HEATH EQUITY IN ACCESS AND BENEFIT INCIDENCE: A TALE OF TWO STATES IN INDIA

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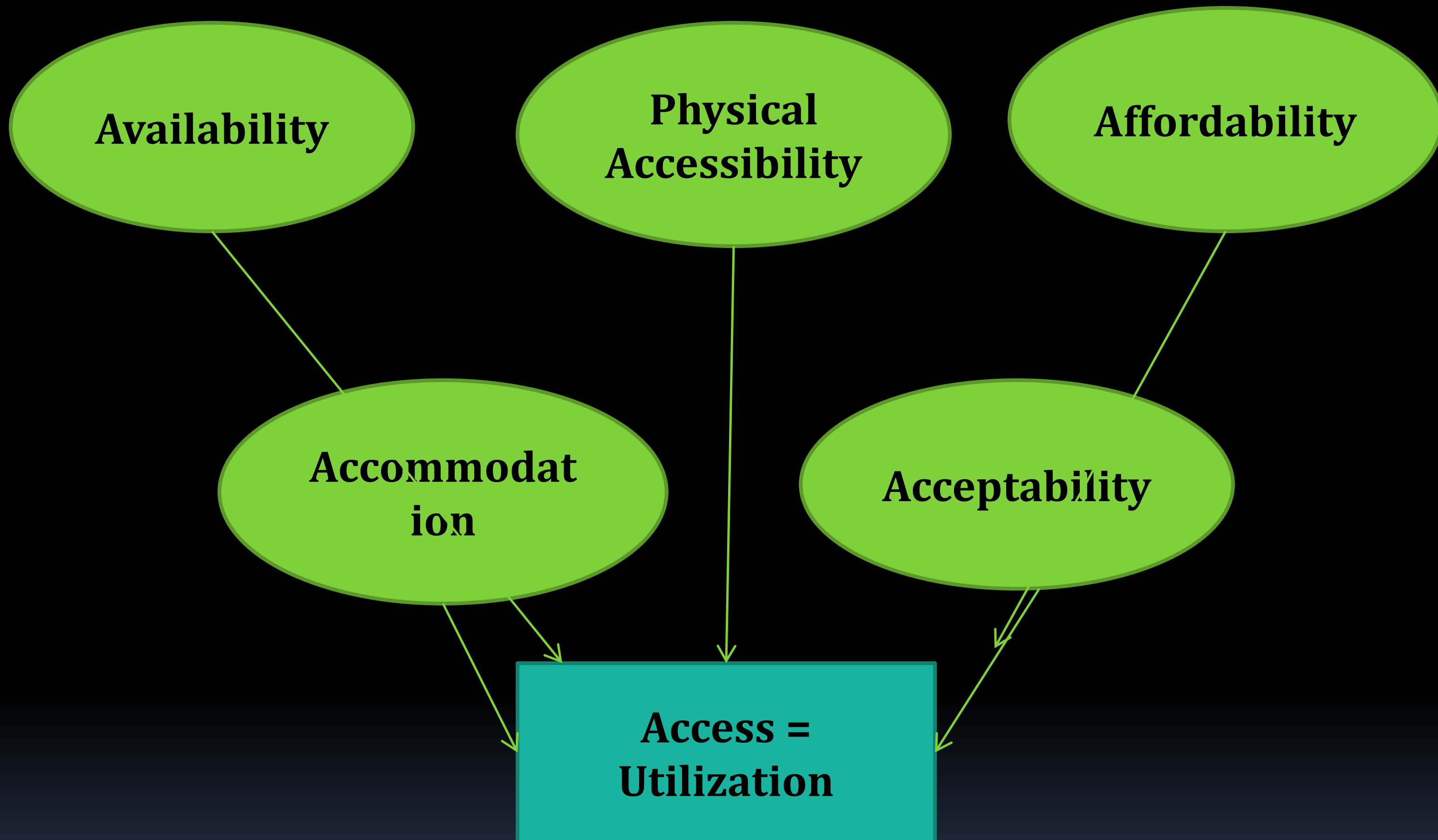
*The authors acknowledge the suggestions and encouragement received from Prof Sarmila Banerjee, Rajib Gandhi Chair Professor, University of Calcutta

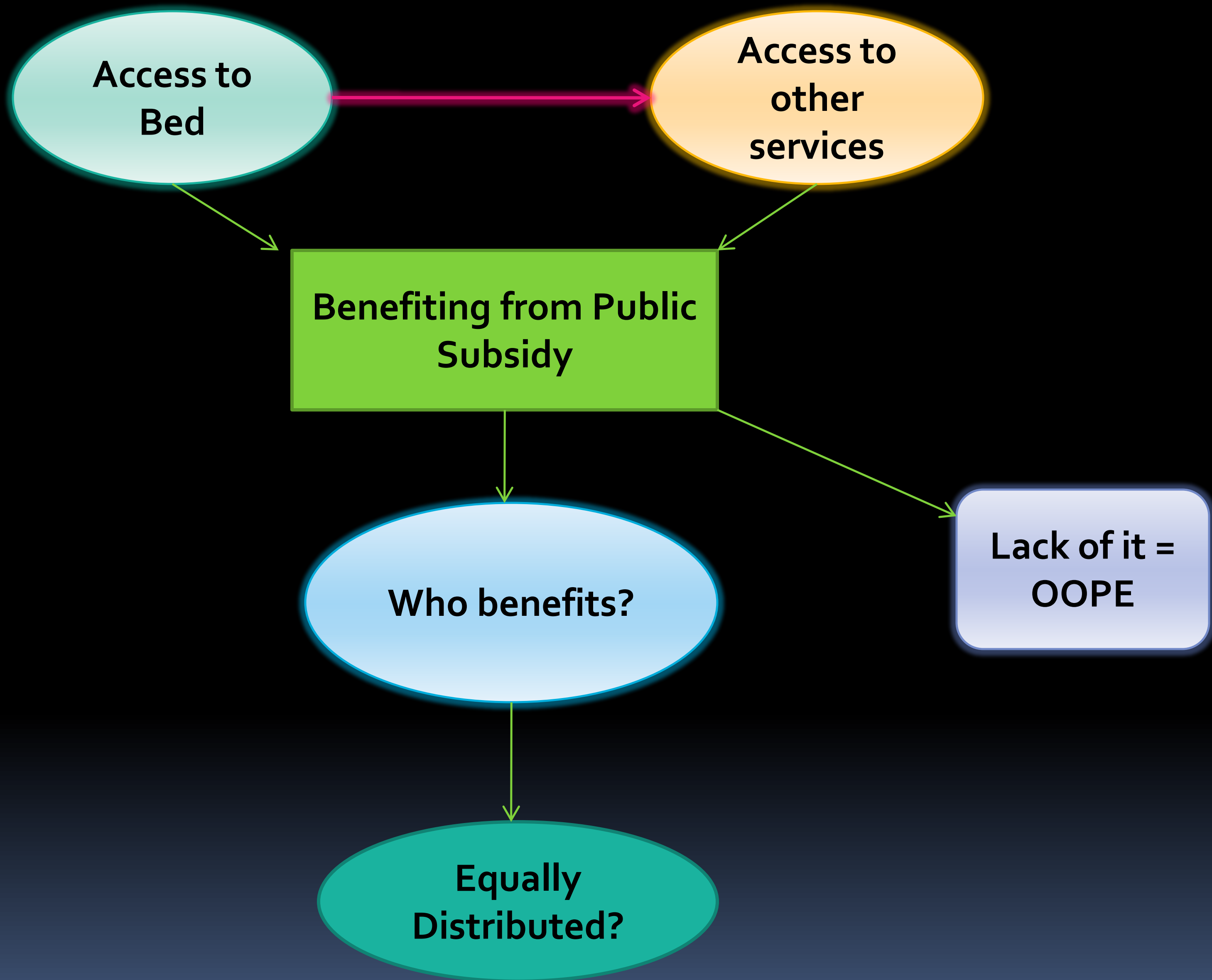
Background

- ***Limited public investment*** in health care
- Too much ***dependence on the unregulated private sector.***
- An urban-centric policy orientation.
- National Health Policy 2002 identifies a paradigm shift at policy level
    - *Deserving*
    - *Affording*

Crucial Issues

- Thus the two issues that gain prominence are:
- Access to health care and
- Access to public subsidy for the most vulnerable deserving population


Availability
Physical Accessibility
Affordability
Accommodat ion
Acceptability
Access = Utilization


Access to Bed
Access to other services
Benefiting from Public Subsidy
Who benefits?
Lack of it = OOPE
Equally Distributed?

2 types of Equity Principles

- *Horizontal equity* in health care means providing equal healthcare to all
- *Vertical equity* means treating differently those who are different in 'need' so that at the end they can be equal(Jerehiah 2000)

Tale of two states

Sl. No.	Indicator	Tamil Nadu	West Bengal
1.	IMR (2010)	24	31
2.	Likely status wrt MDG	On target	Off target
3.	Share of population using public health institutions for hospitalization (in %)	4.54	6.81
4.	BPL population (in %)	22.5	24.7

Source:
1. Sample Registration System, Office of the Registrar General, India, Ministry of Home Affairs;
3. Morbidity & Health Care Survey, NSSO: 2004;
4. Household Consumer Expenditure Survey, NSSO: 2004-05 (Based on URP-Consumption).

Objectives and Data

- To locate the access to publicly funded health care across different economic classes (**horizontal equity**)
- To identify the distribution of public subsidies enjoyed by these classes (**vertical equity**)
- Unit level data from National Sample Survey (NSSO) 60th round data (collected during January-June 2004) on "Morbidity, Health Care and the Conditions of the Aged" (25th schedule) have been used.
- In West Bengal, the sample size was 16111 for rural sector and 8793 for urban sector and the corresponding figures for Tamil Nadu were 10348 and 10946 respectively.

Measurement: Benefit Incidence Analysis

Mathematically, Benefit Incidence is estimated by the formula –

$$\eta_j = \sum \alpha_{ij} \frac{\rho_i}{\alpha_i} = \sum \theta_{ij} \rho_i$$ Where,

η_j = Benefit of public subsidy enjoyed by group j,

α_{ij} = utilization of service i by group j,

α_i = utilization of service i by all groups together,

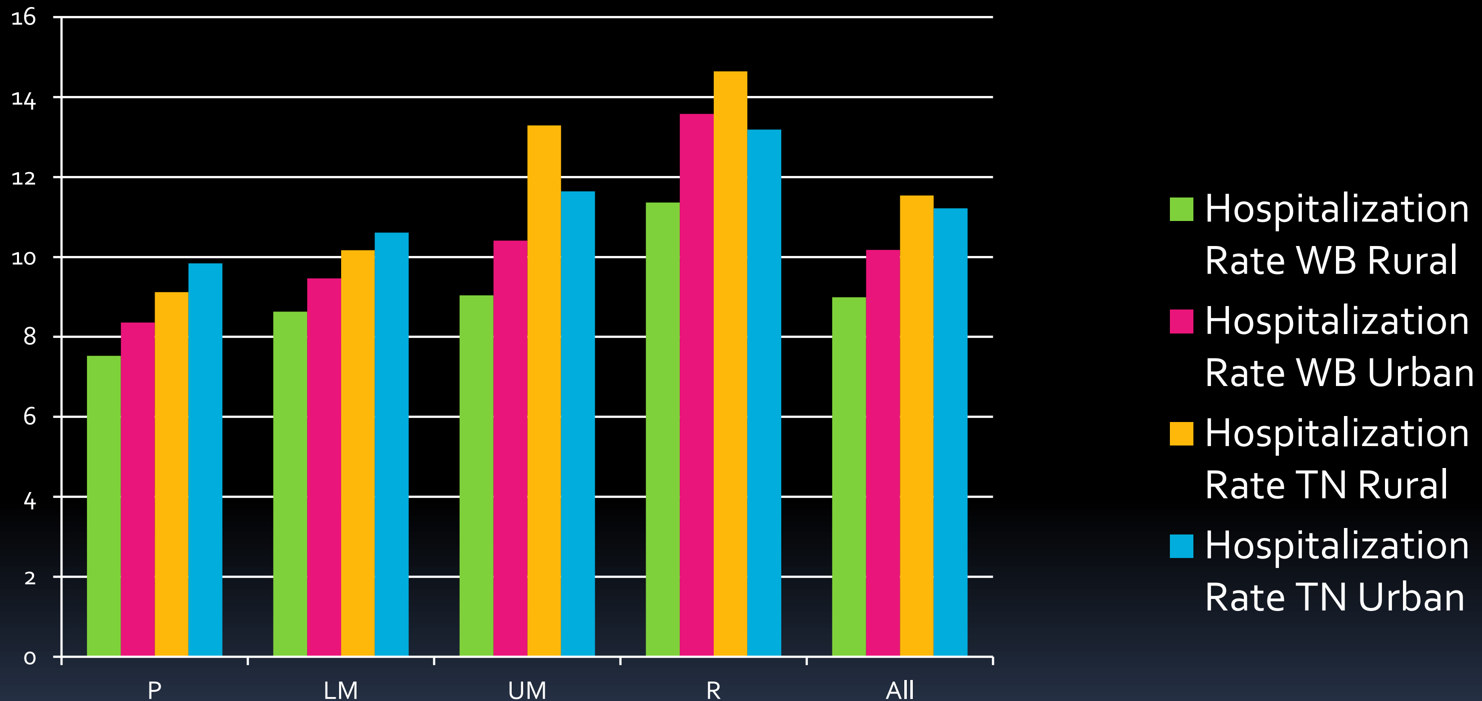
ρ_i = government's net expenditure on service i,

θ_{ij} = group j's share of utilization of service i.

Methodology

- Access is assessed on the basis of utilization
- To calculate benefit incidence we have calculated the number of in-patients who have utilized the services of government hospitals across different MPCE classes (α_{ij}).
- The share of a MPCE class in utilization of a service gives us the utilization share for the MPCE class (θ_{ij}).
- To calculate public subsidy (or expenditure) on in-patient care across rural and urban areas, we have calculated the *ailment wise per capita private expenditure* (PCPE) for a particular service of an income class separately for rural and urban WB.
- Then, to calculate the net-subsidy (ρ_i), OOP expenditure has been deducted from the PCPE. The calculation was normalized for ailments for hospitalization as well.

Hospitalization Rate in two states



Hospitalization in Public Institutions

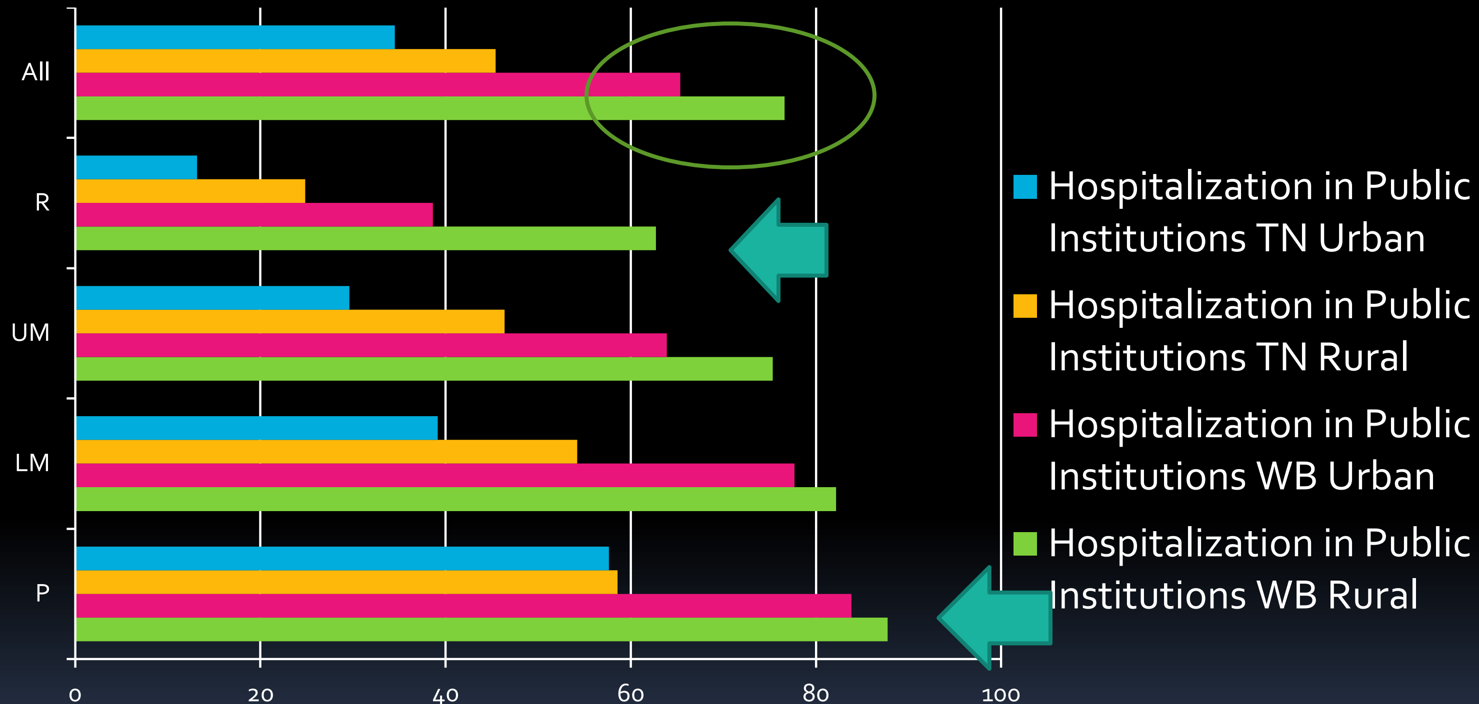


Table 2: Access to Services during Hospitalization in Public Hospitals (%)							
State	MPCE	MED		TEST		DOC	
		Rural	Urban	Rural	Urban	Rural	Urban
WB	P	58.8	54.2	53.9	62.5	40.3	50.0
	LM	55.2	65.9	57.3	67.7	42.3	68.9
	UM	63.4	67.2	62.5	80.1	50.4	74.0
	R	61.1	56.8	75.0	82.1	61.5	68.4
	All	59.5	60.8	61.5	71.1	47.9	63.8
TN	P	98.7	97.7	88.5	82.5	99.7	94.3
	LM	98.1	96.4	89.6	93.6	98.7	94.5
	UM	97.4	98.9	87.0	95.8	92.8	96.8
	R	98.7	100.0	90.9	95.3	93.5	92.9
	All	98.1	97.88	88.7	89.6	96.5	94.8

Table 3: Per Capita OOP Expenditure by State, Region, Service and MPCE Class (Per Episode) in Rs.									
Area	MPCE	West Bengal				Tamil Nadu			
		MED	TEST	DOC	Overall	MED	TEST	DOC	Overall
Rural	P	302.67	449.77	393.47	628.54	0.02	13.86	1.02	13.30
	LM	258.82	491.94	421.70	689.26	1.34	8.48	3.35	12.22
	UM	321.81	547.01	398.56	934.82	3.67	40.30	3.50	44.02
	R	569.05	879.90	7567.58	5908.95	17.34	32.16	35.89	109.88
	All	357.30	599.34	2423.98	1879.98	3.90	22.35	7.17	35.44
Urban	P	191.66	797.60	409.70	965.42	0.00	12.07	0.00	9.96
	LM	181.45	971.69	325.37	1242.14	21.37	67.38	99.45	184.60
	UM	149.61	1287.56	529.15	2142.52	11.29	19.63	15.98	48.45
	R	154.96	1568.54	828.77	3742.33	125.34	161.86	80.68	452.62
	All	172.54	1113.11	487.79	1758.96	20.70	44.64	37.21	107.74

Implications

- Access to beds in public hospital is appreciably high for the poorest class in WB, ensuring horizontal equity.
- The successful creation of horizontal equity in access to hospitalization in public facilities in the West Bengal could not guarantee cheap and quality services to her citizens, whereas those who received access in TN, also received all services at a **pretty low cost in a package.**

Per Capita Benefit-Subsidy during Hospitalization in Public Hospitals in WB & TN (Per Episode) in Rs.

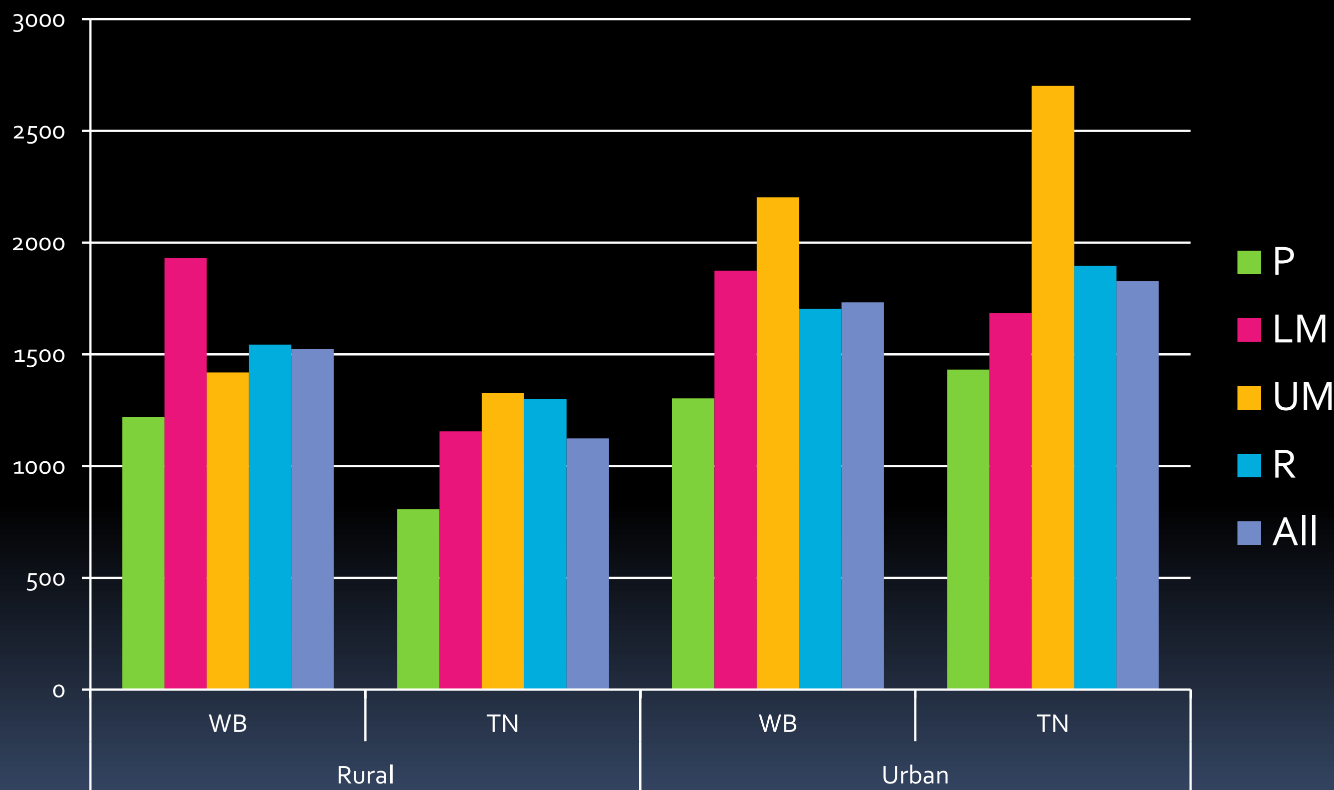
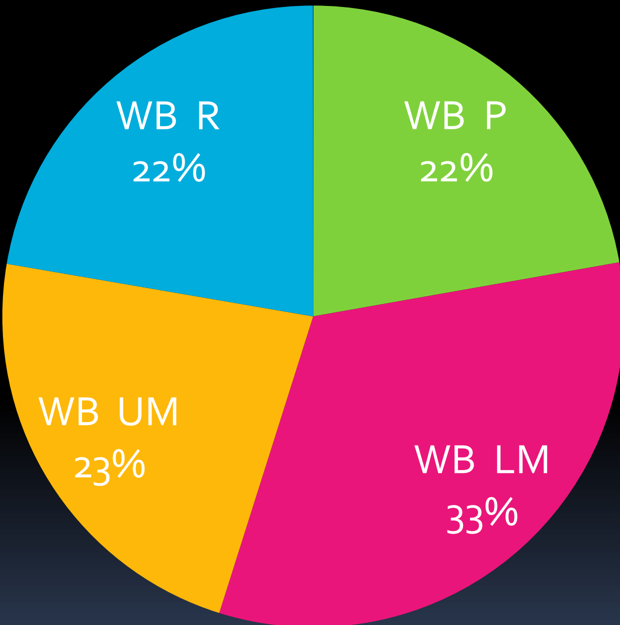


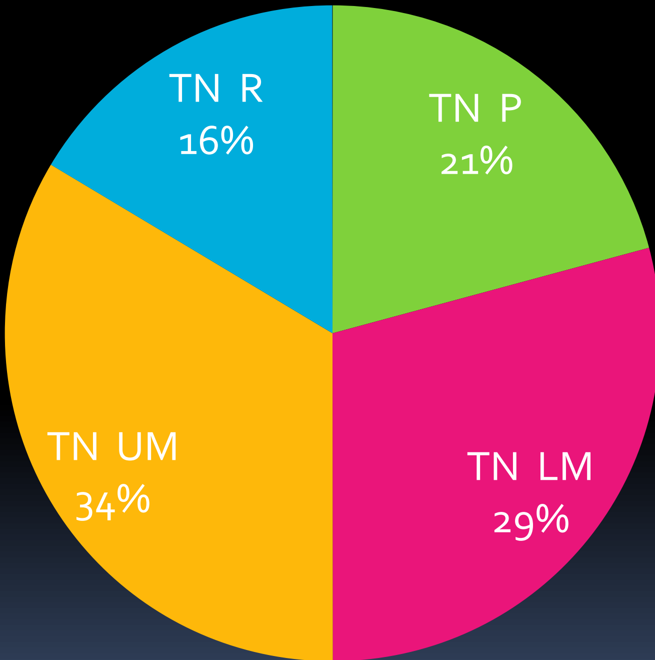
Table 4: Per Capita Benefit-Subsidy during Hospitalization in Public Hospitals in WB & TN (Per Episode) in Rs.

State	MPCE	BED		MED		TEST		DOC		Overall	
		Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
WB	P	173.6	381.8	292.0	166.0	176.5	305.0	448.6	334.2	1220.2	1303.0
	LM	280.4	379.4	580.4	456.5	303.6	131.7	731.0	824.8	1930.4	1874.8
	UM	379.5	510.5	274.7	385.8	202.3	227.7	435.9	994.2	1418.8	2202.9
	R	362.6	313.3	179.1	323.9	340.8	250.9	306.5	711.8	1544.4	1704.4
	All	293.1	398.8	331.0	334.1	257.5	228.2	469.5	722.89	**1523.1**	**1732.9**
TN	P	182.2	248.7	255.0	608.9	116.2	221.2	252.6	356.9	807.15	1431.5
	LM	254.6	353.4	296.8	556.0	116.8	279.5	382.8	490.4	1155.1	1684.8
	UM	284.6	585.8	400.0	816.7	146.8	448.4	491.3	850.5	1327.8	2700.7
	R	195.5	516.9	327.9	620.7	304.3	301.6	472.6	450.3	1299.5	1895.8
	All	233.8	377.9	349.6	643.7	152.2	299.9	386.0	513.5	**1123.9**	**1827.6**

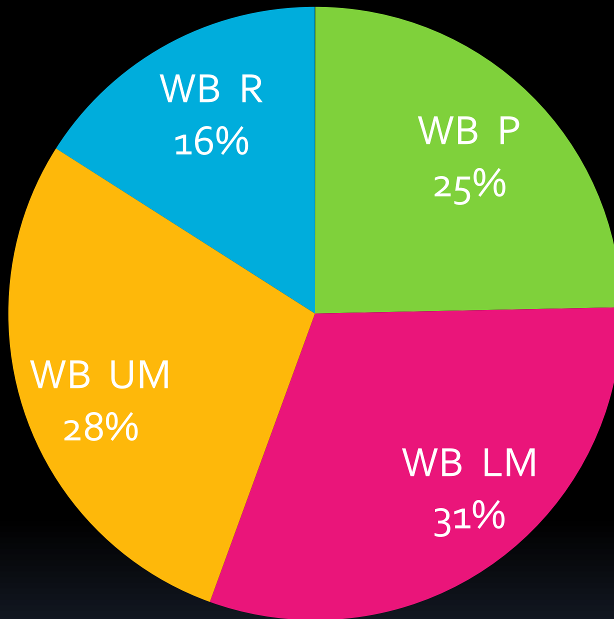
Table 5: Subsidy Benefit Distribution among Income Class by State, Service and Region (%)											
State	**MPCE**	**BED**		**MED**		**TEST**		**DOC**		**Overall**	
		Rural	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**
WB	**P**	16.43	31.42	24.19	14.52	16.66	38.55	22.27	11.90	22.23	24.68
	LM	24.65	27.16	41.97	42.23	28.31	15.67	35.41	35.18	32.66	30.88
	UM	31.72	28.66	21.62	28.55	19.55	25.17	23.91	35.76	22.83	28.47
	R	27.19	12.76	12.21	14.71	35.47	20.61	18.41	17.16	22.29	15.97
TN	**P**	22.58	27.47	21.26	39.44	22.06	28.35	19.52	28.88	20.80	32.70
	LM	30.95	24.26	24.10	22.06	22.01	25.26	28.82	24.71	29.20	23.92
	UM	34.59	34.73	32.26	28.74	26.85	35.81	34.80	37.91	33.57	33.11
	R	11.88	13.55	13.40	9.76	29.08	10.59	16.86	8.51	16.43	10.28

Subsidy Benefit Distribution among Income Class by State, Service in Rural Region (%)





Subsidy Benefit Distribution among Income Class by State, Service in Urban Region (%)



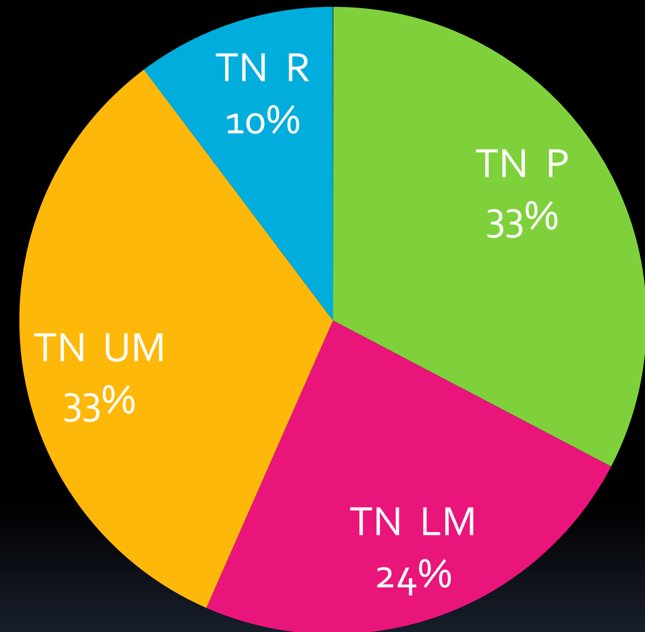


Table 6: Service wise Concentration Indices for Benefit Incidence during Hospitalization in Public Institutions								
Service	West Bengal				Tamil Nadu			
	Per Episode		Per Day		Per Episode		Per Day	
	R	U	R	U	R	U	R	U
BED	0.1588	-0.0429	0.1468	-0.0420	0.0036	-0.0301	0.0257	-0.0409
MED	-0.0769	0.0707	-0.0985	0.0709	0.0280	-0.1593	0.0358	-0.1710
TEST	0.1764	-0.0287	0.1899	0.0029	0.1316	-0.0580	0.1537	-0.0456
DOC	0.0042	0.1428	-0.0081	0.1450	0.0692	-0.0705	0.0888	-0.0834
Overall	0.0363	0.0239	0.0298	0.0223	0.0517	-0.0973	0.0696	-0.1087

Implications

- Results showed that in the two states subsidies enjoyed per episode are almost comparable in urban areas, whereas in the rural areas it is higher in West Bengal.
- This actually occurs due to far higher opportunity costs in private sector in West Bengal, compared to the southern state.
- However, the benefit of the average public subsidy is actually enjoyed maximum by the upper middle class in urban areas of both the states.

Implications

- The picture changes in rural areas as the lower middle income class enjoys the highest share of subsidies per episode in WB, while in TN, the cream is siphoned off by the powerful richest class.
- The concentration index is positive in both rural and urban areas in WB and rural TN, though it is negative in urban TN. Thus except urban TN, pro rich bias dominates in subsidies violating the issue of vertical equity altogether.

Conclusions

- This tale of two states tells a captivating story for the policy makers.

- The availability and good practice of private sector helps to create vertical equity in urban TN, even at the cost of horizontal equity, but the too much dependence on the public sector breaches the vertical equity altogether in WB. This success of TN helped her to offer '*good health at low cost*' over the years and by 2013 TN was able to create great progress in improving maternal, newborn and child health, performing consistently above the Indian national average (Balabanova et al 2013).

- On the other hand, the success of public sector in TN might have also created externalities on better performance of the private sector.