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# Dependency Revisited: International Markets, Business Cycles, and Social Spending in the Developing World

Erik Wibbels

**Abstract** While increased exposure to the global economy is associated with increased welfare effort in the Organization for Economic Cooperation and Development (OECD), the opposite holds in the developing world. These differences are typically explained with reference to domestic politics. Tradables, unions, and the like in the developing world are assumed to have less power or interests divergent to those in the OECD—interests that militate against social spending. I claim that such arguments can be complemented with a recognition that developed and developing nations have distinct patterns of integration into global markets. While income shocks associated with international markets are quite modest in the OECD, they are profound in developing nations. In the OECD, governments can respond to those shocks by borrowing on capital markets and spending countercyclically on social programs. No such opportunity exists for most governments in the developing world, most of which have limited access to capital markets in tough times, more significant incentives to balance budgets, and as a result cut social spending at the times it is most needed. Thus, while internationally inspired volatility and income shocks seem not to threaten the underpinnings of the welfare state in rich nations, it undercuts the capacity of governments in the developing world to smooth consumption (and particularly consumption by the poor) across the business cycle.

Much of the research from the past decade on the consequences of globalization has focused on either the macroeconomic convergence associated with integrating markets or the welfare state implications of globalization. In both areas of study, empirical analyses have focused overwhelmingly on Organization for Economic Cooperation and Development (OECD) cases. To the degree that researchers of the developing world have researched the political economy of open markets, they have done so largely in the context of a market reform literature that emphasizes

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the importance of domestic factors such as legislative bargaining, party system fragmentation, executive independence, federalism, and the like in shaping the adoption of promarket development strategies. Only recently has research begun to investigate the specific effects of international markets per se on policy in the developing world. While the findings from these studies are quite distinct from those on wealthy nations, explanations continue to emphasize the importance of domestic factors. This research complements the domestic-level explanations with a return to dependency theory's emphasis on the constraints associated with the functioning of international markets.

The divergent findings on the relationship between exposure to international markets and domestic politics is clearest when it comes to social spending. One of the most consistent findings in the political economy literature of the past twenty-five years is that increased trade dependence is associated with greater welfare effort in the global North. Despite disagreements on the precise causal mechanisms and debates over methodological issues,[1] researchers interpret this finding as inconsistent with concerns that free trade and capital mobility militate against diverse national political economies and foster a social race to the bottom. Even if the capacity to further expand the scope of the welfare state is limited,[2] existing diversities—be they production regimes, levels of unionization, regulatory environments, or welfare states—seem robust.[3]

Empirical research on the developing world tells a very different story. In most large-N, cross-national studies on the relationship between globalization and welfare effort or government size, trade dependence has a significant and negative effect.[4] In some cases, measures of capital account openness and/or dependence on external capital are also negatively associated with welfare effort. Explanations for these findings vary, but consistent with the domestic emphasis of the market reform literature, researchers suggest that internal politics in the developing world militate against expansion of social programs.

In this article, I complement the emphasis on domestic factors by placing them in international context. In discussing the incentives of governments and actors in tradable sectors, I emphasize the importance of fiscal constraints rooted in distinct

1. Whether the cause is deindustrialization (Iversen and Cusack 2000) or the compensation effect (Cameron 1978; and Garrett 1998) is irrelevant here.

2. See Swank 2002; and Garrett and Mitchell 2001.

3. See Kitschelt, Lange, Marks, and Stephens 1999; Garrett 1998; Boix 1998; and Mosley 2003.

4. See Kaufman and Segura-Ubiergo 2001; and Rudra 2002. Note that in a study that spans the developing and developed worlds, Rodrik finds a positive association between trade and social spending. See Rodrik 1997, 59. It is unclear, however, if increased openness contributes to more social spending in the developing world as he does not run analyses on a sample of developing nations alone. In models that include developing and OECD nations, Rodrik notes that the coefficients on social security and welfare are much smaller than in an OECD-only sample. In another large-N study, Garrett 2001 finds a positive relationship between trade and total government spending, but each of the dummies for developing regions is negative and statistically significant. Neither study estimates models that bear on my hypotheses.

patterns of integration into global markets. While national income shocks associated with international markets are quite modest in the global North, they are profound in developing nations. In the global North, governments can respond to those shocks by borrowing on capital markets and spending countercyclically on social programs. No such opportunity exists for most governments in the developing world that have limited access to capital markets in tough times, more significant incentives to balance budgets, and tradable sectors that are sensitive to currency fluctuations. As a result, these governments cut social spending at exactly the times it is most needed. Thus while internationally inspired income shocks do not threaten the underpinnings of the welfare state in rich nations, it undercuts the capacity of governments in the developing world to smooth consumption (particularly consumption by the poor) across the business cycle.

More specifically, I argue that exposure to international markets affects social spending by increasing the volatility of domestic economies and inspiring procyclical fiscal responses to downturns that imply cuts in social spending. I also hypothesize that business cycles affect the policy preferences of actors in the tradable sectors, who are inclined to favor balanced budgets over countercyclical social spending during economic downturns. This argument, along with a series of resulting hypotheses, provides an account as to how the structure of dependence on international markets affects domestic social policy. In emphasizing the importance of the divergent positions of wealthy and developing nations vis-à-vis international markets, this research hearkens back to some of the insights of dependency theorists, such as Cardoso and Faletto and Evans, and follows in the footsteps of more recent political economists, such as Mosley and Kouparitsas, who suggest that developing nations are much more constrained by global markets than their wealthy counterparts.[5] I expand on that research by theorizing and empirically verifying a direct relationship between trade openness and social policy.

This article proceeds in six sections. In the first section, I review the theoretical arguments and evidence on the relationship between social spending and economic openness. In the second, I develop my argument, assess its relationship to the existing literature, and derive a series of hypotheses. In the third, I examine business cycles in the developing world with specific reference to their roots in exposure to international markets. In the fourth section, I show how this economic volatility affects fiscal policy and social spending in Latin America and compare it with the Organization for Economic Cooperation and Development (OECD). In the fifth section, I conduct a cross-sectional time-series analysis of the effect of the business cycle and international market integration on social spending levels and priorities in twelve Latin American nations between the mid-1970s and the mid-1990s. I conclude with a return to general theoretical and policy issues.

5. See Cardoso and Faletto 1979; Evans 1979; Mosley 2003; and Kouparitsas 1998.

## Globalization and Social Spending: Two Divergent Accounts

The bulk of evidence on the OECD suggests that increased trade and capital mobility have done little to erase the rich array of domestic political economies across nations. With specific reference to social spending, Cameron, Garrett, Rodrik, and others have shown a strong, positive relationship between trade dependence and welfare effort.[6] Similarly, Mosley shows that financial markets care little about microeconomic considerations such as government spending priorities.[7] There is strong evidence, moreover, that tax competition is not eliminating governments' capacity to finance social spending. Indeed, increased exposure to global markets has done little to reduce either the total tax burden or the ratio of taxation on labor to capital.[8] Although a number of additional factors appear to mediate the relationship between economic openness and social spending in the OECD,[9] the thrust of the findings support what is commonly referred to as the compensation hypothesis. The hypothesis suggests that as ties to the global economy increase, governments play a larger role in compensating citizens exposed to the vicissitudes of international markets. Indeed, not only is redistributive spending robust in the face of globalization, but it seems to underpin political support for economic openness.[10]

What is striking is how uniformly the conventional wisdom vis-à-vis emerging market nations reflects more pessimistic evaluations of globalization's effect on public policy.[11] The large-N empirical evidence, though sparse, is broadly supportive of the pessimistic outlook. Several recent studies show a negative relationship between trade and social spending.[12] Kaufman and Segura-Ubiergo also find that capital account openness exaggerates the negative social spending implications of trade dependence.[13] In a similar spirit, Wibbels and Arce show that increased dependence on external finance and indebtedness to international financial institutions result in significant tax burden-shifting from capital onto labor.[14] One clear implication is that governments are able to engage in less fiscal redistribution.

In most cases, researchers emphasize differences in domestic politics to explain the difference between OECD and developing nations. Rudra, for instance, suggests that "the difference in welfare-state outcomes is due to a wide disparity in

6. See Cameron 1978; Garrett 1998; and Rodrik 1997. The chief exception is Burgoon 2001, who finds that increased trade dependence has a negative effect on retirement spending and general social spending.
7. Mosley 2003.
8. See Swank 2002; and Garrett and Mitchell 2001.
9. Mediating factors include electoral systems (Iversen and Soskice 2002), democracy (Adserà and Boix 2002), and the strength and organization of the labor movement (Garrett 1998).
10. Rodrik 1997.
11. Cornia, Jolly, and Stewart 1987.
12. See Kaufman and Segura-Ubiergo 2001; and Rudra 2002.
13. Kaufman and Segura-Ubiergo 2001.
14. Wibbels and Arce 2003.

the bargaining power of labor in developed and developing countries."[15] Wibbels and Arce echo the importance of unions, writing that "despite arguments that mobile capital would sweep all national politics before it. . . . Where strong leftist political parties combine with powerful union movements, governments are much more resistant to shifting tax burdens from capital to labor."[16] Kaufman and Segura-Ubiergo, on the other hand, interpret their findings as evidence that "secular shifts in the preferences and relative power of business sectors exposed to increases in international competition curb social spending over the long term."[17] Garrett and Mitchell likewise argue that unlike the predilection for higher social spending characteristic of tradable sectors in OECD nations, actors in tradables in the developing world prefer low taxes, thus limiting redistribution and contributing to the inverse trade/spending relationship.[18]

Such research has contributed much to one's understanding of the domestic politics shaping national responses to international markets in the developing world. Less research, however, has explored the ways in which international factors shape the economic environment in which domestic actors operate. I argue that national-level explanations should be complemented by recognition of the ways in which relationships with the global economy condition macroeconomic performance and the interests of key domestic actors. In emphasizing national politics, recent research adheres to ongoing intellectual trends in the study of the political economy of developing nations. Such is particularly true of the market reform literature that seeks to explain the degree to which nations have embraced free market models of development. The distribution of social costs and benefits of the market reform process,[19] the organization of business communities,[20] the strength of oppositional forces such as unions,[21] the nature of regimes,[22] the bureaucratic capacity of the state,[23] and institutional factors ranging from party systems[24] to federalism[25] are all important domestic-level factors researchers identify as influencing economic policy. The ways in which the international environment shapes the context in which these domestic institutions operate, however, remains mostly unexplored.

15. Rudra 2002, 436.
16. Wibbels and Arce 2003, 132.
17. Kaufman and Segura-Ubiergo 2001, 571.
18. Garrett and Mitchell 2001. The UN Conference on Trade and Development (UNCTAD) echoes these sentiments, suggesting that the "increased diversity in economic performance of developing countries in the current global downturn reflects differences in their domestic conditions." UNCTAD 2003, 6.
19. Nelson 1992.
20. Kingstone 1999.
21. Dornbusch and Edwards 1991.
22. Skidmore 1977.
23. Waterbury 1993.
24. Haggard and Kaufman 1995.
25. Gibson and Calvo 2000.

## The Argument and Hypotheses

I argue that the findings on the relationship between trade dependence and welfare effort result, in part, from a dependent position in the global economy and the ways in which that position shapes the interests of key domestic actors. More specifically, exposure to global markets inspires severe business cycles and prevents governments from engaging in countercyclical spending to smooth consumption during recessions. Given the need to fiscally retrench in the face of recessions, governments face tradable sectors whose long-term interest in social spending conflicts with their short-term interest in fiscal balance. Both the harshness of business cycles and the limited capacity to spend countercyclically are rooted in the dependent position of developing nations in the international economy. This does not mean that domestic factors (be they the interests of actors in the tradables sector, regime type, or union strength) are irrelevant, only that they are shaped by international constraints. Indeed, once broad macroeconomic limitations are accounted for, I expect that domestic political preferences in the developing world will more closely resemble those in the OECD than extant research suggests.

My argument relies on three links between international markets and the social policies of governments. First, increased exposure to international markets subjects developing nations to profound business cycles. Such business cycles will vary in depth with dependence on exports in volatile sectors (such as raw materials) and external finance. Second, those output shocks, in turn, induce sharply procyclical fiscal policy during bad economic times. This latter phenomenon results in large part from governments' limited ability to borrow from international markets during negative output shocks. Third and finally, the association between deficits and real exchange rate volatility forces policy trade-offs on domestic tradables such that they prefer cuts in social spending during recessions. When combined with the political weakness of the poor, the preferences of tradables encourage governments to retrench social spending as a means to balance budgets. The net result of these interrelated phenomena is that the position of most developing nations in the global economy militates in favor of social spending cuts during periods of economic distress.

Traditionally, one of the most important tools for combating the business cycle has been fiscal policy and social spending in particular. Since most revenue sources available to governments are income-elastic, economists have long been concerned that fiscal policy will magnify business cycles. In particular, procyclical taxing and spending threaten to exacerbate downturns by disrupting employment and the provision of public services. The impact of such swings might be particularly severe for a society's poorest and most vulnerable citizens if social spending is reduced at times when it is most needed. Musgrave, in his classic work on public finance, summarizes the prevailing view that government has an obligation to fiscal stabilization: "A free economy, if uncontrolled, tends toward more or less drastic fluctuations in prices and employment; and apart from relatively short-

term swings, maladjustments of a secular sort may arise toward unemployment or inflation. Public policy must assume a stabilizing function in order to hold within tolerable limits departures from high employment and price stability."[26]

In 1990 the World Bank echoed these concerns with special attention to the impact of spending cuts on the poor: "Adjustment may mean a long-term setback for the poor if it undermines the resources that enable them to work as small-scale producers and laborers. Health and education . . . are some of the investments that should not be allowed to deteriorate."[27] Indeed, as Rodrik and others have suggested, such spending provides the social support for policies of economic openness.[28]

Even if one rejects the Keynsian notion of demand management in a world of rational expectations among market actors, a far-sighted welfare-maximizing government should nevertheless conduct countercyclical policy if it acts according to the "permanent income hypothesis." Such behavior would imply setting government consumption levels according to long-term income expectations rather than yearly fluctuations, thereby minimizing distortions associated with frequent changes in taxation and expenditures. A large empirical literature has determined that whatever their motivations, central governments in wealthy countries behave in this fashion, borrowing and saving so as to smooth the short-term shocks of the business cycle.[29] Redistributive spending, such as that on unemployment transfers and other welfare programs, is particularly countercyclical (meaning spending goes up as the business cycle goes down).

A number of factors make this quintessentially Keynesian response to recessions problematic in developing nations. First and probably most important is the size of the fiscal shocks associated with traumatic business cycles inspired in part by terms of trade shocks and dependence on volatile external finance. Given this economic instability, income smoothing would require either significant borrowing during economic downturns or epic surpluses during good times. In the face of strong political pressure and the real need for spending in developing nations, huge surpluses are unlikely.[30] Heavy borrowing is also problematic given developing nations' precarious access to financial markets.[31] Even in good times, developing regions are seen as high risk. Given such perceptions, capital flows are subject to large fluctuations, often in response to exogenous events.[32] Thus even if governments want to respond to recessions countercyclically, their capacity to do so is limited. Indeed, the automatic stabilizers that explain countercyclical spending

26. Musgrave 1959, 22.
27. World Bank 1990, 116.
28. Rodrik 1997.
29. Hallerberg and Strauch 2002.
30. Tornell and Lane 1999.
31. See IMF 2003.
32. Fiscal shocks are exacerbated by revenue sources that tend to be sensitive to the business cycle. See Talvi and Végh 2000. In contrast to the modestly income elastic tax systems in the OECD, developing nations tend to rely on consumption taxes.

in the OECD are all but an impossibility in most developing nations. As a result, the first hypothesis is:

*H1: Fiscal policy will be profoundly procyclical in the developing world.*

Given these internationally inspired macroeconomic constraints, domestic political considerations should influence the degree to which different portions of public spending respond most directly to the business cycle. Indeed, income shocks are one of the main sources of time variation in government outlays, and it is during recessions that fiscal politics are at their most conflictual. Given the need to cut spending during recessions, I expect politicians to find social spending an attractive target for retrenchment. In contrast to many wealthy nations, where the constituency for social spending of various kinds is quite strong,[33] poor constituencies across much of the developing world are weak.[34] As such, politicians are likely to see it as a politically expedient source of savings in tough economic times. Here, however, it becomes important to distinguish between two types of social spending. While spending on human capital (health and education, for instance) tends to be truly redistributive in favor of the poor and has a relatively unorganized constituency, social security spending tends to be regressive and has a small, highly organized constituency in the developing world.[35] Indeed, as informal labor market employment has climbed in recent decades, the percentage of the working population covered by such systems has declined. Mesa-Lago suggests that in many Latin American cases, for instance, social security covers only about 10 percent of the workforce, and a relatively wealthy portion of the workforce at that.[36] As a result, the second hypothesis is:

*H2: Spending on human capital will respond more procyclically to the business cycle than social security spending.*

Focusing on the specific relationship between economic openness and social spending, I hypothesize that the distinct characteristics of these two social spending categories will have implications for how key political actors perceive them and thus how aggressively they will be retrenched in response to the business cycle. A substantial literature has suggested that increased economic openness should be associated with increased demand on the part of workers and capital alike for the kinds of social policies that promote competitiveness and cushion volatility associated with the international economy.[37] Given the maldistributive nature of many

33. Pierson 1994.
34. Nelson 1992.
35. See CEPAL 1999; and Huber et al. 2004. The relationship between the two types of spending across Latin America since 1970 is −0.58.
36. Mesa-Lago 1994.
37. See Cameron 1978; and Rodrik 1997 and 1999.

social security systems in the developing world, these systems should be exempt from such demands, while the productive features of health and education spending (see below) should increase demands for it as openness mounts.[38]

A number of additional factors suggest that tradable interests in particular will prefer cuts in social security to those in human capital. First, social security systems add to the wage bill, are associated with obstacles to labor market flexibility, and have become expensive. In countries such as Argentina[39] and Brazil,[40] deficits in retirement systems were the most proximate cause of recent fiscal crises. Second, in contrast to spending on social security in the developing world, that on health and education generate widespread positive social externalities, more productive workers, and increase firm profitability.[41] Indeed, it is exactly these aspects of such spending that have led employers in many OECD countries to support various social programs.[42] Despite suggestions to the contrary, there is little reason to think that tradable producers in developing nations would be somehow distinct from those in OECD nations in failing to recognize the private-sector returns to human capital spending. Indeed, Mares's suggestion that high-risk producers are most likely to favor some social programs indicates that producers in the developing world should be strongly in favor of such programs given the economic uncertainty associated with such volatile business cycles.[43]

Although Kaufman and Nelson note that there is little evidence that the business community as a whole expresses preferences on these issues,[44] there is some qualitative evidence with regards to tradables in a number of contexts. Mexican exporters, for instance, are currently bemoaning that nation's failure to move into higher value-added, human capital–reliant production in the face of low-wage competition from China,[45] and the Chinese are themselves struggling to improve education and worker training in an attempt to climb the productive ladder in the face of low-wage competition from other nations.[46] Likewise, in recent polls Peruvian business leaders have consistently emphasized the importance of human capital for competitiveness—it ranks second behind natural resources as the most important engine for business growth.[47] The desires of producers should be matched by

38. Polling data provides some support for this claim. The most recent Latinobarometer regional poll asks individuals whether or not the market is the best means for development. See Lagos 2004. The bivariate relationship between a nation's weighted human capital spending and a positive assessment of the market is 0.34. The relationship between weighted social security spending and assessment of the market is −0.35.

39. Mussa 2002.

40. Samuels 2003.

41. See CEPAL 2000; and Huber et al. 2004.

42. Mares 2003.

43. Ibid.

44. Kaufman and Nelson 2004.

45. "The Sucking Sound from the East," *The Economist*, 24 July 2003, 35.

46. "The Attraction That Is Southern China," *New York Times*, 5 November 2003, W6.

47. Universidad de Lima 2003, 5. The poll emphasized the large businesses most likely to engage in trade.

employees in tradable sectors, where occupational income differentials are widening and the reward for education mounting.[48] Thus my third hypothesis is:

*H3: Trade openness will be associated with reductions in social security spending and protection for spending on human capital.*

Finally, I hypothesize that the interests of actors in the tradable sector are shaped by the macroeconomic environment. More specifically, the desire for more competitive employees in the long-run can conflict with the short-term need for fiscal austerity. To the degree that large deficits are associated with exchange rate volatility, actors in the tradable sector are likely to favor retrenchment even in areas, such as health and education, that have widely recognized benefits. Aside from the fact that external shocks are themselves associated with real exchange rate volatility,[49] this is likely so because to the degree deficits are financed by monetary expansion, they will affect the real exchange rate. Relatedly, looming deficits can encourage capital flight to the degree that they are perceived as inconsistent with market discipline. As Gavin and others explain with regards to the contractionary expenditure retrenchments in Argentina and Mexico during the 1995 peso crisis, "Aggressive fiscal adjustment was a crucial signal of continued commitment to sound policies, and in the absence of this adjustment there was a real danger that capital flight by already nervous international and domestic investors would have intensified, further deepening the economic crisis."[50] Moreover, as Servén notes, exchange rate volatility decreases investment and is much more likely in open, developing economies. He writes "The high real-exchange-rate volatility that characterizes developing economies creates an uncertain environment for investment decisions by making absolute and relative sectoral profitability (in the traded versus nontraded-goods sectors) . . . harder to predict."[51] In the eyes of actors in the tradable sectors, therefore, the connection between fiscal deficits and the exchange rate is likely to weight preferences in favor of the short-term concern with exchange rate volatility over the long-term desire for improved human capital.[52] As a result, the fourth hypothesis is:

*H4: Tradable openness will be associated with social spending cuts of all kinds during negative output shocks.*

48. See CEPAL 1999; and Galiani and Sanguinetti 2003.
49. Ahmed 2003.
50. Gavin et al. 1996, 17.
51. Servén 2002, 212.
52. While one might expect exporters to benefit from devaluation, the empirical literature indicates that devaluations are strongly contractionary in developing nations because they raise the domestic currency real value of external liabilities and dry up access to international credit.

The implications for social spending and equity considerations in the developing world are, of course, not promising. Latin American nations, for instance, not only have 25 percent more recessions than OECD nations, but those recessions are typically twice as long and four times as deep.[53] Yet the fiscal capacity of governments to respond to the corresponding social demands is considerably less. In the following three sections, I further specify the logic and present evidence on each of the three steps in the causal argument: from international markets to severe business cycles, from severe business cycles to procyclical fiscal policy, and from procyclical fiscal policy to cuts in social spending during negative output shocks.

## International Markets and the Business Cycle in the Developing World

The severity of business cycles in many developing nations is intimately tied to their position in the global economy. Though the precise characteristics of each national economy are unique, evidence suggests that increased exposure to international markets exacerbates swings in the business cycle in many developing nations in two key ways. First, developing nations tend to specialize in a small handful of exports (oftentimes agricultural and raw material goods), the international prices of which tend to be volatile.[54] As a result, terms of trade shocks tend to be larger than those in wealthy nations, where the export profile is more diverse. Not surprisingly, then, business cycles and terms-of-trade fluctuations are strongly and positively associated. Indeed, more than half of output fluctuations in developing nations are explained by terms-of-trade shocks,[55] and much of the fluctuations in terms of trade are due to changes in wealthy nation economic output.[56] Indeed, Kouparitsas finds that 70 percent of the variation in consumption in developing nations is tied directly to fluctuations in wealthy economies.[57] Of course, both the degree of economic volatility and the role of trade shocks in creating it vary with the extent to which developing nations have narrow export profiles in volatile product markets. Figure 1 provides preliminary evidence of the close association between the terms of trade and the business cycle by plotting the volatility of terms of trade shocks against the volatility of household income for the period

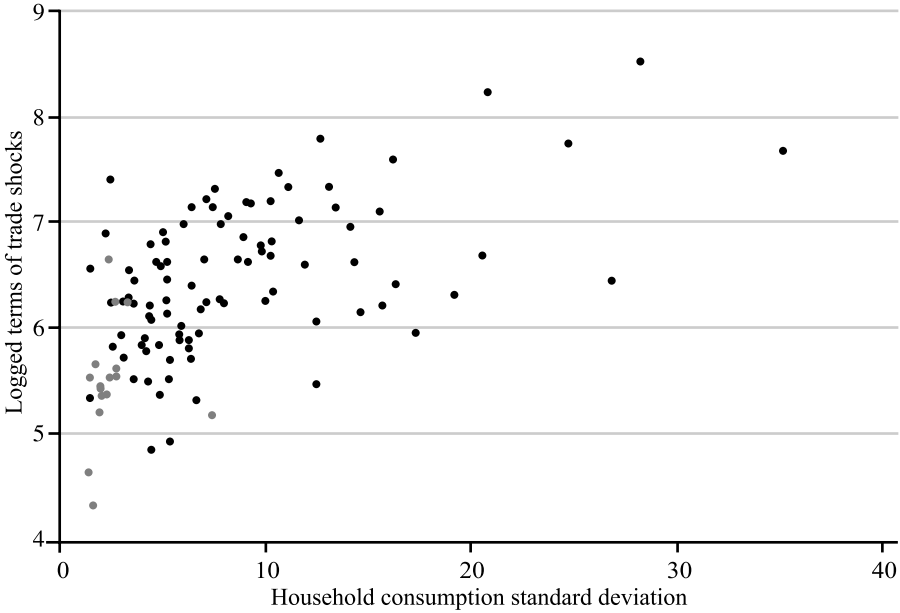
53. IDB 1995, 192.

54. See Borensztein and Reinhart 1994; IDB 1995; and de Ferranti et al. 2000. Borensztein and Reinhart find that more than 50 percent of the fluctuations in commodity prices since the early 1970s are because of demand factors in northern economies.

55. See Agénor, McDermott, and Prasad 2000; and Mendoza 1995.

56. Borensztein and Reinhart 1994.

57. Kouparitsas 1998.




*Note:* Developing nations in black; founding OECD members in gray. Terms of trade shocks are defined in a manner consistent with Rodrik 1999 as the product of the standard deviation of changes in annual terms of trade and trade dependence (imports plus exports/GDP) between 1970 and 2000. The terms of trade variable is logged to facilitate visual presentation. Household consumption is measured as annual change as a percentage of GDP. The standard deviation is taken for the period between 1970 and 2000.

*Source:* Data taken from World Bank 2000a.

**FIGURE 1.** *The relationship between logged terms of trade shocks and the volatility of household consumption, 1970–2000*

between 1970 and 2000.[58] The bivariate correlation between the two variables is 0.59, and the graph clearly shows that developing nations tend to have both more severe terms of trade shocks and more severe business cycles.

Second, thanks to shallow domestic credit markets, many developing nations are heavily reliant on volatile international financial markets.[59] As a result, international capital flows and the price of international credit is particularly important for developing nations, many of which must rely on international (rather than

58. Private consumption is superior to GDP growth as a measure as most households in developing nations are unable to borrow to smooth consumption during recessions.

59. The average domestic banking system in the OECD provided credit amounting to 91 percent of GDP between 1970 and 2000; the figure in the developing world was 41 percent (World Bank 2000a).

domestic) borrowing to finance fiscal and trade deficits. Since developing nations use northern capital as an input into its production processes and to finance fiscal deficits, fluctuations in the international price of capital can cause volatility both in developing country imports and in the capacity of governments to spend countercyclically.

Several features of this reliance are likely to exacerbate business cycles in the developing world. Considerable research has shown that while domestic factors do have an impact on access to external finance, the flow of capital to developing nations is largely determined by developments in wealthy economies.[60] Output and capital flows to the developing world, for instance, are negatively correlated with real interest rates,[61] asset prices,[62] and business cycles in wealthy nations.[63] The result can be exaggerated recessions if high international interest rates or other supply shocks coincide with domestic economic downturns and revenue reductions.[64] In some cases, these exogenous shocks rooted in wealthy nations are exacerbated by contagion—where financial crises in apparently unrelated or scarcely related countries have resulted in capital flight and increased borrowing costs.[65] Second, and in contrast to OECD cases, the cost of international capital is procyclical in developing nations, meaning that its cost goes down when the economy expands and increases when in contracts.[66] Markets rightfully view many developing nations as high risk. When governments do have access to credit markets, sovereign borrowing is subject to high-risk premiums even in the best of times,[67] and government bond yields and country spreads are particularly responsive to exogenous shocks.[68] Recessions within the developing world, moreover, are much more likely to be associated with being entirely cut off from credit markets. The International Monetary Fund (IMF), for instance, has identified twenty-one cases of bond market closures to developing nations as a whole in the last ten years—it also notes that these closures have become more linked to developments in wealthy markets rather than those in developing nations themselves.[69] Indeed, mounting evidence suggests that the importance of exogenous international "push" factors are having

60. See IMF 2003; and Gavin, Hausmann, and Leiderman 1995.

61. Gavin, Hausmann, Perotti, and Talvi 1996.

62. IMF 2003.

63. Kouparitsas 1998.

64. The opposite is the case in wealthy nations where interest rates and growth rates are negatively related.

65. Calvo, Izquierdo, and Mejía 2004 note that sudden stops in access to credit markets tend to occur in bunches and in countries exhibiting a variety of underlying fundamentals.

66. Kaminsky, Reinhart, and Végh 2004. They note that sovereign credit ratings are unrelated to the business cycle in OECD countries.

67. Interest rate spreads between the sovereign debt instruments of major Latin American nations and world interest rates, for instance, varied between 5 and 35 percent over the course of the 1990s. See de Ferranti et al. 2000, 48.

68. Kaminsky and Reinhart 2002, 456. During the Asian financial crisis, for instance, bond spreads increased by 560 basis points in Asia, 901 basis points in Latin America, and 2006 points in the transition economies of Eastern Europe and the former Soviet Union.

69. IMF 2003, 96.

a greater impact on international capital flows to the developing world at the expense of endogenous "pull" factors within developing nations.[70] One result is that the cost of government borrowing to engage in fiscal smoothing across the business cycle is much higher than it is in the OECD.[71] As de Ferranti and others explain of developing governments' failure to smooth, "This again reflects the operation of financing constraints, since at times of adverse shocks governments face sharp reductions in their access to external financing or large increases in its cost."[72] Third, in order to address these procyclical flows, policymakers often push domestic interest rates to high levels to reattract investors.[73] High domestic interest rates, of course, serve to increase the domestic cost of borrowing and exacerbate recessions.[74] In sum, the supply of external finance is subject to exogenous shocks, is an important source of macroeconomic volatility, is more expensive when it is available, and is least available when it is needed most for fiscal smoothing.

Given reliance on external finance and larger terms of trade shocks, it is not surprising that output volatility is significantly higher in developing countries than industrial nations. Unfortunately, limitations on data availability prohibit the estimation of precise models to assess the impact of international markets on business cycles for a large sample of developing nations.[75] Instead, I pursue two strategies: first, I conduct an imperfect analysis of the impact of financial flows and terms of trade shocks on business cycle volatility for as many nations as possible. Second, I rely on a handful of existing studies in economics of a small number of cases with better data to bolster my argument about the importance of exogenous economic shocks. Consistent with the model developed by de Ferranti and others, Table 1 presents the results of two regressions of output volatility on international and domestic factors for all of the nations for which data is available for at least half of the years between 1970 and 2000. The key international variables are those for terms of trade shocks and the volatility of capital flows.[76] The key domestic variables are per capita income, oil dependence, and measures for the volatility of fiscal policy and monetary policy—the two policy spheres most consistently linked

70. See IMF 2003; Albuquerque, Loayza, and Servén 2003.

71. Kaminsky, Reinhart, and Végh (2004, 222–23) note that credit worthiness is unrelated to the business cycle in OECD countries but the two are closely related in middle income countries.

72. de Ferranti et al. 2000, 58.

73. Kaminsky and Reinhart 2002.

74. The regional responses to the Asian financial crisis are again instructive. In Asian, Latin American, and transition economies, interest rates increased by 5.5 percent, 5 percent, and 13.4 percent, respectively. Group of 7 (G7) interest rates went down by .04 percent. See Kaminsky and Reinhart 2002, 456.

75. The degree to which the constraints of the international economy are felt through terms of trade shocks and limited access to debt financing depends on a nation's degree of export diversification, the goods it exports and imports, as well as the depth and breadth of domestic financial markets. Ideally, it would be possible to estimate the effect of international economic shocks on business cycles and the subsequent impact of business cycles on social spending. Since all of this data is available for only a small handful of nations, existing econometric evidence is based on relatively small samples on which I cannot expand.

76. See de Ferranti et al. 2000, annex 1, 68–69, for details.

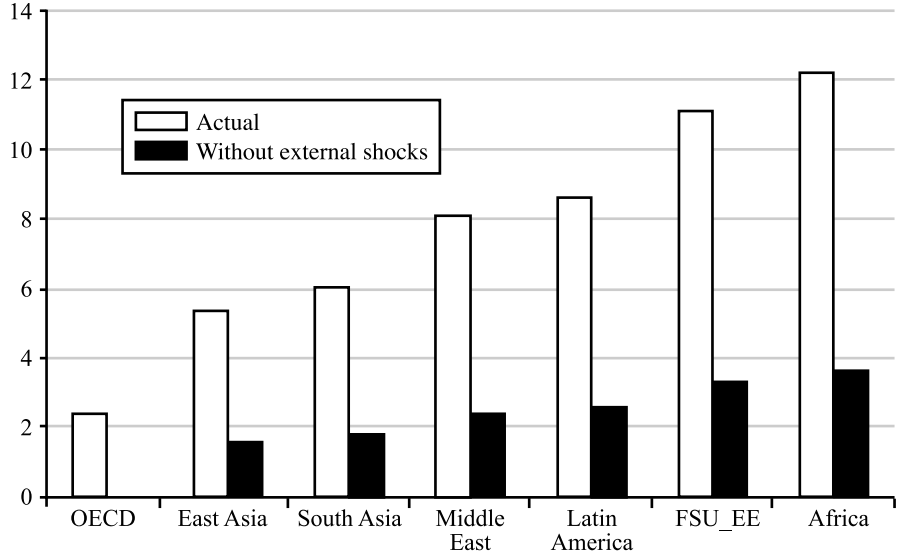
**TABLE 1.** *International and domestic effects on business cycle volatility, 1970–2000*

| *Variables* | *Model 1* | *Model 2* |
|---|---|---|
| VOLATILITY OF TRADE SHOCKS | .002*** | .002*** |
| | (.000) | (.001) |
| VOLATILITY OF CAPITAL FLOWS | 1.400* | 2.143*** |
| | (.757) | (.772) |
| VOLATILITY OF MONEY GROWTH | .001 | |
| | (.001) | |
| VOLATILITY OF FISCAL POLICY | .072 | |
| | (.113) | |
| AVERAGE PER CAPITA GDP | −.350*** | |
| | (.122) | |
| AVERAGE OIL EXPORTS | .011 | |
| | (.009) | |
| $R^2$ | .41 | .35 |
| $N$ | 55 | 55 |

*Note:* Analysis conducted using ordinary least squares. Standard errors are in parentheses. All variables are measured on the basis of annual data for the period from 1970 to 2000. The dependent variable is the standard deviation of GDP growth. Trade shocks are measured as the standard deviation of terms of trade shocks, where terms of trade shocks are defined as in Figure 1. The volatility of capital flows are measured as the coefficient of variation in gross capital flows as a percentage of GDP. The volatility of money growth is measured by the standard deviation of annual money growth as a percentage of GDP. The volatility of fiscal policy is measured using the standard deviation of annual fiscal deficits as a percentage of GDP. Per capita GDP and oil exports are measured as the annual average over the entire period. All data from World Bank, *World Development Indicators*. See Appendix for nations included in the analysis.
*significant at .10; **significant at .05; ***significant at .01.

to changes in output (see the table note for operationalizations). Model 1 shows that, wealth aside, the volatility of terms of trade and international capital flows are the only indicators that impact the severity of business cycles. Measures of domestic fiscal and monetary policy have no impact. Model 2 shows that the two international factors alone account for approximately 35 percent of the volatility of business cycles.

Given the limitations of this analysis (particularly endogeneity concerns) imposed by data shortcomings, Figure 2 presents additional supporting evidence. The figure shows the standard deviation of annual changes in private consumption by region of the world. The least volatile (and most economically diversified) region in the developing world is East Asia, which is 2.5 times more volatile than the OECD. The most volatile is Sub-Saharan Africa, at nearly six times that of wealthy nations. A small body of econometric research on the causes of this volatility using high-quality data for a small number of developing nations suggests that exog-




*Note:* Data taken from World Bank 2004. The bar indicating what the volatility of household consumption would be with external shocks similar to those found in the OECD are based on the studies of Agénor, MacDermott, and Prasad 2000: Mendoza 1995, 127; and Kouparitsas 1998, 3. See text for more details

**FIGURE 2.** *Volatility of household consumption, 1970–2000 (standard deviation of annual percentage change)*

enous international economic factors cause between 56 and 70 percent of it.[77] Taking the midpoint as a reasonable estimate, the graph shows what economic volatility would look like if nations in each region experienced a similar relationship to the global economy as found in the OECD. The results are striking, with income shocks looking similar to those in wealthy nations. All together, this evidence suggests that increased openness to the international economy in the developing world is associated with sharper business cycles, which contrasts with findings on the OECD.[78]

It is worth noting that macroeconomic volatility has a direct effect on poverty rates. Irrespective of the business cycle's effect on social spending, the poor are least able to shield their incomes and assets, more likely to forego education, and least likely to have access to consumption smoothing credit in the face of pro-

77. See Agénor, McDermott, and Prasad 2000; Mendoza 1995: 127; and Kouparitsas 1998, 3. The actual figures reported are 56 percent by Mendoza and 70 percent by Kouparitsas. Agénor, McDermott, and Prasad, 263, fn. 13, do not report a figure for their entire sample but indicate that their findings are consistent with those of Kouparitsas.

78. Iversen and Cusack 2000.

nounced economic downturns.[79] The Inter-American Development Bank estimates that were output shocks in Latin America similar in scale to those in the OECD, 25 percent of the region's poor would be pulled out of poverty.[80]

## The Business Cycle, Budgets, and Social Spending

The challenge for policymakers in the developing world is not only that their economies are three to six times more volatile than in wealthy countries, but the constraints that they face in dealing with that volatility are more severe. Consistent with the discussion above, I hypothesize that fiscal policy in the developing world is likely to be procyclical. A number of factors underpin this expectation, including limited government access to capital markets during downturns,[81] revenue sources that are volatile, the associated lack of automatic fiscal stabilizers, and the large size of the fiscal shocks associated with the severity of business cycles.[82] The net result of these factors should be that public spending fails to smooth consumption across the business cycle and that the lack of an organized constituency will make spending on education and health a particularly attractive target for cuts.

In this and the following section, the empirical focus is on Latin America. Though spotlighting the region reduces the generalizability of the findings to the rest of the developing world, it does have several advantages. First, Latin American nations were the first to make significant moves toward free markets in the aftermath of the 1982 debt crisis. As such, findings for this region may serve as an indicator of where other developing nations are headed. Second, the nations across the region vary tremendously in their levels of trade dependence. Trade dependence in 2000 varied from a low of just above 21 percent in Argentina to more than 90 percent in Costa Rica and Honduras.[83] Third, there is tremendous variation across the region in terms of the scope and type of welfare spending. While some nations spend considerable shares of public spending on social policies, others spend very little. Among those that are comparatively generous, the focus of social spending varies, with some emphasizing social security while others spend on health and education. Finally, data limitations with regards to the political variables described below preclude an analysis of a larger sample of the developing world. Nevertheless, the combination of varied levels of trade dependence, diverse levels and types of social spending, and a period of profound movement toward free market policies across Latin America offers a good opportunity to test the relationship between business cycles and social spending.

79. World Bank 2000b.
80. IDB 1995, 190.
81. IMF 2003.
82. de Ferranti et al. 2000.
83. Data from the World Bank 2000a.

Figure 3 provides a general indication of the degree to which fiscal policy in Latin America is pronouncedly procyclical when compared to OECD nations. Deficits and recessions move in concert in the OECD, which suggests that governments are responding to downturns by increasing borrowing. This borrowing helps finance the increased social expenditures associated with automatic stabilizers—because more people qualify for various social programs during recessions, spending on them automatically increases. In Latin America, on the other hand, deficits and recessions are either unrelated or move in opposite directions. Far from borrowing to finance countercyclical spending, many governments in the region actually move toward surplus. Given that revenues decline during negative output shocks across the region, this relationship between deficits and recessions indicates that significant expenditure cuts take place when public finance axioms suggest that the opposite should happen.

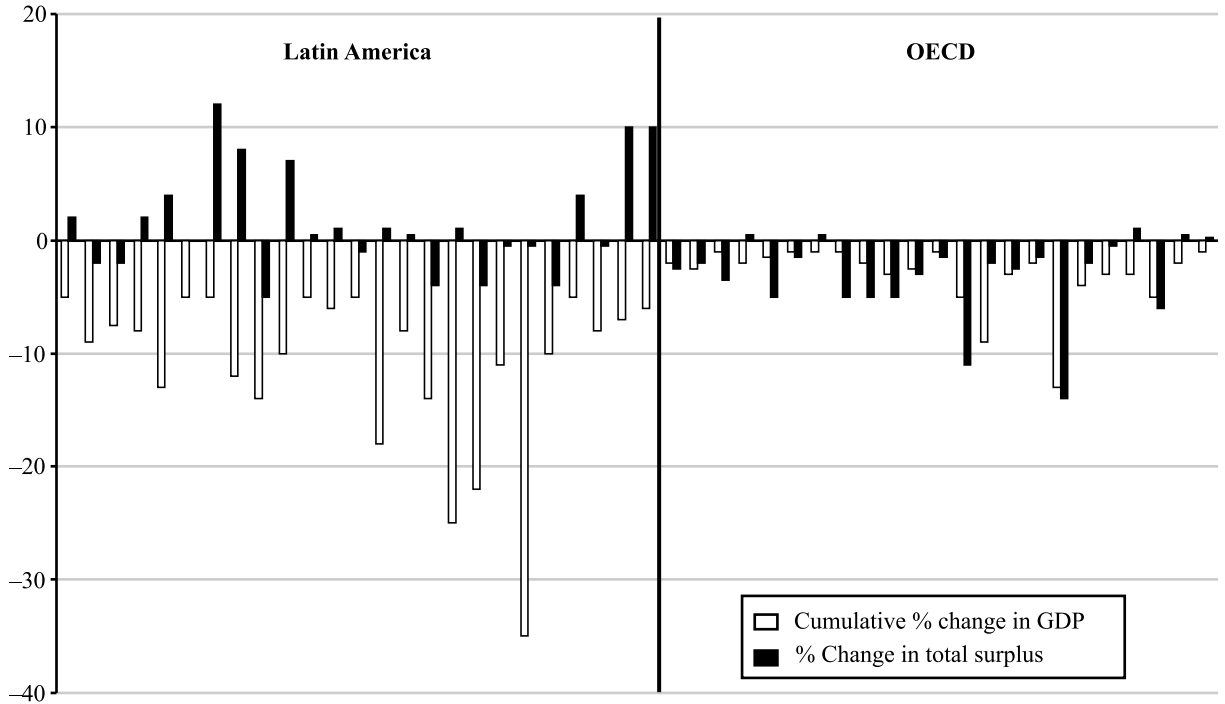
Table 2 below provides a more direct test of Hypotheses 1 and 2, that fiscal policy in Latin America is procyclical and that human capital spending will be more procyclical than social security spending. To provide a general picture of the cyclical characteristics of budgets in Latin America, I have gathered yearly inflation-adjusted per capita data on revenues, deficits, total expenditures, the two types of social spending discussed above, and gross domestic product (GDP) for the twelve nations in the region for which the disaggregated social spending data is available between the mid-1970s and mid-1990s.[84]

The most straightforward way to examine cyclicality is to simply regress fiscal variables on national income. Because of unit roots in both income and fiscal data, I use first differences of the logged real per capita data.[85] I report the results of Prais-Winsten regressions with panel-corrected standard errors, assuming the disturbances to be heteroskedastic and contemporaneously correlated across panels. Each cell in the table is the coefficient from a separate regression and represents the income elasticity for each budget item. For the revenue and expenditure models, a positive coefficient represents a positive, or procyclical, correlation with gross domestic product. For the deficit, however, a positive coefficient reveals that governments increase the surplus during good times and decrease it (enlarge the deficit) during bad times, which is consistent with countercyclical borrowing and saving. To accentuate the fiscal differences between OECD and Latin American nations, I also estimate income elasticities for the OECD.[86]

84. The nations included in the analysis are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Mexico, Peru, Paraguay, Uruguay, and Venezuela.

85. The models also include country fixed effects and a number of standard controls. Because the controls are not theoretically interesting and have little impact on the findings, I leave their discussion for below. I also examined models including year fixed effects, which could be important to the degree that they control for common external shocks to all countries of the region. Their inclusion did not alter the basic findings.

86. I use data provided by Hallerberg and Strauch 2002 and supplemented with OECD 2004 social spending data.




*Note:* A major recession is defined in a manner consistent with Gavin et al. 1996, as one in which GDP declines cumulatively by more than 4 percent in Latin America or 1.5 percent in the OECD.

**FIGURE 3.** *Responses to major recessions, 1970–95*

**TABLE 2.** *Income elasticities for budget items*

| | *Revenue* | *Deficits* | *Expenditures* | *Human capital* | *Social security* |
|---|---|---|---|---|---|
| *Latin America* | 1.09* | −1.35 | 1.16* | 1.16* | .38 |
| | (.20) | (.99) | (.21) | (.23) | (.33) |
| *OECD* | .65* | .66* | −.02 | .07 | −.21 |
| | (.07) | (.10) | (.09) | (.11) | (.15) |

*Note:* The entries are $\beta$ coefficients for the regression of $\Delta$ logged per capita budget item on $\Delta$ logged per capita GDP and a battery of controls. Numbers in parentheses are standard errors. The OECD values are produced by analyzing data provided by Hallerberg and Strauch 2002. * significant at .01.

The results are quite supportive of both hypotheses. As expected, the first column reveals that revenues in Latin America are profoundly procyclical: a 1 percent contraction in GDP per capita results in a similar decrease in revenues. In this respect, the OECD behaves somewhat similarly, though the scale of the procyclicality is less, with revenues decreasing up to 65 percent of any downturn in the business cycle. The similarities end there, however. Consistent with Figure 3 above and the expectation that governments should borrow to finance cycle-smoothing expenditures during recessions, OECD nations have a strong, positive relationship between the business cycle and deficits. The opposite appears to be the case in Latin America. Though the coefficient falls somewhat short of significance, it suggests that nations across the region move strongly toward surplus during recessions. Consistent with the expectation that governments are unable to fiscally smooth, their movement toward surplus exceeds by 35 percent any downward shift in the economy. Likewise, total expenditures are strongly procyclical across the region while they are acyclical in the OECD.

Social spending also behaves as hypothesized but contrary to the OECD experience. To operationalize investments in human capital (as opposed to social security), I add education and health care spending. Spending on human capital moves in concert with the business cycle—indeed, the elasticity of 1.16 implies a very procyclical response. The implications for the poor are dire, because times of economic distress are associated with cuts in the type of spending most likely to reach them. In contrast, social security spending across Latin America is acyclical—the positive coefficient is not significant. Consistent with the theoretical story outlined above, it seems that the highly organized, narrow interests associated with social security are able to defend their budgetary priorities in Latin American contexts. OECD expenditures on both human capital and social security, on the other hand, are acyclical, while other research has shown that welfare spending is strongly countercyclical.[87]

87. Hallerberg and Strauch 2002. Traditional welfare programs as understood in the OECD welfare state literature are trivial in most of the developing world, yet even those small programs are highly procyclical. See Hicks and Wodon 2000.

## Income Shocks, Trade, and Social Spending

To date, most of the research on budget cyclicality has been highly technocratic. Researchers have few systematic political explanations for the variation in the responsiveness of fiscal policy to the budget cycle. That said, research has begun to find that a number of political factors mediate the relationship between income shocks and fiscal policy.[88] Most such research, however, is concerned with fiscal policy aggregates (total taxing, spending, and deficits) rather than the specific implications of the business cycle for social spending and is focused overwhelmingly on OECD nations.

Consistent with testing Hypotheses 3 and 4, this section examines the relationship between the macroeconomic environment, trade openness, and social spending. As suggested above, focusing on up- and downsides of the business cycle has a number of advantages. Most importantly, fiscal shocks underscore the importance of policy trade-offs, because politicians are forced to make hard choices among competing priorities just as contending constituencies mobilize to defend their preferred policy outcome. Consistent with the social preferences and the behavior of actors in the tradables sector of wealthy nations, I expect citizens, and those in tradables in particular, in developing nations to recognize that there is a strong positive association among investments in human capital, productivity, profits, and wages. Indeed, Figure 4 provides preliminary evidence that trade openness has divergent effects on the two big categories of social spending. The graph shows the predicted values of human capital and social security spending derived from simple bivariate regressions of the spending categories on the size of the tradable sector. The results are suggestive, with human capital spending increasing as trade dependence mounts and social spending doing the opposite.

Recognition that this relationship holds in the long term, however, will conflict with tradables' interest in a stable currency. In contexts of negative output shocks, tradables are likely to prefer cuts in social spending as a means to limit the exchange rate volatility often associated with deficits in the developing world. In other words, the interests of tradables vis-à-vis social spending are conditioned by the income shocks associated with the business cycle. To measure income shocks, I follow standard practice in the economics literature by subtracting trend from real GDP, where trend GDP is calculated using a Hodrick-Prescott filter.[89] I then create a "positive shock" variable that takes on the value of the "shock" variable for positive deviations from trend and zero for negative values. Likewise, a "negative shock" variable takes on the value of the "shock" variable for negative deviations from trend and a zero for positive values. This allows for the separate estimation of responses to positive and negative shocks. Table 3 reports the results for five sets of models, a baseline model patterned after the work of Kaufman and Segura-

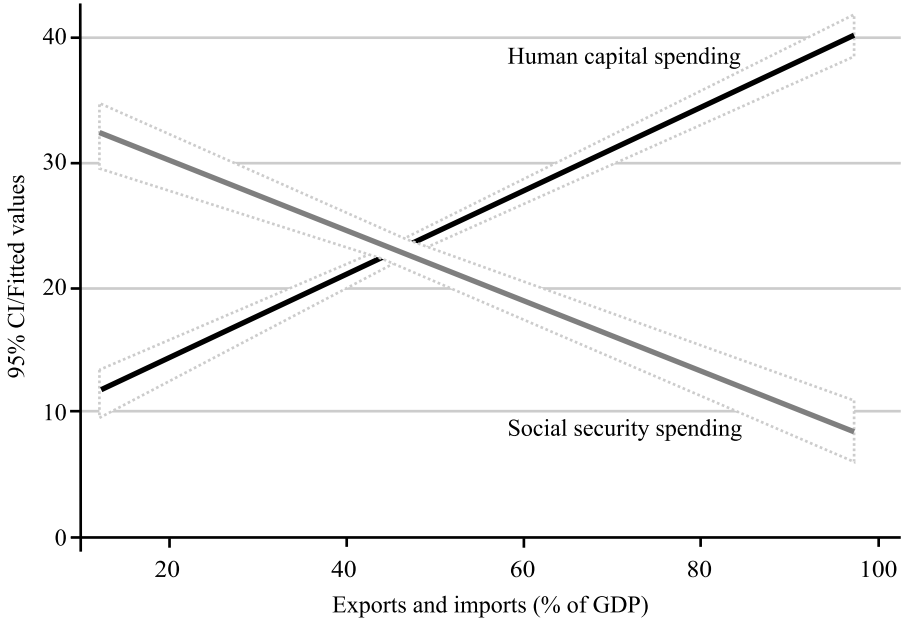
88. Hallerberg and Strauch 2002.
89. See Agénor, McDermott, and Prasad 2000 for a discussion of detrending techniques.

**TABLE 3.** *Responses of social spending to positive and negative shocks*

| *Variables* | *Basic model* | *Full model* | | *Negative shocks* | | *Positive shocks* | | *PLP model* |
|---|---|---|---|---|---|---|---|---|
| | *All social spending* | *Human capital* | *Social security* | *Human capital* | *Social security* | *Human capital* | *Social security* | *All social spending* |
| POSITIVE SHOCK | | .002 | −.002 | | | | | −.001 |
| | | (.002) | (.003) | | | | | (.00) |
| NEGATIVE SHOCK | | −.003** | −.003 | | | | | −.001* |
| | | (.002) | (.002) | | | | | (.00) |
| TRADE | −.09*** | −.04 | −.10*** | −.08** | −.14*** | −.003 | −.11*** | −.24*** |
| | (.03) | (.03) | (.02) | (.04) | (.04) | (.04) | (.03) | (.04) |
| D. TRADE | −.14*** | −.05 | −.11*** | −.17*** | −.11** | .12** | −.11** | −.25*** |
| | (.05) | (.04) | (.03) | (.04) | (.04) | (.06) | (.05) | (.04) |
| CAPITAL ACCOUNT | .58** | −.09 | .38* | .41** | .30 | −.65** | .57* | .68*** |
| | (.27) | (.22) | (.22) | (.21) | (.27) | (.31) | (.33) | (.27) |
| D. CAPITAL ACCOUNT | .36 | .45 | .10 | 1.19*** | .48 | −.27 | −.13 | .53 |
| | (.34) | (.36) | (.29) | (.30) | (.44) | (.46) | (.40) | (.42) |
| LEFT VOTE | −.06 | −.01 | −.06 | .03 | −.09 | −.09* | −.11* | −.02 |
| | (.05) | (.03) | (.05) | (.04) | (.07) | (.05) | (.06) | (.06) |
| D. LEFT VOTE | −.09 | .00 | −.04 | −.03 | −.01 | −.09* | −.05 | −.08 |
| | (.07) | (.03) | (.06) | (.08) | (.07) | (.05) | (.07) | (.07) |
| DEMOCRACY | −.01 | .21*** | −.02 | .09 | −.14 | .24*** | .08 | .21* |
| | (.07) | (.08) | (.06) | (.10) | (.10) | (.09) | (.08) | (.07) |
| D. DEMOCRACY | −.10 | .11 | −.09 | −.08 | .05 | .26*** | −.04 | .06 |
| | (.09) | (.08) | (.08) | (.23) | (.35) | (.10) | (.09) | (.07) |
| PARTY FRAGMENT | .61* | −.29 | .49 | −.38 | −.23 | .14 | .71* | .54 |
| | (.32) | (.28) | (.31) | (.37) | (.41) | (.37) | (.40) | (.45) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| POPULATION > AGE 65 | 1.03 | −1.90* | 1.17 | −4.16*** | 4.93** | −1.55 | 1.60 | −5.05*** |
| | (1.06) | (1.04) | (.99) | (1.44) | (2.17) | (1.19) | (1.40) | (1.78) |
| GDP PER CAP (LOGGED) | −1.78 | 2.53 | −3.54 | 9.18 | −11.55** | 1.69 | −5.85 | .66 |
| | (2.88) | (2.00) | (2.43) | (7.57) | (5.03) | (3.12) | (3.80) | (2.52) |
| TOTAL SPENDING | −.01 | −.24*** | −.06 | −.40*** | −.14* | −.17** | −.00 | −.15* |
| | (.06) | (.07) | (.05) | (.10) | (.08) | (.09) | (.07) | (.08) |
| D. TOTAL SPENDING | −.29*** | −.49*** | −.31*** | −.73*** | −.21* | −.22* | −.30*** | −.30*** |
| | (.09) | (.08) | (.08) | (.08) | (.12) | (.12) | (.11) | (.01) |
| UNION STRENGTH | −.20 | −.03 | −.26** | .05 | −.18 | −.11 | −.17 | −.78*** |
| | (.13) | (.14) | (.11) | (.14) | (.15) | (.17) | (.13) | (.19) |
| POTENTIAL LABOR POWER | | | | | | | | 2.29** |
| | | | | | | | | (.63) |
| OUTPUT GAP | −4.92 | | | −9.51 | −8.74 | 10.27** | 1.55 | |
| | (4.38) | | | (6.84) | (10.11) | (4.78) | (4.81) | |
| LAGGED LEVEL OF DV | −.36*** | −.50*** | −.39*** | −.43*** | −.44*** | −.55*** | −.43*** | −.40*** |
| | (.07) | (.10) | (.06) | (.11) | (.09) | (.11) | (.07) | (.07) |
| $R^2$ | .39 | .43 | .42 | .66 | .60 | .56 | .55 | .50 |
| $N$ | 184 | 198 | 188 | 82 | 77 | 116 | 111 | 145 |

*Note:* Shaded area highlights key results. Dependent variable is the first difference in the budget item as a percentage of total spending. The "Basic Model" builds on that in Kaufman and Segura-Ubiergo 2001. Shocks are measured as positive and negative deviations from trend GDP per capita, where trend GDP is measured using an Hodrick-Prescott filter. Results for decade dummies are excluded from the table. Numbers in parentheses are panel-corrected standard errors. D = differenced. PLP = potential labor power.
* significant at .10; ** significant at .05; ***significant at .01




*Note:* The bold and gray lines represent the predicted values of social security and human capital spending, respectively, as a share of total spending based on a linear regression of each variable on trade (exports plus imports/GDP) for a sample of twelve Latin American nations between 1970 and 2000. N = 293 for human capital spending and 286 for social security spending. The shaded areas represent 95 percent confidence intervals.

**FIGURE 4.** *Predicted value of human capital and social security spending as a function of trade openness in Latin America.*

Ubiergo,[90] one in which the shock variables are included as predictors of spending priorities, two others in which models are estimated separately for positive and negative shocks, and a final model that uses an alternative measure of labor strength. The positive and negative "shock" models allow me to test Hypothesis 4, namely, that trade openness and the interests of tradable sectors vis-à-vis social spending are conditioned by the business cycle.

The most relevant independent variable in the models is that for trade, measured in the customary manner, which should take on a positive coefficient for human capital spending during economic expansions and a negative one during recessions.[91] I expect it to have a negative coefficient in all social security models. The models also include several variables that reflect recent work on the subject and build on the models of Kaufman and Segura-Ubiergo by including capital

90. Kaufman and Segura-Ubiergo 2001.
91. The measure is imports + exports as a share of GDP.

account openness, the electoral strength of the left-wing, regime type (labeled DEMOCRACY), the share of the population over age sixty-five, logged GDP per capita, the output gap, and total public spending as a share of GDP.[92] Capital account openness assesses the degree to which financial-sector actors might have preferences with regard to social spending retrenchment.[93] Given evidence that international markets are particularly threatening to leftist parties in the developing world, the electoral strength of the left-wing should be correlated with particularly sharp cuts in spending.[94] Each country-year's Polity score controls for the argument by Adserà and Boix and Brown and Hunter that authoritarian governments may be able to pursue open economic policies without compensating losers in a way that is common in democracies.[95] The models also add two measures that the comparative politics literature suggest are likely to be important. First, a measure of labor strength controls for the strong finding in the OECD context that powerful unions are associated with increased welfare effort.[96] Given the organized interests that support social security and the lack thereof in support of health and education, high levels of labor strength should result in deeper cuts in education and health and acyclical social security spending. Second, a measure of party system fragmentation tests the influential argument of Haggard and Kaufman and others that fragmented party systems present a large number of veto points likely to obstruct retrenching spending of any sort.[97] Finally, consistent with standard practice in cross-national research on OECD welfare states, I also include country and time-specific dummies to control for fixed effects.[98]

Given the analytical importance of policy trade-offs and budgetary choices in times of stress, the dependent variables are defined as social spending (total, human capital, or social security spending) as a percentage of total spending.[99] Such a measure directly gauges the priorities policymakers place on different portions of the budget.[100] Because I am interested in changes in social spending, I use the same approach as in Kaufman and Segura-Ubiergo, who estimate error-correction

92. The population, per capita income, and output gap data are from the World Bank 2000a. Total public-sector spending is from the IMF's *Government Finance Statistics*, various years. The output gap is measured as the difference between changes in real per capita income and changes in trend per capita income as calculated using an Hodrick-Prescott filter.

93. The data is taken from Garrett, Brune, Guisinger, and Sorens 2001, who create a 9-point scale for annual capital account openness on the basis of the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions*. Capital account openness increases as the scale increases.

94. Remmer 2002. The measure is the share of the vote received by leftist parties as defined in Coppedge n.d.

95. See Adserà and Boix 2002; and Brown and Hunter 1999. Data from the Polity IV data set, Marshall and Jaggers 2005.

96. The measure is the percentage of the total labor force that is unionized. See Roberts and Wibbels 1999 for measurement details.

97. Haggard and Kaufman 1995.

98. Note that the time-specific dummies are for the decades of the 1970s and 1980s, which is consistent with Kaufman and Segura-Ubiergo 2001.

99. Data from the IMF, *Government Finance Statistics*, various years.

100. The results do not change if logged per capita spending is used in place of social spending as a percentage of total spending. The correlation between the two variables is 0.85.

models with dependent variables measured as first-differenced (that is, annual change) spending, the lagged level of the dependent variable, and most of the independent variables included in both lagged levels and first differences.[101] Given that some of the explanatory variables typically change slowly through time, such a specification allows for the distinction between long-term impacts on spending priorities (lagged levels) and short-term effects (first differences).[102] The model can be stated thus:

$$\Delta Y_{it} = \alpha_i + \omega_t + \beta 1(\Delta X_{it-1}) + \beta 2(X_{it-1}) + \beta 3(Y_{it-1}) + \varepsilon_{it}$$

where $Y$ is social spending as a share of total spending in country $i$ at time $t$; $X$ is a vector of independent variables described above; and $\alpha$ and $\omega$ are country and year dummies, respectively. The dependent variable and most independent variables are measured as yearly changes ($\Delta$). The latter are also introduced in lagged level ($t-1$). I estimate all models using ordinary least squares (OLS) with panel-corrected standard errors.[103]

The results, presented in Table 3, provide solid support for Hypotheses 3 and 4. For the sake of clarity, I will focus on those independent variables that involve tests of the hypotheses. I have highlighted the relevant cells in the table. Despite slight differences with their model,[104] column (1) basically replicates the findings of Kaufman and Segura-Ubiergo with regards to overall social spending.[105] Trade openness, both in levels and differences, has a negative impact on social spending. These basic results have informed the notion that globalization has a negative impact on social spending in the developing world.

Moving on to column (2), the full model disaggregates social spending into its two largest components and includes the measures for positive and negative output shocks. The results show human capital spending to be strongly procyclical, particularly with regards to negative output shocks. The coefficient suggests that a $100 per capita (approximately one standard deviation) negative shock to the economy results in a 0.3 percent cut in the share of total spending dedicated to human capital. Lest these small percentages seem underwhelming, in a country such as Mexico they translate into an annual cut of $208 million in response to the negative shock. Social security, on the other hand, is entirely acyclical.

101. Kaufman and Segura-Ubiergo 2001. Both first-difference and level variables are included when there is reason to believe that long-term trends and short-term changes might have substantively different impacts.

102. Greene 2003.

103. Beck and Katz 1995.

104. The slight differences are as follows. First, I use a continuous measure of leftist party strength rather than a dummy variable for popular governments. Second, I have added unionization and party system fragmentation measures. Third, I have dropped their exchange rate measure, which has little impact on any of their findings.

105. The only difference in the findings is that the coefficient on differenced capital account openness falls below significance in my model.

Extremely interesting are the results that bear on trade openness and the interests of the tradables sector. As the results from the full model make clear, once positive and negative output shocks are taken into account and social spending is disaggregated, there is no negative association between trade exposure and human capital investment—the coefficient is insignificant in both levels and differences. Consistent with Hypothesis 3, however, increased trade openness has a strong, significant, and negative effect on social security spending in both the short and long term. The interpretation of the lagged trade coefficient is slightly complicated by the error-correction modeling approach,[106] but a one standard deviation (20 percent) increase in long-term trade reliance (about the difference between Argentina and Bolivia in 2000) results in a 5 percent decrease in social security spending as a share of total spending. Likewise, a short-term 5 percent annual increase in trade dependence (or about a standard deviation), results in a further reduction of social security spending by half a percent of total spending.

Differentiating between positive and negative shocks tells a similar story on the relationship between tradable interests and social spending, with higher and increasing trade dependence resulting in relative cuts in social security spending in both good and bad times. The cuts range from 5.2 percent during positive shocks to 6.4 percent during negative shocks as long-term trade dependence increases by 20 percent. In both cases, social security cuts are exacerbated by short-term increases in trade dependence. To put these numbers in context, the average country in the sample spends 25 percent of the budget on social security; a 20 percent increase in long-term trade dependence would cut that to somewhere below 20 percent of the budget. Human capital expenditures, on the other hand, behave quite differently vis-à-vis trade dependence. Negative output shocks are closely associated with cuts in these types of social spending—the same 20 percent increase in trade discussed above results in a relative cut in human capital expenditures by 3.8 percent. This finding is entirely consistent with the expectation that concerns with currency stability will swamp any interest on the part of tradables in human capital investments. The evidence on the upside of the business cycle tells a different story—the coefficient on differenced trade is positive and significant for spending on human capital. In this case, a 5 percent short-term increase in trade dependence results in a 0.6 percent increase in the budget share devoted to human capital.[107] In a country such as Mexico, this amounts to a $400 million increase in spending. To my knowledge, this is the first time that increases in trade dependence have been associated with increased social effort of any kind in research strictly on the developing world. The finding helps recuperate Rodrik's argument regarding the complementarity between trade and redistributive spending (remember that social security spending, in contrast to that human capital is regres-

106. The impact of trade is calculated by dividing the regression coefficient by the coefficient of the lagged dependent variable and multiplying it by the discussed increase in trade dependence. See Kaufman and Segura-Ubiergo 2001, appendix 2.

107. The long-term impact, of course, will depend on whether such an increase in trade dependence becomes permanent.

sive),[108] though it seems clear that the interests of actors in the tradable sector are in part contingent on the broader macroeconomic environment.

The results on the control variables also yield a number of interesting findings. Although the findings with regards to capital account openness are somewhat inconsistent, they suggest that in the long-term more open capital accounts are associated with increased total social, human capital and social security spending under various conditions.[109] Though this relationship has been subject to contradictory theorizing, the results seem to support Quinn's suggestion that "government expenditures may serve as a substitute for international financial protection, that is it may partly compensate losers from financial liberalization."[110] As expected, political systems with strong left-wing representation are related to cuts in social spending, though only in good economic times. Likewise, strong left-wing representation is associated with cuts in social security in good economic times (that is, during positive shocks). Similarly, higher levels of unionization contribute to retrenchment in social security spending in the full model. These negative findings are consistent with case study research suggesting that governing left-wing coalitions, sometimes in conjunction with labor allies, allow politicians to retrench in ways that conservative parties cannot.[111] More democratic political processes as measured by the Polity indicator have a positive effect on human capital investments but not on more narrowly distributed social security benefits in the full model and in that for positive shocks. This finding is consistent with a growing body of research showing a positive association between globalization, democracy, and social outcomes[112] and a historic literature that emphasizes the affinity between liberal politics and spending policies that distribute benefits broadly.[113] As expected, large old-age populations contribute to reductions in human capital spending and increases in social security spending, particularly during negative output shocks, when fiscal resources accentuate distributive conflicts. Higher numbers of parties in the legislature and per capita income do not have regular, significant impacts on the findings.

Finally, the last column of Table 3 introduces a different measure of labor strength to explore a recently published argument by Rudra.[114] In that research, she finds a strong positive relationship between "potential labor power" (PLP) and social spending. Given the negative finding on my indicator of union strength, this apparent conflict is worth exploring. A close look at the two measures makes clear that there is no real conflict and that the two measures are getting at different aspects of labor strength. While PLP measures key features of labor market conditions,

108. Rodrik 1997.
109. The exception is in the positive shock model, where more open capital accounts have a significant, negative relationship with human capital spending.
110. Quinn 1997, 572.
111. Levitsky and Way 1998.
112. Adserà and Boix 2002.
113. Lindert 2001.
114. Rudra 2002.

my unionization measure more directly assesses the organizational capacity of labor itself. Indeed, the two measures are correlated at a scant 0.17. As such, I enter the two variables simultaneously in a model for total social spending. Note first that the introduction of PLP does not change the story with regards to the relationship between trade openness and overall social spending.[115] Second, given the ISI-era roots of most unions in Latin America and the potential for institutional strong labor unions to coincide with weak labor markets, it should not surprising that the two indicators have divergent effects on social policy. While a higher level of high-skill workers and a low level of surplus labor not surprisingly increases social spending (the PLP effect), unions—particularly during the era of market reforms—have focused on defending their parochial interests at the expense of broad social programs. Though not the chief focus of this article, these dual features of labor power warrant additional attention, particularly given the centrality of labor strength in traditional analyses of the welfare state.

All told, these findings present a compelling picture. When social spending is disaggregated into its two component parts, it seems that tradables have distinct interests vis-à-vis human capital and social security spending. While employees and managers in tradables both have reason to support productivity-improving spending on education and health, the opposite holds for social security. At the same time, however, the vulnerability of tradable sectors to exchange rate volatility in the developing world imposes a tighter constraint than in the developed world. As a result, tradables prefer short-term cuts to human capital when downturns in the business cycle threaten budget balance and currency stability. These findings contradict those for OECD countries. In separate, unreported analyses that estimate similar models for "core" countries, spending on human capital is entirely impervious to the business cycle.[116] Trade openness, moreover, has no impact on human capital spending in contexts of negative output shocks. OECD cases do, however, show the same relationship between trade and social security, with long-term trade dependence associated with reductions in social security spending. One reasonable interpretation may be that tradables throughout the world have a preference for redistributive spending that serves to increase productivity and wages. Only in the developing world, however, is that preference shaped by the business cycle.

## Conclusions

The study of developing nations' political economies over the past two decades has emphasized the importance of domestic politics. Consistent with this tendency, the embryonic work on the relationship between globalization and social

115. Nor does the introduction of PLP alter my fundamental findings if social spending is disaggregated into human capital and social security spending.

116. Results available from the author.

policy in the developing world has suggested that the negative relationship between globalization and social spending results from features of domestic politics. This research complements that stress on domestic politics by emphasizing the role of international markets in shaping macroeconomic contexts and the interests of domestic actors. In short, the international economy affects social spending in developing nations in three ways. First, increased trade exposure and foreign capital dependence contribute to significant business cycles. Second, sharp business cycles contribute to procyclical social spending by virtue of developing nations' limited access to international credit markets during economic downturns. Third and finally, the severity of the business cycle combined with a limited capacity to finance deficits accentuates the policy trade-offs of domestic actors in the tradables sector. While those actors are likely to favor spending on human capital in a manner consistent with evidence on the OECD, the threat to exchange rate stability during fiscal downturns encourages them to choose expenditure cuts over countercyclical social spending. In those countries where exposure to the global economy has gone hand in hand with economic diversification (a handful of East Asian cases), welfare states have continued to grow. In most cases, however, globalization has exacerbated the volatility that complicates countercyclical social spending.

Two big messages emerge from the results. First, it is important to think carefully about the international constraints that shape domestic politics. Political economy research on developing nations often implies a strong relationship between international factors and domestic politics, but the precise mechanisms are rarely explicit. Indeed, it is the failure to root analyses of the international economy in rigorous theoretical and empirical models that contributed to the turn away from dependency-type arguments. That the case, the theory, and evidence provided here echo Stallings's admonishment to rediscover the international explanations that were tossed aside as part of the marginalization of dependency theory.[117] In doing so, this research is consistent with a trend in economics (particularly work on international financial markets) that uses contemporary micro- and macroeconomic tools to explore the sharp international constraints on policymakers in developing nations. Exploring the causal links between exposure to the international economy and domestic decision making is exactly what researchers of globalization in the OECD have been doing for the past two decades. The temptation to take the explanations developed there and apply them to the developing world, however, can blind researchers to the broader constraints imposed by sharply divergent relationships with the global economy.

Second, it is also important to recognize that the interests of domestic actors vis-à-vis social spending are likely to be contingent on internationally inspired economic circumstances. In the models above, several of the domestic-level variables are significant. Yet, as emphasized with respect to the interests of tradables, the preferences of those actors are likely to be mediated by international eco-

117. Stallings 1992.

nomic constraints. Interests associated with trade are likely to oppose expensive, narrowly distributed social security systems, while being in favor of social spending that is more broadly distributed. Under tight macroeconomic conditions, however, tradables are likely to have a dominant interest in fiscal retrenchment at the expense of spending on human capital. Certainly more work needs to be done in understanding the relationship between the structure of dependence on the international economy and the policy priorities of a broad range of social actors in the developing world. Indeed, it would be tremendously useful to have more systematic data on the preferences of tradables than the qualitative and occasionally indirect evidence provided here. Tradables aside, given the centrality of union strength to much research on welfare states and nations' transitions to free market policies, future work should also aim to both collect the necessary data to expand the analysis above to a broader swath of the developing world and think systematically about the ways in which union density, labor market conditions, and partisan relations interact with global economic forces to shape policy outcomes.

The findings above also have important policy implications, particularly for the design of fiscal stabilization strategies. A couple of practical reforms could help limit the procyclicality of spending. First, governments should further develop their capacities to tax less income elastic sources. Most attractive in this regard are property taxes. Even income taxes, though also problematic, are less income elastic than the consumption taxes on which many nations have become very dependent. Second, given the cyclicality of revenues, governments should attempt to increase savings during upswings in the business cycle. OECD research shows that national governments respond to positive output shocks by increasing spending at a slower rate than revenues—this allows for savings that can be used during recessions. Latin American governments, in contrast, respond to increased revenues by increasing spending in lock-step, thus eliminating the potential for saving. The simplicity of these policy recommendations, however, belies their political complexity. Increasing property taxes on politically influential rural sectors and income taxes on the wealthy are notoriously difficult in a region that has struggled for 200 years to improve revenue collection. Likewise, saving during periods of strong growth is hard in a context where public spending of many sorts is too low and political pressures are high.

It would be easy to suggest, as the IMF and Inter-American Development Bank do, that nations should focus on limiting the economic volatility that they can control, namely, that induced by public policy (as opposed to international markets). Unfortunately, fiscal policy itself is quite volatile exactly because of the nature of many nations' position in the global economy. Though the nature of reliance on the global economy varies across developing nations, many nations, being price takers on international markets, reliant on a small number of exports, and dependent on external finance, are subject to a tremendously volatile macroeconomic environment. Given the demands of international markets, governments face strong incentives to balance their budget during downturns, which of course induces fiscal policy volatility. Thus rational politicians operating in response to rational inter-

national markets will cut social expenditures and exacerbate poverty during recessions, despite widespread recognition of the long-term negative social, economic, and political effects of doing so.

The implications for human well-being are not promising. Currently, 50.7 percent of Latin America's population lives in poverty; 25 percent of its citizens live in extreme poverty.[118] The United Nations (UN) Comisión Económica Para América Latina (CEPAL) reports that "the most recent poverty and indigence estimates available . . . [show] that the region's poverty levels have not decreased since 1997."[119] My argument suggests that the explanation for the stagnation is in part a result of social spending cuts associated with the international economic volatility that began with the East Asian financial crisis and continued with the global economic recession of recent years—factors external to most of the region's policy levers. That social security spending in Latin America is less subject to internationally inspired cyclical shocks is not terribly encouraging because its benefits are regressive. In contrast, spending on health and education (itself plagued with problems) is progressive. In fact, social spending of this sort is one of two major factors influencing poverty levels across the region (the other is changing relative prices).[120] That this kind of spending is subject to serious retrenchment during recessions is no small part of the monumental equity challenge facing the region. Indeed, even if the general trend across the developing world is toward slightly higher per capita spending on health and education, the volatility of that spending represents a serious threat to well-being as well as the political consensus in favor of sustaining open markets.

Finally, these findings underscore the warning of former IMF managing director Jacques de Larosiére, who suggested that "the extent to which adjustment is compatible with growth and with an improvement in living standards depends in large part on what *form* that adjustment takes. . . . Adjustment that pays attention to the health, nutrition and educational requirements of the most vulnerable groups is going to protect the human condition better than adjustment which ignores them. This means that authorities will have to be concerned, not only with *if* they close the fiscal deficit but also with *how* they do so."[121] Rodrik and others have recognized that markets in OECD nations are socially embedded and that social spending has served as a crucial linchpin in maintaining public support for economic openness.[122] That integration into the global economy seems to have important social costs in much of the developing world bodes ill for the sustainability of the current development model and probably helps explain the wave of recently elected governments in Latin America and beyond that are intent on rethinking the economic status quo.

118. Inter-American Development Bank 2005.
119. CEPAL 2003.
120. Forty-two percent of such spending is received by the poor. See CEPAL 2000.
121. Cornia, Jolly, and Stewart 1987, 2. Emphasis in the original.
122. Rodrik 1997 and 1999.

## Appendix

Nations included in the analysis reported in Table 1: Argentina, Australia, Bangladesh, Barbados, Belgium, Botswana, Brazil, Burkina Faso, Burundi, Cameroon, Canada, Chile, Colombia, Costa Rica, Cyprus, Denmark, Dominican Republic, Ecuador, Egypt, Fiji, Ghana, Hungary, India, Iran, Israel, Jamaica, Japan, Jordan, Kenya, South Korea, Lesotho, Madagascar, Malawi, Mauritius, Mexico, Morocco, New Zealand, Norway, Pakistan, Panama, Paraguay, Peru, Philippines, Sierra Leone, Singapore, South Africa, Sri Lanka, Syria, Thailand, Tunisia, Turkey, Uganda, U.S., Uruguay, Venezuela, Zimbabwe.

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