Labour Economics 28 (2014) 96–109

Contents lists available at ScienceDirect

Labour Economics

journal homepage: www.elsevier.com/locate/labeco

Does risk matter for occupational choices? Experimental evidence from an African labour market ☆

Paolo Falco *

University of Oxford, Centre for the Study of African Economies, United Kingdom

HIGHLIGHTS

- I propose a testable model of sector allocation with risk-averse workers
- I test the model using experimental data to elicit individual attitudes to risk
- Risk-averse workers are more likely to be unemployed and less to have informal jobs
- Expected income uncertainty is found to be highest in the informal sector
- The results are consistent with a view of unemployment as a 'queue' for formal jobs

ARTICLE INFO

Article history:
Received 14 May 2012
Received in revised form 8 March 2014
Accepted 11 March 2014
Available online 20 March 2014

JEL classification:
C93
J21
J24
J64
O17

Keywords:
Sector allocation
Occupational choices
Risk-aversion
Informality
African labour markets

ABSTRACT

This paper investigates the role of risk-aversion in the allocation of workers between formal and informal jobs in Ghana. In the model I propose, risk-averse workers can opt between the free-entry informal sector and queuing for formal occupations. Conditional on identifying the riskier option, the model yields testable implications on the relationship between risk-preferences and workers' allocation. My testing strategy proceeds in two steps. First, I estimate expected income uncertainty through panel data and find it to be higher in the informal sector. Second, using novel experimental data to elicit individual attitudes to risk, I estimate the direct effect of risk-aversion on occupational choices and find that, in line with the first result, *more risk-averse workers are more likely to queue for formal jobs and less likely to be in the informal sector*. The results bear important implications for the optimal design of employment policies and social security.

© 2014 Elsevier B.V. All rights reserved.

1. Introduction

Modern Development Economics is increasingly interested in the workings of labour markets. As explained by Fields (2005), "the poor are poor because they earn little from the work they do" and it is now widely recognised that fighting poverty entails improving labour-market opportunities for the most disadvantaged. A crucial step in this process will be to gain a clearer understanding of how workers allocate themselves between different occupations and of the constraints they face in their occupational choices. In particular, as the divide between the formal and the informal sector of the economy deepens, identifying what drives workers into such different segments will enhance our understanding of the development process and will help us design more effective labour market policies. Banerjee and Newman (1993) lend strong theoretical support to these claims by showing how economic development can be modelled as a dynamic process of institutional change that ultimately depends on workers' occupational choices, given an initial wealth distribution.

Once we have a clear motivation for studying workers allocation, we are faced with the question of how to model occupational choices in

☆ I am greatly thankful to Dr. Francis Teal and Prof. Abigail Bar for their supervision and support. I am also indebted to Prof. Marcel Fafchamps and Prof. Glenn Harrison for their advice. I am grateful to the ESRC for financial support (grant no. ES/J003689/1). The data I used was collected by the Centre for the Study of African Economies (Oxford University) with funding from the ESRC (grant no. M571255001), in collaboration with the Ghana Statistical Office (GSO). All errors are mine.

* Tel.: +44 1865271084; fax: +44 1865281447.
E-mail address: paolo.falco@economics.ox.ac.uk.

http://dx.doi.org/10.1016/j.labeco.2014.03.005
0927-5371/© 2014 Elsevier B.V. All rights reserved.

labour markets without state funded insurance mechanisms to support the unemployed. My approach in this paper will be to model the choices of individual workers between alternative job-options as a function of their *attitudes to risk* (see Kihlstrom and Laffont (1979) for an early theoretical study of firm formation based on risk aversion). In doing so, I will contribute to bridge a gap in the existing literature, where limited attention has been dedicated to the effects that risk in occupational outcomes may have on the choices of risk-averse workers (e.g. Bonin et al. (2007), Bobba (2013)). The main innovation from this study is the use of experimental data to elicit risk-aversion. During the summer of 2007 I carried out three weeks of behavioural experiments with a sample of Ghanaian workers who had previously taken part in a three-year household survey by the Centre for the Study of African Economies (CSAE). The experiment consisted of a series of dichotomous decisions over 21 pairs of lotteries with real money prizes. Applying Maximum Likelihood techniques for the estimation of utility functions to this data, I have obtained a measure of individual risk-aversion that I can use to research the relationship between attitudes to risk and occupational choices.

To guide the investigation, I formulate a theoretical model of sectoral choice with *risk-averse workers*, motivated by the empirical observation that occupational decisions are "risky" in two important dimensions. First, the process of job-search is inherently uncertain, since workers who seek employment are generally only successful with some limited probability and face the risk of remaining unemployed if their search fails. Second, conditional on finding a job, earnings volatility over "good" and "bad" states of the world can be substantial in some occupations. These two forms of uncertainty should both influence the expected utility that risk-averse workers receive from prospective jobs and they should ultimately affect workers' allocation. Based on this observation, I propose an extension to the classical Harris and Todaro (HT, 1970) model of inter-sectoral linkages and to its further development by Fields (1975). In my model a worker can either seek employment in the formal sector or in the informal sector. If she chooses the former option/strategy, she will obtain a job with probability p, while she will remain unemployed with probability $(1 - p)$. If, on the other hand, she chooses the informal sector, she will be employed with certainty (since the informal sector is presumed to be free entry), but her earnings will be subject to volatility over good and bad periods. These assumptions reflect the observed choice set available to workers in many developing countries, where earnings from informal jobs are easily accessible but highly volatile, while access to formal occupations, which pay more regular income streams, is rationed. In this setting, workers' occupational decisions are driven by their risk-aversion and by the relative magnitude of earnings uncertainty under different search strategies. Hence, conditional on being able to determine which strategy is riskier, the model yields testable implications on the relationship between workers' attitudes to risk and their sectoral allocation.

My empirical strategy will test those implications in the context of the Ghanaian labour market. First, I will estimate the marginal effect of risk-aversion on sectoral allocation using a multinomial logit model. *My main finding is that risk-aversion significantly increases with the likelihood of queuing for formal occupations, while it decreases with the likelihood of working in the informal sector*. These effects are large and statistically significant. Second, using panel data on earnings, I will measure income uncertainty and I will conclude that in urban Ghana taking an informal job is on average a riskier option than queuing for a formal one, in terms of expected income uncertainty. These two findings are consistent with each other and in line with the predictions of the theoretical model. Moreover, they survive an extensive set of robustness checks against a number of potential limitations in the empirical setup, including issues of workers' misclassification into formal and informal employment categories, of imprecision in the estimation of risk-aversion and of the potential endogeneity of risk-preferences.

My conclusion is that risk-preferences, like education and age, play an important role in determining occupational choices and, therefore, they should be taken more carefully into account when designing labour market policies for developing countries, especially if such policies are going to affect the degree of income uncertainty (and ultimately of risk) in different sectors of the economy. Employment schemes that produce highly volatile income streams, for instance, may fail to enhance welfare and they may result in low take-up if workers are sufficiently risk-averse, potentially causing a waste of development resources. Conversely, my results highlight the value of social protection and insurance, as instruments that can effectively assist workers in their occupational choices, enhancing their future employment prospects. As such, these tools should not be viewed as 'mere' transfer payments, but as powerful development tools.

Given the novelty of the analytical framework and of my experimental dataset, the evidence presented in this paper extends beyond the context of developing economies, and certainly beyond the African context. It contributes to a nascent literature from developed countries where direct measures of risk-aversion are used to investigate behaviour in the labour market. Among the most recent studies in this field, Brown et al. (2011) analyse the relationship between willingness to take financial risks and self-employment in the US and Pannenberg (2010) investigates risk-aversion among unemployed workers in Germany, and its relationship with reservation wages. My work is most closely related to Bonin et al. (2007), who find that, among German workers, those with low willingness to take risks are more likely to work in occupations with low earnings risk. Their conclusion is consistent with my results from Ghana.

The paper is structured as follows. In Section 2 I will introduce my model of occupational choices with risk-averse workers and income uncertainty, and I will present its implications for empirical testing. In Section 3 I will describe the survey data and the experimental dataset collected in the summer of 2007. Section 4 will outline the Maximum Likelihood Estimation method used to estimate workers' risk-aversion. In Section 5 I will introduce my empirical strategy, present my results and perform a number of robustness checks on them. Section 6 will conclude.

2. A model of occupational choices with risk-averse workers and earnings uncertainty

The model I propose builds upon the classical Harris and Todaro (1970) model of the dual economy (and more specifically on its later development by Fields, 1975), extending its basic intuition in two interrelated dimensions. First, my theoretical framework will not be solely concerned with differences in *expected earnings* across sectors, but it will also take into account differences in *earnings volatility* and more generally in *earnings uncertainty* as determinants of occupational preferences. Second, I will relax the assumption of workers' risk neutrality to allow risk-aversion to play a role in the occupational decisions.

Inspired by the Kenyan experience of the 1960s, Harris and Todaro (1970) set forth a compelling theory to explain rural–urban migration. Their model postulates that workers compare the *expected incomes* in the urban sector with agricultural wage rates and migrate if the former exceeds the latter. Urban sector wages are assumed to be set institutionally above market clearing and urban unemployment results. On the other hand, it is assumed that there is always full-employment in agriculture. Rural–urban migration acts as an equilibrating force, until the expected urban wage eventually equates the rural wage. As noted by Fields (1975), migration could be more generally regarded as an adjustment mechanism by which workers allocate themselves between different segments of the labour market, while attempting to maximise their expected incomes. In this light, the original HT model can be used to analyse the movement of workers between the formal and informal sector of the economy (Fields, 1975). In the formal sector, generally defined as the sum of public sector workers and employees or owners of large private businesses (a precise definition will be provided in the next section), wages above market clearing cause unemployment

Download English Version:

https://daneshyari.com/en/article/971481

Download Persian Version:

https://daneshyari.com/article/971481

Daneshyari.com