Self-employment: engine of growth or self-help safety net?

Christopher Woodruff, UC San Diego
Note prepared for the World Bank Conference on "Rethinking the Role of Jobs for Shared Growth," June 19, 2006

About a third of the labor force in low- and middle-income countries is self employed, and another perhaps 10-12 percent are employed as paid or unpaid workers in household enterprises. For decades, self employment in developing countries was nearly universally viewed as a self-help safety net in economies lacking government sponsored safety nets. This view began to change with the highly influential book by Hernando de Soto (1989), who proposed a more dynamic view of the sector. De Soto saw household enterprises as the creations of real entrepreneurs, prevented by actions of their governments from growing. It is not hyperbole to say that *The Other Path* has had a greater influence on the World Bank's private sector agenda than any publication in the past half century. Unshackling the micro entrepreneurs by removing government-imposed barriers to registration of businesses and to the hiring of labor is now central in the Bank's agenda.

But how dynamic is the sector? When the barriers are removed, will the household enterprises grow and flourish? I argue here that this is a very unlikely outcome. The evidence suggests that microenterprises are unlikely to become powerful engines of growth for the overall economy, even if government barriers to entrepreneurship are removed. This does not imply that the sector should be ignored, however. Rather, attention should shift to the power of microenterprises to reduce poverty and the capacity of the sector to serve a self-help safety net in low- and middle-income countries.

I will first review evidence that I read as showing the lack of dynamism of the microenterprise sector. The first piece of evidence is simply the cross-country correlation between self employment and income, which shows a very strong negative correlation between the two. I will also use data from Mexican employment surveys to examine differences between individuals who are self employed, working alone, those who hire unpaid family members, and those who hire paid wage workers. This distinction is important because long-term dynamism depends on the ability to hire and manage employees contracted at arm's length. We will see that the firms doing this are both a minority of household enterprises and different in character from other microenterprises.

Next I will turn to evidence on the ability to raise incomes of the self employed. Here I believe there is much more reason for optimism. I will discuss some evidence on returns to capital among microenterprises in Mexico, and also present some evidence from a five-quarter panel of microenterprises in Sri Lanka. The Sri Lankan panel is unique in that the firms were subject to random capital injections after the first and third waves of the panel. This allows us to say something about the speed at which they de-

capitalize these injections, particularly those received early in the panel. There are some caveats to the interpretation of these data which I will discuss later in the paper.

I. Evidence against dynamism

The model which best describes entry into self employment derives from Lucas' seminal 1978 paper. Workers are endowed with some innate entrepreneurial ability. Those above some endogenously determined entrepreneurial ability level will enter self employment; those above some higher threshold will hire employees. The demand for employees will determine the wage rate in the economy. The wage rate in turn will determine the ability level of the marginal entrepreneur—the individual who is just indifferent between self employment and wage work.

As Lucas points out, a prediction of the model is that the percentage of the workforce which is self employed will decrease as an economy's income level rises. Rising income is associated with higher wages. An increase in wages induces the marginal self employed worker to leave self employment in favor of wage work. Gollin (2002) uses ILO data to show that this pattern very clearly holds in cross-country data. While about a third of the workforce is self employed in countries with GDP per capita of less than $4000, the percentage falls to around 10% in economies with GDP per capita in the $10,000 range. At the aggregate level, we should expect the share of self employed to fall as economies develop, and we should welcome the implied loss of entrepreneurship.

Of course, some entrepreneurs have to exhibit dynamism for this process to play out. That is, wages will increase only if the demand for labor increases because firms are growing. But which firms will grow, and what are the relevant constraints preventing them from growing sooner or faster? Here the available data are scarcer than we might like. But I will use the Mexican urban employment and microenterprise surveys to argue that the relevant constraint is the ability to manage workers contracted at arms length, and that the lack of this ability is the major constraint to growth of the household enterprises. I push the argument further than the existing data allow, in large part because, in my view, the literature has focused too much attention on finance and regulation as constraints to growth.

Two groups of micro entrepreneurs:

In Mexico, and certainly in most countries with a large informal sector, the majority of the self employed hire no employees. In urban Mexico, represented by the National Urban Employment Survey, about 22% of working population 18-65 years of age is self employed. Of these, just over 60% have no employees. Among those hiring workers, about 60% hire at least one paid worker.[1] Rates of self employment are particularly high in retail trade (37% of those employed), repair services (48%), personal

---

[1] I focus on urban areas, where more data are available. The 1998 National Employment Survey indicates that self employment is about 34% of the workforce in rural areas. A larger percentage of the enterprises have emploees (46%), but only 30% of those with employees have paid employees. The 2000 population census data also indicate that self employment is higher in rural areas. In both cases, this is largely explained by the high rates of self employment in agriculture.

services (31%) and construction(28%), and low in professional services (13%) and manufacturing (11%).[2]

Who selects into self employment? Across all sectors, males are somewhat more likely than females to enter self employment: 24% of males and 18% of females are self employed. Self employment increases with age, but decreases with education. Both the age and education relationships are similar in the United States (using 2000 population census data), although the effect of both, and especially the effect of education, is much more pronounced in Mexico.

The relationship between education and self employment is worth examining further. Table 1 shows the results of cross-section regressions on self employment. The results are from probits in which the dependent variable takes a value of one if an individual is self employed, and zero otherwise. The data are from the second quarter of 2000, but the results are not particularly sensitive to the particular quarter or quarters chosen. The sample is limited to individuals aged 18 to 65 working one or more hours in the week before the survey. The sample is split into males and females, and observations are weighted by the expansion factors to represent the population of the 44 cities from which the sample was drawn. Education is measured with a series of dummy variables indicating 1-5, 6, 7-8, 9, 10-11, 12, 13-15, 16 and more than 16 years of schooling (no schooling is the base group). Age is measured by five-year cohort dummies.

The regressions show that for both males and females, self-employment rates increase with age and decrease with education. The remaining regressions on Tables 1A and 1B split the sample into four parts: the self employed working alone, the self employed hiring only unpaid family members, the self employed who hire paid employees, and (or males) the self employed who have more than 10 employees. The specification used in Column 1. There is a notable difference in the effect of education on the probability of being self employed as defined by working alone or only with unpaid family members on the one hand, and being an employer of paid workers on the other hand. Among those who work alone, and among those employing only unpaid family members, self employment decreases with education. But among those hiring wage workers, self employment increases with education. The education gradient is much steeper for larger employers—those with 10 or more workers, than for smaller employers.

Indeed, the relationship between owner's education and the size of firms is even evident even in the raw numbers. Among the self employed working alone, 66% (70%) of males (females) have 9 or fewer years of schooling. Among males (females) with 1-4 workers, at least one of whom is paid, 43% (40%) have 9 or fewer years of schooling. But among those with more than 10 employees, only 20% (29%) of males (females) have 9 or fewer years of schooling. These differences occur within rather than across sectors.

---

[2] These percentages are based on the ENEU survey from the second quarter of 2000. Except for the period immediately following the 1994 peso crisis, the percentage of self employment has not changed substantially over time during the past couple of decades in Mexico. Bosch and Maloney (2006) show the proportion of the workforce which is informal over the 1987-2003 period. Though they differntiate formal and informal by benefits rather than firm size, their data show a similar consistancy across time.

Both the regressions and the raw data are similar for sectors such as retail trade and personal services.

A note of caution on the interpretation of these results is warranted. The comparisons do not necessarily imply that education is the factor determining the growth of firms. Educational outcomes may be determined by other factors, which also determine firm size. For example, individuals whose parents are richer may obtain higher levels of education, have more access to financial capital, and have better social connections to both trading partners and government agencies. But the differences between measured attributes associated with own account workers on the one hand and employers (and especially larger employers) on the other, suggest that movement across these two groups is not likely to be fluid.

Indeed, the differences in selection into the own account (one-person entrepreneurial endeavors) and employer groups are there even when we control for factors such as parental education and income level. A supplemental survey was applied to the Mexican Urban Employment Survey during the third calendar quarter of 1994 in seven cities. The supplemental survey provides information on the parents of the adults in the households. Table 2 displays results from a multinomial logit with the form of employment on the left hand side and parent's education[3] and occupation included as right hand side variables. Parent's occupation is measured when the individual was 14 years of age. The individual's employment attachment is categorized as follows: wage work, working alone, working only with unpaid family members, having 1-4 paid employees, 5-9 paid employees, and 10-14 paid employees.

Own education has a similar effect of Table 2 as it did on Table 1. Two conclusion emerge from the results on parental characteristics on Table 2. First, individuals whose parent worked alone are themselves more likely to be self employed, but self employed without paid employees. Those who parents were employers, on the other hand, are more likely to be employers hiring 5 or more workers. As in the United States and Europe, parental occupation has an impact on occupation in Mexico. Parents reproduce themselves: own account workers beget own account workers or employers with 1-4 workers; employers beget employers. Second, individuals whose parents were engaged in higher income occupations are more likely to be employers, but not more likely to be own account workers.

These data suggest that the self employed who work alone or with unpaid family members are distinct from those who hire paid employees. The former account for about 70% of the self employed in Mexico. The differences in characteristics suggest differences beyond access to finance and regulation affect the growth prospects of microenterprises.

These data a picture which appears to be at odds with recent work by Faznyzlber, Maloney and Rojas 2005, who show that there is substantial mobility between wage work

---

[3] Information was gather on the persone who was the head of the household at the time the individual was 14 years of age. In about 83% of the cases, this was the father.

and self employment, and between own account workers and enterprises with employees. Why the difference? First, without doubt there is likely to be growth in some of the microenterprises across time. Ideally, we would have panels along the lines of the NLSY to track individuals across time. I'm not aware of any such panels for low- and middle-income countries. Over a short time period, we observe a lot of movement back and forth between firm sizes and between wage work and self employment. The Mexican labor survey data allow for the tracking of individuals for 5 quarters. Indeed, in any given period, a substantial number of individuals move from wage work to self employment, and vice versa. But about 75% of the movement appears to be attributable to "highly mobile" individuals, those who move more than once over 5 quarters.[4]

There is similar back and forth movement with respect to firm size. For example, among the 2,393 own account males entering the ENEU sample in the first quarter of 1999, 364—more than 10% became employers in Q2 of 1999. But only 63 of these reported being employers in each of the three quarters they remained in the survey. Moreover, of these 63, only 40 hire wage workers. Only 3 reported hiring 5 or more workers three quarters later in their final survey. So while there appears to be substantial mobility between any two points in time, it is unclear how much of this mobility could be said to support a view that the sector is dynamic. In any case, we're not likely to get agreement on this without data over a longer period of time.

Evidence that Incomes can be Increased

A significant part of the self employed work with an extremely small amount of capital. In Mexico in 1998, for example, among males working 35 hours or more per week, 25% have $135 or less in invested capital, measured at replacement cost, and half had $950 or less. Among firms with less than the median level of capital invested, reported earnings were $172 per month. Can their incomes be raised? Here the data from Mexico and from a project in Sri Lanka suggest the answer is yes. McKenzie and Woodruff (2006) use data from the Mexican Microenterprise survey to estimate returns to capital in microenterprises. They find that marginal returns are highest in the very smallest firms—those reporting less than $500 in invested capital, measured at replacement cost. Figure 1 reproduces a graph on returns to capital from McKenzie and Woodruff. McKenzie and Woodruff find that marginal returns to capital are extremely high among firms with less than $200 of invested capital, and high among firms with less than $1000 invested. Taken at face value, these data suggest that allowing the smallest firms to grow will generate higher incomes.

An ongoing project in Sri Lanka is designed to test this hypothesis, as posed by McKenzie and Woodruff, on the effect of increased capital on the operations of businesses suggested by McKenzie and Woodruff.[5] De Mel, McKenzie and Woodruff

---

[4] Among males 18-65 who entered the survey in he first quarter of 1999, for example, 10% switch into or out of self employment at least once, 11% switch twice, 4 % switch 3 times and 1% 4 times.
[5] The project is being undertaken by Suresh de Mel, David McKenzie and Christopher Woodruff. The analysis of the data is just underway, but I will refer to the project as de Mel, McKenzie and Woodruff (2006).

(2006) surveyed 600 microenterprises with no more than $1000 in capital invested in assets other than land and buildings. The firms were selected with a screening survey administered at the household level in three provinces in southern Sri Lanka. An equal number of firms was sampled in each of three zones. The first zone was near the coast, in an area flooded by the December 2006 tsunami. The second zone was in an area immediate inland from the affected zone. Firms in this zone suffered no direct damage from the tsunami, but the demand for their products was affected by the tsunami. The third zone was further inland in an area where there was neither direct damage nor a large effect on demand. For the data presented here, I eliminate the firms in the directly affected zone, but note that for the effects examined here, the results are qualitatively similar if all three zones are used or if the third zone is used by itself.

The first survey was administered in April 2005, and to date, the firms have been surveyed quarterly a total of five times. The basic survey instrument is similar to the ENAMIN: firms are asked both about investments and about current expenditures and revenues. The project also included a series of random capital shocks for the firms. After the first survey in April, we randomly selected 216 of the 600 firms to receive either a cash award, or equipment for their enterprise. One-third of the selected firms (or 72 firms) received 10,000 Sri Lankan Rupees (about $100) in cash, 72 firms received 10,000 Rupees in equipment for their enterprise, 36 firms received 20,000 Rupees in cash and the remaining 36 received 20,000 Rupees in equipment. For equipment awards, research assistants working for the project went with the entrepreneurs to purchase the tools, machinery, or inventories selected by the entrepreneurs. The intention was that the purchase the items they felt were most valuable to the enterprise.

I use the random capital shocks from round 1[6] to provide evidence on two questions. First, how much of the capital invested in the firms remains two, three and four quarters later? Second, how much do sales change in the quarters following the capital shocks? Table 3 shows the effect of the treatments on the investment levels in the firms. Both the mean and the medians of the data are shown. Using either, the treatments have a clear effect on the amount of capital invested in assets other than land and building. The treated firms have investment levels which are 105.6% of the untreated firms in the baseline. But in round 2, the gaps widens, with the treated firms' investment levels reaching 136.2% of the untreated firms investment levels. By round 5 of the survey, almost a year after the treatments, the gap has fallen back somewhat, to 121.3%. The initial impact is smaller at the median, 109.5%, and increases to 122.7% after round 3 before falling very slightly to 119.1% after round 5.

A similar pattern emerges when we focus on inventory investment. Baseline inventory levels are almost identical. After the treatment, inventory levels among the

---

[6] After the third survey round, in November 2005, a second round or treatments was administered. We selected 134 of the firms not receiving treatments after round 1, and cash and equipment awards of 10,000 and 20,000 Rupees were given in the same proportions as those used in the earlier treatments. I do not use those data because we do not yet have enough follow-up surveys to see their effect. Firms in the directly affected zone had a higher probability of receiving a treatment after the first round, and a lower probability after the third round, relative to the other zones. The treatments were structured this way to in order to get more money out quickly to the directly affected firms.

treated firms increase to 136% (200%) at the mean (median), after which the gap declines to 109% (117%) by round 5. The pattern is also similar for revenues, where the capital shocks result in the treated firms having revenues 143% at the mean, or 141% at the median of untreated firms in round 2. The gap at the mean remains almost unchanged, being 138.5% in round 5, while the gap at the median falls somewhat to 120%. Finally, the data for profit levels are somewhat more muddled. The treatment has an apparent in round 2 impact on both the mean and median profit levels, with profits increasing to 124% of the untreated group level at the mean and 133% at the median. By round 5, the median profit levels are identical, while the mean profit level of the treated firms remains 128% of the untreated firm level. This may reflect the fact that the smallest firms are decapitalizing more quickly, or it may reflect only the noisiness of reported profit data.

Though very preliminary, these data suggest that additional capital does result in higher revenues for the smallest microenterprises. Moreover, micro entrepreneurs appear to leave the capital in the firm for at least some period of time, and the higher investment levels result in both higher sales levels and higher profits, at least for some period of time.

Conclusions:
Household enterprises and micro entrepreneurs will become much less numerous as economies develop and incomes and wages increase. Some of the very small firms currently operating will increase in size, but the vast majority will become wage workers. There is a clear divide between the characteristics of the self employed who work by themselves and the self employed who hire paid wage workers. Those who hire paid workers have higher education levels, are more likely to come from families of business owners, and have parents with both higher education levels and higher incomes. The stark differences between the won account workers and employers, especially larger employers, makes it unlikely that own account workers will grow in large numbers. Longer term panel data which include information on firm size would be helpful to confirm or disprove this.

Even if the informal sector is best seen as it traditionally has been, as a self help safety net, the sector should not be ignored. Marginal investments appear to be quite profitable, and the micro entrepreneurs making investments in their firms see revenues and profits increase, at least for some period of time after the investment is made.

Bibliogrpahy

Bosch, Mariano and William F. Maloney, 2006, "Gross Worker Flows in the Presence of Informal Labor Markets. The Mexican Experience 1987-2002," working paper, World Bank.

De Soto, Hernando, 1989. *The Other Path*. New York: Harper and Row.

Faznyzlber, Pablo, William F. Maloney and Gabriel Montes Rojas 2005, "Micro-firm Dynamics in Less Developed Countries:How Similar are they to Those in the Industrialized World? Evidence from Mexico," working paper, World Bank.

Gollin, Douglas, 2002, "Getting Income Shares Right", *Journal of Political Economy*, Vol. 100(2), pp. 458-474.

Lucas, Robert, 1978., "On the Size Distribution of Firms," *Bell Journal of Economics* 9 (1978), 508-523.

McKenzie, David and Christopher Woodruff, 2006, ""Do Entry Costs Provide an Empirical Basis for Poverty Traps? Evidence from Mexican Microenterprises", *Economic Development and Cultural Change*, *forthcoming* October 2005.

Table 1A
Probability of Being Self Employed
Males, 2nd Quarter 2000 ENEU

Model	1	2	3	4	5
Depvar:	All self employed	Own Account	Only unpaid family	Hires wage workers	Hires >10 wage workers
intcpt	-1.193*	-1.226*	-2.646*	-2.601*	-3.922*
	(0.06)	(0.07)	(0.11)	(0.09)	(0.19)
1-5 years	-0.068	-0.135~	0.053	0.077	0.468*
	(0.06)	(0.06)	(0.09)	(0.08)	(0.12)
6 years	-0.164*	-0.251*	-0.023~	0.120*	0.728*
	(0.05)	(0.06)	(0.09)	(0.08)	(0.13)
7-8 years	-0.111	-0.190*	-0.062*	0.171*	0.781*
	(0.06)	(0.07)	(0.11)	(0.10)	(0.18)
9 years	-0.275*	-0.369*	-0.194~	0.144*	0.821*
	(0.06)	(0.06)	(0.09)	(0.08)	(0.13)
10-11 years	-0.238*	-0.371*	-0.129*	0.216~	0.922*
	(0.06)	(0.07)	(0.11)	(0.09)	(0.15)
12 years	-0.273*	-0.427*	-0.227~	0.311*	1.160*
	(0.06)	(0.06)	(0.09)	(0.08)	(0.13)
13-15 years	-0.234*	-0.417*	-0.235~	0.353*	1.277*
	(0.06)	(0.07)	(0.11)	(0.09)	(0.14)
16 years	-0.240*	-0.578*	-0.495*	0.580*	1.650*
	(0.06)	(0.06)	(0.09)	(0.08)	(0.12)
> 16 years	-0.477*	-0.905*	-1.305*	0.529*	1.488*
	(0.09)	(0.12)	(0.15)	(0.11)	(0.16)
23-27	0.326*	0.264*	0.40*	0.363*	0.109
	(0.04)	(0.05)	(0.09)	(0.07)	(0.17)
28-32	0.588*	0.449*	0.652*	0.670*	0.426*
	(0.04)	(0.04)	(0.09)	(0.07)	(0.16)
33-37	0.742*	0.536*	0.812*	0.821*	0.546*
	(0.04)	(0.04)	(0.08)	(0.07)	(0.16)
38-42	0.834*	0.559*	0.913*	0.962*	0.679*
	(0.04)	(0.05)	(0.08)	(0.07)	(0.16)

43-47	0.988*	0.674*	1.020*	1.102*	0.935*
	(0.04)	(0.05)	(0.08)	(0.07)	(0.16)
48-52	1.031*	0.672*	1.161*	1.116*	0.948*
	(0.04)	(0.05)	(0.09)	(0.07)	(0.16)
53-57	1.131*	0.723*	1.199*	1.20*	1.040*
	(0.05)	(0.05)	(0.09)	(0.08)	(0.17)
58-65	1.203*	0.875*	1.088*	1.149*	1.185*
	(0.05)	(0.05)	(0.09)	(0.08)	(0.18)

R-sq	0.061	0.04	0.076	0.074	0.146
#	102248	102248	102248	102248	102248

Table 1B
Probability of Being Self Employed
Females, 2nd Quarter 2000 ENEU

Model	1	2	3	4
Depvar:	All self employed	Own Account	Only unpaid family	Hires wage workers
intcpt	-1.301*	-1.405*	-2.349*	-3.288*
	(0.08)	(0.08)	(0.16)	(0.22)
1-5 years	-0.150~	-0.153~	-0.108	0.29
	(0.07)	(0.07)	(0.11)	(0.19)
6 years	-0.287*	-0.308*	-0.241~	0.489*
	(0.07)	(0.07)	(0.10)	(0.19)
7-8 years	-0.205~	-0.221~	-0.401*	0.692*
	(0.09)	(0.10)	(0.14)	(0.24)
9 years	-0.446*	-0.469*	-0.365*	0.547*
	(0.07)	(0.07)	(0.11)	(0.18)
10-11 years	-0.384*	-0.499*	-0.539*	0.872*
	(0.08)	(0.09)	(0.13)	(0.20)
12 years	-0.638*	-0.685*	-0.620*	0.658*
	(0.07)	(0.07)	(0.11)	(0.18)
13-15 years	-0.666*	-0.723*	-0.679*	0.601*
	(0.08)	(0.09)	(0.18)	(0.20)
16 years	-0.728*	-0.846*	-1.015*	0.803*
	(0.07)	(0.07)	(0.14)	(0.18)
> 16 years	-0.741*	-0.908*	0.997*	
	(0.14)	(0.17)	(0.23)	
23-27	0.497*	0.510*	0.293	0.243
	(0.06)	(0.06)	(0.16)	(0.15)
28-32	0.808*	0.756*	0.507*	0.684*
	(0.06)	(0.06)	(0.15)	(0.15)
33-37	0.90*	0.835*	0.783*	0.684*
	(0.06)	(0.06)	(0.14)	(0.15)
38-42	0.969*	0.796*	0.976*	0.867*
	(0.06)	(0.06)	(0.14)	(0.15)

43-47	1.077*	0.977*	0.965*	0.803*
	(0.06)	(0.07)	(0.15)	(0.15)
48-52	1.175*	0.994*	1.033*	1.005*
	(0.06)	(0.07)	(0.15)	(0.16)
53-57	1.310*	1.089*	1.166*	1.028*
	(0.07)	(0.08)	(0.15)	(0.16)
58-65	1.429*	1.203*	0.967*	1.308*
	(0.08)	(0.08)	(0.16)	(0.17)
--				
R-sq	0.094	0.084	0.113	0.061
#	60541	60541	59883	60541

Table 2
Multinomial Logit Results
Male Workers

	Work Alone	Work With family	Hire 1 to 4 workers	Hire 5 to 9 workers	Hire 10 or more workers
Years of schooling	-0.058	-0.028	0.030	0.154	0.140
	(5.59)	(1.80)	(2.11)	(4.14)	(4.00)
Parent's years schooling	0.010	-0.018	0.026	0.051	0.061
	(0.83)	(0.89)	(1.59)	(1.54)	(2.08)
Parent's occupational income	0.137	0.059	0.377	0.740	1.100
	(0.98)	(0.27)	(2.16)	(2.21)	(3.81)
Parent self employed	0.433	0.756	0.587	0.790	-0.311
	(5.33)	(5.94)	(4.67)	(2.45)	(0.84)
Parent was employer	0.067	0.633	1.195	1.710	1.714
	(0.40)	(2.72)	(0.74)	(5.29)	(6.37)
# of observations	7264				
pseudo R-square	0.101				

Note: The base group is wage workers.

Table 3A: Effect of treatments on investment levels
Total non-land capital

	Mar-05	Jun-05	Sep-05	Dec-05	Apr-05
Untreated firms	27280	31387	32652	33700	34812
	20000	25225	25750	26505	24275
Treated firms	28813	42509	40270	41454	42229
	22010	27610	31600	30000	28910
Treated / untreated					
Mean	105.6%	135.4%	123.3%	123.0%	121.3%
Median	110.1%	109.5%	122.7%	113.2%	119.1%

Table 3B: Effect of treatments on investment levels
Inventory Levels

	Mar-05	Jun-05	Sep-05	Dec-05	Apr-05
Untreated firms	13814	16470	17094	17639	18229
	5000	5000	6000	6900	6000
Treated firms	13805	22426	19258	19806	19925
	5000	10000	8000	8500	7000
Treated / untreated					
Mean	99.9%	136.2%	112.7%	112.3%	109.3%
Median	100.0%	200.0%	133.3%	123.2%	116.7%

Table 3C: Effect of treatments on investment levels
Revenues

	Mar-05	Jun-05	Sep-05	Dec-05	Apr-05
Untreated firms	13336	16721	19511	21291	22201
	8000	8500	10000	10000	12500
Treated firms	12649	23859	25367	28584	30749
	7000	12000	12000	15000	15000
Treated / untreated					
Mean	94.8%	142.7%	130.0%	134.3%	138.5%
Median	87.5%	141.2%	120.0%	150.0%	120.0%

Table 3D: Effect of treatments on investment levels
Profits

	Mar-05	Jun-05	Sep-05	Dec-05	Apr-05
Untreated firms	3794	4313	5964	5394	7768
	3000	3000	3750	4000	5000
Treated firms	3936	5340	5530	5575	9934
	3000	4000	4500	4600	5000
Treated / untreated					
Mean	103.7%	123.8%	92.7%	103.4%	127.9%
Median	100.0%	133.3%	120.0%	115.0%	100.0%