



The Impact of the Global Recession on the Health of the People in Asia

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Soonman KWON, Youn JUNG
(Seoul National University, South Korea)
and
Anwar Islam (Bangladesh), Lan Yao (China), Badri
Pande (Nepal)

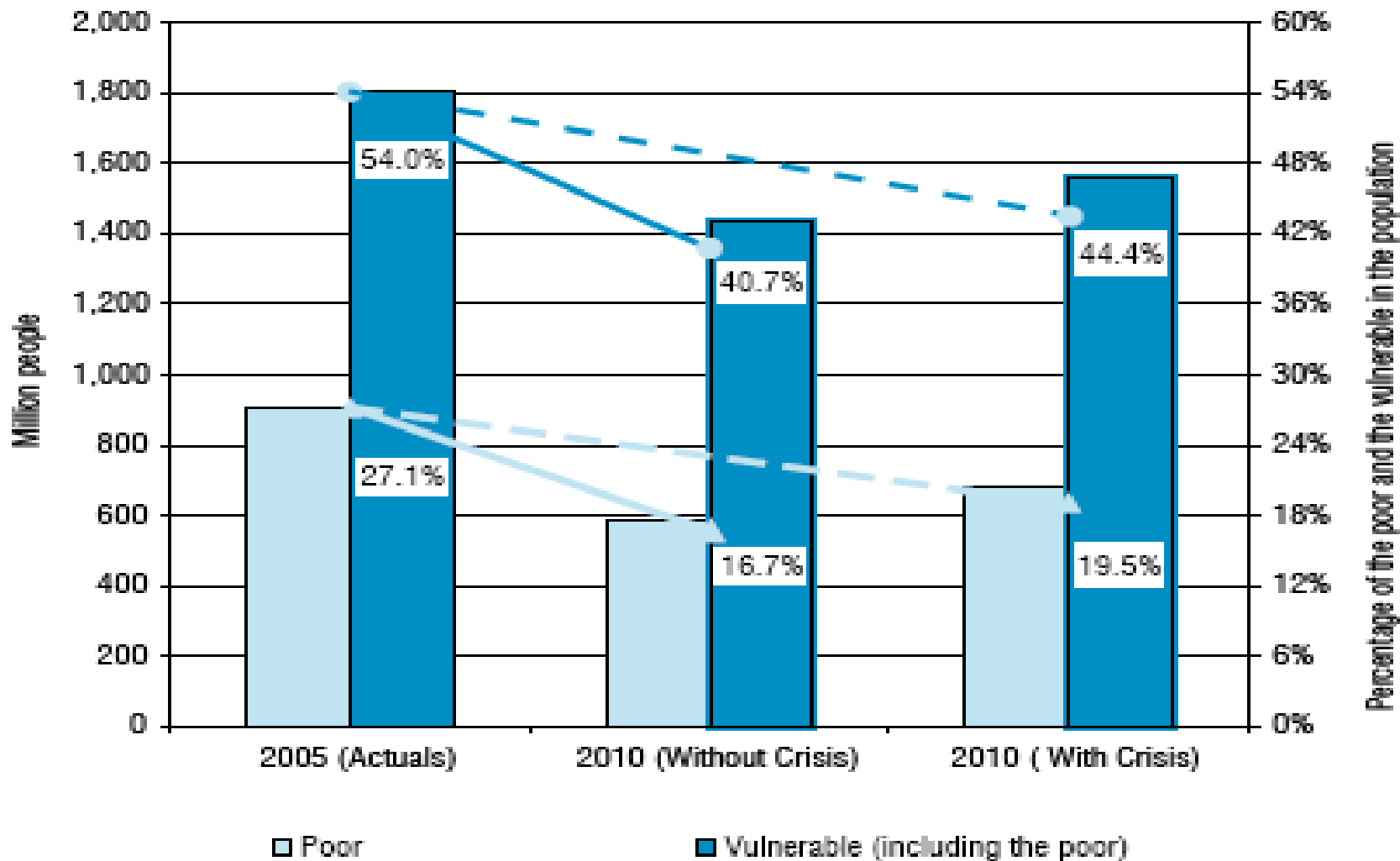
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ROAD MAP

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 1. Health Care Utilization and Expenditure
 2. Cost of Therapeutic Goods
 3. Public Expenditure on Health
 4. Health Behavior
 5. Health Outcomes: Mortality, Morbidity, Nutritional Status, Mental Health

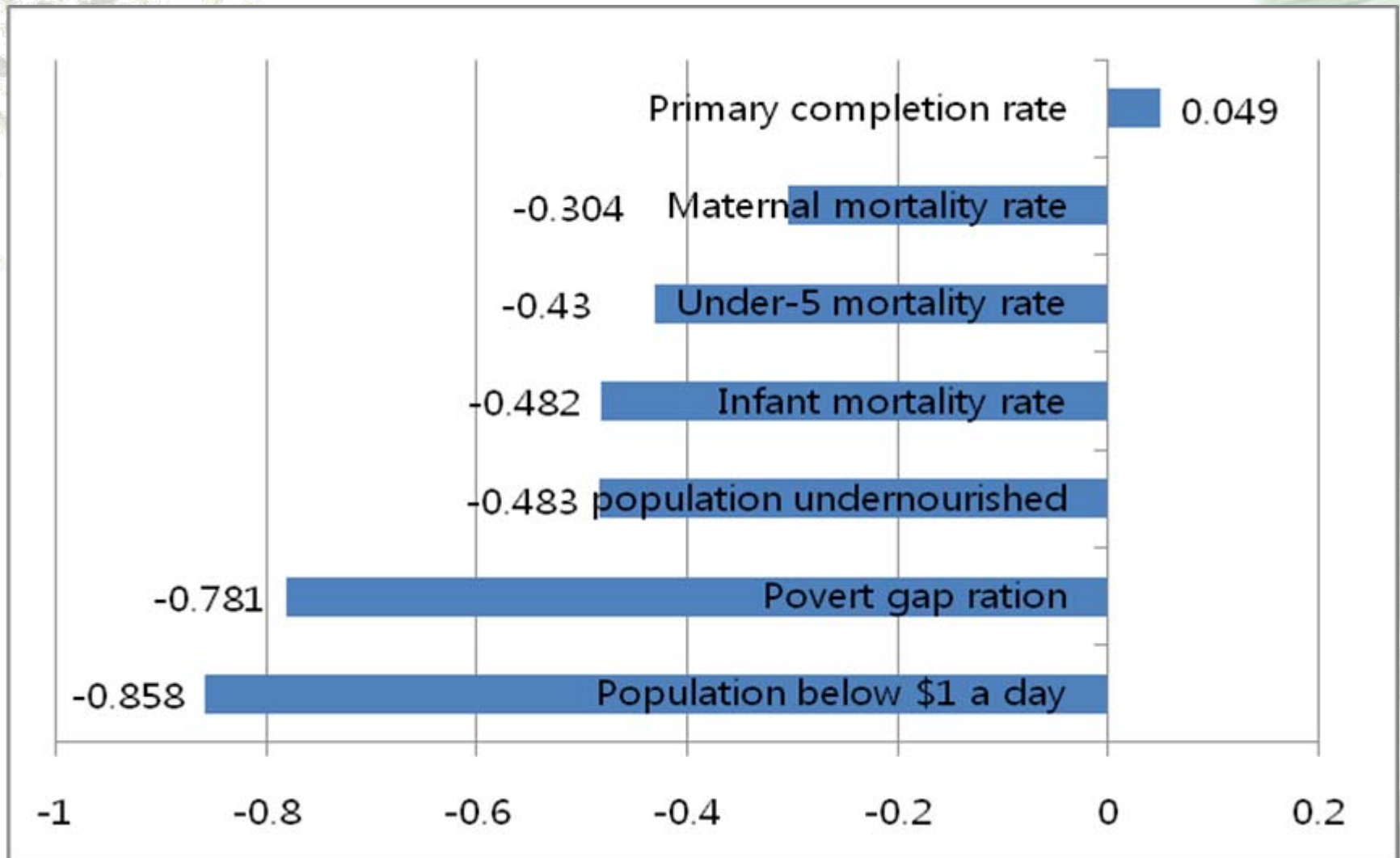
- II. Cases of Bangladesh, China and Nepal

Impact on Poverty and Vulnerability in Asia



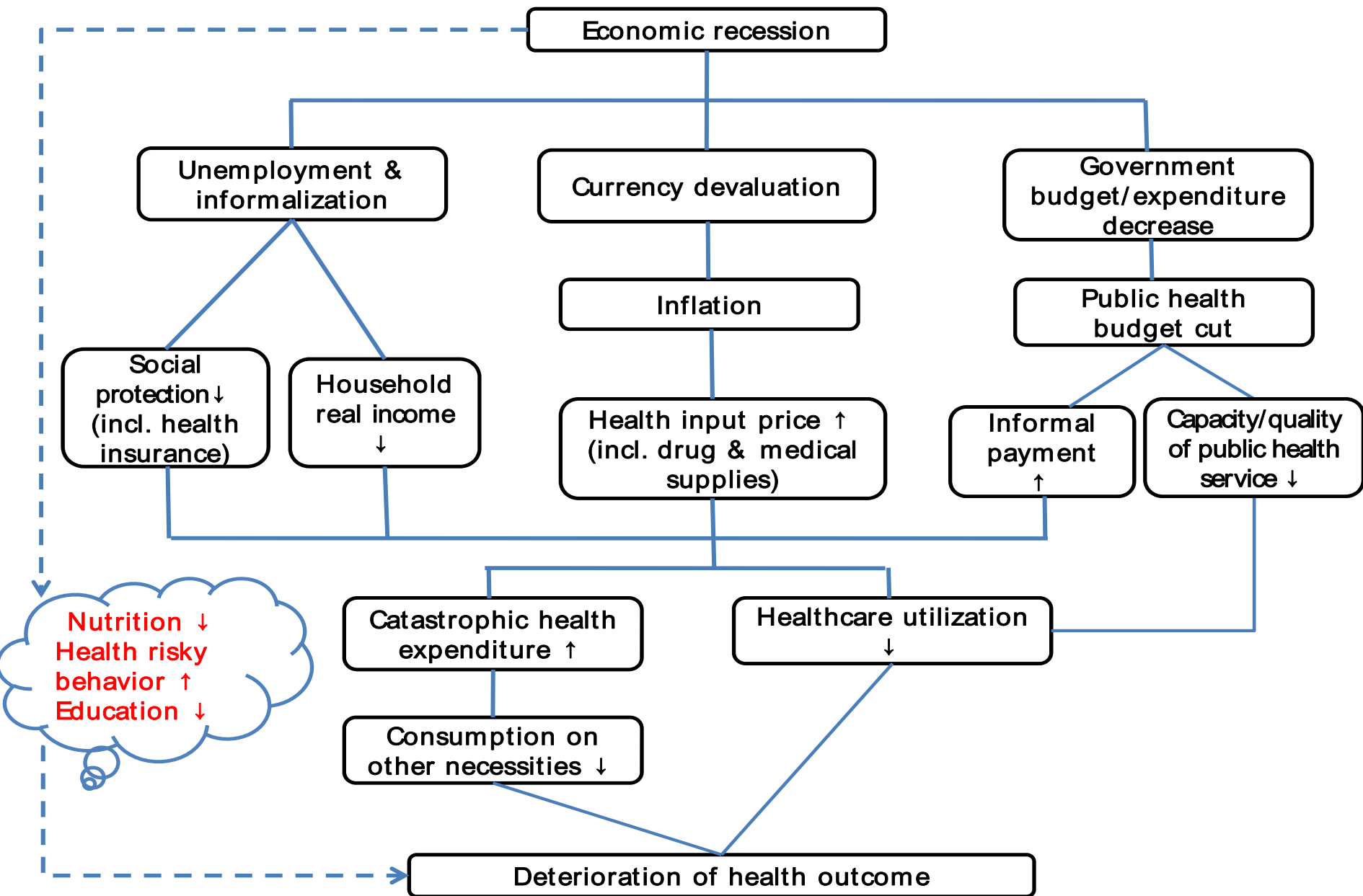
Source: Hasan, Magsombol and Cain, ADB, 2009

Elasticity of MDGs to GDP Growth in Asia



Source: UNESCAP-UNDP-ADB 2008

I. Impact of Economic Recession on Health



1. Health Care Utilization and Expenditure

Utilization of both public and private health care declined
(Indonesia, Vietnam)

Bigger impact/change for poor people (vulnerable
population)

Substitution

- Substitution of public health care for private health care (Thailand, Malaysia)
- Substitution of self-medication or self-treatment for medical care or institutional care (Thailand, Indonesia)

2. Cost of Therapeutic Goods

Currency devaluation and price increases in imported medical goods, technology and pharmaceutical products:

40% (Philippines), 60% (Indonesia), 100-300% (Lao PDR)
(Macfarlane Burnet Centre for Medical Research, 2000)

Substitution of generics and essential drugs for brand-name medicines

3. Public Expenditure on Health

Unemployment and bankruptcy of firms

- > general tax revenue declined
- > government expenditure on health and education declined
- > Long-term effect

Budget cut for programs

e.g., budget for STD/HIV in Thailand, Philippines, and Indonesia

4. Health Behavior

Association between unemployment and alcohol consumption is often non-conclusive

Finnish economic crisis of the late 1990s

- Less educated, single, and unemployed people were associated with greater alcohol consumption during a period of high unemployment (Luoto, 1998)
- Those who were exposed to chronic unemployment and experienced the decrease in employment status increased alcohol consumption, gained weight, and decreased physical activity and sleeping time (Virtanen et al. 2008)

5. Health Outcomes

1) Mortality

Age-adjusted mortality rate in Russia increased by more than 30% during economic crisis in 1990-1994 (Notzon et al., 1998)

All-cause mortality continued to decline during the economic crisis in the late 1990s, but suicidal death and homicide and death related to pneumonia and alcohol dependence increased in Korea (Khang, et al., 2005)

10,400 more suicides in 1998 compared to 1997 in Japan, Hong Kong and Korea was associated with the economic crisis, especially, more closely associated with the rise in unemployment (Chang et al., 2009)

2) Nutrition Status

Income loss and the rise in food prices due to the economic crisis affect nutritional status

-> Micro-nutrient intake declines and malnutrition increases (especially for children), and less nutritious diet and more labor hours of mothers reduces breast feeding

E.g., a) Indonesia: Deficiency of vitamin A of children and pregnant women became more prevalent, and obesity of poor women increased (Macfarlane Burnet Centre for Medical Research, 2000).

b) Philippines: Overall, malnutrition was reduced, but nutritional status of vulnerable population deteriorated

c) Thailand: no major impact on nutritional status, but the prevalence of anemia increased for pregnant women

3) Mental Health

Unstable employment has negative impact on mental health

Precarious employment is positively related to anger, depression, suicide, and substance abuse

Suicide rate was higher for the unemployed in the US, Europe and Japan (Lewis and Sloggett 1998; Kposowa 2001; Aihara and Iki 2002)

40% of the respondents said that economic crisis increased stress, and 4.6% of the respondents had suicidal impulse in Thailand (Wibulpolprasert et al. 1998)

4) Chronic and Acute Diseases

Self-reported disruptive morbidity increased in Indonesia

Morbidity of chronic and acute diseases increased in Korea (Kim, et al., 2003)

5) Other Health Indicators

Women sex workers increased in Indonesia and Thailand (Hopkins, 2006; Wilopo, 1999)

Impact of Economic Crisis on Morbidity and Medical Care Utilization in Korea (Kim, et al. 2003)

Morbidity and utilization	Before (1995)	After (1998)	χ^2 value	Adjusted χ^2 value ^a
Mental and behaviour disorder				
Morbidity	148 (0.65)	460 (1.05)	25.9 ^b	17.7 ^b
Outpatient ^c	48 (32.3)	86 (18.6)	10.7 ^b	16.5 ^b
Inpatient ^c	8 (5.4)	19 (4.0)	0.3	0.5
Cardiovascular disease				
Morbidity	262 (1.16)	800 (1.83)	42.5 ^b	3.7
Outpatient ^c	59 (22.3)	121 (15.2)	6.8 ^b	13.9 ^b
Inpatient ^c	19 (7.1)	51 (6.4)	0.1	0.0
Hypertension				
Morbidity	606 (2.67)	1952 (4.47)	129.3 ^b	19.3 ^b
Outpatient ^c	171 (28.1)	481 (24.7)	2.8	13.0 ^b
Inpatient ^c	11 (1.8)	39 (2.0)	0.0	0.1
Injury				
Morbidity ^c	195 (0.86)	677 (1.55)	54.7 ^b	110.5 ^b
Outpatient ^c	175 (89.7)	394 (58.1)	65.2 ^b	106.1 ^b
Inpatient ^d	—	—	—	—

^a χ^2 values were adjusted with a maturation effect.

^b $P < 0.01$.

II. Cases of Bangladesh, China and Nepal

descriptive cross-sectional analysis of primary data collected through survey method

Country	City	Sector
Bangladesh	Dacca	Garment
China	Shenzhen	Electronics and furniture
Malaysia	Kuala Lumpur	Car parts
Nepal	Country wide	Remittances
Vietnam	Huei	Shoe, leather, food

Respondent's profile

Country	Total N	Employed N	Unemployed N
Bangladesh	308	200	108
China	460	380	80
Nepal	150	83	67

1. Quick Overview of the Impact of the Global Recession in Some Asia Countries

1) Bangladesh

The effect of economic recession is not certain due to little exposure to the failing financial institutions of the developed world

- > Remittance flow may not face serious problems because 63% of them are from the Middle Eastern countries.
- > However, Bangladesh suffered significant income loss from trade shock mainly originating from higher food and oil prices. Also, the export sector is in huge risk because Bangladeshi exports depend too much on garment sector (about 70%) and most of exports are taken place in the USA and the EU countries



2) China

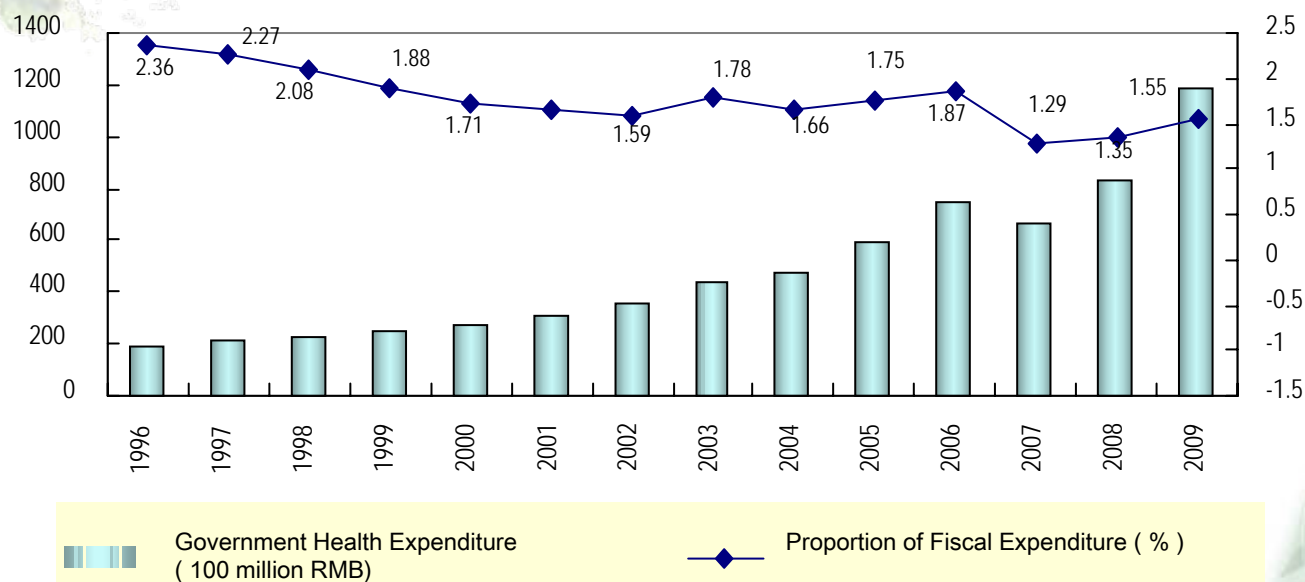
As the Chinese economy has become more reliant on international trade, global recession has impacts on China

- GDP is growing, but at a lower rate
- International trade has declined in 2009
- Lower tax revenues
- High inflation especially for food
- The overall unemployment rate increased slightly during the crisis

2) China

Government's effort to minimize the negative impact of the global recession on health

- Increase in government's financial support in health expenditure



- Increase in government subsidies for the poor (growth rate of government subsidy is over 50% every year)
- There are no significant sign of fluctuation in health services, immunization and healthcare for pregnant women

3) Nepal

So far, Nepal has not faced any direct impact of the global recession, maybe because its financial market is not open to short term portfolio investments from abroad (Rana, Madhukar 2009)

However, decline in remittances from global recession is expected to affect household income, considering it's crucial role in Nepalese economy contributing to nearly 20 percent of GDP, although there were no significant decrease in remittance until now

2. Economic Status (Household Income)

1) Bangladesh

	Mean			Mean Difference (p-value)
	Employed	Unemployed	Total	
The first half of 2008, household income per month (Taka)	7506.7	7819.8	7618.8	-313(.54)
The first half of 2009, household income per month (Taka)	8958.9	7416.8	8416.1	1542(.00)

2. Economic Status (Household Income)

2) China

	Employed	Unemployed
The first half of 2008, household income per month (yuan)	4137.87	3883.53
The first half of 2009, household income per month (yuan)	3449.04	3196.47
Change in income (%)	-16.65	-17.69

3) Nepal

	Remittance Earning Household	Remittance Non Earning Household
The first half of 2008, household income per month	15647.64	10963.93
The first half of 2009, household income per month	18162.92	12540.98
Diff. (p-value)	2515.281(0.000)	1577.05 (0.005)

-> After recession, household income increased for the employed but declined for the unemployed in Bangladesh. In China, there were overall decreases in household income but bigger decrease in the unemployed. In Nepal, overall household income increased , especially more largely in remittance earning household.

3. Health Outcome

1) Bangladesh

- Change in reported health status after recession

	Reported Health Status	
	Employed	Unemployed
much better	9.5	4.6
a little better	24.0	25.0
similar	36.0	39.8
a little worse	27.0	27.8
much worse	3.5	2.8
P-value	0.633	

-> No significant difference

1) Bangladesh

- Current level of stress and depression

	Stress		Depression	
	Employed	Unemployed	Employed	Unemployed
None	42.5	14.8	39.00	20.40
mild	29.0	35.2	30.00	27.80
moderate	20.5	20.4	25.00	33.30
severe	8.0	21.3	6.00	15.70
extreme	0	8.3	4.2	2.80
P-value	0.00		0.00	

-> The Unemployed group is clearly faced with more stress & depression than the Employed group

1) Bangladesh

- Comparison of suicidal ideation before & after recession

	Thought about committing suicide			
	Before(2008)		After(2009)	
Yes	6	5.6%	8	7.4%
no	102	94.4%	100	92.6%
Total	108	100%	108	100%

-> Suicidal ideation increased slightly after recession (no significant)

2) China

- Changes in Health-related indicators after recession (%)

	Reported Health Status		Stress		Depression	
	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed
much better	5.0	1.2	2.4	1.2	2.6	0.0
a little better	11.4	10.5	8.8	1.2	11.1	3.5
similar	73.7	73.3	49.7	20.0	66.7	43.5
a little worse	9.0	14.0	28.2	31.8	15.3	32.9
much worse	0.8	1.2	10.9	45.9	4.2	20.0
Chi-square value	4.577		61.151		41.613	
P-value	0.298		0.000		0.000	

2) China

- Changes in health status by different income groups (%)

	Reported Health Status			Stress			Depression		
	High	Middle	Low	High	Middle	Low	High	Middle	Low
much better	2.6	4.1	8.4	0.7	1.0	6.8	0.7	2.0	6.7
a little better	10.5	11.2	10.9	7.3	8.1	6.0	9.2	10.7	8.4
similar	78.3	70.6	71.4	43.3	42.4	46.2	61.8	64.0	59.7
a little worse	8.6	11.7	9.2	33.3	28.8	24.8	21.1	17.3	16.0
much worse	0.0	2.5	0.0	15.3	19.7	16.2	7.2	6.1	9.2
Chi-square value	11.368			16.666			10.849		
P-value	0.157			0.0338			0.203		

2) China

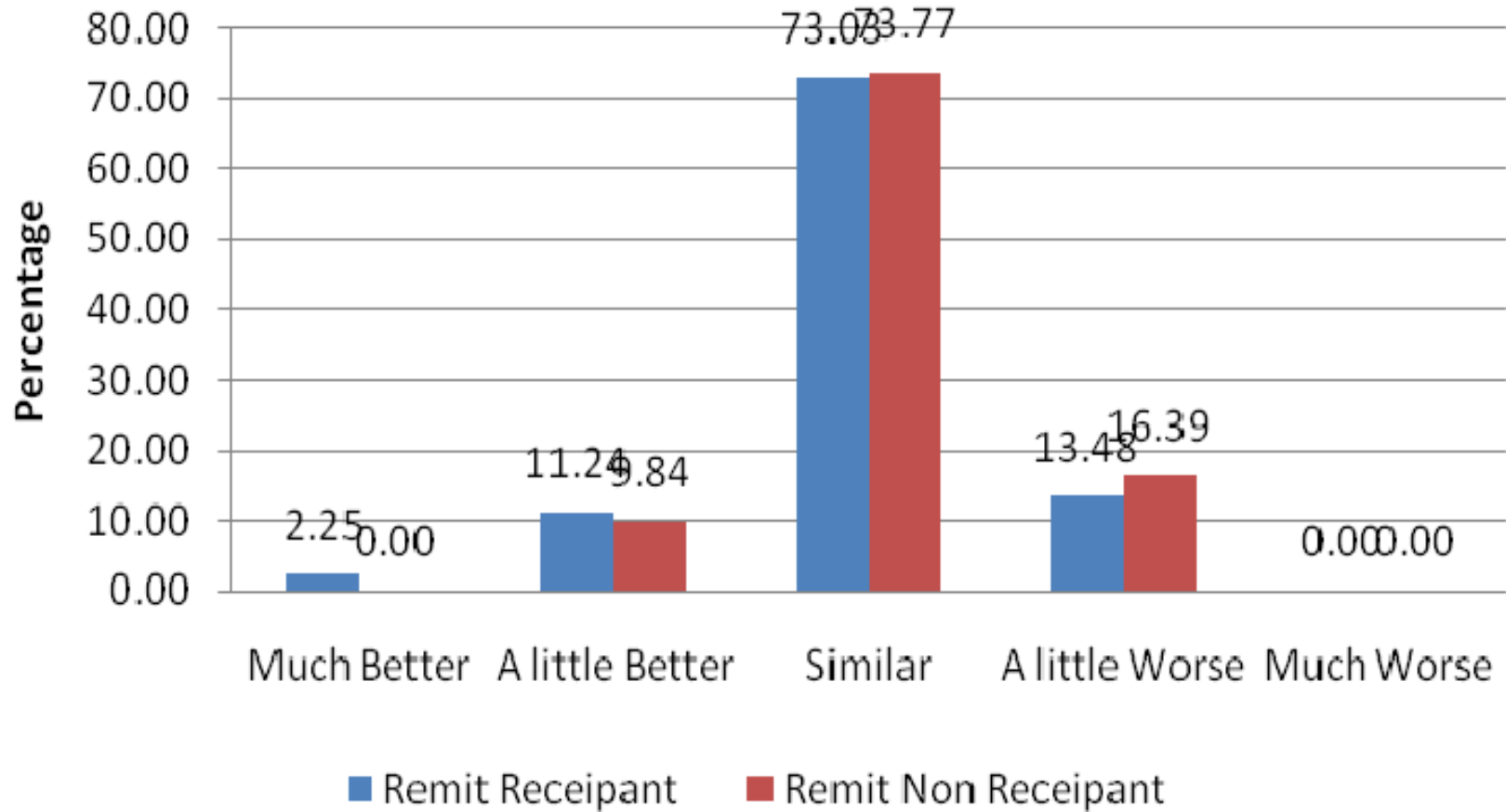
- Changes in suicidal ideation after recession

	Employed		Unemployed		P-value
	N	%	N	%	
Suicidal thoughts in 2008	3	0.8	1	1.2	0.561
Suicidal thoughts in 2009	6	1.6	3	3.5	0.378
P-value	0.001		0.035		-

-> Both employed group and unemployed group showed a significant increase in suicidal ideation after recession

3) Nepal

Change in Health Status

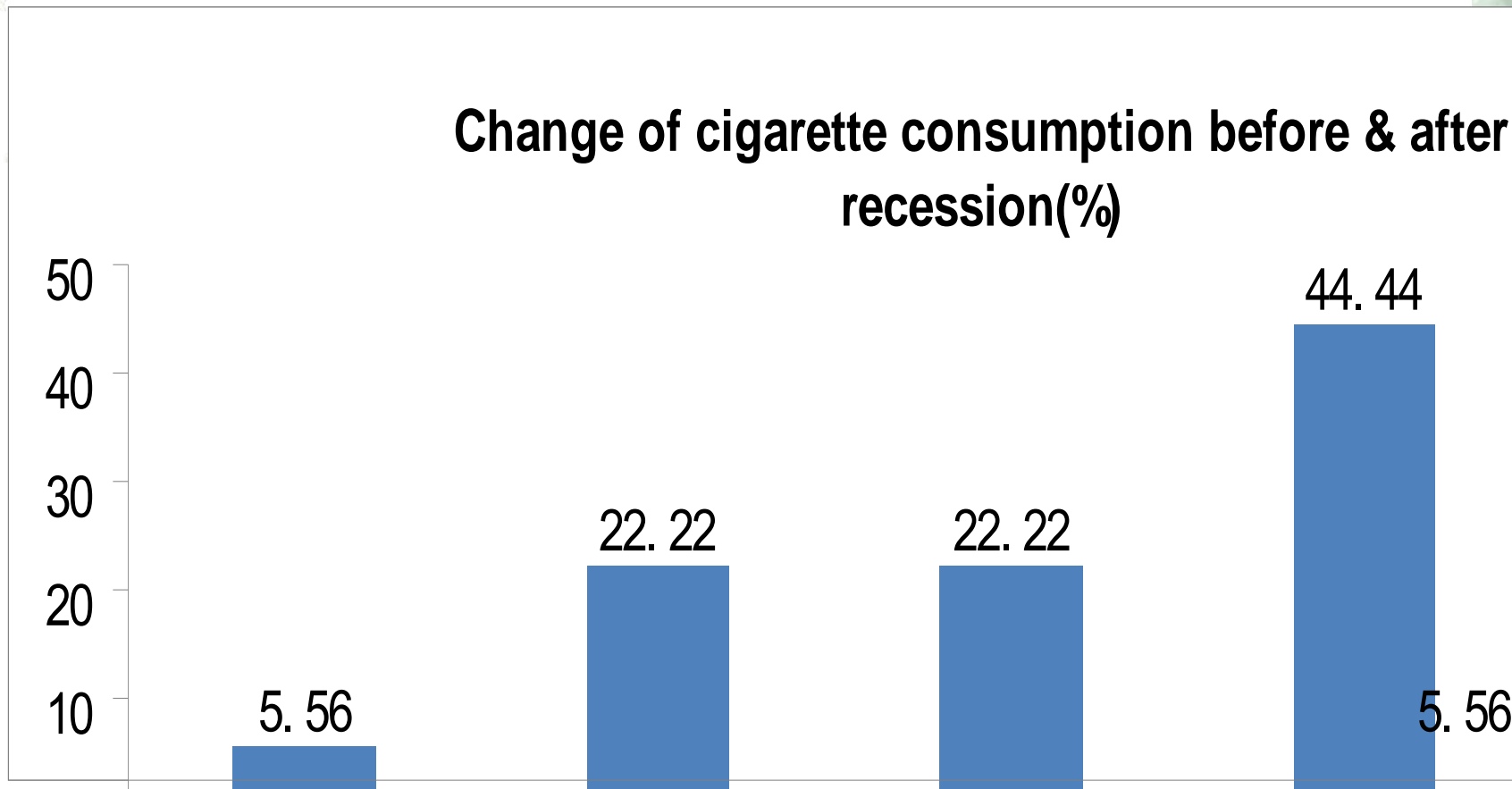


3) Nepal

Extent of Change	Change in mental stress and depression (%)	
	Mental Stress	Depression
Much less	6	8
Slightly less	17.33	18.67
Similar	54	56
Slightly more	20.67	16
Extremely more	2	1.33

4. Health Behavior

1) Bangladesh



4. Health Behavior

1) Bangladesh

	Change in cigarette consumption	
	Employed	Unemployed
much less	9.10%	5.60%
slightly less	18.20%	22.20%
similar	45.50%	22.20%
slightly more	18.20%	44.40%
much more	9.10%	5.60%
Chi-square value	2.854	
P-value	0.582	

-> Increase in cigarette consumption, especially in the unemployed

2) Nepal

- **Change in cigarette consumption after recession (%)**

Trend	Remit. Receiving HH	Remit. Not Receiving HH	All Households
Much Less	18.18	13.33	16.22
Slightly Less	22.73	26.67	24.32
Similar	31.82	60.00	43.24
Slightly More	27.27	0.00	16.22

2) Nepal

- **Change in alcohol consumption after recession (%)**

	Remit. Receiving HH	Remit. Non- Receiving HH	All Households
Much Less	0.00	13.33	6.45
Slightly Less	18.75	6.67	12.9
Similar	56.25	60.00	58.06
Slightly More	25.00	20.00	22.58

5. Health Expenditure

1) Bangladesh

- **Medical expenditure before & after recession**

	Employed			Unemployed		
	2008	2009	P	2008	2009	P
Ambulatory care	1305.9	1622.6	0.032	1083.5	1356.7	insignificant
In-patient care	16829.2	15900.3	insignificant	9113.6	3881.2	
Self-medication	440.6	427.1		228.3	409.6	

Expenditure for ambulatory care increased in both groups, but expenditure for in-patient care decreased, especially largely in the unemployed. Expenditure for self-medication declined in the employed, but increased for the unemployed (potentially substituting for formal medical care).

2) China

- **Medical expenditure before & after recession (RMB)**

	Employed			Unemployed		
	2008	2009	P	2008	2009	P
Ambulatory care	131.16	100.46	0.192	199.62	162.15	0.666
In-patient care	139.46	133.46	0.820	91.08	184.80	0.374
Self-medication	40.57	27.62	0.323	36.34	33.50	0.454
Total	310.51	254.77	0.150	327.03	380.46	0.707

2) China

- **Medical expenditure by different income group (RMB)**

	High			Middle			Low		
	2008	2009	P	2008	2009	P	2008	2009	P
Ambulatory care	107.27	127.97	0.417	175.86	117.38	0.203	138.57	80.81	0.263
In-patient care	228.04	274.22	0.487	105.69	97.47	0.827	49.78	49.64	0.995
Self-medication	46.28	42.00	0.462	23.19	24.76	0.660	64.38	17.85	0.269
Total	381.07	430.13	0.501	303.47	237.74	0.276	254.26	148.55	0.174

3) Nepal

	Remit. Receiving HH			Remit. Non- Receiving HH		
	2008	2009	Diff. (p-value)	2008	2009	Diff. (p-value)
Ambulatory	12119.94	11399.44	-720.51 (0.76)	12036.07	6432.79	-5603.28 (0.30)
Inpatient Care	6924.72	5804.49	-1120.23 (0.44)	6840.98	2686.89	-4154.10 (0.41)
Self-medication	2027.02	1267.64	-759.38 (0.35)	773.69	680.41	-93.28 (0.33)

6. Health Care Utilization

1) Bangladesh

Unmet need (%)

	Employed(%)	Unemployed(%)	
2008	90.3	93.3	Statistically insignificant
2009	87.4	92.7	
	Statistically insignificant		-

- Average number of visits**

	Employed			Unemployed		
	2008	2009		2008	2009	P
Government health facility	2.1	2.1	Stat insigt	1.8	2.2	Stat insig
Private health facility	2.3	2.8		1.7	1.6	

-> The unemployed group decreased the use of private health facility but increased using government health facility after recession, implying substitutions (statistically insignificant)

2) China

- **Unmet need in health care utilization**

	Employed(%)	Unemployed(%)	P
2008	12.5	20.4	0.153
2009	14.4	22.6	0.119
P	0.000	0.000	-

- **Average number of visit in Government and Private health facility before & after recession**

	Employed			Unemployed		
	2008	2009	P	2008	2009	P
Government health facility	2.63	2.53	0.708	2.26	2.00	0.232
Private health facility	2.35	2.33	0.542	3.79	3.44	0.559

-> Overall decrease but no significant changes in the utilization of public and private health services

- **Comparison of prescriptive drug access**

	Employed			Unemployed		
	2008 (%)	2009 (%)	p	2008 (%)	2009 (%)	p
Buy all the drugs	82.3	80.2	0.000	78.4	71.4	0.000
Buy some drugs	13.1	11.6		18.9	26.2	
Buy a few of the drugs	4.0	5.8		0	2.4	
Do not buy	0.6	2.4		2.7	0	
Total	100.0	100.0		100.0	100.0	

-> Proportion of people that could access to all prescribed drugs decreased in both employed group and unemployed group after recession (p=0.000)

3) Nepal

	Remitt. Receiptants		Remitt. Non Receiptants		All Households	
	2008	2009	2008	2009	2008	2009
Government health facility	2.52	2.64	2.26	2.00	2.41	2.39
Private health facility	3.06	2.95	3.23	2.98	3.14	2.97

-> The average number of visits increased in government facilities and declined in private facilities for RRHHs. The average visits to both government and private facilities declined for RNRHHs

III. Policy Recommendations

- 1) Strengthening social safety net, public health services, and health care financing mechanism (to reduce barrier to access)

- 2) Increasing the effectiveness of health care spending
 - Rational drug policy
 - Implementing primary health care reforms
 - Efficient payment system for health care providers

- 3) Monitoring the impact of the crisis, especially on the vulnerable population

THANK YOU !!!



Prof. Soonman KWON

kwons@snu.ac.kr (Seoul National Univ.)

<http://plaza.snu.ac.kr/~kwons> (Homepage)