Social Determinants of Health in Arab Countries

1 author:

Abdesslam Boutayeb
Université Mohammed Premier
167 PUBLICATIONS   **3,358** CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:

Project   Disease prevention and health promotion in developing countries View project

Project   Action on Social Determinants of Health in order to reduce health inequity View project

Social Determinants of Health in Arab Countries

Boutayeb Abdesslam
Faculty of Sciences
University Mohammed Ier
Oujda, Morocco

In(equity) in Arab countries

1. Introduction
2. Measurements of inequity
3. Inequity within Arab countries

    3.1 Description

    3.2 Analysis

4. Health equity, education and poverty trap
5. Conclusion

1. Introduction: SDH and Health equity

Social Determinants generating health differences and variations

Differences generated by
Sex
Age
Genetic
……..

Differences generated by social conditions (Economic, Political, Social or Cultural)

Differences generated Randomly, By Chaos (unavoidable)
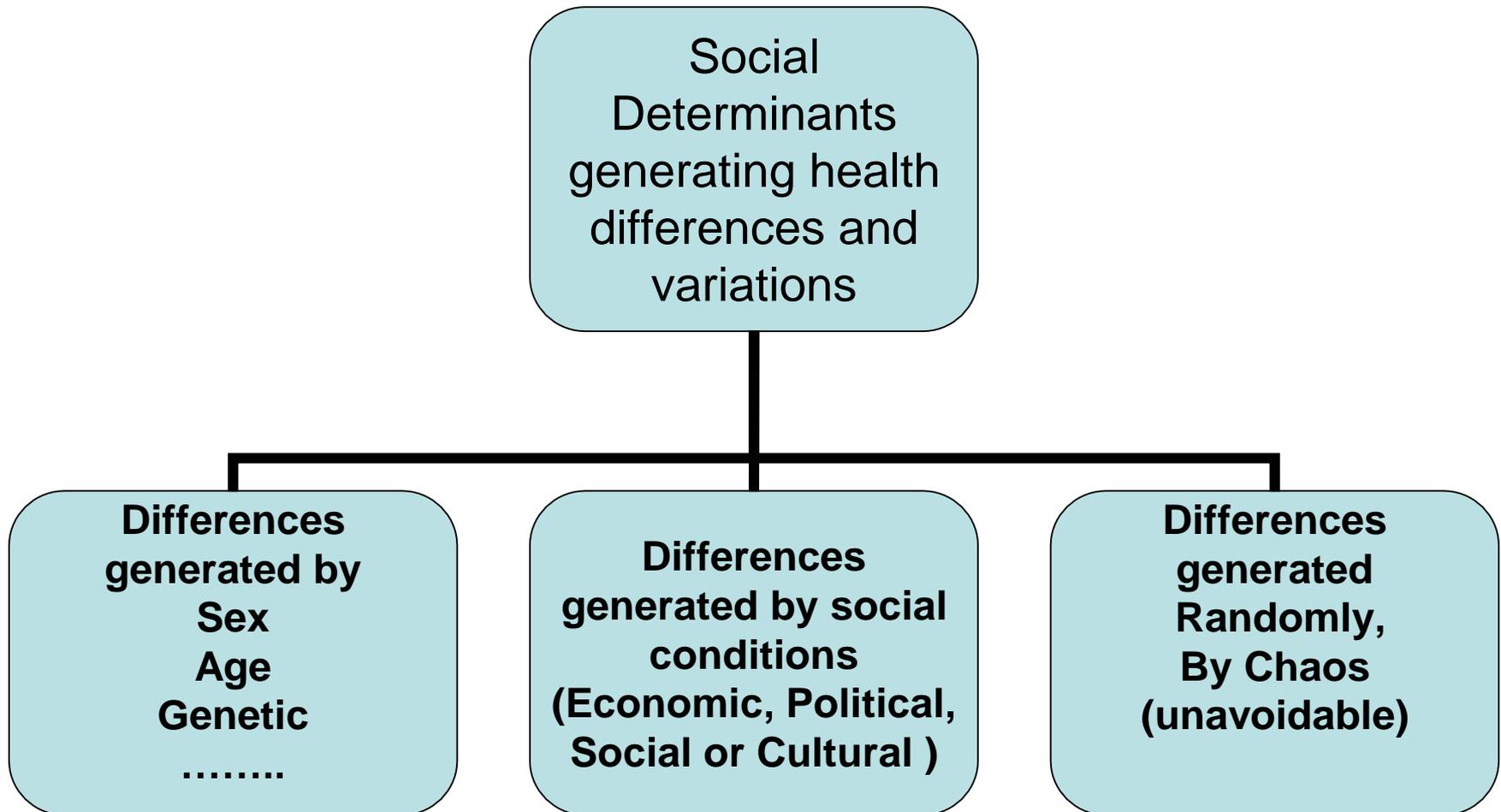
Definition of Health Equity in ISEqH's constitution, 2000

"The **absence** of **systematic** and potentially **remediable differences** in one or more aspects of health across populations or population groups defined socially, economically, demographically, or geographically"

Definition of Health Equity by WHO Commission on Social Determinants of Health, 2008

"Where **systematic differences** in health are judged to be avoidable by reasonable action they are, quite simply, unfair. It is this that we label **health inequity**. Putting right theses inequalities -the huge and remediable differences in health between and within countries- is a matter of social justice. Reducing health inequities is an ethical imperative. Social injustice is killing people on grand scale"

Health inequity: A multidimensional, multi-scale and multi-criteria problem

Multidimensional (Geographical disparities, Gender inequity, Ethnic differences, Socioeconomic inequalities)

Multi-scale (International, Regional, National, Provincial, Local,…).

Multi-criteria (Self assessment, richest-poorest, whole gradient, time-dependence, absolute-relative values, quantitative, qualitative)

=> Different strategies: levelling up, levelling down, levelling up and down, targeting approach, narrowing the gap between the most and least advantaged, reducing inequalities through the whole gradient, etc….

Health inequity: a worldwide problem

- "Our children have dramatically different life chances depending on where they were born. In Japan, Sweden or Germany they can expect to live more than 80 years; in Brazil, 72 years; India, 63 years; and in one of several African countries, fewer than 50 years. And within countries, the differences in life chances are dramatic and seen worldwide. The poorest of the poor have high levels of illness and premature mortality. But poor health is not confined to those worst off. In countries at all levels of income, health and illness follow a social gradient: the lower the socioeconomic position, the worse the health". **(Commission on Social Determinants of Health, 2008)**

- "It is unacceptable that a child born in some parts of Africa can live up to 50 years less than a child born in Japan; and it is unacceptable within the UK there are up to 28 years differences depending on where you live" **(Marmot, 2008).**

Example1: High HDI with health inequity: Norway HDI=0.938; rank 1(2010)

Figure 1. Age-adjusted mortality by education for men and women 45-59 years. 1990-97

Døde per 100.000

Legend: Secondary, Upper secondary, University, PhD level
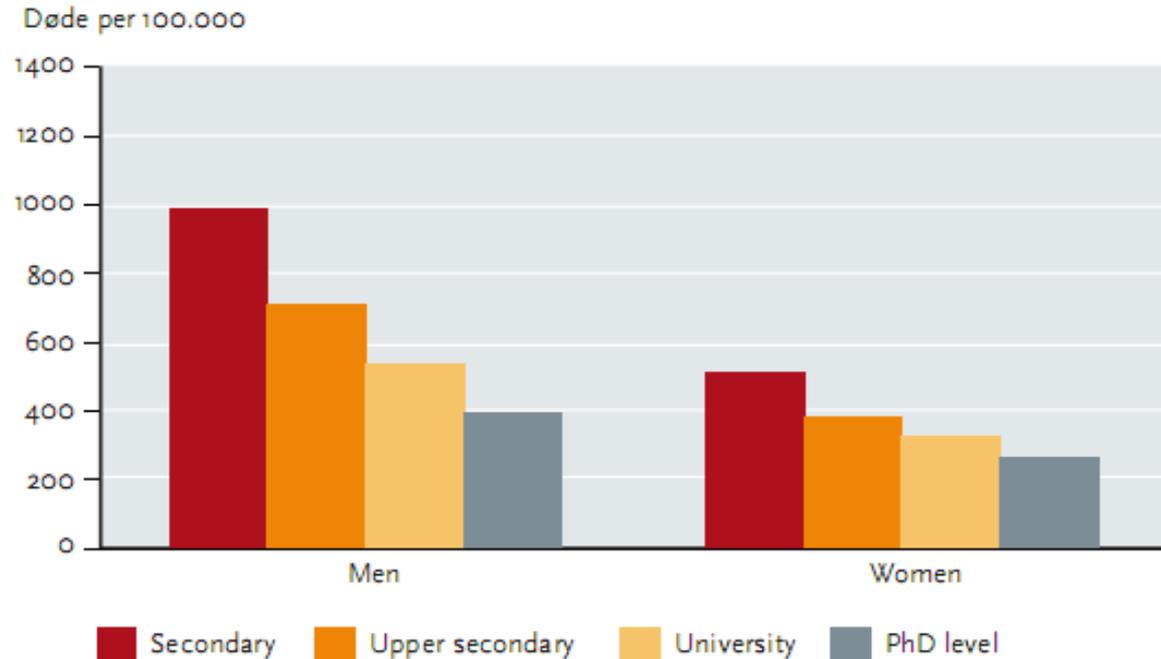
Source: Zahl et al. 2003

Example2. Household income in Britain (Whitehead 2009)
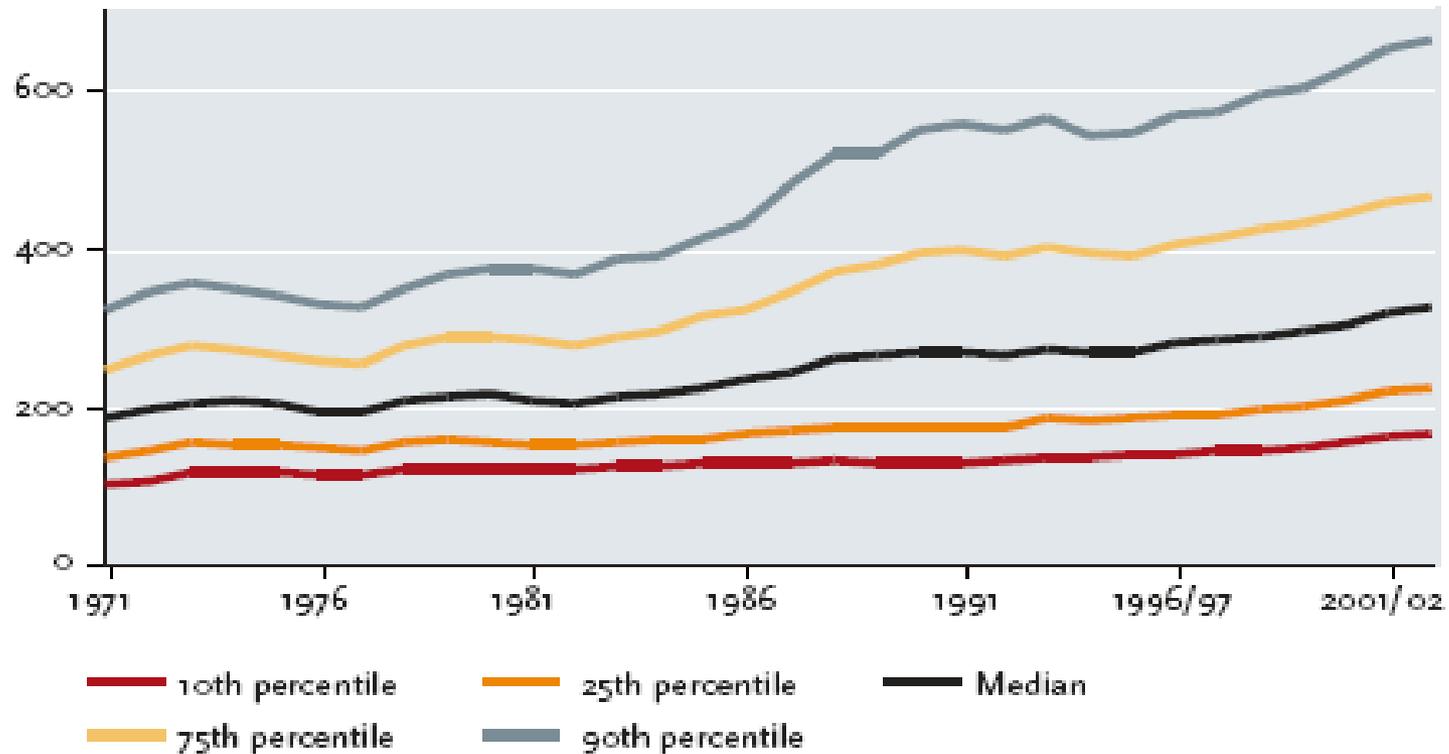
Source: Summerfield, Gill (14)

Example3: On a journey on the London Underground, just 8 stops, life expectancy for men drops by one year per stop

Life expectancy at birth (males), London, 2005–2007

Years
- 81.5 to 83.8 (2)
- 79.3 to 81.5 (6)
- 77.1 to 79.3 (10)
- 74.9 to 77.1 (14)
- no data (1)
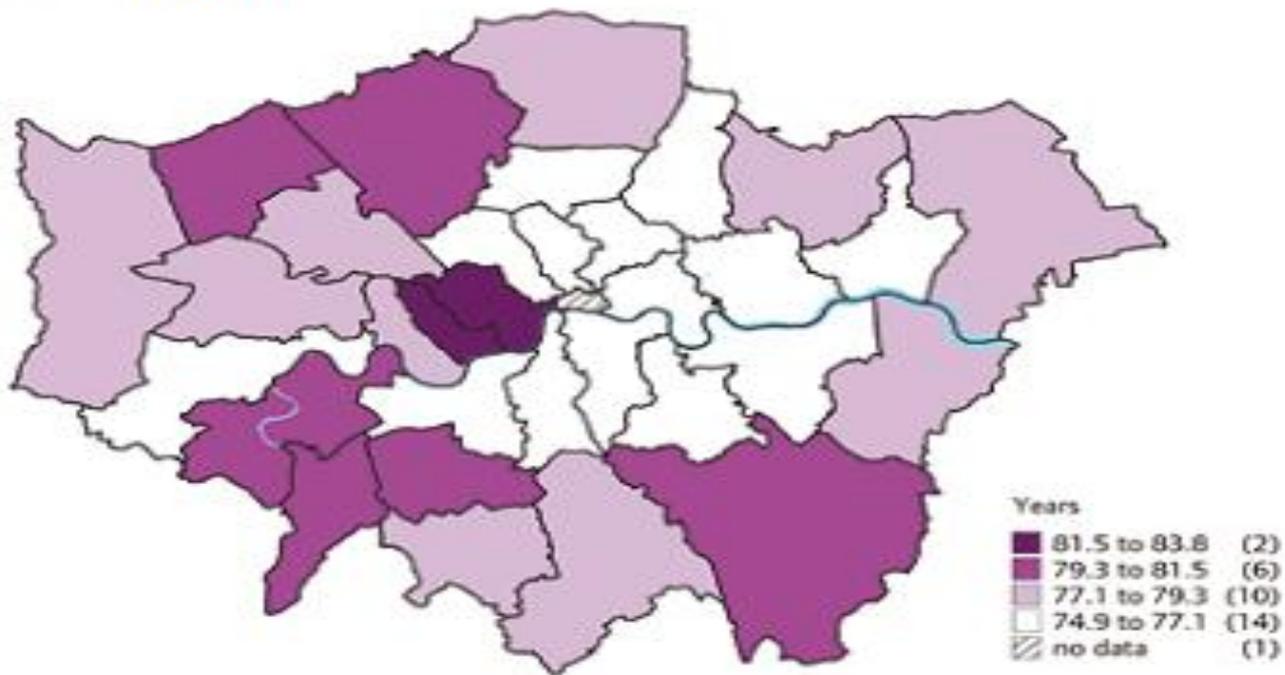
2. **Measurements of inequity**

Inequity can be described and/or measured by:

-Multidimensional data analysis (Discriminant analysis, Classification, Regression,…)

-Ratio most advantaged/least advantaged (usually poorest quintile(20%)/richest quintile(20%))

-Odds Ratio

-Concentration Index

-Gini Index

-Relative index of inequality

Inequities: overlapping and cumulative effect:
literacy rate (Morocco,1999), A:advantaged; D:disadvantaged
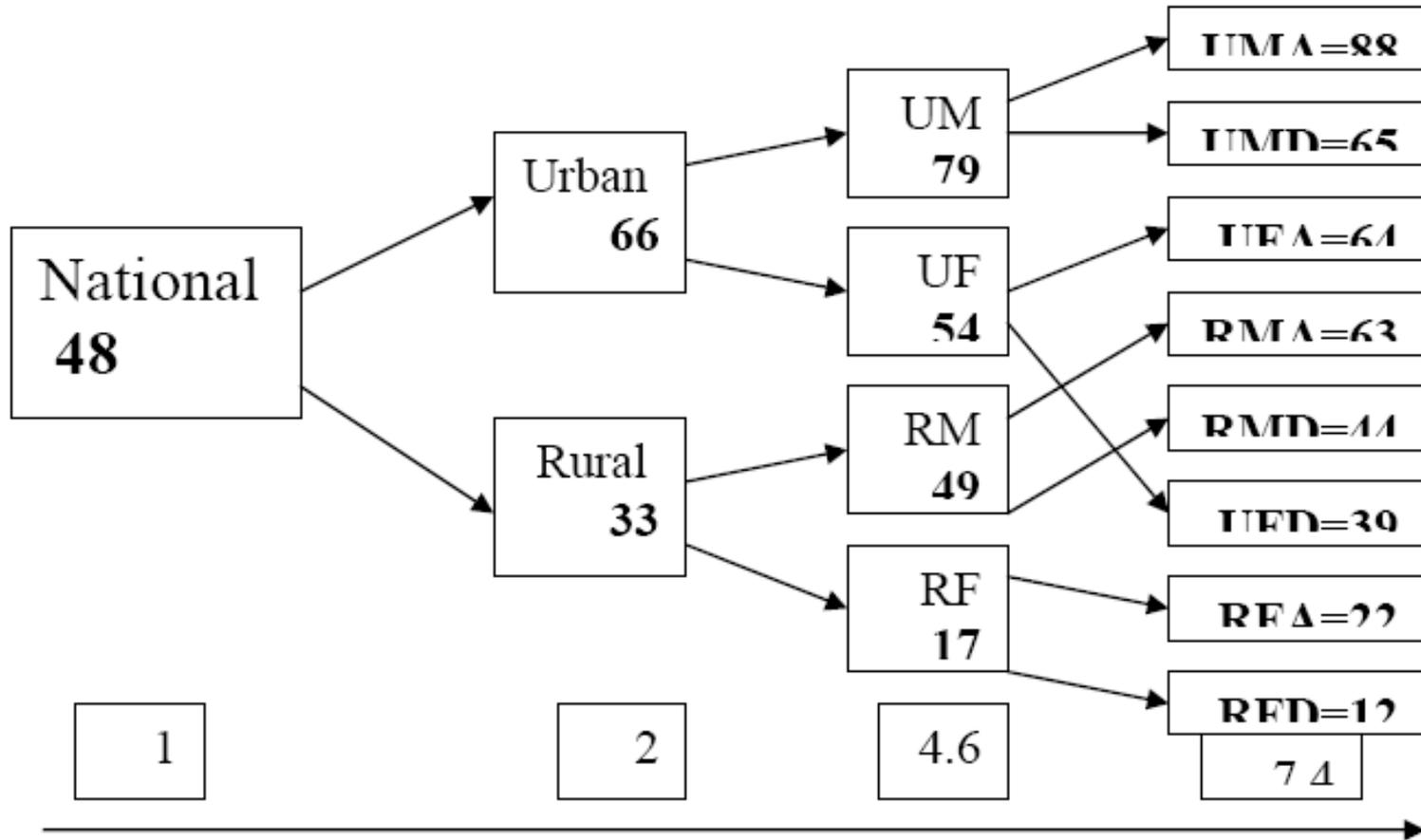
Evolution of illiteracy rates in Algeria (MICS3,2000)
Absolute gap reduced but relatively, inequity increased

Gender inequity: Evolution of illiteracy rate in Algeria
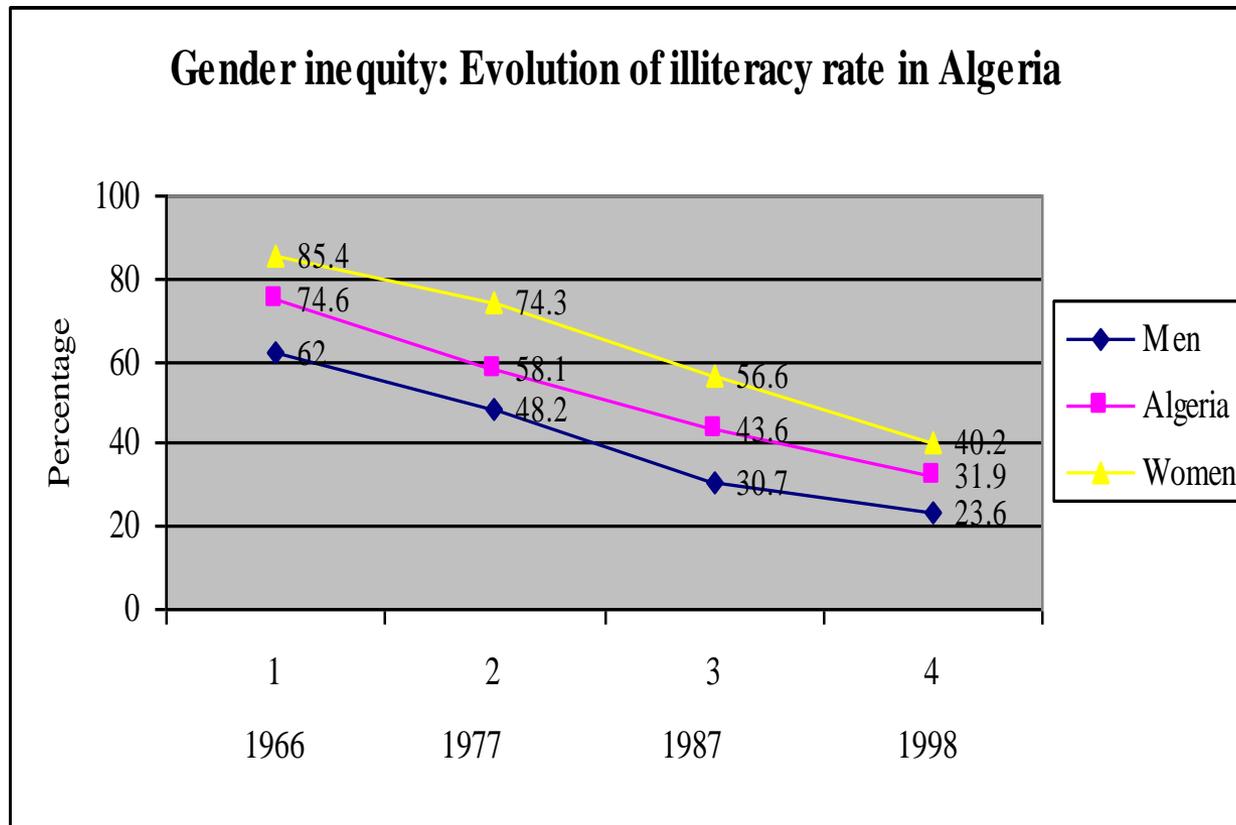
The same dataset may lead to opposite conclusions quantitatively and qualitatively

	1966(%)			1998(%)		
	Women	men	- or /	Women	Men	- or /
Absolute differences:	85.4 −	62 =	**23.4**	40.2 −	23.6 =	**16.6** =>**Reduction**
Relative differences:	85.4 /	62 =	**1.37**	40.2 /	23.6 =	**1.7** =>**Increase**

	1966(%)	1998(%)	
Women	85.4 /	40.2	= **2.1**
Men	62.0 /	23.6	= **2.7**

| Women	Men
(85.4 − 23.4) /32 = **1.4**	(62 − 23.6) /32 = **1.2**

Gini Index
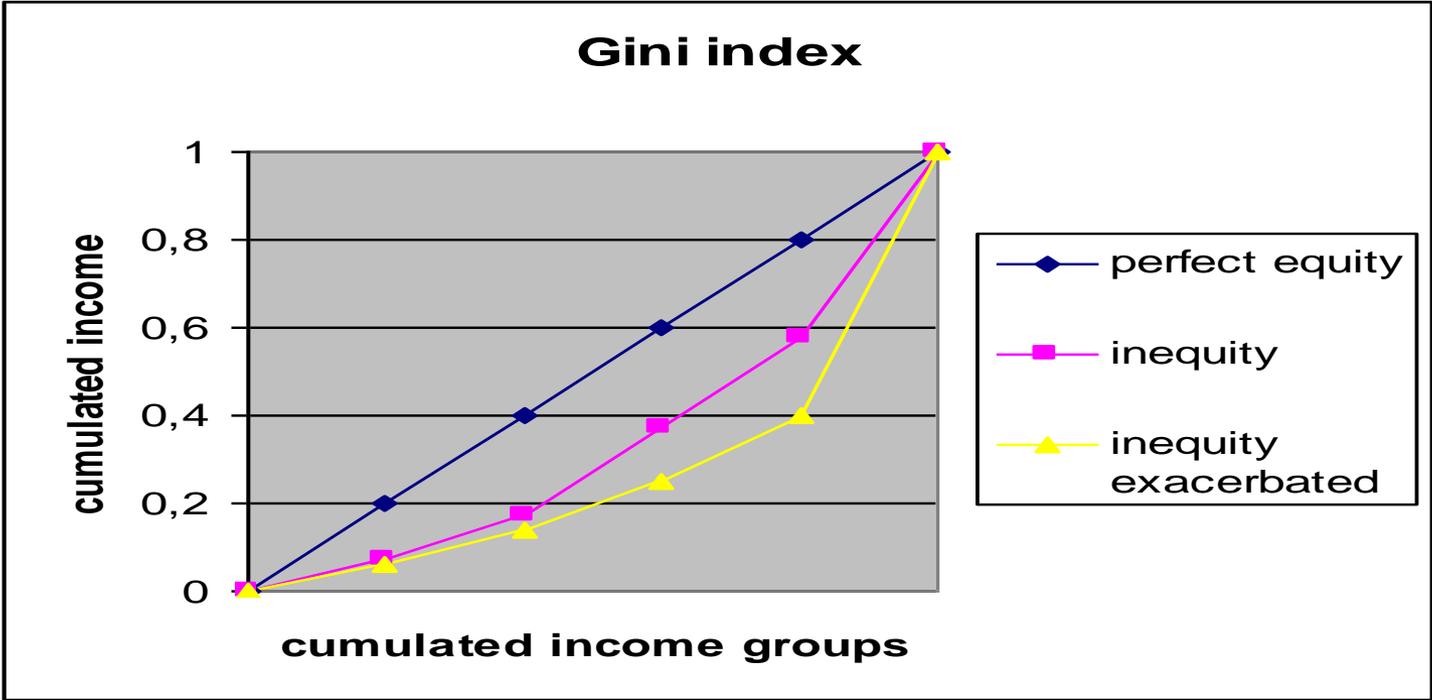
Gini Index illustrating inequality in different distributions
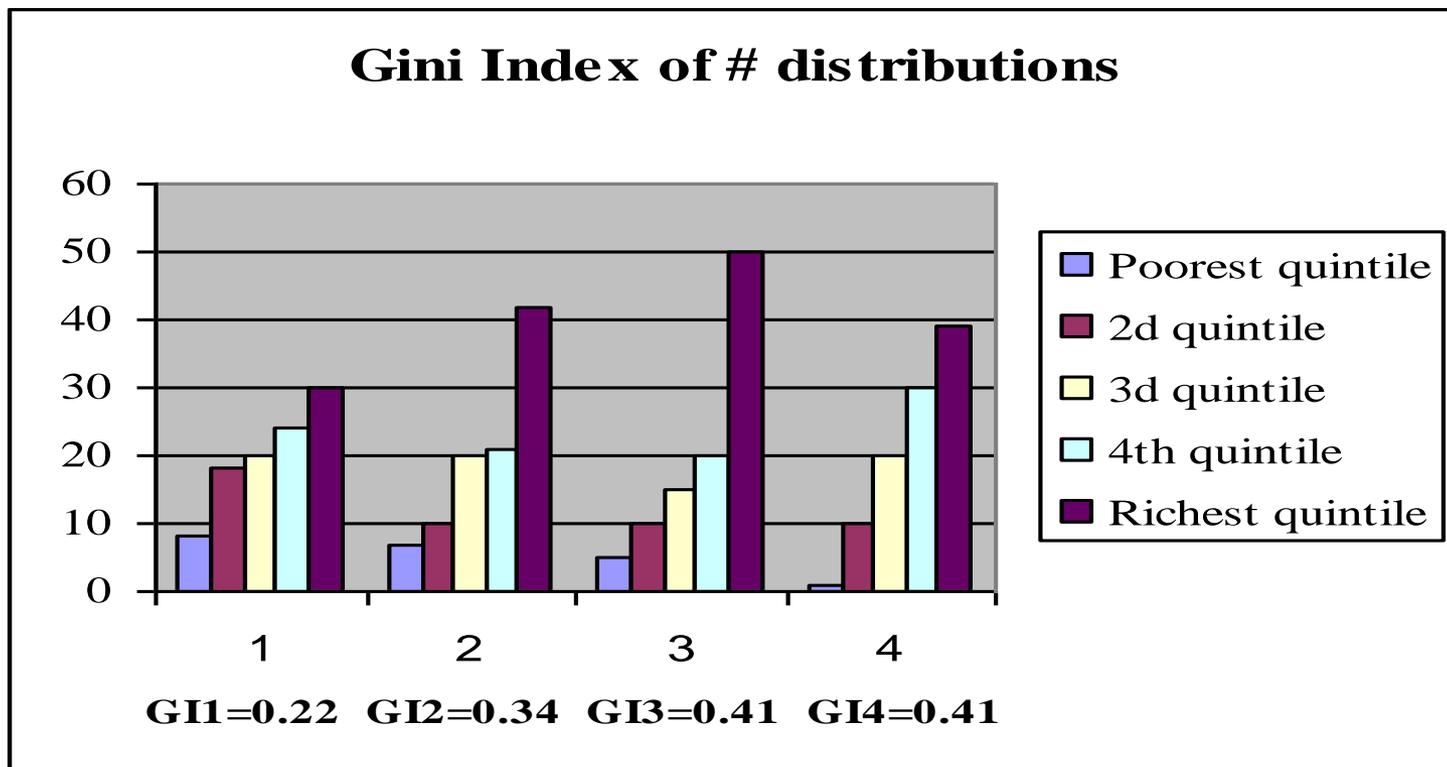
Ratio Richest / Poorest
Income/consumption in North Africa(UNDP,2009)
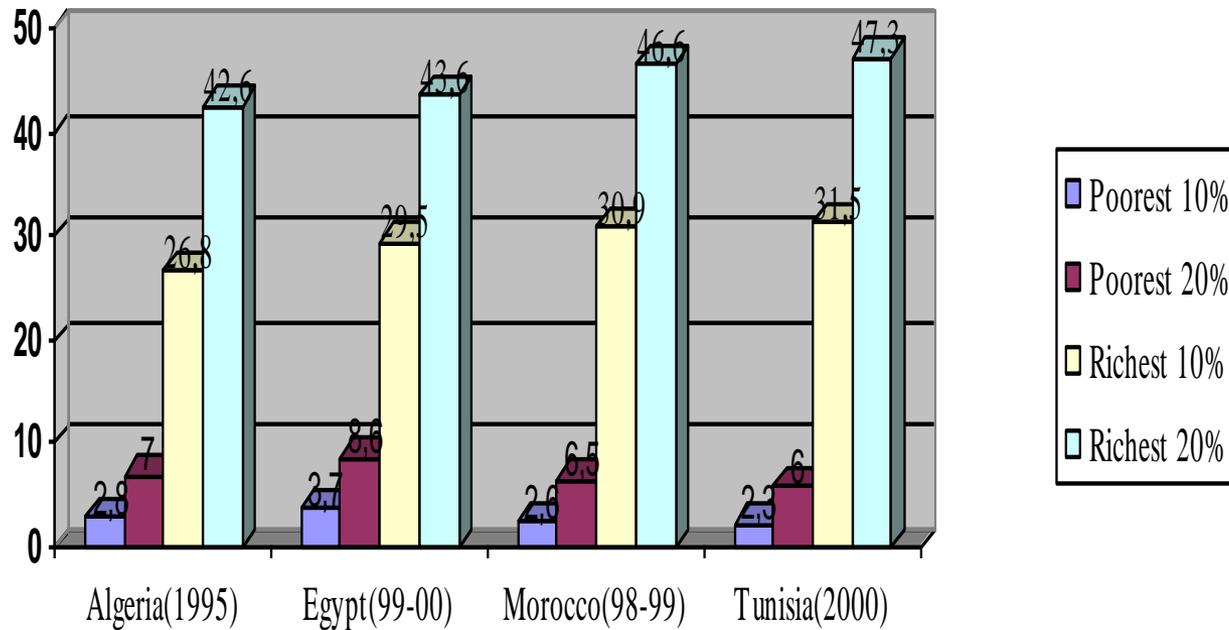
Trends in Gini Index for 13 Arab countries

Algeria	35.3 (1995)	
Comoros		64.3 (2004)
Egypt	30.1 (1995)	32.1 (2004)
Jordan	36.4 (1997)	37.7 (2006)
Kuwait	34.7 (1987)	36.0 (1999)
Lebanon		36.0 (2004)
Mauritania	37.3 (1995)	39.0 (2000)
Morocco	39.5 (1998)	40.9 (2007)
Oman		39.9 (2000)
Syria	33.7 (1997)	37.4 (2004)
Tunisia	41.7 (1995)	37.7 (2005)
UAE		38.3 (2007)
Yemen	33.4 (1998)	37.7 (2005)

3.1 Description and illustration of disparities, discrepancies and inequalities

In many cases, health strategies have significantly improved health indicators globally (in average) but disparities urban-rural, discrepancies between regions and inequalities among socioeconomic groups of the same Arab country have persisted or even increased. Illustration is given by a multitude of examples: 1) Between provinces; 2) Rural-Urban; 3)By wealth quintile; 4) Milieu of residence + Education + wealth

Percentage of deliveries without medical assistance Tunisia (PAPCHILD 1994, PAPFAM 2001 and MICS3 2006)
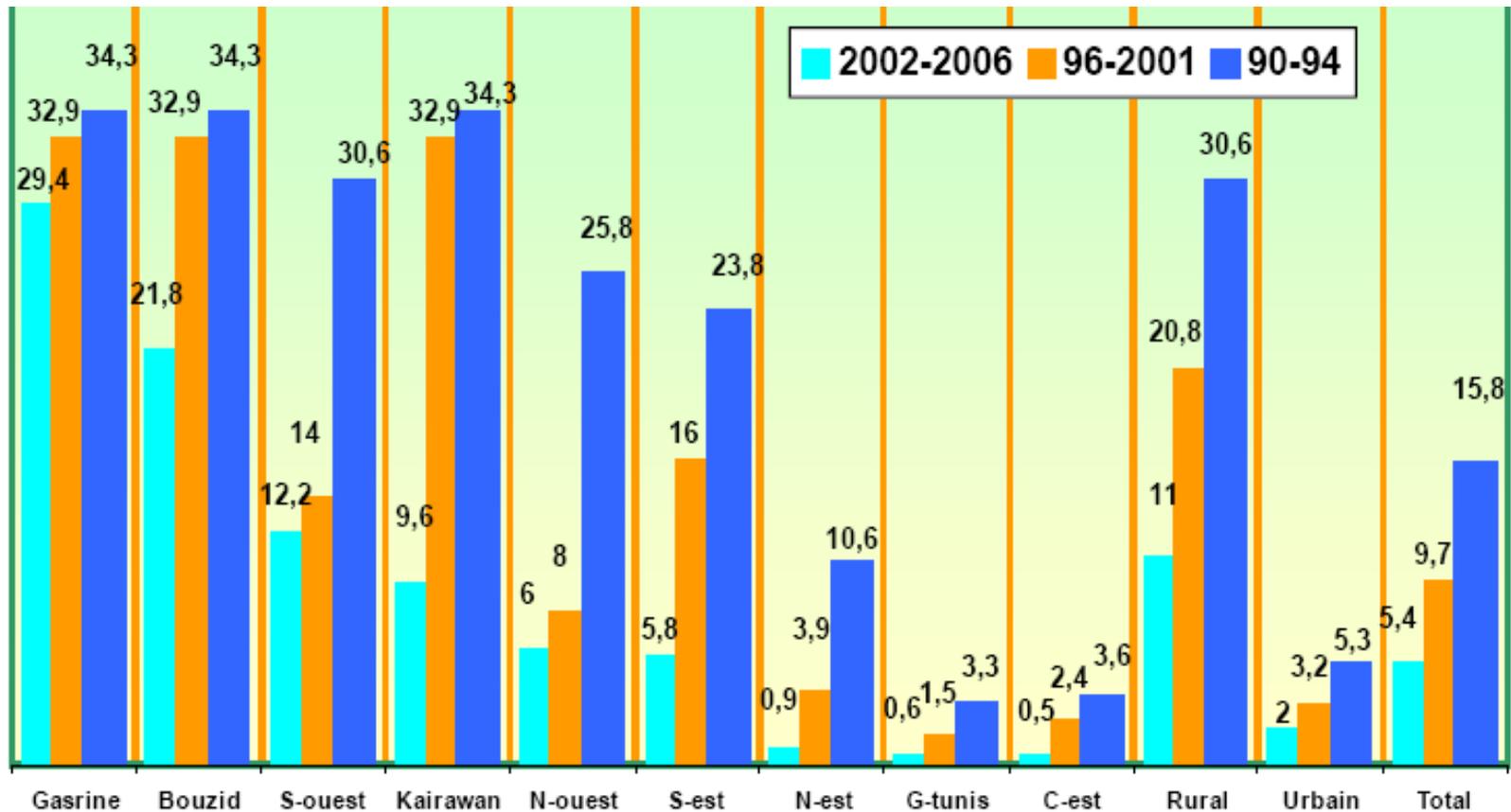
IMR and U5MR in Soudan(MICS2, 2000)

Figure 2: Estimates of infant and under five mortality based on direct estimation by state, Sudan, 1999.
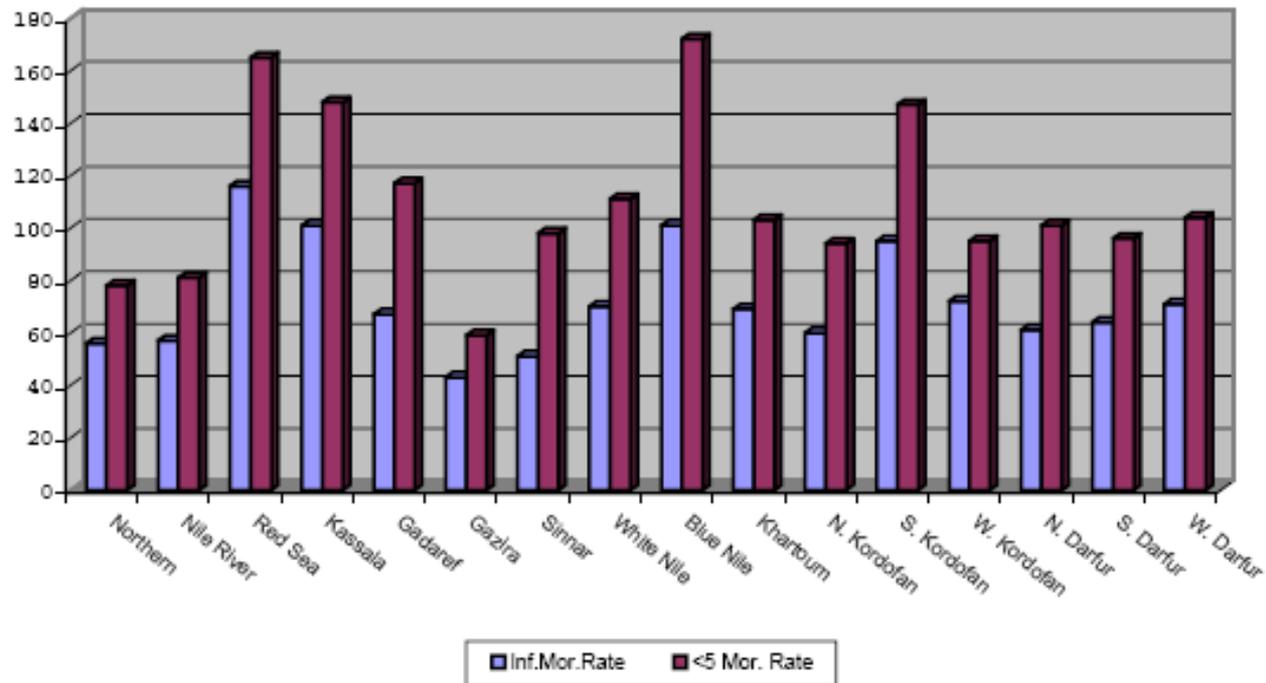
HDI in Moroccan regions (UNDP, 2003)

Left chart — Niveau de l'IDH en 1998/99:

- Guelmim-Es-Semara
- Meknès-Tafilalet
- Grand Casablanca
- Chaouia-Ouardigha
- Oriental
- Souss-Massa-Drâa
- Rabat-Salé-Zemmour-Zaër
- Tadla-Azilal
- Doukala-Abda
- Tanger-Tétouan
- Gharb-Chrarda-Béni Hssen
- Taza-Al Hoceïma-Taounate
- Marrakech-Tensift-Al Haouz
- Fès-Boulemane

X-axis: 0,4   0,45   0,5   0,55   0,6

Right chart — Number of inhabitants per physician

- Y-axis (Number): 0, 500, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000
- 4587
- 836
- Legend: Inhabitants per physician
- X-axis: 16 regions of Morocco (1, 3, 5, 7, 9, 11, 13, 15)

# Under five Mortality in Egypt (DHS 2008)

Figure 10.2 Under-Five Mortality by Place of Residence
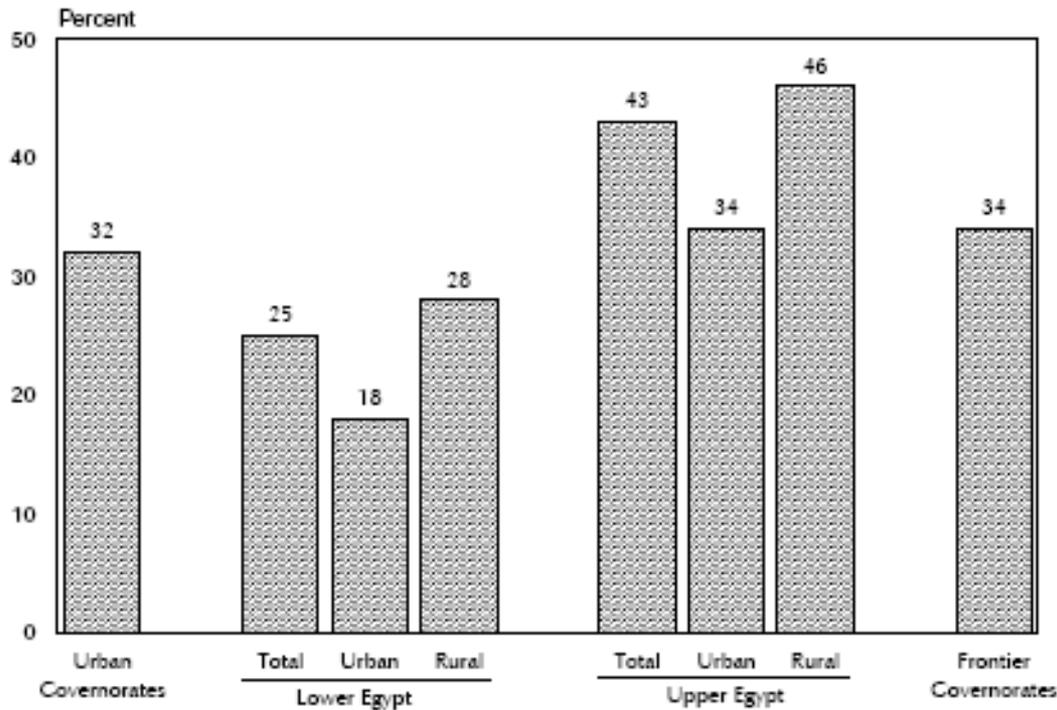
EDHS 2008

# Under five Mortality in Lebanon (MICS2 2001)

Delivery in Public and private health facilities in Jordan (MICS3 2007)
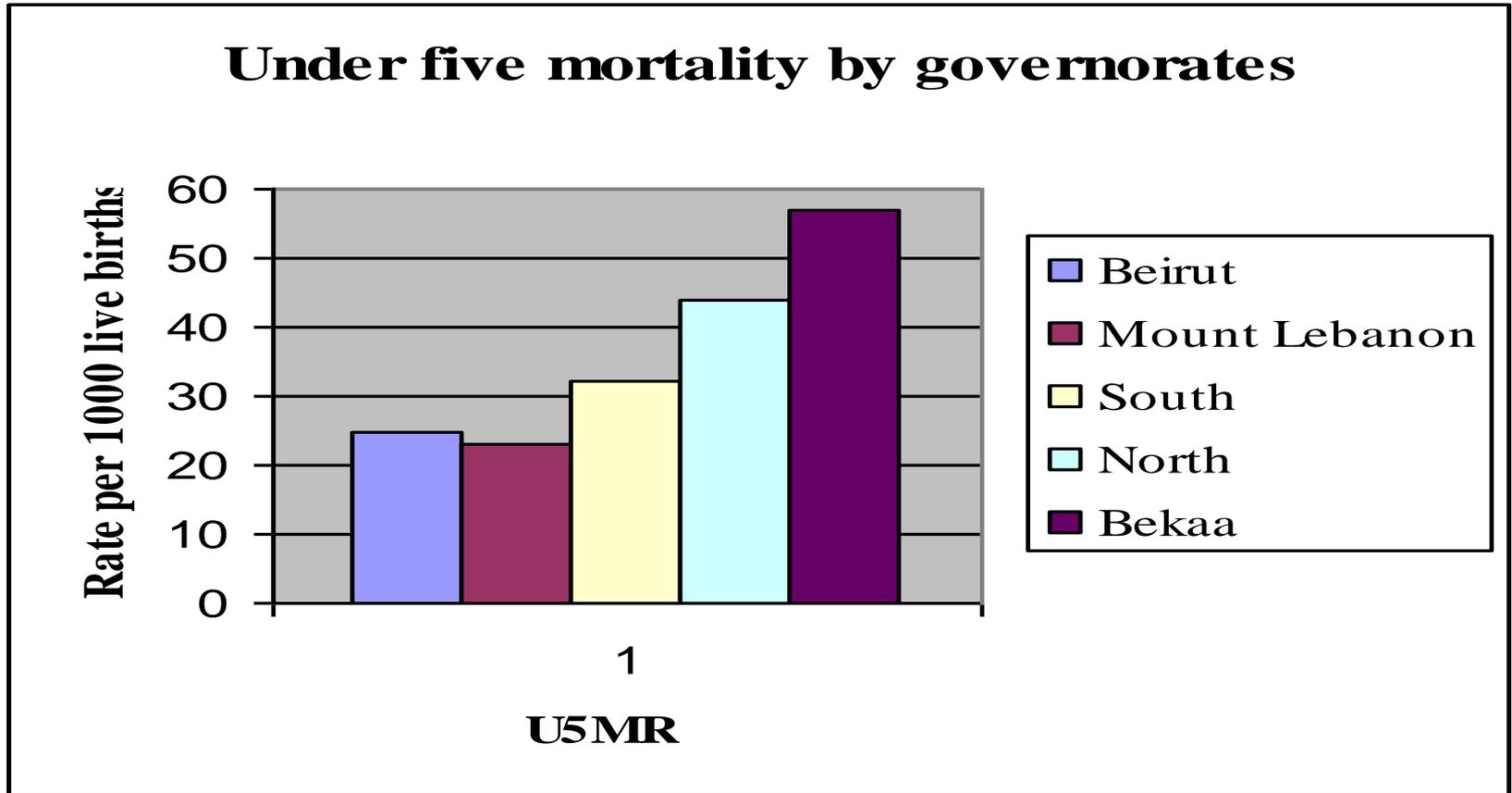
Delivery in health facilities in Jordan, 2007
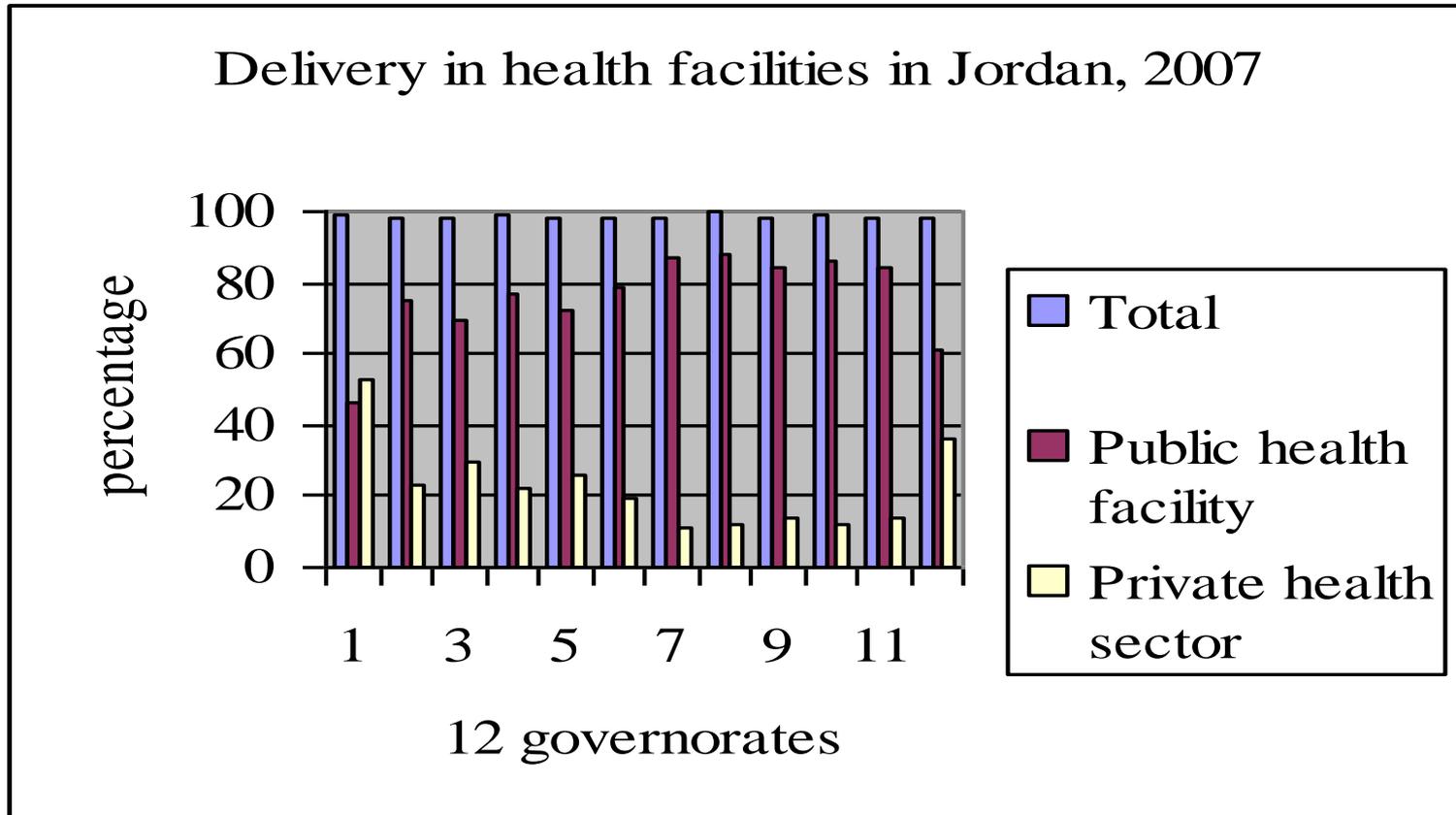
# Assisted delivery in Yemen (MICS3 2006)

Differences in access to health care, Yemen (MICS3, 2006)
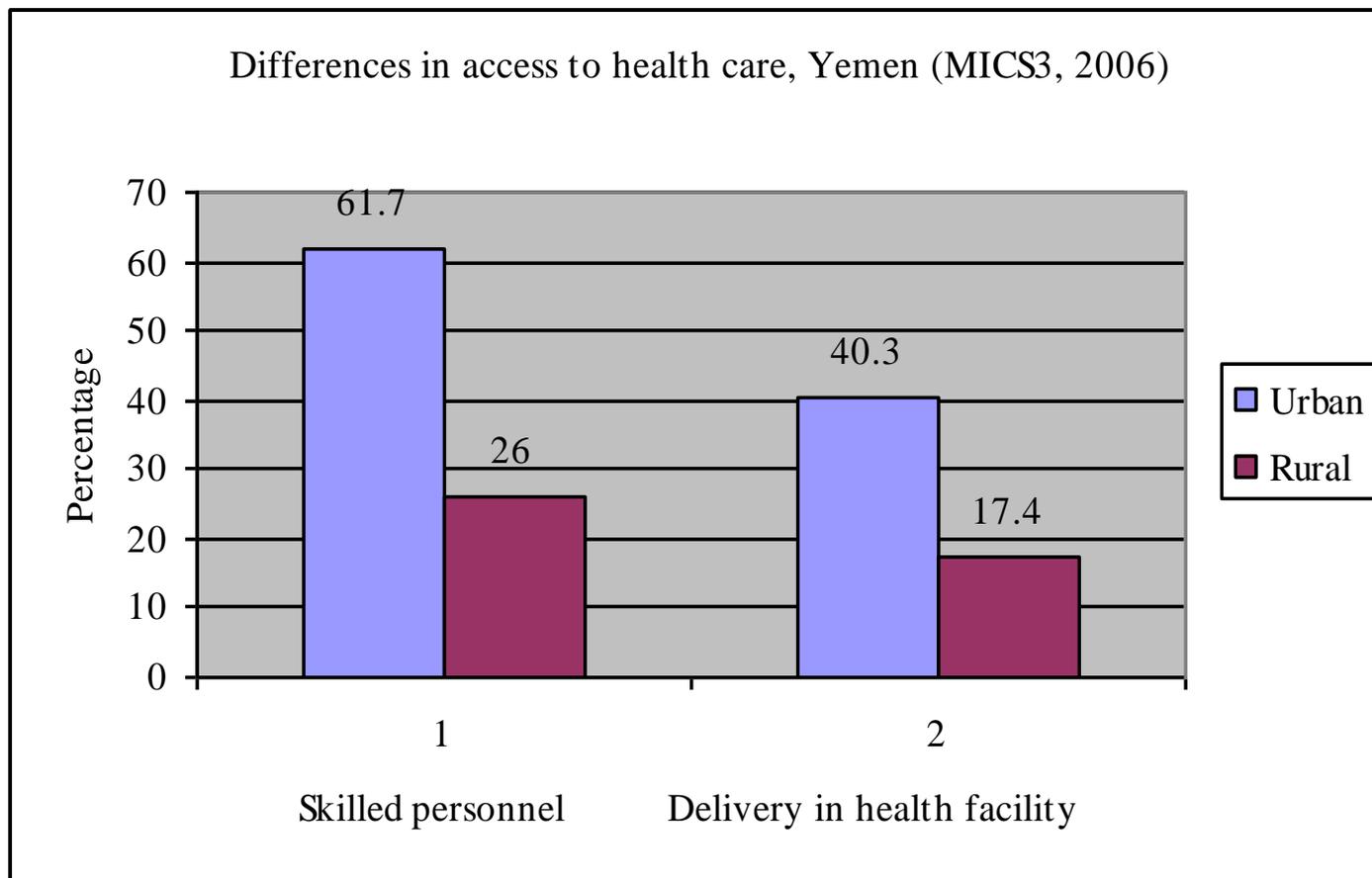
Antenatal and delivery in Morocco (DHS 2003-04)

# Assisted delivery in Djibouti (MICS3,2006)
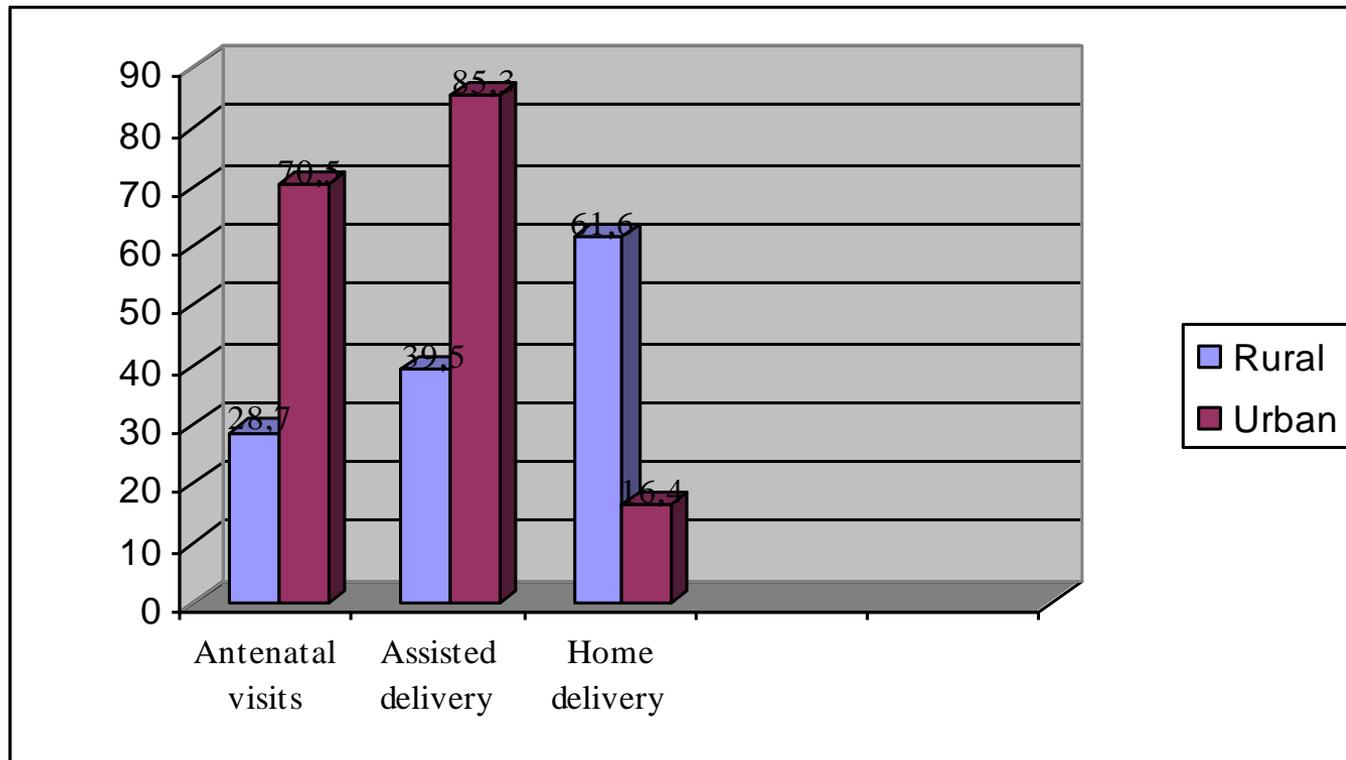
Delivery in Djibouti (MICS3,2006)
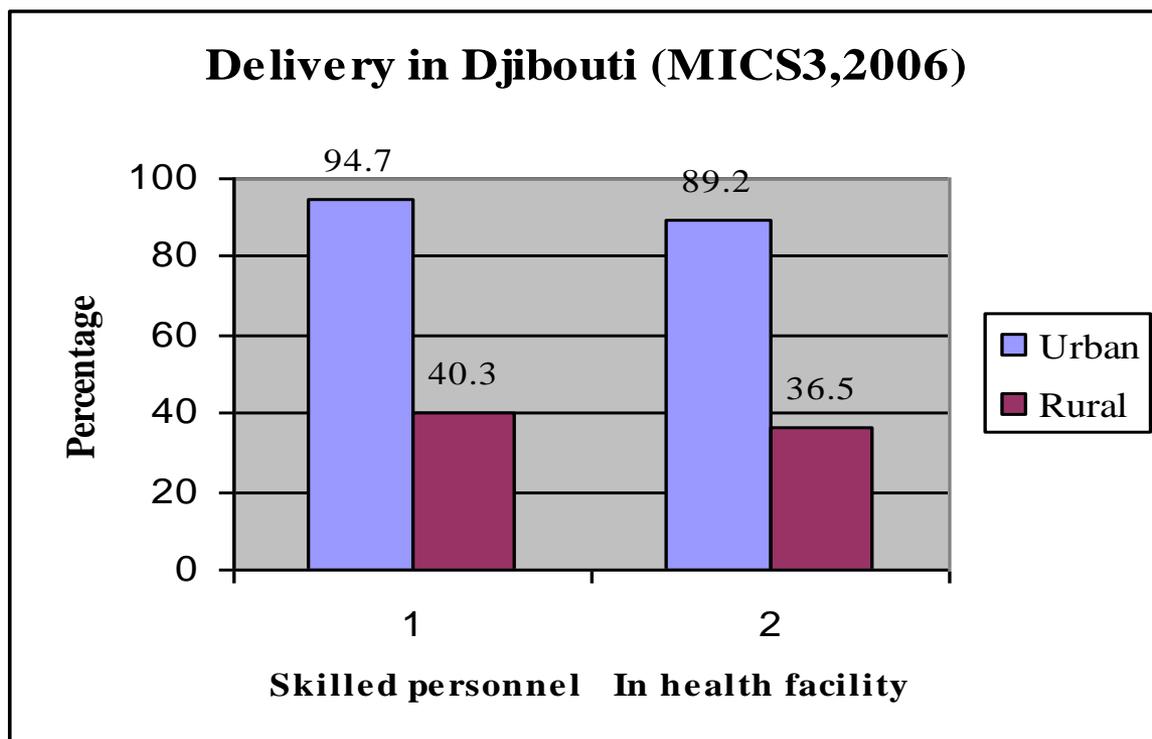
Assistance during delivery, Syria (MICS3, 2006)

Delivery in public and private health facilities in Jordan (MICS3, 2007)
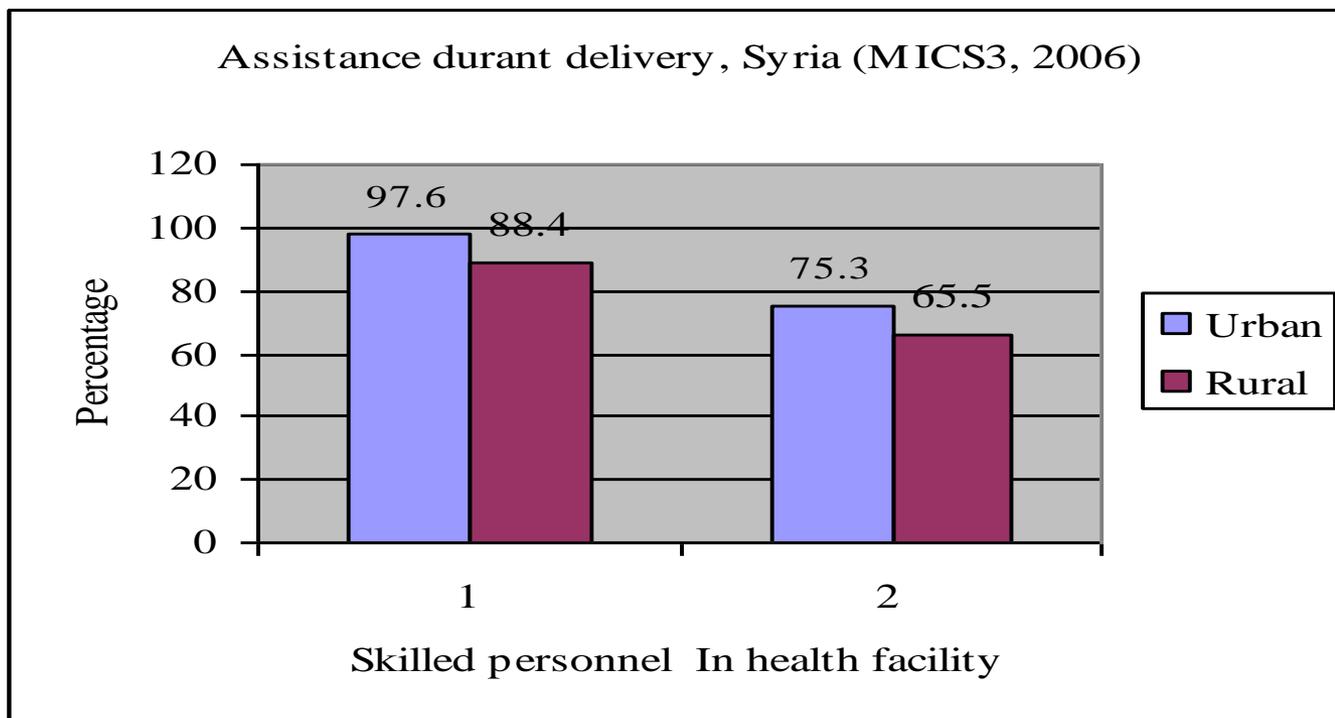
Delivery in health facilities in Jordan, 2007
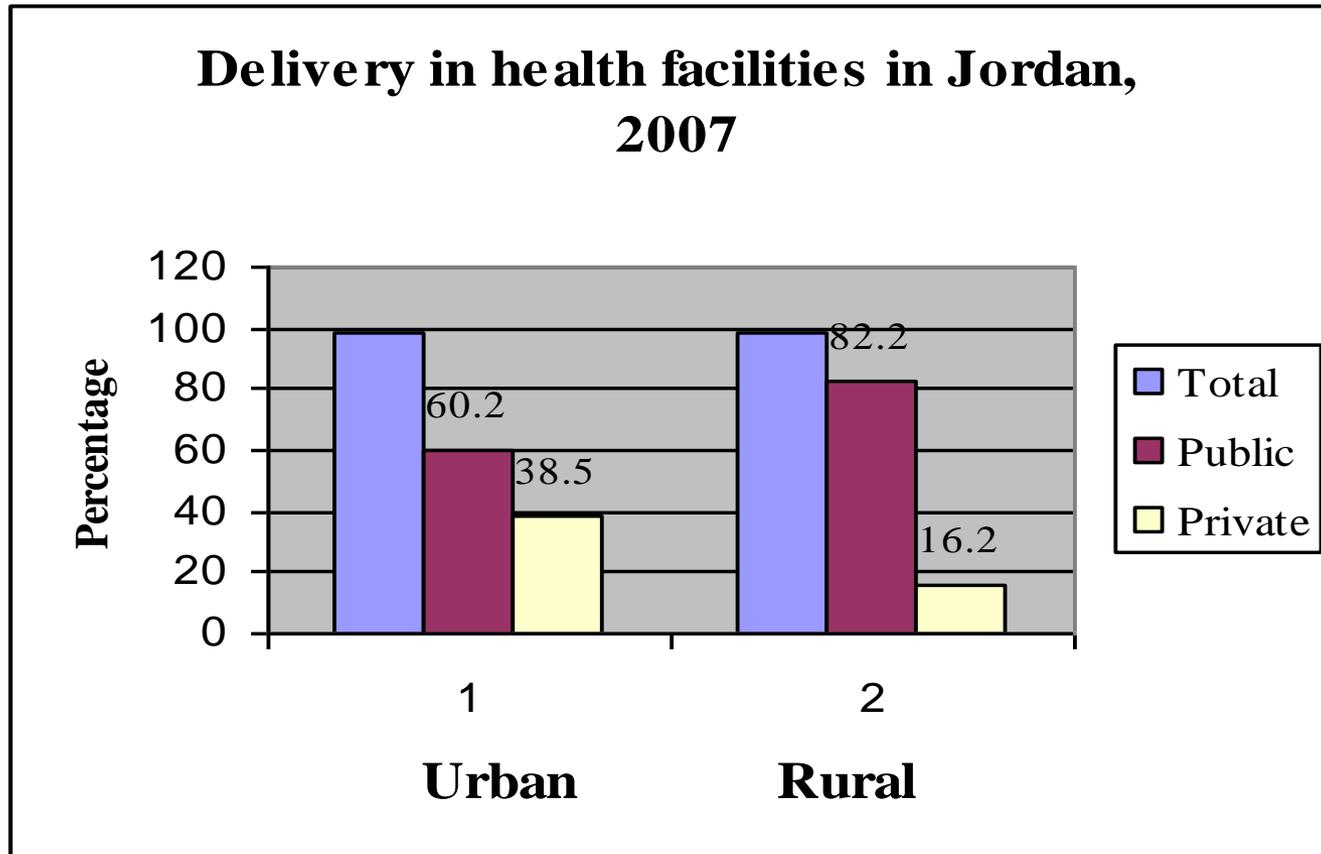
Child health indicators in Egypt(DHS2003)
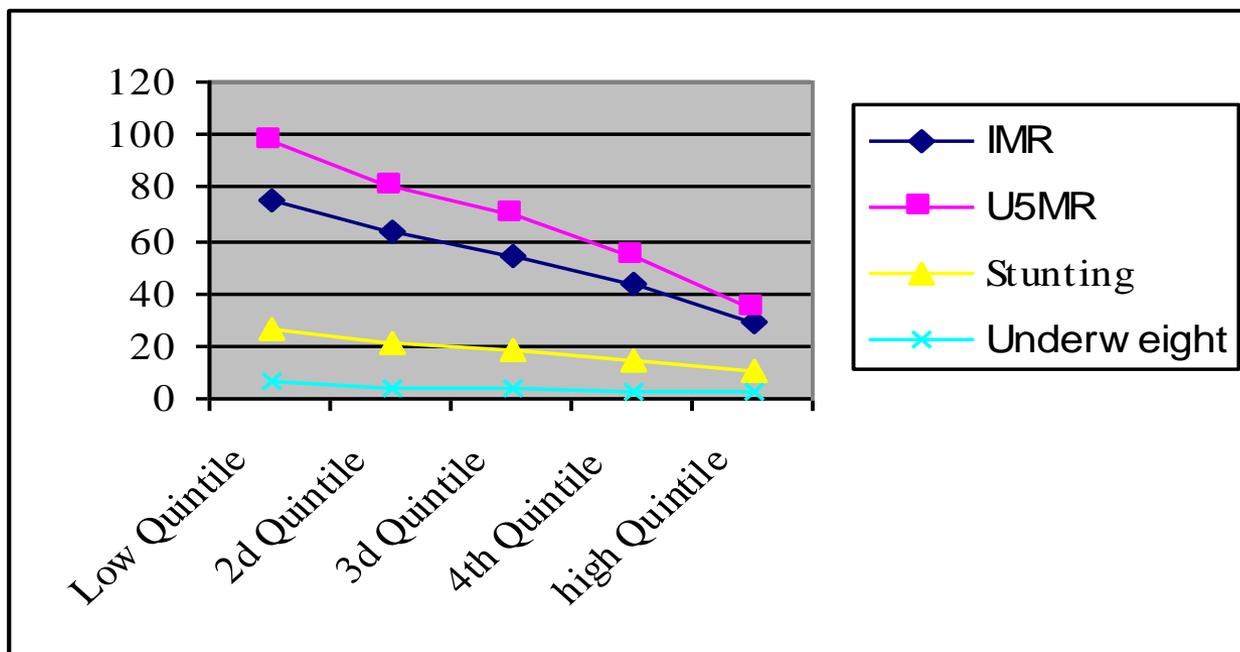
Births attended by skilled personnel in Arab countries: poorest quintile vs richest quintile
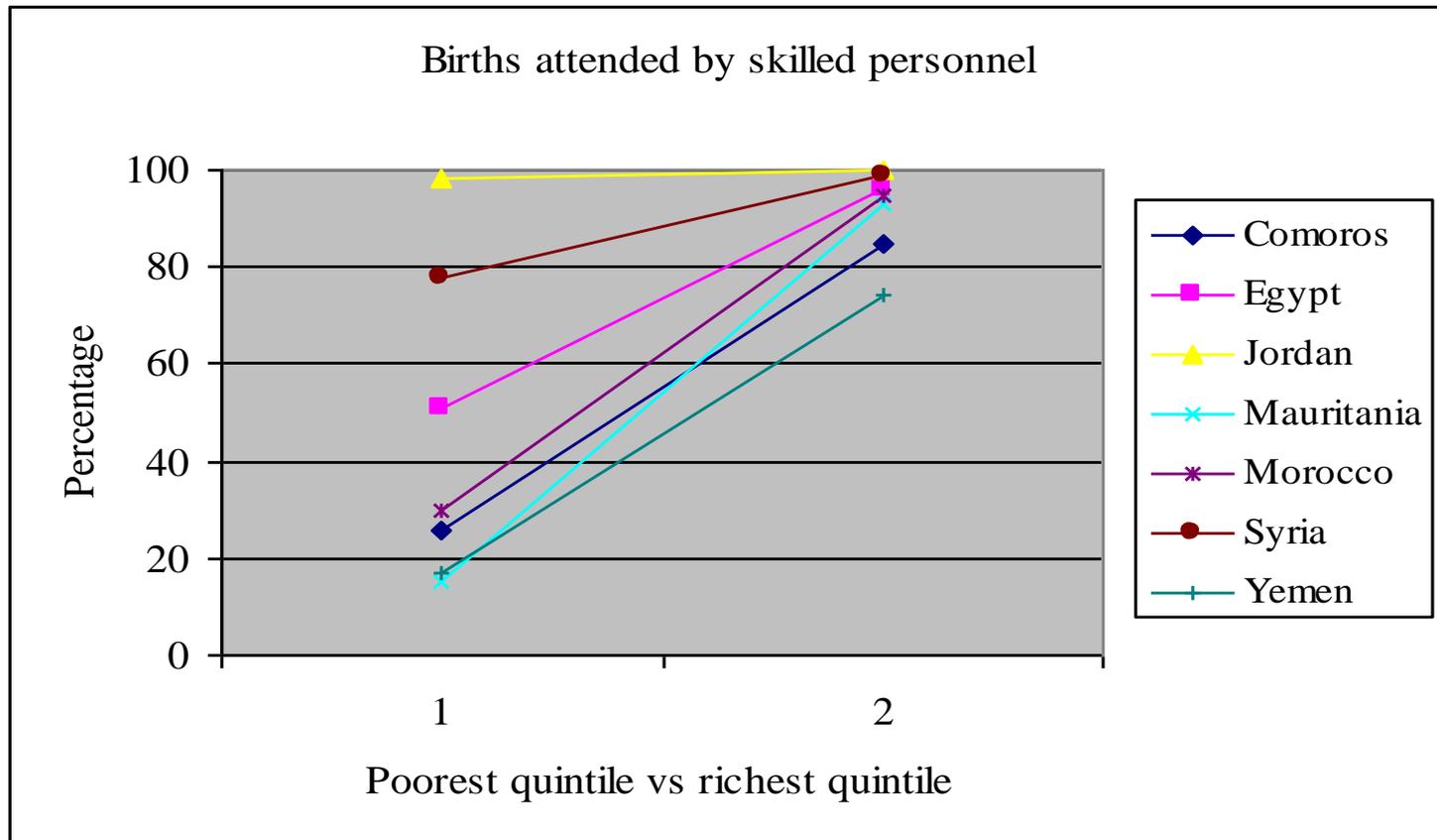
Delivery in public and private health facility by wealth quintile in Jordan (MICS3, 2007)

Delivery in health facility by wealth quintile in Jordan, 2007
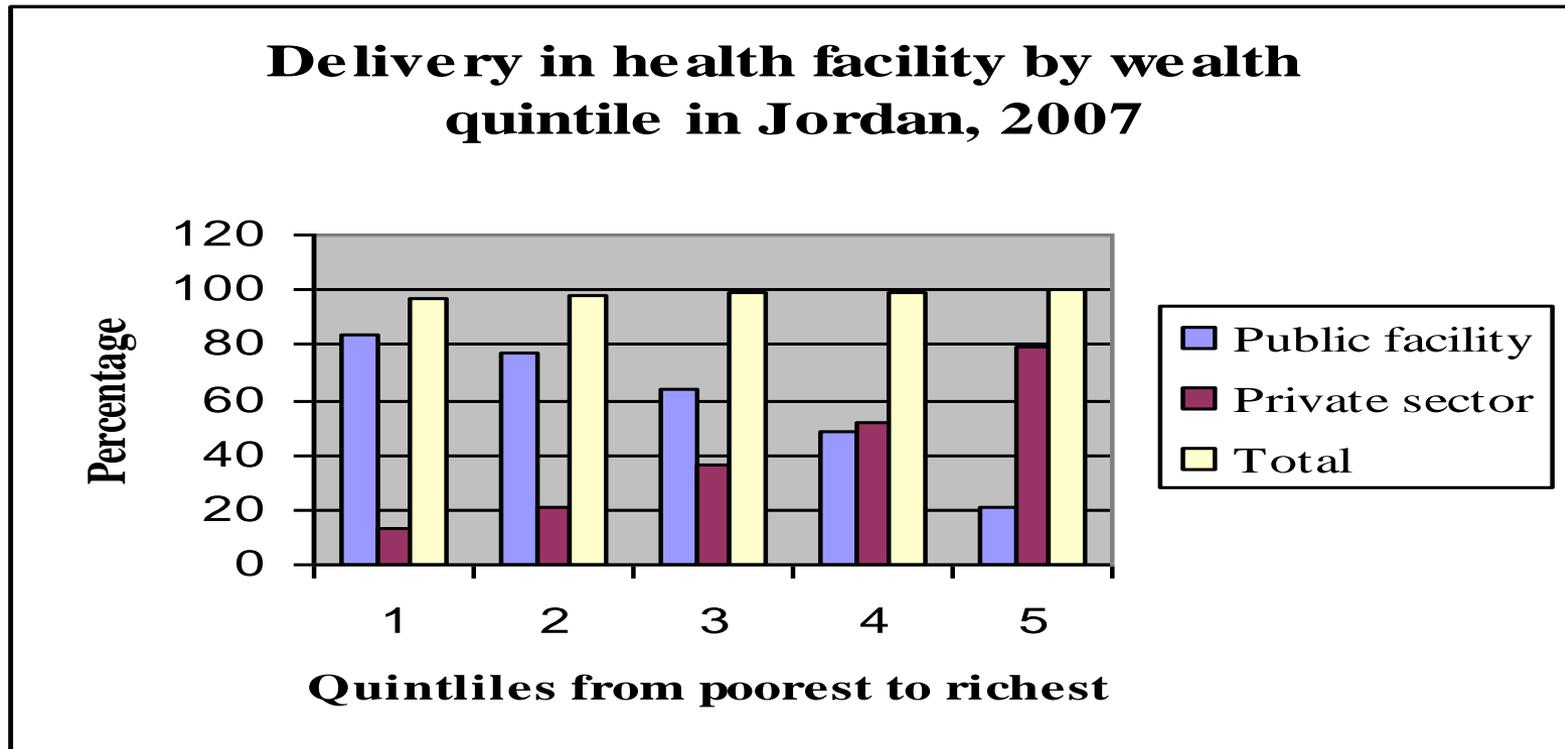
Infant Mortality in Mauritania (MICS3 2007)

Graphique CM.1 Taux de mortalité infantile , Mauritanie,2007
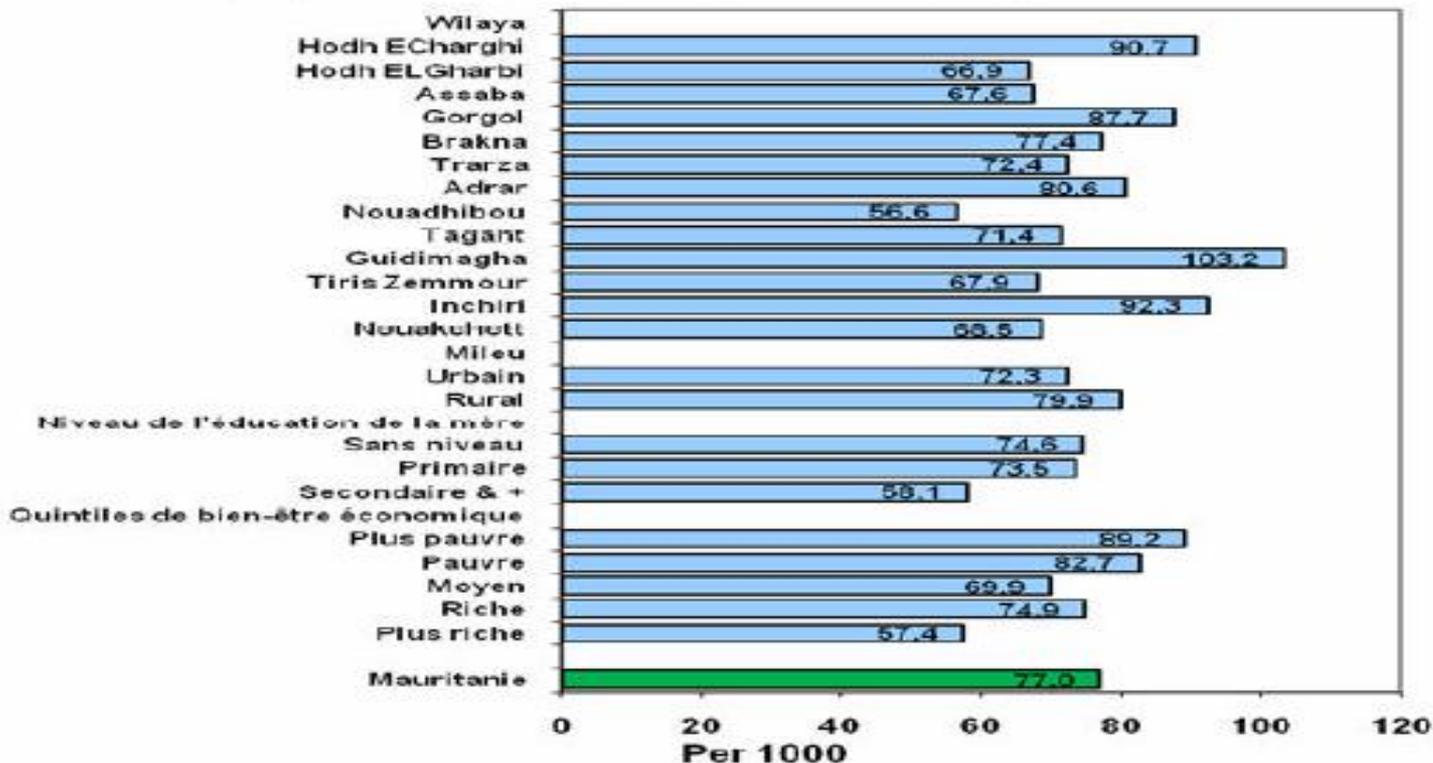
Under five Mortality in Syria(MICS3, 2006)

Figure CM.1 Under-five Mortality Rates by Background Characteristics in the Syrian Arab Republic, 2006.
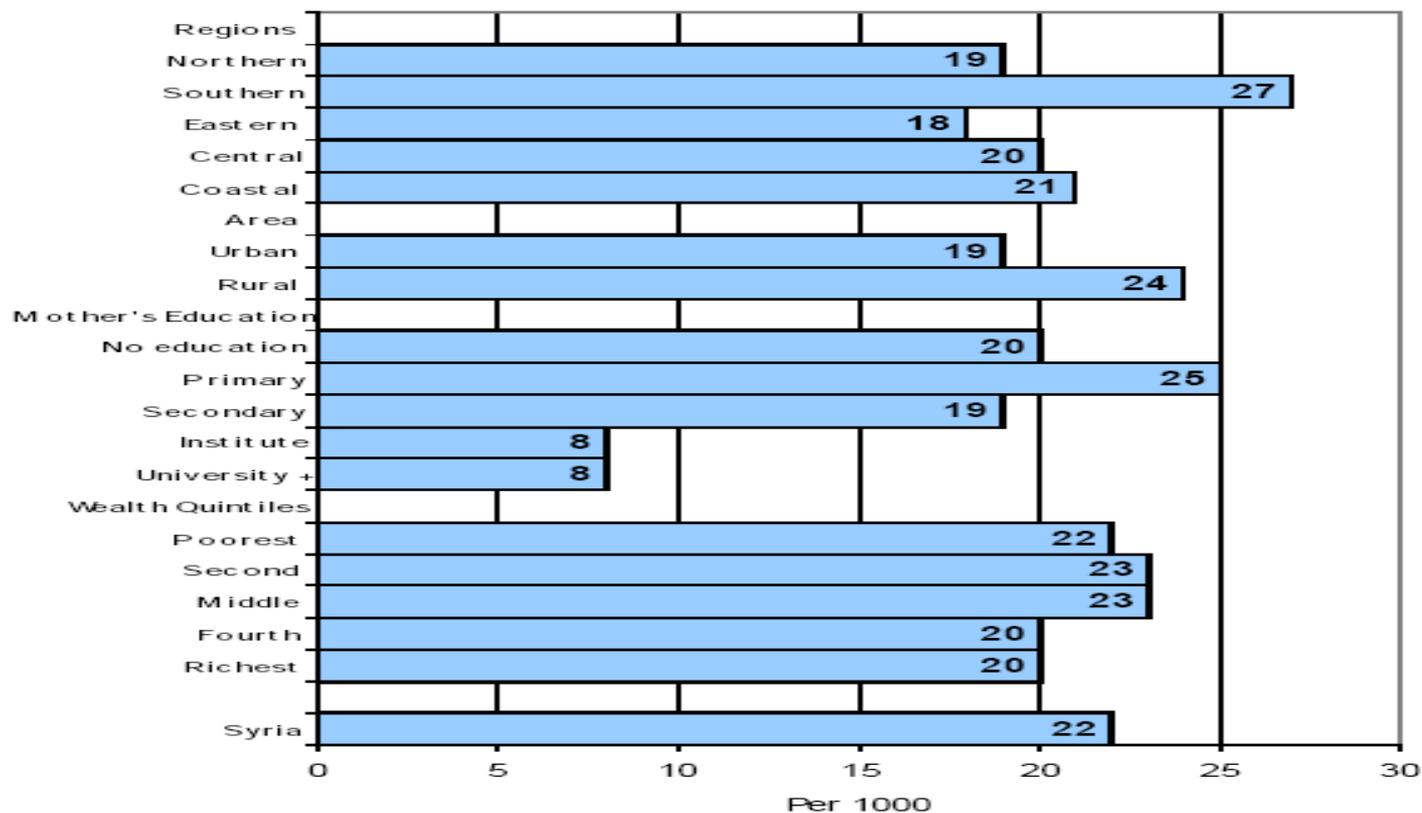
3.2 Equity analysis

Except for Syria and Jordan, inequity was apparently illustrated by all the other examples considered. This conclusion can be checked by

equity analysis, going beyond description and using different tools.

Inequity in Egypt

Analyzing Egyptian data provided over a ten-year period by the Demographic Health Surveys (EDHS1995, EDHS2000 and EDHS2005), Khadr (2009) has shown that, although, almost all maternal health indicators have globally improved, improvements were not equally enjoyed by all population groups. For instance, considering the percentages of prenatal care, skilled birth attendant and delivery at home, the study showed persistence of inequities among women of different levels of wealth and education as indicated by the concentration index in Table1 below

Table 1: Disparities in delivery, Egypt (1995-2005) (Khadr, IJEqH 2009)

	Years			
	1995	2000	2005	•
Indicator •				
Any prenatal care	42.40	54.10	71.40	•
CI by Education	0.41	0.39	0.41	•
CI by Wealth index	0.50	0.37	0.45	•
Skilled birth attendant	41.70	55.80	70.50	•
CI by Education	0.41	0.38	0.37	•
CI by Wealth index	0.55	0.42	0.47	•
Delivery at home	64.50	49.10	33.60	•
CI by Education	-0.42	-0.37	-0.35	•
CI by Wealth index	-0.53	-0.41	-0.47	•

Health equity in Tunisia (PAPCHILD 1994, PAPFAM 2001, MICS2-2002 and MICS3-2006)

According to data provided in Tunisia by four surveys spanning more than a decade period, health indicators related to women and children have improved substantially in global terms. However, large gaps remain essentially according to wealth's group and milieu of residence (rural-urban and between governorates).

This result was particularly confirmed by a logistic regression model in MICS2, showing that antenatal care, postnatal care, births assisted and health facilities use, vaccination, child malnutrition all exhibit significant correlation with milieu and mother's education level.

Inequity in Tunisia
Percentage of deliveries without medical assistance
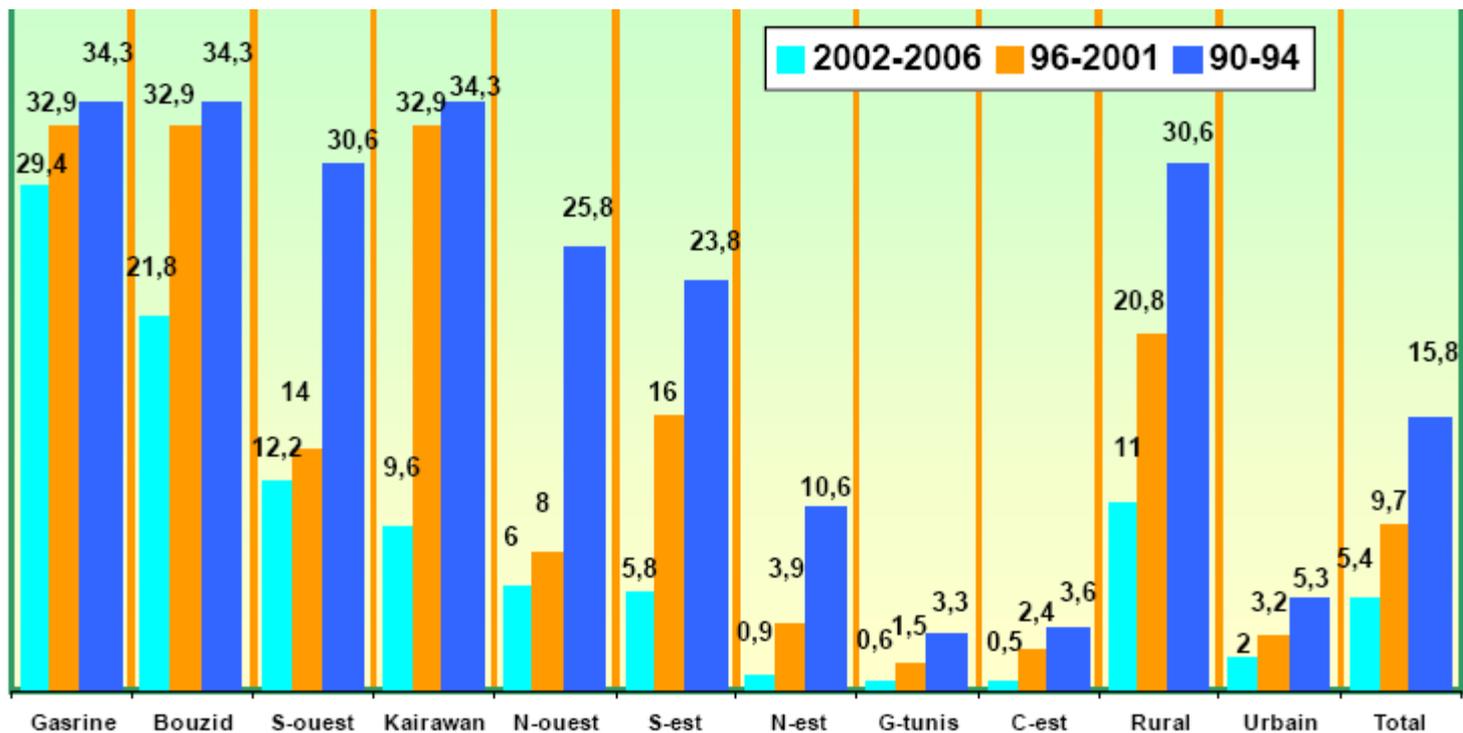
National improvement, Rural-Urban persistent, Provincial inequity increasing

	1994	2001	2006
Rural	30.6	20.8	11
Urban	5.3	3.2	2
Ratio R/U	5.8	6.5	5.5
Gasrine	34.3	32.5	29.4
G-Tunis	3.3	1.5	0.6
Ratio	10.5	22	49
National	15.8	9.7	5.4
trend		decrease	decrease
		1.6	1.8

Health equity in Lebanon: a microeconomic analysis
N. Salti, J. Chaaban and F. Raad(IJEqH, 2010)

- Analysis of the effect of insurance, out of pocket expenditures and the share of spending on health, indicated the vulnerability of the lowest quintile of expenditures per adult equivalent. The uninsured spend both less money on health and a larger proportion of their expenditures on health.

  The authors have also used descriptive methods and logistic regression for comparison between provinces.

"*Fifty years of human development in Morocco and perspectives 2025*" (Morocco, 2006)
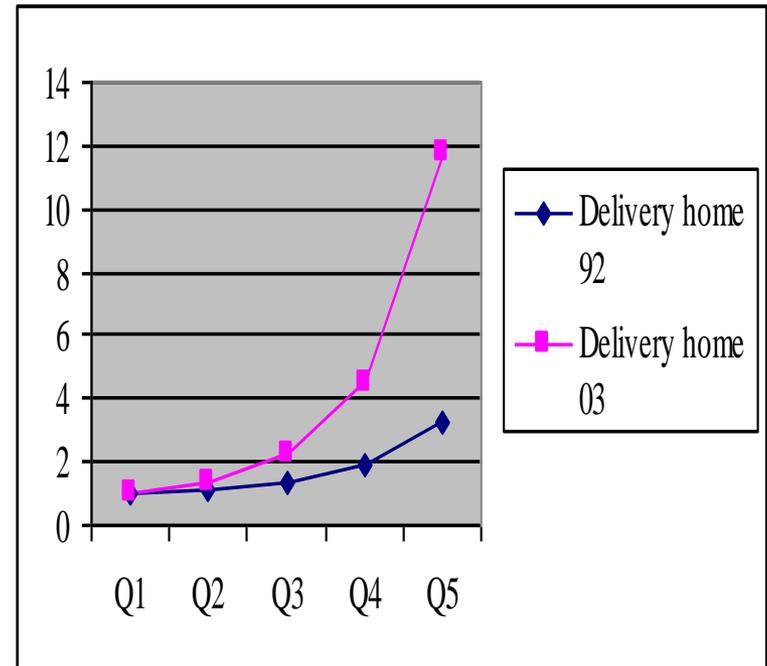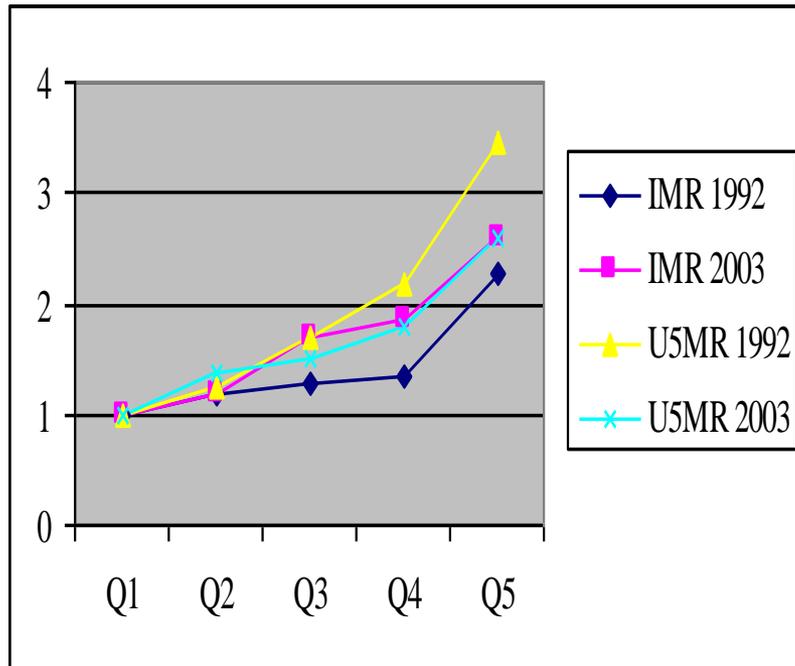
Important achievements in average but inequity is still there (Boutayeb, 2009)

The percentage of deliveries at home has been reduced from 71·6% in 1992 to 38·5% in 2003. On average, the country has achieved important progress by nearly halving the percentage of women giving birth at home. However, the ratio between poorest and richest quintiles has increased from 3·3 to 11·8 in a decade or so.

About 95% of richest women are using public and private centres for delivery whereas 70% of the poorest women are still delivering at home.

A poor child is threefold likely to die before his or her fifth birthday than a rich child. Moreover, the ratio gap has increased from 2·85 in 1992 to 2·98 in 2003

Necessity of a deeper analysis of equity in Jordan

Data from MICS3 in Jordan shows a high association between mother's level of education and the place of birth and also a high negative correlation between household wealth and delivery in the public health sector

	Public health facility	Private health sector	Delivery at Home
Mother's education			
No education	**84.9**	**8.6**	**6.3**
Elementary	83.3	12.8	3.8
Preparatory	76.2	22.0	1.8
Secondary	64.8	33.9	1.1
Higher	**50.6**	**49.0**	**0.3**
Wealth quintile			
Lowest	**83.9**	**13.2**	**2.7**
Second	77.0	21.3	1.6
Third	63.4	36.0	0.5
Fourth	47.9	51.7	0.4
Higher	**20.7**	**79.2**	**0.1**

4. Education, health equity, and poverty trap

In almost all Arab countries, the efforts devoted to enroll the maximum of children at age 6 are not accompanied during the whole education cycle. Consequently, many countries have high rates of dropping out at different levels and obviously, the children living in disadvantaged households are more likely to leave school prematurely than their counterparts from advantaged households (poverty, work, proximity, parents education....)

In morocco, the educative system efficiency is very low (57.5 for primary school and 35.4 for secondary level). The lost is due to high levels of dropping out and failure. Analysis of data in the poorest 404 rural districts identified by the National Initiative for Human Development (NIDH) revealed that socioeconomic conditions and proximity of school are the main factors explaining dropping out (Conseil Superieur de l Enseignement, 2008)

In Egypt 1/5 of children live in poverty and 1 in 4 are deprived of one or more dimensions of welfare(education, health, shelter, food,etc...)

In Tunisia, a multivariate analysis of data from MICS3 showed that the proportion of children reaching the fifth level of primary school was principally correlated with milieu and children work.

According to data from MICS3, in Djibouti, the rate of secondary school attendance drops seriously to 13.4 for disadvantaged children compared to 62.4 for advantaged ones.

The poverty trap

Disadvantaged
Households

Less access to
Education-health

Early marriage
Low socioeconomic
Less influence
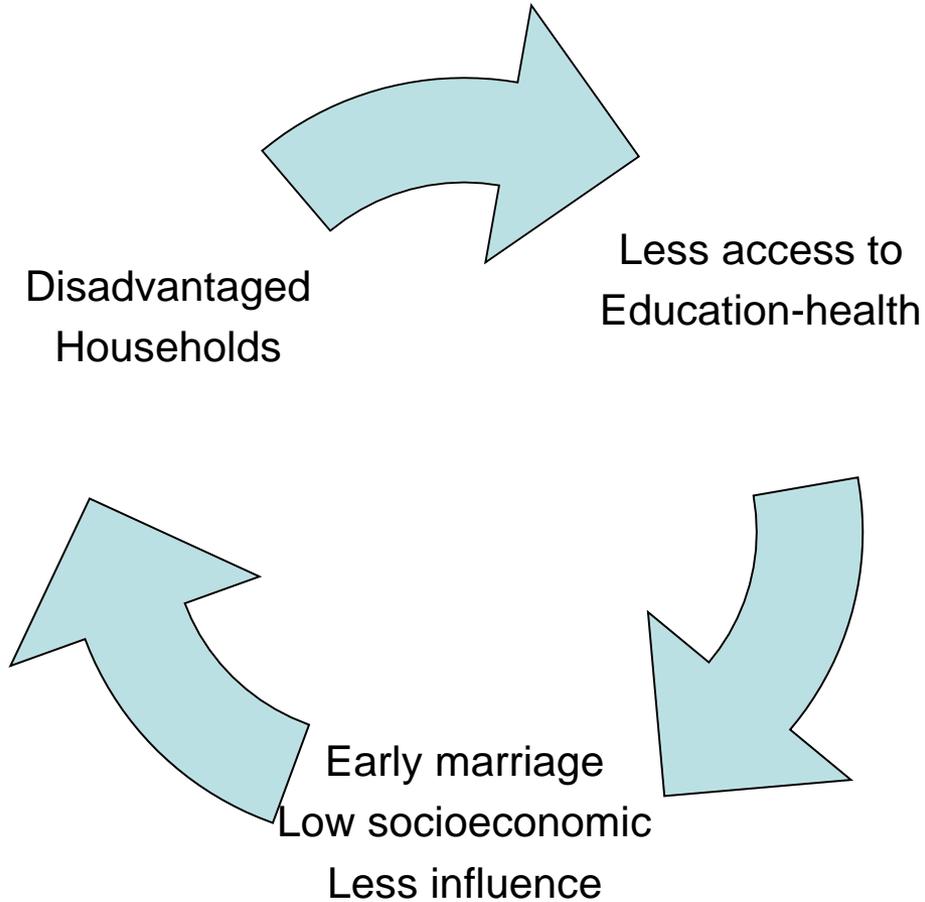
Poverty-health- education
(WHO Director-General, WHO report 2003)

While a baby girl born in Japan today can expect to live for about 85 years, a girl born at the same moment in Sierra Leone has a life expectancy of 36 years. The Japanese child will receive vaccinations, adequate nutrition and good schooling. If she becomes a mother she will benefit from high-quality maternity care. Growing older, she may eventually develop chronic diseases, but excellent treatment and rehabilitation services will be available; she can expect to receive, on average, medications worth about US$ 550 per year and much more if needed.

Meanwhile, the girl in Sierra Leone has little chance of receiving immunizations and high probability of being underweight throughout childhood. She will probably marry in adolescence and go on to give birth to six or more children without assistance of a trained birth attendant. One or more of her babies will die in infancy, and she herself will be at high risk of death in childbirth. If she falls ill, she can expect, on average, medicines worth about US$3 per year. If she survives middle age she, too, will develop chronic diseases but, without access to adequate treatment, she will die prematurely.

5. Conclusion

Health inequity remains a major problem in Arab countries.

Need to collect appropriate data for equity analysis

Need to go beyond average numbers :(HDI, MDG, IMR, MMR,GDP p.c, …)

Hope that Arab decision makers opt for equitable strategies

No development can be sustainable unless inequities, disparities and discrepancies are reduced.

Thank you for your attention