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Are labor markets segmented in developing countries? A semiparametric approach

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Abstract

We test the hypothesis that observably similar workers earn higher wages in the formal sector than in the informal sector in developing nations. Using data from Argentina's household survey and various definitions of informal employment, we find that on average, formal wages are higher than informal wages. Parametric tests suggest that a formal premium remains after controlling for individual and establishment characteristics. However, this approach suffers from several econometric problems, which we address with semiparametric methods. The resulting formal premium estimates prove either small and insignificant, or negative. Neither do we find significant differences in measures of job satisfaction between the two sectors. We invoke these results to question the mainstream view that labor markets are segmented along formal/informal lines in developing nations such as Argentina.

JEL classification: C14; J42; O17

Keywords: Segmented labor markets; Informal sector; Semiparametric methods

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1. Introduction

Dualistic models of labor markets have pervaded the economic development literature since the seminal work of Lewis (1954). According to the dualistic view, some workers do not have access to jobs in the regulated, formal sector. These workers are forced to accept informal sector jobs characterized by inferior earnings and working conditions (see for example, Mazumdar, 1975). In other words, most existing models of informal economic activities assume that labor markets are segmented along formal/informal lines. For instance, in Fields' (1975) extension of the Harris and Todaro (1970) model, agents employed in the informal sector split their time between working and searching for higher paying formal jobs. Rauch (1991) describes a general equilibrium model where firms can violate the minimum wage requirement provided that they operate on a scale smaller than a given detection threshold. In his model, formal jobs are rationed and some workers must accept lower paying informal jobs. Fortin et al. (1997) use Rauch's framework to evaluate the quantitative effect of various public policies on the size and characteristics of the informal sector.

A central prediction of models with segmented labor markets is that some earning-relevant characteristics are better rewarded in the formal sector than in the informal sector. Should such characteristics fail to exist, barriers to entry into the formal sector would not be economically relevant. In this paper, we use a variety of parametric and semiparametric techniques to test this prediction with data from Argentina's permanent household survey.

In our analysis, we consider workers formally employed if they receive the benefits mandated by Argentina's labor laws. Our main results are as follows: As most studies, we find that on average, formal workers earn more than informal workers. Standard wage regressions suggest that this premium remains even after controlling for differences in observed characteristics of individuals and employers. However, estimators based on propensity score matching give us the opposite result. Once we match formal sector workers with informal sector workers with similar propensity scores, the formal sector premium disappears. This holds for our overall sample, for a variety of sample splits, and for a variety of matching techniques. In fact, we find that in many subsamples, informal workers earn more than their formal counterparts. Finally, we find that controlling for establishment size is important. When size variables are dropped from the specification of propensity scores, the resulting matching estimators of the formal sector premium become significantly positive. This is not surprising since larger establishments pay higher wages in Argentina, as in most countries, including countries where the informal sector is small. (See Oi and Idson, 1999 for a review of the size-wage premium literature.)

In contrast to our results, most existing studies of labor markets in developing countries find that some earning-relevant characteristics are better rewarded in the formal sector than in the informal sector (see, for example, Mazumdar, 1981; Heckman and Hotz, 1986; Roberts, 1989; Pradhan and Van Soest, 1995; Tansel, 1999; Gong and Van Soest, 2001). We reach a different conclusion for at least two