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2007

Published in: Ravi Kanbur and Jan Svejnar (Eds.) **Labour Markets and Economic Development,** NY: Routledge, **2008.** And, International Policy Centre, University of Michigan Working Paper # 54, 2007.

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

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April 2007
Revised October 2007

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, which has only reached a new height very recently. 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. However, with full mobility of capital this will not be an equilibrium outcome.

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

JEL Code: J40, O1, O40

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Acknowledgement: An earlier version of this paper was presented at the "Cornell-Michigan Conference on Labor Market in Transition and developing Economies" at the University of Michigan, Ann Arbor. The authors are indebted to conference participants, in particular Ravi Kanbur and Jan Svejnar and to Ronald Jones for helpful comments. We are also indebted to Pranab Kumar Das for suggestions with the empirical section. Research assistance by Mahasweta Kundu and Archita Banik is also acknowledged. The usual disclaimer applies.

1. Introduction

This paper looks at the impact of growth in the productivity of workers in both the formal and informal sectors, on the informal wage and employment. It is now more or less established that the recent surge in the Indian growth rate is much more related to a productivity boost than to a rise in investment (see for example, Guha-Khasnobis and Bari 2003; Marjit, 2005, etc.). If such income growth precipitates on the lower deciles of the income groups, then it is expected that the social consequences of the overall increase in the growth rate must be reflected on the quality of life of the poor people. It is clearly a difficult task to measure such impact at the micro level and in terms of the various indicators of human development, and therefore, we argue that the informal wage is a good indicator 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 wage of unskilled workers involved in the informal sector, or how a productivity growth of unskilled workers working in the organized/formal sector affects their informal counterpart. Before we provide further details on the 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 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 relocate 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 main focus of the earlier papers was to investigate the 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 a model where capital is sector-specific.

The spillover effects of productivity growth on informal wage may perhaps be best understood by dwelling upon the aspects of free mobility of labor and capital, and on the vertical linkage between the formal and the informal sectors, of which we focus on the issue of factor mobility only. The linkage effect is discussed in the appendix. These, however, need to be supplemented by demand side effects when growth in income spills over to the non-traded informal activities. Yet, we look at the supply side effects only, partly because the demand effect is quite standard and also due to the fact that the demand effect may not be very significant.

In a recent paper, Foster and Rosenzweig (2004) 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, they show 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. In fact, using these elements as building blocks, our study offers a general equilibrium model of production for a small open economy and looks at the labor productivity growth in formal and informal sectors. We derive a set of results, by considering the short run when capital is sector specific, and the longer run when capital moves gradually across sectors.

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's (1971) 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 of capital the informal wage must rise.

The paper is structured as follows. The second section offers the basic framework 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 produced by the formal/organized segment of the labor market. 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 endogenize the fixed wage by invoking a utility maximizing union without any perceptible change in the direction of the results. Thus exogeneity of fixed unskilled wages is not a crucial assumption and can be relaxed. 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 the informal segments. But there is perfect mobility of capital within the formal sectors producing X and Y. 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:

The competitive price conditions are given by:

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

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

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

and, the full employment conditions imply:

$$a_{KX} X + a_{KY} Y = \tilde{K} \tag{4}$$

$$a_{LY} Y + a_{LZ} Z = L \tag{5}$$

$$a_{SX} X = S \tag{6}$$

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

Note that. Equations (1) and (2) determine w_S and r. Then from (4) and (6) we determine X and Y. Further, (3), (5) and (7) determine w, R and Z. $(a_{KX}, a_{SX}, a_{KY}, a_{LY})$ are determined by the wage-rental ratios, $\frac{w_S}{r}$ *and* $\frac{\overline{w}}{r}$. 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. These relationships together analytically determine w and R and hence Z from (7) (see Figure 1).

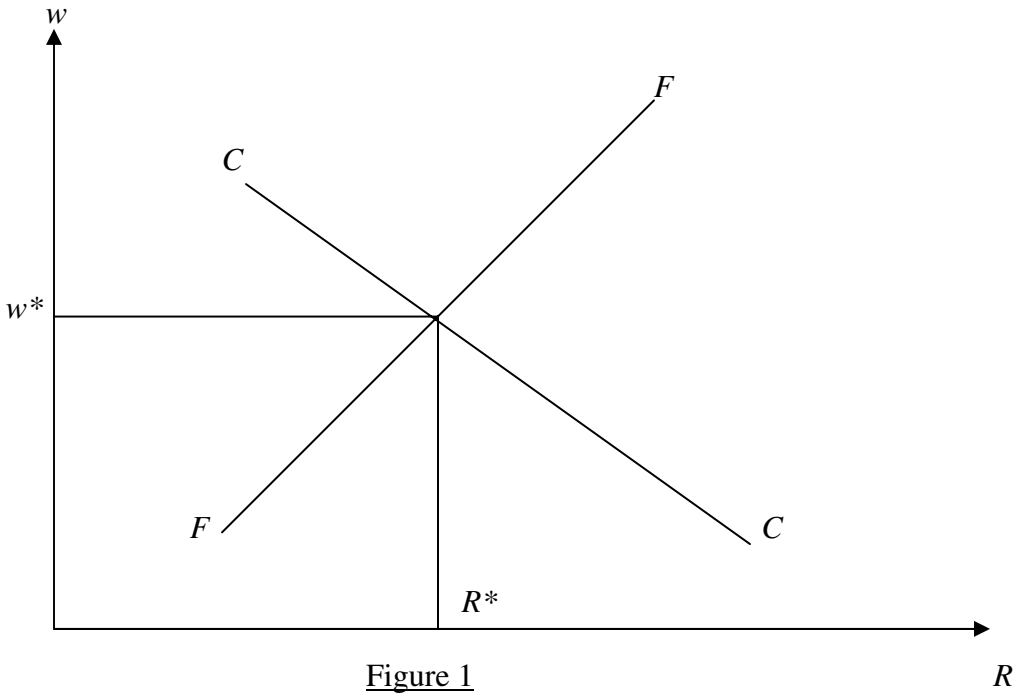

Figure 1

Note: CC refers to the Competitive Condition, FF refers to the Full- Employment Condition.

This structure refers to the short-run with no mobility of capital between the formal and 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 increase 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 an excess supply of labor in the informal segment following a production contraction 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} on the other hand, raises *r* and squeezes down w_S, reducing X and increasing Y. Interestingly, although this may or may not increase the demand for informal labor as a_{LY} drops and Y increases. If the elasticity of factor substitution is strong enough, employment in Y will increase drawing workers from the informal segment. This should raise *w* and reduce *R* in turn.

The last exercise, we dwell upon 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 sectors with $r = R$. Also equations (4) and (7) are now lumped together as (9).

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

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 negative effect on *w* is now mitigated by the full mobility of capital, as X draws in the retrenched capital out of Y. On the other hand, 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* in the process.

Finally, 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 the 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

In this section, we try to assess the above 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 noted in the theoretical section, labor productivity growth in the skilled sector should not benefit the informal workers. In fact, it can

worsen 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 the organized sector and fixed assets for the unorganized manufacturing for various NSS (National Sample Survey of India) round between 1989-90 and 2000-01 across various provinces in India. We first construct an index to classify the provinces according to the skill content in their organized production system, i.e., the states are classified as relatively skilled and relatively unskilled in terms of the participation of skilled workers in the organized manufacturing within each state. The number of skilled workers in any state is obtained by taking the difference between the total employees across all industry types less the number of wage earners in that state. The degree of 'skill concentration' in each state may therefore, be simply stated as the share of skill in total employment.[1] Furthermore, the states have been ranked as High Concentration (Rank 1) or Low Concentration (Rank 2) as per the respective skill concentrations greater than or less than the all-India average given in the last but one column in Table A1. Interestingly, most of the states do not display any appreciable increase in the skill concentration, and some have actually registered lower skill concentration despite continuing above the national average during the period (1989-90 to 2000-01). Using this information, we construct a Skill-Dummy for each state (value 1, if skill concentration ratio above national average, or value 0, if skill concentration ratio below it). Subsequently we run a set of pooled regressions with real informal wage (manufacturing) as the dependent variable. The data is available from the three rounds of NSSO, i.e., 1989- 90, 1994-95 and 2000- 2001 (see Appendix 3). The gross value added (GVA) per worker in the organized manufacturing as available from the Annual Survey of Industries for various states, the real fixed assets in the informal sector (available from

[1] See Table A1 in Appendix III for a ranking of the states according to skill concentration as defined here.

NSSO) as a proxy for capital stock and the skill dummy as three explanatory variables. The GVA per worker in this structure represents the average productivity of labor in each state. The actual values of GVA per worker, the level of real informal fixed assets and the real informal wage are shown in Table A2 in Appendix III.

The regression result offers an interesting, though exploratory, evidence on the relationship between annual growth of real informal wage and the growth in GVA per worker in the formal sector. For the relatively "unskilled" states (i.e., for skill dummy taking value 0), the relationship is positive and significant. However, the coefficient of real fixed assets is not significant. On the other hand, a growth in the productivity of unskilled workers in the organized sector does have a positive influence on the growth of real informal wage, a distinct possibility in our theoretical structure.

4. Concluding Remarks

This paper starts from a stylized fact that the recent growth in the Indian economy is influenced more by a productivity take-off as compared to other factors. Such productivity growth is largely concentrated in the service sector, which has grown phenomenally over the recent years. However, given the fact that the size of the unorganized sector is quite substantial, a number of interesting questions require serious attention. As labor productivity in the formal/ organized sector increases, does it help the informal workers? How does informal wage, a benchmark yardstick for the poor, respond to such 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. Thus capital mobility plays a crucial role in our analysis, when aspects of product market reform, productivity change, and trade related reform also 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 the cost of capital in the formal sector must help the informal segment when capital is mobile. However, 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 I

Effect of a decline in a_{LY} and a_{LZ} with imperfect mobility of capital

$$K_X + K_Y = \tilde{K} \tag{1A}$$

$$\tilde{K} + K_Z = \overline{K} \tag{2A}$$

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

Differentiating full- employment conditions

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

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

$$\hat{a}_{KZ}\hat{Z} = \hat{K}_Z \tag{6A}$$

$$\hat{X} = 0 \tag{7A}$$

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

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

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

Differentiating competitive price conditions,

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

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

From (3A)

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

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

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

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

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

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

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 $\in\to\infty$ (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 II

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 III

States	Table A1		
	Skill Concentration (Rank)		
	1989-90	**1994-95**	**2000-01**
HIMACHAL PRADESH	32.64 (1)	34.98 (1)	24.33 (1)
MADHYA PRADESH	30.37 (1)	30.49 (1)	24.59 (1)
DELHI	29.21 (1)	29.84 (1)	31.80 (1)
MAHARASHTRA	27.05 (1)	28.47 (1)	30.31 (1)
KARNATAKA	26.03 (1)	24.84 (1)	24.24 (1)
HARYANA	24.13 (1)	27.42 (1)	27.70 (1)
ORISSA	23.81 (1)	23.73 (2)	22.96 (2)
RAJASTHAN	23.60 (1)	26.06 (1)	24.38 (1)
WEST BENGAL	21.84 (2)	22.17 (2)	20.01 (2)
BIHAR	21.82 (2)	23.01 (2)	22.37 (2)
PUNJAB	21.70 (2)	25.14 (1)	22.70 (2)
GUJARAT	21.33 (2)	26.03 (1)	26.37 (1)
UTTAR PRADESH	20.64 (2)	23.09 (2)	26.16 (1)
TAMIL NADU	20.19 (2)	20.01 (2)	18.56 (2)
KERALA	17.44 (2)	16.37 (2)	16.08 (2)
ASSAM	16.90 (2)	18.31 (2)	17.83 (2)
ANDHRA PRADESH	14.42 (2)	15.21 (2)	15.78 (2)
All-India Average	**23.13**	**24.42**	**23.31**
Source: ASI, various years			

Pooled regression results

Pooled Regression Equation (Random Effects Model):

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

such that,

$$Ln(I_w) = 0.07 + (0.61^{*} + 0.D_S) Ln(Y_F) + 0.11 Ln(I_{FA})$$

R-squared: 0.33, Adj. R-Squared: 0.29, Prob >F=0.00, $\rho = 0$, Hausman = 0.00,
* = significant at 5% level

Where,
I_w = Informal wage
α = 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)

Table A2: 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	7037
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

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