

# The Relationship between Financial Transactions Costs and Economic Growth

BY DEAN BAKER AND HELENE JORGENSEN\*

The opponents of financial transactions taxes (FTTs) have argued that the imposition of such taxes will slow economic growth by raising the cost of capital. The argument is that if the cost of buying and selling stock and other financial assets is higher, then it makes it more expensive for firms to raise capital. This is true even if the initial sale is exempted from the tax, since the fact that future sales will be subject to the tax will lower the price of stocks sold in the secondary market, which would mean that even initial offerings will command a lower price.

However, there are reasons for believing that offsetting factors could mean that higher transactions costs do not have a negative impact on growth and could even have a positive impact. This paper reviews some of the arguments as to why higher transactions costs may actually lead to better working financial markets. It then examines the relationship between growth and transactions costs for a limited set of countries for which transactions cost data are available.

There are four reasons for believing that higher transactions costs may be associated with higher growth:

- 1) An increase in transactions cost can drive out both noise traders who can make markets more volatile and highly informed traders who are successful at appropriating gains that would otherwise go to normal investors;
- 2) The impact of higher transactions costs on the cost of capital is likely to be very small and the impact of small changes in the cost of capital may not have a noticeable impact on investment;
- 3) The resources freed up by reducing the volume of trading may actually mean that more resources are available for investment; and
- 4) The revenue from a tax may be used for productive public investment that will increase productivity and growth.

These points are discussed briefly below. The final section of this paper examines evidence on the relationship between transactions costs and growth.



**Center for Economic and  
Policy Research**  
 1611 Connecticut Ave, NW  
 Suite 400  
 Washington, DC 20009  
 tel: 202-293-5380  
 fax: 202-588-1356  
 www.cepr.net

\*Dean Baker is an economist and the Co-Director of the Center for Economic and Policy Research, in Washington, D.C. Helene Jorgensen is a Research Associate at CEPR.

### **The Impact of an FTT on Asset Prices**

There are two reasons to believe that driving out some traders with higher transactions costs could lead to an increase rather than a decrease in asset prices. The first would be if noise traders – traders who respond to and amplify market movements rather than trading based on fundamentals – are disproportionately the ones who leave the market as a result of higher transactions costs. If noise traders are driven from the market, then asset prices may become less volatile. This would in turn mean that assets are less risky and investors would be willing to hold them with a lower return.

The reason why it is plausible that noise traders would be disproportionately driven from the market is that these traders are not looking to experience gains over long periods of time as a result of market fundamentals. They are looking to profit from short-term movements. The increase in transactions costs would be a small portion of the expected gains for someone holding an asset for a long period of time; however it could be a very substantial portion of the expected gain from someone who typically holds an asset for a day or even an hour.

The exit of highly informed traders from the market could also benefit ordinary investors. These traders specialize in getting information ahead of the rest of the market in order to beat market movements. For example, if an investor had channels that allowed her to get access to crop projections even a short period of time before the rest of the market she would be able to garner substantial profits even on thin margins. An inside trader is an extreme example of a highly informed trader who reduces returns for normal investors. However, insofar as it is possible for highly informed traders to get information a short moment ahead of the rest of the market through legal channels, it would have the same effect as insider trading in reducing returns for everyone else. (The presumption here is that the period of time by which a highly informed investor beats the market is too short to have any beneficial effects on investment behavior.)

If a financial transactions tax could discourage the effort to beat the market in this way, more gains would accrue to normal traders. This would mean that, other things equal, they would be prepared to pay more for financial assets, since they could expect to get a larger portion of the return, rather than being beaten out by highly informed traders.

Since an FTT may both decrease volatility – by reducing the number of noise traders – and increase returns to normal investors – by driving out highly informed traders – it is possible that it could actually raise asset prices. In any case, a lower proportion of noise traders and highly informed traders in the market would both be factors that offset the negative impact of higher transactions costs on asset prices.

### **The Impact of Lower Asset Prices on the Cost of Capital and Investment**

Even if an FTT has a negative impact on asset prices, the impact on the cost of capital is likely to be limited, as is the impact on investment. The main reason that the impact on the cost of capital will be little affected is that the vast majority of investment is financed from corporate retained earnings, the profits that firms keep after paying out dividends. Over the last decade (2001-2010), retained corporate earnings averaged over 80 percent of gross investment. While there are differences across firms (some firms will use retained earnings to buy existing assets rather than for investment and many small and newer firms have no choice but to turn to capital markets for investment funds), a

very large portion of investment does not rely on raising money in capital markets and therefore will not be directly affected by a higher cost of capital.

This means that even if the cost of capital is increased as a result of the tax, it is not likely to have much impact on investment and growth. The determinants of investment is an extensively researched topic. Most of this research finds that the most important factors are the rate of growth of demand and cash flow; the cost of capital is generally found to have a very small effect on investment.<sup>1</sup> This research suggests that a modest increase in the cost of capital attributable to an FTT is not likely to have a noticeable impact on investment. And, if an FTT does not have much effect on investment, it will not have much impact on productivity and growth.

### **The Impact of an FTT in Freeing Up Resources for Productive Uses**

A main point of an FTT is to reduce the amount of resources being wasted in the financial sector. Insofar as actors in financial markets are engaged in rent-seeking they are not adding to the economy's output. (Rent-seeking means finding ways to grab income from workers or investors without making a productive contribution to the economy – like insider trading. If the tax has the effect of making rent-seeking in financial markets less profitable, for example by discouraging noise trading, then it will reduce the number of people engaged in this behavior.

In 1970, the narrowly defined financial sector (commodities and securities trading and investment banking) accounted for 0.5 percent of employee compensation in the private sector.<sup>2</sup> This had risen to 2.3 percent in 2010. Unless the additional resources allowed for the better allocation of capital or more secure savings, they are simply waste from an economic standpoint.

If an FTT drives out some of the people seeking rents in the financial sector, we would expect to see them seeking employment in the productive economy. Many of the people employed in the financial sector presumably could make substantial contributions elsewhere in the economy. They are highly educated with degrees from the most prestigious universities. If they stood to earn more working in the technological sector, the medical sector or other productive areas of the economy, rather than rent-seeking in the financial sector, this should provide a boost to growth. The imposition of an FTT would have the same impact on the economy as the addition of an exogenous clump of capital and highly skilled labor.

### **Productive Government Investment Financed by an FTT**

The extent to which an FTT raises or lowers growth will depend in part on what governments chose to do with the revenue. Many forms of government spending, such as spending on infrastructure, research and development, and education are productive.<sup>3</sup> If governments use the revenue from an FTT to increase spending in these areas, then it will provide a boost to productivity and growth. This is the stated intention of many proponents of FTTs.

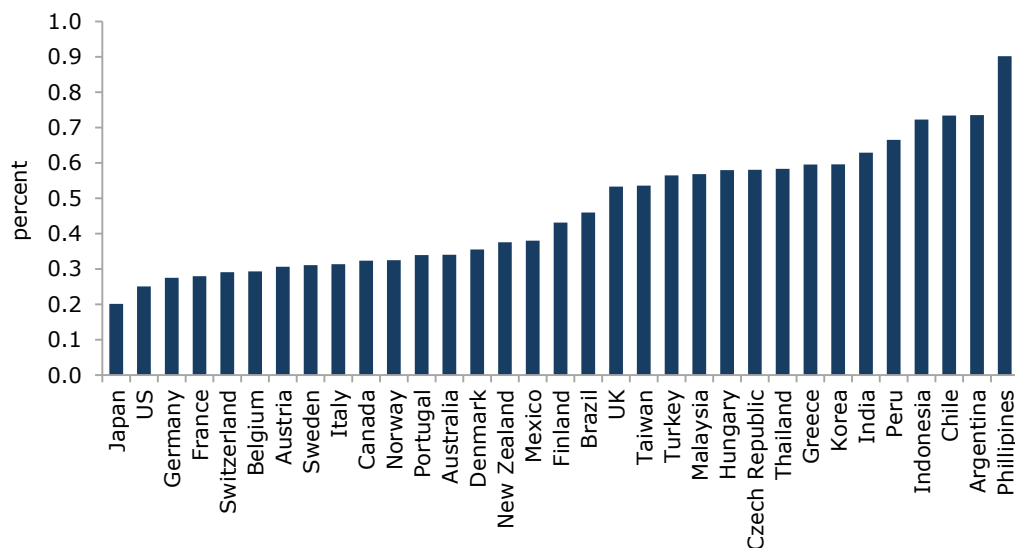
For the four reasons listed above, an FTT can be expected to have little or no negative impact on growth. The first three reasons apply to transactions costs more generally. The last factor is only relevant insofar as transactions costs are higher in part because of a tax that raises revenue.

## The Relationship between Transactions Cost and Growth

While opponents of FTTs have been quick to claim that it will lead to slower growth and a loss of jobs, there is little research that actually examines the impact of FTTs on growth. It is important to recognize that an FTT will affect the economy in the same way that any increase in transactions costs will affect the economy. This means that if an FTT will have a negative impact on growth, then an increase in transactions costs for any reason should also slow growth. The opposite should be the case as well, so that a reduction in transactions costs should imply faster growth.

Unfortunately, there are no good series on transactions costs through time, so the available data does not make it possible to directly test the impact of changes in transactions costs on growth. However, a recent paper does provide a careful calculation of transactions costs for 33 countries over the years 2001-2006, as shown in **Figure 1**.<sup>4</sup>

**FIGURE 1**  
Transactions Costs on Equity Trades



If it can be assumed that countries with lower transactions costs have seen a larger decline in transactions costs in the recent past, then regressing the impact of levels of transactions costs on growth can provide a basis for assessing the impact of changes in transactions costs on growth.

**Table 1** shows the results of a set of regressions that try to measure the impact of transactions costs on growth. The four regressions use three different measures for growth in gross domestic product (GDP) over the years 1990-2007.

The first column in the table shows the results from a regression that measured growth as the annual change in per capita GDP, using a purchasing power parity measure of GDP. In this regression, the coefficient on the transactions costs variable is positive and highly significant. The coefficient of the transactions cost variable implies that a 0.01 percentage-point increase in transactions costs is associated with a 0.037 percentage-point increase in annual growth.

The second column shows the results of a regression that uses per capita annual growth, adjusted for inflation, over the years 1990-2007 measured in each country's own currency. In this case also the coefficient for the transactions costs variable is positive and highly significant, again implying that higher transactions costs are associated with higher growth.

The third column shows the results using inflation-adjusted total annual growth (not per capita) measured in each country's own currency. In this case also the coefficient of the transactions costs variable is positive and highly significant, again implying that higher transactions costs are associated with more rapid growth.

The fourth column shows results from a regression that also uses total growth as the dependent variable (like regression whose results are shown in the third column), but it also includes a series of regional dummy variables to pick up the differences in growth rates across regions. (The other regressions were also run with regional dummy variables, but are not shown because they were insignificant.) In this case, the coefficient for the transactions costs variable is again positive and highly significant. Here also the data suggest that higher transactions costs are associated with more rapid growth.

**TABLE 1**  
**The Relationship between Financial Transactions Costs and Economic Growth**

Impact of:	Annual growth, in percentage points			
	Per capita purchasing power parity	Per capita constant currency for each country	Constant currency	Constant currency with regional dummy variables
0.01 percentage-point increase in transactions costs	0.037 (3.88)**	0.036 (3.92)**	0.056 (5.17)**	0.037 (3.18)**
<i>Being located in:</i>				
European Union				-0.902 (-2.09)*
Asia				0.848 (1.55)
Latin America				0.121 (0.84)
Growth if transactions costs were held at zero (constant)	3.00 (6.39)**	0.72 (1.58)	0.73 (1.96)#	1.69 (3.15)**
Share of variance in growth explained by regression ( $R^2$ )	0.31	0.32	0.45	0.61

Note: T-statistics are in parentheses. Statistical significance at: \*\*1 percent, \*5 percent, and #10 percent.  
Source: Authors' analysis of IMF, September 2011 World Economic Outlook Database, and Thapa and Poshakwale (see endnote 4).

In all four of the regressions shown in Table 1, the coefficient on the transactions cost variable is positive and highly significant. This indicates that there is a strong correlation between higher transactions costs and higher growth. This could suggest that countries actually would see more rapid growth if they had higher transactions costs and thereby reduced waste in the financial sector.

However, it would be necessary to do a much more careful analysis of patterns of growth to be able to assert this relationship with any confidence.

The results shown in Table 1 certainly undermine the contention that financial transactions taxes, by raising transactions costs, would lead to slower economic growth. For the 33 countries for which data are available, the evidence points very strongly in the opposite direction.

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1 See Chirinko, Robert S. 1993. "Business Fixed Investment Spending: Modeling Strategies, Empirical Results, and Policy Implications." *Journal of Economic Literature*, Vol XXXI, 1875-1911; and Fazzari, Steve, R. Glenn Hubbard, and Bruce Peterson. 1988. "Financing Constraints and Corporate Investment." National Bureau of Economic Research Working Paper #2387.

2 Bureau of Economic Analysis, National Income and Products Accounts, Table 6.2B, Lines 55 plus 59, divided by line 1 and Table 6.2D, line 59 divided by line 1. Compensation is used rather value-added because value-added data are not available at this level of industry detail.

3 Munnell, Alicia H. 1990. "Why Has Productivity Growth Declined? Productivity and Public Investment." *New England Economic Review*.

4 Thapa, Chandra and Sunil S. Poshakwale, 2010. "International Equity Portfolio Allocations and Transactions Costs." *Journal of Banking and Finance*, Vol. 34, 2627-2638.