Preliminary Draft


Labor Productivity Growth, Informal Wage and Capital Mobility
A General Equilibrium Analysis

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Abstract:

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. In this context we study the possible impact of higher productivity of labor in the formal sector on the informal wage in an economy comprising of skilled and unskilled workers. More productive skilled workers depress informal wage in the short-run, but do not affect it in the long run, when capital is fully mobile across sectors. 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.

Keywords:  skilled labor, productivity growth,
informal wage, factor specificity

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## I  Introduction

We try to look at the impact of a growth in productivity of workers in the formal and informal sectors on the informal wage and employment.  It is now more or less established that the recent rise in Indian growth rate is much more related to a productivity boost than to a rise in investment.  This is corroborated by Guha-Khasnobis and Bari (2003), Marjit (2006) etc. The social consequence of overall rise in growth rate must be reflected on the quality of life of the poor people. While it is difficult to assess such an impact at the micro level and in terms of  various indicators of human development, we feel that informal wage is a good benchmark to capture the income element, given that most of the workforce in India is absorbed in this segment. Hence, for example, one may like to know how a productivity growth in the skilled sector affects the informal wage of unskilled workers or how a productivity growth of unskilled workers working in the organized/formal sector affects their informal counterpart.  Before we detail our plan of work, let us briefly visit the existing literature dealing with informal labor markets in developing countries.

Several empirical papers by Marjit and Maiti (2006), Sinha and Adam (2006), Olofin and Folawewo (2006) contained in a recent volume edited by Guha-Khasnobis and Ravi Kanbur (2006) discuss various aspects of the informal labor markets and its role in the development process.  Goldberg and Pavcnik (2003) and Marjit, Ghosh and Biswas (2006) point out the asymmetric impact of reform policies on the size of the informal sector.  Marjit (2003), Marjit, Kar and Beladi (2007) argue that liberal trade policies that contract the size of import-competing sector and create excess supply of workers in the informal segment can still lead to a rise in the informal wage if capital is also allowed to be reallocated to the informal sector. Empirical evidence supporting these claims is provided in Marjit and Kar

(2005) and Marjit and Maiti (2006). The theoretical structure dealing with formal-informal interaction in some of the abovementioned work captures dual labor market by including a high fixed wage formal sector with a lower flexible wage informal segment, in line with the earlier treatments of Carruth and Oswald (1981), Agenor and Montiel (1997), Marjit(2003) etc.

While the focus of the earlier papers was to check trade policy induced relative price effects on real informal wage, the current paper highlights the productivity issue explicitly. It finds that the degree of capital mobility between the formal and the informal sector is quite critical in determining whether the benefit of a productivity growth in the formal sector percolates to the informal workers and/or whether productivity growth of the informal workers is eventually translated into an increase in their wage . In the process we extend Jones (1971) and demonstrate that the condition under which the mobile factor gains from its own productivity growth is altered as soon as we bring in some degree of mobility in sector specific capital model.

Theoretical considerations involving the spillover effect of productivity growth on informal wage work through labor and capital movement and vertical linkage between the formal and informal sectors. In this paper we look at the factor mobility aspect. The linkage effect is discussed in the appendix. These need to be supplemented by demand side effects when growth in income spills over to the non-traded informal activities. Yet, we look at only supply side effects, partly because the demand effect is quite standard but partly because the demand side effect may not be that significant.

In an important work Foster and Rosenzweig (1995) argue that greater agricultural productivity induced higher wage in the rural economy increases the cost of production in rural

industries. At the same time, greater demand for rural non-traded goods encourages rural industrialization. In case of India, the mix of such effects has worked against rural industrialization. Thus what they show is that the role of demand in rural industrialization is less significant compared to the supply side effects. While the overall demand effect in the entire economy cannot be undermined, in the current context we are interested in identifying the supply side outcomes.

These are taken as building blocks for the model we construct. Our study applies a general equilibrium model of production for a small open economy, looks at the labor productivity growth in formal and informal sectors and derives a whole set of results, by considering the short run, when capital does not move and the longer run when capital moves gradually.

Higher productivity growth in the skilled sector in the short-run has an unfavorable impact on the informal wage, whereas in the longer run, it may not have any impact. Productivity growth in the unskilled sector is likely to have opposite effects on informal wage in the short and in the long run. Productivity growth in the informal sector will be retained in higher wages in the short run provided Jones condition holds. As we introduce some degree of capital mobility, the condition changes and the possibility of a rising informal wage is eventually guaranteed by a higher elasticity of capital mobility. With full mobility informal wage must rise.

The paper is structured is as follows. The second section develops the basic model and results. The third section attempts a simple econometric exercise to corroborate some of the theoretical claims. The last section concludes.

## 2.    The Model

We have a three sector economy, X uses skilled labor and capital, Y uses unskilled labor and capital. X and Y are located in the formal/ organized segment. While the skilled wage is market determined, unionized bargaining determines the level of fixed wage for the unskilled in the formal sector. One point should be noted here. One can easily endogeneize the fixed wage by invoking a utility maximizing union. Thus exogeneity is not a crucial assumption.   Z is produced with informal workers and capital. Informal wage is market determined and is less than the fixed wage in the formal sector. In the short term capital does not flow between the formal and informal segments. But there is perfect mobility within the formal sector. Markets are competitive and technology is neo- classical. We assume exogenously given commodity prices, consistent with the small open economy assumption. Following equations describe the model –

Competitive Price Conditions

$$w_s a_{SX} + r a_{KX} = P_X \tag{1}$$

$$\overline{w} a_{LY} + r a_{KY} = P_Y \tag{2}$$

$$w a_{LZ} + R a_{KZ} = P_Z \tag{3}$$
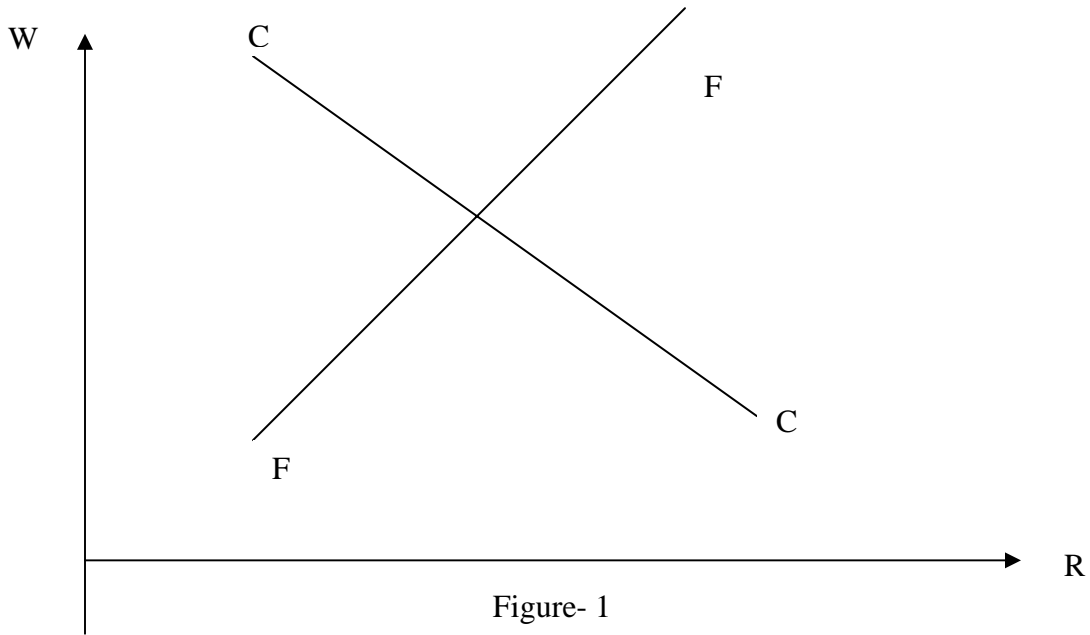
Full Employment Conditions

$$a_{KX}X + a_{KY}Y = \tilde{K} \qquad (4)$$

$$a_{LY}Y + a_{LZ}Z = L \qquad (5)$$

$$a_{SX}X = S \qquad (6)$$

$$a_{KZ}Z = K_Z \qquad (7)$$

Note that (1) and (2) determine $w_s$ and r. Then from (4) and (6) we determine X

and Y. Then (3), (5) and (7) determine w, R and Z. $(a_{KX}, a_{SX}, a_{KY}, a_{LY})$ are determined

by $\dfrac{w_S}{r}$ and $\dfrac{\overline{w}}{r}$. It is easy to check that for (5) and (7) to hold simultaneously an increase

in w must increase R as well. A rise in w, given $a_{LY}Y$, reduces demand for labor in the

informal sector, hence R must rise to absorb the excess. On the other hand (3) suggests

that (w, R) should be negatively related. Both relationships together analytically

determine w and R and hence Z from (7). (See Figure-1)

Figure- 1

CC refers to the Competitive Condition
FF refers to the Full- Employment Condition

We are in the short- run with no mobility of capital from the formal to the

informal segment i.e. $r \neq R.$ We now look at the consequence of a secular decline in

$a_{SX}, a_{LY}$ and $a_{LZ}$ on w, the informal wage. Note that

$$a_{SX} = f\left(\frac{w_S}{r}, t\right) \qquad (8)$$

where t denotes some sort of productivity parameter and $\hat{a}_{SX} = -\alpha < 0$ denotes the

elasticity of $a_{SX}$ with respect to t given $\frac{w_S}{r}$.

Let us trace the general equilibrium consequence of a drop in $a_{SX}$. A decline in $a_{SX}$

must raise $w_S$ as r is pegged from (2). Note that this should raise X and reduce Y.

From (5) it is straightforward to argue that there will be excess supply of labor in the informal segment following a cutback in Y. Thus w will go down and R will increase. The size of informal output and employment will expand but informal workers will be poorer.

A secular decline in $a_{LY}$ raises r and squeezes $w_S$, reducing X and hence increasing Y. Interestingly enough this may or may not increase the demand for informal labor as $a_{LY}$ drops and Y increases. If elasticity of factor substitution is strong enough employment in Y will increase drawing workers from the informal segment raising w and reducing R.

The last exercise is the direct effect of a secular decline in $a_{LZ}$ on w. Given Y, whether such a change increases w depends on the elasticity of substitution. With weak substitution elasticity wage can go down.

Note that while productivity growth in the skilled sector cannot increase w, more productive unskilled workers in the formal sector may raise w.

**The Long Run**

Suppose capital can move freely between the formal and the informal with r = R. Also equations (4) and (7) are now lumped together as (9).

$$a_{KX}X + a_{KY}Y + a_{KZ}Z = \overline{K} \tag{9}$$

Note that w is insulated from changes in supply of informal workers as capital moves in and out to remove any gap between r and R.

A drop in $a_{SX}$ now increases $w_S$ without any impact on r or w. The short- run harmful effect on w is mitigated by capital mobility. As X expands and Y contracts, capital moves quickly out of Y production.

A drop in $a_{LY}$ will increase r, reduce both $w_S$ and w. The informal sector and the skilled sector both have to accommodate a higher r.

A drop in $a_{LZ}$ must increase w. This is also an unambiguous result. As $\overline{w}$ is frozen, any tendency of increasing the return to capital in the formal sector is countered by movement of capital into the sector. Thus the benefit rests with the informal workers. In fact the rate of increase in w will be greater than the rate of growth in productivity.

### 3.    A Heuristic Exercise

Now we try to assess our theoretical conjectures in terms of some empirical evidence drawn from the data on informal wage, formal sector productivity and capital accumulation in Indian industries. As has been noted in the theoretical section, labor productivity growth in the skilled sector should not benefit the informal workers. At best it can worsen it if capital is sector- specific. On the other hand labor productivity growth in the unskilled segment may increase unskilled informal wage. In terms of a preliminary empirical exercise we use data on informal wage, labor productivity in organized sector and fixed assets for the informal manufacturing for various NSS round between 1989-90 to 2000-2001 across various Indian states. We also classify relatively skilled and relatively unskilled states in terms of the participation of skilled workers in organized manufacturing. Appendix 3 contains Pooled Regression Results involving real informal wage (manufacturing) available in three rounds of NSSO, 1989- 90, 1994- 95, 2000- 2001. We use the data on gross value added (GVA) per worker in organized manufacturing from Annual Survey of Industries for various states, data on real fixed assets in the informal

sector as a proxy of capital and dummies to denote whether a state has greater than average proportion of skilled workers.

Our simplified baseline regression shows some interesting results.

Growth in informal wage is significantly and positively related to a growth in GVA per worker in the formal sector for relatively "unskilled" states. However, the coefficient of real fixed assets is not significant. Also this is not a very good fit for overall determination of the growth rate of the informal wage. But it is instructive to note that a growth in the productivity of unskilled worker in the organized sector does have a positive influence on the growth of real informal wage, a distinct possibility in our theoretical structure. Appendix 3 provides the relevant data and the regression results.

**Concluding Remarks**

This paper starts from a stylized fact that the recent growth in the Indian economy is more due to a productivity take-off rather than anything else. Such productivity growth is also concentrated in the service sector, which has grown phenomenally over the recent years. As labor productivity in formal/ organized sector increases, does it help the informal workers? How does informal wage, a benchmark yardstick for the poor, respond to much changes in the short- run and in the long- run when we account for both labor and capital movement across sectors.

We prove that higher productivity of skilled workers should not affect informal wage. More productive unskilled workers in the formal segment may help the informal workers in the short- run but definitely not in the long- run. Capital mobility plays a crucial role in our analysis.

Product market reform, productivity change, trade related reform, all have worked together to affect the informal wage. We have argued elsewhere that trade reform should help the informal workers provided capital moves more or less freely between the segments. But as we show here the productivity impact does have opposite implications. For example any reform that reduces cost of capital in the formal sector must help the informal segment when capital is mobile. But under the same circumstances a productivity growth in the formal sector will hurt the informal workers. One future task might be to isolate these impacts empirically.

## Appendix 1

**Effect of a decline in** $a_{LY}$ **and** $a_{LZ}$ **with Imperfect Mobility of Capital.**

$$K_X + K_Y = \tilde{K} \qquad\qquad (1A)$$

$$\tilde{K} + K_Z = \overline{K} \qquad\qquad (2A)$$

$$\hat{\tilde{K}} - \hat{K}_Z = \in \left( \hat{r} - \hat{R} \right) \qquad\qquad (3A)$$

Differentiating full- employment conditions

$$\lambda_{LY}\hat{Y} + \lambda_{LZ}\hat{Z} + \lambda_{LY}\hat{a}_{LY} + \lambda_{LZ}\hat{a}_{LZ} - \lambda_{LY}\alpha - \lambda_{LZ}\beta = 0 \qquad (4A)$$

$$\lambda_{KX}\hat{X} + \lambda_{KY}\hat{Y} = \hat{\tilde{K}} \qquad\qquad (5A)$$

$$\hat{a}_{KZ}\hat{Z} = \hat{K}_Z \qquad\qquad (6A)$$

$$\hat{X} = 0 \qquad\qquad (7A)$$

From (2A), (4A), (5A), (6A) and (7A)

$$\frac{\lambda_{LY}}{\lambda_{KY}}\hat{\tilde{K}} + \lambda_{LZ}\hat{K}_Z - \lambda_{LY}\sigma_y(-\hat{r}) - \lambda_{LZ}\sigma_Z(\hat{w}-\hat{R}) = \lambda_{LY}\alpha + \lambda_{LZ}\beta \qquad (8A)$$

$$-\frac{\lambda_{LY}}{\lambda_{KY}}s_Z\hat{K}_Z + \lambda_{LZ}\hat{K}_Z + \lambda_{LY}\sigma_Y\hat{r} - \lambda_{LX}\sigma_Z(\hat{w}-\hat{R}) = \lambda_{LY}\alpha + \lambda_{LZ}\beta$$

Differentiating competitive price conditions,

$$\hat{K}_Z(\lambda_{LZ} - \frac{\lambda_{LY}}{\lambda_{KY}}\frac{\lambda_{KZ}}{\lambda_K}) + \lambda_{LY}\sigma_Y\hat{r} - \lambda_{LZ}\sigma_Z\frac{(\hat{w}-\theta_{LZ}\beta)}{\theta_{KZ}} = \lambda_{LY}\alpha + \lambda_{LZ}\beta$$

$$f_Z\hat{K}_Z + \lambda_{LY}\sigma_Y\left(\frac{\theta_{LY}\alpha}{\theta_{KY}}\right) + \lambda_{LZ}\sigma_Z\beta\frac{\theta_{LZ}}{\theta_{KZ}} - \frac{\lambda_{LZ}}{\theta_{KZ}}\sigma_Z\hat{w} = \lambda_{LY}\alpha + \lambda_{LZ}\beta$$

From (3A)

$$-\frac{f_Z \in}{1+\frac{\lambda_{KZ}}{\lambda_K}}\left(\frac{\theta_{LY}\alpha}{\theta_{KY}} - \frac{\theta_{LZ}\beta - \theta_{LZ}\hat{w}}{\theta_{KZ}}\right) + \lambda_{LY}\sigma_Y\left(\frac{\theta_{LY}\alpha}{\theta_{KY}}\right) + \lambda_{LZ}\sigma_Z\beta\frac{\theta_{LZ}}{\theta_{KZ}} - \frac{\lambda_{LZ}}{\lambda_{KZ}}\sigma_Z\hat{w} = \lambda_{LY}\alpha + \lambda_{LZ}\beta$$

$$-\hat{w}\left[\frac{\lambda_{LZ}}{\theta_{KZ}}\sigma_Z + \frac{f_Z \in \theta_{LZ}}{\theta_{KZ}\left(1+\frac{\lambda_{KZ}}{\lambda_K}\right)}\right] = \alpha\left[\lambda_{LY} + \frac{f_Z \in \theta_{LY}}{\theta_{KY}\left(1+\frac{\lambda_{KZ}}{\lambda_K}\right)} - \lambda_{LY}\sigma_Y\frac{\theta_{LY}}{\theta_{KY}}\right] + \beta\left[\lambda_{LZ} - \lambda_{LZ}\sigma_Z\frac{\theta_{LZ}}{\theta_{KZ}} - \frac{\theta_{LZ}f_Z \in}{\theta_{KZ}\left(1+\frac{\lambda_{KZ}}{\lambda_K}\right)}\right]$$

$$\hat{w} = \frac{\alpha\left[\lambda_{LY} + \dfrac{f_Z \in \theta_{LY}}{\theta_{KY}\left(1+\dfrac{\lambda_{KZ}}{\lambda_K}\right)} - \lambda_{LY}\sigma_Y\dfrac{\theta_{LY}}{\theta_{KY}}\right]}{(-)\left|\dfrac{\lambda_{LZ}}{\theta_{KZ}}\sigma_Z + \dfrac{f_Z\theta_{LZ}\in}{\theta_{KZ}\left(1+\dfrac{\lambda_{KZ}}{\lambda_K}\right)}\right|} + \beta\frac{\left[\lambda_{LZ} - \lambda_{LZ}\sigma_Z\dfrac{\theta_{LZ}}{\theta_{KZ}} - \dfrac{\theta_{LZ}f_Z\in}{\theta_{KZ}\left(1+\dfrac{\lambda_{KZ}}{\lambda_K}\right)}\right]}{(-)\left|\dfrac{\lambda_{LZ}}{\theta_{KZ}}\sigma_Z + \dfrac{f_Z\theta_{LZ}\in}{\theta_{KZ}\left(1+\dfrac{\lambda_{KZ}}{\lambda_K}\right)}\right|} \qquad (9A)$$

Suppose $\in = 0$, $\alpha > 0, \beta = 0$ (Short Run, only Labor Productivity in Y goes up).

Then $\hat{w} > 0$ iff $1 < \sigma_Y\dfrac{\theta_{LY}}{\theta_{KY}}$

Similarly for $\in = 0, \alpha = 0, \beta > 0, \hat{w} > 0$ iff $1 < \sigma_Z\dfrac{\theta_{LZ}}{\theta_{KZ}}$.

Thus strong elasticities of substitution will increase w.

Let us divide the numerator and denominator in RHS of (9A) by $\in \neq 0$

Then let $\in \rightarrow \infty$ (The perfect mobility case)

$\alpha > 0, \beta = 0 \Rightarrow \hat{w} < 0$
$\alpha = 0, \beta > 0 \Rightarrow \hat{w} > 0$

This proves the argument in the text.

**Appendix 2:**

**Vertical Linkage and Productivity Impact**

We follow Marjit (2003).

$$\overline{w}a_{LY} + ra_{KY} + P_m a_{my} = P_y \qquad (10A)$$

$$wa_{Lm} + ra_{Km} = P_m \qquad (11A)$$

$$wa_{LZ} + ra_{KZ} = P_Z \qquad (12A)$$

M is capital- intensive.

In this model r is positively related to $P_m$ as M is capital intensive and LHS in (10A) is an increasing function of $P_m$. Therefore, a drop in $a_{LY}$ must raise $P_m$ and r reducing w, the same effect that we derive in the model without vertical linkage. If M is labor intensive, r is declining in $P_m$. In that case one does not know whether the LHS in (10A) is declining in $P_m$. If it is still increasing in $P_m$, then a drop in $a_{LY}$ will raise $P_m$ and w via the Stolper-Samuelson result. So, we do have a different outcome. However, if LHS in (10A) is declining in $P_m$, a drop in $a_{LY}$ will reduce $P_m$ and w.

**Appendix 3:**

**Pooled regression result:**

**Regression Equation:**

$Ln(I_w) = \alpha + (\beta_1 + \gamma_1 D_s)Ln(Y_F)$

$I_w$ = Informal wage

$\alpha$ = Constant

$Y_F$ = Formal Apl

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

$\alpha = 0.56$

$\beta_1 = 0.69*$

$\gamma_1 = 0.00$

R-Square=0.30

Adj R-squared =0.27

Prob>F=0.00

## Table1: State- level characteristics on the basis of skill- concentration

| State | Grouping on % skill concentration Formal | | | GVA per worker Formal | | | Deflated FA in ('00000) Informal | | | Real wage Informal | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1989-90 | 1994-95 | 2000-01 | 1989-90 | 1994-95 | 2000-01 | 1989-90 | 1994-95 | 2000-01 | 1989-90 | 1994-95 | 2000-01 |
| ANDHRA PRADESH | 2 | 2 | 2 | 55859 | 93600 | 99091 | 112699 | 119314 | 298122 | 2535 | 7441 | 7037 |
| ASSAM | 2 | 2 | 2 | 121584 | 102492 | 118578 | 15260 | 24942 | 31404 | 2665 | 5324 | 7181 |
| BIHAR | 2 | 2 | 2 | 154334 | 174546 | 221411 | 171383 | 138364 | 195048 | 3308 | 5293 | 7974 |
| GUJARAT | 2 | 1 | 1 | 117194 | 229594 | 283751 | 163235 | 219203 | 300510 | 3607 | 10739 | 12663 |
| HARYANA | 1 | 1 | 1 | 109689 | 150910 | 223213 | 50051 | 52169 | 157014 | 6852 | 9175 | 11028 |
| HIMACHAL PRADESH | 1 | 1 | 1 | 115405 | 188139 | 354982 | 56235 | 16102 | 33121 | 4460 | 6748 | 12009 |
| KARNATAKA | 1 | 1 | 1 | 120800 | 173724 | 194272 | 77874 | 101751 | 215801 | 2671 | 6342 | 8392 |
| KERALA | 2 | 2 | 2 | 106577 | 78337 | 108657 | 60789 | 44697 | 159397 | 4446 | 7530 | 9718 |
| MADHYA PRADESH | 1 | 1 | 1 | 147232 | 217470 | 265189 | 76709 | 92499 | 189710 | 2958 | 7966 | 8249 |
| MAHARASHTRA | 1 | 1 | 1 | 185831 | 268129 | 315094 | 209950 | 303671 | 608403 | 4038 | 10974 | 12695 |
| ORISSA | 1 | 2 | 2 | 170424 | 158313 | 212283 | 44574 | 53120 | 72085 | 2438 | 5781 | 6592 |
| PUNJAB | 2 | 1 | 2 | 116263 | 117541 | 130473 | 90991 | 32617 | 230536 | 2071 | 8026 | 11274 |
| RAJASTHAN | 2 | 1 | 1 | 103813 | 196273 | 251614 | 129626 | 63960 | 237915 | 2958 | 8008 | 12177 |
| TAMIL NADU | 2 | 2 | 2 | 106940 | 135241 | 149697 | 140946 | 94346 | 487575 | 4214 | 6812 | 9945 |
| UTTAR PRADESH | 1 | 2 | 1 | 116773 | 192203 | 214509 | 312029 | 220188 | 565231 | 3490 | 6036 | 8405 |
| WEST BENGAL | 1 | 2 | 2 | 67296 | 98239 | 106662 | 164692 | 125816 | 327097 | 3250 | 6828 | 8358 |
| DELHI | 1 | 1 | 1 | 105609 | 222398 | 191485 | 81516 | 126654 | 433640 | 8741 | 11139 | 14783 |

**<u>References</u>**

Agenor, R. and P. Montiel (1997): "Development Macroconomics", 2nd edition, Princeton University Press.

Carruth, A., and A. Oswald (1981): "The Determination of Union and Non-Union wage- rates, *European Economic Review,* Vol 16 (2), pp: 285-302

Foster, A. D and M. R. Rosenzweig (1995): "Technical Change and Human- Capital Returns and Investments: Evidence from the Green Revolution", *American Economic Review*, Vol.86 (4), pp: 931-953.

Goldberg, P. K. and N. Pavcnik (2003): "The Response of the Informal Sector to Trade Liberalization", NBER Working Paper No. 9443, January.

Guha- Khasnobis and Ravi Kanbur (eds) (2006): "Informal Labor Markets and Development", Palgrave- Macmillan.

Guha- Khasnobis, B. and Bari Faisal (2003): "Sources of Growth in South Asian Countries" in Isher Judge Ahluwalia and John Williamson (eds), *The South Asian Experience with Growth*, Oxford University Press, 2003.

Jones, R. W. (1971): "The Specific- Factor Model in Trade, Theory and History" in J. N.

Bhagwati et al (eds); *Trade, Balance of Payments and Growth,* North Holland, Amsterdam.


Marjit, S. (2003): "Economic reform and Informal wage – A General Equilibrium Analysis",

*Journal of Development Economics*, Volume 72(1), pp 371-378.

Marjit, S. and S. Kar (2005): "Pro- Market Reform and Informal Wage- Theory and the

Contemporary Indian Perspective", *India Macroeconomics Annual.*

Marjit, S. and D. S. Maiti (2006): "Globalization, Economic Reform and Informal Labor",

in B. Guhakhasnobis and Ravi Kanbur (eds) – *Informal Labor Markets and Development,*

MacMillan-Palgrave.

Marjit, S., S. Kar and H. Beladi (2007): "Trade Reform and Informal Wage" (forthcoming),

*Review of Development Economics.*

Marjit, S., S. Ghosh and A. K. Biswas (2006): "Informality, Corruption and Trade Reform",

*European Journal of Political Economy (Forthcoming).*

Olofin, S. O., and A. O. Folawewo (2006): "Skill Requirements, Earnings and Labor Demand

in Nigeria's Urban Informal Sector" in Basudeb Guha Khasnobis and Ravi Kanbur (eds)

*Informal Labor Markets and Development,* Palgrave- Macmillan.


Sinha, A., and C. Adam (2006): "Trade Reforms and Informalization: Getting Behind Jobless

Growth in India" in Basudeb Guha Khasnobis and Ravi Kanbur (eds), *Informal Labor Markets*

*and Development,* Palgrave- Macmillan.