



# **Índice de Pobreza Multidimensional para Colombia**

## **Index of Multidimensional Poverty for Colombia (IPM-Colombia)**

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**ROBERTO ANGULO**

Subdirector de Promoción Social y Calidad de Vida  
Dirección de Desarrollo Social  
Departamento Nacional de Planeación

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# Selection of Variables

## Criteria for variable selection

1. Frequent usage (national or international); literature review; discussion with experts; other indicators. IPM-OPHI Internacional, NBI, ICV y Sisbén III.
2. Indicators can be affected by public policies.
3. Availability of information (in the survey of Quality of Life in Colombia).

## Criteria to validate variables

Precision of the sample to estimate the variable - estimated coeff of variation <15%.

\*EL DANE utiliza:

0-7: Estimación precisa

8-14: precisión aceptable

15-20 ó 15-25: Precisión regular y por lo tanto se debe utilizar con precaución

# Household as Unit of Analysis

- The deprivations are experienced simultaneously by household members not by isolated persons. Colombia's MPI is compatible with the public policy instruments that are designed to reduce poverty. This is justified by the Constitution.
- *“La garantía de las condiciones de vida digna en los acuerdos sociales no está dada por la responsabilidad de los individuos de forma aislada»* - Constitución Política de Colombia
- *There is empirical evidence in Colombia that households respond to adverse situations, not just isolated individuals.* - Combination of actions involve different members of the household
- *The instruments, programmes and strategies for poverty reduction in Colombia are focused on the household not on isolated individuals. Examples of such programmes:* – SISBEN, UNIDOS, Familias en Acción



# Dimensions of MPI Colombia

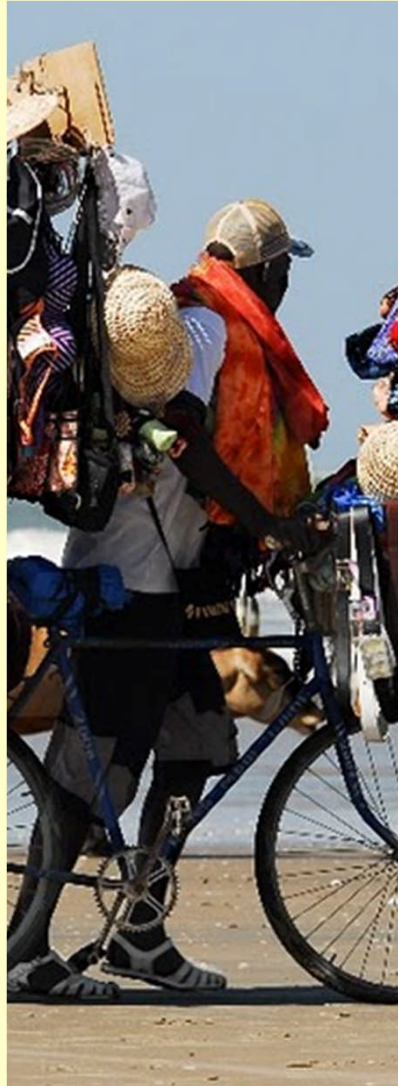
Educational  
conditions



Childhood  
and youth



Work



Health



Housing &  
Public services



## Educational Conditions

### **Educational Achievement:**

HH. deprived if members aged 15 or older has less than an average of 9 years of schooling.

**Illiteracy:** HH. Deprived if any member 15 years or older cannot read and write.





## Childhood & Youth

**Attendancy:** HH with at least one child (between 6 and 16 years) not attending school

**Educational Gap:** HH with at least one child (between 7 and 17 years) with educational gap (number of aproved years are lower to the national mean)

**Access to childcare services:** HH with at least one child (0-5) without acess to childcare (health, nutrition, care)

**Child Labour:** HH with at least one child (12-17) working





## Work

**Long-Term Unemployment:** HH with at least one member unemployed for more than 1 year.

**Formal Employment:** At least one member of the HH is employed with no pension scheme.



## Health



**Healthcare Access:** HH with at least one member older than 5 years do not have access to healthcare.

**Healthcare Access When Needed:** HH with at least one member who in the last 30 days required healthcare due to sickness, accident, etc., (without hospitalisation) but did not seek a physician, specialist, or any health institution.





## Housing & Public Services

**Access to Drinking Water:** *Urban* – HH without tap water. *Rural* – HH without a well, those who obtain water from rivers, trucks, or any other source

**Sanitation:** *Urban* – HH without (flush) septic system. *Rural* – toilet without connection, no toilet

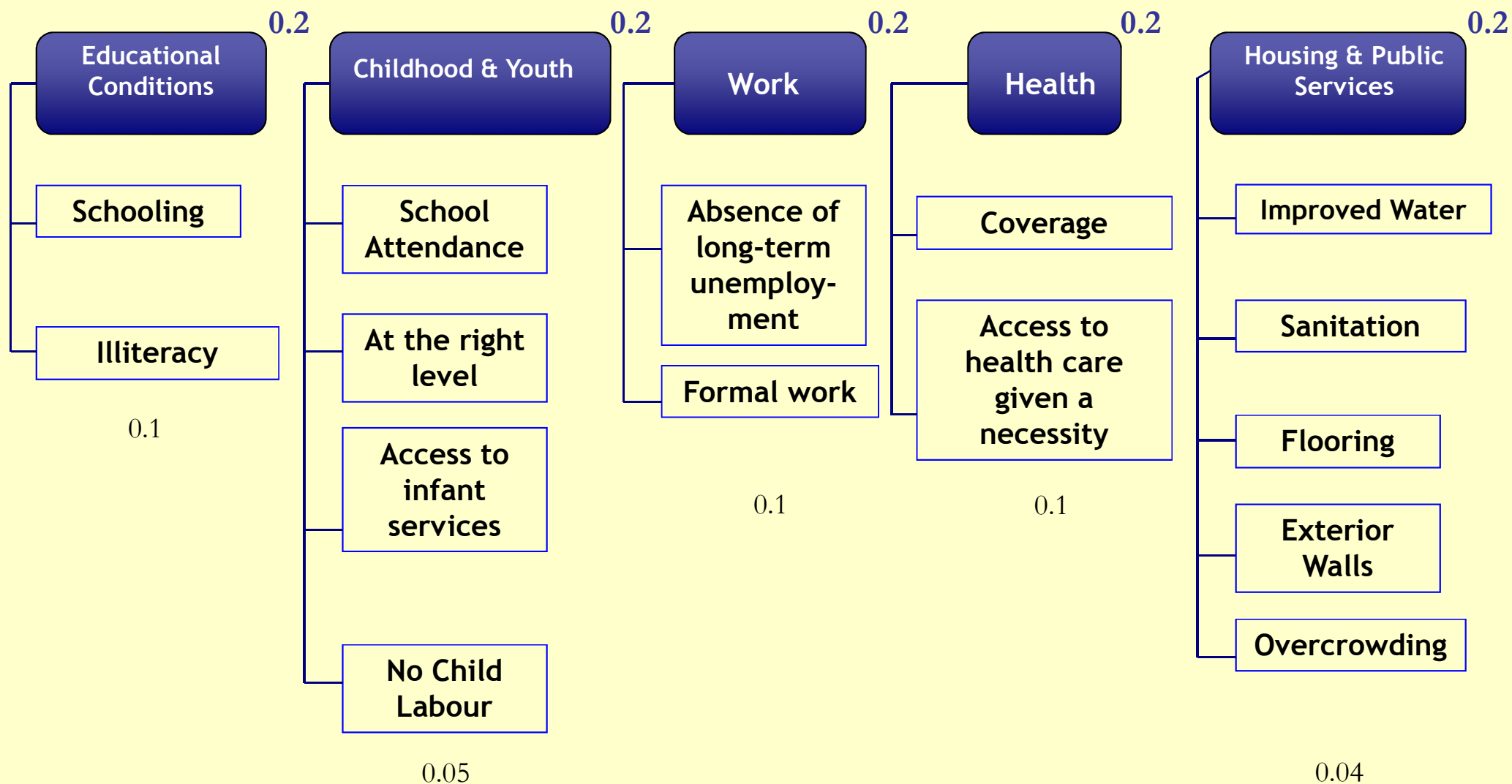
**Floor:** earth

**Wall:** Urban: wood without interior protection, plants, fabric, cardboard, rubbish, corrugated iron, or without walls. Rural: plants, fabric, cardboard, rubbish, corrugated iron, or without walls.

**Critical Overcrowding:** Urban: 3 or more individual per room, Rural: more than 3 individuals per room



# Dimensions, Variables and Weights - MPI Colombia



# Weights & Poverty Cutoff

## Poverty Cutoff

### Nested Weights

- Equal among dimensions
- Equal among indicators within each dimension

### Statistical Criteria for Poverty Cutoff $k$ :

1. Each indicator  $CVE < 15\%$ .
2. Robustness of  $k$  (for relevant rankings)
3. Statistical significance of the difference between indicators for each value of  $k$ .



# Weights and Poverty Cutoff - Further considerations.

The number of MPI deprivations experienced by those who were income poor, and those who perceived themselves to be poor, was compared with the number of deprivations among the non-income and non-subjective poor.

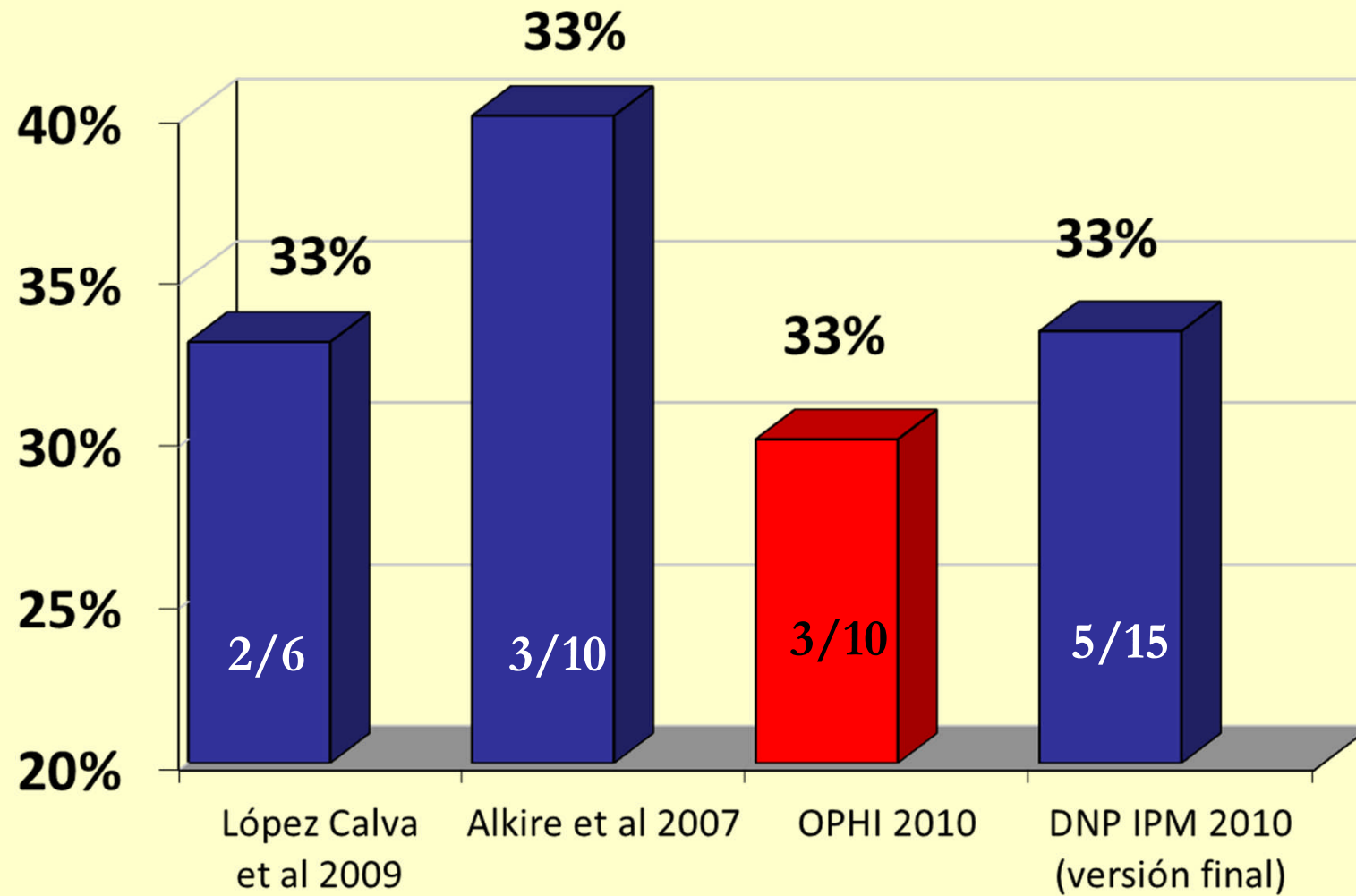
## Median and Average number of deprivations 2008

	Median	Average
People who perceive themselves to be poor	5.0	5.0
Income poor people	5.1	5.2
Income poor people who perceive self as poor	5.4	5.6
Those who don't perceive themselves as poor	3.0	3.2
Those who are not income poor	3.0	3.2
All people	3.8	4.1

Fuente: Cálculos DNP-SPSCV, con datos de la ECV2008

A non-poor person on average has 3 deprivations, which suggests that a low value of  $k$  would capture deprivations that were not related to or sufficient to identify poverty.

# Choosing poverty cutoff - other multidimensional poverty measures



## Survey of the Quality of Life, for years 1997, 2003, and 2008.

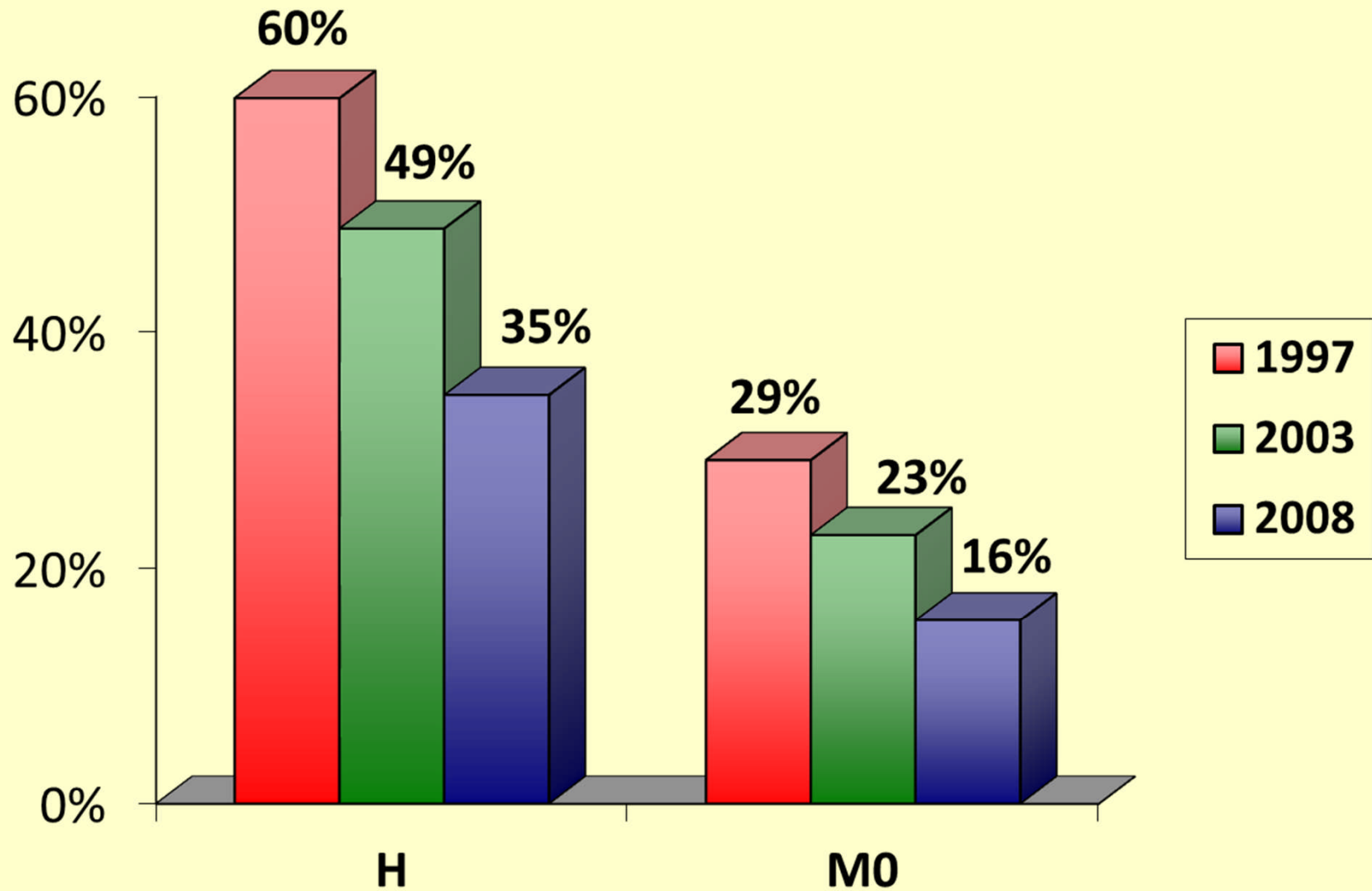
	1997	2003	2008
Sample size	9.121 hh	22.949 hh	13.600 hh
Representativeness	National, Rural/Urban, and Regions		

Diseño muestral probabilístico, estratificado, de conglomerados y polietápico



# Results – MPI Colombia

# Incidence (H) And Adjusted Headcount (M0) for $k = 5/15$



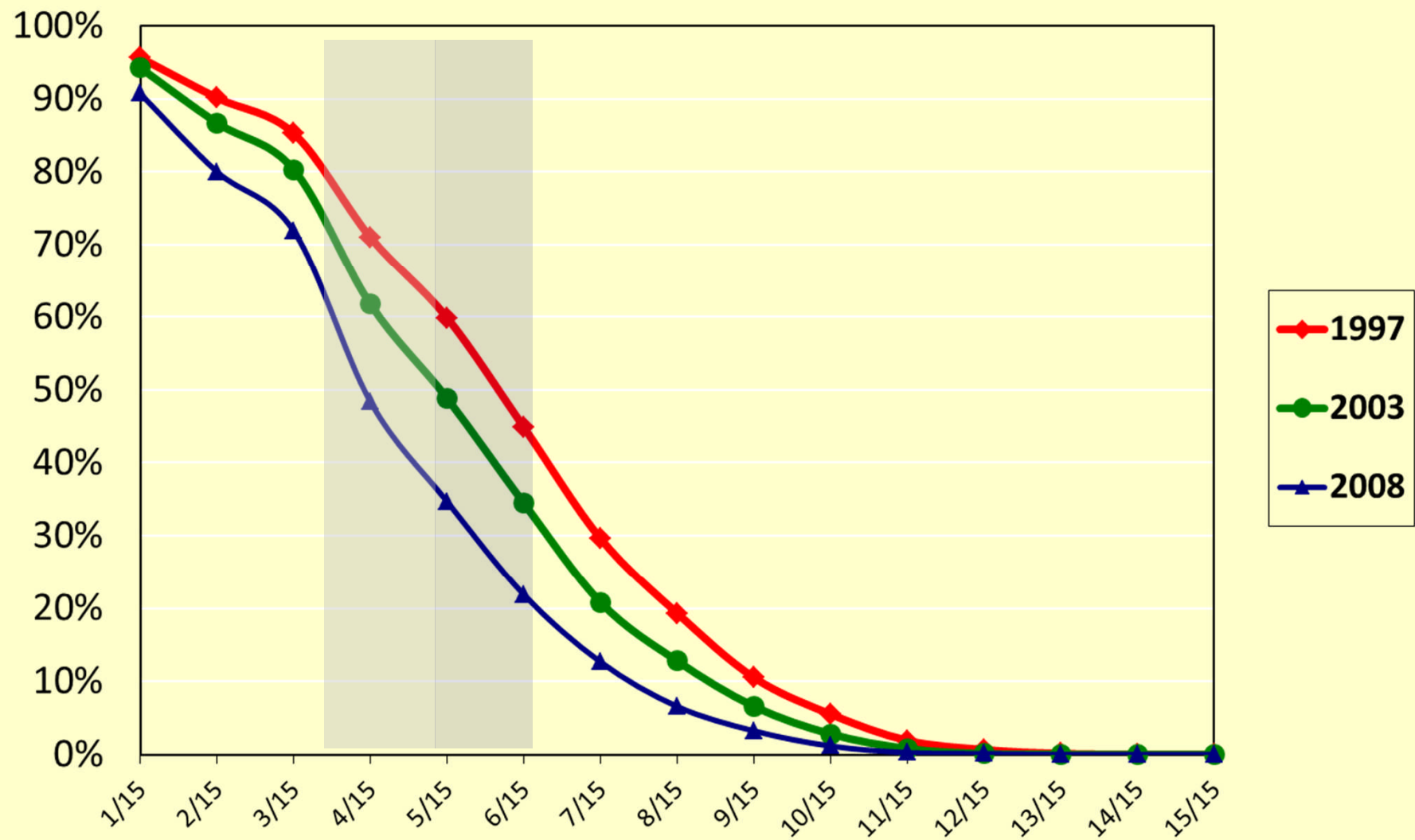
***For 3 values of k***

**Intensity or Average Deprivation Share (A)**

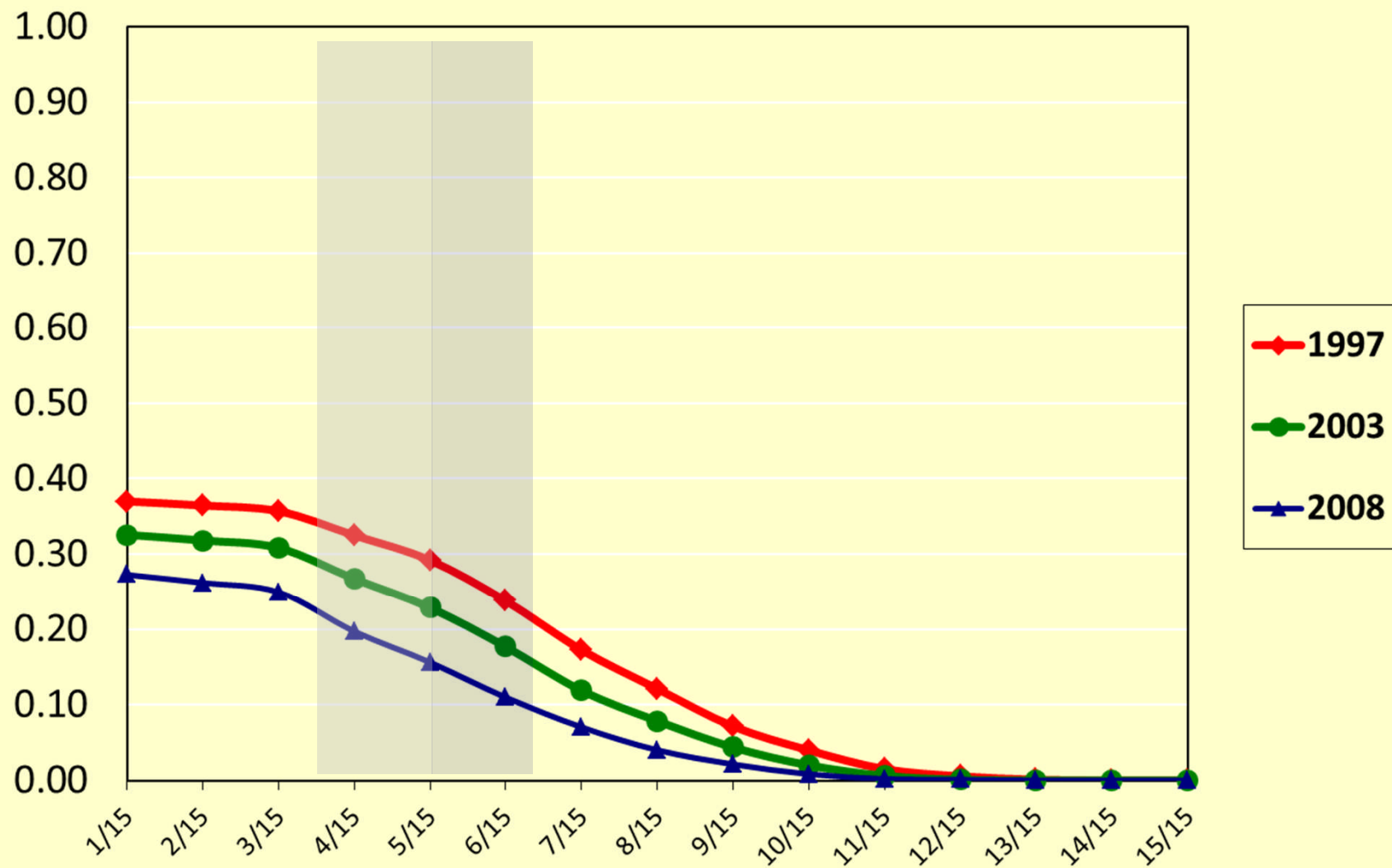
K	1997	2003	2008	1997-2008 p.p
4	46%	43%	41%	-5
5	49%	47%	45%	-4
6	53%	51%	50%	-3



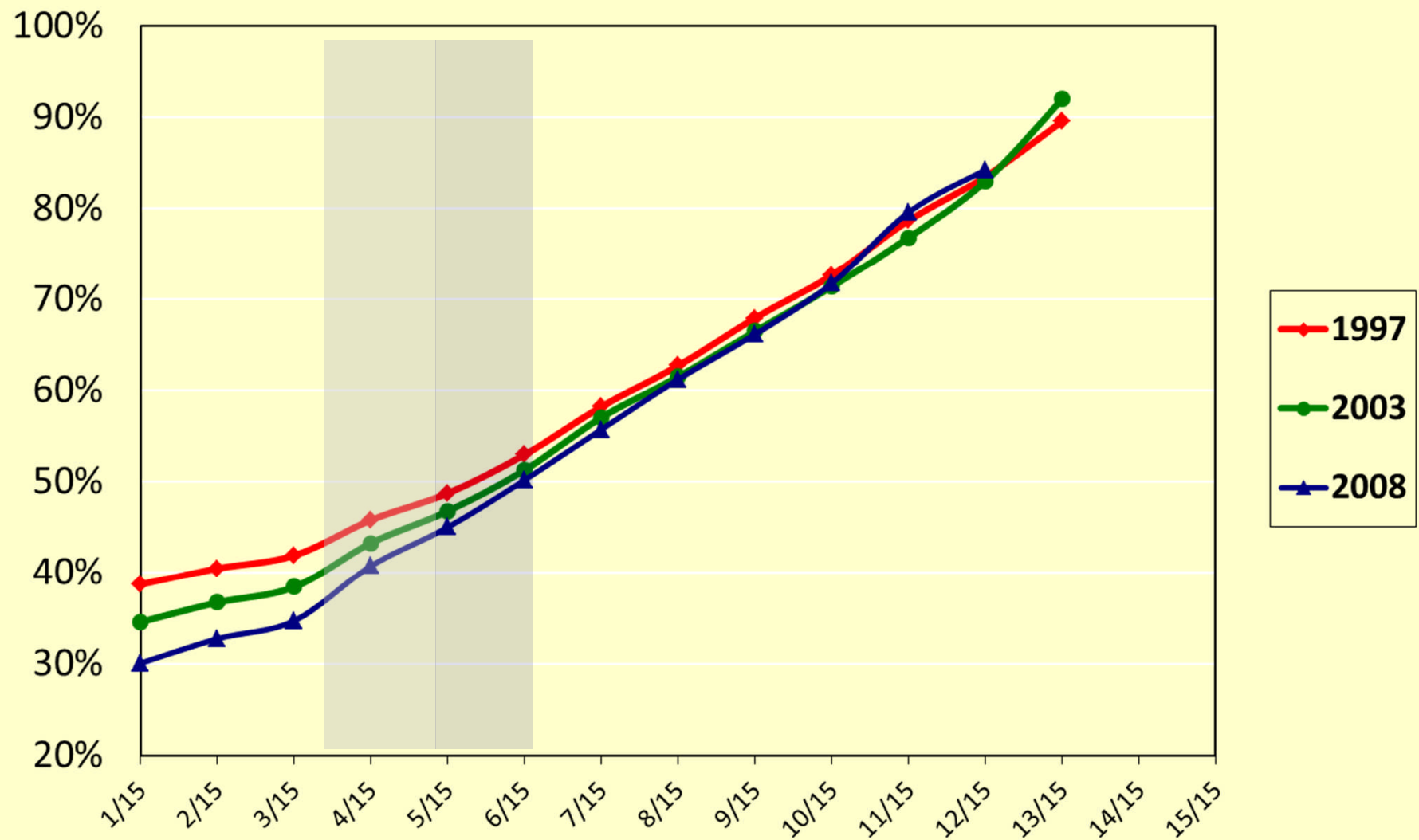
# Incidence (H) For all values of k (1997-2008)



## Adjusted Headcount (M0) for all values of $k$ (1997-2008)

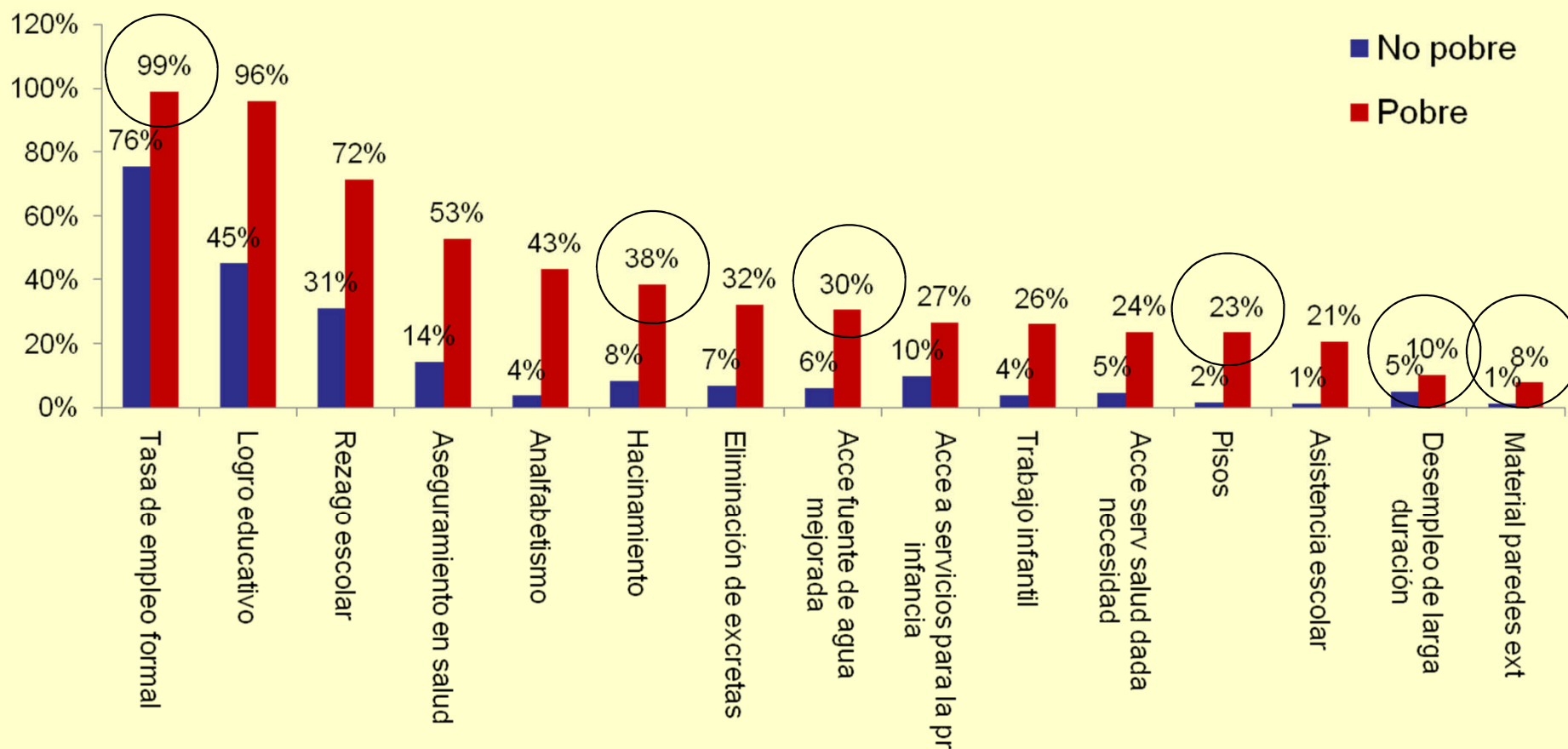


## Intensity (A) for all values of $k$ (1997-2008)





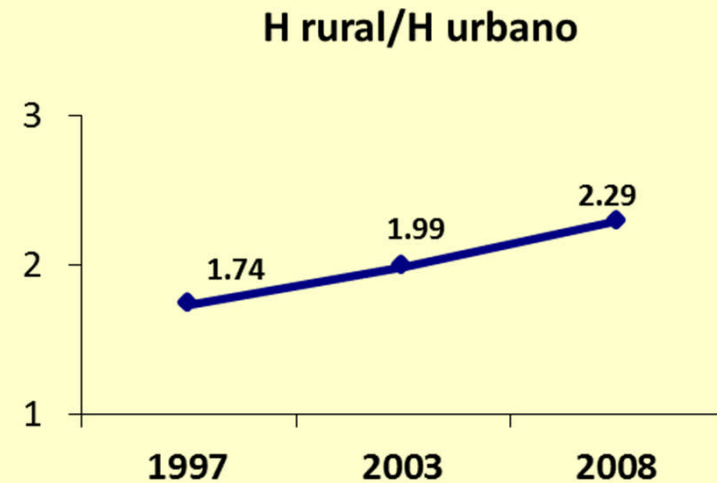
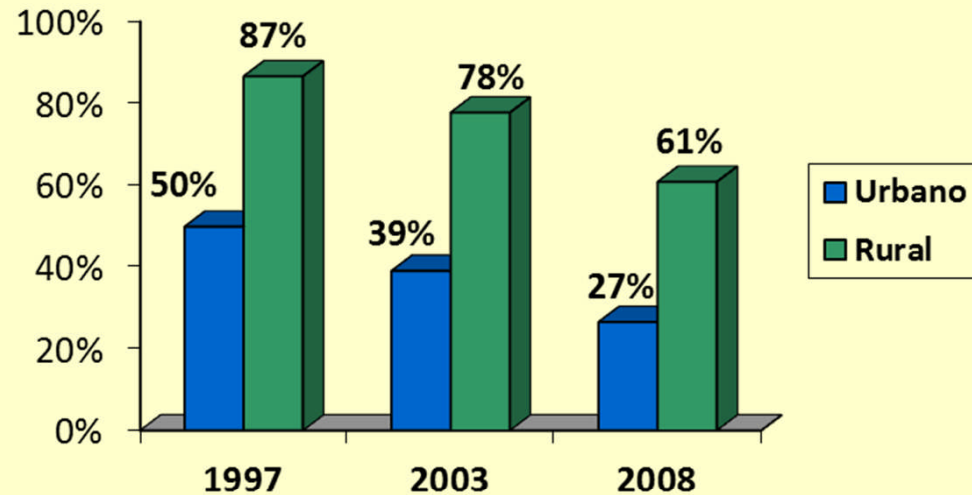
# Percentage of hh with deprivations in each dimension: Poor vs non-poor, 2008



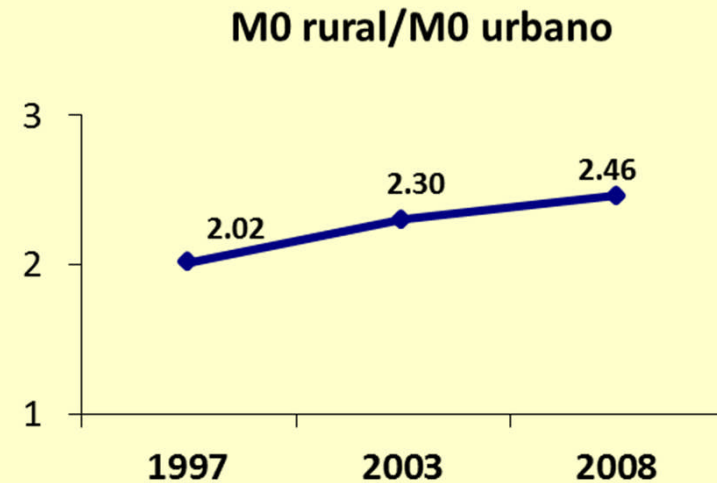
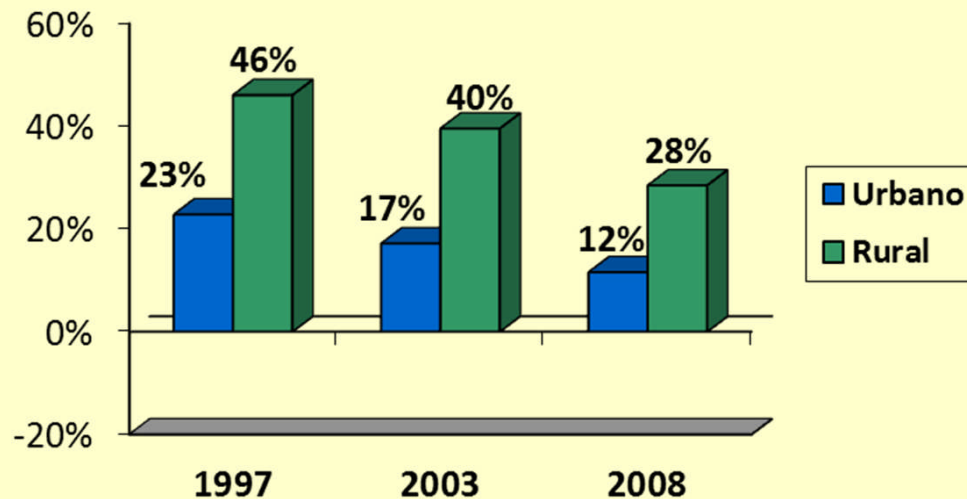
# (H) and (M0) K=5/15

## Incidencia (H)

Reduction in poverty / increasing differences urban and rural

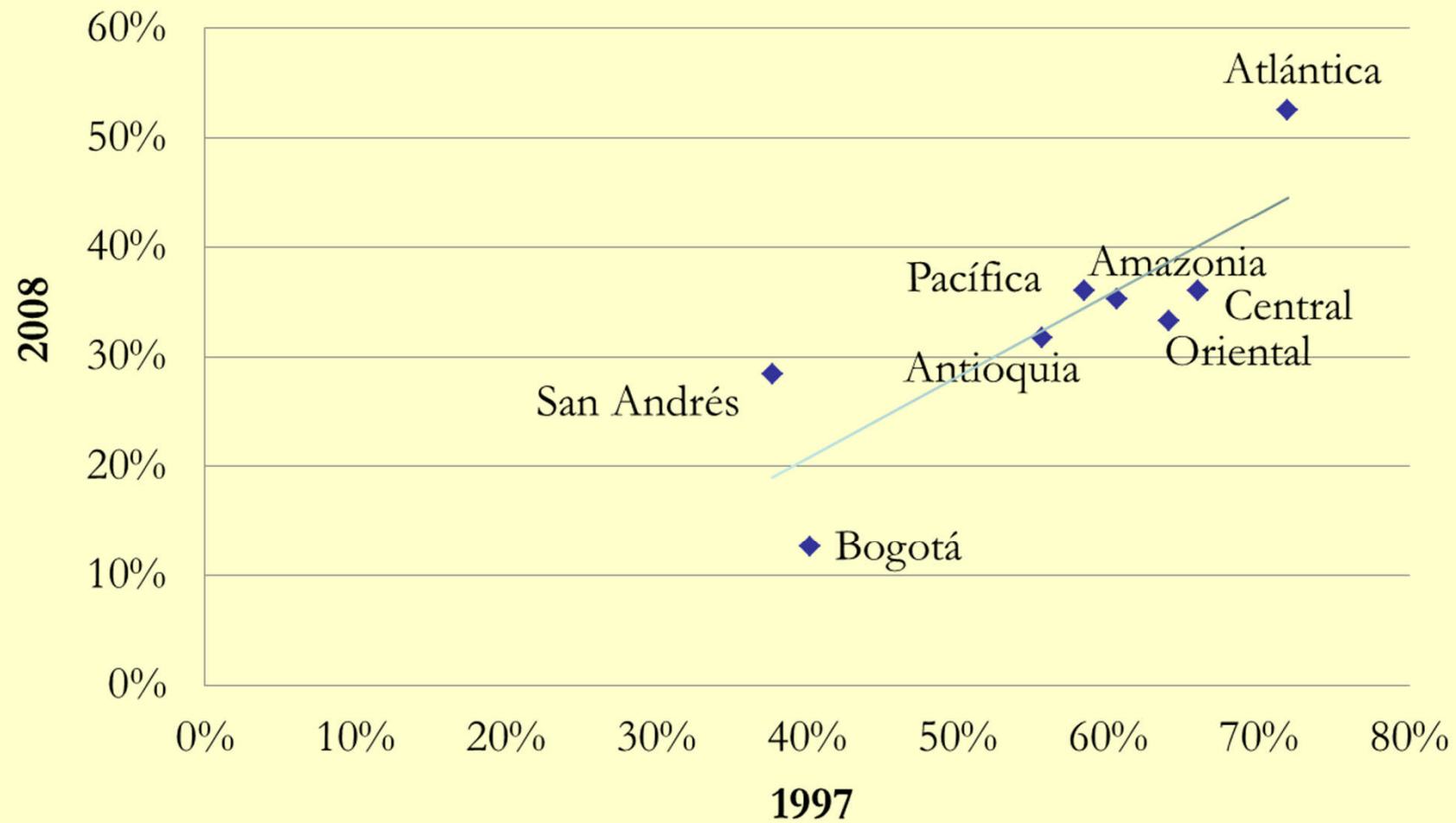


## Incidencia Ajustada (M0)



# Headcount by region

Headcount (H) by region 1997 - 2008



# PROSPERIDAD PARA TODOS

Más empleo,  
menos pobreza  
y más seguridad

## ÍNDICE DE POBREZA MULTIDIMENSIONAL Meta PND



# MPI in Policy – Public Goals

- The Government of Colombia goals with the indicators of the MPI.
- The goals are based on the ‘national plan’ and the goals that the different ministries or sectors had set for themselves.
- Progress towards the goals will be reviewed at the Cabinet and Ministerial level.
- As a result of these targets, there is also a goal for the overall reduction in MPI Headcount.



# The MPI headcount Goal

Indicador	2008	2014	Diferencia
Headcount of Multidimensional Poverty (IPM-Colombia)	34.7%	<b>22.5%</b>	-12.2%
Absolute Number of MPI poor people	15,415,986	10,701,598	-4,714,388
Absolute Number of non-MPI-poor people	29,034,274	36,959,770	7,925,496

**The goal for MPI in 2014 is to have an MPI Headcount of 22.5%. This implies a reduction in poverty by 12.2% a year from 2008.**

# IPM – Meta PND

IPM			METAS PLAN NACIONAL DE DESARROLLO 2010-2014		
Dimensión	Variable - Indicador		Indicador PND		Línea base 2009 Meta 2014
Condiciones educativas del hogar	Logro educativo	Escolaridad promedio de las personas de 15 años y más del hogar	Años promedio aprobados de educación población de 15 a 24		9,15 9,80
	Analfabetismo	Porcentaje de personas del hogar de 15 años y más que saben leer y escribir	Tasa de analfabetismo (mayores de 15 años)		6,70% 5,70%
Condiciones de la niñez y juventud	Asistencia escolar	Proporción de niños entre 6 y 16 años asistiendo al colegio	Tasa de Cobertura Bruta	Media	79,27% 91,00%
	Rezago escolar	Proporción de niños y jóvenes (7-17 años) dentro del hogar sin rezago escolar (según la norma nacional)	Tasa de Deserción Intra-anual en preescolar, básica y media		5,15% 3.80%
	Acceso a servicios para el cuidado de la primera infancia	Proporción de niños de cero a cinco años con acceso a servicios para el cuidado de la Primera Infancia en el hogar	Dado que los datos de la encuesta no permiten medir exactamente la Atención Integral a Primera Infancia, y en comparación con los datos oficiales, la cobertura según la ECV 2008 es superior, no se calcula meta de reducción para este indicador		
	Trabajo infantil	Proporción de niños en el hogar que no se encuentra en condición de trabajo infantil.	Porcentaje de niños, niñas y adolescentes ( entre 5 y 17 años) fuera del mercado laboral		1.768.153 35%

# IPM – Meta PND






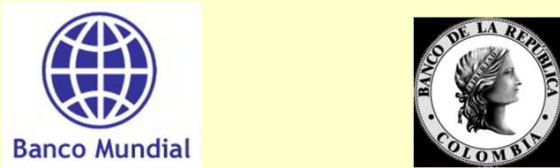
IPM			METAS PLAN NACIONAL DE DESARROLLO 2010-2014		
Dimensión	Variable - Indicador		Indicador PND	Línea base 2009	Meta 2014
Trabajo	Desempleo de larga duración	Proporción de PEA del hogar que no se encuentra en desempleo de larga duración	Tasa de desempleo. Total nacional (%)	12%	8,9%
	Tasa de empleo formal	Proporción de la PEA del hogar que son ocupados con afiliación a pensiones	Afiliados al Sistema de Pensiones. Porcentaje	32%	42%
Salud	Aseguramiento en salud	Proporción de miembros del hogar, mayores de cinco años, asegurados a Seguridad Social en Salud	Afiliados al Régimen Contributivo	18.116.769 <sup>1</sup>	19.593.047
			Cobertura del Régimen Subsidiado	90,27%	100%
	Acceso a servicio de salud dada una necesidad	Proporción de personas del hogar que acceden a servicio institucional de salud ante una necesidad sentida			

# IPM – Meta PND

IPM			METAS PLAN NACIONAL DE DESARROLLO 2010-2014		
Dimensión	Variable - Indicador		Indicador PND	Línea base 2009	Meta 2014
Acceso a servicios públicos domiciliarios y condiciones de la vivienda <sup>2</sup>	Acceso a fuente de agua mejorada	Privación según acceso del hogar a acueducto o fuente de agua mejorada	Cobertura del servicio de acueducto	91.79% hogares	94.12% hogares
	Eliminación de excretas	Privación según acceso del hogar a servicio de alcantarillado o tipo de servicio sanitario	Cobertura del servicio de alcantarillado	87.48% hogares	90.76% hogares
	Pisos	Carencia del material predominante	Porcentaje de hogares con carencias en los materiales de la vivienda	9.40%	6.70%
	Paredes exteriores	Carencia del material predominante			
	Hacinamiento crítico	Urbano: 3 o más personas por cuarto Rural: Mas de 3 personas por cuarto	Porcentaje de hogares en hacinamiento crítico	12.50%	8.20%

Las metas asociadas a esta dimensión fueron adaptadas con la DDUPA con base en las que aparecen en el PND, para lograr correspondencia con los indicadores del IPM.

# Tablero de Control

Poverty Indicators	Inequality Indicators
<p>Poverty (income)</p>  <p>MESEP and DANE logos. MESEP is a red arrow pointing right with the text 'MESEP' below it. DANE is a pink square with three white dots and the text 'DANE Para tomar decisiones' below it.</p>	<p>Gini (Income)</p>  <p>MESEP and DANE logos. MESEP is a red arrow pointing right with the text 'MESEP' below it. DANE is a pink square with three white dots and the text 'DANE Para tomar decisiones' below it.</p>
<p>Poverty (Income after subsidies)</p>  <p>DNP logo. It features the Colombian flag colors (yellow, blue, red) to the left of the text 'DNP' and 'DEPARTAMENTO NACIONAL DE PLANEACIÓN' below it.</p>	<p>Gini (with subsidies)</p>  <p>DNP logo. It features the Colombian flag colors (yellow, blue, red) to the left of the text 'DNP' and 'DEPARTAMENTO NACIONAL DE PLANEACIÓN' below it.</p>
<p>Multidimensional poverty index</p>  <p>OPHI and DNP logos. OPHI is the Oxford Poverty &amp; Human Development Initiative logo, featuring the University of Oxford crest and text. DNP is the logo of the Departamento Nacional de Planeación, featuring the Colombian flag colors and text.</p>	<p>Index of Human opportunities</p>  <p>Banco Mundial and Banco de la República logos. Banco Mundial is the World Bank logo, featuring a globe and the text 'Banco Mundial'. Banco de la República is the logo of the Bank of the Republic of Colombia, featuring a classical head and the text 'BANCO DE LA REPUBLICA COLOMBIA'.</p>