



**A NOTE ON LABOUR MARKET (IN) FLEXIBILITY IN
THE CARIBBEAN**

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ABSTRACT

This paper compares labour market flexibility in three Caribbean countries (Barbados, Jamaica and Trinidad and Tobago) using three derived indicators of flexibility. The results suggest that Jamaica's labour market adjusts relatively faster to shocks than either Barbados or Trinidad and Tobago. However, the region still lags behind more developed countries and some developing countries in terms of the flexibility of its labour market.

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I. INTRODUCTION

A well-functioning labour market is key to boosting economic growth and achieving international competitiveness. Indeed, along with investment in human capital, the ease with which firms can deploy/employ human resources is critical to the expansion of production capacity in any country. For small developing countries, such as those in the Caribbean, the constraints posed by smallness and limited economies of scale bring into sharp focus the importance of properly functioning labour markets, more specifically, labour market flexibility. The labour-intensive nature of most productive activities across the region and the planned free movement of labour as part of the creation of a Single Market and Economy (SME) are added considerations.

Inasmuch as Caribbean countries are already challenged to compete in a highly competitive global market in which their wages are high relative to other Latin American and developing countries (World Bank, 2005), the issue of inflexible markets that add to the non-wage costs of doing business is especially important. Indeed, institutional features such as minimum wage legislation, collective bargaining and the influence of labour unions can raise wage costs as well. Downes (2004) concluded that real wages in Barbados, Jamaica and Trinidad and Tobago, driven by these pressures, increased faster than productivity, resulting in a loss of competitiveness. A foreign investors' perception survey (World Bank, 2004) ranked the Dominican Republic above the rest of the Caribbean as a potential investment destination, citing a flexible regulatory environment as one area in which this country has an advantage over the rest of the Caribbean.

Further World Bank (2005) research cites the persistence of high unemployment and the growing informal employment observed across the Caribbean as suggestive of rigidities and obstacles to the smooth functioning of the labour market. This study concludes that existing labour legislation and the influence of unions and government in collective bargaining were among the factors impeding Caribbean competitiveness.

An assessment of the extent of labour market (in)flexibility across the Caribbean would be highly useful in the context of Caribbean integration, but the incomplete and inconsistent nature of labour market data makes such an undertaking somewhat difficult. Nevertheless work has been done by the World Bank and others (see Marquez and Pages, 1998) using varying

approaches, but the results are conflicting and may reflect data deficiencies. Consequently, the authors employ data on Barbados, Jamaica and Trinidad and Tobago for which better data is available. The use of econometrically derived labour market indicators can supplement those studies that use detailed surveys of the legislation and industry practice of these countries, by supporting the main conclusions derived from these studies and presenting annual time series indicators of labour market (in)flexibility.

The structure of this paper is as follows: Following the introduction, Section II provides a brief survey of techniques used to measuring labour market flexibility and the data. Section III discusses the results for the countries considered, while Section IV concludes with some suggestions based on the results obtained.

II. METHODOLOGY AND DATA

This paper uses three techniques to derive indices of labour market flexibility for Barbados, Jamaica and Trinidad and Tobago. Following Layard, Nickell and Jackman (1991), the first approach assesses labour market flexibility in a standard wage- and price-setting model. In this framework, real wages (w) and prices (p) are regressed on unemployment (u) and inflation (Δp):

$$w - p = \gamma_0 - \gamma_1 u - \gamma_2 \Delta p \quad (1)$$

$$p - w = \beta_0 - \beta_1 u - \beta_2 \Delta p \quad (2)$$

Equations (1) and (2) assume that wages are set as a mark-up over prices and prices as a mark-up over wages. Solving Equations (1) and (2) for Δp leads to a Philips curve of the form:

$$\Delta p = \frac{\beta_1 + \gamma_1}{\beta_2 + \gamma_2} \left(u - \frac{\beta_0 + \gamma_0}{\beta_1 + \gamma_1} \right) \quad (3)$$

Equation (3) implies that without the presence of labour market rigidities, the unemployment rate would be equivalent to $\frac{\beta_0 + \gamma_0}{\beta_1 + \gamma_1}$ (the non-accelerating inflation rate of unemployment). An index of real wage rigidity (*RWR1*) can be derived as:

$$RWR1 = \frac{1}{\beta_1 + \gamma_1} \quad (4)$$

where the larger the absolute value of *RWR1* the larger is unemployment (or the more inflexible the labour market).

Bean (1994) reports that most studies find that the effects of unemployment on prices, β_1 , are usually quite weak. As an alternative, some models replace the price equation (Equation 2) with a labour demand equation similar to that given below:

$$n = \alpha_0 - \alpha_1(w) \quad (5)$$

where *n* is employment. One may then solve for the unemployment rate obtained when there are no labour market rigidities, which in this case depends critically on the rigidity index (*RWR2*) obtained from:

$$RWR2 = \frac{1}{1 + \alpha_1 \gamma_1} \quad (6)$$

As with *RWR1*, the larger the value of the index, the more inflexible the labour market.

Blanchard and Katz (1997) suggest that if one interprets inflation in the wage equation (1) as a proxy for expected inflation (assuming rational expectations), Equation (1) gives the relationship between expected wage inflation and unemployment. However, supply wage relations are conditional on the reservation wage, which tend to reflect factors that grow with productivity. As a result, Blanchard and Katz argue that the real wage should be determined by both the rate of unemployment and productivity and specify the following wage equation:

$$\Delta w = \phi + \Delta p_{t-1} - \lambda(w_{t-1} - p_{t-1} - x_{t-1}) - \beta u \quad (7)$$

where *x* is the productivity level. The coefficient λ (*RWR3*) indicates whether a deviation of the real wage from the equilibrium level determined by productivity and inflation causes a change in wage inflation; the smaller the value of *RWR3*, the slower the response of the labour market to shocks. Franz and Gordon (1993) also point out that the above specification avoids the issue of simultaneity bias, since there is not a separate wage equation.

Equations (1), (2) and (5) are estimated using three-stage least squares to account for simultaneity issues, while the coefficient estimates for Equation (7) are obtained using the ordinary least squares technique. Price indices and GDP are taken from the International Monetary Fund's *International Financial Statistics*, while the unemployment and wage series are acquired from the publications of the various statistical agencies in the countries under investigation. Productivity is constructed as the fitted value from a regression of the natural logarithm of the employment-GDP ratio on a quadratic time trend.

III. ASSESSMENT OF LABOUR MARKET FLEXIBILITY IN THE CARIBBEAN

Table 1 shows the rankings that are derived from the estimated labour market models. The coefficients all have their *a priori* signs. These coefficients are then employed to obtain the three labour market indices discussed in the previous section. For the first two indicators (*RWR1* and *RWR2*) the larger the absolute value the higher is unemployment, due to the slow speed of adjustment following shocks to the labour market. For *RWR3*, on the other hand, the larger the absolute value the lower is unemployment, as markets with larger values respond relatively quicker to labour market shocks.

In all three cases, the derived indices suggest that the Jamaican labour market responds quicker to labour market shocks than both Trinidad and Tobago and Barbados. This result is similar to those presented by Downes (2004) and the World Bank (2005) that were derived from a survey of labour market legislation in the region. Barbados seems to have the slowest speed of adjustment, probably due to the fixity of its exchange rate, which does not allow the real wage to change as easily as in either Jamaica or Trinidad and Tobago. Similarly, although both Jamaica and Trinidad and Tobago have flexible exchange rates, the Trinidad and Tobago authorities appear more willing to intervene in the foreign exchange market in order to maintain a stable and competitive exchange rate (see Worrell, 2003). As a result, the adjustment process to labour market shocks in Trinidad and Tobago is less flexible than in Jamaica.

The real wage rigidity index computed in this paper is also somewhat larger than that derived for Organisation for Economic Cooperation and Development Countries (OECD). The sixteen OECD countries considered in Layard, Nickell and Jackman (1991) had an average real

wage rigidity index of about -0.348 , reaching as high as -0.06 in Norway and as low as -1.10 in Australia. The wage rigidity index computed for all three Caribbean countries is significantly below those for the OECD, suggesting that the region lags behind this group of rich countries.

In contrast to those studies that use surveys of labour market legislation and practices, it is possible to derive annual values of the labour market flexibility indices using rolling regressions. To obtain the index value for period t the models are estimated from period $t-1$ to period t and the index is calculated, then the model is estimated using data from period $t-1$ to period $t+1$ and a new index value is obtained for period $t+1$. The results of this procedure are shown in Figure 1. The first thing to note from the figure is that labour market flexibility seems to have worsened during the period in both Barbados and Trinidad and Tobago, while it has improved in Jamaica. In the case of Jamaica, the RWR1 and RWR3 indices seem to indicate that the labour market has become more responsive to shocks.

The second key finding from the figure is that the indices seem to be converging after diverging somewhat during the early 1990s. This result is especially relevant as the region attempts to form the single economic space known as the CARICOM Single Market and Economy. If the countries in the region respond similarly to economic shocks, this might make it easier to pursue a similar course of policy as it relates to exchange rate, monetary and fiscal policy.

IV. CONCLUSION

This study estimates three models of the labour market from which indices of market flexibility are obtained for Barbados, Jamaica and Trinidad and Tobago. The results of the study show that Jamaica's labour market seems to respond relatively faster to economic shocks. These results substantiate the findings of Marquez and Pages (1998), which also placed Jamaica ahead of Barbados and Trinidad and Tobago with respect to labour market flexibility.

The study also finds that there was some convergence in the indices of labour market flexibility within the region from the latter half of the 1990s. With the formation of a single economic space, harmonisation will be important and disparities in labour market regulation and environment will need to be removed. If the countries in the region respond similarly to economic shocks, this might make it easier to pursue a similar course of policy as it relates to exchange rate, monetary and fiscal policy.

Barbados will need to address its labour market rigidities so that its labour market conditions are more in line with its regional counterparts. Coupled with its fixed exchange rate regime, these rigidities can affect competitiveness and hamper the growth of the export sectors, as well as the flow of foreign direct investment. Apart from the differences in exchange rate regimes, the relative strength of labour unions across these economies may also account for the disparity in labour flexibility outcomes. Indeed, with the extensive reliance on collective bargaining, unions in the Caribbean still have a significant influence on labour market conditions and wage setting. Linking wages increases to productivity gains and increasing employers' flexibility are some of the possibilities for ensuring greater competitiveness.

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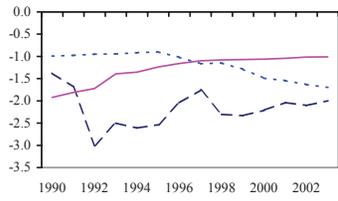
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Table 1: Regression Estimates and Labour Flexibility Indices

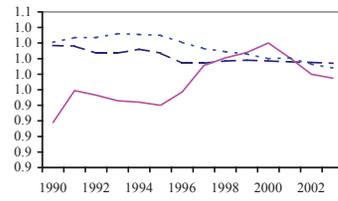
	Barbados	Jamaica	Trinidad
β_1	-0.074 (0.036)	-0.587 (0.086)	-0.429 (0.073)
γ_1	-0.428 (0.206)	-0.402 (0.023)	-0.159 (0.280)
Log-likelihood	-204.356	-237.294	-422.219
γ_1	-0.061 (0.035)	-0.672 (0.048)	-0.076 (0.115)
α_1	-0.099 (0.033)	-0.039 (0.026)	-0.169 (0.047)
Log-likelihood	-189.549	-278.563	-268.369
λ	-0.324 (0.106)	-0.488 (0.137)	-0.363 (0.114)
Log-likelihood	72.696	38.429	51.949
RWR1	-1.992(3)	-1.011(1)	-1.701(2)
RWR2	0.994(3)	0.975(1)	0.987(2)
RWR3	-0.324(3)	-0.488(1)	-0.363(2)

Figure 1: Indices of Labour Market Flexibility

RWR1



RWR2



RWR3

