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Capital Controls
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Abstract
Capital controls can take many different forms and are broadly defined as any restrictions on the movement of capital across a country's borders. This article focuses on the debate on the merits of capital controls for emerging markets and developing economies. It describes the potential costs and benefits of capital controls, focusing on the recent empirical literature evaluating the impact of capital controls.

Introduction
Capital controls are any restrictions on the movement of capital into or out of a country. Capital controls can take a wide variety of forms. For example, capital controls can be quantity-based or price-based, or focused solely on the movement of capital into or out of a country. Capital controls can also be directed at different types of capital flows (such as at bank loans, foreign direct investment or portfolio investment) or at different types of actors (such as at companies, banks, governments or individuals).

Most developed countries believe that the benefits from the free movement of capital across borders outweigh the costs, and therefore have very limited (if any) capital controls in place today. For emerging markets and developing economies, however, there has been a long-standing debate on the desirability of capital controls. Assessing the impact of capital controls is complicated due to a number of factors, including the various forms in which they can be structured. This entry will discuss the recent debate on capital controls, focusing on the theoretical arguments for and against controls and the existing empirical evidence on their impact.

History of Debate
Over the last century, economists have regularly expressed concerns about international capital flows. For example, in the 1920's Ragnar Nurkse wrote about "destabilizing capital flows" and in the 1970's Charles Kindleberger described the role of capital in driving "manias, panics and crashes". When the world's leading economies met at Bretton Woods after World War II to formulate rules governing the international financial system, John Maynard Keynes and other delegates debated the role for capital controls. The resulting compromise required that members of the International Monetary Fund (or IMF, one of the newly created International Monetary Institutions) allow capital to be freely exchanged and convertible across countries for the purpose of all current account transactions, but they could enact capital controls for financial account transactions. Most countries had capital controls in place at this time.

Over the following years, however, many developed countries gradually removed their capital controls, so that by the 1980s, most had few controls in place. By the early and mid-1990s, many emerging markets and developing countries also began to lift their capital controls. The impact initially appeared to be positive—capital flowed into countries with liberalized capital accounts, investment and growth increased, and asset

prices rose. In fact, support for lifting capital controls was so widespread that in 1996/97 leading policymakers discussed amending the rules agreed to at Bretton Woods to extend the IMF's jurisdiction to include capital movements and make capital account liberalization a purpose of the IMF. In mid-1997, however, a series of financial crises started in Asia and spread across the world, appearing to disproportionately affect emerging markets that had recently liberalized their capital accounts. This series of crises sparked a reassessment of the desirability of capital controls, especially for emerging markets and developing economies.

In a sharp sea change, many leading policymakers and economists began to support the use of capital controls for emerging markets in some circumstances, especially taxes on capital inflows. Much of this support was based on the belief that controls on capital inflows could reduce a country's vulnerability to financial crises. From 2002 to 2005, several emerging markets (such as Colombia, Russia and Venezuela) also implemented new controls on capital inflows, largely to reduce the appreciations of their currencies. Over the same period, however, several large emerging markets (such as India and China) moved in the opposite direction and lifted many of their existing controls.

Benefits and Costs of Capital Controls

The free movement of capital across borders can have widespread benefits. Capital inflows can provide financing for high-return investment, thereby raising growth rates. Capital inflows—especially in the form of direct investment—often bring improved technology, management techniques, and access to international networks, all of which further raise productivity and growth. Capital outflows can allow domestic citizens and companies to earn higher returns and better diversify risk, thereby reducing volatility in consumption and income. Capital inflows and outflows can increase market discipline, thereby leading to a more efficient allocation of resources and higher productivity growth. Implementing capital controls can reduce a country's ability to receive these multifaceted benefits.

On the other hand, the free movement of capital across borders can also have costs. Countries reliant on foreign financing will be more vulnerable to "sudden stops" in capital inflows, which can cause financial crises and/or major currency depreciations. Large volumes of capital inflows can cause currencies to appreciate, undermining export competitiveness and causing the "Dutch Disease". The free movement of capital can also complicate a country's ability to pursue an independent monetary policy, especially when combined with a fixed exchange rate. Finally, capital inflows may be invested inefficiently due to a number of market distortions, thereby leading to overinvestment and bubbles that create additional challenges. Capital controls could potentially reduce these costs from the free movement of capital.

Empirical Evidence on Capital Controls

Since capital controls can have costs and benefits, evaluating the desirability and aggregate impact of capital controls is largely an empirical question. (See Eichengreen, 2003 on the potential costs and benefits of capital controls.) Not surprisingly, an extensive literature has attempted to measure and assess the effects of capital controls.

The most studied experience with capital controls is the Chilean *encaje*—a market-based tax on capital inflows from 1991 to 1998 structured such that the magnitude of the tax decreased with the maturity of the capital flow. Chile's experience with capital controls is generally viewed positively, largely due to Chile's strong economic performance during the period the controls were in place. Empirical studies of the impact of Chile's capital controls, however, have reached several general conclusions. First, there is no evidence that the capital controls moderated the appreciation of Chile's currency (which was the primary purpose of the capital controls). Second, there is little evidence that the controls protected Chile from external shocks. Third, there is some evidence that the controls raised domestic interest rates (at least in the short term). Fourth, there is some evidence that the controls did not affect the volume of capital inflows, but did lengthen the maturity of capital inflows. Finally, the capital controls significantly raised the cost of financing for small and medium-sized firms and distorted the mechanisms by which Chilean companies procured financing. The general conclusion from this work is that Chile's strong economic performance during the 1990's resulted from sound macroeconomic and financial policies—not the capital controls—and that the capital controls had both costs and benefits. (See Forbes, 2007 for more information on this literature and the Chilean capital controls.)

A second major branch of literature examining the impact of capital controls focuses on the effects of lifting capital controls (i.e., capital account liberalization). The majority of this work uses macroeconomic data, typically focusing on how capital account liberalization raises economic growth using cross-country growth regressions. Prasad et al. (2003) is a detailed survey of this literature and shows that although several papers find a robust, positive effect of capital account liberalization on growth, other papers find no significant effect, and most papers find mixed evidence. This literature is generally read as showing weak evidence that lifting capital controls may have some positive effect on growth.

There are several explanations for the inconclusive results in this macroeconomic literature assessing the impact of capital controls. First, it is extremely difficult to measure capital account openness and to capture the various types of capital controls in a simple measure that can be used for empirical analysis. Second, different types of capital flows and controls may have different effects on growth and other macroeconomic variables. For example, controls on portfolio investment may be more beneficial than other types of capital controls. Third, the impact of removing capital controls could depend on a range of other factors that are difficult to capture in cross-country regressions, such as a country's institutions, financial system, corporate governance or even the sequence in which different controls are removed. Fourth, capital controls can be very difficult to enforce (especially for countries with developed financial markets) so the same capital control may have different levels of effectiveness in different countries. Finally, most countries that remove their capital controls simultaneously undertake a range of reforms and undergo structural changes, so that it can be difficult to isolate the impact of removing the controls. (For additional details on the challenges in measuring

the impact of capital controls, see Eichengreen (2003), Forbes (2006), Magud and Reinhart (2004), and Prasad et al. (2003).)

Given these challenges in measuring the impact of capital controls, it is not surprising that the empirical literature has had difficulty documenting their effects on growth at the macroeconomic level. To put these results in perspective, however, the current status of this literature is similar to the literature in the 1980s and 1990s on how trade liberalization affects economic growth. Economists generally believe that trade openness raises growth, but most of the initial work on this topic also focused on cross-country, macroeconomic studies and reached inconclusive results. At a much earlier date, however, several papers using microeconomic data and case studies found compelling evidence that trade liberalization raises productivity and growth.

Similarly, recent work based on microeconomic data has been much more successful than the macroeconomic literature in documenting the effects of capital controls. Forbes (2006) surveys this new literature, which covers a variety of countries and periods, uses a range of approaches and methodologies, and builds on several different fields. This literature has, to date, reached five general results. First, capital controls reduce the supply of capital, raise the cost of financing, and increase financial constraints—especially for smaller firms and firms without access to international capital markets. Second, capital controls reduce market discipline in financial markets and the government, leading to a more inefficient allocation of capital and resources. Third, capital controls distort decision-making by firms and individuals as they attempt to minimize the costs of the controls, or even evade them outright. Fourth, the effects of capital controls vary across different types of firms and countries, reflecting different pre-existing economic distortions. Finally, capital controls can be difficult and costly to enforce, even in countries with sound institutions and low levels of corruption. Therefore, this series of microeconomic studies suggests that capital controls have widespread and pervasive costs, but has not yet provided significant evidence of the benefits of capital controls.

Conclusions

The debate on the effects and desirability of capital controls is likely to continue and motivate new academic research. Most economists agree that countries should gradually lift their capital controls as they grow and develop, and that developed countries should have few (if any) capital controls in place. Most economists also believe that the free movement of capital can have widespread benefits, but that in countries with weak financial systems, poorly developed institutions, and vulnerable macroeconomies, the free movement of capital can also generate distortions and increase a country's vulnerability. As a result, emerging markets and developing countries that currently have capital controls should work to address the shortcomings in their economies as they liberalize their capital accounts. There continues to be widespread disagreement, however, on the exact sequencing of these reforms and the optimal pace of capital account liberalization for emerging markets and developing economies.

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Suggested Cross-References

International Capital Flows
International Monetary Institutions
John Maynard Keynes
Charles Poor Kindleberger
Ragnar Nurkse

JEL classification: F2 & F3