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 - **Kolkata**

Growing Prevalence of Subcontracting in West Bengal - an Impediment to Industrial Growth or a Consequence of its Absence?

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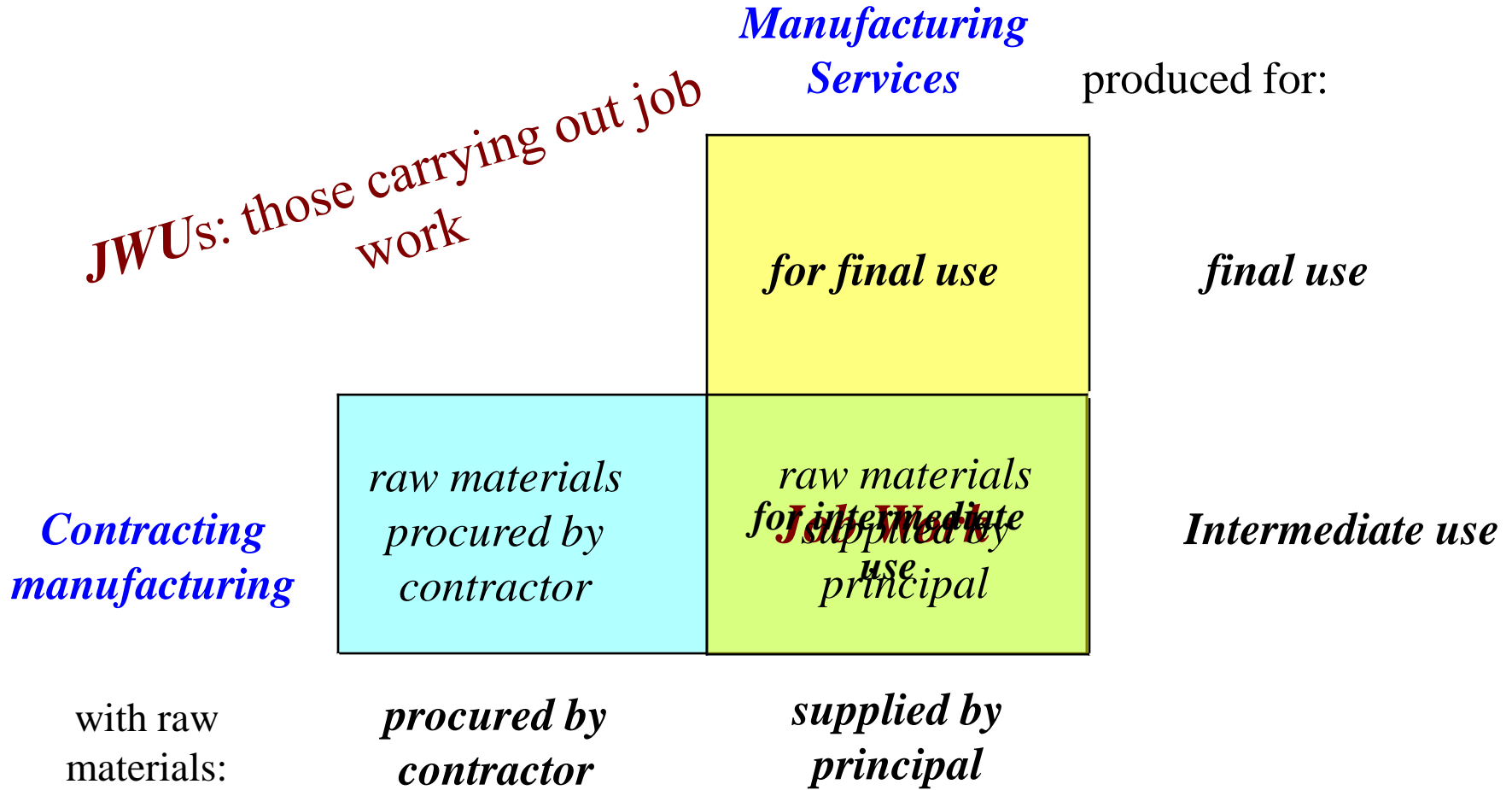
Introduction

Terms Used (1)

- ◆ “*Manufacturing Service*”: Transformation of physical inputs owned by other units. Two kinds:
 - for final use
 - for intermediate consumption.
- ◆ “*Manufacturing Service Providers*” (*MSPs*): Those exclusively engaged in providing *manufacturing service*.
- ◆ “*Contract Manufacturing*”: Activity of manufacturing undertaken for an outsourcing firm on contract. Two kinds:
 - main raw materials procured by the contract manufacturer
 - main raw materials supplied by the outsourcing firm.

Introduction

Job Work



Terms Used (2)

- ◆ “***Outsourcing***”: The act of engaging ‘*contract manufacturers*’ to carry out processing job work on materials – “goods for processing” - supplied. [as used in the *ISIC Rev. 4*]
- ◆ “***Subcontracting***”: The act of providing manufacturing services – of processing goods supplied by a *principal* – on contract.

Outsourcing & Subcontracting

Players Involved:

- ◆ “*Job Work Unit*” (*JWU*) : A *MSP* which provides manufacturing services for intermediate use to another enterprise on contract.
- ◆ “*Principal*”: An unit that outsources manufacturing process and supplies the main raw material – goods for processing – to *JWUs*.
- ◆ “*Agent*”: An intermediary unit that takes delivery of raw materials from a *principal* and engage *JWUs* to get the job done.

Units not involved:

- ◆ “*Own-accord*” manufacturing unit: a manufacturing unit that is neither a *principal* nor an *agent* nor a *JWU*.

Introduction

Indicators: 2000-01 to 2010-11 [*Table 1*]

	Indicator	year	West Bengal	All India
1.	Share of unorganised segment in 'job-count' employment of manufacturing sector (%)	2000-01	91.3	82.7
		2005-06	91.7	80.5
		2010-11	89.1	73.5
2.	Share of MSPs in total 'job-count' employment in manufacturing sector (%)	2000-01	36.9	33.6
		2005-06	39.0	34.5
		2010-11	55.8	36.4
3.	Share of JWUs in total 'job-count' employment in manufacturing sector (%)	2000-01	32.0	17.9
		2005-06	31.3	17.7
		2010-11	41.4	12.5

Introduction

Indicators -2000-01 to 2010-11 [*Table 1*]

	Indicator	year	West Bengal	All India
4.	Share of <i>JWUs</i> in <i>GVA</i> of manufacturing sector (%)	2000-01	15.6	6.3
		2005-06	5.9	2.5
		2010-11	8.7	1.8
5.	<i>Service charges</i> receipts to <i>VGO</i> ratio (%)	2000-01	12.5	9.5
		2005-06	8.9	8.5
		2010-11	7.9	6.3
6.	Share of <i>principals, agents</i> and <i>JWUs</i> in <i>GVA</i> of manufacturing sector (%)	2000-01	38.7	40.3
		2005-06	35.4	44.3
		2010-11	41.5	45.9

Present Study

- ◆ Earlier studies: Banga & Goldar (2004); P.Sahu (2007, 2011); Bhosle and Sashidharan *et. al.* (2013) and Vishnu Kumar *et. al.* (2007).
 - All these were confined to either the organised or the unorganised segment of the manufacturing sector.
- ◆ Present study covers both organised and unorganised segments, using
 - ASI 2000-01, 2005-06 & 2010-11 and
 - NSSO Enterprise surveys of 56th (2000-01), 62nd (2005-06) & 67th (2010-11) rounds.

Present Study – Main Focus

Period under study: 2000-01 to 2010-11.

Objectives:

1. to gauge relative prevalence of and nature of change in outsourcing and subcontracting in West Bengal, in terms of
 - presence of *principals, agents* and *JWUs*;
 - evidences of *inter-state flow* of *goods for processing* and *manufacturing services*; and
 - *earnings of subcontracting* activities;
2. to examine how industrial stagnation and the profusion of *JWUs* in the state are related to each other.

Present Study – Scope

- Examination of estimates of number of units, employment, *GVA* and other related indicators for *principals*, *agents* and *JWUs*.
- Excludes:
 - ‘own accord’ *MSPs*.
 - ‘repairing services’, since these are typically executed on machinery owned by the client;
 - subcontracting units that do not carry out *job work*.

Identification

Units providing and receiving manufacturing services

Data used for Identification

- ◆ From *ASI* [2000-01, 2005-06 & 2010-11]:
 - Payment of (exclusively) manufacturing service charges
 - Receipts of manufacturing service charges, (this also includes charges for non-industrial services).
 - Goods output and goods input
- ◆ From *ES* [2000-01, 2005-06 & 2010-11]:
 - Payment and receipts of service charges
 - Data on marketing arrangements.
 - Goods output and goods input

Identification of *Principals*

◆ From *ASi*:

- positive goods output, i.e. $VGO > 0$,
- positive *IC* of main raw materials or goods, i.e. $IC_{\text{goods}} > 0$,
- positive payment of manufacturing service charges or *IC* of manufacturing services, i.e. $IC_{\text{JW}} > 0$ and

◆ From *ES*:

- $VGO > 0$,
- $IC_{\text{goods}} > 0$,
- $IC_{\text{JW}} > 50\%$ of the expenses other than on raw materials and
- $GVO_{\text{MS}} = 0$.

Identification of *MSPs*

◆ From *ASI*:

All factories providing manufacturing services are assumed to be *JWUs*

◆ From *ES*:

- $VGO = 0$,
- $IC_{\text{goods}} = 0$,
- $IC_{\text{JW}} < 50\%$ of the expenses other than on raw materials and
- $GVO_{\text{MS}} > 0$.

Identification of *JWUs*

◆ From *ASI*:

- $VGO = 0$,
- $IC_{\text{goods}} = 0$,
- $IC_{\text{JW}} = 0$,
- $GVO_{\text{MS}} > 0$

◆ From *ES*:

- $VGO = 0$,
- $IC_{\text{goods}} = 0$,
- $IC_{\text{JW}} < 50\%$ of the expenses other than on raw materials
- $GVO_{\text{MS}} > 0$
- having prior marketing agreement
- other units provide raw material and
- the unit has no secondary activity.

Identification of *Agents*

- ◆ From both *ASI* and *ES*:
 - $VGO = 0$,
 - $IC_{\text{goods}} = 0$,
 - $IC_{\text{JW}} > 50\%$ of the expenses other than on raw materials and
 - $GVO_{\text{MS}} > 0$.

**Changing Aspects of
Manufacturing in West Bengal**

Changes in West Bengal during 1980s and 1990s

- a generally decelerating registered sector with a semblance of “turn around” during the latter half of 1990s;
- growing share of unregistered sector in the state’s manufacturing employment;
- very low labour productivity as compared to national level, and
- a widening gap between productivity estimates of the state and the country as a whole .

Changing Aspects of Manufacturing

Manufacturing in West Bengal - 2000-01 to 2010-11 [Table 5]

	Average Annual Growth Rate in Employment (%)	year / period	West Bengal	All India
1.0	manufacturing sector	2000-01 to 2005-06	-1.4	0.2
		2005-06 to 2010-11	-1.4	0.6
1.1	Registered	2000-01 to 2005-06	-2.2	2.6
		2005-06 to 2010-11	4.2	6.7
1.2	Unregistered	2000-01 to 2005-06	-1.3	-0.3
		2005-06 to 2010-11	-2.0	-1.2

Changing Aspects of Manufacturing

Manufacturing in West Bengal -2000-01 to 2010-11 [Table 5]

	Average Annual Growth Rate (%) in GVA [NAS]	year / period	West Bengal	All India
2.0	manufacturing sector	2000-01 to 2005-06	6.2	6.6
		2005-06 to 2010-11	8.4	9.3
2.1	Registered	2000-01 to 2005-06	5.9	7.8
		2005-06 to 2010-11	11.0	10.7
2.2	Unregistered	2000-01 to 2005-06	6.6	4.6
		2005-06 to 2010-11	5.6	6.4

Changing Aspects of Manufacturing

Manufacturing in West Bengal -2000-01 to 2010-11 [Table 5]

	Indicator	year / period	West Bengal	All India
3.	Share of <i>unorganised segment</i> in total <i>employment</i> of manufacturing sector (%)	2000-01	91.3	82.7
		2005-06	91.7	80.5
		2010-11	89.1	73.5
4.	<i>GVA per worker</i> (at current prices) of manufacturing sector (Rs. 000)	2000-01	20.8	47.8
		2005-06	50.0	156.2
		2010-11	91.2	266.8

Changes in West Bengal: 2000-01 to 2010-11

- **Manufacturing employment:**
 - low growth at national level but declining in West Bengal
 - yet, decent AGR of *GVA* in West Bengal [NAS] → “jobless growth” in unregistered manufacturing?
 - falling share of unregistered segment at the national level while that for the state remaining largely unchanged
- **Labour productivity (*GVA* per worker)**
 - low and progressively falling in the state as compared to that at the national level.

Outsourcing and Subcontracting
- Recent Trends in West Bengal

Recent Trends – Outsourcing & Subcontracting

Percentage Share of *Principals*

State / All-India	Estimate	2000-01	2005-06	2010-11
All India	unit	1.6	1.8	1.3
	workers	9.5	11.2	14.3
	GVA	32.9	40.7	43.4
West Bengal	unit	3.6	2.6	1.3
	workers	8.7	7.4	6.8
	GVA	21.7	29.1	32.2

Recent Trends – Outsourcing & Subcontracting

Percentage Share of *Principals*

State / All-India	Estimate	2000-01	2005-06	2010-11
West Bengal	unit	3.6	2.6	1.3
	workers	8.7	7.4	6.8
	GVA	21.7	29.1	32.2
Gujarat	unit	1.0	1.1	1.2
	workers	15.6	16.9	15.5
	GVA	37.2	58.0	37.1
Tamil Nadu	unit	1.5	1.7	1.8
	workers	14.7	17.3	20.2
	GVA	37.1	44.3	46.8
Maharashtra	unit	2.5	1.4	2.7
	workers	17.4	18.2	22.1
	GVA	44.5	35.5	52.2

Outsourcing – Recent Trends

- In 2000-01, the percentage of *principal* units in West Bengal was higher than that in the country as whole.
- During the decade,
 - In West Bengal: *Principals'* percentage share in workers fell while that in *GVA* increased.
 - At the national level, increasing trends are seen in both percentage share of *GVA* and employment.
 - As it appears, outsourcing tended to get concentrated in larger (registered) units.

Recent Trends – Outsourcing & Subcontracting

Percentage Share of JWUs and Agents in Manufacturing Workforce

State / All-India	2000-01	2005-06	2010-11
All India	19.5	19.1	13.8
West Bengal	34.5	32.2	42.5
Uttar Pradesh	19.3	23.7	20.1
Gujarat	20.7	12.2	3.0
Tamil Nadu	31.1	33.2	22.2
Maharashtra	12.9	13.6	3.0
Andhra Pradesh	13.6	12.3	6.1
Madhya Pradesh	22.6	5.7	18.8
Rajasthan	8.8	9.3	3.2

***Subcontracting* – Recent Trends:**

- During 2000-01 to 2005-06, percentage share of *JWUs* or *agents* units in manufacturing sector employment:
 - In West Bengal and Tamil Nadu, about 1/3, as against 19% at the national level.
 - In all the other selected states, much lower.
 - Except for Gujarat and Madhya Pradesh, no noticeable change.
- During 2005-06 to 2010-11:
 - **Most significantly, for all-India it fell from 19% to 14%, while that in West Bengal shot up from 32% to 42%.**
 - In Madhya Pradesh, sharp rise.
 - In all the other selected states, a noticeable decline.

Recent Trends – Outsourcing & Subcontracting

Importance of Outsourcing & Subcontracting

Percentage Share of Units Involved in Outsourcing and Subcontracting in Manufacturing GVA [Table 11]

State	2000-01	2005-06	2010-11
All India	40.3	44.3	45.9
West Bengal	38.7	35.5	41.6
Uttar Pradesh	26.7	36.5	34.3
Gujarat	44.9	59.6	38.4
Tamil Nadu	47.7	51.3	53.4
Maharashtra	50.2	40.3	53.4
Andhra Pradesh	24.7	34.6	43.2
Madhya Pradesh	41.4	33.3	43.1
Rajasthan	30.7	48.5	37.5

Contribution of Outsourcing & Subcontracting

- Extremely high dependence (p.c. share of subcontracting-based manufacturing in manufacturing GVA) of Indian manufacturing on subcontracting.
- At the national level, the share underwent a gradual rise during the decade.
- Largely similar trends are seen for the selected states, except Gujarat.
- Most significantly, its share in manufacturing GVA \gg its share in manufacturing workforce, except in West Bengal.

Recent Trends – Outsourcing & Subcontracting

Relative Shares of *Principals*

Percentage Shares of Subcontracting-based Manufacturers in GVA and Workforce in 2010-11 - All-India [Table 12]

'contract' category	GVA	Workers
Principal	43.4	14.3
Agent	0.7	1.3
JWU	1.8	12.5
Own accord	54.1	71.9
All	100.0	100.0

- As expected, the *principals* have a relatively high share of manufacturing GVA with a much smaller share in its workforce.
- Evidently, much of the GVA of the *principals* are derived from the value generated by activities of the subcontractors.

Relative Prevalence of Outsourcing & Subcontracting

- The *Index of Relative Prevalence (IRP)* defined as follows:

$$IRP = \frac{P_{nk} / P_k}{P_{nI} / P_I}$$

where P_{nk} : number of *principal* units / workers in JWUs in the k^{th} state

P_k : number of units / workers in the k^{th} state

P_{nI} : number of *principal* units / workers in JWUs in India

P_I : number of units / workers in India.

Recent Trends – Outsourcing & Subcontracting

IRPs of Principal and JWU Workers [Table 13]

State	Principals			JWU workers		
	2000-01	2005-06	2010-11	2000-01	2005-06	2010-11
West Bengal	2.3	1.4	1.0	2.0	1.8	2.9
Uttar Pradesh	0.6	0.3	0.3	1.0	1.1	1.3
Gujarat	0.6	0.6	0.9	0.9	0.8	0.1
Tamil Nadu	0.9	0.9	1.4	1.5	1.8	1.4
Maharashtra	1.6	0.8	2.1	0.5	0.6	0.2
Andhra Pradesh	0.9	3.5	1.2	0.5	0.6	0.2
Madhya Pradesh	0.3	0.2	0.2	1.2	0.3	1.5
Rajasthan	0.4	0.6	1.6	0.3	0.3	0.1

Cross-State-Border Outsourcing and Subcontracting

- West Bengal had relative advantage in both *outsourcing* & *subcontracting*, except that at the end of the decade *RPI* for *principals* declined to 1.
- *Subcontracting* in the state grew sharply during the decade.
- Maharashtra and Andhra Pradesh had high *RPI* for the *principals* and low *RPI* for *JWUs*.
- In contrast, Uttar Pradesh and Madhya Pradesh had low the *RPI* for *principals* and high *RPI* for *JWUs*.
- In Gujarat and Rajasthan, both subcontracting and outsourcing were generally low, with a sharp fall in the *RPI* for the *JWUs*.

Index of Net Subcontracting (INS)

$$INS = \frac{\text{number of workers in JWUs per principal unit in the state}}{\text{number of workers in JWUs per principal unit in India}}$$

Another index, henceforth called *Size-Adjusted Index of Net Subcontracting (SAINS)*, is defined as *INS* adjusted by a factor representing relative size of units in the state.

- $SAINS =$

- $$\frac{\text{number of workers in JWUs per principal unit in the state}}{\text{number of workers in JWUs per principal unit in India}}$$

$$\left/ \frac{\text{average size of units in the state}}{\text{average size of units in India}} \right.$$

- This reduces to

- $$SAINS = \frac{(\text{IRP for JWU workers of the state})}{(\text{IRP for principal units of the state})}$$

Recent Trends – Outsourcing & Subcontracting

Index of Net Subcontracting [Table 14]

State	INS			SAINS		
	2000-01	2005-06	2010-11	2000-01	2005-06	2010-11
West Bengal	0.77	1.09	2.15	0.87	1.29	2.90
Uttar Pradesh	1.67	3.53	4.17	1.67	3.67	4.33
Gujarat	2.31	2.05	0.13	1.50	1.33	0.11
Tamil Nadu	1.86	2.38	1.19	1.67	2.00	1.00
Maharashtra	0.40	1.04	0.12	0.31	0.75	0.10
Andhra Pradesh	0.56	0.16	0.16	0.56	0.17	0.17
Madhya Pradesh	3.54	1.33	5.83	4.00	1.50	7.50
Rajasthan	0.63	0.48	0.06	0.75	0.50	0.06

Net Subcontracting by States

- As both the indices suggest, **West Bengal** shifted its position:
 ‘*net outsourcer*’ → ‘*net subcontractor*’ during the decade.
- Only **Gujarat** among the other selected states show a shift in position, but in the reverse direction.
- **Uttar Pradesh, Madhya Pradesh** and **Tamil Nadu** have throughout been ‘*net subcontractors*’,
 - with Tamil Nadu showing distinct signs of shifting towards outsourcing in the future.
- On the other hand, the indices clearly identify **Maharashtra, Rajasthan** and **Andhra Pradesh** as having been ‘*net outsourcers*’ throughout the decade.

Subcontracting-Based Earnings

- The GVA of *principals, agents* and *JWUs* taken together represents the earnings from *subcontracting-based manufacturing* (SBM).
- Percentage shares of a state in *workers* and *GVA* of the SBM units of the country reflect the inter-state disparity stemming from outsourcing activities.

Recent Trends – Outsourcing & Subcontracting

Inter-State Disparity in Earnings of SBM Units [Table 15]

State	Estimate	2000-01	2005-06	2010-11
West Bengal	Workers	21.3	17.3	21.0
	GVA	6.0	3.4	3.7
Uttar Pradesh	Workers	10.7	12.6	12.2
	GVA	5.5	5.9	5.2
Tamil Nadu	Workers	16.0	17.4	17.4
	GVA	14.0	9.7	12.3

Recent Trends – Outsourcing & Subcontracting

Inter-State Disparity in Earnings of SBM Units [Table 15]

State	Estimate	2000-01	2005-06	2010-11
Gujarat	Workers	6.2	5.7	6.2
	GVA	11.8	17.8	11.3
Maharashtra	Workers	9.6	9.5	9.1
	GVA	22.2	23.2	21.0
Andhra Pradesh	Workers	6.7	7.0	6.0
	GVA	3.3	3.9	6.4

**Subcontracting in Unregistered
Manufacturing –
Composition and Productivity**

Composition and Productivity

Percentage Distribution of Workers in JWUs

States	Year	Rural			Urban			All
		Female	Male	persons	Female	Male	persons	
All India	2000-01	31.8	26.6	58.4	13.9	27.8	41.6	100
	2005-06	42.8	21.3	64.2	14.3	21.5	35.8	100
	2010-11	44.5	19.8	64.3	16.6	19.1	35.7	100
West Bengal	2000-01	37.8	32.2	70.0	13.6	16.4	30.0	100
	2005-06	57.1	19.3	76.4	12.6	11.0	23.6	100
	2010-11	56.9	24.6	81.5	7.9	10.7	18.5	100

Composition of JWU Workforce

- Participation of female workforce in rural *JWUs* has been highest in West Bengal throughout the decade and has progressively grown during the period.
- It was high in Uttar Pradesh, Andhra Pradesh and Tamil Nadu as well, but there were distinct signs of decline.
- In Maharashtra, it was low but the shares of both rural and urban female workers grew perceptively.
- In all the selected states, except Gujarat and Rajasthan, there was a distinct shift towards female workers in the composition of JWU workforce.

Composition and Productivity

GVAPW of JWUs & Wage Earnings of Casual Workers

States	Reference Year	Average Daily Wage Earnings at 2004-05 prices		Reference Year	Average daily GVAPW of JWUs at 2004-05 prices	
		Rural	Urban		Rural	Urban
All India	1999-2000	42.5	63.5	2000-01	39.6	90.8
	2004-05	41.6	62.6	2005-06	47.2	92.7
	2010-11	69.0	89.8	2010-11	42.9	82.3
West Bengal	1999-2000	46.6	51.0	2000-01	36.0	60.0
	2004-05	42.5	47.4	2005-06	21.9	63.2
	2010-11	63.3	72.5	2010-11	39.7	74.6
Uttar Pradesh	1999-2000	44.3	53.9	2000-01	37.3	69.9
	2004-05	45.7	55.1	2005-06	35.1	71.5
	2010-11	65.7	79.5	2010-11	38.9	49.5

Composition and Productivity

GVAPW of JWUs & Wage Earnings of Casual Workers

States	Reference Year	Average Daily Wage Earnings at 2004-05 prices		Reference Year	Average daily GVAPW of JWUs at 2004-05 prices	
		Rural	Urban		Rural	Urban
Gujarat	1999-2000	48.9	75.3	2000-01	100.4	211.7
	2004-05	49.2	70.3	2005-06	48.2	127.2
	2010-11	71.5	74.1	2010-11	568.2	110.3
Tamil Nadu	1999-2000	49.8	71.8	2000-01	37.3	61.7
	2004-05	45.8	65.7	2005-06	37.7	62.6
	2010-11	81.7	105.0	2010-11	67.8	113.4
Maharashtra	1999-2000	42.8	65.7	2000-01	83.8	182.9
	2004-05	41.9	72.1	2005-06	694.3	324.5
	2010-11	60.1	77.6	2010-11	36.1	109.6

Composition and Productivity

GVAPW of JWUs & Wage Earnings of Casual Workers

States	Reference Year	Average Daily Wage Earnings at 2004-05 prices		Reference Year	Average daily GVAPW of JWUs at 2004-05 prices	
		Rural	Urban		Rural	Urban
Andhra Pradesh	1999-2000	37.6	57.2	2000-01	32.9	59.2
	2004-05	34.6	50.1	2005-06	36.1	42.1
	2010-11	78.1	95.8	2010-11	44.7	57.2
Madhya Pradesh	1999-2000	32.2	43.7	2000-01	23.3	51.3
	2004-05	34.6	45.1	2005-06	25.2	35.6
	2010-11	58.2	65.7	2010-11	22.3	29.8
Rajasthan	1999-2000	54.4	67.7	2000-01	72.0	76.1
	2004-05	57.3	63.5	2005-06	51.0	111.0
	2010-11	102.0	101.6	2010-11	43.1	74.7

Labour Productivity of JWUs & Wage Earnings of Casual Workers

Results indicate:

- The *principals* are in a position to take advantage of availability of cheap labour across state borders,
- The *JWUs* are obliged to operate even when their earnings per worker fall below the daily wage earnings of casual workers.
- The growth of *JWUs* in rural West Bengal and high female employment in them provide evidence of distress-led non-farm employment.

In Conclusion

Concluding Remarks (1)

- At the beginning of the decade, West Bengal had
 - a disproportionately high percentage of workers engaged in unregistered units and thus
 - a very low labour productivity;
 - a third of its manufacturing employment engaged in *JWUs*; and
 - relative advantage both in outsourcing and subcontracting.
 - *principal* units plagued with low returns.

Concluding Remarks (2)

During the decade, West Bengal

- lost much of the relative advantage of *outsourcing*, while the *subcontracting* units became more and more numerous.
- moved from its position of a ‘net outsourcer’ to a ‘net subcontractor’.
- saw a sharp rise in the percentage share of rural workers, particularly female workers, in *JWU* workforce;
- had rural *JWUs* with very low GVAPW - even less than the daily wage earnings of rural casual workers, which themselves were amongst the lowest in the country.
- had high share in *JWU* workforce and very low share in the GVA of *SBM* in India.

Concluding Remarks (3)

- ◆ West Bengal patently lacks the entrepreneurship to mobilise its 'distressed' workforce.
- ◆ The entrepreneurs of other states, particularly those engaged in low-skill labour-intensive manufacturing activities, should naturally be content with outsourcing to the state's *JWUs* rather than investing in the state.
- ◆ Thus, the very high prevalence of subcontracting not only is a consequence of industrial stagnation in the state but also an impediment to its industrial growth.

Thanks