

The Other Half: What do we know- and need to learn - about self employment in LICs?

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Motivation:

Typically a half or more of the labour force in low-income countries is self employed. Table one shows the percentage of the labour force which is self employed in 12 of the 35 countries currently classified as low-income by the World Bank. Nine of these data points are for years between 2000 and 2006 from the ILO's LABORSTA database. For these nine, the data include the agricultural sector. For five of the current LICs, the table shows the non-agricultural self employment rate, mostly from years in the 1990s. These are generally lower. Nevertheless, between one-third (Rwanda) and 60% (Chad) of the non-agricultural labour force in these countries is self employed.

Rates of self employment are much lower in high income countries, where typically around 10% of the labour force is self employed. (See, for example, the graph in Gollin 2002, Figure 3). On the other hand, the percentage of the workforce who are employers – self employed but hiring at least one paid worker – are lower in LICs than in OECD countries. The ILO reports that self employment rates (including the agricultural sector) average 54% in a set of SSA countries, but 10% in a set of European countries. On the other hand, 43% of the self employed (4.3 percent of the labour force) are employers in Europe, while only 3 percent of the self employed in Africa (1.8 percent of the labour force) are employers. (See ILO 2012, Figure 3.)

A benchmark for efficient sorting

Lucas (1978) develops a model of occupational choice which appears to describe the aggregate patterns quite well. In his model, each potential labour force participant has a unique managerial ability. The structure of the Lucas model is straightforward: Production involves homogeneous labour and capital, combined in a CRS technology when management has 'normal' ability. More able managers extract higher output from a given level of capital and labour than do less able managers. But they face a 'span of control' problem: the manager's ability to extract output from capital and labour is diminishing in the amount of capital and labour s(he) employs. Thus, efficiency in the economy requires more than identifying the single more able manager. Maximizing output given (fixed) levels of capital and labour requires an efficient sorting of individuals into roles as managers and workers. Lucas shows that this implies that the most able managers will run firms, and the rest of the workforce will be employed in those firms. Firm size is increasing in managerial ability and there is some threshold level of managerial ability above which workers will be entrepreneurs, and below which workers will be employees. Lucas also shows that the threshold is increasing in the economy's income level – that is, that lower income

economies will have a larger share of the workforce self employed, and managing smaller firms.

This framework leads immediately to several questions related to self employment in LICs:

Q1: *How efficient is the selection into self employment in LICs?*

Q2: *Who are the self employed, and what determines selection into self employment and wage work?*

Q3: *Is managerial ability a person-fixed factor, or can it be learned? And if it is learned, can it be taught?*

Q4: *Where, given this dynamic, will creation of wage jobs come from?*

I discuss what we know about each of these questions below.

How efficient is the selection into self employment in LICs?

This is arguably the most important question related to self employment and labour market dynamics, and one on which we have limited evidence. There has been quite a lot of work, both theoretical and empirical, on the role of credit constraints in constraining entry and growth of enterprises. (See, of particular interest, Paulson and Townsend 2004 and Paulson, Townsend and Karaivonov 2006.) Undoubtedly, access to credit is important – but it is far from the only factor which affects the decision to start a business. Entry regulations (Bruhn 2010; Kaplan et al 2010, for example), political or market connections (Khana, etc.), a lack of insurance markets which may also affect which individuals become entrepreneurs. To the extent that these factors are not perfectly correlated with entrepreneurial ability, they will lead to some inefficiency in relation to the Lucas benchmark.

There are several lenses through which to look at the question of efficiency of sorting. Assuming entrepreneurial ability has a distribution which is something like normal, the vast majority of enterprise owners will have modest levels of ability. This is especially true in LICs where half the population is self employed. Given modest ability levels, their optimal size, measured by employment, is one – themselves. These are often referred to as ‘subsistence’ entrepreneurs. (See, for example, Ardagna and Lusardi, 2010; Schoar.) Further up the ability distribution are ‘transformational’ entrepreneurs, whose optimal firm size is larger than one.

The term subsistence entrepreneurs is unfortunate in that it suggests that the non-employers are individuals who are self employed only for lack of opportunities in wage work. What does the evidence suggest about mobility between wage work and self employment? Perhaps the best answer to this question comes from work by Maloney and collaborators, based on data from Latin America. In a series of papers, they find little evidence for queuing for formal sector wage jobs. For example, using data from Argentina, Brazil and Mexico, Bosch and Maloney (2008) show that transitions from self-employment to formal work (which is overwhelmingly wage work) are pro-cyclical. *But so are transitions from formal (wage) work to self employment.* Indeed, the cyclicity of the two transitions are almost identical.

Maloney’s work suggests that micro entrepreneurs in Latin America are, on average, drawn by opportunity rather than a lack of choice. But do these findings from MICS in Latin America tell us anything about self employment dynamics in other parts of

the world, and in LICs? There is some reason to be sceptical that they do. Self employment rates in Sub-Saharan Africa are much higher than in Latin America. And while movement between wage work and self employment is very common in Latin America, de Mel et al (2010) find that over half of a sample of self employed in Sri Lanka report that they have always been self employed. This raises the question of whether the dynamics are different in Africa and South Asia than they are in Latin America. Unfortunately, a lack of panel data in South Asia and SSA make it difficult to assess whether the findings of Maloney and his co-authors carry over. The closest existing work may be that by Townsend and various collaborators, using long-term panel data collected from households in Thailand (which is an MIC rather than an LIC).

Because the entrepreneurs with an optimal firm size of one are likely to numerically dominate the population of entrepreneurs, analysis of ‘the self employment’ dynamics of the sort Maloney and his collaborators carry out is likely to be driven by non-employers. But from the perspective of growth, the decisions of a few very high ability entrepreneurs may be of greater importance. Potential high-ability entrepreneurs face numerous constraints to opening a business. The World Bank’s *Doing Business* project has been effective in highlighting many of these. But in addition to constraints, talented and well trained labour market participants often have unusually lucrative opportunities in salaried labour markets which raise the opportunity cost of starting a business. Driven by lucrative and stable public sector salaries, for example, queuing for government sector jobs is common among university graduates in LICs. Survey data from Sri Lanka suggest that parents- by a ratio of six to one for boys and almost twenty to one for girls- would rather see their children be managers in a government ministry than managers in large firm. This gap in aspirations holds even among those parents who believe either of these positions is possible for their children. There is some sense that the pattern of aspirations parents have for their children is similar in other LICs, especially in South Asia.

In addition to governments, NGOs and multinationals, faced with an environment where trust is a concern, may also distort labour markets by providing particularly enticing occupational choices for high-ability workers. These effects may be difficult to measure, because they remove only a few individuals from the set of business owners. But because these few are among the highly skilled, they may have important effects on growth and job creation.

With regard to high-ability entrepreneurs, there are two research agendas. One is to work on theoretical models which incorporate one or more of the constraints / wage market attractions in a way which gives insight into the actual circumstances in LICs. The other is empirical. This will involve, on the one hand, creation or use of panel data for the type of broader analysis of dynamics of the Maloney sort, and on the other hand, identifying or creating data which allows us to compare career paths of entrepreneurs in LICs with those in high-income countries.

Who are the self employed, and what determines selection into self employment and wage work?

One approach to the efficiency question is to ask whether the relationship between measured characteristics and selection into self employment – or perhaps, selection into non-employer and employer status – differs in high- and low-income countries.

We have limited information from large representative samples on the characteristics of entrepreneurs and wage workers. One exception is the work by Ardagna and Lusardi, which uses the Global Entrepreneurship Monitor (GEM) data 37 middle- and high-income countries. The GEM survey asks individuals whether they are thinking about starting a business, and if so, whether they are doing so because of they see a business opportunity or because “they could find no better economic work...” (Ardagna and Lusardi, p. 6). They find that the potential entrepreneurs in this set of countries have higher rates of university and post-graduate education than non-entrepreneurs. Moreover, the education gap is even more pronounced between those considering a business opportunity than among those who say they are entering for lack of better alternatives. These results are also evident in data from Mexico analysed in Woodruff (2007). The Mexican data show that self employment rates are negatively correlated with educational attainment in Mexico, but positively correlated in the United States.¹ However, education is very positively correlated with firm size among the self employed in Mexico.

Ardagna and Lusardi also report that a ‘fear of failure’ matters. Respondents in the GEM are asked whether a fear of failure might dissuade them from opening a business. Potential entrepreneurs are less likely to say they fear failure, especially those who report chasing a business opportunity. This is perhaps not surprising in the context of having reported an interest in opening a business. But the question does highlight the need to understand the relationship between factors other than education on the one hand, and selection into non-employer or employer status on the other. In order to understand the efficiency of the sorting process, we need much more detail. In particular, what do the career paths of entrepreneurs look like in different environments? *De Mel et al (2010) indicate that, comparing non-employers with employers in firms with 5-50 workers, the employers are much more likely to have been wage workers at some point in their career.*

Notice that all of the data discussed are from middle- and high-income countries. There are many fewer studies comparing wage workers, non-employers and employers in LICs. In fact, I am not aware of any such studies using representative samples which go beyond measured education levels. This is clearly a gap. In closing it, we might look for ways to obtain data which would be comparable to that gathered in middle- and high-income countries. The relationships between worker characteristics and labour market status are not likely to be very informative except in a comparative context.

Is managerial ability a person-fixed factor, or can it be learned? And if it is learned, can it be taught?

Jovanovic (1982) make an important extension of the Lucas framework. He supposes that entrepreneurs do not learn their managerial ability until after entry. They may therefore enter at a suboptimal size. Those who learn that they have low entrepreneurial ability exit. Those who learn they have high ability grow quickly in the initial period of operation as they re-optimize their scale given what they have learned about their ability.

¹ Perhaps not coincidentally, returns to schooling are found to be strongly concave in high income countries, but often convex in low and middle-income countries.

There is evidence consistent with this sort of up-or-out behaviour. A separate but related question is also important: can entrepreneurship actually be taught? That is, is training of low-ability entrepreneurs effective in increasing entrepreneurial ability?

The evidence on the effect of training is mixed, at best. The most credible studies are randomised control trials, which small to modest sample sizes in a diverse set of locations. They often show a positive effect but for a part of the training or for a subsample of the study. (See Karlan and Valdivia, Drexler Fischer and Schoar)

Perhaps it is not training on entrepreneurial skills, but other kinds of knowledge which are important. Owners of larger firms often have experience working as wage workers in larger enterprises.

Sutton (2010) traces the origins of the 50 largest companies in Ethiopia. The findings are illuminating: Sutton finds that only two of the 50 largest firms in Ethiopia trace their roots to small enterprises. Half were started by traders, who were for the most part involved in international trade. Most of the other half have roots either in the public sector (11 of the 50) or foreign firms (9). His conclusion is that knowledge of markets and market opportunities are key. Mostafa and Klepper trace the origin of numerous large garment exporters in Bangladesh to a single factory operated by a Daewoo subsidiary. Mid-level managers at Dosh (Daewoo) gained skills needed to organise a large factory on the job. A key question for LICs without a large number of large firms is how do potential entrepreneurs obtain this training in the absence of these larger firms?

Where, given this dynamic, will creation of wage jobs come from?

The distinction between subsistence entrepreneurs on the one hand and ‘opportunity’ or ‘transformational’ entrepreneurs on the other, presupposes an answer to this question. But in the reality of LIC labour markets, I worry that this distinction might lead us astray. The best answer to this question seems to me to depend on the answer to the preceding questions about the efficiency of sorting and learning. If the correlation between entrepreneurial ability and firm size is as high in LICs as it is in high-income countries, and if entrepreneurship cannot be taught, then creation of wage jobs will almost certainly come from expansion or entry to much larger firms. The focus then becomes determining the factors which discourage entry among those with very high levels of entrepreneurial ability.

Alternatively – or in addition, since these are not mutually exclusive – it may be that there are high ability entrepreneurs ‘hiding’ among the non-employers. The question then is whether, because of their numbers modest growth of non-employers or very small firms might generate an economically important number of jobs. Some evidence on this comes from ongoing research by de Me et al in Sri Lanka. A project which offered temporary wage subsidies to a random sample of enterprises with no more than 2 paid employees (and 84% of whom were non-employers) was offered a subsidy equivalent to have of an unskilled worker salary for a period of 6 months if they hired an additional employee. A year after the subsidy was removed, those offered the subsidy were around 10 percentage points more likely to have a paid employee than those in the control sample. Whether this is a permanent effect is not clear. And the project is not designed to address general equilibrium effects. But the initial results suggest that there may be some scope for generating employment even among the smallest enterprises.

In a second experiment involving small scale enterprises in Sri Lanka, de Mel et al (2011) provided incentives for firms to formalise their registration. The incentives are effective in inducing between 20 and 40 percent of previously unregistered firms to register. For the median firm, there appears to be no effect on growth of sales or employment. But in the upper tail, for perhaps 5-10% of the firms, registration does appear to be followed by growth. These results suggest that informality is a characteristic rather than a state for most firms. But again, given the number of informal firms, the effects on those at the upper tail – if they turn out to be more generally true – may have substantive effects on job creation. These findings are consistent with Kaplan et al (but not as much Bruhn's) analysis of a reform in Mexico which simplified business registration.

The data on firm dynamics and job creation in LICs are far too limited. But what data we have suggest that the majority of the largest firms are likely to enter large. Whether the smallest firms, vast in number, can generate meaningful employment by growing up a bit, and whether policy can speed that growth, are open questions.

Concluding remarks

The goal of the workshop is to help establish an agenda for the GLM-LIC program. I have tried to outline what I see as important issues related to self employment, which is an important part – perhaps even the majority – of the labour force in LICs. This is also the point of the GLM-LIC agenda which will overlap most clearly with the agenda of the other DFID-funded research program on Private Enterprise Development in LICs (PEDL).

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