INFLATION STARTS IN LATIN AMERICA AND THE CARIBBEAN

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ABSTRACT

High rates of inflation are a perennial problem in Latin American and Caribbean (LAC) countries. This paper attempts to identify the factors that initiate these inflation episodes using observations on 31 LAC countries between 1970 and 2006. The study finds that the key determinants of inflation starts in the region are demand pressures, oil price shocks, elections, transitions to less repressive political regimes and foreign inflation.

JEL Classification: E31; E58
***Keywords*:** Inflation Starts; Probit Analysis; Latin America and the Caribbean

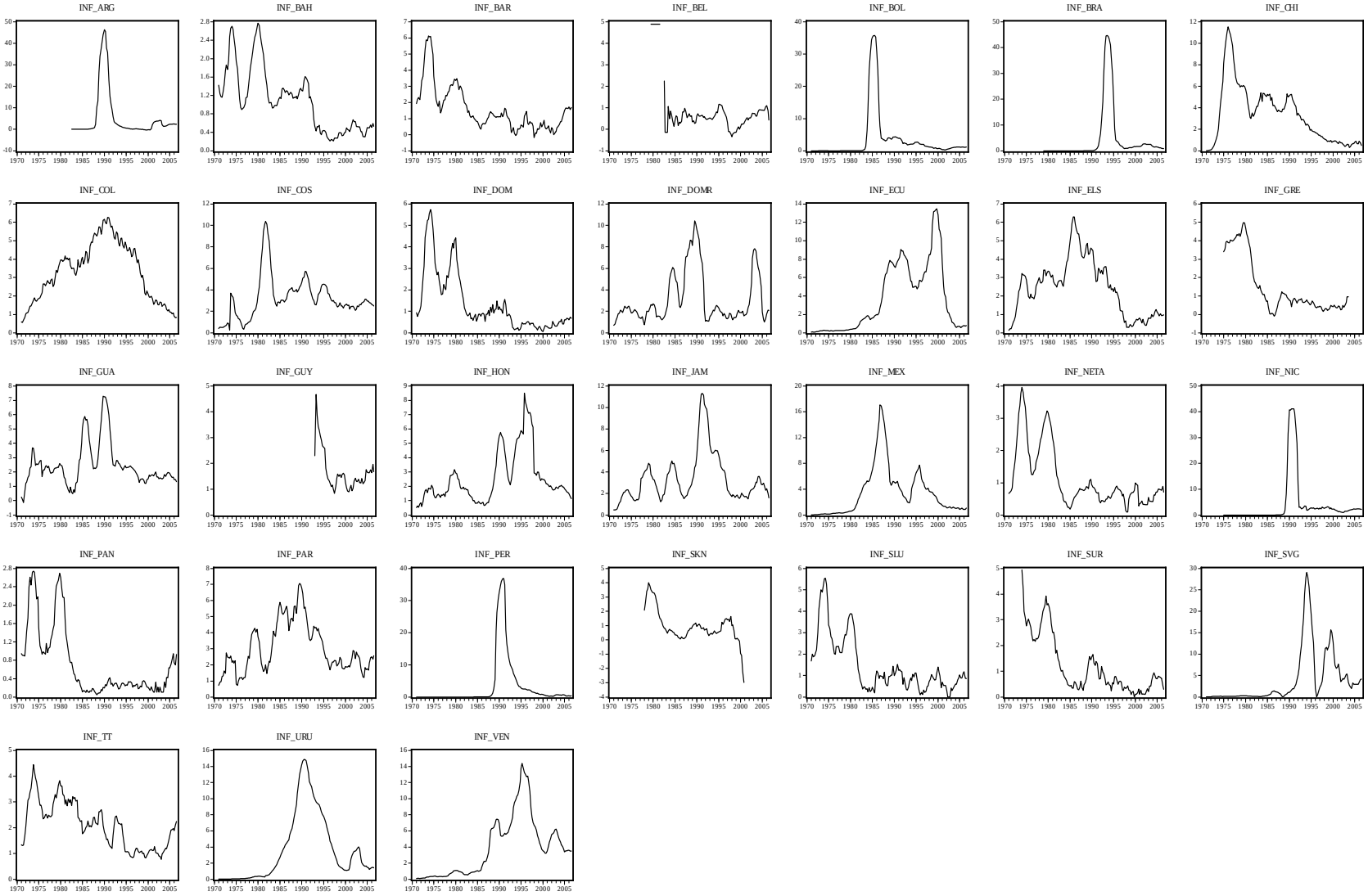
1. Introduction

Latin American and Caribbean (LAC) countries have experienced recurrent bouts of high inflation for most of the twentieth century. As should be expected, therefore, it remains one of the most important policy issues for the region. High inflation presents a myriad of problems, especially in developing countries. When faced with high inflation, developing countries undergo democratic instability, fiscal austerity, and structural reform (see Dornbusch, 1992). Understanding the factors that contribute to inflation starts is therefore an important step in designing appropriate and effective policy responses.

Previous research on pinpointing what triggers inflationary episodes has focussed primarily on policy mistakes and commodity shocks. Taylor (1992 & 1997), De Long (1997) considered policy mistakes resulting from misunderstanding the Phillips curve, while Parkin (1993) and Ireland (1999) examined the interaction of the exogenous rise in the natural rate of unemployment and time consistent monetary policy. Boschen and Weise (2003) and Domaç and Yücel (2005), on the other hand, examined the role that oil and food price changes, the international transmission of inflation and political and fiscal factors played in the start of inflation episodes

Given the differences in economic, political and social structures in LAC countries, there is good reason to suspect that the factors that drive inflation in the region may differ from those identified for more developed groups of countries. LAC countries should also provide a useful case study of inflationary starts since the region has been grappling with the problem of price stability for a number of decades. Figure 1 presents a plot of monthly changes in the consumer price index for 31 LAC countries. The figure shows that almost every country in the region has had at least one major price spike between 1970 and 2004.

Figure 1: Inflation in Latin America and the Caribbean



There has also been renewed focus on the forging greater links within Latin America and the Caribbean in recent years as means of facing the changes that are taking place in the international arena and avoiding a reoccurrence of the crises that afflicted the region during the 1980s and 1990s (ECLAC, 1994).[1] To this end, the study outlines the main drivers of inflation in the region over the last thirty years. The findings presented in this paper should help policymakers avoid the crises that would have occurred in previous years. The paper also contributes to the existing literatureby: (1) investigating the factors that explain inflation starts in Latin America and the Caribbean; (2) identifying the role of both capital and trade openness on inflation starts, and; (3) providing empirical estimates of the impact of political repression on inflation starts.

The remainder of the paper is organised as follows: section 2 provides a brief review of the literature on the factors that trigger inflation. Section 3 presents the methodology for identifying inflation episodes and inflation starts and outlines the empirical approach employed while section 4 discusses the empirical results. The final section concludes with a summary of the results and policy recommendations.

2. Literature Review

From as far back as the Bretton Woods era, researchers have been preoccupied with understanding the factors that give rise to inflation. There are two main views regarding the factors that drive inflation. One view holds that inflation is largely triggered by non-monetary factors such oil and commodity price (supply) shocks. The opposing view is that the short-run path of inflation is only affected by non-monetary factors, whereas monetary variables affect the long-run path of the inflation rate.

[1] There are four main regional groupings: (1) the Southern Common Market (MERCOSUR), consisting of Brazil, Argentina, Uruguay, Venezuela and Paraguay; (2) the Andean Community encompassing Bolivia, Colombia, Ecuador and Peru; (3) the Central American Common Market (CACM) encompasses Guatemala, El Salvador, Honduras and Nicaragua, and; (4) the Caribbean Community and Common Market (CARICOM) which embraces 15 Caribbean countries.

The evidence on the affect of supply/price shocks on inflation is mixed. Fisher (1981) and later Domaç and Yücel (2005) reported that large supply shocks were an important source of inflation for both emerging market economies (EME) and developing countries. Domaç and Yücel (2005) added that given the weight of food and energy (oil) in the consumer price index (CPI) of EMEs, compared to advanced economies, a substantial increase in the price of these commodities can result not only in a rise in short-run inflation, but can also spark a sustained increase in the inflation rate if it raises expectations. On the other hand, Blinder (1982) and Ball (1995) have argued that the price shocks of the 1970s may have triggered inflation indirectly through monetary policy on the part of the central bank. De Long (1997) noted that although oil shocks may have largely impacted U.S. inflation in the 1970s, they could not have been the ultimate cause for the inflation episodes within the developing countries, as these episodes occurred at a time when inflation was already high and still rising.

To empirically test these two competing explanations of inflation starts, Lougani and Swagel (2001) examined a myriad of factors that were likely to influence inflation in a sample of 53 developing countries, including the output gap, changes in oil and non-oil commodity prices, money growth and exchanges rates. The authors identified monetary growth and exchange rate movements as the key determinants of inflation in these states; cost shocks and the output gap had relatively little impact on the evolution of inflation in their sample of developing countries. Since most developing countries are price-takers, exchange rate fluctuations should have a significant impact on the evolution of domestic inflation. As price-takers, the pass through of depreciation on domestic prices can be much larger than the share of imported goods in the consumption basket would indicate, since a currency depreciation would also affect inflation expectations. Furthermore, a rise in inflation expectations would then tend to depreciate the exchange rate as agents buy foreign currency to maintain purchasing power. Thus, through the relationship between the exchange rate and domestic prices, a country can easily fall victim to a terrible circle of depreciation and inflation.

Fiscal factors have also been identified by previous researchers as another potential source of inflation starts. Fiscal deficits, since they are usually financed through money creation, should be expected to highly correlated with the start of inflation episodes. Establishing the relationship

between fiscal deficits, monetary growth and inflation, however, has proven to be elusive**.** Fischer *et al* (2002) found that the relationship between inflation and the fiscal deficit is only strong in high inflation countries, whereas low inflation countries demonstrated no obvious link between the fiscal deficit and inflation. In contrast, Catão and Terrones (2001) and Domaç and Yücel (2005) obtained a statistically significant relationship between long-run inflation and the fiscal deficit. Other studies on the impact of fiscal variables considered the importance of debt. The empirical results in Calvo (1988) and Missale and Blanchard (1994) show that if government debt is included in the inflation equation, it has a statistically significant impact on inflation dynamics. These results may vary with the choice of variables, as Boschen and Weise (2003) were unable to find a positive and significant relationship between a country's public debt ratio and average inflation rate in their sample of OECD countries.

Political factors, such as elections, political repression or central bank independence, have also received a considerable amount of attention. According to the political business cycle models developed by Nordhaus (1975) and Lindbeck (1976), central banks administer expansionary monetary policy in the period leading up to an election in order to add to the governing party's chances for re-election. Empirical evidence confirming the political business cycle hypothesis has been mixed, with both McCallum (1978) and Alesina (1988) rejecting the hypothesis. In contrast, Boschen and Weise expanded on the partisan models of Hibbs (1977 & 1994) and Alesina (1988), where they assumed that politicians have different motives and preferences over unemployment and inflation. The partisan model states that "left-leaning" political parties tend to move to a higher inflation-lower unemployment point on the Phillips curve, than the "right-leaning" political parties. Therefore, switching from a right-to-left-leaning government is the critical factor triggering inflation and not elections per se. Boschen and Weise (2003) found that the election variable was positive and statistically significant, indicating that inflation episodes were more likely to start during election years.

Domaç and Yücel (2005) highlighted two competing schools of thought on the political dimension of inflation, which are the populist approaches and the state-capture approaches. Within the populist approach, politicians respond to public demands through the increase of government expenditures by resorting to inflationary finance. Furthermore, the characteristic of

democracy that is electoral competition, separation of powers, partisanship, and political fragmentation increases pressures on politicians to use inflation tax. Therefore, populist approaches declare that inflation is less likely to occur in governments with consolidated, autonomous and even dictatorial powers can avoid these public demand pressures. Secondly, the state-capture approaches, on the other hand, vie that price stability is not a result of demand for inflationary financing by the public, but by incumbent politicians and their elite patrons who receive private benefit from money creation.

Researchers have also considered international transmission of inflation on domestic price stability. Canzonori and Gray (1985) and Turnovsky, Basar and d'Orey (1988) developed models in which expansionary policies abroad could cause the home country to inflate even in a flexible exchange rate regime. U.S. inflation, in particular has been highlighted in several studies as playing a vital role in triggering inflation abroad. Brunner and Meltzer (1977), Cassese and Lothian (1982), and Darby (1983) have found evidence pertaining to the international transmission of inflation from the U.S. even as far back as the Bretton Woods period. Furthermore, Boschen and Weise (2003) concluded that the influence of U.S. inflation as a trigger for inflation episodes in other countries was strong.

3. Empirical Approach

The analysis begins by defining an inflation episode and inflation start. The approach employed is similar to that outlined by Ball (1994), Boschen and Weise (2003) and Domaç and Yücel (2005). The first step is the estimation of a trend inflation series for each country so as to filter out transitory quarter-to-quarter variation in inflation. The trend is calculated as a nine-quarter moving average of consumer price inflation. Trough dates are identified as the point in time when trend inflation is lower than in the preceding and succeeding four quarters and conversely peak dates are when trend inflation is higher. Following Domaç and Yücel (2005), an inflation episode is defined as a period over which trend inflation rises by at least 2% from trough to peak and which is preceded by four or more quarters of stable or declining trend inflation. Given the start date for an inflation episode as the year following the year in which the trough takes place,

we identified 42 inflation episodes for Latin America and the Caribbean over the period 1970-2005.

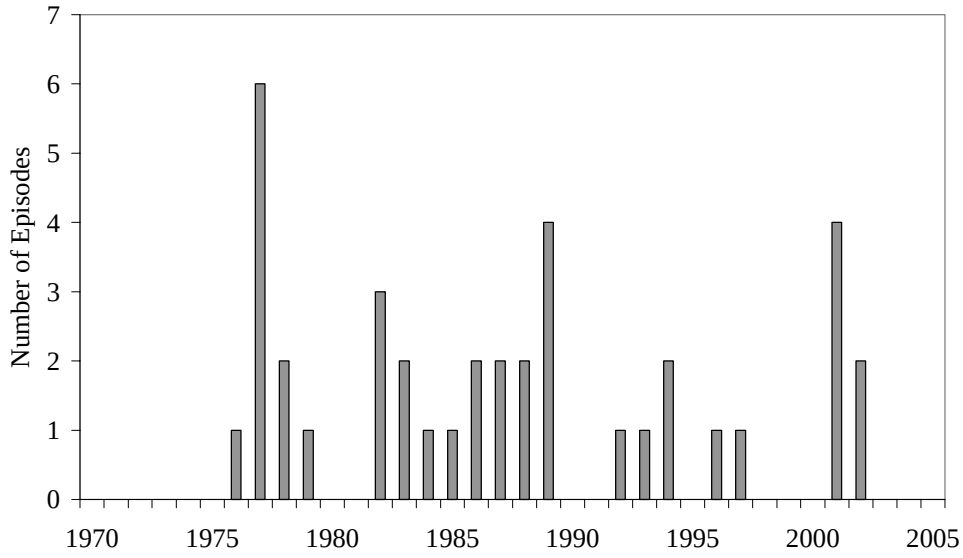
Table 1: Descriptive Statistics

	Full Sample	Latin America	Caribbean
Number of Episodes	42	31	11
Length (quarters)	14.1	14.1	13.8
Initial Inflation Rate	1.8	1.9	1.4
Ending Inflation Rate	8.4	9.5	6.4
Rise in Inflation	6.6	7.6	5.0

Evident in Table 1, the average length of an inflation episode for the full sample was 14.1 quarters, which is marginally lower than the figure reported by Domaç and Yücel (2005) of 14.8 for the emerging market countries and also below the OECD figure estimated by Boschen and Weise (2003) of 15.1. The results on the initial inflation rate, ending inflation rate and the rise in inflation for Latin America and the Caribbean are similar to these previous studies. Table 1 shows that over 70% of the inflation starts took place in Latin America and were of longer duration than those registered by Caribbean countries. Although Latin America had a greater number of inflation starts, it is noteworthy that these two groups of countries experienced broadly similarly patterns of inflation episodes as seen from the marginal differences in initial inflation rates and average rise in inflation.

The number of inflation starts per year is depicted in Figure 2. Similar to Domaç and Yücel (2005), there are a concentration of inflation starts in the 1980s and early 1990s. The distribution of inflation starts reveals both a concentration, with several countries experiencing an inflation start in the same year, and dispersion, with country-specific inflation experiences. This is suggestive of an overall explanation for inflation starts that incorporates both international and domestic effects and is consistent with previous research.

Figure 2: Number of Inflation Starts per Year



A discrete choice specification is used to empirically model inflation starts in LAC countries:

$$y_i = x_i'\delta + \varepsilon_i, \quad \varepsilon_i \sim NID(0,1) \tag{1}$$

where $y_i = 1$ if country *i* experienced an inflation start during the year and zero otherwise, x_i is a matrix of explanatory variables thought to be related to inflation starts, and ε_i is a well-behaved error term. The data is stacked by country and Equation (1) is estimated using a probit model. It should be noted, however, that the coefficients obtained from the probit model cannot be easily related to the probability of an inflation start. Thus, marginal effects, $\frac{\partial \Phi(x_i'\beta)}{\partial x_{ik}} = \Phi(x_i'\beta)\beta_k$, are calculated that can be interpreted in terms of a given variable affecting the probability of an inflation start. The model is estimated by the method of maximum likelihood using the Bendt-Hall-Hausman algorithm (other algorithms, such as Quadratic-Hill Climbing and Newton-Raphson, were employed, but these yielded similar estimation results).

Drawing on the previous empirical work, the following influences on inflation in developing countries have been identified for consideration in this study: demand and supply pressures, the impact of political and fiscal factors, the international transmission of inflation and the impact of

trade and financial openness and exchange rate regime on inflation start (see Appendix 1 for a complete description of the variables and data sources).

4. Empirical Models and Results

This section of the paper presents the empirical results. In the first case, a group of models based on the influences of demand and supply pressures are considered in which the independent variables are the GDP gap (deviation of GDP growth from the median GDP growth rate), oil price starts, the level of oil prices and food price starts (see Table 2). The use of oil price and food price starts, which are specified like the dependent variable, is an innovation as previous studies have not included these variables. These variables are expected to have a positive impact on the probability of an inflation start. Model 1 includes GDP only to capture demand side pressures, while Model 2 only considers supply side shocks and Model 3 incorporates both demand and supply factors. The results are presented in Table 2.

Table 2: The Influence of Demand and Supply Pressures on Inflation Starts

	Model 1	Model 2	Model 3
GDP	0.004	-	0.006
	(1.705)		(2.202)
Oil Price Starts	-	0.023	0.026
		(1.626)	(1.727)
Average Oil Prices	-	0.000	0.001
		(0.441)	(1.875)
Food Price Starts	-	0.031	0.039
		(2.649)	(3.185)
Constant	-0.148	-0.154	-0.186
	(23.371)	(-12.279)	(-9.958)
Log Likelihood	-166.2	-164.2	-159.1
McFadden R^2	0.01	0.03	0.05
Number of Observations	1054	1114	1054

Note: (1) Marginal effects are reported in the table and are evaluated at the sample mean for all variables.
(2) z-Statistics are given in parentheses.

The table shows that there exists a positive association between demand pressures and inflation starts in LAC countries. However, this effect is only significant once supply side shocks are

incorporated into the model. In contrast to Boschen and Weise (2003), demand pressures have a relatively small impact on inflation starts in the region: a 1 percent increase in GDP above trend raises the probability of an inflation start by less than 1 percent in LAC countries. On the other hand, there is a stronger statistically significant positive correlation between inflation starts and commodity price shocks. For our group of developing countries, the start of a food price episode increases the probability of an inflation start by 3.9 percent, while the start of an oil price cycle increases the likelihood of an inflation start by 2.6 percent. In the context of LAC countries, therefore, supply-side shocks seem to have a proportionally greater impact on the odds of an inflation start than demand-side pressures.

Using the basic specification of inflation starts in model 3 as a starting point, the authors then augment this model with both political and fiscal factors to identify whether they add additional information to the explanation of inflation starts in LAC. The results are given in Table 3. Boschen and Weise (2003) argue that the policy action designed to influence election results take place in the year(s) prior to the election, with inflationary consequences being felt at or subsequent to the election itself. Consequently in Model 4 an election dummy variable is added, which equals 1 during an election year and 0 otherwise. Model 5 includes a dummy variable that takes of value of 1 if the country transitioned to a politically repressed regime during the year and 0 other wise, while models 6 and 7 include fiscal policy variables: debt and government consumption.

These results point to the significance of elections in inflations starts with the coefficient indicating that the occurrence of an election raises the probability of an inflation start by 2.9 percent. Political repression is expected to lead to less prudent fiscal management, thereby inducing inflation. This variable has a large statistically significant impact on inflation starts in LAC countries: the transition to a politically repressed regime increases the probability of an inflation start by 7.5 percent. The effects of fiscal policy, as captured by the debt and government consumption, have the correct signs but have only marginal effects.

Table 3: The Impact of Political and Fiscal Factors on Inflation Starts

	Model 4	Model 5	Model 6	Model 7	Model 8
GDP	0.006	0.006	0.009	0.006	0.010
	(2.246)	(2.194)	(2.449)	(2.232)	(2.438)
Oil Price Starts	0.027	0.027	0.021	0.023	0.022
	(1.799)	(1.776)	(1.207)	(1.492)	(1.208)
Average Oil Prices	0.001	0.001	0.002	0.001	0.001
	(1.845)	(1.901)	(2.235)	(0.946)	(1.683
Food Price Starts	0.041	0.039	0.038	0.041	0.044
	(3.341)	(3.199)	(2.756)	(3.238)	(3.015)
Elections	0.029	-	-	-	0.027
	(2.292)				(1.779)
Political Repression	-	0.062	-	-	0.075
		(1.866)			(2.174)
Debt	-	-	0.001	-	0.001
			(1.635)		(1.818)
Government Consumption	-	-	-	0.003	0.001
				(1.224)	(0.053)
Constant	-0.193	-0.187	-0.214	-0.184	-0.222
	(-10.409)	(-10.004)	(-9.490)	(-9.171)	(-9.254)
Log Likelihood	-156.6	-167.7	-127.9	-157.4	-123.8
McFadden R^2	0.06	0.06	0.06	0.05	0.08
Number of Observations	1054	1054	823	1022	797

Note: (1) Marginal effects are reported in the table and are evaluated at the sample mean for all variables.
(2) z-Statistics are given in parentheses.

Given the dependence of LAC countries on imported goods, it is likely that inflation starts in the region can also be initiated via this channel. To evaluate this hypothesis the inflation model is augmented with indicators of foreign inflation: US inflation, inflation in industrial countries, world inflation and inflation in developing countries. The findings presented in Table 4 support the hypothesis of the international transmission of inflation in LAC, however, its effects are small. World inflation and inflation in developing countries are found to be statistically significant with the correct signs, but the probability of a 1 percent rise in either world inflation or inflation in developing countries initiating inflation in LAC countries is less than one percent. Contrary to a priori expectations, US inflation is not a significant trigger in inflation starts in the Latin American and Caribbean region. This is surprising given the importance of the US as a trading partner for many of the countries studied, but could suggest that the effects of US inflation are subsumed in the oil and food price starts variables.

Table 4: The Impact of External Inflation

	Model 9	Model 10	Model 11	Model 12
GDP	0.006	0.006	0.006	0.006
	(2.225)	(2.201)	(2.243)	(2.268)
Oil Price Starts	0.027	0.026	0.034	0.037
	(1.833)	(1.761)	(2.139)	(2.673)
Average Oil Prices	0.001	0.001	0.001	0.001
	(1.892)	(2.016)	(1.860)	(1.764)
Food Price Starts	0.042	0.042	0.044	0.044
	(3.356)	(3.428)	(3.588)	(3.575)
Elections	0.030	0.031	0.030	0.029
	(2.364)	(2.445)	(2.340)	(2.271)
Political Repression	0.062	0.059	0.061	0.062
	(1.927)	(1.809)	(1.951)	(2.031)
US Inflation	0.001	-	-	-
	(0.627)			
Inflation in Industrial Countries	-	0.002	-	-
		(1.068)		
World Inflation	-	-	0.002	-
			(2.136)	
Inflation in Developing Countries	-	-	-	0.001
				(2.288)
Constant	-0.198	-0.203	-0.215	-0.212
	(-9.447)	(-9.730)	(-9.118)	(-9.015)
Log Likelihood	-154.9	-154.6	-153.9	-154.9
McFadden R^2	0.07	0.07	0.08	0.07
Number of Observations	1054	1054	1054	1054

Note: (1) Marginal effects are reported in the table and are evaluated at the sample mean for all variables.
(2) z-Statistics are given in parentheses.

The final group of factors considered are liberalisation and exchange rate policies. Two measures of liberalisation are employed: trade openness and capital account openness. A dummy variable, that takes a value of 1 if the country maintains a fixed exchange rate and zero otherwise, is also included in the regression equation. The results are presented in Table 5 show that liberalisation and the type of exchange rate regime have statistically insignificant effects on the likelihood of inflation starts in LAC countries.

Table 5: The Impact Trade Openness, Financial Openness and Exchange Rate Regime on Inflation Starts

	Model 13	Model 14	Model 15
GDP	0.006	0.006	0.006
	(2.310)	(2.366)	(2.342)
Oil Price Starts	0.034	0.034	0.036
	(2.162)	(2.114)	(2.242)
Average Oil Prices	0.001	0.001	0.002
	(1.874)	(1.892)	(1.915)
Food Price Starts	0.044	0.044	0.044
	(3.638)	(3.600)	(3.641)
Elections	0.029	0.030	0.029
	(2.288)	(2.332)	(2.283)
Political Repression	0.059	0.061	0.063
	(1.902)	(1.926)	(2.022)
World Inflation	0.002	0.002	0.002
	(2.119)	(2.045)	(2.258)
Trade Openness	-0.012	-	-
	(0.972)		
Capital Account Openness	-	-0.002	-
		(-0.436)	
Fixed Exchange Rate Regime	-	-	-0.012
			(-1.062)
Constant	-0.209	-0.216	-0.212
	(-8.788)	(-9.103)	(-8.830)
Log Likelihood	-153.5	-153.1	-153.4
McFadden R^2	0.08	0.08	0.08
Number of Observations	1054	1040	1054

Note: (1) Marginal effects are reported in the table and are evaluated at the sample mean for all variables.
(2) z-Statistics are given in parentheses.

5. Conclusions

In this paper the authors have attempted to investigate the factors that trigger inflation in LAC countries using observations on 31 countries over 1970 to 2006. The study finds that the key determinants of inflation starts in LAC are commodity (oil and food) price shocks and political factors (elections and political repression). In the developing country context, these results are not surprising. Given the relatively high food content of the consumption basket in these countries, it is expected that the influence of food prices would be strongly positive. This research also provides support for the widespread view, largely unsubstantiated in the literature, that oil price changes drive inflation. Political factors also play a very significant role in

triggering inflation in the region. The empirical estimates presented in the study indicate that transitioning to a politically repressed regime increases the likelihood of an inflation start by 7 percent, while elections increase the probability of an inflation start by about 3 percent. Political factors therefore seem to be the major triggers of inflation in LAC since the 1970s.

The policy implications are clear: fiscal and political factors are a key element in maintaining price stability. High spending in pre-election periods and by socialist administrations contribute to inflation episodes in these economies. Furthermore, where price changes are precipitated by strong demand or income growth then there is a role for monetary policy in containing such imbalances. It is less obvious what can be done to address supply-induced price shocks, especially those arising from natural disasters. Finally, the results presented in this paper validate the notion that developing countries, such as those of the Latin American and Caribbean region, are vulnerable to external shocks. These vulnerabilities can place constraints on the ability of these nations to effectively generate meaningful growth through appropriate domestic policies.

Appendix 1

Inflation	Natural log change in the consumer price index; IMF Financial Statistics CD-ROM, issue Date May 2007.
GDP	Real GDP; United Nations Statistics Division National Accounts Database.
Food Prices	Index of food commodity prices; IMF Financial Statistics CD-ROM, issue Date May 2007
Oil prices	West Texas crude oil prices in US dollars; IMF Financial Statistics CD-ROM, issue Date May 2007
Elections	Takes a value of 1 if an election was held in that year, 0 otherwise; Political Database of the Americas.
Political Repression	Takes a value of 1 if the country transitioned to a political repressed regime during the year, 0 otherwise; Freedom House.
Debt	Total debt service as a percentage of GDP; World Development Indicators CD-ROM, issue data 2005.
Government Consumption	Real government consumption as a percentage of GDP; United Nations Statistics Division National Accounts Database.
US, Industrial World and Developing countries Inflation	Natural log change in the consumer price index; IMF
Trade Openness	Exports plus imports as a percentage of GDP; United Nations Statistics Division National Accounts Database.
Capital Account Openness	Chinn-Ito (2006) Capital Account Openness Index
Fixed Exchange Rate Regime	Takes a value of 1 if the country maintained a fixed exchange rate for 2 quarters prior to and after the current quarter, 0 otherwise. IMF Financial Statistics CD-ROM, Issue Date May 2007.

References

Alesina, Alberto (1988) Macroeconomics and Politics, *NBER Macroeconomic Annual* pp 11-55 (Cambridge, MA: MIT Press).

Alesina, A. & Roubini, N. (with G.D. Cohen) (1997*) Political Cycles and the Macroeconomy* (Cambridge, MA: MIT Press).

Ball, L. (1995) Time-Consistent Policy and Persistent Changes in Inflation, *Journal of Monetary Economics,* 36, pp.329-350.

Blinder, A. S. (1982) The Anatomy of Double Digit Inflation in the 1970's, in: R. Hall (Ed.) *Inflation: Causes and Effects*, pp 261-282 (Chicago, IL: university of Chicago Press).

Boschen, J.F. and Weise, C.L. (2003) What Starts Inflation: Evidence from the OECD Countries, *Journal of Money, Credit, and Banking*, 35(3), pp 323-49.

Brunner, K. & Meltzer. A. H. (1977) The Explanation of Inflation: Some International Evidence, *American Economic Review,* 67, pp 148-154.

Calvo, G. A. (1988) Servicing the Public Debt: The Role of Expectations, *American Economic Review,* 78, pp 674-661.

Campillo, M. & Miron, J. A. (1997) Why Does Inflation Differ across Countries, in: C. D. Romer and D. H. Romer (Ed.) *Reducing Inflation: Motivation and Strategy*, pp 335-357 (Chicago, IL: University of Chicago Press.)

Canzoneri, M. M. & Gray, J. (1985) Monetary Policy Games and the Consequences of Noncooperative Behaviour, *International Economic Review,* 26, pp 547-564.

Cassese, A. & Lothian, J. R. (1982) The Timing of Monetary and Price Changes and the International Transmission of Inflation, *Journal of Monetary Economics*, 10, pp 1-23.

Catão, L. & Terrones M. (2001) Fiscal Deficits and Inflation: A New Look at the Emerging Market Evidence, *IMF Working Paper*, No: WP/01/74.

Darby, M. R. (1983) The United States as an Exogenous Source of World Inflation, in: M. J. Darby, J. R. Lothian, A. E. Gandolfi, A. J. Schwartz, and A. C. Stockman (Ed.) *The International Transmission of Inflation*, pp 478-490 (Chicago, IL: University of Chicago Press).

De Long, J. B. (1997) America's Peacetime Inflation: The 1970's, in: C. D. Romer and D. H. Romer (Ed.) *Reducing Inflation: Motivation and Strategy*, pp 247-276 (Chicago, IL: University of Chicago Press).

Domaç, I. & Yücel, M. (2005) What Triggers Inflation in Emerging Market Economies *Review of World Economics*, 141(1), pp 141-64.

Dornbusch, R. (1992) Lessons from Experiences with High Inflation, *The World Bank Economic Review*, 6(1), pp. 13-31.

Fischer, S. (1981) Relative Shocks, Relative Price Variability, and Inflation, *Brookings Papers on Economic Activity*, 2, pp 381-441.

Fischer, S., Sahay R. & Vegh C. (2002) Modern Hyper- and High Inflations, *Journal of Economic Literature*, 40, pp 837-80.

Hibbs, D. A. (1977) Political Parties and Macroeconomic Policy, *American Political Science Review*, 71, pp 467-497.

_____ (1994) The Partisan Model of Macroeconomic Cycles: More Theory and Evidence, *Economics and Politics*, 6, pp 1-23.

Ireland, P. N. (1999) Does the Time-Consistency Problem Explain the Behaviour of Inflation in the United States, *Journal of Monetary Economics*, 44, pp 279-292.

Lindbeck, A. (1976) Stabilization Policies in Open Economies with Endogenous Politicians, *American Economic Review Papers and Proceedings*, 66, pp 1-19.

Lougani, P. & Swagel, P. (2001) Sources of Inflation in Developing Countries, *IMF Working Paper*, No: WP/01/198.

McCallum, B. T. (1978) The Political Business Cycle: An Empirical Test, *SouthernEconomic Journal*, 44, pp 504-515.

Missale, A. & Blanchard O. J. (1994) The Debt Burden and Debt Maturity, *American Economic Review*, 84, pp 309-319.

Mohanty, M.S. & Klau, M. (2001) What Determines Inflation in Emerging Market Countries, *BIS Papers*, No.8: Modelling Aspects of the Inflation Process and Monetary Transmission Mechanism in Emerging Market Countries.

Nordhaus, W. (1975) The Political business Cycle, *Review of Economic Studies*, 42, pp 169-190.

Parkin, M. (1993) Inflation in North America, in: K. Shigehara (Ed.) *Price Stabilization in the 1990's*, pp 47-83 (London: Macmillan Publishing).

Taylor, J. B. (1992) The Great Disinflation, and Policies for Future Price Stability, in: A. Blundell-Wignall (Ed.) *Inflation, Disinflation and Monetary Policy*, pp 9-31 (Reserves Bank of Australia).

_____ (1997) Comment, in: C. D. Romer and D. H. Romer(Ed.) *Reducing Inflation: Motivation and Strategy*, pp 276-280 (Chicago, IL: University of Chicago Press).

Turnovsky, S. J., Basar T. & d'Orey V. (1988) Dynamic Strategic Monetary Policies and Coordination in Interdependent Economies, *American Economic Review*, 78, pp 341-361.