Do free markets imprison? The effects of economic liberalization and financial deregulation in developing countries during external economic booms and crises

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1 Introduction

Much debate surrounds the issue of economic liberalization, especially in relation to its place as part of a country's overall development and growth strategy. Discussion of economic liberalization, seen as the process in which the government defers control of the economy to the market, emerged in the early 1970s. Proponents claim it helps improve the functioning of financial systems by increasing the availability of funds through increased access to domestic and international capital markets and allowing cross-country risk diversification, which increases efficiency of capital allocation. The overall effect contributes to higher rates of economic growth.

However, others assert that evidence from the experiences of developing countries is not as compelling as the theory, pointing to a weak causal relationship between economic liberalization and growth as well as the problem of increased volatility giving way to financial fragility and a greater propensity to crisis. These authors support a more holistic approach to economic liberalization, which accounts for country context, arguing that crucial institutional reforms must first be made such that there remains a role for government mediation in developing countries until the economic climate of the country can support economic liberalization.

This paper will add to the debate by examining the effects of economic liberalization in developing countries in contrast to developed countries in the aftermath of external shocks, looking specifically at the 2008 Global Recession and the global economic boom of the 1990s. Though a plethora of literature exists on the chance of a financial crisis in the aftermath of a country's economic liberalization, none examine the extent to which the degree of country's economic liberalization shapes the externalities of external shocks on a country's financial system as this paper endeavors to do through empirical analyses. As economic liberalization remains a common prescription of multilateral banking institutions to developing countries, this study will assess the validity of this recommendation and carry implications for future policy-making for a developing country's growth and development strategy.

1.1 Defining Economic Liberalization

Despite the proliferation of the term, few encompassing definitions exist for economic liberalization. As endorsed by the United Nation, the definition used in this study of economic liberalization is: "the process, including government policies, that promote free trade, deregulation, elimination of subsidies, price controls, and rationing systems, and often, the downsizing or privatization of public services."[1] Encompassed in this process is trade liberalization, or the removal of trade barriers, and financial liberalization through domestic financial sector deregulation and the opening of the capital account. Overall, in economic liberalization, government policies are redirected to follow a non-interventionist approach to economic activity, relying mainly on market forces to allocate resources. However, in order for this process to actually achieve its potential, it should be accompanied by enabling conditions in the form of macroeconomic stability, guaranteeing property rights, and maintaining law and order to encourage both domestic and foreign investment. One of the first proponents of economic liberalization, McKinnon (1993), points out these initial conditions when noting the "optimal order of economic liberalization." Foremost, the central government's finances must be balanced through fiscal control of spending and a regularized tax system able to effectively collect taxes. Next, the domestic capital market should be opened up to encourage borrowing and lending at a steady non-zero real interest rates. After the successful financial liberalization of the domestic markets, it is then possible to gradually open up the liberalization of foreign exchanges.[2] Thus, as a process of loosening government control on the market and opening up control to private domestic and foreign markets, economic liberalization depends on following an order of initial conditions, which build upon each other.

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[1] United Nations Department of Economic (2010), *Rethinking Poverty: Report on the World*

[2] Ronald I. Mckinnon, (1993), *The Order of Economic Liberalization: Financial Control in the Transition to a Market Economy* (JHU Press).

1.2 Arguments for Economic Liberalization

The respective work of McKinnon (1973) and Shaw (1973) pointed to economic liberalization as a catalyst for higher savings. The McKinnon-Shaw hypothesis assumes that as controls on the economy are lifted through liberalization, its association with higher real interest rates would stimulate savings, which encompasses an underlying assumption that savings is responsive to interest rates and more broadly that savings is a key determinant of growth. With the real interest rate adjusting to the equilibrium level, low-yielding investment projects would be eliminated, enhancing the overall efficiency of investment projects. These savings rates would then finance a higher level of investment and thus, higher growth.[3] Subsequent studies support the positive link between financial liberalization and nominal interest rates. Others argue for the positive linkages created by economic liberalization through the promotion of transparency and accountability, which reduces adverse selection and moral hazard while alleviating liquidity problems in the market.[4] Overall, the proponents of economic liberalization argue that global capital markets allocate savings the most efficiently irrespective of location.

1.3 Arguments against Economic Liberalization

Despite this prevailing theory, the experiences of developing countries who have undertaken the process of liberalization over the past fifty years fail to support the link between economic liberalization and growth concretely. Besides evidence that questions the fundamental assumptions, such as that savings is responsive to interest rates, of the Mckinnon-Shaw hypothesis, a growing body of literature reveals the increased risk associated with liberalization for developing countries that contributes to financial fragility and a greater propensity to crisis, as well as undesirable deflationary effects.

Foremost, many studies question the underlying assumptions of the McKinnon-Shaw hypothesis, pointing to weak or contradictory evidence. Campbell and Mankiw (1990) challenge the implicit assumption based on homogenous households with free access to capital markets

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[3] Ronald I. McKinnon, (1973). Money and Capital in Economic Development, (Washington: The Brookings Institution); Edward Shaw, (1973). Financial Deepening in Economic Development, (New York: Oxford University Press).

[4] Stulz, (1999). "Globalization of Capital Markets and the Cost of Capital." Journal of Applied Corporate Finance Vol. 12(3), pp. 8-25. ; Mishkin, (2001). "Financial Policies and the Prevention of Financial Crises in Emerging Market Countries." NBER working paper No. 8087.

within the domestic economy by noting that for liquidity constrained households commonly seen in developing countries, consumption decisions are entirely determined by current income.[5] Furthermore, many studies find a lack of empirical evidence to link real interest rates to savings, particularly in developing countries.[6] In fact, an extensive review of the literature on the relationship between trade barriers and economic growth conducted by Rodriguez and Rodrik (2001) which focused on the methods used by the studies finds that the strong positive results arise either from obvious empirical misspecification in the variables used in the analysis or the use of measures of openness that are sensitive to other policy and institutional variables with independent effects on growth.[7] They reveal a tendency in the literature to overstate the systematic evidence in favor of liberalization at the cost of other institutional reforms with potentially greater rewards.

Empirical studies tend to highlight the contrasting effects of liberalization on growth between developing and developed countries. Studies propose that the strong positive relationship between liberalization and growth witnessed in developed countries, may be contingent on the quality of institutions in the country.[8] As institutional reforms are rarely implemented prior to liberalization, developing countries are instead more prone to experience increased volatility instead of growth, which is inimical to development.[9] Instead, it is argued

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[5]John Y. Campbell and N. Gregory Mankiw (1990), "Permanent Income, Current Income and Consumption," Journal of Business and Economic Statistics, 8(3), 265-79.

[6] Giovannini, Alberto, (1985)."Saving and the Rate of Interest in LDCs," Journal of Development Economics, Vol. 18, pp. 197-217. ; Ostry, Jonathan D., and Carmen M. Reinhart, 1992."Private Saving and Terms of Trade Shocks: Evidence from Developing Countries," Staff Papers, International Monetary Fund, Vol. 39, pp. 495-517. ; Reinhart, Carmen M. and Carlos A. Végh, 1995. "Intertemporal Consumption Substitution and Inflation Stabilization: An Empirical Investigation," University of Maryland Working Papers in International Economics No. 3. ; Bandiera, G. Caprio, P. Honohan, and Schiantarelli (2000). "Does Financial Reform Raise or Reduce Saving?, Review of Economics and Statistics, May, 82(2): 239-263. ; Loayza N., K. Schmidt-Hebbel, and L. Serven (2000). "What Drives Private Saving Across the World? Review of Economics and Statistics, May 2000, 82(2) :165-181.

[7] Francisco Rodriguez and Dani Rodrik, (2001). "Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence," in *NBER Macroeconomics Annual 2000, Volume 15*, 261–338.

[8] Kaminsky, Graciela and Sergio Schmukler (2002).“ Short-Run Pain, Long-Run Gain:The Effects of Financial Liberalization." ;Seema Hafeez, (2003). *The Efficacy of Regulation in Developing Countries*, UN.

[9]Jayati Ghosh, (2005). *The Economic and Social Effects of Financial Liberalization: A Primer for Developing Countries*, UN. ; Huw Pill and Mahmood Pradhan, (1997). "Financial

that for liberalization to be effective, it must be set within a comprehensive regulatory framework and environment of macroeconomic stability, such that until these conditions exist, governments can play an effective regulatory role in financial activity.[10] The overwhelming positive effects of liberalization on growth are less convincing when disaggregating the experiences of developed and developing countries and when accounting for the presence or absence of strong and inclusive institutions.

1.4 The Relationship between Economic Liberalization and Financial Crises

Opponents of unrestricted liberalization emphasize the incidence of financial crises within developing countries after the liberalization of the economy. Generations of currency crisis models seek explanations for this empirical fact and point to weak economic foundations, such as regulations and rules of law, that prompt investors to pull resources from the country; implicit guarantees by domestic banks that encourage an unsustainable influx of capital that eventually leads to asset price bubbles, as well as overall "fragile financial institutions."[11] Though most studies agree that liberalization leads to excessive financial booms and busts in the immediate aftermath of its implementation, the effect is more prominent in emerging economies.[12]

This study hopes to examine whether the destabilizing effects of liberalization in respect to financial crises extend beyond domestic crises, as noted above, to include increased vulnerability to external shocks, either booms or busts. A historical comparison of the recent economic recession to earlier international financial crises and recession distinguishes the recent recession for being the less costly than historical evidence would have predicted. However, the

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Liberalization in Africa and Asia," *Finance and Development* 34: 7–10. ; *Stiglitz (2002). "Capital market liberalization and exchange rate regimes: risk without reward."*

[10] Stiglitz, J., (1994). "Economic Growth Revisited," Industrial and Corporate Change, 3(1), pp. 65-110. ; Daniel Daianu and Radu Vranceanu, (2002). "Opening the Capital Account of Transition Economies: How Much and How Fast."

[11] Krugman, Paul (1979). " A model of Balance-of –Payments Crises, " Journal of Money, Credit, and Banking, Vol. 11, pp. 311-25. ; *Krugman, Paul (1998), What happened to Asia? January 1998.*

[12] Kaminsky, Graciela and Sergio Schmukler (2001) ."On Booms and Crashes: Financial Liberalization and Stock Market Cycles", World Bank WP. *;* Demirguc-Kunt, A. and E. Detriagiache. (1998) "Financial Liberalization and Financial Fragility". World Bank Working Paper.; Charles Wyplosz, (2001). "How Risky Is Financial Liberalization in the Developing Countries?."

nature of the crisis arising from financial innovations in the development of securitization, derivatives and off-balance-sheet entities designed to evade capital requirements is linked through financial globalization and increased global systemic risk.[13] Furthermore, a study done by the Carnegie Endowment for International Peace tracked the transmission of the 2008 Global Recession through significant measures of financial weakness and found that Eastern Europe and Argentina were affected the most.[14] Though it noted common characteristics among the most affected economies, such as large current account and fiscal imbalances, high government debt, and large bank-related capital inflows prior to the crisis, it did not go further in its analysis. This study endeavors to disaggregate the cost/benefits of external international crises and booms by making distinctions between developed and developing countries as well as the extent of economic liberalization, either high or low, of the developing countries.

1.5 Overview of Data and Methodology

Specifically, the study investigates the percent changes in various measures of economic and financial performance of leading developed countries compared to a variety of developing countries in the aftermath of the 2008 Global Recession and the global economic boom of the 1990s. The main focus is to compare the effects of these global economic phenomena on the developed countries at the root of each of these events to the effects on developing countries, chosen according to their level of economic liberalization based on a measure of high and low. In this way, the study examines the extent of the externalities of increased economic liberalization on developing countries.

For the developed countries, this study considers the US, the UK, Germany and France since they are the top economic powerhouses leading the normative world economic order over the past several decades and each is a catalyst for each of these global phenomenons. An IMF "Database of Financial Reforms" provides the basis for the developing country selection. Covering 91 economies over 1973-2005, the database rated each country based on seven aspects of financial sector policy. Using these ratings, this study compiled a ranking of the country,

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[13] Michael D. Bordo and John S. Landon-Lane, (2010). *The Global Financial Crisis of 2007-08: Is It Unprecedented?* (National Bureau of Economic Research, 2010).
[14] "Financial Transmission of the Crisis: What's the Lesson?," (2009). *Carnegie Endowment for International Peace*.

choosing two countries from each region (as classified by the World Bank) on each end of economic liberalization, low and high.[15]

Region	Country with high economic liberalization	Country with low economic liberalization
East Asia and Pacific	Malaysia/Philippines	China/Vietnam
Europe and Central Asia	Hungary/Georgia	Belarus/Kazakhstan
Latin America and Caribbean	Chile/Mexico	Brazil/Costa Rica
Middle East and North Africa	Jordan/Turkey	Algeria/Morocco
South Asia	India/Sri Lanka	Bangladesh/Nepal
Sub-Saharan Africa	Nigeria/South Africa	Ethiopia/Ghana

Each country will be contextualized with respect to its economic structure and political economy, focusing on its degree of economic liberalization, the implementation of the measures usually associated with liberalization, and the type of measures taken to combat the recession and how they compared to the measures taken by the US or the EU Bank.

Building upon past studies on the financial transmission of crises, the variables of economic performance under scrutiny include those which best signify financial strength: currency value (as compared to the US dollar), equity market, and the level of sovereign bonds, as well as more traditional measures of the economy such as the real gross domestic product (GDP), the unemployment rate, industrial production, value added, exports of goods and services, and current account balance (only for December 2007-August 2009 period). Data is obtained through the World Bank World Development Indicators for the time periods of interest.[16] Using these variables, the study will first analyze the overall percent change in each variable in the immediate aftermath of the 2008 Global Recession (December 2007-May 2009) as well as the overall percent change in each variable after the 1990s Economic Boom (March 1991-2001). A table ranking the countries from least to most affected by the crisis/boom for each variable and on the whole serves as the basis for this analysis into the extent of the externalities of external booms/busts with respect to the degree of economic liberalization.

[15] Abdul Abiad, Enrica Detragiache, and Thierry Tressel, *A New Database of Financial Reforms*, 2008-2266 (International Monetary Fund, 2008).
[16] "World Development Indicators," The World Bank, http://data.worldbank.org/products/wdi."

Overall, the analysis provides insight into the variable of interest: economic liberalization in developing countries. By situating the results of each country within its specific historical and current political economy, this study investigates the externalities of increased economic liberalization for developing countries in a novel way by focusing on external booms and busts. In this way, the implications for this study rest with future policy-making on the growth and development strategies of developing countries. The paper is structured as follows. Part Two explores the economic and political economy structure of the countries under analysis, focusing on its degree of economic liberalization and implementation of the measures usually associated with liberalization. Part Three describes the methods used in this study for analyzing the effects of economic liberalization in developing countries. Part Four describes and explains the results derived from the comparison of percent changes. The conclusion, in Part Five, involves a discussion of the implications of the results as well as a theoretical discussion for future policy making for developing countries in light of the results.

2 Regional and Country Context

Foremost, an in-depth analysis of the each region and country of interest, focusing on its degree of economic liberalization and history of the implementation of the measures traditionally associated with liberalization is necessary in order to fully understand the results of the study later on. An additional focus will be on the type of measures, if any, taken to combat the 2008 Global Recession and how they compared to the measures taken by the US or the EU Bank. Besides informing our understanding of the regions and countries in this study, a contextual analysis reveals factors endogenous to the region and/or country that may affect the data.

The Bretton Woods Conference and ensuing institutions, created to regulate the international monetary and financial order, introduced and first promoted the idea of open markets in the aftermath of WWII.[17] Even after its collapse, the ideals of the Bretton Woods system live on in economic liberalization. Its institutions, the World Bank and the IMF, prescribed liberalization throughout. Despite this, the vast majority of developing countries

[17] M. J. Stephey, "Bretton Woods System," *Time*, http://content.time.com/time/business/article/0,8599,1852254,00.html.

maintained highly protectionist trade regimes until the early 1980s.[18] During the 1980s, a massive wave of trade liberalization episodes occurred within developing countries. La Ferrara argues that economic crisis leads to a deterioration in living conditions, which deteriorates a regime's legitimacy among its constituency. In response, the government resorts to multilateral agencies to ask for structural adjustment funds to stabilize the economy but whose disbursement is conditioned on the adoption of a number of policy actions, such as trade liberalization.[19]

2.1 Historical experience with liberalization of the G-7 economies

Many of the G-7 countries maintained relatively repressed financial systems, gradually opening up in the late 1970s and early 1980s to have largely or fully liberalized financial sectors.[20] In the United Kingdom and France, this transition was also accompanied by large-scale privatization, notably of large utilities. However, France strengthened their systems of prudential supervision congruently with liberalization.[21] Present-day, they stand as the third and second largest economies in Europe, respectively, after Germany, and the sixth and fifth largest in the world, respectively, with Germany coming in fourth and the United States as the largest economy.[22] The United States took a more gradual approach to liberalization, depending on technological advances to drive its economy. However, this reliance on technology increased inequality such that since 1975, practically all the gains in household income have gone to the top 20% of households and since 1996, dividends and capital gains have grown faster than wages or any other category of after-tax income. Germany confronts demographic challenges to sustained growth, leading to structural reforms in 2005, which counteracted these pressures to

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[18] La Ferrara, Eliana, "A Political Equilibrium Approach to Trade Liberalization in Developing Countries," *The Journal of International Trade & Economic Development* 5, no. 3 (1996): 287–318.
[19] Ibid, 307.
[20] Abdul Abiad, Enrica Detragiache, and Thierry Tressel, *A New Database of Financial Reforms*, 2008-2266 (International Monetary Fund, 2008), 9.
[21] Williamson, John and Mahar, Molly, *A Survey of Financial Liberalization*, vol. 211, Essays in International Finance (Princeton, NJ: International Finance Section, Department of Economics, Princeton University, 1998), 29.
[22] Andrew Bergmann, "The New Global Economy," *CNNMoney*,, http://money.cnn.com/news/economy/world_economies_gdp/.

contribute to strong growth and falling unemployment.[23] Despite these country challenges, each is a leading trading power and financial center in its own right, at the vanguard of the international economic system.

2.2 Historical experience with liberalization of the developing economies

The remainder of the countries in this analysis underwent more tumultuous experience with liberalization, mostly due to the nature of reforms as ad-hoc interventions. Interestingly, Rodrik (2001) notes "the countries that integrated into the world economy most rapidly were not necessarily those that adopted the most pro-trade policies."[24] In fact, the liberalization of financial markets in many countries led to a series of financial crises in the late 1980s.[25] In part, this is because few countries had sufficient resources and human capital to introduce a system of prudential supervision as a precursor to liberalization, as theory recommends.[26] The generally successful countries in the South and East Asia and Pacific region took a gradual process and eliminated macroeconomic imbalances, for the most part, before financial reforms were introduced. At the onset of extensive liberalization that took place in the 1990s, these countries also experienced a severe banking and financial crisis in the second half of 1997, due to the exploitation of the resulting credit boom by international investors.[27] Eventually recovering from these crippling effects, these economies are now touted as proof of the success of the neoliberal paradigm, though some studies argue that the high level of savings after liberalization owed more to bank expansion into rural areas and the availability of low-yielding but safe deposit options than to high interest rates.[28]

Looking at the specific countries in the East Asia region, Malaysia stands out as an early implementer of liberalization prescriptions, beginning the process in the early 70s, though its

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[23] "The World Factbook," *CIA-The World Factbook*, https://www.cia.gov/library/publications/the-world-factbook/.
[24] United Nations, *Rethinking Poverty: Report on the World Social Situation 2010* (New York: United Nations, Dept. of Economic and Social Affairs, 2009), 102.
[25] Michael D. Bordo and John S. Landon-Lane, *The Global Financial Crisis of 2007-08: Is It Unprecedented?* (National Bureau of Economic Research, 2010), 9.
[26] Williamson, John and Mahar, Molly, *A Survey of Financial Liberalization,* 29.
[27] Arestis, Philip and Demetriades, Panicos, "Financial Liberalization: The Experience of Developing Countries," *Eastern Economic Journal* 25, no. 4 (Fall 1999): 441–57, 448.
[28] Williamson, John and Mahar, Molly, A Survey of Financial Liberalization, 48.

financial sector reforms followed export promotion, eventually falling victim to crisis.[29] The Philippines mimicked this process, assuming the lead, among others, in interest rate deregulation in the early 1980s. though it did not complete its reforms until the end of the decade.[30] In the aftermath of the crippling effects of the Vietnam War, Vietnam has been working to transition away from a rigidly planned central economy. Since 1986, authorities expressed their commitment to further economic liberalization because of domestic pressures to strengthen the macroeconomic environment and ensure political and social stability.[31] Though a self-identified Communist state, China, the final country under analysis in the East Asia and Pacific region, has implemented gradualist reforms since the late 1970s to move from a closed, centrally-planned economy to a more export and market-oriented economy. China now stands as the world's largest exporter and second largest economy.[32]

The South Asian region followed a similar path, with mainly repressed financial sectors until steady reforms began to be implemented in the mid to late 1980s.[33] India took a gradual (and overall successful, particularly in regard to capital markets) approach over the 1990s in liberalizing its financial sector, such that strong regulations contribute to currently large capital inflows and higher growth which then leads to low interest rates and better bank performance.[34] Though it began deregulation in the late 1970s, Sri Lanka followed sequencing recommendations and instituted financial reforms three years after trade reforms, though it still fell victim to the contagion of the Asian currency crisis.[35] Despite the contractionary effects of a prolonged civil war, throughout the 1980s and 90s, its economy now enjoys strong growth. In contrast, Bangladesh experienced steady but slow growth mostly due to the lack of inclusive political and economic domestic institutions. For example, the country over relies on its garment industry (making up 80% of total exports and 18% of GDP) though roughly half of its population is employed in the agricultural sector. The final country in the region, Nepal is among the poorest

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[29] Arestis, Philip and Demetriades, Panicos, "Financial Liberalization: The Experience of Developing Countries.", 447.
[30] Williamson, John and Mahar, Molly, A Survey of Financial Liberalization.
[31] "The World Factbook."
[32] Ibid.
[33] Abiad, Detragiache, and Tressel, A New Database of Financial Reforms, 9.
[34] James Hanson and S. Ramachandran, "Financial Liberalization: What Went Right, What Went Wrong?," World Bank, Economic Growth in the, 1990, 211.
[35] Williamson, John and Mahar, Molly, A Survey of Financial Liberalization, 26.

in the world, with a quarter of its population living below the poverty line and 70% of the population employed in agriculture. Its economy is mostly hampered by a tense political climate and difficult business climate, which discourages investment. [36]

In the Europe and Central Asia region, most of the countries under analysis represent transition economies (former Soviet territories/satellites), which experienced the fastest episodes of liberalization, matching the levels of Latin America and East Asia, by 2002, exemplified in the experiences of Hungary and Georgia. In contrast, Belarus retained its past industrial base—linked to the Russian economy and oil markets—even following the collapse of Soviet economy. Attempts at capitalist reforms in the early 1990s did not translate to economic growth, and 80% of industry remains in state hands, greatly discouraging foreign investment. Boasting enormous fossil fuels and other energy reserves, Kazakhstan mainly relies on these exports to generate growth, ultimately leading to "Dutch disease" which contributes to an appreciation of the currency that discourages secondary industries and exports. [37]

The Latin America and Caribbean region was one of the first to encounter economic liberalization, beginning reforms as early as the mid to late 1970 and with a pace faster than other developing countries, often experiences crises as a result.[38] With the nationalization of its commercial banking in 1982, Mexico experienced a severe crisis linked to a flawed and rushed privatization process as well as a lack of understanding of the political reality.[39] Similarly, Chile went full force into liberalization in the late 1970s, privatizing national banks, removing all controls on interest rates, and permitting banks to become "universal", and encouraging foreign banks and nonbank financial institutions to enter the market through the easing of capital controls.[40] Despite its business impediments due to a convoluted bureaucracy, Costa Rica attracts one of the highest levels of Foreign Direct Investment per capita in Latin America, which the country mainly relies on for growth, in addition to exports and tourism.[41] Brazil is among the early implementers of liberalization, eventually rolling back some reforms focusing on

[36] "The World Factbook."
[37] Ibid.
[38] Williamson, John and Mahar, Molly, *A Survey of Financial Liberalization*, 11.
[39] Hanson and Ramachandran, "Financial Liberalization.", 224.
[40] Williamson, John and Mahar, Molly, *A Survey of Financial Liberalization*, 11.
[41] "The World Factbook."

macroeconomic stability, building up foreign reserves and reducing its debt, though it continues to enjoy a high level of investment due to its historically high interest rates.

In the Middle East and North Africa region, experiences are varied. Turkey blazed ahead with reforms, eliminating interest rate ceilings in 1980 and easing entry restrictions. A banking crisis two years later prompted the repeal of much of these reforms, only to be implemented later as part of a larger reform and stabilization effort.[42] In 1999, Jordan promoted reforms, such as opening up the trade regimes, privatizing state-owned businesses, and eliminating fuel subsidies, which now contribute to its largely open economy. In response to crippling debt in the 1980s, Morocco implemented some pro-market reforms and austerity measures to become a diverse, relatively open economy. In contrast, Algeria's economy is mainly state-run as part of a "socialist, post-independence, development model" with the government often imposing restriction on foreign investors.[43]

By attempting to implement liberalization reforms quickly in an inflationary atmosphere during the 1990s, countries in the sub-Saharan Africa region, mostly suffered from the repercussion, often leading to policy reversals, such as in Nigeria.[44] Mostly an oil-exporting country, Nigeria recently took measures in 2005 to re-energize the banking system to finance Nigeria's industrial development, which contributed to a soaring capital base, lucrative stock market, and an influx of foreign investors in the market.[45] South Africa followed a more traditional trajectory to liberalization, removing credit ceilings and interest rate controls in 1980 and allowed greater competition within banking in 1983. However, worldwide economic sanctions imposed as a repercussion of its then policy of Apartheid prompted the country to roll back reforms as a response to capital flight.[46] It has since rebounded, boasting well-developed financial and legal institutions as well as a prominent stock market. Ghana stands as a classic example of the ill-implemented economic liberalization reforms of the early 1990s, though it has rebounded since to enjoy steady but slow growth and sustained reductions in poverty levels. Ethiopia's government still maintains a fair degree of control over its economy: its banking,

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[42] Williamson, John and Mahar, Molly, *A Survey of Financial Liberalization*, 24-25.
[43] "The World Factbook."
[44] Abiad, Detragiache, and Tressel, *A New Database of Financial Reforms*, 9.
[45] *Voices from the South: The Impact of the Financial Crisis on Developing Countries* (Brighton, Sussex: Institute of Development Studies, November 12, 2008), 41.
[46] Williamson, John and Mahar, Molly, *A Survey of Financial Liberalization*, 2.

insurance, telecommunications, and micro-credit industries are restricted to domestic investors as well as complete state ownership of land, which is leases to tenants. Despite this, Ethiopia attracts significant foreign investment in manufacturing industries and agriculture.[47]

2.3 Analysis of time periods

The first time period under analysis is that of the 1991-2001 economic "boom." Throughout the 1990s, developed countries, particularly the United States, enjoyed an extended period of economic prosperity. This period delivered years of rapid growth in GDP, investment, labor productivity, and even real wages, while reducing inflation and unemployment.[48] Western Europe mimicked this vitality to some extent, as the UN notes in its global economic outlook for 2001, "both investment and consumer spending have been growing solidly [for the European Union], supported by high levels of business sentiment and consumer confidence. A large increase in exports, partly resulting from the weak euro and strong external demand, also contributed to the economic acceleration."[49] Despite this, few developing countries experienced similar gains; many experienced significant crises from rushed liberalization implementations, which had regional repercussions (notably the Asian Crisis in 1997). Thus, the proposed analysis of the relative gains of developing countries from liberalization during this "boom" period will test the claims of liberalization proponents that open markets mutually benefit from growth.

Next, I analyze the 2008 Global Recession, from December 2007 to August 2008. With its epicenter in the United States, the sub-prime mortgage crisis, falling home prices, investment bank failures, tight credit, and lack of financial regulation pushed the United States into a recession by mid-2008, contributing to the longest and deepest downturn in GDP since the Great Depression.[50] The crisis quickly spread to European banks via drying up interbank liquidity and exposure to mortgage backed securities, which threatened the solvency of these banks. The collapse of Lehman brothers and near-collapse of AIG worsened the crisis, which then hit other Eastern European countries that were overexposed to foreign debt burdens.[51] Developing

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[47] "The World Factbook."
[48] Robert Brenner, *The Boom and the Bubble: The US in the World Economy* (Verso, 2003).
[49] *World Economic Situation and Prospects 2001* (Department of Economic and Social Affairs and United Nations Conference on Trade and Development, 2001), 24.
[50] "The World Factbook."
[51] Bordo and Landon-Lane, *The Global Financial Crisis of 2007-08,* 3.

countries were also deeply impacted, as Rose (2010) notes, "Smaller countries [read economies] tend to be open to international trade. Small countries were thus also heavily exposed to the collapse of international trade and trade credit, other features of the 2008 crisis."[52] This statement suggests that the crisis would affect highly liberalized developing countries rather than mainly the crisis epicenters in the United States and Western Europe. Evidence, like this, contrary to the proposed economic gains from liberalization prompts this study to investigate the claim closer.

2.4 Regional and Country Response to the 2008 Financial Recession

The G-7 countries took similar measures to combat the crisis, which eventually ended through a multi-country response of government bailouts of insolvent banks, guarantees of liability of the banking system, the provision of credit to financial markets, as well as overall expansionary monetary and fiscal policy.[53] The United States, in an attempt to stabilize financial markets, established in October 2008 a $700 billion Troubled Asset Relief Program (TARP), which grew to an additional $787 billion to create jobs and to stimulate the economy over a span of ten years. Pushed into a recession in the latter half of 2008, the Brown government in the United Kingdom installed a series of measures to stabilize the financial markets and stimulate the economy, which included partial nationalization of the banking system, temporary tax cuts, the suspension of public sector borrowing rules and fast-tracking public spending on capital projects. The effects of the crisis echoed in France, leading to the Hollande government to enact measures for greater state support for employment, an increase in top corporate and personal tax rates, and the separation of bank's more traditional activities with more speculative ones. Recent reforms to combat rising unemployment and slow growth, as well as an additional government subsidized reduced working hours scheme softened the blow of the crisis in Germany. Further stimulus and stabilization efforts and tax cuts were introduced to curb the onset of crisis. [54]

An interesting distinction between the G-7 countries in the analysis and the developing countries is the country response to the crisis, or lack thereof. A report looking into the responses of the "Global South" to the crisis asserts: "Very few developing country governments appear to

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[52] Andrew K. Rose and Mark M. Spiegel, "Cross-Country Causes and Consequences of the 2008 Crisis: International Linkages and American Exposure," *Pacific Economic Review* 15, no. 3 (2010): 340–63, 4.
[53] Bordo and Landon-Lane, *The Global Financial Crisis of 2007-08*, 3.
[54] "The World Factbook."

have given significant thought to how to respond to the impact of the crisis in the real sector, either in the form of fiscal stimulus, or the implementation of appropriate forms of social protection for those most affected."[55] Asian countries notably responded to the crisis; monetary authorities of countries in the sample, like China and India, began easing monetary policy by reducing policy interest rates and/or reserve requirements and adopting policies to increase liquidity in financial markets.[56] The Vietnamese government also implemented a reasonably successful series of eight policy packages aimed at combatting the crisis.[57] In contrast, policymakers in the Philippines feign control of the situation and downplayed the depth and risks of the crisis on the Philippine economy, despite recommendations by academics. The Malaysian economy remained mostly protected from the crisis, so the government did not enact any significant reforms in response.[58]

Though India, as previously mentioned, worked quickly to enact measures counter to the crisis, some criticize the initiatives of the government for being directed towards big business and enhanced liquidity, with lackluster results.[59] Though affected to some extent by the crisis, the governments of Sri Lanka, Bangladesh and Nepal, within the South Asian region, did not take immediate measures to curb the effects of the crisis.

Burdening debt exacerbated the transmission of crisis in the Hungarian economy. In addition to a receiving a joint IMF/EU bail-out, the new government implemented a number of business and personal income tax cutes, imposed "crisis taxes" on financial institutions, energy and telecom companies, and retailers. During this time period, the Georgian economy suffered from a decline in GDP rates from an endogenous shock —the August 2008 conflict with Russia—then from secondary linkages to the crisis, such as a decline in foreign investment and worker's remittances. In Kazakhstan, effective government measures allowed the economy to rebound well from the initial decline from sinking global oil prices.[60] Belarus did not take any significant actions in the wake of the 2008 Global Recession.

[55] *Voices from the South: The Impact of the Financial Crisis on Developing Countries*, 10.
[56] Ibid, 45.
[57] Ibid, 57.
[58] Ibid, 47-48.
[59] Ibid, 31.
[60] "The World Factbook."

Within the Latin America and Caribbean region, the Chilean and Brazilian authorities had a notable response. Chile financed fiscal stimulus packages during the Global recession, as a supplement to its conventional counter-cyclical policy of accumulating surpluses during periods of economic growth and allowing deficit spending in times of low growth.[61] Brazilian monetary authorities responded with foreign exchange and domestic credit initiatives to promote exchange and trade, and mitigate speculative fears.[62] In the selection of Middle East and North African countries, Jordan stands out for creating a set of economic relief packages and a budgetary supplement, aimed at lifting the living conditions of the middle and poor classes in 2010-2011, a few years after the peak years of crisis. [63]

Without direct links to the international financial system, excluding Nigeria and South Africa because of their established stock exchanges, few countries in the region of Sub-Saharan Africa were heavily impacted by the economic downturn.[64] Building upon the 2005 banking regulation mentioned beforehand, Nigeria recapitalized its financial sector and enhanced regulation further, following the crisis.[65] South African fiscal authorities argue that a rigid regulatory environment and a generous fiscal surplus used to fund expansionary policies largely shielded the economy from the downturn. Ethiopia and Ghana exemplify sub-Saharan African countries without deep links to the international financial system, such that the crisis did not have a direct effect on the economy, nor did the government take any significant measures during this time period. Understanding the contexts of these time periods and the regions/countries involved allows this analysis to understand endogenous inputs that affect the results.

3 Methodology

This section reveals the methods employed in this analysis of the effects of economic liberalization on a developing country's susceptibility to external boom and crises. It includes a discussion on country selection, variable selection, and the techniques employed to compare and contrast the change in each country due to the assumed external shock during the selected time periods.

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[61] Ibid.
[62] *Voices from the South: The Impact of the Financial Crisis on Developing Countries*.
[63] *Ibid.*
[64] Ibid.
[65] "The World Factbook."

3.1 Country Selection

The choice and classification by a binary measure of liberalization (high or low) of the developing countries under analysis is guided by an IMF-produced dataset "A new database of financial reforms."[66] "Developing" country, in this context, refers to those classified by the World Bank as "Low Income," "Lower Middle Income," "Low and Middle Income," and "Heavily Indebted Poor Countries."[67]The study looked at 91 countries, covering a diverse range of economies, regions, and levels of development, over the years 1973-2005 along seven dimensions. The first dimension involved credit controls and excessively reserve requirements, coding 20% as the threshold for determining meet "excessive" levels. The following dimensions were the degree of interest rate controls, state ownership in the banking sector, capital account restrictions, and securities trade policy was coded where high levels were coded as repressive. The last dimension, prudential regulations and supervision of the banking sector was the only one where a greater degree of government interventions codes for reform. A country is assigned a score on a scale of zero (highest degree of repression) to three (full liberalization), which is then aggregated to obtain a single liberalization index for each economy in each year.

The authors themselves admit that this classification method introduces a degree of bias, since the scores are assigned using some degree of judgment by the researcher.[68] Yet, the dimensions used by the study matches those in the dominant literature. In fact, in "A Survey of Financial Liberalization," Williamson and Mahar (1998) identify six dimensions of financial liberalization: elimination of credit controls, deregulation of interest rates, autonomous banks, private ownership of banks, free entry into the banking and financial services industry, and liberalization of international capital flows.[69] The broad range in countries and years facilitates the focus of this study well, as well as its inclusion of international and domestic reforms for each country, such that it represents a good source for country selection.

Using this database, this study looked at each country's financial reform score during the years 2001 and 2005. These scores were aggregated and the two highest and two lowest countries in each region of analysis were included in this study. The regions include East Asia

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[66] Abdul Abiad, Enrica Detragiache, and Thierry Tressel, *A New Database of Financial Reforms*.
[67] "World Bank-Countries," *World Bank*, http://www.worldbank.org/en/country.
[68] Abiad, Detragiache, and Tressel, *A New Database of Financial Reforms*.
[69] Williamson, John and Mahar, Molly, *A Survey of Financial Liberalization*.

and the Pacific, South Asia, Europe and Central Asia, Latin America and the Caribbean, and Middle East and North Africa, and Sub-Saharan Africa. For comparison, four G-7 economies, the United States, the United Kingdom, France and Germany were included as well, chosen for their historical authority in governing the international financial system and its norms. The following table shows the country selection, with each country's aggregate ranking on the database underneath its name:

Region	Country with high economic liberalization	Country with low economic liberalization
East Asia and Pacific	Malaysia/Philippines (16) (16.5)	China/Vietnam (7.4) (8.5)
South Asia	India/Sri Lanka (12.5) (14)	Bangladesh/Nepal (10.5) (8)
Europe and Central Asia	Hungary/Georgia (20.25) (18.75)	Belarus/Kazakhstan (10.4) (13.5)
Latin America and Caribbean	Chile/Mexico (19) (20)	Brazil/Costa Rica (11.5) (10.63)
Middle East and North Africa	Jordan/Turkey (19.25) (15.5)	Algeria/Morocco (11.25) (14)
Sub-Saharan Africa	Nigeria/South Africa (18) (18.25)	Ethiopia/Ghana (7.5) (11.5)
G-7	United States/United Kingdom/France/Germany (21) (N/A) (21) (19)	

The total number of countries in the sample is 28, including the four G-7 economies.

3.2 Variable Selection

Variable selection is based on existing literature on indicators of financial crisis in economies, such as Rose (2008) who modeled the cross-country incidence of crisis through indicators such as real GDP, the stock market, country credit ratings and the exchange rate.[70] The variables, then, choose and build upon these indicators. They include those which closely correlate with financial strength: currency value, equity market, and the level of sovereign bonds, as well as overall measures of the strength of the economy: real gross domestic product, the unemployment rate, industrial production, exports of goods and services, and the current account balance (included only for Dec 07- Aug 09 period). All data for each country and time period in

[70] Andrew K. Rose and Mark M. Spiegel, "Cross-Country Causes and Consequences of the 2008 Crisis: Early Warning."

this study is obtained from the World Bank's World Development Indicators Database.[71] A discussion of the variables under scrutiny follows.

The official exchange measured as period average of the local currency unit per US dollar. By conveying relative prices, this indicator reflects valuable information about the interaction of economic agents within an economy and outward with the world, though this analysis is limited to the relative prices of tradable goods. Within the sample of countries it is important to note that during the period of 1991-2001, both France and Germany switched from their respective currency to a common European currency.

The total value of stocks traded in current US dollars stands as an indicator of the equity market. As it is argued that open economies with sound macroeconomic policies, good legal systems and shareholder protections attract capital and thus have larger financial markets, this measure is important in analyzing the functioning of financial markets within each country. Similarly, the next variable: Portfolio investment, bonds, explains the external indebtedness of a country and stands as a measure of the level of sovereign bonds. These bonds are securities issued with a fixed interest rate for a period of more than one year.

Gross Domestic product in current US dollars is used as an overarching indicator of a country's economic performance, in addition to the next variable: unemployment expressed as the percent of the total labor force, modeled on estimates by the International Labour Organization of the United Nations, to represent the share of the labor force without work but available for employment.

The next measure looks at the value added (in current US dollars) of industrial production of areas such as mining, manufacturing, construction, electricity, water and gas. The total exports of goods and services, or the value of all goods and other market services provided to the rest of the world, then encompasses, to a degree, the level of linkages of each country to the global economy. Due to limitations in the data, the last indicator is available only for the "bust" period. Building off of total exports, the current account balance, expressed as a percentage of GDP, is the sum of net exports of goods and services, net primary income and net secondary income. Thus, in addition to traditional indicators of economic performance, the variables under analysis also involve indicators of financial markets. A table of descriptive statistics for each variable during each year under analysis is available in Appendix 1.

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[71] "World Development Indicators," The World Bank, http://data.worldbank.org/products/wdi."

3.3 Technique

This study is interested in the individual change in each country with respect to the chosen variables during the two time periods under analysis: March 1991-March 2001 and December 2007-August 2009. These changes then represent standardized measures of the change in each economy that can be compared cross country/region/level of liberalization. Thus, a percent changes approach is chosen, where the percent change in each variable for each country is calculated for both of the time periods analyzed. By assigned a rank to each country for each variable based on the level of percent changes, this rank can be aggregated to reveal the economies and financial systems, which experienced the most change during these time periods.

Ranks varied according to the time periods in order to understand the effect of the external boom/crisis at the time. For example, during the period of external financial crisis, a positive change is ranked as “most affected” in the variables of exchange rates (currency devaluation), portfolio investment, bonds (level of sovereign debt), and unemployment rate, while a negative change is ranked as “most affected” for change in stock value, gross domestic product, value of exports, and capital account. The opposite is true of the analysis during the “boom” period. Ranking countries based on this percent change informs this analysis of the effects of external booms and crises in relation to the
level of liberalization in developing countries, especially as it relates to the effect of the countries at the epicenter of the boom/crisis.

4 Results

This section endeavors to describe and contextualize the results derived from the comparison of percent changes during each time period with regard to the central question of this study. From the ranking during the bust period, countries are selected for a deeper look into the domestic situation at the time, and other factors which could also be having an effect on the results

4.1 Ranking of affected countries

The following table ranks each country with respect to overall most affected in both periods of external shock, as well as additional ranks for most affected in each respective period.

A fuller representation of the results, including a ranking for most positively affected during the boom, most negatively affected during the crisis, and rankings for overall most positively and negatively affected can be found in Appendix 2.

Region	Country:	Level of Liberalization (1: High; 0: Low; 2: N/A)	Overall most affected Rank:	Dec 07-Aug 09 Rank:	Mar 91-Mar 01 Rank:
Europe and Central Asia	Hungary	1	1	4	3
Latina America and Caribbean	Mexico	1	2	2	7
Latina America and Caribbean	Costa Rica	0	3	7	4
G-7	United Kingdom	2	4	1	13
Sub-Saharan Africa	Nigeria	1	5	6	9
G-7	United States	2	5	9	6
Latina America and Caribbean	Chile	1	6	3	15
Middle East and North Africa	Turkey	1	7	8	11
East Asia and Pacific	Malaysia	1	8	10	14
South Asia	India	1	8	22	2
East Asia and Pacific	China	0	9	24	1
Middle East and North Africa	Algeria	0	9	5	20
Europe and Central Asia	Georgia	1	10	11	16
East Asia and Pacific	Vietnam	0	11	25	3
Middle East and North Africa	Jordan	1	12	21	8
South Asia	Sri Lanka	1	12	19	10
South Asia	Bangladesh	0	13	27	5
East Asia and Pacific	Philippines	1	14	15	18
Latina America and Caribbean	Brazil	0	14	16	17
Sub-Saharan Africa	South Africa	1	15	12	24
G-7	France	2	15	13	23
Middle East and North Africa	Morocco	0	16	26	12
Sub-Saharan Africa	Ghana	0	16	17	21
G-7	Germany	2	17	14	25
Europe and Central Asia	Belarus	0	18	20	22
South Asia	Nepal	0	18	23	19
Europe and Central Asia	Kazakhstan	0	19	18	26
Sub-Saharan Africa	Ethiopia	0	20	28	21

At first glace, one interesting result stands out: two countries in the G-7 group, the United States (#5 tied with Nigeria) and United Kingdom (#4), are in the top five economies most affected by the external shocks. Disaggregating this ranking reveals that the US is included because of a relatively high rank during the boom years, though it still only comes in at #6 though the rhetoric and literature led us to postulate that it should experience the greatest effects from the boom, as the United States was the main driver of growth during this period.[72] The United Kingdom owes its high ranking to its position as the number one most affected economy during the economic crisis. In direct contrast, the rest of the G-7 economies, France and Germany, come in towards the end of the ranking, specifically number 15 and 17, respectively. Though both economies come in towards the middle of the rankings during the crisis period, their economies hardly experience growth, relative to the others in the sample, during the boom period, which again runs counter to the literature which emphasized the linkage effects of economic prosperity between the United States and Western Europe.[73]

The top five economies that experienced the most change during these time periods, in order, are Hungary, Mexico, Costa Rica, United Kingdom, Nigeria, and the United States (tied at #5 with Nigeria). Half of the countries in the top five, are classified as having high levels of liberalization, two are G-7 economies, as previously mentioned, and one is a country characterized as having a low level of liberalization. Though this generally matches the hypothesis of this study that countries with higher levels of globalization undergo greater volatility during periods of external boom/crisis than low liberalized countries or even the countries at the locus of the shock, the evidence is not that convincing. Expanding the analysis to all of the countries in the sample allows us to compare rankings relative to the degree of liberalization:

Level of Liberalization	Affected Rank Average	Overall Positive Effect Rank Average	Overall Negative Effect Rank Average
1 (High liberalization)	8.33	12.08	8.92
2 (G-7)	10.25	15.75	5.25
0 (Low liberalization)	13.83	8.83	12.17

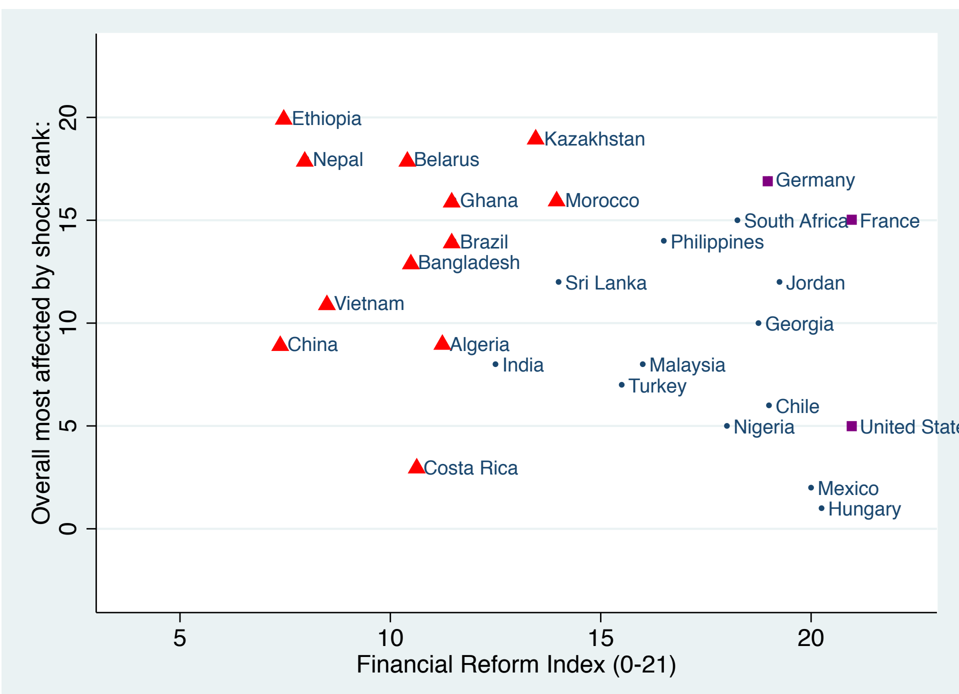
[72] Robert Brenner, *The Boom and the Bubble: The US in the World Economy*.
[73] *World Economic Situation and Prospects 2001* (Department of Economic and Social Affairs and United Nations Conference on Trade and Development, 2001).

I note that the high-liberalized countries in the sample are, on average, most affected in the indicators chosen for financial markets and economic well being during the time periods under analysis. They rank second in overall positive effect and overall negative effect, from a combination of their rank during the economic boom and crisis, on their economies of this time period. The G-7 economies experienced less of an overall effect on their economies than the high liberalization developing countries, but more than the low liberalization developing countries. A test of correlation offers another look at this trend in the data. Using the overall affected rank as the dependent variable and the numerical score (from 0-21) of each country on the Financial Reform Index, it is possible to run a test of correlation between the two variables:

$$Rank \ = \propto \ + \beta \ FinancialReformIndex \ + \ \epsilon$$

Running the test, I obtain the following result, displayed below:

$$Rank \ = \underset{(3.41)}{18.11} - \underset{(.22)}{.47} FinancialReformIndex \ + \ \epsilon$$



P-value > t	.045
R^2	.1515
R`	-.39
N	27

A correlation of -.39 is observed between the variables, indicating that the two variables are slightly negatively correlated. In fact, the linear model can explain only 15% of the variability in the data. Despite this, the correlation coefficient and its graph provide useful information to analyze in answering the central question of this study. The negative correlation coefficient indicates a negative relationship between rank and the financial reform index, meaning that a low number ranking that denotes the most affected by the crises is correlated to a higher rank on the financial reform index and thus a higher level of liberalization, in support of the previous findings from the country rankings. Furthermore, the graph reveals a slight trend where countries of low liberalization rank lower on the list of most affected economies, while countries of high levels of liberalization are concentrated more towards the top of the list. The G-7 countries are split between the top and bottom of the most affected economies ranking. Overall, this ranking of the overall effect on economies during a period of economic boom/crisis seems to suggest that developing countries at a high level of liberalization experience greater effects on their economies in the direction of external economic booms and crises, during the time periods of this study, than even the shock origin, and more than developing countries with low liberalization levels, who come in last overall in their magnitude of overall percent change in their economies, according to the indicators chosen.

4.2 Individual country analysis

To inform our understanding of the country rating, a discussion of the overall country context follows of the five economies most and least affected by the external shocks. Hungary is at the top of the ranking. Unsurprisingly, the government ran large current account deficits, which combined with the credit constraint, caused sudden depreciation of the currency and insurmountable debts.[74] Mexico's economy shows a high level of volatility through the rankings during these years. With trade agreements in over 50 countries, it is unsurprising Mexico would experience shocks from the world economy.[75] Despite its low liberalization classification, Costa Rica attracts a large amount of tourism, as well as foreign investors who are attracted by the country's political stability, high education levels, and incentives within the free trade zones, despite its high levels of bureaucracy.[76] Among the G-7 economies, Britain was the most affected overall, particularly due to its drastic downturn during the 2008 Global recession. The Financial Services Agency and deficient banking insolvency laws threw Britain's financial sector

[74] *Voices from the South: The Impact of the Financial Crisis on Developing Countries*, 49.
[75] "The World Factbook.".
[76] Ibid.

into disarray.[77] As mentioned before, the United States, as the center of the boom/crisis, is expected to be reasonably affected by economic climate of these time periods. Nigeria's political economy links it to the global economy, particularly the 2008 Global recession, through two channels: its active stock market and as an oil-exporting nation.[78] In fact, the Nigerian stock market lost a third of its market capitulation in the March 2008.[79]

The countries towards the bottom of the ranking include Ethiopia, Kazakhstan, Nepal, Belarus, Germany and Ghana. Each of these countries, with the exception of Germany, is classified as having a low level of liberalization. Ethiopia and Ghana maintain mostly shielded economies from the world, which also shielded them from the most severe effects of the crisis. In fact, the Ethiopian economy is one of the least monetized in the world, leading the Ethiopian Prime Minister to announce to Parliament: "In general, we don't expect drastic effects on our economy, our financial structure is not as liberalized as those of affected countries and the economy is not intertwined to Western economies to face a crisis."[80] Similarly, Belarus and Kazakhstan promote less liberal economies, though Kazakhstan is working towards liberalization. In the rankings the Kazakhstan economy was more affected during the time period of the crisis than the shock, also from its role as an large oil exporter.[81] Nepal, though mired by a host of domestic political problems and widespread poverty, ranked low in the percent change in its economy through various indicators, during the years under analysis. Though a global economy, Germany, through virtue of reforms, which encouraged growth and reduced unemployment, enacted just prior to the crisis, managed to escape the brunt of its repercussions. Similarly, it ranks low on the ranking of affected economies. Thus, each of the country contexts allow a deeper understanding of the results of the overall relative changes in the economy of the countries in the sample during these time periods. The general pattern through the rankings seems to imply that the higher levels of liberalization of a developing country tie the country more to the external shocks such as booms and crisis, more so sometimes than the countries at the origin. Note that this is a discussion of general trends witnessed in the results, remarking on

[77] Andrew K. Rose and Mark M. Spiegel, "Cross-Country Causes and Consequences of the 2008 Crisis: Early Warning."
[78] "The World Factbook."
[79] *Voices from the South: The Impact of the Financial Crisis on Developing Countries*.
[80] Ibid, 27.
[81] "The World Factbook."

if it can be understood within the country context. Further analysis is needed into the trends witnessed in the data into a stronger link between economic liberalization and volatility in response to external shocks.

5 Conclusion

To conclude, this section involves a discussion of the implications to draw from the results as well as for future policy making, in light of these results. Similar studies looking at the international transmission of external shocks found “interdependence” through the cross-country correlation of asset prices during both shock and tranquil periods.[82] Looking historically, the UN contends that China, India and Vietnam escaped contagion form the Asian financial crisis of 1991 due to tight controls on short-term capital flows.[83] In general, Bordo (2010) asserts that countries with sound financial systems, effective lenders of last resort and efficient financial supervision and regulation fared better in in the 2008 crisis.[84] This rhetoric is in line with theorists of economic liberalization, who argue for established preconditions and sequencing when opening up an economy.[85] Yet, even then, others cite the case of Chile to note that even when correct sequencing took place and trade liberalization occurred before financial liberalization, the outcome was not much more successful.[86] In fact, Aizenman (2005) extends this further when finding no evidence of a “growth bonus” when countries increased their foreign financing share, even finding evidence pointing to the contrary throughout the 1990s where greater financing shares were associated with lower growth.[87] Thus, there is some evidence that questions the neoliberal paradigm that lauds the benefits of economic liberalization.

[82] Andrew K. Rose and Mark M. Spiegel, “Cross-Country Causes and Consequences of the 2008 Crisis: International Linkages and American Exposure.”
[83] United Nations, *Rethinking Poverty: Report on the World Social Situation 2001*.
[84] Michael D. Bordo and John S. Landon-Lane, *The Global Financial Crisis of 2007-08: Is It Unprecedented?*.
[85] Huw Pill and Mahmood Pradhan, “Financial Liberalization in Africa and Asia.”
[86] Arestis, Philip and Demetriades, Panicos, “Financial Liberalization: The Experience of Developing Countries.”
[87] “Financial Liberalization: How Well Has It Worked for Developing Countries?,” *Federal Reserve Bank of San Francisco*, accessed March 7, 2015, http://www.frbsf.org/economic-research/publications/economic-letter/2005/april/financial-liberalization-how-well-has-it-worked-for-developing-countries/.

Bringing in the mixed record on poverty reduction worldwide, the United Nations questions the efficacy of conventional approaches involving economic liberalization and privatization, calling for governments to play a more developmental role and implement integrated economic and social policies designed to encourage inclusive growth.[88] The results of this study suggest similar policy recommendations for the governments of developing countries. As noted, in the sample and analysis of percent changes in measures of economic health, there exists a general trend in the indicators that, on average, countries classified as having a high level of liberalization experienced the greatest overall percent change during the periods under analysis. The G-7 countries followed, and countries with low levels of liberalization ranked last. These descriptive results beg us to dig deeper and question the prevailing norms of the international financial system with further empirical studies.

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[88] United Nations, *Rethinking Poverty*, 108.

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Appendix 1 Summary Statistics of Indicators:

Table 1: Time Period: December 2007

Variable	Observations	Min	Max	Mean	Median	St. Dev.
Official exchange rate (LCU per US$, period average)	28	.5	16105.13	720.74	9.95	3043.33
Stocks traded, total value (current US$)	24	4.52e+07	4.26e+13	2.93e+1	4.60e+10	8.85e+12
Portfolio investment, bonds (PPG+PNG) (NFL, current US$)	23	-4.06e+07	1.31e+10	2.69e+09	2.84e+07	4.19e+09
GDP (current US$)	28	1.02e+10	1.45e+13	1.18e+12	2.84e+07	2.83e+12
Unemployment, total (% of total labor force) (modeled ILO estimate)	28	2.3	22.3	7.26	6.65	4.33
Industry, value added (current US$)	28	1.64e+09	3.00e+12	3.03e+11	5.81e+10	6.39e+11
Exports of goods and services (current LCU)	28	5.30e+09	8.79e+14	3.77e+13	1.06e+12	1.65e+14
Current account balance (% of GDP)	28	-19.57	22.49	-1.15	-1.9	9.37

Table 2: Time Period: May 2009

Variable	Observations	Min	Max	Mean	Median	Std. Dev.
Official exchange rate (LCU per US$, period average)	28	.64	17065.08	785.14	12.65	3234.77
Stocks traded, total value (current US$)	25	1855500	4.67e+13	2.58e+12	2.94e+10	9.39e+12
Portfolio investment, bonds (PPG+PNG) (NFL, current US$)	23	-4.61e+09	1.78e+10	1.59e+09	0	4.66e+09
GDP (current US$)	28	1.08e+10	1.44e+13	1.22e+12	1.53e+11	2.86e+12
Unemployment, total (% of total labor force) (modeled ILO estimate)	28	2.6	23.7	8.12	7.65	4.54
Industry, value added (current US$)	28	1.94e+09	2.71e+12	3.06e+11	5.52e+10	6.55e+11
Exports of goods and services (current LCU)	28	5.35e+09	1.14e+15	4.73e+13	1.11e+12	2.14e+14
Current account balance (% of	28	-12.46	15.72	-1.1	-1.55	5.77

GDP)						

Table 3: Time Period: March 1991

Variable	Observations	Min	Max	Mean	Median	Std. Dev.
Official exchange rate (LCU per US$, period average)	25	.004	10037.03	432.58	5.64	2002.22
Stocks traded, total value (current US$)	19	300000	2.18e+12	1.64e+11	8.05e+09	5.01e+11
Portfolio investment, bonds (PPG+PNG) (NFL, current US$)	19	- 5.58e+07	1.94e+09	3.74e+08	0	6.85e+
GDP (current US$)	28	3.92e+09	6.17e+12	4.42e+11	3.55e+10	1.21e+12
Unemployment, total (% of total labor force) (modeled ILO estimate)	28	2.1	24.4	8.52	7.8	5.38
Industry, value added (current US$)	25	6.45e+08	6.22e+11	7.32e+10	1.29e+10	1.43e+11
Exports of goods and services (current LCU)	27	5300	2.37e+13	1.21e+12	1.42e+11	4.57e+12

Table 4: Time Period: March 2001

Variable	Observations	Min	Max	Mean	Median	Std. Dev.
Official exchange rate (LCU per US$, period average)	28	.694655	14725.17	645.71	10.32	2773.84
Stocks traded, total value (current US$)	24	6400000	2.90e+13	1.43e+12	4.52e+09	5.90e+12
Portfolio investment, bonds (PPG+PNG) (NFL, current US$)	23	-4.48e+08	8.38e+09	7.48e+08	0	1.93e+09
GDP (current US$)	28	3.22e+09	1.06e+13	6.97e+11	5.41e+10	2.02e+12
Unemployment, total (% of total labor force) (modeled ILO estimate)	28	2.5	27.3	8.65	7.7	5.95
Industry, value added (current US$)	28	6.61e+08	2.21e+12	1.69e+11	1.99e+10	4.30e+11
Exports of goods and services (current LCU)	28	1.63e+09	2.65e+14	1.15e+13	6.10e+11	4.98e+13

Appendix 2 Full Results:

Country:	Level of Liberalization	Overall positive effect ranking:
China	0	1
Vietnam	0	2
Bangladesh	0	2
India	1	3
Morocco	0	4
Jordan	1	5
Sri Lanka	1	6
Ethiopia	0	7
Nepal	0	8
Costa Rica	0	9
United States	2	9
Hungary	1	10
Brazil	0	11
Belarus	0	12
Nigeria	1	13
Turkey	1	13
Philippines	1	13
Malaysia	1	14
Ghana	0	14
Mexico	1	15
Georgia	1	15
Kazakhstan	0	16
France	2	17
Germany	2	18
United Kingdom	2	19
Chile	1	19
South Africa	1	19
Algeria	0	20

Country:	Level of Liberalization	Overall negative effect rank:
Algeria	0	1
United Kingdom	2	2
Chile	1	2
South Africa	1	2
Germany	2	3
France	2	4
Kazakhstan	0	5
Mexico	1	6
Georgia	1	6
Malaysia	1	7
Ghana	0	7
Nigeria	1	8
Turkey	1	8
Philippines	1	8
Belarus	0	9
Brazil	0	10
Hungary	1	11
Costa Rica	0	12
United States	2	12
Nepal	0	13
Ethiopia	0	14
Sri Lanka	1	15
Jordan	1	16
Morocco	0	17
India	1	18
Vietnam	0	19
Bangladesh	0	19
China	0	20

Appendix 3 Result Summary Statistics

Time Period: March 1991-2001 ("Boom" years)

Table 5: Summary statistics, countries where liberalization=1 (high)

Variable	Obs	Mean	Std. Dev.	Min	Max
Exchange rate change	11	28.53	87.69	.04	292.78
Stock value change	11	11.36	18.3	.26	54.12
Portfolio investment change	9	1.94	5.08	-1.89	12.33
GDP change	12	.62	.49	-.5	1.31
Unemployment change	12	-.07	.22	-.51	.22
Industrial production, change	11	.61	.68	-.7	1.82
Exports of goods and services change	12	25736.69	88898.84	.58	308027.6

Table 6: Summary statistics, countries where liberalization=2 (N/A for the G-7 countries)

Variable	Obs	Mean	Std. Dev.	Min	Max
Exchange rate change	4	-.27	.47	-.81	.23
Stock value change	4	7.11	4.19	2.74	12.3
Portfolio investment change	0				
GDP change	4	.31	.31	.05	.72
Unemployment change	4	-.1	.37	-.44	.4
Industrial production, change	3	-.03	.14	-.15	.13
Exports of goods and services change	4	.85	.1	.73	.96

Table 7: Summary statistics, countries where liberalization=0 (low)

Variable	Obs	Mean	Std. Dev.	Min	Max
Exchange rate change	10	2.66	5.64	-.22	18.48
Stock value change	4	203.11	254.63	1.05	546.47
Portfolio investment change	10	2.202031	15.89686	-22.68011	42.38515
GDP change	12	.64	1.03	-.39	2.67
Unemployment change	12	.31	.61	-.08	2.1
Industrial production, change	11	.96	1.44	-.53	4.47
Exports of goods and services change	11	324638.2	1076674	.021	3570934

Time Period: December 2007-August 2009 (the crisis years)

Table 8: Summary statistics, countries where liberalization=1 (high)

Variable	Obs	Mean	Std. Dev.	Min	Max
Exchange rate change	12	.11	.09	-2.74e-06	.24
Stock value change	12	-.36	.28	-.96	-.02
Portfolio investment change	11	10.89	37.31	-1.47	123.36

GDP change	12	.07	.15	-.14	.39
Unemployment change	12	.18	.19	-.02	.53
Industrial production, change	12	.01	.18	-.19	.41
Exports of goods and services change	12	.04	.12	-.13	.28
Capital Account change	12	-.29	.76	-.89	1.94

Table 9: Summary statistics, countries where liberalization=2 (N/A for the G-7 countries)

Variable	Obs	Mean	Std. Dev.	Min	Max
Exchange rate change	4	.07	.15	-.02	.28
Stock value change	4	-.45	.36	-.67	.1
Portfolio investment change	0				
GDP change	4	-.06	.11	-.22	.01
Unemployment change	4	.37	.48	-.11	1
Industrial production, change	4	-.12	.1	. -.26	-.03
Exports of goods and services change	4	-.06	.09	-.14	.05
Capital Account change	4	-.16	.34	-.47	.32

Table 10: Summary statistics, countries where liberalization=0 (low)

Variable	Obs	Mean	Std. Dev.	Min	Max
Exchange rate change	24	.12	.13	-.1	.51
Stock value change	20	-.12	.61	-.96	2.04
Portfolio investment change	23	6.65	26.34	-1.47	123.36
GDP change	24	.15	.18	-.14	.65
Unemployment change	24	.13	.21	-.26	.7
Industrial production, change	24	.09	.19	-.19	.41
Exports of goods and services change	24	.12	.24	-.2	.89
Capital Account change	24	.69	7.45	-14.22	32.71