Financial Institutions and their Quasi-Taxes:

A Little Bit of Craziness

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Governments levy taxes to finance a wide variety of public sector activities. With few exceptions, for example head taxes and taxes on economic rents, these taxes drive a wedge in the marketplace between the price paid by a purchaser and the price that a supplier of a commodity or a resource receives. The gap between what is paid and what is returned to suppliers is siphoned as tax revenues by government.

Many government regulations which aim at controlling market prices also introduce a tax-like wedge between demand and supply prices. Regulations of this kind have frequently been referred to as quasi-taxes. As will be shown below, what distinguishes quasi-taxes from ordinary taxes is that the benefits which they finance are targeted to particular groups in the economy. Quasi-taxes do not flow into general revenues in the way that ordinary taxes that are not earmarked do. Rather, quasi-taxes should be viewed as part of an overall tax and transfer package.

Quasi-taxes that exert their impact on the behavior of financial institutions in developing countries and which affect the degree of financial intermediation are the focus of this paper. It begins with a brief discussion of the motivations that lie behind the government use of quasi-taxes applied to financial markets. That is followed by a consideration of how effective these quasi-taxes are likely to be in achieving their stated objectives. The basic equivalence between financial sector quasi-taxes and formal tax and transfer mechanisms is set out in the next section. After that, a simple diagrammatic model is presented and used to indicate the potential range of effects that quasi-taxes may have on the efficiency of resource allocation and the distribution of income. The results of some earlier empirical studies attempting to measure the size of these effects are also inserted at this juncture. Finally, some

policy implications are brought out in the concluding section of the paper.

I. Why Quasi-Taxes?

Quasi-taxes appear in numerous forms but their ultimate aim is to control either the price or the volume of credit, or sometimes both In response to compelling political pressures governments everywhere have tried to steer more credit towards particular groups of borrowers, especially farmers, small businessmen, consumers of housing, and themselves, at terms that are more favorable than an unfettered market would provide.

Toward this end governments have typically imposed interest rate ceilings on deposits issued by formal sector financial institutions on the expectation that cheaper costs of finance would be passed on to borrowers in the form of lower loan rates. Where lower loan rates have not occurred, the ceilings on deposit rates have often been supplemented by ceilings on loan rates for preferred borrowers. Thus the scope of quasi-taxes does not include the often substantial informed financial sector or transactions with foreign financial institutions. Quasi-taxes are ordinarily selective taxes on one component of a country's financial system.

Another significant type of quasi-tax consists of restrictions on the portfolio composition of depository institutions. Banks and other financial lenders may be required to allocate a fixed proportion of their loans to preferred borrowers at rates below those charged on other types of loan. Alternatively, private commercial banks may be forced to hold a fixed percentage of their assets in the form of low-interest obligations issued by publicly owned specialized lending agencies which charge

concessional rates of interest to their borrowers.[1] In either situation the effect of the regulation is to place downward pressure on the level of the deposit rate that a competitive financial institution can afford to pay. Deposit holders are implicitly taxed by these regulations and some will find it attractive to hold their wealth in alternative forms such as tangible assets (real estate and jewelry for example) or assets that arise from lending to untaxed activity in informal and foreign credit markets. In the literature on development these implicit tax policies have been referred to as the financial repression of the formal financial sector in developing countries. Conversely, financial liberalization is the term associated with the elimination of these implicit tax policies.

An additional instrument of financial repression is the imposition of high reserve requirements on commercial banks. Because central banks seldom pay interest on required reserves, or if they do it is only at a relatively modest rate, high reserve requirements automatically reduce the proportion of income earning assets held by banks and limit the amount of interest which they can offer on their deposits.[2] From the government's narrow financial perspective, this state of affairs provides a number of important advantages. First, it enables governments to launch their expenditure programs without having to resort to higher levels of explicit taxation. When the public debt arising from a government deficit is monetized by the central bank, high reserve requirements both contain the growth of credit to the private sector and enhance the size of the inflation tax base, the stock of outside money or the magnitude of the monetary base that is diminished in real terms by inflation. Additionally, the emergence of low deposit rates makes it easier for low yield government

bonds to compete in the portfolios held by direct lenders.[3]

As noted by Fry (1988, chapter 12), credit ceilings are just as likely to constitute a form of quasi-tax on financial assets as credit floors. When financial institutions are enjoined from using their excess reserves to extend credit their incentive to compete for new deposits disappears and deposit interest rates are likely to be depressed by this absence of competition. When the margin between lending and deposit rates increases it's the same as if the financial institution had been subjected to a formal tax on its intermediation activities.

Most developing countries have at one point or another embraced either some or all of these forms of quasi-taxation. In their analysis of the regulatory experience of ten developing countries over the period 1970-82 Hanson and Neal (1986) found that all of them rigorously pursued directed credit programs designed to channel credit resources towards favored groups, sectors and regions, including the public sector. Six of them, Pakistan, Morocco, Thailand, Korea, Bangladesh and Korea, displayed modestly negative real deposit and preferential loan rates. Three of them, Nigeria, Peru and Turkey, exhibited real deposit rates over the period which were highly negative, in the -16.5% -18.6% range. Preferential loan rates were often lower than deposit rates. In all of these countries nominal interest rates tended to be sticky with the result that low or even negative real interest rates were primarily the by-product of inflationary macro-policies. While noting the tendency of resources to leak away from targeted lending programs, the authors concluded from their survey that directed credit schemes and public sector borrowing act to "crowd-out" nonpreferred borrowers and drive up interest rates in uncontrolled credit

markets due to the heightened competition for the remaining sources of credit.

What sustains the seemingly universal appeal of quasi-taxes on financial institutions? Evidently, the desire by governments for relatively cheap sources of bond finance is a major part of the story. But there seems to be more to it than that and at least two other considerations appear to be relevant. One is the stereotype, or deeply entrenched perception, that lenders, on balance, tend to be well-off while borrowers, on the whole, are either poor or not as nearly as well-off as lenders. A number of directed credit programs seem to be driven by a desire to redistribute welfare from rich lender to poor borrower. While a treatment of the probably distributive impact of financial quasi-taxes is reserved for section IV below, Adler (1985), among others, has challenged whether this popular perception bears even a remote resemblance to reality. In Colombia, Adler found that the clientele of specialized lending agencies in agriculture and housing consisted primarily of the wealthy farmer and the well-off homeowner. Moreover, the implicitly taxed lender was more likely than not to be a low income saver.

Also adding impetus to the regime of quasi-taxes in many countries is the apparent desire on the part of governments to provide compensation for the handicaps which some sectors or groups are perceived to bear on account of various non-financial policy initiatives. Consider agriculture for instance. In many countries this sector falls victim to a battery of non-credit policies which promote the growth of nonagricultural activities at the expense of agriculture. These non-credit policies include, but are not limited to, tariff-induced import substitution and overvalued exchange

rates (both of which act as an implicit tax on agricultural exports), foreign exchange restrictions and licensing schemes which grant priority to nonagricultural users and price controls on basic foodstuffs intended to raise the real wage of urban workers. In the messy world of second-best political bargaining the creation of a new distortion in resource use is often justified by the existence of earlier distortions.

Another, less frequently voiced, argument for quasi-taxes is that they provide a useful discipline on the exercise of monopoly power in a concentrated banking system. Imperfectly competitive banks may operate with sizeable spreads between loan and deposit rates, a measure of the implicit tax associated with monopolistic behavior. In such an environment regulatory restrictions on lending rates may be able to convert monopoly profits into lower lending rates and appropriate a portion of monopoly profits for the benefit of borrowers.

Finally, there is the simple minded notion that lower interest rates will stimulate a larger volume of investment. As discussed next, and as many countries have discovered the hard way, what is missing from this argument is a consideration of the supply side, or where the funds for investment will come from. Downwardly regulated interest rates may dry up some potential sources of investment finance and result in less, rather than more, investment.

II. Quasi-taxes - how effective are they?

It is one thing to establish a regime of quasi-taxes on financial intermediaries. It is quite another to enforce them and have them apply as they were intended to work. Like taxes, regulations involve an element of

compulsion and invite avoidance and evasion behavior on the part of those who are coerced. Such tension is inevitable and perverse outcomes may occur when quasi-taxes attempt to rule the interplay of market forces by edict and compel financial market participants to act in ways that are inconsistent with their self-interest.[4]

Suppose banks or other intermediaries are required by regulation to lend to a group of preferred borrowers at below-market lending rates. A variety of responses from those subject to regulation would help to mitigate the repercussions of such a decree. While regulators may have tight control over stated interest rates they have much less influence upon effective interest rates.[5] Maximum legal loan rates would be expected to induce intermediaries to charge extra fees in appraising loan applications, to collect interest in advance and to require borrowers to hold compensating balances. To the extent that these price reactions were inadequate to offset the regulatory bite, or perhaps were themselves also made subject to regulation, some further responses would be anticipated from the supply side. Lenders would have a strong incentive to curtail their supply of credit to preferred borrowers and demand substantial collateral from those who were fortunate enough to receive loans at the subsidized rates. According to Virmani (1984), such was the experience in Bangladesh where a system of sectorally specific interest ceilings redirected credit flows away from low interest farm and export loans towards other sectors and towards borrowers with more collateral. Alternatively, if intermediaries are sectorally specialized and deposit rates are depressed by the regulated loan rates, ultimate lenders may shift their funds to higher yielding outlets. Either way, the supply of

preferred credit is diminished.

Governments have adopted a number of measures to counteract the erosion of their price controls on credit. In some cases quantity controls either have been combined with, or used to replace, price controls in order to prevent the reduction in supply of preferred credit. The credit floors described in the last section are the most common manifestation of quantity constraints. However, even these lending requirements can be circumvented by the simple expedient of reclassifying the purpose of a loan. For example, all acquisitions of small aircraft would be transformed into agricultural transportation loans for purposes of satisfying a credit floor on the amount of agricultural loans.

Rediscount privileges are also used to make it worthwhile for financial institutions to extend relatively low interest loans. Providers of these loans may sell them to the central bank in exchange for low interest central bank credit, a privilege which makes the central bank the de facto supplier of cheap credit. Nonetheless, the fungibility of funds makes it impossible to easily ascertain the effectiveness of the rediscount mechanism. Intermediaries could shift blue chip clients who would have received loans in any event to the front of the rediscount line and thereby expand the volume of funds that are available for nonpreferred lending. While it introduces a financial carrot to offset the impact of the quasi-tax, the rediscount mechanism may also seriously complicate the task of controlling the monetary base, as Fry (1988) has pointed out. Moreover, by contributing to an elaborate pattern of financial layering, rediscounting may raise the resource cost of shifting funds from ultimate lenders to ultimate borrowers, as also noted by Fry (1988).

Another technique for diverting credit into lower paying employments in a system of obligatory investment or forced lending that is sometimes imposed on private financial intermediaries. Adler (1965) gives a detailed description of how such a system works in Colombia. A network of obligatory investments for private intermediaries sustains a system of less than average interest rates on loans made by a raft of public lending institutions catering mainly to agriculture, housing and small business. The Caja Agraria, for example, is the primary agricultural lender and it receives its loanable funds from sales of its low yielding bonds to the central bank and to savings institutions and commercial banks which are obliged to purchase them. Similarly, the major mortgage lender, Banco Central Hipotecario, issues a 20 year bond that insurance companies, capitalization companies and all issuers of savings deposits are required to purchase. Because of the unprofitability of savings deposits commercial banks issue few of them and most savings accounts are collected by the public lending institutions which pay only a modest return on them. Adler estimates that the obligatory investments generate yields that are on average only about half, and sometimes even less than that, of the market determined return on a corporate bond.

Both the lessons of experience and the insights of economic theory suggest that the successful application of financial quasi-taxes depends critically on the compartmentalization of a country's capital markets. Just as a discriminating monopolist must prevent opportunities for resale in higher priced markets, a government relying on quasi-taxation must continuously combat profit-seeking pressures to break down capital market barriers. Suppliers of credit have to be prevented or discouraged from

shifting their funds to higher yield activities and users of credit must be deterred from profitable relending. Otherwise, arbitrage behavior will render quasi-taxes ineffective.[6]

As Hanson and Neal (1986) concluded from their examination of ten developing countries, there is an inevitable leakage of resources from targeted sectors. Relending is particularly difficult to control. If, for example, lending rates are below the level of deposit rates those fortunate enough to have access to funds effectively have the keys to a virtually riskless money machine.[7] With rationing of loans some forms of relending may be disguised as mergers. As described by Fry (1988), some large firms which receive rationed credit may use those resources to buy out profitable smaller firms that have been excluded from the loan market.

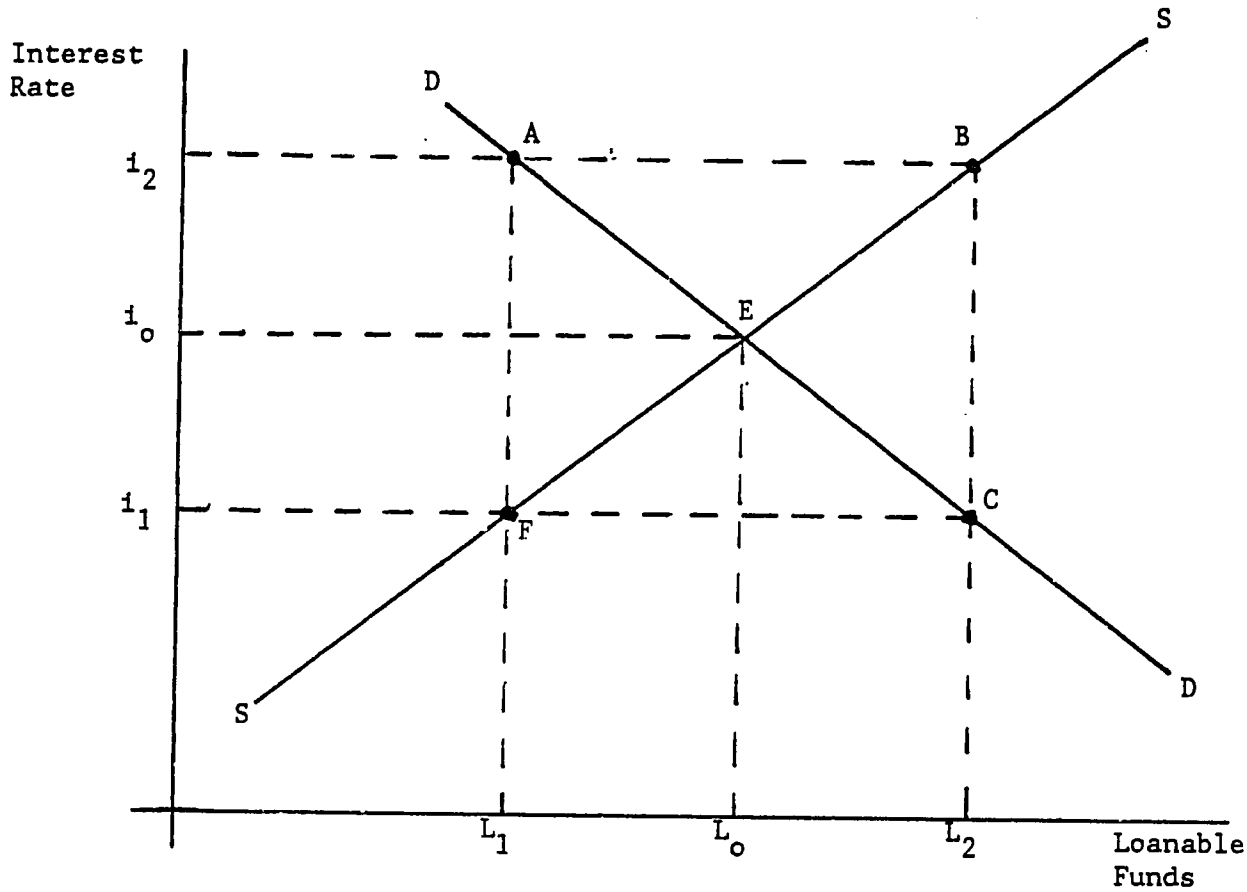
III. The Equivalence of Taxes and Quasi-Taxes

Figure I can be used to illustrate some of the similarities and differences that exist between quasi-taxes on financial intermediaries and formal tax policies. The supply and demand curves for loanable funds shown in Figure I represent behavioral relationships in the formal financial sector of a typical developing country. As interest rates increase savers are willing to hold a larger fraction of their wealth in the form of deposits issued by this sector. Demand, however, diminishes at higher rates either because borrowers can turn to other sources of credit or because it becomes unprofitable to use borrowed funds.

In the absence of taxes of any kind, a competitive financial sector would establish a uniform interest rate, risk factors aside, of i_o and furnish credit on the scale of L_o to borrowers.[8] If an explicit tax on

Figure I

Quasi-Taxes and Transfers



financial transactions were introduced at this point it could be viewed as either adding to the cost of supplying deposits or subtracting from the return to lending. Either way, a wedge would be driven between the interest rate paid by borrowers and that received by depositors. In Figure I such a wedge is portrayed by the distance AF. With a wedge of this size borrowers pay the now higher interest rate i_2 and depositors receive the now lower interest rate i_1. Tax revenues in the amount depicted by the rectangle AF i_1 i_2 are collected. Taxes of this type exist in Turkey and the Philippines where ad-valorem taxes are assessed on the gross receipts of the banking system.[9]

Quasi-taxes replicate many of the effects of a formal tax. For example, a ceiling on deposit rates of i, would curtail the supply of deposits and loans to L_1 just as an explicit tax of AF would. If loan rates were free to adjust, the competition for a diminished credit pool would drive interest rates to i_2 and equilibrate the demand and supply for credit.[10] If loan rates as well as deposit rates were restricted to i_1, loans would have to be rationed out on a non-price basis. Exactly how this might be done, efficiently or otherwise, is discussed in the next section. If it were done efficiently borrowers who would be willing to pay interest at i_2 on the margin would instead receive loans at the reduced rate of i_1. The combination of the interest ceilings and efficient rationing would be equivalent to imposing an explicit tax of AF on financial institutions and earmarking the entire proceeds of the tax to provide an interest rate subsidy to borrowers. Thus while an explicit tax would generate positive tax revenues the equivalent quasi-tax has no revenue implications because it is coupled with a subsidy or transfer of equal value.

In the case in which loan, but not deposit, rates are regulated at the level i_1 there are several possibilities concerning who pays the cost of the subsidy provided to borrowers. Most likely, the lower return from lending will bring downward pressure to bear on deposit rates and depositors will finance the subsidy. However, some cross-subsidization among borrowers may also occur if financial institutions can extract higher lending rates from nonpreferred borrowers. Finally, if the regulated institutions earned some monopoly rents prior to being regulated it is probable that a portion of the subsidy cost will be paid for by a reduction in these rents. The latter possibility is the most favorable regulatory outcome since it, and it alone, would not provoke any resource misallocation.

The quasi-tax can also be usefully compared with a formal subsidy scheme for borrowers, for example, the practices of some public lending agencies in which the loan rate is held below the deposit rate. The losses entailed by these lending practices are recovered from government revenue transfers intended to help pay for current expenditures or which are received as part of a capital transfer agreement. In Colombia, Bird (1984) has outlined how the central government has made budgetary transfers to the Land Credit Institute (ICT) on a regular basis and also, on an occasional basis, to the Agricultural Bank (Caja Agraria). In 1979 for example slightly less than one percent of central government expenditures was allocated as a capital transfer to the ICT.[11]

In Figure I the vertical distance BC represents a formal subsidy to lenders. With a subsidy of that size it would be possible to charge lenders a low rate of i_1 while paying depositors the higher rate of i_2.

The revenue cost of financing this subsidy is shown as the rectangular area BC i_1 i_2.

IV. The Economic Effects of Quasi-Taxes

Since quasi-taxes are capable of duplicating the effects of explicit, earmarked taxes, it is natural to evaluate the impact of quasi-taxation according to the normal criteria of efficiency, equity and administrative ease. Enforcement complications and issues were dealt with earlier so this section concentrates on the efficiency and equity aspects of quasi-taxation.

The efficiency features of quasi-taxation are most easily appreciated with the aid of a simple diagrammatic model shown in Figure 2. The model itself is adapted from Chamley (1987) and is an interesting extension of Harberger's (1962) two-sector tax incidence model.

The model rests on a number of critical assumptions which are spelled out and discussed below:

HH1. The supply of real capital to the economy is fixed - as shown by the length of axis O_F - O_I in Figure 2 - and is allocated according to the supply of funds between the formal (F) financial sector and the informal (I) financial sector. Wealth-owners hold indirect claims to the economy's capital stock by holding the indirect liabilities issued by firms or money lenders in both sectors.

2. Savers can switch their assets easily between the formal and informal credit markets so that the deposit rate paid in the formal sector matches the (risk-adjusted) rate of return on investment in the informal market.

3. Borrowers, on the other hand, cannot move between sectors and are therefore prevented from borrowing in one market and lending in the other.

4. To simplify matters, there is no uncertainty with respect to investment returns or the ability, or willingness, to repay loans and therefore no risk premia. Intermediation costs are also assumed to be zero.

5. When interest ceilings are imposed on formal sector loan rates, firms in that sector are unable to offset their impact by a policy of requiring compensating balances or other behavior which raises effective loan rates.

6. The economy enjoys macro-stability such that nominal interest rate changes correspond to real interest rate variations and any induced revenue effects attributable to quasi-taxation do not create fiscal deficits.

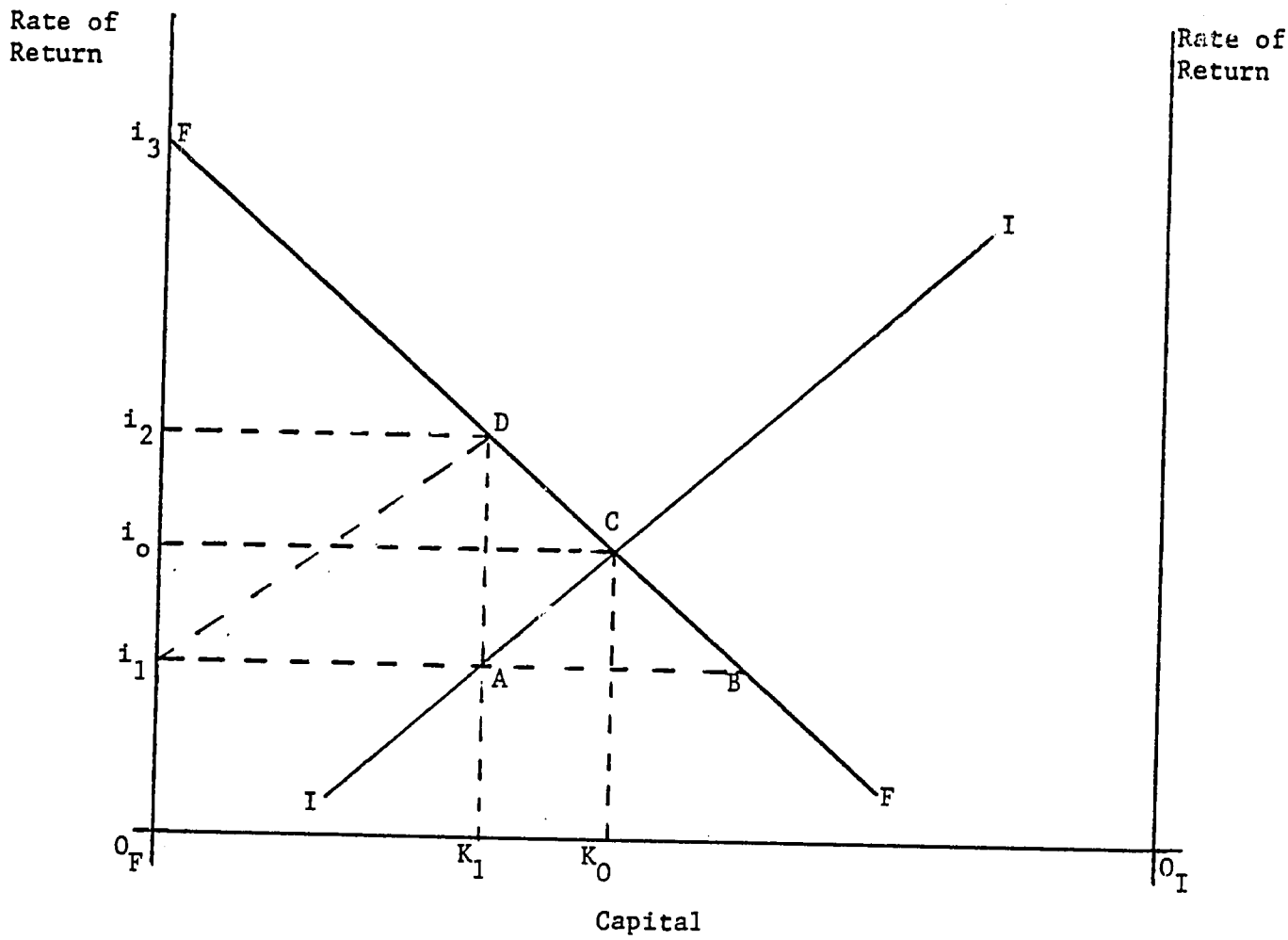
7. Efficient relative prices prevail in the rest of the economy and produce a convergence between private and social rates of return on investment.

8. In the absence of regulation the formal financial sector behaves in competitive fashion.

Given these assumptions, an initial capital market equilibrium is featured in Figure 2 where the interest rate i_o is received by owners of wealth in both sectors and supplies of deposits and credit in the amount $O_F - K_O$ emanate from the formal sector. The functions F-F and I-I indicate the returns on investment financed by loans extended from the formal and informal sectors respectively. By assumption, the function I - I also

Figure 2

The Inefficiency of Quasi-Taxes



represents the supply of deposits to the formal sector.

When interest rate ceilings on loans (and hence deposits) are introduced into the formal sector the interest rate in that sector declines to i_1 and deposits (and loans) issued by it contract to $O_F - K_1$ at the lower deposit rate. Credit in the amount of $K_1 - K_o$ transfers to the informal sector where the larger supply depresses interest rates on loans to i_1 as well.[12] At the regulated loan rate there is an excess demand for formal sector loans of AB and the amount of loanable funds on hand must be rationed out in some manner among potential borrowers.

How the rationing is carried out has an important bearing on the determination of efficiency costs. There are several possibilities. If formal sector lenders ration funds efficiently, they will only make funds available for their highest rate of return borrowers. In that case the marginal borrower would earn a rate of return of i_2 on his investment. Since the marginal borrower in the informal sector only earns i_1 on his investment there is a misallocation of investment resources and a loss of capital productivity on the marginal investment equal to the difference between i_2 and i_1. Using similar reasoning, it can be seen that the size of the inefficiency resulting from the quasi-tax is represented by the area of the triangle ACD.

But that is not all there is to it. At the margin, borrowers lucky enough to receive a loan will reap an economic rent of DA which also represents the maximum amount that they would be willing to pay in order to enjoy that rent. If other prospective borrowers have to incur similar rent seeking costs in order to compete successfully for access to funds there is an additional social cost associated with the area of the rent-seeking

rectangle DA i_2 i_1. In that case the total inefficiency cost of the quasi-tax would consist of the trapezoidal area DCA i_1 i_2.

If, on the other hand, formal sector lenders are unable or unwilling to ration funds efficiently the social costs of the quasi-tax are elevated. Consider the extreme case, for example, where the most efficient borrowers are replaced by those who are least efficient. Assume, for simplicity, that these two groups are of equal size, represented respectively by the equal distances i_1A and AB in Figure 2. If the most efficient borrower were pushed aside for the least efficient the loss in investment efficiency would be measured by the difference between the rates of return i_3 and i_1. As the next most efficient borrower was replaced by the next most inefficient borrower a slightly smaller efficiency cost would be incurred until, as the process continued, point D on FF was reached where no further efficiency loss occurs. By then the total cost of inefficient rationing would correspond to the triangular area i_3 Di_1.

In the case of inefficient rationing the costs of quasi-taxation consist of the triangle i_3 D1, plus the triangle ACD. The former triangle represents the cost of investment misallocation within the formal sector while the latter triangle indicates the distortion in the distribution of investment between the formal and informal sectors. In addition, if potential borrowers consider their selection for loan eligibility as part of a random decision-making process they will also be willing to incur some rent seeking expenditures.

Without detailed empirical inquiry it is difficult to determine which of the two rationing scenarios is most realistic.[13] The empirical work currently available has tended to opt for the efficient rationing paradigm. Table I

presents some recent estimates by Chamley (1988) of efficiency costs for Indonesia and Thailand. The allocative cost, corresponding to the triangle ACD in Figure 2, is measured according to the formula 1/2 $\Delta i\ \Delta M_2/GDP$ where Δi is the increase in real deposit rates resulting from financial liberalization and $\Delta M_2/GDP$ is the growth in savings deposits, relative to GDP, issued by formal sector financial institutions. Rent seeking expenditures, corresponding to the rectangle $i_2\ DAi_1$, in Figure 2, are estimated from the formula $\Delta i\ .\ M_2^o/GDP$ where M_2^o/GDP is the ratio of savings deposits to GDP prior to liberalization.

As shown in Table I, the allocative gains of financial liberalization range from .5 percent of GDP in Indonesia to 1.4 percent in Thailand. In both countries the estimated reduction in rent seeking expenditures is larger, varying between 2.5 percent of GDP in Indonesia and 3.4 percent in Thailand. Summing these benefits, the total gain from liberalization is estimated as 2.5 percent of GDP in Indonesia and 4.8 percent in Thailand.

How robust are these estimates? Apart from measurement errors which plague every empirical effort, they are sensitive to the accuracy of the numerous assumptions on the basis of which they are constructed. Two of these assumptions, in particular, are likely to give cause for concern and have enjoyed a controversial history. There is a noticeable lack of agreement in the literature on the nature of the opportunity cost of new deposits issued in the formal sector subsequent to a liberalization policy. Much of the early literature on this topic assumed extremely limited savings choices and characterized savers as holding the bulk of their wealth in unproductive forms such as land and precious metals. McKinnon (1973) for instance viewed the alternative to holding a deposit as a much

Table I

Efficiency Impact of Financial Liberalization in Thailand and Indonesia

Variable	Indonesia	Thailand
Increase in Real Deposit Rates (Points)	.1	.09
Initial Level of M_2/GDP	.2	.38
Final Level of M_2/GDP	.3	.68
Allocative Gain (percent of GDP)	.5	1.4
Savings in Rent Seeking Costs (percent of GDP)	2	3.4
Total Benefit (percent of GDP)	2.5	4.8

Source: Chamley (1988)

lower yielding direct investment in traditional technologies. In their appraisal of the liberalization experience, Brown (1973) for Korea and Ranis (1977) for Taiwan both argue for a dramatic shift in wealthholding from unproductive real assets and a consequently large increase in the degree of financial intermediation in the economy.[14] In both countries there was a spectacular growth in recorded savings rate. Ranis claims that when real deposit rates rose in Taiwan from 10 percent in 1958-60 to about 15 percent in 1963-65 the gross saving rate doubled from 10 to 20 percent of GDP, 70 percent of which derived from households and more than 80 percent of which flowed through formal financial channels. In terms of Figure 2, the impact of this alternative view is to assert a much large gain stemming from financial intermediation, a gain associated with the trapezoid DC K_1 K_o rather than the triangle ACD.

The more recent literature on this subject is less sanguine and pays more attention to the role of curb or informal markets than the earlier literature did. In his study of Indonesia and Thailand Chamley (1988) found that liberalization was not associated with a higher savings rate.[15] Other recent work reviewed by Fry (1988) reaches a similar conclusion. Van Wijnbergen (1983), meanwhile, has questioned the conventional wisdom by suggesting that the informal sector, because of its relatively low reserve requirements, is a more efficient intermediator than the formal sector. According to this view, the supply of credit would decline in the economy if savers switched their claims to formal sector deposits.

The other key assumption imbedded in Figure 2 is the supposition that relative price structures in the economy's commodity and factor markets are efficient. Given what we know, or think we know, about the plethora of

distortions that exist in developing economies, this is a strong assumption. However, without it, there is the strong likelihood that the financial sector will efficiently allocate funds to socially wasteful investments. Thus the efficiency payoff to financial liberalization may very well depend on the success of prior reforms to prices and policies in other sectors of the economy.

A precise determination of the income distribution consequences of eliminating financial quasi-taxes is no less easy to pin down. There is a theoretical presumption, however, that if banks and other intermediaries are prevented from charging higher loan rates for riskier investments they are apt to resort to non-price methods of reducing their exposure to risk. As Virmani (1982) has argued, one way to do this is to insist on higher collateral requirements in rationing loans. If access to loans is tied to initial ownership of assets it seems probable that such a lending scheme would skew the distribution of loans in favor of the rich. As McKinnon (1973, 73) puts it, "cheap credit ... may not benefit the little man at all" if he is thrown into the arms of informal sector money lenders.

On the other hand, if poor borrowers tend to be concentrated in the informal sector, the model implicit in Figure 2 unambiguously predicts that quasi-taxes in the formal sector will depress loan rates in the informal sector and, therefore, improve the welfare of the poor. Conversely, a financial liberalization, while it might allow the poor greater access in the formal market, would also raise informal sector loan rates and harm the poor. Using a more complicated three sector model consisting of two informal ("old" and "new") sectors as well as a formal sector, Roemer (1986) arrives at the same conclusion. In his model

liberalization works to attract funds out of the informal markets and harm poor borrowers with no access to the formal market.

A complete picture of the income changes resulting from liberalization would also have to consider the income profile of depositors in the formal sector and money lenders in the informal sector.[16] If the former are poor and the latter are rich on balance, liberalization would have a mixed impact on income distribution, helping both one group of poor and another group of richhouseholds. Unfortunately, there is a dearth of empirical studies that have tried to sort this matter out. It is interesting to note, however, that Ranis (1977, 38) reports results for Taiwan which contradict the normal predictions of how interest rates respond to liberalization. When real interest rates in the formal sector rose from 10 percent in 1958-60 to 15 percent in 1963-65 it is alleged that interest rates in unofficial markets - "deprived of some of their monopoly content" actually fell from about 50 percent in the late 50's to around 25 percent in the early 60's. Under this scenario it is much more likely that the poor borrower and depositor would gain at the expense of the rich money lender.

A more complete picture would also need to examine the indirect effects of liberalization on the labor market. If quasi-taxes and cheap credit induce excessive capital intensity in production, the elimination of quasi-taxes would contribute to the welfare of low income groups through higher wages and more employment opportunities.

While there is something of an empirical void on the subject, it is difficult to disagree with Fry's overall assessment (1988) of quasi-taxes that they are likely to reduce both the quantity as well as the quality of

investment, encourage capital intensity, worsen income distribution and increase the degree of industrial concentration.

In Korea, Costa Rica, Brazil and Colombia there is some, but hardly overwhelming, evidence to support the view that financial liberalization contributes to a more even distribution of income, both directly in the capital market and indirectly in the labor market. Based on a wider sample of developing country experience Fry (1988, 153) concludes that "the bulk of the empirical evidence ... is consistent with the McKinnon-Shaw view that financial liberalization increases saving, improves the efficiency with which resources are allocated among alternative investment projects and therefore raises the rate of economic growth." Asian countries, for example, that relied most heavily on selective credit policies experienced the lowest rates of economic growth.

V. Policy Implications

In their design and operation quasi-taxes generally correspond closely to the notion of a negative tax expenditure. A tax expenditure is a form of preferential tax treatment which reduces demand, relative to supply, prices and encourages greater output of a particular item. There is an implicit grant from taxpayers in general to the users of that item. A quasi-tax, on the other hand, raises demand relative to supply prices and discourages the supply of some product. In this case there is an implicit transfer from the suppliers to the users of that product.

Whether tax expenditure or quasi-tax, all instruments of public policy should be judged on their ability to meet the goals set out for them, assuming that these goals are in some sense worthy. Quasi-taxes imposed on

investment, improving income distribution, channeling credit to neglected sectors and correcting for the distortions created by other government policies. It has been argued here that directed credit programs are not very well suited to serve any of these purposes. These programs are for too blunt an instrument to effectively redistribute income. Because they are poorly targeted, any redistribution associated with them is likely to be inefficient or even perverse. Because of their supply inhibiting effects, these programs also cannot be reasonably expected to stimulate investment. Less investment and investment misallocation is more likely. Redirecting sectoral credit flows is also likely to fail to the extent that it relies on forcing institutions to do the unprofitable. Finally, while financial quasi-taxes may help to partially neutralize other distortions in the economy, they also introduce fresh distortions such as the promotion of greater capital intensity.

The essential reason that quasi-taxes fail as a policy measure is that they do not tackle economic problems directly but instead approach them indirectly in ways that are guaranteed to cause inefficient outcomes. If more investment is sought, it is better to adopt measures which stimulate various kinds of saving, private, public and foreign. Similarly, if more equal distribution of income is desired, tightly targeted expenditure programs are likely to work better than any tax related measure. And an explicit subsidy, which rewards lenders for redirecting credit, is apt to be crowned with greater success than compelling lenders to make unprofitable loans.

Although quasi-taxes on financial institutions may be unattractive, it would be a mistake to conclude that explicit taxes on these institutions would be much better. While an explicit tax would at least generate some revenue and eliminate price rationing and some amount of rent seeking, it can be argued that there are better ways of raising revenue than taxing the gross receipts, and perhaps even the income, of financial intermediaries. Invariably these explicit taxes end up as taxes on the business use of inputs and provoke serious inefficiencies in the intertemporal and intersectoral use of resources.

If financial quasi-taxes have very little to recommend them, it would also be a mistake to reach for the implication that their immediate elimination is called for. As the experience of the Southern Cone countries (Chile, Uruguay and Argentina) has vividly taught us, successful financial liberalization must be seen as part of a wider reform effort involving a carefully planned sequence of policy reforms. The object lesson coming from the Southern Cone is that macro-stability, realistic exchange rate policies and trade liberalization are logical prerequisites to a satisfactory financial liberalization. Otherwise, if the appropriate macro, exchange rate and trade policies are not already in place, financial liberalization could exacerbate instability and reinforce inefficient resource use. After the domestic financial system has had sufficient time to adjust to a new competitive environment, the final step in the sequence of reform initiatives is to link with the world capital market by freeing up the economy's capital account and accepting free trade in financial services.

END NOTES

1. In some countries financial institutions may be required to hold a certain percentage of low yielding government bonds in their portfolios. More commonly, however, governments seek to reduce their borrowing costs by making the interest on their liabilities tax exempt.

2. To see this point more clearly let L, R and D denote, respectively, interest-earning loans, required reserves, and bank deposits. If r represents the interest rate paid on loans and i is the deposit rate, zero profit competitive equilibrium, ignoring intermediation costs, required $i \cdot D = r \cdot L$ or $i = L/D \cdot r$. If p is the required ratio of reserves to deposits, $p = R/D$, and since $L + R = D$ from the bank's balance sheet, $L/D = (1 - p)$, so the equilibrium condition can be rewritten as $i = (1 - p)r$. Clearly, for a given value of r, a larger reserve ratio p is consistent with a lower value for the deposit rate.

3. Chamley (1987) has argued that the implicit subsidy to interest on government debt is in fact paid by the implicit tax on deposits. Therefore, to the inflation tax revenue which arises from taxing the monetary base should be added an amount equal to the value of public debt times the difference between a normal real rate of return on investment and the real rate of return actually paid.

4. My favorite example is the employment security law passed by Brazil in the 1950's. Under that law employees with a continuous record of employment of ten years or more with a single employment could not be fired. In light of the unintended incentive to fire long term employees prior to their tenth year of employment, the regulation is

alleged to have contributed to greater, not less, job insecurity in that country.

5. In an unindexed tax system real effective interest rates are sensitive to the inflation rate as Hanson and Neal (1985) have shown.

6. At a macro level foreign exchange controls are needed if a country is to maintain real domestic interest rates that diverge significantly from real interest rates in the rest of the world.

7. The real estate analogue to relending is the practice of "flipping" properties if their value is more than what was paid for them.

8. For the sake of simplicity reserve requirements against deposits are ignored in Figure I so that all deposits are transformed into loans.

9. Strictly speaking, personal income taxes on interest income in many countries also create a wedge similar to AF in Figure I, a wedge whose size is extremely sensitive to the rate of inflation in an unindexed tax system.

10. In a competitive environment financial firms would be expected to engage in non-price competition for deposits through greater advertising, more branches and payments in-kind to new depositors.

11. A more important source of finance for the ICT is the forced lending to it by insurance companies and the commercial banks. The latter are required to hold one percent of their reserves in the form of low yielding ICT notes. This requirement, of course, acts as an implicit tax on depositors of commercial banks.

12. This is perhaps the principal result of the Harberger model, that a tax on a factor in one sector results in a burden that is shared by that factor no matter where it is employed. Here a quasi-tax on loans

in the formal sector depresses lending rates in both sectors.

13. If banks are unable to profit from risky high return loans, they would be expected to concentrate making low return (and less risky) loans, a strategy that conforms with the practice of inefficient rationing.

14. In both Korea and Taiwan investment increased along with savings since the rate of return on investment remained higher than the augmented real interest rate on loans.

15. Chamley (1988) also documents the failed liberalization experiment of the Philippines after 1980. The attempt at liberalization was thwarted by a high inflation rate and the taxation of financial institutions via a high reserve requirement and a tax on all bank receipts.

16. If quasi-taxes and the consequent rationing of loans encourages greater economic concentration and the exercise of monopoly power, a liberalization which reverses this tendency could potentially improve both efficiency and equity through the creation of more competitive market structures.

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