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Earmarking Government Revenues: Does It Work?

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Economic theory provides some justification for earmarking. But in practice it has proven difficult to set up earmarking mechanisms that are both efficient and independent, and governments often override earmarking arrangements when they need resources.

"Public choice" economists (Buchanan and others) have shown that, under some circumstances, earmarking can facilitate agreement about additional revenues *and* expenditures when there is no consensus about raising either separately. Earmarking also may provide some protection for priority programs against shifting majorities, inefficiency, and corruption.

In practice, pricing and taxation arrangements that lead to an appropriate allocation of resources for the service in question — and that are relatively automatic and independent of frequent administrative decisions — are difficult to set up. Under a wide variety of circumstances (such as externalities and nonconstant returns to scale), efficient pricing and taxing would lead to unbalanced budgets for the earmarked fund and hence interdependence with the general budget. In addition, earmarked funds seldom achieve independence because they depend on government for additional, nonearmarked sources of funding or on frequent government decisions about prices or taxes for the earmarked sources. Governments often circumvent the intentions of earmarking by withholding funds or failing to change prices or taxes or, if need be, simply suspending the earmarking arrangements. These problems, and the failure to provide an appropriate balance between recurrent and capital expenditures, lie at the heart of the World Bank's disenchantment with highway funds.

Skepticism about earmarking is justified because in general it hasn't worked very well. Any earmarking scheme should meet a rather formidable set of prerequisites, among which the most important are:

- Is there a substantial overlap of beneficiaries and taxpayers? (Earmarking works best in local government situations and least well where there are strong redistributional or social welfare objectives involved.)

- Is earmarking essential (in additional to benefit charges) to ensure service quality or revenue collection?

- Will the pricing and taxing arrangements lead automatically to the appropriate levels of the service?

- Is there an agency competent to carry out the program and appropriate accounting and auditing to guard against abuse?

- Is there a cutoff date for deciding whether the earmarking arrangements should be continued?

This paper is a product of the Public Economics Division, Country Economics Department. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Ann Bhalla, room N10-059, extension 60359 (43 pages with tables).

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PART I: PRINCIPLES OF EARMARKING

A. Background

1. Earmarking is the practice of assigning revenues from specific taxes or groups of taxes to specific government activities or to broader areas of government activity. As such, it contrasts with general fund financing where monies are pooled to be used for various government purposes. In practice, earmarking has come into being via statute or via constitutional clauses mandating that certain revenues only be used for specified activities. The rules of the game may in some cases allow earmarked funds to be supplemented by revenues from other sources or allow earmarked funds to be diverted to other uses. The distinguishing feature of earmarking, at least in its pure form, is the desire to protect a certain category of expenditures from the vagaries of the political process by linking them to a particular revenue source. Once this link is established, the system supposedly runs on automatic pilot and the behavior of revenues over time drives the level of expenditures.

2. At first glance, earmarking appears to be an application of the benefit principle of taxation -- that is, the beneficiaries or recipients of certain government activities are the ones paying the taxes or charges. Despite the apparent connection, however, it is possible to have benefit taxation or earmarking without the other. Benefit taxes may be added to the central pool or revenues may be earmarked for activities which do nothing for the contributing taxpayers.[1]

1/ For a useful review of the benefit principle of taxation and its relation to questions of efficiency and equity, see R.M. Bird, "A New Look at Benefit Taxation" in H.C. Recktenwald (ed.) Tendances a Long Terme du Secteur Public: Secular Trends of the Public Sector 241 (Paris: Editions Cujas, 1978), pp. 241-252.

3. Four broad types of earmarking, categorized by the degree of specificity of tax source or expenditures financed, are shown in Table 1. The most common forms are gasoline taxes/motor vehicle fees for highway expenditures and employer/employee contributions to social security and unemployment insurance funds. Revenue sharing between various levels of government is also common. A subcategory of Type A forms what we will call "strong earmarking", the case where there is a benefit link between the charges assessed and the goods/services provided. These are cases where the goods/services involved have the characteristics of private goods -- little or no externalities, no claim by recipients for special treatment on income distribution grounds, and no significant inefficiencies resulting from the implementation of a charge.[2] Transactions in these goods give off market signals regarding the amounts desired and willingness to pay. It is also worth noting that public enterprises -- to the extent that they are allowed to retain control over profits -- represent a form of strong earmarking; the purity of each case would depend on their independence from the budget for subsidies or other special financing arrangements.

4. The remaining cases of Type A and Types B-D in Table 1 are all examples of "weaker" earmarking in that the connection between assessees and beneficiaries is tenuous or non-existent and there are redistribution or other social welfare objectives comingled with allocative objectives. The designation of a liquor tax for the financing of education, for

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2/ Actually, "strong earmarking" could be extended to public goods as well provided a way could be found to induce people to reveal their preferences about what they would be willing to pay for alternative amounts of the good, hence allowing a decision to be reached about the optimum quantity to be provided and the division of the tax bill for that quantity among citizens according to their preferences.

TABLE 1: VARIETIES OF EARMARKING

Type	Revenue	Expenditure	Examples
A	Specific Tax or Fee	Specific End-use	· Gasoline taxes/ motor vehicle fees for highway investments · Social Security, Unemployment funds · Public enterprises
B	Specific Tax or Fee	Broad End-use	· Lottery proceeds and sin taxes (tobacco, alcohol) to finance social sector programs · Taxes/royalties from petroleum to finance development expenditure
C	General Tax	Specific End-use	· Fixed % of total revenue devoted to specific programs (e.g. education) · Revenue sharing for a specific purpose
D	General Tax	General End-use	· Revenue sharing

example, gives us no useful information about the appropriate level of education and represents a straight transfer between two groups of citizens. Similarly for the earmarking of a fixed (and arbitrary) percentage of general revenues for education. All of the cases of earmarking can be diluted by the possibilities for supplementary funds from general revenue or diversion of earmarked funds to other uses. In such instances, it is not clear what role earmarking is playing since decisions about the relative merits of using funds on the earmarked expenditure versus other government expenditures appear to be dictating the allocation of resources at the margin.

5. In the remainder of this paper, we will concentrate our attention on those cases of earmarking involving the provision of fairly specific goods or services financed by a clearly designated tax or fee (that is, categories A and B in Table 1). Even here, to make the discussion reasonably tractable, we will ignore social security, public enterprises, and the sharing of revenues between levels of government, all of which are special cases of earmarking. The remainder of the paper takes the following shape. Sections B and C sketch out the cases against and for earmarking as they have appeared in the literature. Section D takes up the question of whether rules can be developed for price/tax setting and expenditure of the proceeds for earmarked goods and, if so, whether such rules appear to lead to desirable consequences. The section also takes up the question of whether earmarking is justified in those cases where there is little or no connection between the beneficiaries of public expenditures tax/price payers. Part II summarizes the lessons that can be learned from several prominent cases of earmarking with which the World Bank has had experience: highway funds, betterment taxes to finance local expenditures, and Turkey and Colombia where earmarking has become extensive. Part III draws some preliminary conclusions and suggests some criteria which earmarked funds should meet.

B. The Case Against Earmarking

6. Among economists and public administrators, earmarking has but a few supporters. The case against is well known and can be stated quite briefly. The usual litany of objections contains the following items:[3]

3/ The list is from Elizabeth Deran "Earmarking and Expenditures: A Survey and a New Test", National Tax Journal (December 1965), pp. 354-61, but similar remarks have been made in a number of places.

- It leads to a misallocation of resources, with too much being given to earmarked activities and not enough to others;
- It hampers effective budgetary control, to a degree depending on whether provisions are embedded in statutes or in the constitution;
- It infringes on the powers and discretion of the legislative and executive branches of government;
- It imparts inflexibility into budgets in that changes only come with a lag and earmarking systems continue after their usefulness has been served.

7. The litany boils down to saying that earmarking reduces discretion; by reducing the scope of the executive/legislative branches' command over the allocation of resources, it builds some rigidity into the system and reduces flexibility. Earmarked expenditures are exempted from swings in the availability of general resources; in times of general resource shortages, too much will be devoted to the earmarked areas compared to a situation where they had to compete with other uses (provided, of course that earmarked funding sources are more stable than general revenues). In addition, earmarking has been criticized because it removes expenditures from close public scrutiny. Earmarked expenditures may not have to meet the same rigorous evaluation as other budgetary expenditures, and hence funds may be diverted to low priority projects or squandered in needless overheads (e.g., elaborate buildings, overstaffing).

8. Clearly, the foregoing arguments have some merit. At a very minimum, they would lead one to conclude that expenditure of earmarked money should be subject to established, clear evaluation procedures and to strict accounting/auditing to assure that funds are not diverted from stated purposes and that each earmarked fund should be subject to periodic review as to the desirability of its continuation. Nonetheless, it is hard to make a case against earmarking under all circumstances. The defects cited by its critics are the virtues cited by its proponents who argue that there are circumstances under which limitations on the possibilities for reallocating resources and rigidity are in fact desirable. Moreover, the flexibility of general fund financing can be overstated. Monies are not readily moved from one expenditure category to another as expenditures for debt service, social insurance, and oftimes administration and security take precedence and expenditure programs, once started, take on a life of their own. In some cases, countries have established very strict control procedures to guard against corruption or the misuse of funds, safeguards so strict that it is difficult to begin expenditure programs or to obtain timely funding for them once approved. In such cases, earmarking is an escape from overly rigid general budget procedures.[4] The existence of numerous instances of earmarking in the

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4/ For example, see R.M. Bird "Budgeting and Expenditure Control in Colombia", Public Budgeting and Finance, (Autumn 1982) Vol. 2, No. 3, pp. 87-99.

real world -- and the fact that at least some appear to be successful[5] -- would argue that we should explore further why this should be so.

C. <u>The Case For Earmarking</u>

9. Adherents of earmarking -- few as they are -- cite a number of advantages:[6]

- o It applies the benefit principle of taxation (at least in some cases).
- o It provides greater assurances of minimum levels of financing for public services that governments consider worthy, thus avoiding periodic haggling within the bureaucracy or between the bureaucracy and legislature over appropriate levels of funding.
- o Greater stability and continuity of funding may lead to lower costs through speedy completion.
- o By linking taxation with expenditures, it may overcome resistance to taxes and help to generate new sources of revenue.

5/ However, many of the instances where earmarking appears appropriate both on theoretical grounds and on the basis of broadly satisfactory performance are clustered in the areas of revenue sharing between various levels of government and social security. There is a reasonable consensus that revenue sharing may be justified by mismatches in the efficient decentralization of revenue raising and expenditure activities, externalities in local government expenditures, and income redistribution considerations. Similarly the financing of social security programs through earmarked taxes on earnings (whether paid by the employee or employer) can be justified by the obvious benefit nature of the relationship and by the fact that in most LDCs coverage is so narrow that financing from general taxation would likely involve a transfer to a relatively better off segment of the population.

6/ The list is again from E. Deran, <u>op cit</u>, p. 357.

10. To the extent there is overlap, earmarking takes on some of the same virtues as benefit taxation -- i.e. the simultaneous linking of the expenditure and revenue sides of the budget; the provision of adequate financing for public goods and services; and the elimination of excess demand/shortages that occur when goods/services are provided below (marginal) cost or free. That is, the virtues of benefit taxation are similar to those of the price mechanism: it provides appropriate signals for the efficient allocation of resources and financing for government services.

11. The possibility of a linkage between expenditure and tax/price decisions forms an important thread in the long search for a fair or just system of taxation, a thread that stretches from Adam Smith through Wicksell and Lindahl down to Samuelson, Musgrave and Buchanan.[7] A fair tax system, it is said, would be one in which people paid according to what they received, and taxes would be set according to the marginal benefits received by taxpayers. Expenditures -- both in total and for individual public goods and services -- would be expanded so long as at the margin benefits received by all individuals exceeded marginal costs. Thus the total

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7/ See Knut Wicksell, "A New Principle of Just Taxation"; Erik Lindahl "Just Taxation - A Positive Solution" and "Some Controversial Questions in the Theory of Taxation", in R.A. Musgrave and A.T. Peacock (eds), Classics in the Theory of Public Finance (MacMillan & Co., London, 1958), pp. 72-118, 168-76, and 214-32; P.A. Samuelson, "The Pure Theory of Public Expenditures" Review of Economics and Statistics (November 1954) pp. 387-389 and "A Diagrammatic Exposition of a Theory of Public Expenditures" Review of Economics and Statistics (November 1955), pp. 350-56; R.A. Musgrave The Theory of Public Finance (McGraw-Hill, Inc., New York 1959), Chapter 4; J.M. Buchanan, The Demand and Supply of Public Goods (Rand McNally & Co., Chicago, 1968).

level of expenditures (and its composition), the total level of taxes and its distribution across taxpayers would be determined simultaneously. As elegant as such a system would appear in theory, its design in practice has proved to be another matter since it leaves open the problem of how to handle taxes/expenditures that have distributional objectives (i.e., how to finance the redistribution) and how to induce the public to reveal its preferences in the case of pure public goods -- especially if it knows that such revelations will be the basis for increased tax bills.[8] Nonetheless, this strand of public finance theory points up the importance of thinking about expenditure and tax/financing questions together and the fact that this linkage is essential to arriving at correct resource allocation decisions. Indeed, the "public choice economists" (i.e. Buchanan and Co.) would argue that there are cases where the linkage is essential to reaching any collective decision to expand the size of government activity.

12. The criticisms of earmarking rest mainly on a notion of government as a single will or government decisionmaking as a perfect reflection of the wishes of the population under which

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8/ To some extent, the budgetary process may be thought of as a method of inducing a kind of quasi-preference revelation. Elected officials must be sensitive to voter desires and voters know that they will be taxed to finance the expansion of any government activity only if other voters are likewise taxed. However, knowledge of voter desires -- especially as to the amounts and quality of public goods and services to be provided -- is at best imperfect and, given larger numbers, voters know that they individually can obtain a free ride. That is, its not at all clear how accurately the budgetary process translates the public's wishes into concrete expenditure and tax programs.

expenditure/taxation decisions are made such as to maximize some (even if implicit) social welfare function. Analogously to household utility maximization, if allocative choices are made such that the net marginal social benefits are equated, any constraints on choice would lead to a lower level of welfare. If, on the other hand, one drops the notion of a single will and recognizes that political processes are imperfect and that societies consist of many groups with differing preferences, benefit taxation/earmarking may take on a more favorable coloring as a means of accommodating differences at a point in time and over time.[9] If collective decisions are nothing more than the expression of individual choices through constitutionally agreed rules, general fund financing may have its limits. Expenditures and taxes are considered separately, with the level of (planned) expenditures determined annually at budget time on the basis of projected revenue from a tax system that has been implemented piecemeal over a number of years. The only links between expenditures and taxation in this process are the marginal adjustments in either that must be made to accommodate macroeconomic stabilization considerations.

13. These characteristics of general fund financing, coupled with unstable majority coalitions, mistrust among competing groups, or general "tax weariness" may make it difficult to raise additional resources. Voter/legislators will be unwilling to vote for more taxes

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9/ In fact, if voters have identical preferences or if the same voter group had the median preferences with respect to both expenditure composition and taxation (budget size) then the solutions under general fund financing and earmarking are the same.

without assurances about how the money will be spent or to vote for more expenditures without the details about how the tax burden will be distributed. Without assurances about both sides of the equation and some guarantee that agreements will be honored, it may not be possible to obtain a majority of voters/legislators in favor of a change. Both Buchanan and Goetz have shown that earmarking enforces a "tie-in" which ensures that taxes will be used for certain purposes and that the relationship will be stable through time.[10] Thus, there are circumstances under which earmarking would break through the impasse and allow money to be raised that otherwise might not have been possible.[11]

14. Earmarking has also been viewed as strengthening the case for cost recovery in the case of goods/services where charging a price is feasible. Cost recovery, the argument goes, makes more sense if the monies raised are retained for particular public goods or services in the sector.[12] Beneficiaries will be more willing to pay if they know

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10/ J.M. Buchanan, "The Economics of Earmarked Taxes" Journal of Political Economy (October 1963), 71, pp. 457-69; and C.J. Goetz, "Earmarked Taxes and the Majority Rule Budgetary Process" American Economic Review (March 1968), pp. 128-136.

11/ In Buchanan and Goetz's scheme of things, the impasse results when the majority in favor of a given expenditure (tax) program feels that its preferred tax (expenditure) program will not be adopted. With expenditure and tax decisions made separately, the decision to do nothing may be the only one which can command a majority. However, such an impasse can be broken if there are combinations of expenditures and tax finance which a majority would favor. This is not to say that the change brought about will be "Pareto optimal". The decision needs only a majority vote and clearly some persons could be hurt by the change.

12/ Obviously earmarking is not essential to cost recovery. Cost recovery -- with the funds flowing to the central pool -- can be justified by the need for the public sector to mobilize resources generally and by the contributions of benefit taxation to efficiency and equity.

their monies will be used for activities that directly benefit them. Officials, involved in the provision of a particular good or service, will be more willing to enforce fee collection if they know that their clients will be benefited and/or the quality or quantity of services provided by their sector will be enhanced. Hence, earmarking may contribute to improved collection performance, and perhaps even a better utilization of the monies since concerned users and officials are better monitors of performance than more distant authorities.[13] In addition -- and this argument likely applies better to public enterprises than to government departments and agencies -- the knowledge that the size of the institution's investment program is directly related to the amount of self-finance it can generate may in some cases be a spur toward greater production efficiency. In sum, the above arguments point to earmarking as a means to improve the performance of public sector institutions. The arguments make sense, but whether they hold up as a general rule can only be determined by an examination of real world experience.

15. Paragraphs 9-14 summarize the general case for earmarking. It appears that, under certain circumstances, the practice may help achieve improvements in the allocation of resources that would not have been possible under general fund finance and/or it may be a way

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13/ For example, a recent study of the Philippines showed that schools that rely more heavily on local sources of finance have lower costs, holding enrollments and quality variables constant. See E. Jimenez, V. Paqueo, and L. deVera, Does Local Financing Make Primary Schools More Efficient? The Philippines Case (World Bank Working Paper Series, WPS 69, August 1988).

around general budgetary procedures that are cumbersome and inflexible. The arguments clearly have some merit but they are not compelling in that they do not give us a clear indication of the circumstances under which earmarking is justified or the criteria it would have to meet to be considered satisfactory. We take up these questions in the next section.

D. The Earmarking Problem: The Search for an Efficient, Automatic Pricing Mechanism

16. Neither the theoretical nor the practical literature gives much guidance about what performance criteria earmarking would have to meet to be considered satisfactory. The theoretical aspects are limited to deriving circumstances under which earmarking might prove to be desirable. Little is said about how earmarking might be implemented in practice or what might determine whether earmarking arrangements were suitable or not. The practical literature evaluates the experience of earmarking in various countries or sectors, using broad criteria about the growth and mix of earmarked expenditures. On the basis of such qualitative criteria, earmarking usually receives a mixed to negative rating.

17. In this section, we will argue that earmarking arrangements must meet two broad criteria. First, the price/tax arrangements must be such that they lead to an appropriate allocation of resources for the sector. That is, the financing must lead to an economically efficient result. Secondly, the price/tax arrangements must lead to reasonably automatic financing for the earmarked expenditures -- that is, financing that is independent of general budget developments. If

earmarked funds must depend on frequent executive/legislative branch decisions about prices/taxes (or on additional funds from the general budget), then they are no longer insulated and begin to take the characteristics of general fund financing. In the remainder of this section, we will sketch in more details on the efficiency conditions, emphasizing that according to economic theory, price/tax arrangements would both meet efficiency criteria and insulate the earmarked fund from the budget only under restrictive assumptions and that in practice governments find ways around the insulation. The section concludes with an argument against earmarking when there is little or not overlap between beneficiaries and price/tax payors.

18. The traditional theory of earmarking has been laid out in terms of balanced budgets -- charges paid by beneficiaries/taxpayers will be just sufficient to cover the (current and capital) cost of providing the good or service. For example, in Samuelson's general equilibrium model of the efficient provision of private and social goods, all goods are provided under constant returns to scale, the quantity of each social good consumed is the same for all taxpayers (by definition) and its output expanded so long as the sum of the marginal benefits over all taxpayers exceeds the (constant) marginal cost of its provision.[14] The equilibrium solution involves the

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14/ This, of course, abstracts from the "free rider" problem. If all public goods must be consumed in equal quantities by all and one person's participation in the benefits of any public good does not affect the benefits received by others, then there are no incentives for taxpayers to reveal their preferences, esp. when large numbers are involved. They benefit whether they pay or not.

determination of quantities of all public and private goods, taxes levied on each taxpayer for each social good according to the marginal benefit that he receives, and the sum of taxes paid for each social good equal to the total cost of supplying that good. Although there is no earmarking in the sense of segregated funds, earmarking in fact takes place because every public expenditure comes with its own source of finance and no public good would be provided without such financing. With constant returns, the budget for each public good would be balanced.

19. Analogous is the case of the public sector providing pure private goods under conditions of constant returns to scale (abstracting for a moment from questions of scale economies indivisibilities, externalities, or public sector financial constraints). Given the level of demand for the good, the optimum output involves the equality of price with short- and long-run marginal cost (and hence with short- and long-run average costs). A price in excess of short-run marginal cost provides an incentive to increase production using variable factors of production while a price in excess of long-run marginal cost would lead to increased investment to expand capacity and lower (short-run) costs of production. The optimally adjusted capacity, for a given demand, involves the equalities listed above and results in total revenues equalling total costs. Earmarking (and cost recovery) would in this case involve a balanced budget. This would not be so, however, if capacity had not

been adjusted to the optimum level[15] or if some of our assumptions were altered.[16]

20. Without the assumptions listed at the beginning of paragraph 19, economic optima and earmarking would need to involve unbalanced budgets. Put differently, any earmarking rule that required a balanced budget would violate optimality conditions. The reasons why this is so are well known and need only be outlined here.

<u>Returns to Scale.</u> With increasing (decreasing) returns to scale, the long-run optimal output still involves the equality of price with short- and long-run marginal cost, both of which fall short of (exceed) short- and long-run average costs. That is, optimal adjustment to any given level of demand will involve continuous losses (profits) for an indefinite period.

<u>Indivisibilities.</u> With constant returns to scale but with lumpy investments which add non-marginal increments to output, the output at which price is equal to both short- and long-run marginal cost -- for any given level of demand --

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15/ All short-term equilibria (with short-run marginal cost unequal to long-run marginal cost) involve either excess profits or losses.

16/ The results still hold in the face of fluctuating demand, keeping the assumptions of constant returns and no indivisibilities. In the so-called "peak load pricing" case, non-peak users pay a price equal to short-run marginal cost while peak users pay a price sufficient to cover the variable and fixed costs of peak use. Optimality thus involves a balanced budget. See O.E. Williamson, "Peak Load Pricing and Optimal Capacity under Indivisibility Constraints", <u>American Economics Review</u>, 56 (September 1966), pp. 810-827.

may be impossible to attain, and the appropriate price will either exceed or fall short of long-run marginal cost and involve continuous excess profits or losses.

Externalities. Optimization in the presence of externalities involves equality between marginal social benefits and marginal social costs. With the good/service in question produced under constant returns to scale, external economies involve a higher output than would be generated by private demand and supply considerations and a subsidy to consumers to induce them to consume the larger quantity. External diseconomies in turn would involve a tax on output which results in a lower equilibrium output than would be generated by private demand-supply considerations.

Public Sector Financial Constraints (pure taxation). The government's desire to raise revenue to finance general public sector operations may lead to use of excise and sales taxes (as well as pricing of public enterprise products at above marginal cost) -- i.e., financial constraints may dictate indirect taxation which drives a wedge between the price consumers pay and marginal (private and social) costs.[17] Any monies raised in this fashion belong to the general budget.

17/ Efficiency considerations dictate that the tax/pricing decision for all goods and services--private and public--be considered together in order to minimize distortionary costs. The discrepancy between price and marginal cost should be relatively higher on goods where the ratio of marginal revenue gain to the marginal distortionary cost is relatively high and conversely, optimality being reached when the ratio is the same for all goods.

21. The above sketches a number of examples when economic efficiency and earmarking considerations would appear to require inequality between revenues and outlays for variable and fixed factors of production and hence some sort of relationship with the general budget (or perhaps with financial markets should borrowing or lending be allowed). Quite simply put, allowing expenditure levels in these cases to be driven solely by the level of earmarked revenues would lead to a misallocation of resources. For example, the excess profits generated at the optimum level of output in the increasing costs case are not a signal for increased investment since capacity is already correct; the excess profits should either revert to the general budget or, at a minimum, be held in interest bearing financial assets until increased real investment could be justified. Similarly, the losses dictated by optimality considerations in the cases of decreasing costs or positive externalities would have to be met from general funds. In theory, therefore, there are a large number cases in which economic efficiency would dictate an unbalanced budget and in which, therefore, it would be undesirable to run a fund independently from the general budget.

22. Theoretical considerations aside, experience has shown that automatic financing arrangements are difficult to devise in practice. There are a number of reasons why the isolation of earmarked funds from the general budget is difficult to achieve. The first is the obvious one that often such funds also depend on additional, non-earmarked sources of revenue. In such cases, the amount of such monies will depend upon general budget considerations (for example, the availability of resources, the comparative desirability of various expenditures) and it is no longer clear what role earmarking may be having on the allocation of resources at the margin. Second, earmarked revenues are easily eroded, especially in an

inflationary environment. To the extent that any fund is dependent on a specific tax, an administered price, or an ad valorem tax linked to an administered price, it is dependent on periodic government price adjustments. By failure to adjust, the Government can force the fund to become more dependent on general budget finance and/or give itself the leeway to raise other taxes. Thirdly, experience has shown that government will simply override earmarking arrangements if necessity dictates (see paragraph 28, for example, for the experience of highways).

23. Up to this point, we have confined our attention to earmarking cases which have a strong benefit link -- a large, if not total, overlap between the tax/price-payers and the expenditure beneficiaries. A number of real world cases, however, do not meet this condition: e.g. the use of so-called sin taxes (alcohol, tobacco), or lottery proceeds to finance the social sectors, the setting aside of a fixed proportion of income taxes for specific purposes, and the like. These cases seem to have almost no redeeming features.[18] There's no connection between the amount of revenues raised and the appropriate level of expenditures or services; indeed, because the goods/services are provided to users below cost, there is a tendency toward excess demand, necessitating the use of non-price devices (e.g. queuing, congestion, entrance examinations) to restrain demand. In addition, since in most of these cases earmarked funds are supplemented by general budget funds, the real function that earmarking is

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18/ Indeed it is not clear that they would be justified even in the event of greater overlap between tax/price-payers and beneficiaries. If, for example, a substantial number of students (or their families) were smokers or drinkers, it does not follow that taxation of tobacco and alcohol would generate the appropriate level of resources for the education sector.

playing is not clear. Earmarked sources are supplying an arbitrary amount of resources for the sector; the additional amount of resources coming from the general fund depends on the needs of the sector as against those of other sectors. The main virtue touted by proponents of these taxes is that government can extract more resources from taxpayers by committing them to specific purposes. However, given fungibility and given that earmarking cannot play much of a role toward assuring the appropriate level of output in such cases, such commitments appear to serve political ends rather than being rooted in sound efficiency/distributional criteria.

PART II: SELECTED EXAMPLES OF WORLD BANK EXPERIENCE WITH EARMARKING

A. Highway Funds

24. The highways sector is a particularly fruitful one for study. Firstly, it has a number of characteristics which make it interesting from the point of view of pricing and cost recovery decisions -- e.g. the presence of returns to scale and indivisibility questions, external diseconomies in the form of congestion and pollution, and income elastic demand for fuel which opens up the possibility of luxury taxation. Secondly, taxes on fuel and vehicles form a significant fraction of government revenues in both developed and less developed countries and in both there are numerous examples of earmarking in the form of highway funds. This section begins by briefly reviewing the evolution of the Bank's attitude toward earmarking and then summarizes the Bank's experience with a number of road funds in developing countries.

25. After an initial period of enthusiasm, the Bank's attitude toward earmarking for highway expenditure has cooled considerably. Early Bank work -- at least for some specific countries -- called for earmarking on the argument that greater stability in funding would provide steadier support for the development of entrepreneurship and would help to lower unit construction costs by speeding completion; in addition, some crude statistical work purported to show a correlation between earmarking and the proportion of investment devoted to highways.[19] Later Bank work has been more skeptical. The Bank's Transportation Policy Note No. 1 (1985)[20]

19/ P. Eklund, Earmarking of Taxes for Highways in Developing Countries (IBRD; Economics Department Working Paper No. 1; June 6, 1967).

20/ IBRD, Interim Guidelines - Road Funds from Earmarked Sources (Transportation Note No. 1; November 5, 1985).

stated that the Bank's experience with road funds had been poor almost without exception and concluded that, with some qualifications, earmarking ought to be avoided wherever possible. The qualifications recognized that where public sector mismanagement was rampant the alternative to earmarking might be worse and allowed for earmarking where (a) there was a public agency with the demonstrated capacity to carry out the program; (b) funds would be devoted entirely to a maintenance program where economic priorities had been carefully articulated; (c) there were clear controls (ex ante and ex post) against the diversion of funds; and (d) the earmarking arrangement would be of finite duration.

26. The Bank's position is based on the by and large poor performance of earmarking for highways in LDCs. In its qualifications, it clearly recognizes the importance of institutional capacity and the existence of a priority expenditure program based on economic criteria; there is no way that earmarking can make up for their absence. It also recognizes that commitments to earmarking ought not to be open-ended; there ought to be periodic evaluations to determine whether continuation is justified on the basis of past performance and likely future needs. Nonetheless, the Bank's qualified position still raises questions. Even acknowledging that inadequacy of maintenance funds is a general problem in LDCs, it is not clear that all maintenance programs take precedence over construction projects or that, given fungibility, earmarking really does lead to an improved mix of highway expenditures.

27. Subsequent evaluations of the Bank's experience in five countries -- Ghana, Zaire, Central Africa Republic, Mali, and Colombia -- confirm the

skepticism about road funds expressed in the 1985 Policy Note.[21] Only in the case of Ghana could earmarking be claimed to have been successful. The creation of a road fund appears to have assured the more timely distribution of funds and sharp increases in allocations for maintenance and rehabilitation. The deterioration of the road network during a long period of economic mismanagement and the consequent threat to the government's economic recovery program appear to have strengthened the government's resolve to assure adequate funding. In the remaining countries, road funds have--at least for a time--helped to get around cumbersome budgetary procedures and, because of more assured funding, permitted increased use of private contractors through competitive bidding.[22] The quest for larger allocations and greater stability of funding appears to have been more elusive, however.

28. A number of broad conclusions emerge from the Bank staff's survey of the experience with road funds:

21/ See F. Johansen (ed.), Earmarking, Road Funds and Toll Roads - A World Bank Symposium (Infrastructure and Urban Development Department; Discussion Paper Report No. INU45; June 1989); and William A. McCleary and Evamaria Uribe Tobon, The Earmarking of Government Revenues in Colombia (World Bank; Policy, Planning and Research Working Paper, forthcoming, 1989).

22/ A general observation can be made that officials in agencies receiving earmarked funds support earmarking arrangements; often such arrangements by-pass much budgetary red tape, allow more timely receipt of funds, and permit better planning. However, it does not follow that society also benefits from such arrangements unless the priority of the expenditures can be established and it can be shown that appropriate expenditure levels result. Otherwise, earmarking involves the creation of a new inefficiency to correct an old one.

- It is hard to set appropriate prices for road funds; specific taxes or ad valorem taxes linked to administered fuel prices very quickly erode road fund resources in an inflationary environment.
- Allocations for road funds appear to depend on the general budget situation. In cases of budget stringency, earmarked funds may be temporarily frozen (for example, Ghana), diverted to other uses (for example, Mali) or the government and public enterprises may stop paying their fuel bills and hence fuel taxes (for example, Zaire).
- Road funds are more vulnerable to general budgetary problems the more they are dependent on periodic changes in fuel prices or tax rates and (obviously) the smaller earmarked taxes are as a proportion of road fund resources.
- The adequacy of overall road fund resources provides no assurance that the appropriate mix between maintenance, rehabilitation and new investments will be struck.

The message that comes through is that road funds are not the easy or obvious solutions to underfunding of highway expenditures that they appear to be. It is difficult to set up a pricing arrangement that will generate an appropriate amount of resources for the sector without periodic decisions by officials. The purported independence from general budget problems is largely illusory since there are many ways governments can tap into earmarked monies when budget conditions get tight.[23] Only when a

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23/ This has also been the experience in the United States where earmarked program in highways, aviation, and waterways have not been exempt from general budget retrenchments or from year-to-year decisions about appropriate expenditure levels regardless of the size of available revenues. See Jenifer W. Short "Earmarking for Transportation - A View of the U.S. Experience" in Frida Johansen, op. cit., pp. 74-89.

government is committed to highway expenditures as a priority (as in Ghana) will the funds be safe; in such cases, one suspects that the outcome of general fund financing would not have been much different.

B. <u>Earmarking at the Local Government Level: The Example of Colombia's Valorization Tax</u>

29. The possibilities for successful earmarking appear to increase in more decentralized, local government settings. These situations allow easier identification of beneficiaries, more opportunities for articulation of voter/user preferences about appropriate levels and quality of services and methods of financing, and (because of the localized nature of the benefits) less opportunity to pass the costs of programs to non-beneficiaries. Thus, at the local level, one finds the use of special assessments (specific expenditures linked to changes in tax rates or betterment/valorization taxes); special purpose governments (such as special districts for water and sewerage or for schools financed from fees or property tax assessments); and various services provided for a charge (for example, local transport, garbage removal). All of these represent earmarking in various guises.

30. One point is worth stressing. The link between expenditures and revenues in these arrangements is extremely close. In fact, often the level of government activity or service is proposed and then are appropriate financing arrangement decided upon. Because of this, the danger of a mismatch between appropriate levels of revenues and activities is substantially reduced; hence the danger of over- or underinvestment --such as can occur when expenditures are linked to a revenue source that is set more or less arbitrarily (as, for example, with fuel taxes and highway expenditures)--is mitigated. However, this gain may be at the

expense of the automaticity and insulation from general budget considerations, often thought of as the virtues of earmarking. The more frequently decisions must be made about appropriate levels of expenditures and revenues, the more voters and officials will be forced to choose among competing uses for the funds and the less certain financing becomes.

31. Colombia's municipal valorization tax (similar to what are called special assessments or betterment taxes in other countries) represents a rather pure form of earmarking.[24] This purity results from several of the tax's characteristics:

(a) the fact that taxpayers and beneficiaries overlap to a substantial degree;

(b) the use of benefit-cost type considerations ("appraisal" or "analysis" would be too strong a word) and the conscious and conscientious attempt to allocate tax assessments proportionally according to how people benefit from the project; and

(c) the strong link between valorization revenues and expenditures (i.e. no supplements from or diversions to general fund financing, at least in principle).

In addition, valorization appears to reverse the usual sequence of earmarking whereby available revenues drive expenditure levels: instead,

24/ See W.G. Rhoads and R.M. Bird. "Financing Urbanization by Benefit Taxation" Land Economics 43 (November 1967), pp. 403-12; IBRD Valorization Charges as a Method for Financing Urban Public Works: The Example of Bogota, Colombia Staff Working Paper No. 254 (March 1977); and R.M. Bird, Intergovernmental Finance in Colombia: Final Report of the Mission on Intergovernmental Finance (International Tax Program; The Law School of Harvard University; Cambridge, 1984), pp. 87-115.

the identification of desirable projects, often within the scope of prepared investment programs, appears to call forth efforts to raise financing from prospective beneficiaries.

32. Upon the selection of a project suitable for valorization taxation, a "zone of influence" is demarcated, the area over which benefits are expected to be felt. Benefits are estimated -- as the total resulting rise of site values -- and allocated across the properties within the zone according to formulas which take into account a number of characteristics such as size, shape, topography, frontage, distance from project, and a number of economic factors. Over time, the scope of valorization has been extended to include street construction, local paving, parking facilities, urban development and what are called "green spaces". In principle, there is nothing to stop authorities from attempting to recapture some or all of the project (net) benefits, but in practice only full recovery of the costs of land, construction, and some interest and administrative expenses is sought. In addition, consideration is given to problems that the poor or persons with few liquid assets might have in paying the tax. Low income persons can be exempted altogether and others are allowed to stretch out payment over several years if otherwise it would absorb a significant fraction of their annual income.

33. The valorization tax as practiced obviously has a number of desirable features -- the benefit connection; the efforts to select projects where the gains clearly exceed the costs, and the flexibility with which it has been adopted in differing circumstances. As a tax on the unimproved value of land, the tax would have no adverse incentive effects, and in fact the combination of the tax and improvement serve to raise income and increase the potential profitability of investments which should

have a desirable incentive effect. It has raised sizable revenues and financed a significant fraction of improvements in Colombia's cities.

34. On the other hand, valorization does have some drawbacks, primarily centered around collections problems. First, quite aside from the fact that authorities attempt to recover only project costs, collections fall far short of 100 percent. The reasons appear to be cost overruns, generous exemptions (for example, the Catholic Church, charitable institutions, and public enterprises), and generous exceptions/payment schedules given to the poor and those with liquidity problems. Problems have particularly arisen when projects have been designed to improve conditions in low income areas. Second, the concept of the "zone of influence" has its limitations: in a number of cases, a sizable fraction of beneficiaries fall outside the zone, and this has led to collection problems because persons within the zone were reluctant to pick up the added burden. It is also hard to implement with a number of projects simultaneously affecting a number of overlapping zones. Lastly, valorization revenues have proven to be quite unstable in part because of collection problems and in part to administrative deficiencies in planning and implementing projects; thus revenue growth seems to be characterized by periods of stagnation followed by sizable increases.

35. Despite its imperfections, valorization deserves a favorable rating. Its popularity and its ability to raise revenues would justify its continuation and extension into cities which have not taken full advantage of it. Its weaknesses could be reduced by cutting back on exemptions and the introduction of interest payments and penalties on arrears (the former

was introduced in 1981). Further, where there are substantial numbers who are unable to pay and subsidization of such low income persons is a key project objective, experience has shown that income redistribution objectives are not readily served within the context of valorization/betterment taxes. In such cases, the need for transfers should be made explicit and financed from general budget revenues.

C. Two Countries with Widespread Earmarking: Turkey and Colombia

36. Turkey and Colombia are both prolific earmarkers. In both cases, earmarking has passed a level which is sensible and could possibly be justified, resulting in a significant misallocation of resources. There are, however, a number of contrasts between the two countries. In Colombia earmarking is a much larger share of government revenues. In Turkey, earmarking is a recent response to budgetary stringency while in Colombia its a practice of long-standing. Turkey's earmarking is mainly off-budget while Colombia's is almost entirely on-budget.

37. Turkey.[25] Some of Turkey's extra-budgetary funds (EBFs) are quite old but the bulk are of recent origin, mainly a response to the budgetary problems of the 1980s. As a consequence, EBFs have grown from the equivalent 8% of central government budget revenues (1.4% of GNP) in 1983 to over 20% of government revenues or more than 4% of GNP in 1987. This, in a country where central government revenues (as a share of GNP, including EBFs) have been falling -- from 21% in 1980 to 18% in 1987.

25/ IBRD Fiscal Policy and Tax Reform in Turkey (No. 6374-TU), Vol. I, Chapter VII and Operations Evaluation Department (IBRD) Evaluation of Structural Adjustment Lending in Turkey: Program Performance Audit Report of the Fourth and Fifth Structural Adjustment Loans and Overview of SALs I-V, (Report No. 7205, Washington, D.C., April 13, 1988).

TABLE 2 TURKEY'S PRINCIPAL EXTRA-BUDGETARY FUNDS, 1985-86

Name	Date Established	1985 Revenue	1986 Projected Revenue	Major Sources of Revenue	Major Area of Use
Defense Industry Support Fund (DIF)	1985	..	194.6	Indirect tax on fuel, tobacco; direct tax on corporate and personal income; non-tax revenue.	Support to investment in the domestic defense industry.
Development and Support Fund (DSF)	1984	62.2	113.1	Tax on luxury imports and transfers from other funds	Price support of animal feed-stock and social programs
EEC Fund (EECF) a/	1982	13.0 b/	..	Tax on imports of iron and steel and some chemicals from EEC a/	Transfer to other funds (mainly DSF)
Export Encouragement Fund (EEF)	1984	22.9	31.0 c/	Tax on imports, exports and non-tax revenue.	Support to private investment and transfer to other funds. (Mainly RUSF and DSF).
Export Improvement Fund (EIF)	1980	0 6	0.8 c/	Contributions from private industry.	Export promotion through marketing and advertising.
Financing Fund (FF)	1980	22.4	30.0 c/	Deferred tax on corporate income.	Support to private investment.
Investment Goods Manufacturing Encouragement Fund (IGMEF) d/	1985	..	n.a.	Foreign credits and transfers from other funds. Firms may also use rediscount facility of CBT.	Credit to investment goods manufacturing firms and their importer-clients.
Mutual Assistance and Support Fund (MASF) or "Poor People's Fund"	1986	..	n.a.	Transfers from budget and other funds; surcharge on corporate and personal income tax; non-tax revenues.	Income transfer to poor.
Mass Housing Fund (MHF)	1984	212.4	315.7	Tax on luxury imports; share of supplementary VAT and transfers from other funds.	Subsidized housing credit.
Petroleum Consumption	1984	52.0	108.8	Tax on fuel consumption	Financing investments of local government and highway and sport directories.
Petroleum Exploration Fund (PEF)	1973	75.3 b/	90.0	Tax on domestic petroleum.	Transfer to other funds (mainly SPSF).
Public Participation Fund (PPF)	1984	228.7	421.7	User charges on public infrastructure; issuance of revenue-sharing certificates; share of petroleum consumption tax.	Public investment in infrastructure.
Petroleum Price Stabilization Fund (PPSF)	1979	65.4 b/	88.3 c/	Tax on imported petroleum.	Transfer to other funds (mainly MHF).
Resource Utilization Support Fund (RUSF)	1984	112.3	172.2	Tax on bank loans.	Export and investment subsidy.
Selective Credit Fund (SCF)	1970	35.0 e/	5.0	Central Government consolidated budget.	Export and investment subsidy (now through transfer to RUSF)
Support and Price Stabilization Fund (SPSF)	1980	267.7	280.0	Tax on imports and agricultural exports.	Fertilizer subsidy.
Tax Administration Development Fund (TAF)	1985	..	50.0	Central Government consolidated budget.	Improvement in tax administration.
TOTAL		1134.9	1901.2		
TOTAL (Net of inter-fund transfers)		965.0 f/	1700.0 f/		

a/ Taxes on imports from the EEC were abolished in July 1986.
b/ Provisional
c/ These are estimates based on an increase of 35% over 1985.
d/ Until the beginning of July 1986 this Fund had not yet started functioning.
e/ Refers to 1984 and is not included in the total.
f/ Approximate. There are some discrepancies between inter-fund transfer receipts and expenditures in the Fund Accounts.
Figures in billions of Turkish Lira.

38. The purposes and sources of funding for the major EBFs is shown in Table 2. The purposes are quite varied, ranging from quite specific (e.g. support for defense industry investment, housing subsidy, fertilizer subsidy) to more general (e.g. export and investment subsidies, export promotion through marketing and advertising) to even more general (an EBF to raise money for other EBFs). For example, the biggest fund, the Public Participation Fund, which builds and sells participations in large infrastructure projects, receives money from the petroleum consumption tax and can borrow domestically. The second largest, the Mass Housing Fund, provides credit for small housing units and land acquisitions and receives the bulk of its financing from earmarked taxes -- from variable import levies, the supplementary VAT, petroleum product taxes and the $100 exit tax on Turkish citizens. Revenues for the EBFs are obtained from tax (68%) and from non-tax (32%) sources. Some funds have authority to borrow but to date the amounts involved have been quite small. Major tax sources were import duties (18% of total revenue), export taxes (13%), petroleum taxes (20%), financial transactions (10%) followed by excises on tobacco, alcohol and beverages. Non-tax revenues included the proceeds of lotteries and gambling houses, various fees and penalties, operating income from infrastructural facilities and interest income on financial assets.

39. In general, EBFs are established by decree following approval by the Council of Ministers. The decree specifies the EBF's purposes; eligible expenditures; sources of revenues and rates of tax/surcharge and/or rates of subsidy involved. In some instances, the decree is so specific that the Council of Ministers determines the EBFs charter, policies, operating framework and budget. Then the EBF has no separate management board and the fund is merely an account held at the central

bank. In other instances, the fund has a separate board and management body. There is no single authority which supervises all the EBFs.

40. Earmarking, as practiced in Turkey, contains a number of serious drawbacks. First, it contributes little, if anything, to Government efforts to raise more resources. The rise of the EBFs has accompanied falling shares of government expenditures and government revenues in GNP. They are pre-empting a greater share of public revenues and contribute directly to a decline in central government revenues. For example, import levies on particular products reduce imports and hence the amount of import duties flowing to the central budget from these products. Similarly, other special indirect taxes can reduce budgetary revenues by reducing demand or profits. Second, with the lack of effective overall organization, it is clear that the policies of some EBFs run counter to those of other EBFs or to those of the Government. For example, reliance on export taxes and import duties is contrary to government objectives of a more open export-oriented strategy. The use of special import levies runs counter to the trend toward reduced quantitative restrictions and tariffs and introduces the potential for quite arbitrary, uneven protection across various sectors. While the Government encourages private initiatives and gives investment incentives, one fund relies on taxes on bank loans to the private sector in order to subsidize exports and investments. At one time in the past (it apparently has stopped), two funds were taxing and subsidizing agricultural exports at the same rate. Thirdly, the practice of EBFs in Turkey strays quite far from the benefit principle. In virtually no case is there a linkage between the beneficiaries of government expenditures and the persons financing these expenditures (the only minor exception is the use of part of the taxes on petroleum to finance highways). Earmarking instead represents the arbitrary assignment

of certain tax revenues for the finance of supposedly desirable government programs. Under these circumstances, revenues provide no guidelines about desirable levels of the service to be provided. Lastly, and relatedly, it is not at all clear what project evaluation criteria the EBFs must meet and how rigorous these are compared to those for regular budget expenditures. In sum, given the size of the EBFs and the lack of coordination and control, there is a potential for a major misallocation of resources.

41. Colombia.[26] Unlike Turkey, most of Colombia's earmarking comes from old, established funds which were created two decades ago and more (see Table 3). The rise in earmarking in the period since has been mainly a consequence of revenue sharing and rather buoyant sources of revenue for some of the major funds. Colombia's earmarking is a product of its political history--a long struggle over the question of centralization vs. decentralization and significant periods of political tension and violence. Under these circumstances, earmarking emerges as a way of committing government to continue specific activities regardless of shifting political circumstances and of getting around elaborate budgetary controls designed to prevent misuse of funds. Earmarking in the form of the automatic sharing of specified central government revenue sources is an attempt at reversing centralization to a certain extent and supporting increased activity at the departmental (provincial) and, more recently, municipal levels.

42. Earmarking has grown very rapidly during the past two decades. From 11% in 1970, the proportion of national government revenues earmarked rose to 28% by 1986. The proportion of revenues earmarked at all levels of government rose from 21% to 32% between the same two years. Whereas

26/ See William A. McCleary and Evamaria Uribe Tobon, op. cit.

TABLE 3 COLOMBIA'S PRINCIPAL EARMARKED FUNDS

Recipient	Date Established	1986 Revenue (millions of Colombia pesos)	1987 Revenue (millions of Colombia pesos)	Major Sources of Revenue	Major Area of Use
			A. National Level		
National Highway Fund (et. al.)	1967	46,493	59,600	Fuel Taxes	Transportation investment with 75% for national highways, 10% for neighborhood roads, 10% for national railways, and 5% for urban transport
PROEXPO	1967	27,038	43,200	Levy on imports	Subsidized credit for exports
National Coffee Fund	1940	17,886	14,005	Taxes on value of coffee exports and retention on volume	Economic and social investments in coffee areas; various equity and financial investment; coffee price stabilization
National Apprenticeship Service (SENA)	1957	18,256	23,195	Payroll Taxes	Technical skills training
Family Welfare Institute (ICBF)	1968	17,831	23,534	Payroll Taxes	Programs for protection of children and family
			B. Departmental		
Sectional Health Services	n.a.	78,461	..	Taxes on beer, wine, liquor	Health expenditures
Sectional Sports Commissions	n.a.			Taxes on cigarettes	Support of sports activities
			C. Municipal Level		
Municipal Improvements	1921	6,967	..	Tax on increases in unimproved value of land (valorization tax)	Investment in roads, water, sewer, parks, etc.
			D. Intergovernmental Transfers		
Departments and Territories	1971	75,838	109,862	Share of total national revenue minus revenues earmarked for other purposes	Education and health expenditures
Municipalities	1968	55,590	80,432	Share of value added tax revenues	Specified municipal investments

departmental and national level earmarking were equally important in 1970, the earmarking of central government revenues was responsible for this surge and now accounts for 75% of earmarking at all levels of government. The largest sources of earmarking presently are (with the percentage of total earmarking accounted for in parentheses): revenue sharing for education and health and for specified municipal investments (35%); departmental sin taxes (alcohol, tobacco, gambling) for health and sports (21%); the fuel tax for highway and other transport expenditures (12%); payroll taxes to finance training and various family welfare activities (10%); the import levy to finance subsidized credit for exports (9%); various levies on coffee exports to cover economic and social investments in coffee areas and other investments (5%); and the municipal valorization tax (2%). These seven sources account for about 94% of earmarking in Colombia.

43. Aside from differences in the origins of earmarking and in its significance in public resources, there are several contrasts with Turkey: (1) Colombia's earmarked funds are largely within existing budgets and hence their revenues and expenditures do not detract so much from the transparency of government activities or the government's impact on the economy; (2) the system relies much less heavily on import duties and other taxes on international transactions as a source of financing; and (3) a greater proportion of earmarking (though still not a very large proportion) would meet the test of being benefit related (for example, the fuel tax, municipal valorization, and, more loosely, the coffee tax).

44. That earmarking has become excessive has long been recognized in Colombia but to date there has been little success in reducing its scope. The Bird-Wiesner Commission on intergovernmental finances (1981) took a

generally skeptical but pragmatic view of earmarking recognize that earmarking owed much of its origin to Colombia's complex political and budgetary situation.[27] It, therefore, recommended a case-by-case approach, eliminating those cases of earmarking which did not fulfil benefit principles or where earmarking was not a major source of finance. The Commission on Public Expenditures (1986) took a much harsher view, accepting the Bird-Wiesner view that earmarking ought to be limited to cases which meet benefit principle criteria but finding that the overlap between tax/price payors and beneficiaries was absent in virtually all cases.[28] The Commission therefore concluded that Colombia's inefficient budget processes could not justify earmarking if there was no assurance that the appropriate amount of resources would be devoted to earmarked activities -- i.e. with one inefficient practice substituting for another, there was no assurance of an improvement in national welfare. The Commission, therefore concluded that earmarking ought to be abolished.[29] To date very little has been done to implement the recommendations of these two commissions, and in fact a number of relatively small earmarked funds have been added.

27/ R.M. Bird, Intergovernmental Finance in Colombia-Final Report of the Mission on Intergovernmental Finance, (International Tax Program: Harvard Law School; Cambridge, Massachusetts; 1984).

28/ Comision del Gasto Publico, Informe Final, (Bogota, Colombia; 1986).

29/ In its definition, the Commission did not include revenue sharing, payroll taxes for social security, and public enterprises profits all of which can be considered as earmarking under a broader definition.

45. Colombia's earmarking is too complex to allow blanket recommendations. However, recent budgetary reforms in Colombia make reductions in the scope of earmarking more feasible politically than in the past. If the piecemeal suggestions made below were adopted fully, about 45% of traditional earmarking (in value terms) would be eliminated. Remaining would be revenue sharing, three major cases of earmarking and perhaps some minor funds. The objective would be to eliminate the most obvious cases of inefficiency. First, there are a number of funds whose revenues and expenditures do not fit the benefit principle of taxation. Revenues generated are not an adequate substitute for conscious annual budget decisions on the appropriate level of resources for the activity in question. Those funds include import duties for subsidized export credit (PROEXPO), payroll taxes for various social welfare objectives (SENA, ICBF, etc.), and departmental tax/profits on alcohol, tobacco, and gambling for health, welfare and sports, and a number of minor funds. Second, for the remaining major funds, some adjustments would be desirable to move them closer to benefit principles; e.g. limiting coffee fund expenditures to the coffee sector and growing areas, more frequent adjustments in fuel taxes to generate the resources required for highways, and extension of the valorization tax to additional Colombian municipalities. Thirdly, revenue sharing plays an important role in the government's efforts to decentralize activities to the departmental and municipal levels. The effectiveness of revenue sharing could be increased by changes in the formulas to remove anomalies (e.g. the undue favoritism given to areas with small populations), increases in incentives to generate resources at the local level, and measures to increase municipal absorptive capacity.

III. CONCLUSIONS AND RECOMMENDATIONS

46. Several broad conclusions can be drawn from the foregoing review of the literature or the theory and experience of earmarking. First, however much the IMF and Bank have condemned it in the past, there is no general presumption against earmarking. In theory, as Buchanan, Goetz, and other public choice economists have shown, it may make possible agreement on additional revenues <u>and</u> expenditures where there would be no consensus about either separately. It may protect priority programs from shifting majorities, administrative inefficiency, and corruption (although experience shown that often apparently low priority programs get protected also). In practice, there are examples of successful earmarking, the successes being clustered in the areas of revenue sharing, social security, special assessments (betterment or valorization taxes) and special districts (e.g. for water and sewerage, education). Earmarking in other areas -- requiring specific taxes to finance narrowly defined government expenditure programs (e.g. highways, housing, and training) has been notably less successful. Secondly, tax/price arrangements for earmarked funds should meet the same efficiency/equity tests as for pricing public sector goods in general and in addition should provide a reasonably automatic source of financing (i.e. independent from general budget considerations). Meeting these two criteria simultaneously is likely to be difficult. Efficient pricing and taxation is likely to dictate unbalanced budgets for the earmarked fund and hence an interdependence with the general budget. In practice, governments generally override earmarking arrangements if they need the resources. The protection given by earmarking has proven somewhat illusory and evaporates when budgets become tight.

47. Thirdly, earmarking works best where it is an extension of the benefit principle of taxation. However, the efficiency/equity objectives of benefit taxation can usually be met through general fund financing and earmarking needs to be justified by consideration of additional objectives -- e.g. that it is needed to protect levels of the service, improve revenue collections, or improve quality of the service. By the same reasoning, earmarking is not desirable for programs with strong redistributional or social welfare objectives because the connection between revenues and appropriate program levels are tenuous or nonexistent or for pure public goods where taxpayers will not reveal their preferences through voluntary individual payments.[30] Fourthly, the World Bank's longstanding skepticism about highway funds is amply justified by experience. Notwithstanding the fact that many highway officials like them because they simplify budgetary procedures and appear to make funding more certain, experience shows that the financing they provide is not automatic and remains dependent on government judgments which change as budget considerations dictate.

48. Fifth, earmarking appears to work more successfully in local government settings where the correspondence of beneficiaries and taxpayers is closer and where voter/user preferences can more easily be expressed. Expenditures and revenues for specific activities are linked through periodic votes and/or assessments which provides a check on the

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30/ The exception to this statement would be local public goods where the absence of large numbers creates a greater incentive for voter/taxpayers to express their preferences and to finance the expenditures through betterment levies or property taxes.

appropriateness of decisions. Sixth, there are limitations to the extent of earmarking at any level of government. These limits stem from the limited cases where the benefit principle applies; the costs of fractionalization of decision-making; and possible tradeoffs with revenue mobilization for the general budget. In those countries where earmarking has become extensive (e.g. Turkey, Colombia), there appear to be numerous cases where it is not justified and ought to be abolished.

49. In conclusion, the practice of earmarking cannot be universally ruled out, but there are certainly grounds for skepticism about how well it is likely to work in practice. If past experience is any guide, any proposed scheme of earmarking carries its own set of potential problems in addition to the fact it shelters one type of government expenditures from having to compete for funding with other types of expenditures -- e.g., questions about the adequacy of resources to meet sectoral needs, the adequacy of the institution designated to carry out the earmarked activity, lack of control or scrutiny over expenditure priorities or administrative outlays, and possible conflicts with the government's ability to raise resources for the general budget or with other government policies. This suggests that proposals to create earmarked funds be approached with skepticism and that each earmarking scheme be called upon to meet a series of tests to ensure that it does in fact represent an improvement. Satisfying the following tests is a formidable enough task that the scope of earmarking would likely be quite limited in practice:

- Is there a strong link between beneficiaries and tax/price payers.

- Is earmarking necessary (in addition to benefit taxation/charges) to ensure levels of service or improve revenue collection or service quality.
- Will the price/tax (and other financing) arrangements for the earmarked expenditure lead to levels of resources appropriate to present and expected levels of demand
- Will the price/tax arrangements have (significant) distortionary effects on the allocation of resources (e.g., deadweight losses, inflationary impacts).
- Is there an appropriate investment program and a clear set of rules for decisions regarding investment, regarding the mix of capital, O&M and rehabilitation expenditures, and regarding administrative overheads.
- Is there a set of controls (accounting, auditing) guarding against the misuse or diversion of funds.
- Is the expenditure program and its financing consistent with the government's overall macroeconomic and resource allocation policies (or, better, is there a government committee or agency which oversees extra-budgetary funds and assures that their activities are consistent with government policies).
- Is there an agency with the demonstrated capacity to plan, evaluate, and carry out the program (or confidence that one can be created).
- Is there a cutoff date for deciding whether the earmarking arrangements should be continued.

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