

# Unemployment and the Real Exchange Rate in Latin America

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**Summary.** — Today unemployment rates in several Latin American countries are similar or even higher than the highest unemployment rates among OECD economies. Open unemployment has become, for the first time in the region's history, a major dimension of the employment problem. This paper examines the role of the real exchange rate (RER) in the recent unemployment performance of Latin America. It presents a model of the determinants of unemployment, the channels through which the RER influences unemployment performance, as well as the stylized facts and empirical results about this relationship giving special attention to the cases of Argentina, Brazil, Chile, and Mexico.

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*Key words* — unemployment, real exchange rate, Latin America

## 1. INTRODUCTION

The early 1990s marked the turning point in the recent economic development of Latin America. The radical change in the international economic environment, with the implementation of debt relief programs and the resumption of capital inflows to the region, put an end to the negative transfer of resources abroad that characterized most of the previous decade. This made possible the success of stabilization programs that brought inflation under control, the recovery of investment and the resumption of economic growth. Yet, the region's unemployment rate increased during the decade, reaching an average level of the order of 10% of the labor force, and in several South American countries unemployment rates actually skyrocketed (see Table 1). That is, after the decade of stabilization and growth resumption, unemployment was slightly higher than in 1990, at the end of the "lost decade" following the debt crisis of the early 1980s. Today unemployment rates in several Latin American coun-

tries are similar or even higher than the highest unemployment rates among OECD economies. Open unemployment has become, for the first time in the region's history, a major dimension of the employment problem.

This paper examines the role of the real exchange rate (RER) in this employment and unemployment performance. Section 2 presents a model of the determinants of unemployment and discusses the channels through which the RER influences unemployment performance. Section 3 presents the stylized facts and empirical results about the relationship between the

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Table 1. *Urban unemployment (%)*

	1990	2002
Mexico	2.7	2.7
Guatemala <sup>a</sup>	6.3	3.1
Honduras	7.8	6.1
El Salvador	10.0	6.2
Ecuador	3.8	6.6
Dominican Republic <sup>a</sup>	8.9 <sup>b</sup>	6.6
Costa Rica	5.4	6.8
Brazil	4.3	7.1
Panama	12.1	8.6
Bolivia	7.3	8.7
Chile <sup>a</sup>	7.8	9.0
Peru	8.3	9.4
Trinidad and Tobago	20.1	10.4
Nicaragua	7.6	12.9
Paraguay	6.6	14.7
Venezuela <sup>a</sup>	10.4	15.8
Colombia	9.7	16.5
Uruguay	8.5	17.0
Argentina	7.4	19.7
Average	8.8	10.4

Source: See Appendix A.

<sup>a</sup> National unemployment rate.

<sup>b</sup> 1991.

RER and the employment performances in Latin America giving special attention to the cases of Argentina, Brazil, Chile, and Mexico. Section 4 concludes.

## 2. THE DETERMINANTS OF UNEMPLOYMENT AND THE INFLUENCE OF THE RER

In this section, we present an analytical framework to examine unemployment and discuss the mechanisms by which the RER affects employment performance. We distinguish three channels. The first one is the macroeconomic channel, pointing to the role of the RER in the determination of the activity and employment levels in the short run. The second is the labor intensity channel. This channel focuses on the role of the RER in affecting the labor intensity of the economic process, that is, the influence of the RER on the employment generation ability of a given activity level or rate of output growth. The third is the development channel. It points to the influence of the RER on economic growth and consequently, on the speed of generation of new jobs. While the first and third channels have received some (modest)

treatment in the economic literature, the second channel has been much less explored.

### (a) *A model of the determinants of unemployment*

The analytical framework combines a two-sector open economy model with the Harris–Todaro approach to unemployment (except for the fact that the wage differential between the formal and informal sectors is here endogenous rather than exogenous as in Harris & Todaro, 1970). It draws on the model in Ros and Skott (1998), modified to examine the determinants of unemployment (rather than the dynamic effects of trade liberalization and currency overvaluation). Some of its properties are similar to those of models based on the “capital shortage hypothesis” (Malinvaud, 1980; Rowthorn, 1995, 1999) extended to include the role of the RER.

The economy has two sectors. A formal sector producing a single traded good ( $T$ ) coexists with a non-traded goods informal sector ( $N$ ) where workers earn the average product of labor. Technology in the traded goods sector is described by a standard Cobb–Douglas production function:

$$T = AK_T^a L_T^{1-a}, \quad (1)$$

where  $T$  is the production of traded goods and  $K$  and  $L$  refer respectively to the capital stock and employment.

Employment in the traded goods sector ( $L_T$ ) is determined by profit maximization under competitive conditions and price-taking behavior. This implies

$$L_T = [(1-a)A(p_T/w_T)]^{1/a} K_T, \quad (2)$$

where  $p$  and  $w$  denote prices and wages. We shall assume that  $p_T$  is determined by the world market price of the traded good ( $p^*$ ) and the nominal exchange rate ( $e$ ):  $p_T = ep^*$ .

Non-traded goods production ( $N$ ) is generated by the informal sector under conditions of diminishing returns to labor and, to simplify, we assume away the use of capital in this sector so that labor ( $L_N$ ) is the only input:

$$N = L_N^{1-d}, \quad 0 < d < 1. \quad (3)$$

Workers who do not find a job in the formal sector become openly unemployed or work in the informal sector earning an income equal

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