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Informality in developing economies: Regulation and fiscal policies

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ABSTRACT

This paper proposes a unified theoretical framework where formal and informal firms coexist and face the same type of product and labor market imperfections: they have monopoly power in the goods market, they are subject to matching frictions in the labor market, and wages are determined by bargaining between large firms and their workers, through either individual or collective bargaining. Our model matches the main stylized facts on informality for developing countries and appears to be a good candidate for policy analysis. In this framework, we study the impact on informality, wages and unemployment of policies that may be used to reduce informality. We consider changes in product market regulation (PMR) and in two types of fiscal policies, labor taxes and formality enforcement. We find that lessening PMR decreases informality and unemployment simultaneously, indicating that there is not necessarily a tradeoff between informality and unemployment. The tradeoff appears when fiscal policies are used, though. Moreover, the impacts of PMR on unemployment and on wages are larger under collective than individual bargaining. With respect to wage inequality, lessening PMR reduces it, while lower taxes tend to increase the formal sector wage premium.

1. Introduction

Informal activities are pervasive in both developed and developing economies. According to the estimates of Schneider and Enste (2000), the size of the shadow economy as a percentage of GDP ranges from 25 to 60% in Latin America, from 13 to 50% in Asia, and is around 15% among OECD countries, reaching 30% in some European countries. Informal firms differ from formal ones in a number of measurable characteristics, and there is a growing literature trying to understand the causes of informality and its differences from formal businesses. Although widespread, informality is associated with a number of undesirable features. Not only do informal firms tend to be less productive and to pay lower wages, but also their very existence puts in check the rule of law and the integrity of public institutions. Policies aimed at reducing informality, however, may have some undesirable effects. It is generally argued that unemployment and informality are the two faces of the same coin and that policy makers cannot contend with the latter without harming the former. In addition, such policies may also induce undesirable effects on wage inequality.

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The aim of our paper is to investigate the overall impact of policies intended to reduce informality. In particular, we seek to detect whether a tradeoff between unemployment and informality exists and what the relevant policies from this standpoint are, as well as in other dimensions such as wage inequality.

The novelty of our approach is to propose a unified theoretical framework that matches the main stylized facts on informality for developing countries and that can be used for policy analysis. Our modeling strategy combines the following features: (i) there are frictions in both formal and informal labor markets; (ii) job seekers are identical and can find jobs in both sectors, that is, the labor market is not segmented; (iii) the number and size of firms in each sector is endogenous, which renders the degree of competition in each sector endogenous; (iv) wages are set through bargaining between large firms and their workers, and we consider, alternately, individual and collective bargaining. We extend our model to assess the robustness of our results under alternative assumptions regarding the structure of the labor market and workers' search behavior.

Informality is defined as a low productivity sector that does not pay taxes, with higher turnover and easier matching in the labor market. The informal sector also avoids many of the costs stemming from regulations. In particular, it faces lower entry costs and it is not subject to wage agreements set by collective bargaining. As will be discussed below, this paper is the first to simultaneously incorporate all these features and allows us to shed new light on the links between unemployment, wages and informality.

We then study how changes in regulation and fiscal policies affect informality, unemployment and wage inequality, for the two alternative assumptions on bargaining: individual and collective. To that end, we calibrate the model to fit the Brazilian economy in 2003, since this country represents well the type of economy we model.

We find that lower PMR, represented in the model by changes in formal sector entry costs, reduces informality, unemployment and wage inequality between formal and informal workers. Moreover, the quantitative impacts of changes in PMR are different for the two types of wage bargaining considered. In particular, the impacts on unemployment and on the wage differential are smaller under individual than under collective bargaining. A fall in PMR that reduces informality by 1% would decrease unemployment by 0.26% under individual bargaining, whereas the unemployment reduction would be of 5.27% with collective bargaining. The corresponding increase in relative wages of the informal sector would be of 0.12% and 2.88%, respectively. The positive impact of formal sector entry costs on unemployment and wage inequality is a non-negligible argument in favor of reducing PMR to diminish informality in countries with high levels of unemployment and inequality, and where collective bargaining plays an important role.

With respect to fiscal policies, lowering payroll taxes in the formal sector and increasing the detection rate of informality do reduce informality, but these policies also raise unemployment. Besides, lower taxes imply higher wages and higher inequality, while formality enforcement, captured in the model by a higher exit rate among informal firms, decreases wages, with very small impact on wage inequality.

All in all, PMR dominates fiscal policies as a measure to boost formality, for unemployment decreases with lessened regulation, whereas it rises when fiscal policies are used. Increasing informality detection is the least preferable policy, since it increases unemployment and reduces wages.

We also check the model's ability to fit the case of Brazil over the period 2003–2010, when the economy experienced significant changes in those variables. According to our model, the observed changes in regulation, fiscal policies and productivity explain fairly well the evolution of unemployment, informality and wage inequality over the period.

Our paper is related to at least two strands of the literature. First, following Blanchard and Giavazzi (2003), a number of recent papers have studied the impact of PMR on unemployment in economies with frictions in the labor market (e.g. Delacroix, 2006; Ebell and Haefke, 2009; Felbermayr and Prat, 2011). These studies, however, do not consider the existence of an informal sector. Given the significant share of informality in most economies, it is important to understand how its presence may affect the impacts of changes in regulatory policies. For instance, the relative size of the informal sector should be responsive to changes in the costs involved in creating a new business, since many such costs are avoided by firms entering the informal sector. Indeed, Fig. 1 below illustrates that, among Latin American countries, the informal sector tends to be larger in countries where barriers to entry are stricter. Many developing countries tend to have relatively higher barriers to entry of new businesses (see Djankov et al., 2002), which partly explain why informality is more pervasive among those countries.

Second, there is a recent and growing literature on unemployment and informality in developing countries. Most of the studies in this literature, such as Fugazza and Jacques (2003), Satchi and Temple (2009) and Zenou (2008), take the formal sector as a disadvantaged or residual sector. Based on the Latin American experience, Maloney (2004) and Fiess et al. (2010) claim that the informal sector should be viewed as an unregulated micro-entrepreneurial sector instead. There is some controversy on this issue, particularly when considering rural and urban labor markets. It is fair to say, though, that formal and informal labor markets are integrated at least in urban areas, which is the focus we choose for our paper. In terms of the behavior of the unemployed, (urban) job seekers in developing countries are likely to look simultaneously for formal and informal jobs, either because they cannot afford to do otherwise, or because there is less social stigma attached to taking a job in the informal sector.

Various alternative assumptions have been considered in the literature. Zenou (2008) studies the impact of labor market policies on informality, and he models the formal sector as subject to labor market frictions and presenting unemployment, while the informal one is taken as being competitive. Although it is generally acknowledged that one of the advantages of the informal sector lies in the fact that finding a job is easier, there is at best no compelling evidence that the informal labor