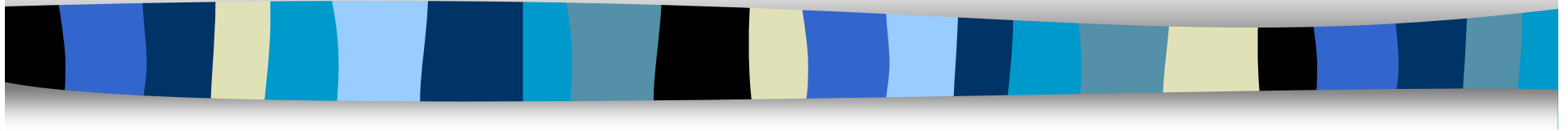


# Issues in Informality

## India Panel

WIEGO Research Conference, Cape Town



Saibal Kar

Centre for Studies in Social Sciences, Calcutta  
and IZA, Bonn

March 25-26, 2011



# Broad Themes

- What categories of informal workers or types of informality (high-end vs. low-end, voluntary vs. involuntary) are growing or shrinking?
- Factors driving these trends?
- Implications for Development and Poverty?



# Brief Theory

- Consider an aggregative economic structure
- Realistically, assume **3** finished and **1** intermediate good. **X** and **Y** are traded, **I** is intermediate and **Z** non-traded.
- Can expand to ‘**n**’ number of goods with same structure.
- **I** and **Z** produced in the **informal sector**; **X** and **Y** are **formal industries**.
- Product **I** ranges from rubber, leather products, paper products, garments, and services like mechanics, security services, chauffeurs, etc. which formal industries regularly use.
- **Z** is very low-end activity – small vendors to domestic helps

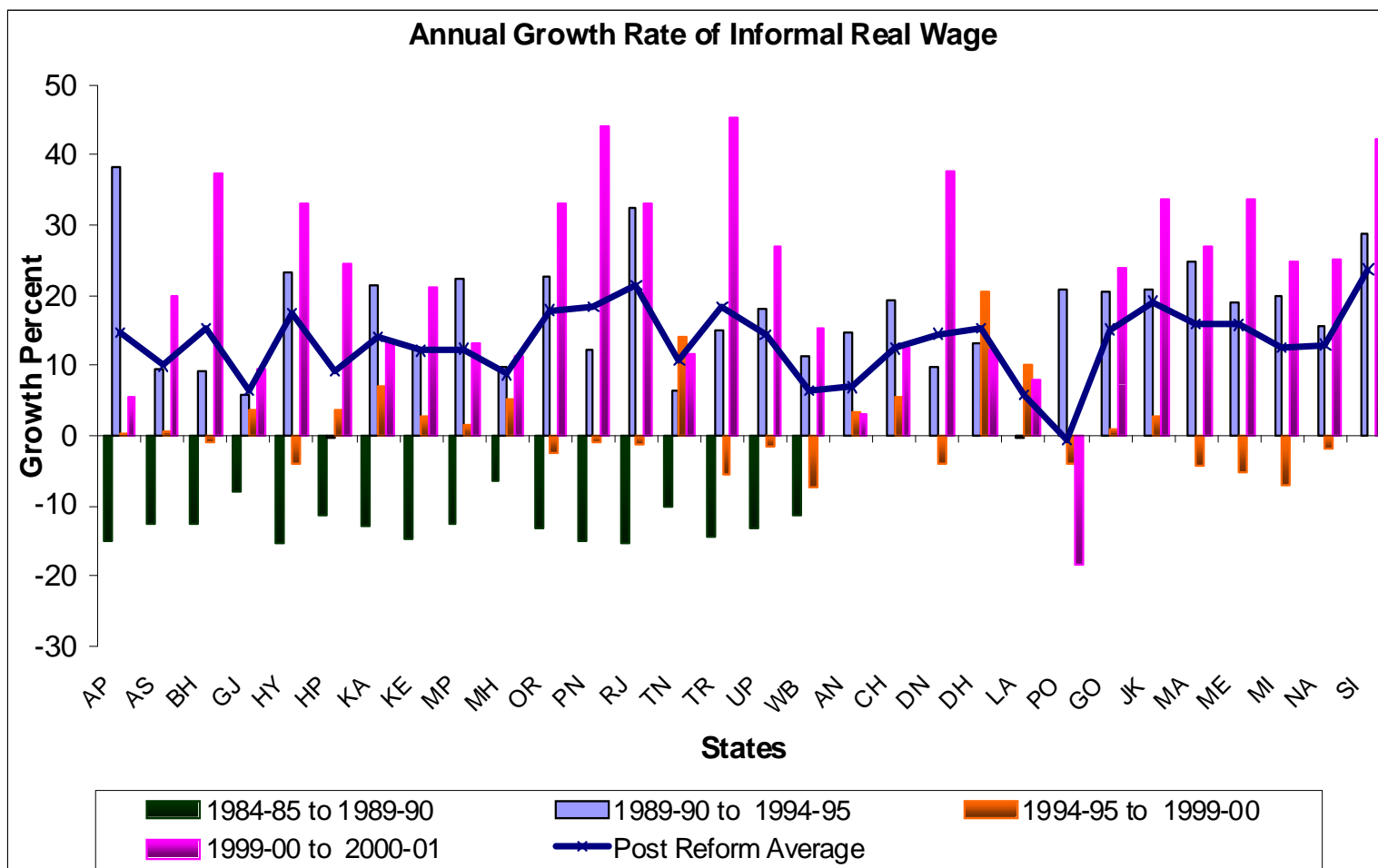


# Results

- **Proposition I:** *A reduction in the import tariff raises product prices and wages in both informal sectors. However, the sector producing the intermediate good expands in output and employment, while the one producing non-traded services, contracts.*
- **Proposition II:** *A rise in the price of the export good,  $Y$ , shall raise the prices of both intermediate good and non-traded good. The informal wage must rise, and labor moves to the intermediate sector thus lowering output and employment in the non-traded sector despite a higher price per unit.*

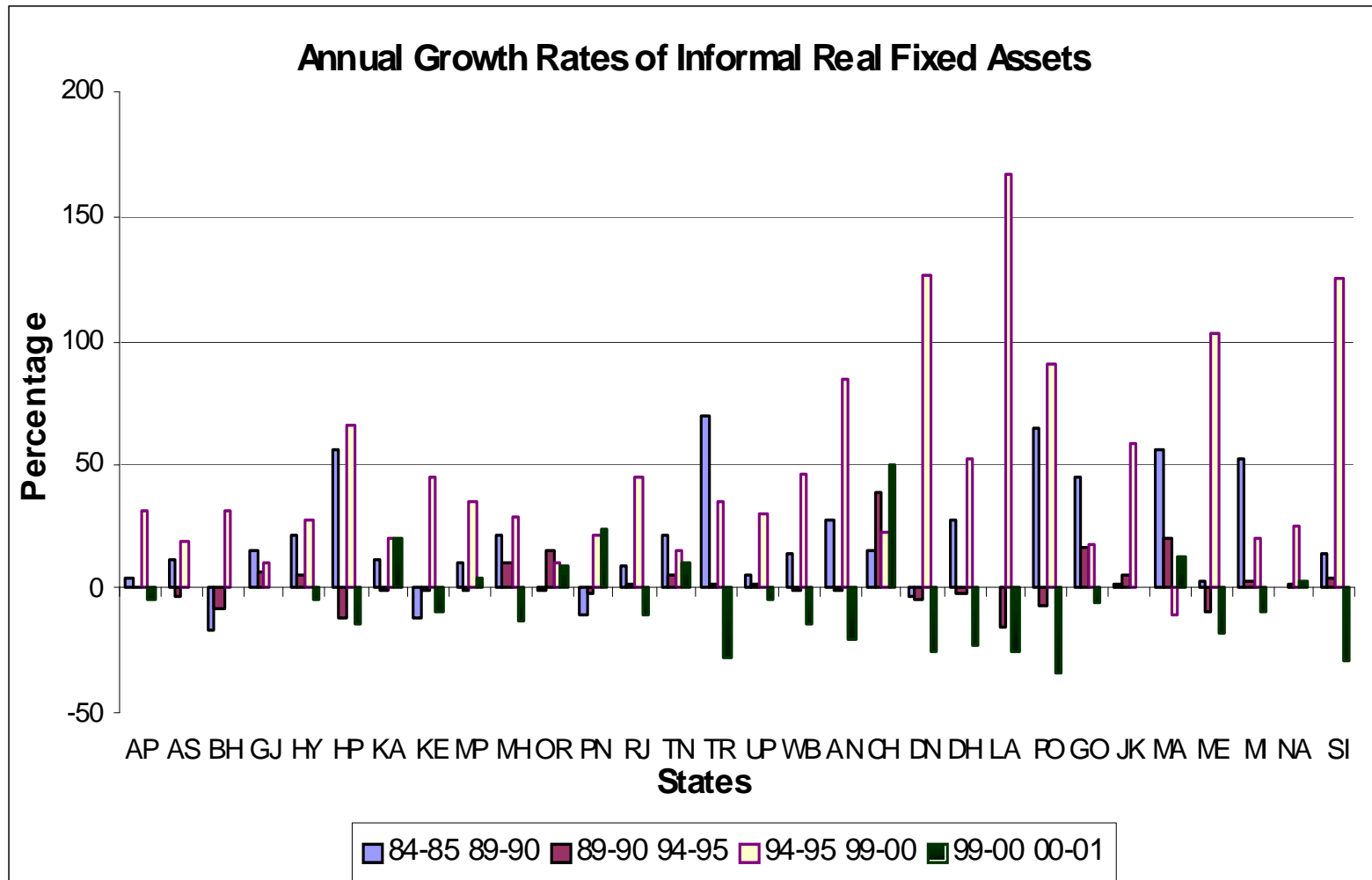
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# Evidence from India



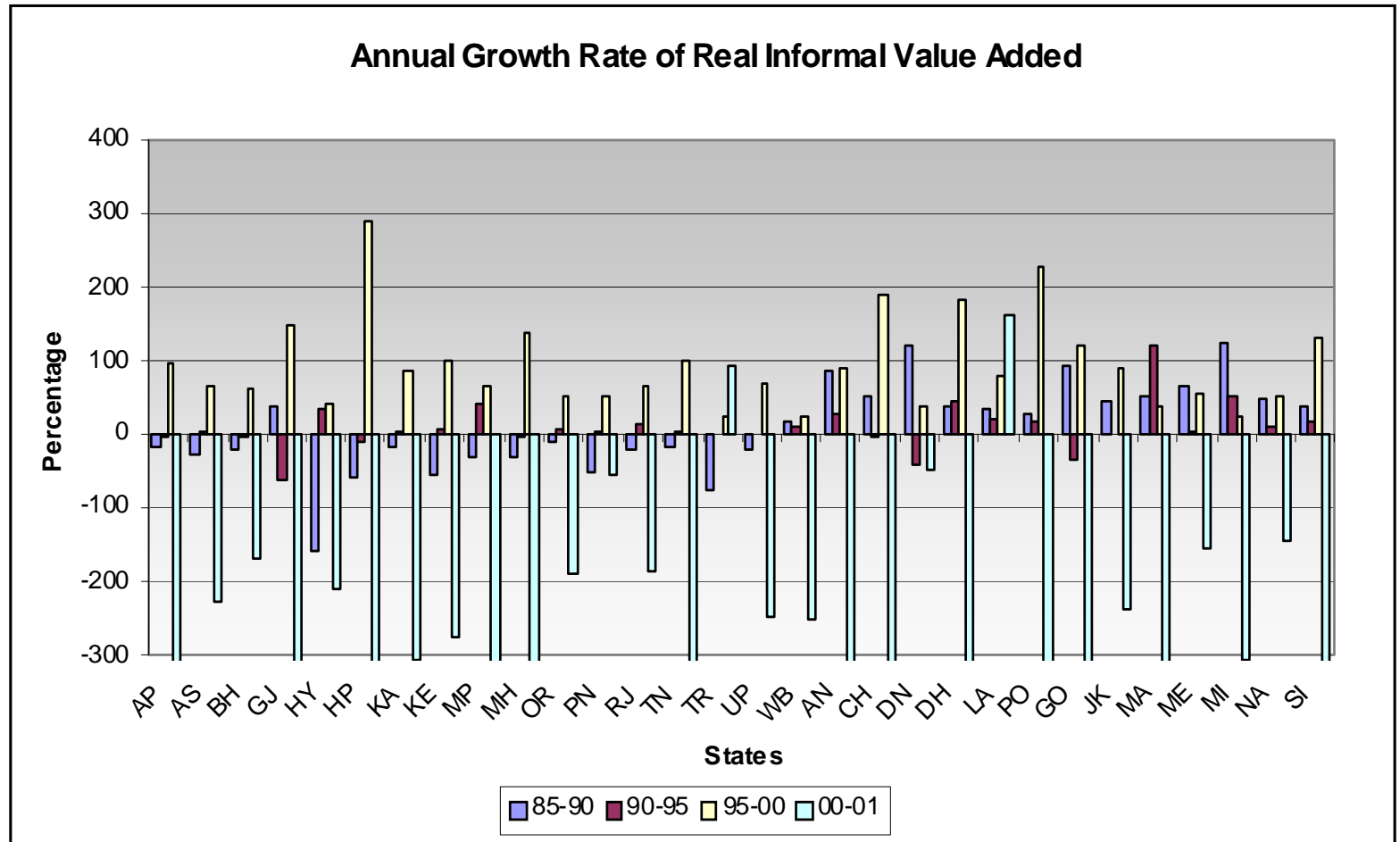
Source: NSS Reports, various rounds and own calculations

# Informal Real Fixed Assets



Source: NSS Various rounds, ASI Reports, GOI and own calculations

# Informal Real Value Added



Source: NSS Various rounds, ASI Reports, GOI and own calculations

# Econometric Evidence

METHODOLOGY: Generalized Least Squares							
Dependent variable: Annual Growth Rate of IW							
Year	Exp. Variables	Coeff.	t-ratio	R <sup>2</sup>	Adj. R <sup>2</sup>	AIC	LL
1989-90	CONSTANT	(-) 11.35	(-) 6.70473*	0.48	0.36	5.01	(-) 39.10
	FA	0.102	2.588*				
	VA	0.233	5.098*				
1994-95	CONSTANT	15.89	8.846*	0.23	0.14	7.59	(-) 109.98
	FA	0.278	2.190*				
	VA	0.183	1.744**				
1999-2000	CONSTANT	(-) 3.76	(-) 1.622	0.16	0.06	6.961	(-) 100.42
	FA	0.014	0.4587				
	VA	0.083	2.041**				
2000-2001	CONSTANT	69.56	5.691*	0.30	0.23	9.41	(-) 137.09
	FA	0.152	0.8636				
	VA	0.607	2.239*				





# Effect on Poverty

Regressing current period's **BPL percentage** on previous year's **Annual Growth of Informal wage**

**Sources: NSSO, Planning Commission, GoI**

Dependent variable: BPLPER					
Methodology: OLS					
Exp. Variables	Coeff.	t-ratio	R <sup>2</sup>	AIC	Log - Likelihood
IWPREV	(-) 0.236	(-) 2.57*	0.13	7.883	(-) 183.24
CONSTANT	27.85	14.53*			
Note: BPLPER = <b>BPL percentage</b> IWPREV = Previous year's growth rate of informal wage					

**Implication: Doubling Informal Wage lowers poverty by 23.6% for all states in India (1984-85 to 2004-05)**



# Labor Productivity Growth, Informal Wage and Capital Mobility

- The recent growth experience in India highlights the role of skill-based service sector and productivity improvement rather than a significant rise in physical capital accumulation
  - If the productivity of unskilled workers in the formal sector improves, it may have drastically different impact on the informal wage in the short and the long run.
  - Secular labor productivity growth in the informal sector may lead to lower wage for informal workers if capital mobility is restricted between the formal and the informal
- Published in: Ravi Kanbur and Jan Svejnar (Eds.) **Labour Markets and Economic Development**, NY: Routledge, 2009



# Theoretical Prediction

- **Proposition 1:** Improvement in labor productivity in the *informal (formal)* sector leads to **positive (negative)** wage growth for the *informal workers*, unambiguously, if **capital in the short run is perfectly immobile between the formal and the informal sectors**. Improvement in labor productivity in *formal* sectors **raise informal wage** in the long-run.



# Explanation

- In a three sector economy: X (skill, capital); Y (union wage, capital) both formal/organized sector and Z (unskilled workers, low-end capital) produced in informal segment
- A rise in skilled worker's productivity (either secular change or more capitalization) raises skilled wage and production of X, draws capital out of Y- employment must suffer in Y – excess supply of labor --- informal wage goes down and return to capital rises -----UNLESS there is free capital mobility between formal and informal sectors - otherwise informal output rises but workers get poorer - between 2000-01 and 2004-05 this is observed
- In the long run capital is freely mobile, negative impact on informal wage is mitigated



# Regression Results for Productivity

## Pooled Regression Equation (Random Effects Model):

$$\ln(I_w) = \alpha + (\beta_1 + \gamma_1 D_s) \ln(Y_F) + \beta_2 \ln(I_{FA})$$

Or,

$$\ln(I_w) = 0.07 + (0.61^* + 0.D_s) \ln(Y_F) + 0.11 \ln(I_{FA})$$

- R-squared: 0.33, Adj. R-Squared: 0.29, Prob >F=0.00, , Hausman = 0.00

\* = significant at 5% level

Where,  $I_w$  = Informal wage,

$\alpha$  = Constant,  $Y_F$  = Formal Average Productivity of Labor  
 $I_{FA}$  = Informal fixed assets

$D_s$  = Skill dummy (Which takes value=1 for skilled formal labor, value=0 for unskilled formal labor)

## State-wise Real GVA/worker, Real Fixed Assets and Real Wage (Informal)

States	Real GVA per worker (Formal)			Real Fixed Assets ('000) (Informal)			Real wage (Informal)		
	1989-90	1994-95	2000-01	1989-90	1994-95	2000-01	1989-90	1994-95	2000-01
	ANDHRA PRADESH	55859	93600	99091	112699	119314	298122	2535	7441
ASSAM	121584	102492	118578	15260	24942	31404	2665	5324	7181
BIHAR	154334	174546	221411	171383	138364	195048	3308	5293	7974
GUJARAT	117194	229594	283751	163235	219203	300510	3607	10739	12663
HARYANA	109689	150910	223213	50051	52169	157014	6852	9175	11028
HIMACHAL PRADESH	115405	188139	354982	56235	16102	33121	4460	6748	12009
KARNATAKA	120800	173724	194272	77874	101751	215801	2671	6342	8392
KERALA	106577	78337	108657	60789	44697	159397	4446	7530	9718
MADHYA PRADESH	147232	217470	265189	76709	92499	189710	2958	7966	8249
MAHARASHTRA	185831	268129	315094	209950	303671	608403	4038	10974	12695
ORISSA	170424	158313	212283	44574	53120	72085	2438	5781	6592
PUNJAB	116263	117541	130473	90991	32617	230536	2071	8026	11274
RAJASTHAN	103813	196273	251614	129626	63960	237915	2958	8008	12177
TAMIL NADU	106940	135241	149697	140946	94346	487575	4214	6812	9945
UTTAR PRADESH	116773	192203	214509	312029	220188	565231	3490	6036	8405
WEST BENGAL	67296	98239	106662	164692	125816	327097	3250	6828	8358
DELHI	105609	222398	191485	81516	126654	433640	8741	11139	14783



# Concluding Remarks

- The Wage movement in the Informal sector can be significantly explained by inter-sector mobility of capital (and degree of mobility)
- Real Fixed Assets and Real Value Added are significant explanatory factors
- Urban poverty is very sensitive to growth in Informal wage