
30	Colima	0,47
31	<u>Baja California Sur</u>	0,18

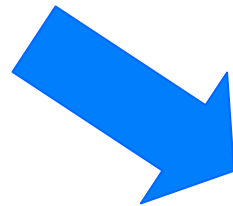
## Ranking for Transfers

1	Chiapas	11,42
2	Veracruz	11,04
3	Oaxaca	9,65
4	Edo. de México	8,24
5	Puebla	7,85
6	Guerrero	7,83
7	Michoacán	5,21
8	Guanajuato	5,04
9	San Luis Potosí	3,50
10	Hidalgo	3,24
11	Jalisco	3,20
12	Tabasco	2,68
13	Yucatán	2,11
14	Chihuahua	2,06
15	Zacatecas	1,93
16	Durango	1,64
17	Tamaulipas	1,64
18	Sinaloa	1,63
19	Querétaro	1,35
20	Morelos	1,15
21	Campeche	0,97
22	Nuevo León	0,97
23	Sonora	0,97
24	Nayarit	0,85
25	Tlaxcala	0,83
26	Coahuila	0,81
27	Baja California	0,73
28	Quintana Roo	0,71
29	Aguascalientes	0,38
30	Colima	0,24
31	<u>Baja California Sur</u>	0,15



## Result: Coordination for intervention in selected priority areas (integrality)

On July 2005 UNDP published the Human Development Report including HDI's by Municipality for the first time (never published before, although several calculations were available)



On August 2005 President Fox announces a coordinated "package" of interventions in 50 poorest Municipalities

Result: Coordination for intervention in selected priority areas (integrality)

1. Change 2005 budget priorities to 50 Municipalities, for 7 Ministries
2. Direct 2006 budget priorities to 50 Municipalities, for 7 Ministries
3. Direct personal follow-up by President Fox
4. First coordinated effort in a long time

# Sinergies between 7 Ministries, 12 interventions

1. Education infrastructure
2. Health infrastructure
3. Sanitation
4. Electricity
5. Water
6. Roads
7. Micro credit
8. Environment protection
9. Training for projects
10. Conditional cash transfers
11. Social insurance
12. Social infrastructure



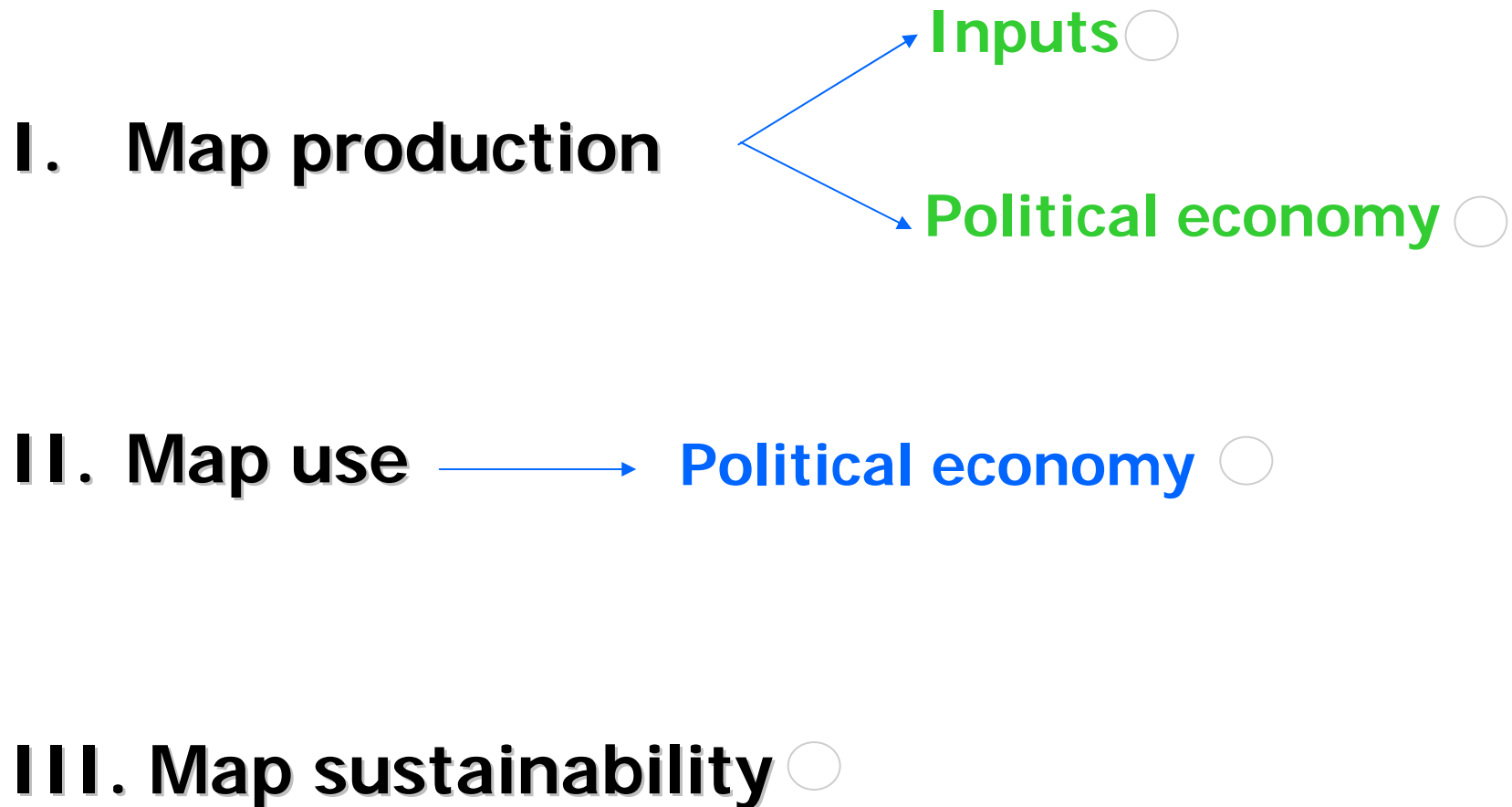
## Result: Improved program implementation

- + Run HABITAT presentation here
- + Run LICONSA presentation here
- + Run CASAS ATENCION INFANTIL here



What made implementation  
possible?

# What made implementation possible?



# Inputs for Map production

- **Pre-existing conditions**
- **Technological capacity**
- **Administrative aspects**
- **Institutional arrangements**
- **Budget**

# Inputs for Map production

## Pre-conditions:

- Good quality credible data
- “Internalized” and accepted poverty definition

+

## Technological capacity:

- Human capital for production
- Human capital for understanding use
- Enough and adequate computing equipment, software, and time for data processing

+

## Administrative aspects:





- Enough people involved
- Allocate enough time to concentrate for long periods of time
- Capacity to “isolate” team from day-to-day activities

## Institutional arrangements:

- Agreement with statistical office
- Assure World Bank continuous support
- Support as mainstream project of the institution



# Challenges

- Looks too time consuming 
- Looks too complicated 
- Many other options to obtain "same" product 
- Difficult to command all necessary resources (Stat. offices) 
- Data is too old

# Resources

- Benefits apparent from other cases
- Transparency, Software available and WB technical support
- Credibility (*Econometrica* and other publications)
- Expand ownership



# Political economy in production

- **Information is power**
- **Sell as “double check”**
- **Create demand**
- **Incentives for producers**

# Political economy in production

## Information is power:

- Select collaborators used to share data

+

## Create demand:

- Identify and involve potential beneficiaries of data
- “sell” potential uses (HDI) and develop quickly
- Full ownership by Statistical Office

+

+

## Sell as “double check”:

- Maps challenge existing methods
- “Healthy” competition in production among designated teams

## Incentives for producers:

- Academic publication

# Challenges

- **Results are too sensitive**
- **Invasion of delimited turfs**
- **Do we need that much refinement?**



# Resources

- **Compromises between competing teams**
- **External referees (WB support, credibility)**
- **Show power of results early in the process**



# Political economy in application

- **Ideological resistance**
- **Acceptance of results**
- **Use, to what extent?**
- **Public policy uses  
may shift power**

# Political economy in application

## Ideological resistance:

- “Planning must be local”, participation
- Too good to be true
- Technocratic approach

+

## Acceptance of results:

- Some will like them, others will not

## Use, to what extent?:




- Careful with “outdated” data (Honduras)
- Method is not perfect, it is an input for improving
- Challenges current distribution of resources
- Income/consumption vs poverty

+

## Policy uses may shift power:

- Some may be chosen to coordinate actions in selected areas
- Empower planners previously dependant on alternative data

# Challenges

- **Technocratic approach** 
- **Skepticism on precision** 
- **It's fine, but how will we see benefits (results, higher impact)** 

# Resources

- **Make clear it is an input, that should be complemented with other info**
- **Statistical office, WB endorsement**
- **Sustainability?**



# Map's key features


## 1. Credibility

+

## 2. Transparency


+

## 3. Accountability

- 
- For improving budget allocation
  - Synergies between programs
  - Program design
  - Program implementation



### Poverty changes over time:

- 
- Evaluation of Policy effectiveness in poor areas
  - Evolution of regional poverty
  - Impact evaluation of specific programs

# The problem is not...

- 1. Updating map using new household surveys (with old censuses)**
- 2. Having technical capacity to do the job**
- 3. Having the necessary technology**
- 4. Being able to show the benefits**



# Some (imperfect) options

- 1. Sampling to check if structural conditions changed**
- 2. Censuses and household surveys for delimited areas**

**Conclusion:**

**Income/Consumption Maps:**

A powerful tool for increasing policy effectiveness...

... the challenge: a new generation of dynamic maps