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and Stefan Dercon

## More Sweatshops for Africa?

### Pilot Results from an Experimental Study of Industrial Labor in Ethiopia



#### In brief

- Industrial growth is seen by many as a key driver of economic development. Some argue that it can provide a source of steady wages and higher incomes than lower-productivity agriculture and self-employment. However, others argue that industrial work can be exploitative and harmful by overworking the poorest in poor working conditions.
- This study attempts to address the impact of working in the industrial sector on workers on a number of measures, including economic, health and social. The following results are from a pilot study of a water bottling factory in Burayu, Ethiopia. Participants were randomly assigned to either industrial jobs or a self-employment program or neither.
- Industrial jobs appear to improve the economic welfare for laborers. As a result of factory employment, workers have greater incomes, consumption, income stability and go to bed hungry less often. Factory workers do not report large increases in the number of hours worked, suggesting an increase in labor productivity due to factor employment.
- Industrial jobs also appear to increase subjective well-being in the near and long term, as well as improving physical health. We find no evidence of a change in work place conditions. However, we observe a slight increase in depressive and anxiety symptoms.
- Industrial jobs appear to increase the rate of community leadership, as well as strengthening relationships with others in the community.
- Although our results are preliminary and, due to a small sample size, may be statistically imprecise, our pilot results suggest that industrial sector employment results in substantial welfare gains among the poor and should be used as a poverty-reduction strategy. Replication and scale-up of this study is still ongoing in Ethiopia.

## Research Motivation

*“Should donors and governments focus on the conditions for firm growth and industry, or should they intervene in labour markets?”*

Policy makers see industrial development as key to aggregate growth, but debate its value as a poverty alleviation strategy. For some, industrial jobs are exploitative and harmful, overworking the poorest, exposing them to health risks or unpleasant working conditions. For them, the key is to regulate these jobs, as well as to encourage people to remain smallholders or support them into self-employment. For others, industrial jobs are a source of steady wages and higher incomes than low-productivity agriculture and self-employment. For them, the question is not whether industrial labor improves well-being, but by how much. They look at the long lines of applicants for every handful of factory jobs and see revealed preference for steadier formal labor, especially compared to the unpredictability, stress and drudgery of self-employment and agriculture. They object to an overly romantic view of self-employment and agriculture that overlooks the fact that most people are unhappy entrepreneurs who actually value steady work and wages.

Which view is true? The answer is important. It not only affects how we feel about our Nike sneakers or Apple iPads (and how we hold these firms accountable) but also for development strategies generally. Should the donors and country governments focus on the conditions for firm growth and industry, or should they intervene in labour markets, as well as continue their emphasis on smallholder agriculture and self-employment?

## Design

We investigate this question with an unusual experiment, one that randomly assigns applicants to industrial jobs to either the job, a self-employment program (of skills training and a cash grant), or neither. To do so, we are collaborating with ten medium-sized firms in Ethiopia that have agreed to randomize job offerings among eligible applicants, allowing the research team to compare those offered a job to those not, as well as an NGO providing the self-employment program intervention.

*“These results are preliminary and... results from the complete study may change. However, we feel these pilot results are indicative of the general pattern we will observe through an expansion of the study”*

We report initial results from a small pilot study of 78 applicants to a water bottling factory in Burayu, Oromiya region. Among all the applicants, 34 were randomly offered a position in the factory, creating a random treatment group of 34 and a random control group of 44. Results are drawn from the follow-up survey conducted one-year after the initial job offer.

## Key Findings

These results are preliminary and, due to the small sample size, are generally statistically imprecise. Results from the complete study may change. However, we feel these pilot results are indicative of the general pattern we will observe through an expansion of the study.

## Industrial jobs appear to improve economic welfare for laborers

*“Factory workers have greater incomes, greater consumption, greater income stability and go to bed hungry less often as a result of factory employment”*

Factory workers have greater incomes (11 to 31%), greater consumption (10 to 27%), greater income stability (19 to 54%) and go to bed hungry less often (-49 to -149%) as a result of factory employment (Figure 1). Asset wealth is .1 to .3 standard deviations greater as a result of factory employment (results not shown). At the same time, factory workers do not report substantial increases in overall number of hours worked (Figure 2), suggesting that labor productivity increases as a result of factory employment.

Figure 1: Impacts on Income and Poverty

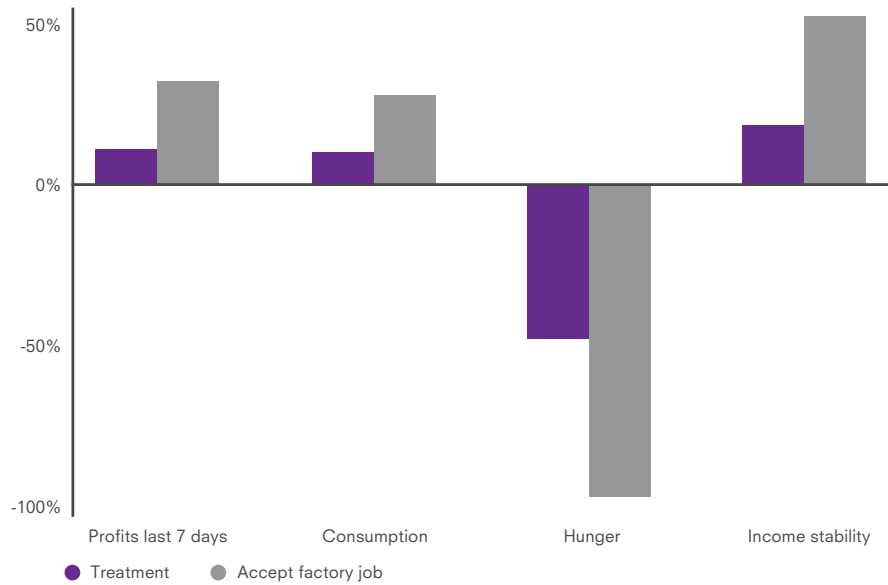
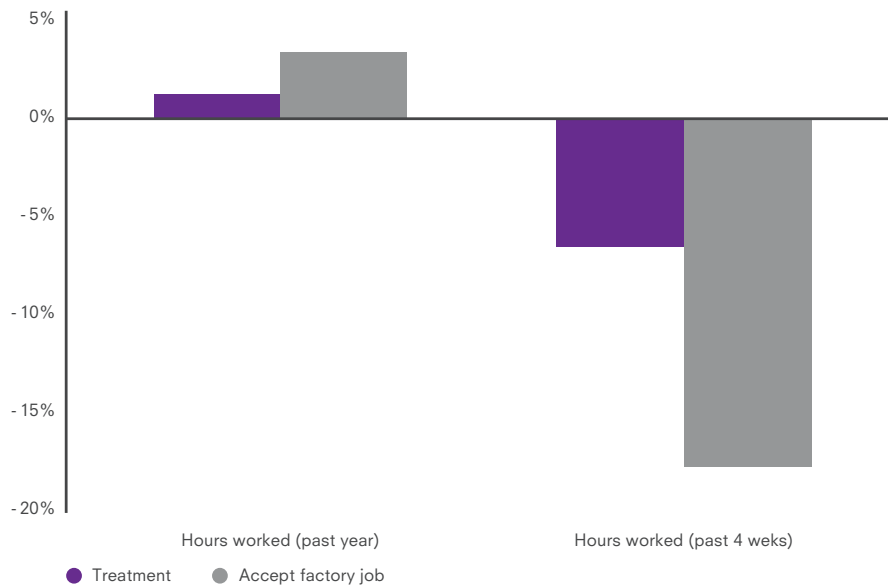


Figure 2: Impacts on Employment



*“The effects of factory jobs on well-being may be perceived as positive, but there are not uniform improvements”*

### Industrial jobs appear to increase subjective well-being and physical health

Factory employment increases well-being (35-104%) and anticipated well-being in the near term (10- 29%) and long term (15-44%) (Figure 3). We find no evidence of a change in work place conditions, such as workplace comfort or flexibility. Factory employment also improves physical health, measured as the ability to perform strenuous daily tasks without difficulty, by 20-58% (Figure 4). We observe a slight increase in depressive and anxiety symptoms, however, suggesting that the effects of factory jobs on well-being may be perceived as positive, but there are not uniform improvements.

Figure 3: Impacts on Subjective Well-Being and Work Conditions

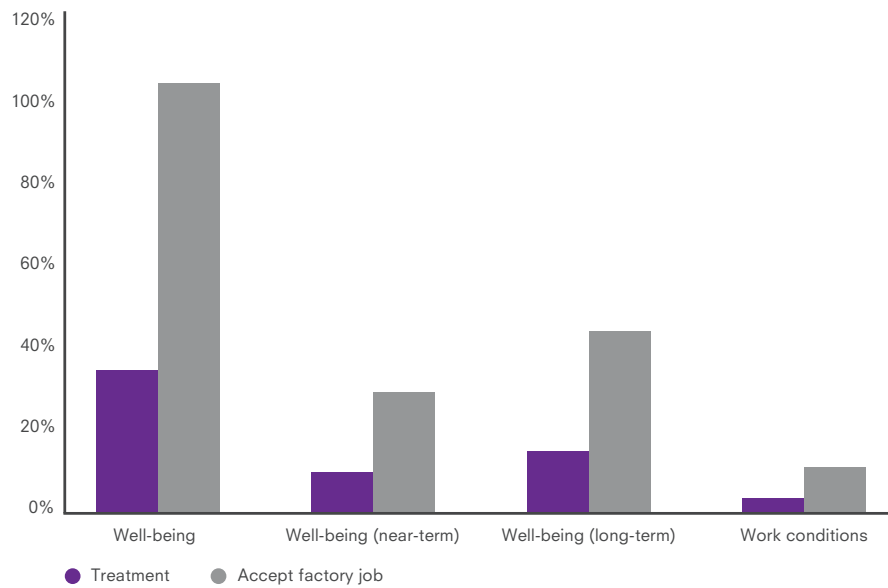
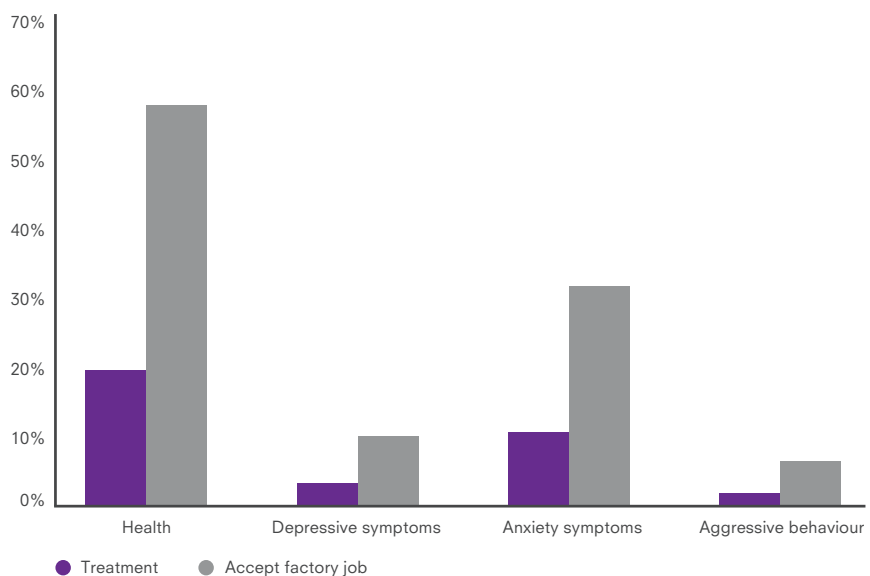


Figure 4: Impacts on Physical and Mental Health

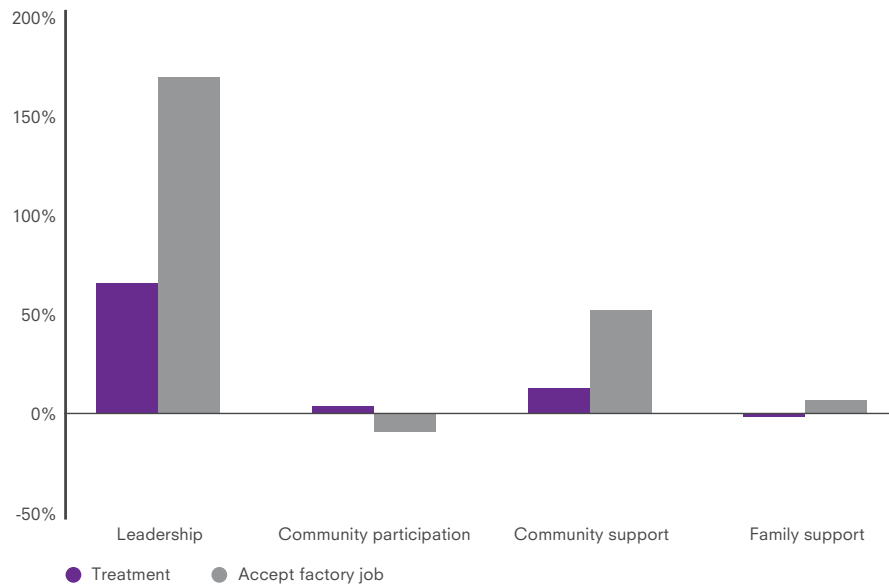


*“We find no impact on intra-family relationships or other forms of community participation”*

### Industrial Jobs appear to improve the quality of relationships with community members

Factory employment increases the rate of community leadership and strengthens relationships with others in the community, possibly as a result of greater leisure time, self-esteem, or status (Figure 5). We find no impact on intra-family relationships or other forms of community participation, such as group membership or voting.

Figure 5: Impact on Community and Family Outcomes



### Policy Implications

Industrial sector growth has long been at the center of country’s economic growth strategies. Yet our research suggests that industrial sector employment also results in substantial welfare gains among the poor, and thus should be used as a poverty-reduction strategy. For now, we cannot substantiate that returns are high relative to returns to micro-enterprise or agriculture interventions, although recent research suggests the latter are quite limited. Aid agencies, donors and government ministries should therefore place greater emphasis on policies to expand job opportunities through industrial production, medium-size enterprise growth and factory sector employment.

*“Our research suggests that industrial sector employment also results in substantial welfare gains among the poor”*

### Further work

Replication and scale-up of the current study is ongoing within Ethiopia. One-year results from all ten firms, with a total of 450 new hires among a larger sample of eligible candidates, as well as from the self-employment program, will be available in 2013. This analysis will allow the research team estimate the impact of industrial sector employment within Ethiopia during the time period covered by our study,

but the external validity of our findings beyond Ethiopia will be uncertain. As with all randomized controlled trial (RCT) interventions, replication in other settings is necessary to determine the extent to which our findings generalize.

## Further Readings

For evidence on the limited ability of the informal sector, self-employment, and small scale agriculture to serve as the engines for growth, as well as limited returns to poverty reduction as a result of such interventions see:

Banerjee, A., E. Duflo, et al. (2010). “The Miracle of Microfinance? Evidence from a Randomized Evaluation.” Unpublished working paper, MIT.

Banerjee, A. V. and E. Duflo (2008). “What is middle class about the middle classes around the world?” *The Journal of Economic Perspectives* 22(2): 3.

Banerjee, A. V. and E. Duflo (2011). *Poor economics: A radical rethinking of the way to fight global poverty*. New York, Public Affairs.

Beck, T., R. Levine, et al. (2003). “Small and medium enterprises, growth and poverty: cross—country evidence.” *World Bank Policy Research Working Paper* 3178.

de Mel, S., D. J. McKenzie, et al. (2008). “Returns to Capital in Microenterprises: Evidence from a Field Experiment.” *Quarterly Journal of Economics* 123(4): 1329-1372.

Dercon, S. (2009). “Rural Poverty: Old Challenges in New Contexts.” *World Bank Research Observer* 24: 1-28.

Woodruff, C. (2006). “Self-employment: Engine of Growth or Self—help Safety Net?” Unpublished manuscript.

## About the authors

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