

## OUTPUT, PRODUCTIVITY AND EARNINGS: THE INFORMAL MANUFACTURING SECTOR IN THE GREATER MANILA AREA, 1976

By

Dante B. Canlas\*

### Introduction

This note is a sketch of the informal manufacturing sector in the Greater Manila area. Interest in the study arises from economists' concern with those groups of workers who choose market work to meet their income needs yet experience economic hardships. Traditionally, public policy has aimed at reducing the numerical size of the unemployed. Employment generation, however, appears hollow if a number of workers, while choosing work, are unable to meet minimum standards of living.

The informal sector has played a central role in the analysis of urban labor markets which feature a dual structure [See for example, (1) & (2)]. The underlying theme presents a formal and protected sector, alongside an informal and unprotected one. The former has entry restrictions and a noncompetitive wage rate (due maybe to minimum wage legislation and strong union power). The latter possesses no barriers to entry and has a market clearing wage. In this scheme, employment is mostly voluntary — workers line up for scarce jobs in the formal sector, choosing to be unemployed to engage in job search. Some are fortunate to land a protected job while others are less so and take a job in the informal sector.

To understand the economic plight of workers who choose employment in the informal sector, we examine in this note the factors influencing output of enterprise, labor productivity, and earnings of enterprise head in the informal manufacturing sector. The data are drawn from a sample survey of informal manufacturing establishments in the Greater Manila area in 1976.

We proceed as follows: The following section is a descriptive presentation using information drawn from the survey; the regression

---

\*Assistant Professor of Economics, University of the Philippines. This is a revised version of an earlier paper which formed part of a project on the Informal Sector in the Greater Manila Area. The project was coordinated by Dr. Gonzalo M. Jurado. Discussions with Ruperto Alonzo, Ricardo Ferrer, Cayetano Aderanga and comments by Dean José Encarnación, Jr. are gratefully acknowledged. Remaining errors are solely mine.

models are next presented and the results discussed; concluding remarks are made in the last section.

## The Informal Manufacturing Sector Survey

The survey yielded 402 enterprises in the manufacturing sector. Using a 4-digit ISIC classification, we obtained 30 industry groups which are shown in Table 1. Further classification using a 2-digit grouping yielded 9 industry groups: textile, wearing apparel, and leather industries (with 273 enterprises); manufacture of fabricated metal products (44); machinery and equipment (32), and manufacture of wood and wood products (23).

TABLE 1  
Distribution of Enterprise By Industry Groups

ISIC 4 Digit	Industry	No. of Enterprises	Proportion
3111	Slaughtering, preparing and preserving meat	1	.0025
3114	Canning, preserving and processing of fish, crustacea and similar food	5	.0125
3117	Manufacture of bakery products	37	.0920
3121	Manufacture of food products not elsewhere classified	11	.0025
3214	Manufacture of carpets and rugs	11	.0025
3220	Manufacture of wearing apparel except footwear	263	.6542
3233	Manufacture of products of leather and leather substitutes, except footwear and wearing apparel	1	.0025
3240	Manufacture of footwear except vulcanized or moulded rubber or plastic footwear	5	.0124
3311	Sawmills, planing and other wood mills	2	.0050
3312	Manufacture of wooden and cane containers and small cane ware	1	.0025
3319	Manufacture of wood and cork products not elsewhere classified	3	.0075
3320	Manufacture of furniture and fixtures, except primarily of metal	17	.0423
3419	Manufacture of pulp, paper and paperboard articles not elsewhere classified	1	.0025
3420	Printing, publishing and allied industries	11	.0274
3512	Manufacture of fertilizers and pesticides	1	.0025
3529	Manufacture of chemical products not elsewhere classified	1	.0025
3551	Tire and tube industries	1	.0025
3620	Manufacture of glass and glass products	2	.0050



TABLE 1 (Continued)

Industry	No. of Enterprises	Proportion
<u>ISIC</u> <u>4 Digit</u>		
3699 Manufacture of non-metallic products not elsewhere classified	3	.0075
3710 Iron and steel basic industries	3	.0075
3812 Manufacture of furniture and fixtures primarily of metal	3	.0075
3813 Manufacture of structural metal	4	.0100
3819 Manufacture of fabricated metal products except machinery and equipment not elsewhere classified	12	.0299
3821 Manufacture of engines and turbines	1	.0025
3829 Machinery and equipment except elec- trical not elsewhere classified	4	.0100
3839 Manufacture of electrical apparatus and supplies not elsewhere classified	1	.0025
3843 Manufacture of motor vehicles	6	.0149
3852 Manufacture of photographic and optical goods	1	.0025
3901 Manufacture of jewelry and related articles of precious metals	3	.0075
3909 Manufacturing industries not elsewhere classified	4	.0100
TOTAL	402	
<u>ISIC</u> <u>2 Digit</u>		
31 Manufacture of food, beverages and tobacco	44	.1095
32 Textile, weaving apparel and leather industries	273	.6791
33 Manufacture of wood and wood products, including furniture	23	.0572
34 Manufacture of paper and paper products, printing and publishing	12	.0299
35 Manufacture of chemicals and of chemical, petroleum, coal rubber and plastic products	3	.0075
36 Manufacture of non-metallic mineral products, except products of petroleum and coal	5	.0124
37 Basic metal industries	3	.0075
38 Manufacture of fabricated metal products, machinery and equipment	32	.0796
39 Other manufacturing industries	7	.0174
TOTAL	402	

Among the informal manufacturing enterprises sampled, only one was reported to have a variable location. About 95 per cent were housed in permanent structures. Most of these structures were equipped with water and electricity. Government permits had been sought by 96 per cent of these firms to build their structures (see Table 2).

**TABLE 2**  
**Location, Types of Structure and Equipment,**  
**and Building Permits**

Question and Response	Per Cent	Question and Response	Per Cent
<b>(1) Type of Location</b>		<b>(2) Type of Structure</b>	
Fixed	99.8	Permanent	95.0
Variable	0.2	Temporary	5.0
Total (402)	100.0	Total (402)	100.0
<b>(3) Type of Equipment</b>		<b>(4) Is Structure Built with Government Permit?</b>	
Water only	0.5	Yes	96.5
Electricity only	7.7	No	2.2
Water and electricity	91.0	Don't know	1.3
Neither water nor electricity	0.8	Total (402)	100.0
Total (402)	100.0		

The two major reasons for the firm's present location were the proximity to buyer and availability of transportation. Approximately 96 per cent were accessible by motorable roads but not one reported owning a vehicle for its operations (see Table 3).

TABLE 3

## Reasons for Present Location and Accessibility

Question and Response	Per Cent	Question and Response	Per Cent
(1) Reasons for Present Location of Enterprise (A)		(2) Reasons for Present Location of Enterprise (B)	
Proximity to buyers	63.2	Proximity to buyers	0.2
Proximity to suppliers of materials	4.2	Proximity to suppliers of materials	14.9
Availability of transportation	8.7	Availability of transportation	27.6
Availability of labor type required	2.5	Availability of labor type required	1.7
No choice	20.4	No choice	7.7
Lower space rental	0.7	Lower space rental	1.0
Not applicable	0.2	Not applicable	46.8
Total (402)	100.0	Total (402)	100.0
(3) Reasons for Present Location of Enterprise (C)		(4) Is Enterprise Accessible Through a Motorable Road?	
Availability of transportation	9.0	Yes, through a paved road	96.3
Availability of labor type required	1.2	Yes, through an unpaved road	1.5
No choice	1.0	No	2.0
Lower space rental	0.7	Not applicable	0.2
Not applicable	88.1	Total (402)	100.0
Total (402)	100.0		



Government regulation of their activities was apparent with 98 per cent reporting that government permission was necessary to operate the business and 81 per cent were subject to inspection on both a regular and an irregular basis (see Table 4).

TABLE 4

On Permits and Regulation/Inspection

Question and Response	Per Cent
1) Is Permission from Government Necessary?	
Yes	98.0
No	1.5
Don't know	0.5
Total (402)	100.0
2) Is Enterprise Subject to Regulation/Inspection on a Regular Basis?	
Yes	80.8
No	18.2
Don't know	1.0
Total (402)	100.0

The enterprises apparently had not diversified their output. Table 5 shows that about 75 per cent had not sold and produced goods and services different from those produced in the past and that the quantity of goods produced was stagnant; only about 9 per cent reported a substantial increase in output, 39 per cent showed a slight increase and 40 per cent experienced no change at all. The rest of the enterprises experienced a decrease in output.

**TABLE 5**  
**Changes in Product Line, Product Quantity and Sales**

Question and Response	Per Cent
<b>(1) Is the Enterprise Producing/Selling Goods/Services Which It Has Not Produced/Sold in the Past?</b>	
Yes	25.1
No	74.9
<b>Total (402)</b>	<b>100.0</b>
<b>(2) Has There Been an Increase in Quantity of Goods/Services Produced?</b>	
Yes, substantial increase	8.7
Yes, slight increase	38.8
No change	40.0
No, slight decrease	9.0
No, substantial decrease	3.5
<b>Total (402)</b>	<b>100.0</b>
<b>(3) Was Sale During Survey Week Same as in Preceding Weeks?</b>	
Higher	11.9
About the same	74.1
Lower	11.4
Not applicable	6.1
<b>Total (402)</b>	<b>100.0</b>

There appears to be no bright prospects in sales either. About 74 per cent reported that sales during the survey week were about the same as in preceding weeks (Table 5). Forty-six per cent reported lower sales than preceding weeks. About 48 per cent experienced higher sales than the preceding week.

With such stagnant and declining sales, it is easy to picture the weak effects of this sector on the level of employment. It is seen in Table 6 that of the 402 enterprises, only 2.2 per cent reported a substantial increase in the number of persons associated with the enterprise. That of 14.7 per cent increased somewhat while 68 per cent reported no change during the year. Some 15 per cent of firms reported a decrease.

For most of the enterprises sampled, the regular participation of the owners on a full-time basis is noticeable. About 87 per cent had the owner(s) engaged in the various activities of their firms (see Table 5). The mean number of full-time workers employed on a regular basis was 1.6 for males and 0.8 for females. The mean number of part-time workers was almost negligible. Most of the enterprises did not hire part-time workers (see Table 7).

TABLE 6  
Employment and Owner's Activities

Question and Response	Per Cent	Question and Response	Per Cent
1) Has the Number of Persons Associated with the Enterprise Changed?		(2) Has the Owner Engaged in the Firm's Activities?	
Increased substantially	2.2	Yes	87
Increased somewhat	14.7	No	11
Remained the same	67.9	Not Applicable	20
Decreased somewhat	11.9	Total (402)	100.0
Decreased substantially	3.2		
Total (402)	100.0		



**TABLE 7**  
**How Many Employees Are Employed**  
**on a Regular Basis?**

	Part-time				Full-time			
	Male		Female		Male		Female	
	(f)	%	(f)	%	(f)	%	(f)	%
0	377	93.8	379	94.3	177	44.0	234	58.2
1	8	2.0	14	3.5	58	14.4	81	20.1
2	6	1.5	4	1.0	66	16.4	47	11.7
3	6	1.5	2	0.5	39	9.7	20	5.0
4	1	0.2	2	0.5	29	7.2	11	2.7
5	3	0.7	13	3.2	13	3.2	4	1.0
6					3	0.7	1	0.2
7					4	1.0	1	0.2
8					4	1.0	1	0.2
9					3	0.7		
10	1	0.2	1	0.2	5	1.2	1	0.2
don't know					1	0.2	1	0.2
Total	402	100.0	402	100.0	402	100.0	402	100.0

Concerning the quality of the work force, it is generally held that the informal manufacturing sector recruits workers from members of the labor force who, because of deficient schooling and lack of skills, cannot find jobs in the formal sector. We find some support for this position. The enterprises were asked if they experienced difficulty in recruiting various types of labor. Table 8 shows that the majority (63%) reported difficulty in recruiting skilled labor. The relatively small number of firms encountering difficulty in recruiting unskilled labor seems to underscore the existence of a large pool of unskilled workers with generally low wages. Accordingly, it seems reasonable to suppose that the variation in average wages across enterprises is due to differences in the proportion of unskilled laborers hired.

TABLE 8  
Type of Labor Hard to Recruit

Response	Per cent
Not applicable	55.0
Unskilled labor only	40.5
Skilled labor only	1.7
Unskilled and unskilled labor	2.7
Total (402)	100.0

We would also expect a low equilibrium wage to prevail. The maximum daily wage per male worker ranged from P5.52 to P7.97 while that for the female worker ranged from P3.98 to P5.86.

For both sexes, the maximum daily wage fell short of the minimum wage of about P10 per day. The majority of workers were concentrated in the lowest tail of the wage distribution (see Table 9).

In such a situation, one would expect techniques of production to change much. About 61 per cent did not change their methods, 36 per cent cited some changes for the better, while 13 per cent reported changes for the worse (see Table 10).

The fostering of the unskilled-labor intensive type of technology is likely to make the employer less prone to invest in on-the-job training. The rate of labor turnover is expected to be higher for unskilled workers than skilled ones. In view of this, employers would be less inclined to invest in on-the-job training since they might not



TABLE 9

What Were the Maximum and Minimum Wages  
(Both Cash and Kind) Paid to Adult Workers?

Daily Wage	Maximum		Minimum	
	Male (f)	Female (f) %	Male (f) %	Female (f) %
Less than P5	179	44.5	246	314
P 5 - P 9.99	61	15.2	96	60
10 - 14.99	83	20.6	47	25
15 - 19.99	45	11.2	8	3
20 - 24.99	21	5.2	3	
25 - 29.99	9	2.2	0	
30 - 34.99	3	0.7	0	
35 - 39.99	0	0.0	0	
40 and above	1	0.2	2	
Total	402	100.0	402	402
				78.1
				14.9
				6.2
				0.7
				100.0

cover their investments in such activities. In the survey, the enterprises were asked if they were willing to share in the cost of such training programs. Two hundred twenty-nine (229) were willing provided the share was small. One hundred twenty-two (122) declined outright (see Table 10).

The difficulty involved in recruiting skilled labor might eventually affect the actual operation of the enterprise as employers tend to adjust to the work traits of their employees. It may well be that the employers will purchase low-cost equipment which are relatively less expensive in maintenance and repair: unskilled workers may be viewed as less likely to care for tools and equipment. In the sample, the approximate mean value of capital goods purchased was P800. (The price of raw figures for this value is Table 11).

TABLE 10  
Change in Method of Production and Willingness  
to Share Training Costs

Question and Response	Per Cent	Question and Response	Per Cent
Has There Been a Change in the Method of Production/Operation in the Enterprises?		(2) Would the Enterprise be Willing to Share the Cost of Training Programs?	
Yes, change for the better	36.1	Yes, provided share is small	57.0
No change at all	60.7	Yes, even if share is substantial	2.7
No, change for the worse	3.2	No	30.3
Total (402)	100.0	Not applicable	10.0
		Total (402)	100.0

Most of these capital goods were either new or second-hand and financed from own savings (see Table 12). Rare was the enterprise that rented such goods. Most of the workers did not bring and equipment with them.



**TABLE 11**

**What is the Approximate Value of These Goods (Capital Equipment)  
if Sold in the Market Now?**

Value	Per cent	Value	Per cent
0	3.7	3500	1.0
20	0.2	3700	0.2
30	0.2	4000	3.2
100	0.2	4200	0.2
120	0.2	5000	5.2
200	0.5	5500	0.5
250	0.5	6000	2.0
290	0.2	7000	2.2
300	0.2	7800	0.2
350	0.2	8000	2.0
400	1.0	10000	7.7
480	0.2	10550	0.2
500	4.7	11000	0.2
600	1.2	12000	0.7
700	4.2	13000	0.2
800	3.7	14000	0.5
900	1.2	14500	0.2
950	0.2	15000	1.5
1000	1.2	16000	0.2
1100	0.2	18000	0.7
1130	0.2	20000	2.7
1200	0.7	20001	0.2
1250	0.2	22000	0.2
1350	0.2	25000	0.7
1400	1.0	26500	0.2
1500	4.7	30000	1.2
1600	0.7	36000	0.2
1700	0.2	40000	1.2
1735	0.2	50000	1.7
1800	0.2	56000	0.2
2000	5.7	60000	0.2
2400	0.7	70000	0.5
2460	0.2	90000	0.2
2500	2.2	100000	1.2
2600	0.7	150000	0.2
2800	0.2		
3000	6.0	Total (402)	100.0

Table 13 shows that majority of the enterprises cited lack of credit from banks and government regulations as major barriers to expanding their operations. Most of them desired to expand if credit were made available to them (see Table 14). However, a large number did not succeed in obtaining loans from financial agencies, the major reason being the complicated and stringent nature of the lending procedures (see Table 14). With regard to their use of credit, they rarely borrowed from banks and other similar institutions. The majority resorted to their own savings for their large financial needs and relatively smaller day-to-day financial transactions (see Table 14).

**TABLE 12**  
**Type of Capital Goods**

Response	Per Cent
New	61.9
Secondhand	24.9
Re-constructed	0.7
Slightly secondhand but made substantial improvements	1.0
Not applicable	2.7
Total	100.0

**TABLE 13**  
**What Are The Specific Barriers To Expansion?**

Response	Per Cent
Government regulations with regard to licensing, location, etc.	19.4
Lack of credit from banks at modest interest rates	19.2
Lack of managerial skills to run a bigger enterprise	4.5
Lack of skilled workers	10.7
Workers quit the job frequently	0.7
Lack of demand for goods and services produced by enterprise	8.5
Lack of building premises and other physical facilities	6.2
Lack of capital	8.0
Intense competition	0.2
High cost of products and high rentals	0.2
Not applicable	22.4
Total	100.0



TABLE 14

## Plans for Credit and Sources of Finance

Question and Response	Per Cent	Question and Response	Per Cent
(1) If Credit is Made Available on Favorable Terms, Would the Enterprise Like to Expand Production?		(3) How Does the Enterprise Meet Its Financial Needs for Big Expenditures?	
Yes	75.1	From own savings	91.0
No	22.6	Borrow from friends and relatives	4.0
Not applicable/no answer	2.2	Borrow from moneylenders	1.0
Total (402)	100.0	Borrow from banks and other financial agencies	2.5
		Won't say	1.5
		Total (402)	100.0
(2) Does the Enterprise Believe That It Can Get Credit from Banks and Other Formal Financial Agencies?		(4) How Does the Enterprises Meet Its Financial Needs for Day-to-Day Expenditures?	
Yes	70.9	From own savings	96.8
No, because the enterprise is not recognized by the government	2.7	Borrow from friends and relatives	1.0
No, because the lending procedures are complicated	14.9	Borrow from moneylenders	—
No, because the lending procedures are stringent	10.0	Borrow from banks and other financial institutions	0.5
No	1.5	Won't say	1.7
Total (402)	100.0	Total (402)	100.0

From the above facts, it would not be implausible to expect an interaction of various worker's and enterprise's characteristics that would perpetuate low output for the enterprises. The mean gross value added per week was about ₦420 (see Table 15).

### Regression Models

The variables determining output of enterprise, labor productivity and earnings can be inferred from the underlying production function. The production function is a technical relationship between the various factors of production or the inputs and the

**TABLE 15**  
**Distribution of Enterprises by Weekly**  
**Gross Value Added (in Pesos)**

Gross Value Added	Per Cent
51 — <50	17.0
51 — 99	10.0
100 — 149	9.0
150 — 199	9.0
200 — 299	10.1
300 — 399	8.0
400 — 599	11.9
600 — 799	6.2
800 — 999	3.0
1000 — 1499	5.7
1500 and above	9.2
Total (402)	100.0

amount of output which they yield, i.e.,  $Y = f(I_1, I_2, \dots, I_k)$  where  $Y$  is output and  $I_k$  is the amount of the  $k$ th input.

### *Output of Enterprises*

In examining the output of enterprises, we consider traditional methods of production function estimation using measures of inputs of labor and capital as explanatory variables. The dependent variable used is value added per enterprise (VAE). For labor, number of laborers employed (LFE) was used, and an additional variable to effect quality of the labor force (QLF). Recent studies in human capital have shown that the amount of human capital an individual brings to the market, e.g., years of schooling, training, health, etc., affects his productivity. In the regression model, the only quality variable that we found possible to work with is a dummy variable which takes the value 1 if most or few of the workers had had normal schooling and zero otherwise. The coefficients of LFE and LF are expected to be positive.

Concerning the other factors of production, a proxy measure of capital used is the value of fixed assets (VFA). One would expect each variable to have a positive marginal product.

It might be that those enterprises that were able to secure loans from banks and other financial agencies had better records of



profitability and larger output than those borrowing from other sources. For credit source (SCR), we used a dummy variable which takes the value 1 if the credit source was banks and other big financial agencies, and zero otherwise.

Additional control variables included dummy variables for forward linkages, (FLK), backward linkages (BLK) and legal status (LST). We hypothesize that the size of the economic units from which the firm purchases goods for its operations and where it sells its output is positively related to the enterprise's output. Age of the enterprise (AOE) was included together with a quadratic term since age of the enterprise appears related to productivity in a nonlinear manner. It would seem that the older the enterprise, the greater its output. However, it may be that in view of the depreciation of capital equipment which are low in maintenance, a lower level of output is produced as the enterprise ages. Those with legal status are expected to have better output than those without. We estimate a linear regression model of the form:

$$(1) \text{VAE} = \alpha_0 + \alpha_1 \text{LFE} + \alpha_2 \text{QLF} + \alpha_3 \text{VFA} + \alpha_4 \text{SCR} + \alpha_5 \text{FLK} + \alpha_6 \text{BLK} + \alpha_7 \text{LST} + \alpha_8 \text{AOE} + \alpha_9 \text{AOE}^2 + \epsilon$$

where  $\epsilon$  is the standard error term.

### *Labor Productivity*

Value-added per worker (VAW), which serves as the measure of labor productivity here, is made to depend on the capital-labor ratio (KL), proportion of part-time workers (PTW), years of formal schooling of the head (AFE), and age of the enterprise head (AGH).

We hypothesize that factors associated with the owner of the enterprise may account for interfirm differences in labor productivity since most of the owners participate on a full-time basis in the activities of the enterprise. The years of formal schooling and age of the enterprise head are included as explanatory variables: higher years of schooling may reflect better management abilities and may lead to a more efficient production technique while the age of the enterprise head, as a proxy for experience, seems to be positively correlated with skill level. We estimate a linear regression model of the function:

$$(2) \text{VAW} = \beta_0 + \beta_1 \text{KL} + \beta_2 \text{PTW} + \beta_3 \text{AFE} + \beta_4 \text{AGH} + \epsilon$$

### *Earnings of Enterprise Head*

This paper also looks at the impact of person-related characteristics and enterprise-related characteristics on earnings of the enter-

e head (YHE). Several studies on human capital have pointed out that the amount of human capital an individual brings to the market affects his productivity, his market earnings and his money income. Years of formal schooling (AFE) and presence of formal training (F) are deemed reasonable proxies for human capital-related variables with expected positive signs. To account for enterprise-related characteristics we included value added per enterprise (VAE) which is expected to have a marginal positive effect on the earnings of the enterprise head. To complete the model, we control for sex of enterprise head (SXH), age (AGH), hours of work (HWE) and income from property (YHP).

$$YHE = \partial_0 + \partial_1 AFE + \partial_2 FIF + \partial_3 VAE + \partial_4 SXH + \partial_5 AGH + \partial_6 HWE + \partial_7 YHP + \epsilon$$

### Results

The results of using a step-wise regression technique to estimate parameters of equations (1), (2), (3) are shown below in (4), (5), (6):

$$\begin{aligned} VAE = & -194.7837 + .0477 VFA + 264.0237 LST \\ & (7.651) \quad (1.027) \\ & + 38.3459 AOE - 0.9638 AOE^2 + 95.0203 BLK \\ & (1.085) \quad (0.919) \quad (0.382) \\ & - 139.7193 SCR + 78.3955 QLF + 1.3634 LFE \\ & (0.442) \quad (0.329) \quad (0.272) \\ & - 50.9328 FLK \\ & (0.114) \end{aligned}$$

$$\begin{aligned} R^2 &= 0.1524 \\ \text{s.e.e.} &= 1952.4790 \\ n &= 402 \end{aligned}$$

$$\begin{aligned} ) VAW = & 41.1861 + 0.0222 KL + 65.6765 PTW \\ & (4.891) \quad (.819) \\ & + 6.3413 AFE + 6.9555 AGH \\ & (.557) \quad (.390) \end{aligned}$$

$$\begin{aligned} R^2 &= 0.0543 \\ \text{s.e.e.} &= 396.5721 \\ n &= 402 \end{aligned}$$



$$\begin{aligned}
 (6) \quad YHE &= 100.6876 + 0.1541 VAE + 31.2527 AFE \\
 &\quad (8.481) \quad (1.305) \\
 &- 94.9619 SXH + 32.7112 AGH \\
 &\quad (1.207) \quad (0.592) \\
 &- 92.8168 FIF - 42.2186 YHP + 2.3183 HWE \\
 &\quad (0.835) \quad (0.807) \quad (0.400)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.1656 \\
 \text{s.e.e.} &= 758.9334 \\
 n &= 402
 \end{aligned}$$

According to these results, value added per enterprise is explained mainly by the value of fixed assets, the only significant variable. The effect of a unit increase in the value of fixed assets on value added per enterprise per week is about .05 or 2.5 per year.

The variation in value added per worker is explained mainly by the capital-labor ratio; earnings per enterprise head is significantly explained by value added per enterprise. In the three estimated equations, we note the lack of statistical significance of human capital related variables. For the sample of enterprises used, formal schooling and training are not major factors in explaining productivity and earnings. Since there are no significant returns to schooling, it seems reasonable for an educated worker to choose unemployment while waiting for a formal job to open up.

We infer that for this sample of enterprises, employment is basically one of low-wage and unskilled type, and tends to perpetuate low labor productivity. By the nature of the production techniques, this informal manufacturing sector allows no opportunity for investment in human capital to deliver a reasonable pay off. Low wages and low productivity seem to interact to produce low-quality employment.

### Concluding Remarks

On the basis of the sample considered, the informal manufacturing sector does not offer much hope out of low productivity, low earnings, and underemployment. It is not at all surprising why new entrants to the labor force would tend to bypass a job in this sector and queue up for a job in the formal sector.

Saddled with inefficiencies, the informal manufacturing sector is expected to be driven out of the market in the course of economic development. The role of public policy is to hasten its dissolution.

s can be achieved by carrying out rural development projects which can achieve a reasonable wage gap between the rural and urban areas. This will stem the tide of migration, draining the pool from where the informal sector recruits its unskilled workers. Likewise, government should concentrate on retraining the urban unemployed for more productive jobs rather than simply attempting to reduce the numerical size of the unemployment rate.

## REFERENCES

- Fields, G., "Rural-urban Migration, Urban Unemployment and Underemployment and Job Search Activity in LDCs," *Journal of Development Economics*, Vol. 2, 1975, pp. 165-87.
- Harberger, A., "On Measuring the Social Opportunity Cost of Labor," *International Labor Review*, Vol. 103, 1971, pp. 559-79.