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Open borders, open regimes? Testing causal direction between globalization and democracy, 1970 - 2000

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Ross E. Burkhart, Indra de Soysa

Open Borders, Open Regimes?

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Abstract

Pessimists on globalization claim that liberalization of markets allows multinational corporations free reign, constraining local autonomy and precipitating a ‘race to the bottom’ that will endanger recent democratic gains. The optimists see the end of dirigiste economic models as favorable for political liberalization, envisioning foreign direct investment (FDI) as one way in which to transfer wealth to poor societies, leading to democracy. The most recent literature assesses this debate using FDI flows. We believe that FDI stocks is a superior variable, and captures the underlying idea of “saturation point” better. We create models of democracy and use estimates of FDI stock for 107-120 countries over the 1970–2000 time period as a principal control variable. We find that FDI Granger-causes democracy to a greater degree than the other way around. Cross-sectional time-series results show FDI’s effect on democracy to be robust, independent of trade, income, urbanization, and historical and institutional factors. Trade is positively, but weakly, associated with democracy as well. It seems that poor countries stand to gain much from interdependence with the rich. The problem with globalization may be that it has not gone far enough.
1 Introduction

Freedom of trade and industry created a network of divisive competitive relationships.... The market replaced the hierarchical pyramid of medieval and absolutist feudalism. And it was in this unity-division of the national state and market that the process of democratization originated.

The debate on globalization has produced two distinct camps—the pessimists, who view spreading global capitalism as a threat to development and democracy, and the optimists, who see the end of dirigiste, state-led economics as favorable for economic and political freedom. The optimists place great faith in the high correlation between expanded free markets and democratized polities. The pessimists argue that global capitalism gives powerful multinational companies in rich countries and the pro-market economic elite in poor countries free reign, emasculating state autonomy and allowing capital to subvert democracy. International policy advocates higher levels of trade and foreign direct investment (FDI) in order to stabilize economies and promote democracy, paying little heed to arguments that suggest that capitalism and democracy do not mix.

The questions of whether and how economic liberalization impacts democracy are not just academic. They also have significant policy implications in an age when developing countries are struggling with ‘dual transitions’—adjustment to the market and to democracy.

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1 We appreciate comments received from Erich Weede and colleagues at ZEF and Boise State University.
5 One prescient argument is that liberalization and structural adjustment in general will cause lower public spending on social goods, such as health and education, undermining social capital and democratic development. Much of this discussion has remained impressionistic and anecdotal.
Open Borders, Open Regimes? Testing Causal Direction between
Globalization and Democracy, 1970–2000

To contribute our views on these debates, we test the causal direction between trade and FDI and democracy using both Granger causality techniques and cross-sectional, time-series models with the latest estimates of FDI stock now available for a large number of countries, spanning roughly three decades.8

In doing so, we seek to engage the most recent literature that addresses in statistical fashion the extent to which the causal link from globalization to democracy exists. We endeavor to advance the literature with our presentation of untried Granger causality tests and our use of FDI stock as a more valid indicator of globalization, in contrast to the usual use of FDI flow as an indicator of globalization. Quan Li and Rafael Reuveny find that while flows of FDI have short term positive effects, they also exhibit long term negative effects.9 However, the best measure of the long term effects of FDI is FDI stock. A long and illustrious discussion on what captures dependency on the world capitalist system reached a consensus that it was accumulated stocks of FDI reflecting the long-term effects, and not short-term flows, that best illustrate how poor countries come to be dominated by MNCs.10 While we do not speculate here on what may be driving the long term negative effects from flow, we seek to test the effects of FDI stock over GDP on democracy, the most accepted way of gauging the influence of foreigners in an economy, particularly their long term influence relative to domestic actors.

The end of communism transformed the world along two dimensions: economic liberalization and democratization.11 Some claim this transformation is evidence of the rebirth of liberalism, the triumph of market democracy, and its emergence as an unrivalled and superior system of socio-economic organization.12 Limited government involvement in the economy enhances the prospects of democracy by allowing alternative nodes of power within society based on economic criteria—such as stronger protection of private property rights and the development of private bases of taxation that leads to calls for representation. Contrarily, heavy state involvement in the economy is seen as dangerous to ‘freedom’ as it concentrates power in the hands of vested interests and destroys social pluralism.13 Economic competition goes hand in hand with political competition. The competition creates an incentive to be efficient and it enhances democratic political institutions.

8 The estimates of FDI stock spanning the years 1970–2000 are downloadable at www.zef.de. The entire data set used in the paper will be made available at www.zef.de.
On the other hand, some see market capitalism as providing inordinate power to narrow interests who have an incentive to subvert democracy and markets, destroying social equality, communitarian values and pluralism.\textsuperscript{14} According to one of the foremost theorists on democracy, Robert Dahl, capitalism and democracy exist in a kind of `antagonistic symbiosis.'\textsuperscript{15} This insight extends into the debate on globalization and democracy. Rodrik suggests that the reliance on liberalization, particularly on free trade, undermines the capacities of states to cushion society from the vagaries of a global free market, destroying the bases of `social consensus,' or in other words, of democracy, which will further undermine chances for development.\textsuperscript{16} Such criticism coupled with the violent anti-globalization demonstrations on the streets in many Western capitals has led to several policy changes that caution against unfettered globalization, and thus trade and FDI (DFID 2000).\textsuperscript{17} Clearly, whether or not trade and FDI are compatible with democracy is a crucial empirical question. Answers to these questions bring into focus issues concerning globalization and earlier, concerns addressed by dependency/world system and modernization theories.\textsuperscript{18}

When Adam Smith criticized the mercantilist policy of his time, he argued that private enterprise leads to `an obvious and simple system of natural liberty that will establish itself of its own accord'.\textsuperscript{19} Early-nineteenth-century liberals (Benthamite liberals) reiterated the capitalist path to democracy. They wanted to limit government so as to increase economic opportunity for private actors and create political institutions within which they would express their interests. However, modern, mass democracy emerged as a threat to property, which raised ambiguities within liberal sentiments as to what `democracy’ really entails. Following the rise of homogenizing fascist and communist dictatorships in the early 20\textsuperscript{th} century, liberals reiterated the natural affinity between economic and political freedom. The classic orthodoxy expressed by Friedrich von Hayek and Milton Friedman posited economic freedom as a `necessary condition’ for political freedom.\textsuperscript{20} Scholarship on democratization supports the view that the growth of a middle class and the diffusion of power are favorable to democracy.\textsuperscript{21} Yet postwar theories of political development, particularly modernization and dependency theory, are spilt as to how countries exposed to international capitalist forces are likely to fare given all the

\textsuperscript{14} The recent fiasco involving Enron and Arthur Andersen and several other large corporations in the USA has surely strengthened these views.
ambiguities associated with whether or not internationalization is conducive to creating a
dynamic bourgeoisie under the present historical conditions of capitalism.²²

Modernization theory views international trade and investment as positive forces because
they promote specialization and create a complex division of labor, industrialization and
urbanization, and expand the bourgeois class—in other words, they increase social pluralism.
Dependency theory, on the other hand, expects the exact opposite, highlighting the ways in
which international trade and investment reinforce oligarchic interests and prevent the
emergence of a dynamic bourgeois, even helping to create underdevelopment and bureaucratic
authoritarianism.²³ In fact, the spectacular success of the Asian Tiger economies under
authoritarian rule gave much credence to the idea that democracy was a hindrance to material
progress, creating a large liberal bias against democracy that made it seem that international
capitalist forces preferred stability to the messy way in which democracy functioned in
practice.²⁴ Clearly, much ambiguity came to cloud the earlier statements about how economic
and political freedom ‘go together’.²⁵ Before examining the two paradigms in detail, we first
examine the basis on which the arguments relate to how democracy comes about, particularly the
central theme of social pluralism and countervailing power.

²² Those who see a positive role for market capitalism in promoting democracy among the early democratizers see it differently for the
developing countries, which apparently face the burdens of ‘dependent capitalism’, see Therborn, ‘The Rule of Capital and the Rise of
Democracy’.

1962); Fernando H. Cardoso and Enzo Faletto, Dependency and Development in Latin America (Berkeley, Calif.: University of California Press,
1979); Daniel Chirot, Social Change in the Twentieth Century (New York: Harcourt Brace Jovanovich, 1977); André Gunder Frank, Capitalism
and Underdevelopment in Latin America (New York: Monthly Review Press); Guillermo O’Donnell, Modernization and Bureaucratic

²⁴ Samuel P. Huntington, Political Order in Changing Societies (New Haven, Conn.: Yale University Press, 1968); Adam Przeworski, Michael
E. Alvarez, Antonio José Cheibub, and Fernando Limongi, Democracy and Development: Political Institutions and Well-Being in the World,

2 Democratization

The causes of democratization and the nature of what democracy really means and how it is measured are highly contested issues within the social sciences. The most widely accepted definition is Robert Dahl’s concept of ‘polyarchy,’ which is ‘democracy’ as the product of the degree of contestation among groups and individuals for political office and of popular participation. People should be allowed to choose freely among competing political leaders and programs, and democracy can be designated along a dimension that allows a high degree of both these factors. While the nature of democracy is a matter of degree, many espouse a minimalist definition whereby democracy is recognizable from other forms of regimes because it contains competitive elections and the participation of the citizenry in making decisions about who governs. Political liberalization, then, is the relinquishment of the reins of power by unelected groups or individuals so that the decision of who governs is subject to the popular will. The people continuously decide in a competitive process as to who will use state power for public ends.

Democratic theorists have generally emphasized the notion of countervailing power as the key to understanding what raises the cost of the monopoly of political power. As such, the issue of rising social pluralism, generally associated with the development of the bourgeoisie as a result of industrialization, has taken a prominent place. Theorists such as Robert Dahl, William Kornhauser, and Karl Wittfogel point out the importance of pluralistic society for balancing out interests and avoiding hegemony as vital for the emergence of democracy. Wittfogel argued that in hydraulic society, the source of despotism was the concentration of the means of production in the hands of a few, allowing the few to achieve total power, whereas the emergence of a multi-centered society based on a more complex division of labor made democracy possible. Of course, there are a plethora of reasons as to why and exactly under what conditions democracy has emerged in recent times, such as defeat in war, economic hardship, and changing international conditions.

However, much empirical evidence supports the general proposition that social conditions fostering pluralistic structures, where monopoly of power is limited, and where industrial development and economic prosperity exist, democracy exists. The pessimists and optimists disagree as to whether globalizing conditions are conducive to creating conditions that encourage democracy.

3 FDI, Trade & Democracy: Modernization vs. Dependency Theory

Early modernization theorists, particularly Daniel Lerner and Seymour Martin Lipset, postulated that poor countries would naturally adopt democracy as their tradition-bound societies emerged into the modern world with economic development (industrialization), urbanization, and rising literacy.\(^3^2\) Moreover, the flow of capital, technology, new ideas, and managerial expertise that the modern, western products and capital would transfer to tradition-bound poor societies was thought to be the ingredients for ‘take off’ into self-sustaining growth, and these very same ingredients would also be a modernizing force that would create the nascent middle classes (labor, small businesses, entrepreneurs, managers etc) needed to make democracy possible.\(^3^3\)

Industrialization and urbanization were seen to be essential for making citizens modern. According to Lerner, ‘cities produce the machine tools of modernization’ and Inkeles confirmed that ‘the factory can be a school—a school for modernization.’\(^3^4\) Moreover, FDI was thought to be a durable transmitter of modern values, particularly of meritocratic practices over patronial, clientelistic ones. The modern practices of multinational corporations (MNCs), it was argued, would shake up tradition-bound economies and boost industrialization—the ‘universal social solvent’.\(^3^5\) These theorists viewed the interaction of poor countries within the global capitalist system as a positive force, where the burden of tradition had to be overcome with new ways of thinking and acting in order to handle democracy—poor countries would become wealthier and more democratic given closer economic ties with rich countries because old habits were expected to change with the pressure of modernization.\(^3^6\)

In response to the failure of modernization and the reversal of democracy in much of the developing world, dependency theory suggested that the teleological, deterministic view of modernization theory was mistaken. These theorists argued that economic ties between the rich and poor were based on neocolonial mechanisms that perpetuated a system of ‘unequal

\(^3^2\) Daniel Lerner, *The Passing of Traditional Society: Modernizing the Middle East* (Glencoe, Ill.: Free Press, 1958); Lipset, ‘Social Requisites of Democracy: Economic Development and Political Legitimacy’.


\(^3^6\) Kobrin reports a positive effect between social modernization and an interactive term of FDI and industrialization, but no direct effect of FDI on social modernization. These data are old and the cross-national design prevents inferences about causality. However, his study is an excellent early example of systematically addressing the problem of FDI, industrialization, and modernization. Stephen J. Kobrin, ‘Foreign Direct Investment, Industrialization, and Social Change’, *Journal of Conflict Resolution*, 20 (1976), 497-522.
exchange’, creating underdevelopment, both economically and politically. The modern MNC was an exploitative entity that ventured abroad in search of monopoly profits, extracting more than it brought in. MNCs were the instruments of a capitalist world system that continued to be exploitative of poorer societies despite the end of formal empire. Softer theories of dependency, however, suggested that while some industrialization was possible for poor countries, the result was not the emergence of democracy, but new forms of authoritarianism. FDI did not create broad-based development but created enclave economies because ‘dependent development’ benefited a narrow elite. Heavy investment of MNCs and reliance on international trade promoted income inequality, creating reactionary classes within society, not a dynamic bourgeoisie committed to national development as envisioned by the optimistic pronouncements of modernization theory.  

Many of these theorists blamed foreign capital and trade for creating authoritarianism because they argued that MNCs and the dictates of the global capitalist system necessitated authoritarian conditions to facilitate exploitation, creating oligarchic structures, not pro-democratic ones. Cardoso and Faletto argued that ‘dependent development’ weakened national-popular coalitions, led to cooptation of local entrepreneurial elites, and promoted new coalitions of state and oligopolisitic interests that sought insulation from mass electoral politics. Some even saw FDI as directly exploiting their hosts. According to Bornschier and Chase-Dunn:

While the more ‘primitive’ forms of exploitation such as capitalist slavery, capitalist serfdom, and formal colonialism have disappeared, they have been replaced by ... the hierarchical organizational structures of the modern transnational corporation.

MNCs were accused of direct involvement in politics in the most insidious ways, preventing labor unions and fomenting coups and rebellions. Cold War history is of course illustrative, given the complicity of United Fruit Company in Guatemala, ITT in Chile, and oil and mining companies in many parts of Africa, the Middle East, and Asia. As some people

37 Baran, The Political Economy of Growth; Frank, Capitalism and Underdevelopment in Latin America.
39 Cardoso and Faletto, Dependency and Development in Latin America.
40 Bornschier and Chase-Dunn, Transnational Corporations and Underdevelopment, pp. 2-3.
41 While complicity of multinationals in coups d’état are well documented in some historical accounts, others provide examples of when the multinationals prevented movement towards autocracy. See Alfred Stupan, The State and Society: Pers in Comparative Perspective (Princeton, N.J.: Princeton University Press, 1978). Moreover, it is not clear whether it is that one or two corporations within an economy may collide (which is entirely plausible given the relative power of the MNC compared with a small host economy) for narrow aims, or whether indeed there is a systematic ‘structural bias’ from relying on FDI.
suggest, once powerful MNCs make a long-term commitment to a country, they become political actors so as to influence policy that allow monopolistic profit.\textsuperscript{42} MNCs kept dependent states weak, which prevented the strong institutional environment necessary for democracy.

Currently, the pessimists on globalization echo arguments implicit in these older theories of (under)development. They suggest that the conditions being imposed on weaker states by those who control capital are exploitative. They argue that since the line between what is domestic and international is becoming increasingly blurred, the poor will be left defenseless. Individuals and groups not conforming to the logic of globalization will have no champions, and democracy itself will be stunted. In other words, while state and individual sovereignty decrease, it is argued that ‘global capital’ will become master.\textsuperscript{43} Even the recent spread of democracy and the emphasis on the rule of law are seen to be processes by which the powerful countries and corporations ‘make the world safe’ for private and transnational capital at the expense of the majority of poor.\textsuperscript{44} Contrarily, others suggest that multinational corporations, which are sensitive to consumer demands in rich countries, are likelier to respect ‘human rights’ and support open political conditions out of self interest. Some recent evidence suggests that FDI is negatively associated with human rights violations controlling for other important factors. However, the question of FDI’s formal relationship to democracy remains open.\textsuperscript{45}

On the other hand, FDI and trade generally go together. This is particularly true for the 1980s and 1990s, when formerly closed economies opened up and were keen to attract FDI because of highly constrained opportunities for borrowing following the debt crises. In fact, for the 1970–2000 period of our 120 country dataset, we obtain a correlation of $r=.50$ between the ratio of trade to GDP and the stock of FDI and GDP. Therefore, the arguments about FDI and democracy are as valid as they are for trade, particularly with regards to its effects on economic growth and industrialization. John Stuart Mill observed that

\begin{quote}
‘the opening of foreign trade . . . sometimes works a sort of industrial revolution in a country whose resources were previously underdeveloped’.\textsuperscript{46}
\end{quote}

\begin{thebibliography}{9}
\bibitem{Armijo} Armijo, ‘Mixed Blessings’.
\bibitem{Willett} See Susan Willett, ‘Introduction: Globalisation and Insecurity’, \textit{IDS Bulletin}, 32, no. 2 (2001); Bornschier and Chase-Dunn reported that while flows of FDI were positive for growth, accumulated stock, or ‘penetration’ of MNCs led to slower growth. See Bornschier and Chase-Dunn, \textit{Transnational Corporations and Underdevelopment}. Others show how they misinterpret their results. Firebaugh, and de Soysa and Oneal, demonstrate how foreign capital’s contribution to growth is larger than domestic capital’s compared ‘dollar for dollar’ and that FDI tends to encourage domestic capital, not displace it. See Firebaugh, ‘Growth Effects of Foreign and Domestic Investment’; de Soysa and Oneal, ‘Boon or Bane? Reassessing the Productivity of Foreign Direct Investment’.
\end{thebibliography}
While there is much evidence today to suggest that freer trade does indeed create higher economic growth, the exact links of the direction of causality from trade to democracy and vice versa are still quite ambiguous. Many find that higher trade to GDP ratios are correlated with lower levels of corruption. The trade to GDP ratio is one indicator of institutional development, but corruption does not proxy well for democracy per se—consider the recent removal of elected leaders from office in the Philippines and Pakistan because of widespread corruption. Besides, the direction of causality may very well be reversed—less corruption causes increases in trade. In general, liberals expect free trade to promote competition and liberal norms that promote democracy. According to this perspective, free trade promotes democracy by ‘intensifying economic competition, reducing the opportunities for corruption . . . and socializing actors into the predominantly Western norms of the international economy.’

Still others make explicit links from political freedom to higher trade liberalization. Verdier traces this line of reasoning ‘back to Kant, Bastiat, and the British radicals, who believed that republics . . . were more likely to engage in trade than absolute monarchies.’ Some explain the ‘rush to free trade’ as resulting from the recent wave of democratization. Since free trade benefits larger segments of the population, democracy encourages free trade by constraining rent-seeking, the monopoly profits of vested interests. Recently, Mansfield, Milner, and Rosendorff provide a rational choice-based link to democracy’s direct causal effect on free trade. They explain the choice to engage in free trade as a function of voter desire to have low-cost, high-quality goods that come with free trade, as opposed to the scenario of powerful interest groups who resist increased competition by currying the favor of an autocrat. Democratic politicians must listen to voters in order to maximize their chances of reelection. The establishment of democracy increases the likelihood that free trade increases.

The case of causal direction is not clear cut, since it is widely believed that adjustment to free market conditions requires authoritarian regimes for suppressing dissent, even if temporarily, since the losers have strong incentives to scuttle reform.

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51 Milner and Kubota, ‘Why the Rush to Free Trade?’


The fact that many democratic nations including the United States practice trade restrictions means that trade does not at all times and places enjoy clear ‘majority’ support. Consider the debate in the US over NAFTA and the constant haggling between the major trading partners of the world. Moreover, rich country publics seem to have an enormous appetite for agricultural subsidies, despite the fact that agriculture is a minute part of most industrial economies. In fact, political economy models show that voting and lobbying activities can result in protection as well as liberalization. Whether or not democracy is more receptive to trade may depend heavily on factor proportions, where poor democracies may be more receptive to trade because they are labor-abundant. Regarding trade and democracy, just as with FDI, the question of direction of causality is an empirical one. We think the evidence is important for instructing global policies regarding the proper sequence for achieving democracy and economic prosperity in an age of globalization.

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54 Frey et al. surveyed over 1,500 economists for their views on trade and found that 81% of the U.S. economists agreed with the statement that ‘tariffs and quotas reduce general economic welfare.’ While 70% of German economists agreed, just 27% percent of French economists did. See B. Frey, W.W. Pommerrehne, F. Schneider, and G. Guy, ‘Consensus and Dissention Among Economists: An Empirical Inquiry’, American Economic Review, Papers and Proceedings, 74 (1984), 986-94. Disagreements are rife even within the economics community; see especially Srinivasan and Baghwati, ‘Outward Orientation and Development’. Policymakers are in a constant quandary balancing the needs of winners and losers in a situation that Bill Clinton referred to as a ‘three dimensional chess of trade’. Quoted in William Pfaff, ‘The Business of Business Isn’t Principally the Common Good’, International Herald Tribune, 26 January 2001.

55 Burtless, Lawrence, and Shapiro, Globophobia.


4 Variables, Data, and Methods

We employ a pooled cross-section, time-series dataset of 107 to 120 countries (listed in appendix), measured annually between the years 1970–2000. The data are unbalanced, meaning that there are missing data for some countries on some years. This is not a hindrance to model estimation. We first employ Granger causality tests to establish direction of causality between democracy and our globalization variables—trade and FDI—and then utilize a fuller model of democratization including relevant controls utilizing a pooled cross-section, time-series method to test the robustness of the relationship.

We measure openness to trade as the influence of imports and exports within the economy (imports+exports/GDP). The question is, does being dependent on trade hinder democratization? We focus on the reality of trade dependence and not the potential in terms of trade policy, since we are interested in identifying the impact of the structural effects that are crucial to globalization arguments. The data on trade to GDP ratios are taken from the Global Development Network (GDN) economic growth data set and are logged to the base 10 to correct for skewness.58

The influence of foreign capital within an economy can be gauged by new investments (flows) or the accumulated influence of stock. We use the accumulated stock measure for theoretical reasons concerning long-term effects. We are interested in the ‘lasting relationship’ between FDI and a host society. Since stock captures the ‘foothold’ of MNCs to a greater degree than do flows alone, we utilize this measure. The larger the ratio of stock to GDP, the greater the imprint of international actors (for good or evil) within an economy and it reflects a historical relationship better than does flow alone. Both trade and FDI proxy aspects of internationalization, or globalization, and they capture different dimensions of the debate on economic freedom and democracy as discussed above.

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The data on FDI stocks require some explanation. The United Nations publishes updated estimates of flows and stocks each year since 1980.\textsuperscript{59} We estimate stocks from 1970–1980 by subtracting flows reported by the World Bank, which are derived from IMF balance of payments statistics.\textsuperscript{60} In our efforts to update the data, we also discovered that for many countries, which the UN estimates stock by accumulating flows, the current dollar flows match stock exactly, an unlikely coincidence. Therefore, we simply use the UN’s estimate of stock in 1980 as a benchmark and add flows converted to constant dollars for estimating stock back to 1970 and forward to 2000. In this way, we apply the same method to all countries in constant dollars. Our stock estimates for 1990 and 1999 (two points in time for which the UN reports stock) are highly correlated with the UN’s reported figures ($r=.98$). Thus, our method of estimating stock yields figures almost identical to those of the United Nations.\textsuperscript{61} The GDP data are also taken from the GDN data set.

We use the Polity IV data as our measure of democracy.\textsuperscript{62} Polity scores democratic and authoritarian dimensions on five main criteria: competitiveness of political participation, regulation of political participation, competitiveness of the executive, openness of executive recruitment, and constraints on chief executive. While they are subjectively derived, they are ideal for our purposes given that almost all criteria, particularly those such as ‘competitiveness of political participation’ and ‘constraints on the chief executive’ gauge the degree to which patterns of political authority are oligarchic or egalitarian. We subtract the authoritarian values (AUTOC) from the democratic ones (DEMOC), add 11 to the result, and arrive at a scale of democracy that stretches from 1 (highly authoritarian) to 21 (highly democratic).

We use Granger causality tests to establish the direction of the causal arrow. The test establishes whether or not past values of one variable have a statistically significant impact on present-day values of a second variable, controlling for past values of the second variable.\textsuperscript{63} If the past values of the first variable exhibit a statistically significant effect, then the first variable is said to have ‘Granger-caused’ the second variable. We test four possible causal directions:

1. trade Granger causes democracy
2. democracy Granger causes trade
3. FDI Granger causes democracy
4. democracy Granger causes FDI


\textsuperscript{60} World Bank, \textit{World Development Indicators CD-Rom} (Washington, D.C.: World Bank, 2001). We use World Bank flows as they are available electronically. These flows are correlated $r = 0.99$ with those reported by the UN. We use the accelerated depreciation method with a half-life of 10 years, which is consistent with others using similar data. See Firebaugh, \textit{Growth Effects of Foreign and Domestic Investment}.

\textsuperscript{61} We hasten to add that there are well-documented difficulties with the cross-national estimation of FDI stock. UNCTAD’s demarcation of the period during which stocks accumulate has changed over time. UNCTAD warns ‘that comparison of data among countries should be made bearing these limitations in mind.’ See UNCTAD, \textit{World Investment Report 1999} (New York: United Nations, 1999), p. 467.


To take the first hypothesized causal direction, trade Granger-causes democracy, if democracy is affected by past values of trade, controlling for past values of democracy. If trade’s effect is statistically significant, then trade is said to have ‘Granger caused’ democracy. Mathematically, the unrestricted model, denoted as:

$$\text{Democ}_t = a + b_1 \text{Trade}_{t-1} + b_2 \text{Democ}_{t-1} + b_3 \text{Democ}_{t-2} + \ldots + b_{\infty} \text{Democ}_{t-\infty} + \mu$$

where $b_{\infty}$ = parameters to be estimated; $\mu$ = error term, should reveal a statistically significant F-test for the addition of the $\text{Trade}_{t-1}$ variable, as opposed to the restricted model, denoted as:

$$\text{Democ}_t = a + b_1 \text{Democ}_{t-1} + b_2 \text{Democ}_{t-2} + \ldots + b_{\infty} \text{Democ}_{t-\infty} + \mu$$

where terms are defined as above. If trade flows are ‘Granger caused’ by democracy, then the unrestricted model, denoted as:

$$\text{Trade}_t = a + b_1 \text{Democ}_{t-1} + b_2 \text{Trade}_{t-1} + b_3 \text{Trade}_{t-2} + \ldots + b_{\infty} \text{Trade}_{t-\infty} + \mu$$

where $b_{\infty}$ = parameters to be estimated; $\mu$ = error term, should reveal a statistically significant F-test for the addition of the $\text{Democ}_{t-1}$ variable, as opposed to the restricted model, denoted as:

$$\text{Trade}_t = a + b_1 \text{Trade}_{t-1} + b_2 \text{Trade}_{t-2} + \ldots + b_{\infty} \text{Trade}_{t-\infty} + \mu$$

where the terms are defined as above. This method is repeated for testing the direction of causality between democracy and FDI.

A critical issue to resolve when using Granger causality tests is the number of lags of the dependent and independent variables used to perform the test. If there are too few lags, the test will be inconsistent, but if there are too many lags, the test will be inefficient. Several methods exist for determining the proper number of lags. The one that has been found to be the best performer by several researchers is the Final Prediction Error test, or FPE. Using the FPE method, we determined the following equations representing the optimal lag structure for the Granger causality tests.

$$\begin{align*}
\text{Democ}_t &= a + b_1 \text{Trade}_{t-1} + b_2 \text{Democ}_{t-1} + \mu \\
\text{Trade}_t &= a + b_{1\ldots3} \text{Democ}_{t-1\ldots t-3} + b_{4\ldots9} \text{Trade}_{t-1\ldots t-5} + \mu \\
\text{Democ}_t &= a + b_1 \text{FDI}_{t-1} + b_2 \text{Democ}_{t-1} + \mu \\
\text{FDI}_t &= a + b_{1\ldots9} \text{Democ}_{t-1\ldots t-9} + b_{10\ldots11} \text{FDI}_{t-1\ldots t-2} + \mu
\end{align*}$$

---

64 Burkhart and Lewis-Beck, ‘Comparative Democracy’, p. 907.
Table 1. Granger causality tests of FDI, trade, and democracy

<table>
<thead>
<tr>
<th>Potential Causal Relationship Tested</th>
<th>F-test for Significant Granger-Causal Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade → Democracy</td>
<td>137.45* (1,3635)</td>
</tr>
<tr>
<td>Democracy → Trade</td>
<td>105.78* (3,2998)</td>
</tr>
<tr>
<td>FDI → Democracy</td>
<td>1003.06* (1,3032)</td>
</tr>
<tr>
<td>Democracy → FDI</td>
<td>38.82* (2,2052)</td>
</tr>
</tbody>
</table>

Where * = statistical significance at .05 level, two-tailed test; figures in parentheses are the degrees of freedom for the F-test.

Table 1 reports the results from the Granger causality tests. As seen there, the causal effect of trade on democracy and democracy on trade are both statistically significant. Trade to GDP ratio Granger causes democracy and democracy leads to increasing trade. The long-run impact for both relationships is positive and statistically significant. The long-run effect of trade on democracy is .32 (standard error of .05, significant at .01), and the long-run effect of democracy on trade is .98 (standard error of .16, significant at .01). Since we cannot know whether any other factors are influencing democracy through trade because of the bivariate nature of these tests, the conclusions from these results must remain limited. We further test multivariate models below, but the fact that the long-run impacts are positive in the Granger tests calls into question propositions that see trade dependence as being inimical for democracy.

Table 1 shows that democracy and FDI also Granger cause each other. However, FDI shows a stronger Granger causal statistical impact on democracy than the other way around. Initially higher levels of FDI stocks to GDP are associated with democracy to a greater degree than past values of democracy are with itself. Moreover, the long-run impact for both directions of causality are positive and statistically significant. The long-run effect of FDI on democracy is 1.83 (standard error of .03, significant at .01), and the long-run effect of democracy on FDI is .99 (standard error of .01, significant at .01). These set of results too certainly do not show that globalization measured as the dependence on FDI creates the oligarchic structures associated with autocracy as dependency and world systems theorists predicted. Contrarily, these tests lend preliminary support for propositions that view FDI and trade dependence as being ‘progressive’. However, the robustness of any relationship between FDI and democracy is dependent on what factors are controlled for, given FDI and trade’s association with income and other ‘good things’ causally associated with democracy.

---

66 The long-run effect is the sum of the coefficients of the lagged terms of the causal variable divided by one minus the sum of the coefficients of the lagged terms of the variable that is being caused. The standard error of the long run effect is the sum of the standard errors of the coefficients of the lagged terms of the causal variable divided by one minus the sum of the standard errors of the coefficients of the lagged terms of the variable that is being caused.

67 Becker et al., Postimperialism; Kobrin, ‘Foreign Direct Investment, Industrialization, and Social Change’.
Having established directions of causality, we test the robustness of the association between our main independent variables and democracy by including other structural variables in a pooled cross-section, time-series framework. Since the connection between FDI, trade, and democracy is usually presented as an indirect one through economic development, industrialization, and urbanization (modernization), we control for these variables in addition to historical and cultural/institutional factors. We control for social fractionalization, colonial history, and oil dependence following important recent theoretical and empirical work on democratization. FDI and trade dependence together with democracy are also theoretically linked to historical factors such as colonial heritage and system of law. We do not expect to see much FDI, nor democracy, in the former socialistic systems, for example. Therefore, we control for legal systems, which are broken down into British, French, German, Socialist, and Scandinavian legal traditions, and these variables also roughly proxy for colonial heritage and institutional strength thought to be important for democracy.

Recent theoretical work on democracy highlights the problem of resource wealth. Political elites that have the luxury of ‘unearned income’ allow state institutions around taxation to wither, which invariably leads to weak states that are unable to cope with economic and social crises. When resources yield high rents, state leaders do not have the incentives to provide public goods that enhance the chances of democracy, but may use the state as personal patrimony. Resource rents may also help to create factional political states with a high degree of societal conflict, so that democracy is emasculated.

Ross investigated whether the problematic relationship between Islam and democracy was really the effect of oil wealth, and he found independent effects of oil and Islam on lower levels of democracy. Others too report a significant negative effect of Islam on democracy, even if Islamic societies tend to have less inequality. FDI and trade to GDP ratios are intimately related to oil wealth, so we control for

69 The dummy variable for Scandinavian legal system is left out to prevent collinearity.
70 There is a mountain of literature on oil rents, Islam, and the problem of the democratic deficit in the Middle East. See Ross, ‘Does Oil Hinder Democracy?’, for an excellent review. Recent studies on civil war have also highlighted the corrosive impact of resource wealth that could have indirect effects on democratization. See Paul Collier and Anke Hoeffler, ‘On the Economic Causes of Civil War’, Oxford Economic Papers, 50 (1998), 563-73; and Indra de Soysa, ‘The Resource Curse: Are Civil Wars Driven by Rapacity or Paucity?’, in Mats R. Berdal and David M. Malone, eds, GREED & GRIEVANCE: Economic Agendas in Civil War (Boulder, Colo.: Lynne Rienner, 2000).
71 These data are from GDN. Oil dependence is a discrete variable taking on the value 1 if petroleum exports are larger than 50% of GDP and 0 if not. Data on religion is percentage population that is Muslim, Catholic, Protestant, and other (La Porta et al. 1998). See La Porta et al., ‘The Quality of Government’. ‘Other’ is left out to avoid collinearity.
both oil wealth and religion in our models. Naturally, we capture many favorable aspects of
democratization by including the logged value of per capita income, which should capture all the
modernization/industrialization aspects beyond our liberal variables. The basic model is:

\[
\text{Democ} = \beta_0 + \beta_1(\text{GDP per capita}_i) + \beta_2(\text{FDI}_i) + \beta_3(\text{trade}_i) \\
+ \beta_4(\text{vector of legal systems}_i) + \beta_5(\text{vector of religions}_i) \\
+ \beta_6(\text{ethnolinguistic fractionalization}_i) + \beta_7(\text{Oil export dependence}) \\
+ \beta_8(\%\text{urban population}) + \mu_i + \epsilon_i
\]

We performed model estimation using the AR1(TSCS) procedure in the statistical
package TSP 4.4. This maximum likelihood estimation procedure controls for autocorrelation
through differencing each observation by the transformation \(V_t - \rho (V_{t-1})\) where \(V\) is the
observation and \(\rho\) is the autocorrelation coefficient (or the regression coefficient of the lagged
error term). Parameter estimates are consistent, efficient, and readily interpretable as they are in
the original metric of the variables in the model.
Table 2. The effects of FDI & trade on Democracy with Controls, 1970-2000

<table>
<thead>
<tr>
<th>Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDI stock / GDP (log)</td>
<td>.56***</td>
<td>.56**</td>
<td>.53***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.67)</td>
<td>(3.52)</td>
<td>(3.35)</td>
<td></td>
</tr>
<tr>
<td>Trade / GDP (log)</td>
<td></td>
<td>.10</td>
<td>.04</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.43)</td>
<td>(.13)</td>
<td>(.07)</td>
</tr>
<tr>
<td>GDP / pc (log)</td>
<td>1.41***</td>
<td>.93***</td>
<td>1.39***</td>
<td>1.41***</td>
</tr>
<tr>
<td></td>
<td>(3.92)</td>
<td>(2.71)</td>
<td>(3.85)</td>
<td>(3.94)</td>
</tr>
<tr>
<td>%Urban population</td>
<td>.05***</td>
<td>.07***</td>
<td>.047***</td>
<td>.044***</td>
</tr>
<tr>
<td></td>
<td>(2.58)</td>
<td>(4.35)</td>
<td>(2.62)</td>
<td>(2.43)</td>
</tr>
<tr>
<td>%Protestant population</td>
<td>.015</td>
<td>.032</td>
<td>.015</td>
<td>.016</td>
</tr>
<tr>
<td></td>
<td>(.63)</td>
<td>(1.46)</td>
<td>(.65)</td>
<td>(.67)</td>
</tr>
<tr>
<td>%Catholic population</td>
<td>-.006</td>
<td>-.009</td>
<td>-.009</td>
<td>-.001</td>
</tr>
<tr>
<td></td>
<td>(-.03)</td>
<td>(-.58)</td>
<td>(-.05)</td>
<td>(-.07)</td>
</tr>
<tr>
<td>%Muslim population</td>
<td>-.041***</td>
<td>-.034**</td>
<td>-.04***</td>
<td>-.039***</td>
</tr>
<tr>
<td></td>
<td>(-2.18)</td>
<td>(-1.96)</td>
<td>(-2.07)</td>
<td>(-2.11)</td>
</tr>
<tr>
<td>Ethnolinguistic fractionlization</td>
<td>-.65</td>
<td>-.54*</td>
<td>-.73**</td>
<td>-.82</td>
</tr>
<tr>
<td></td>
<td>(-.41)</td>
<td>(-.35)</td>
<td>(-.47)</td>
<td>(-.53)</td>
</tr>
<tr>
<td>British legal system</td>
<td>2.19**</td>
<td>3.05***</td>
<td>2.28**</td>
<td>2.29**</td>
</tr>
<tr>
<td></td>
<td>(2.23)</td>
<td>(3.14)</td>
<td>(2.34)</td>
<td>(2.37)</td>
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<td>Socialist legal system</td>
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<td>-1.32</td>
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<td></td>
<td>(.15)</td>
<td>(-.74)</td>
<td>(.15)</td>
<td>(.07)</td>
</tr>
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<td>German legal system</td>
<td>1.22</td>
<td>2.50</td>
<td>1.27</td>
<td>1.25</td>
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<tr>
<td></td>
<td>(.59)</td>
<td>(1.21)</td>
<td>(.61)</td>
<td>(.61)</td>
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<tr>
<td>Oil Dependent</td>
<td>-4.20***</td>
<td>-4.39***</td>
<td>-4.19***</td>
<td>-4.15***</td>
</tr>
<tr>
<td>Oil&gt;50% exports</td>
<td>(-2.69)</td>
<td>(-2.82)</td>
<td>(-2.67)</td>
<td>(-2.68)</td>
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<tr>
<td>Cold War Dummy</td>
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<td></td>
<td></td>
<td>-6.00***</td>
</tr>
<tr>
<td></td>
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<td>(-3.17)</td>
</tr>
<tr>
<td>constant</td>
<td>-.62</td>
<td>1.15</td>
<td>-.70</td>
<td>.21</td>
</tr>
<tr>
<td></td>
<td>(-.21)</td>
<td>(.41)</td>
<td>(-.23)</td>
<td>(.07)</td>
</tr>
<tr>
<td>Adj. R^2</td>
<td>.92</td>
<td>.92</td>
<td>.92</td>
<td>.92</td>
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<tr>
<td>D-W</td>
<td>1.58</td>
<td>1.59</td>
<td>1.57</td>
<td>1.58</td>
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<tr>
<td>Rho</td>
<td>.94</td>
<td>.94</td>
<td>.94</td>
<td>.94</td>
</tr>
<tr>
<td>N</td>
<td>2941</td>
<td>3329</td>
<td>2913</td>
<td>2913</td>
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<tr>
<td>States</td>
<td>107</td>
<td>120</td>
<td>107</td>
<td>107</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-6205.90</td>
<td>-7049.30</td>
<td>-6137.54</td>
<td>-6132.53</td>
</tr>
</tbody>
</table>

* t-ratios in parentheses

*** = statistical significance at the .001 level with a two-tailed test,
** = statistical significance at the .05 level with a two-tailed test,
* = statistical significance at the .10 level with a two-tailed test.
Adj. R^2 = adjusted R^2 statistic, D-W = Durbin-Watson statistic,
Rho = autocorrelation coefficient, N = number of cases in analysis,
States = number of states in analysis.
In Table 2, we present the results for the cross-section time series analyses where we control for level of income, degree of urbanization, and historic and social factors. We present results for equations with FDI and trade individually and together. Column 1 shows that FDI has a positive and statistically significant impact on democracy, despite several strongly statistically significant control variables. A percentage increase of FDI in GDP predicts a half-point increase in democracy on the twenty-point scale, *ceteris paribus*. This is hardly insignificant given that the mean score of democracy on the 21-point scale is only 12.8 points. Moreover, given that much of the theoretical discussion on FDI and democracy is supposed to be indirect, such as through urbanization and income, a direct effect of FDI net of these factors is impressive. This finding is also at variance with the results of tests presented by Li and Reuveny, who find that FDI flows are negatively related to democracy and further suggest that there are long-term negative effects from FDI on democracy. Given that our measure of FDI stocks is long-term by definition, we contend that our results point toward a better understanding of the long-term FDI impact on democracy.

The results of the control variables are interesting. GDP per capita is a strong predictor of democracy, a relatively uncontroversial result, which supports many previous empirical studies. The degree of urbanization seems to matter for democracy net of GDP per capita, with which it is highly correlated. Taken together, the results on FDI, GDP per capita, and urbanization support modernization theories. Of the cultural (religious) variables, we see that percentage of the population Protestant and percentage of the population Catholic fail to reach conventional levels of statistical significance, while the effect of Islam is negative and significant compared with others. These results, taken together with the results for the legal systems, suggest that the ‘Protestantism thesis’ is perhaps less relevant than a British colonial effect compared with others. The percentage of the population Islamic is negative and statistically significant as others also report. A standard deviation increase in the Muslim population decreases democracy by 1.5 points on the democracy scale. This effect is independent of oil dependence, supporting Ross’s as well as Fish’s conclusions about a democratic deficit among Muslim countries, albeit one that is not very large.

Ethnolinguistic fractionalization is negatively associated with democracy but statistically not significant. However, as seen later, it becomes significant when trade to GDP is controlled and its relationship to democracy seems to be sensitive to specification. As reported by others, being dependent on oil exports is extremely unfavorable for democracy. Being dependent on oil reduces the level of democracy by a little over 5 points on the 21-point scale of democracy.

---

75 FDI’s effect is considerably stronger without level of urbanization in the model, almost double the impact (results not shown).
78 Income’s effect is considerably stronger without urbanization in the model (results not shown).
79 We also note that FDI flows capture some aspects of extractive investment, such as within the oil industry, which clearly has negative effects on democracy. This helps to explain the Li and Reuveny finding of a negative FDI flow to democracy relationship.
Undoubtedly, oil and Islam’s effects on democracy drive the strong views on the Middle East and Central Asia’s democratic deficit, but it is interesting to keep in mind that similar views of Catholicism existed when Latin America and Southern Europe were predominantly authoritarian.

Column 2 leaves out FDI and tests trade dependence on democracy independently. Trade’s effect on democracy is positive but fails statistical significance at conventional levels.\textsuperscript{80} The control variables are little changed except that ethnolinguistic fractionalization is now negative and significant. In column 3, adding both FDI and trade in the model, FDI is still positive and significant statistically. Including a dummy variable for the Cold War era (dummy coded as 1 if year falls between 1970 and 1989 and 0 if after 1989) exhibits little effect on our primary variables of interest (Column 4). As expected, the Cold War era was unfavorable for democracy, but controlling for the Cold War effect, ethnolinguistic fractionalization loses statistical significance, which seems to suggest that it may be less of a factor in recent times. This issue deserves more rigorous analysis in future empirical work.

We have tested several different models, including size of the population and economic growth rates but the basic results in Table 2 remained unchanged. FDI to GDP remained robust to specification. Trade always has a positive effect on democracy and sometimes statistically significant, but at no time is it close to being negative as expected by pessimists. In fact, there is good reason to believe that trade’s indirect effect through urbanization and income is likely to be a positive one for democracy.

\textsuperscript{80} Trade’s effect is positive and statistically highly significant when urbanization and FDI are left out of the model. Moreover, including the gravity effect by adding the size of the population had little impact on the results in the table (results not shown).
5 Conclusions

We addressed the issue of globalization and democracy by visiting some earlier theoretical issues concerning the influence of international capitalist forces on democratization. Our crucial globalization variables are the stock of FDI (accumulated capital) to GDP and imports plus exports (total trade) to GDP. First we tested for direct causality using Granger causality analysis and found FDI and trade to have statistically significant causal effects on democracy and vice versa. FDI dependence is also robustly related to democracy in pooled cross-sectional time-series models controlling for other salient factors effecting democracy. Trade, which is correlated with FDI, is positively related to democracy but statistically significant only if FDI and urbanization are not in the model. Our results from the Granger causality tests and the cross-sectional time-series models taken together suggest that FDI and trade carry some direct and indirect benefits for poor countries.

These results call into question the heated debates on the structural effects of globalization on the democratic developmental prospects of poor countries. The way in which we operationalize our key variables, however, does not allow us to say conclusively that MNCs never try to subvert democratic processes to safeguard profits in particular situations. After all, it may take just one or two companies to influence politics in a poor country for good or ill. What we can say is that when FDI dominates an economy, or is structurally strong, it tends to have positive effects on the chances for democratization. These empirical results are exactly the opposite expected by structuralist arguments. In fact, accumulated stock to GDP probably indicates certain positive aspects of the domestic environment that encourages FDI and thereby a competitive market environment, which also encourages democracy. Moreover, greater competition among the MNCs themselves should lead to less corrupt outcomes as they would seek to minimize collusion out of self interest, calling for tighter controls and regulation of corrupt practices. The problems, as has often been the case, is the collusive tendencies between a government (ruling elite) and an MNC for extracting monopoly profits for themselves, which means that there should still be vigilance at the global level to hold MNCs and governments accountable, as the ‘global compact’ and George Soros’s recent initiative against MNC corruption seek to do.

While we can disprove the pessimistic expectations, further analysis is required to tease out the exact links from FDI to democracy. Our suspicions are that free markets and local global linkages create the pressure on governments and companies to live up to the expectations of global consumers. If this is truly the case, then globalization has perhaps not gone far enough yet, and as one book title suggests, the anti globalization, communitarian coalitions made up of
NGOs and other groups that see MNCs as all evil may in fact be ‘fighting the wrong enemy’. Moreover, while our measure of trade openness (the ratio of actual trade to GDP) is not directly a measure of liberal policy, but rather the extent of liberalization, perhaps trade and democracy’s reciprocal relationships are over-theorized relative to FDI’s relationship with democracy, a serious lacunae in the literature on globalization thus far. An additional promising angle is to analyze the impact of geostrategic variables such as civil and international conflict on both globalization and democracy. Clearly, future research should pay close attention to trade and FDI’s reciprocal role with regard to democracy.

---

## 6 Appendix

APPENDIX—LIST OF COUNTRIES (* are countries included in Model 2.2)

<table>
<thead>
<tr>
<th>Country</th>
<th>Country</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania*</td>
<td>Gabon</td>
<td>Nicaragua</td>
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<td>Algeria</td>
<td>Gambia</td>
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<td>Zimbabwe</td>
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The following papers have been published so far:

No. 1 Ulrike Grote, Arnab Basu, Diana Weinhold  
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