



# **CMH Working Paper Series**

Paper No. WG3 : 3

## **Title**

A Summary Description of Health  
Financing in WHO Member States

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Date: June 2001

A Summary Description  
of Health Financing  
in WHO Member States

by

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First Draft 8 June 2001

Revised 29 June 2001

*The authors are with the Department of Health Financing and Stewardship of WHO, Geneva. One (Musgrove) is chiefly responsible for the text; the other (Zeram dini) is responsible for the data handling and graphic presentations. This paper is written for Working Group 3 of the WHO Commission on Macroeconomics and Health. Thanks are due to Jean-Pierre Poullier, Patricia Hernández, Chandika Indikadahena and Takondwa Mwase of WHO for the National Health Accounts estimates, to Peter Heller of the IMF for data on central government tax structure and expenditures and to Ke Xu of WHO for the calculations of catastrophic household health expenditure. Discussions with Alan Tait of the Commission, Guy Carrin of WHO and Alex Preker of the World Bank as well as with those just named, were extremely helpful. The views expressed here should not be attributed to WHO or to the governments of its Member States. The limitations of the paper are nobody's fault but the authors'.*

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*1. Scope of analysis and sources of information*

This paper is meant to provide a descriptive analysis of what WHO Member States are currently spending on health and how it is financed. The objective is to see what patterns, if any, emerge from simple comparisons and to comment on what such patterns imply for the adequacy of spending and the distribution of the financial burden among sources of finance and among households. The paper should be considered a draft which might subsequently be developed with more causal or explanatory analysis or with additional kinds of information.

The principal source of data is the set of national health accounts estimates prepared by WHO. The *World Health Report 2000* included estimates of total absolute health spending per capita in both exchange rate and international dollars, with the public and the out-of-pocket components distinguished in the latter case. The methods and assumptions behind these calculations have been detailed elsewhere (1), and continue to be revised as more sources of information are incorporated. The complement of out-of-pocket spending is prepayment of all kinds, including both voluntary and employment-related purchases of insurance and involuntary contributions via “tax-funded and other public expenditure” and social insurance contributions (often but not always operated through social security). Since social security contributions are often perceived as simply another kind of tax, the term “general revenue” is used here for all other kinds of public spending on health, even though some of the revenues are from dedicated taxes. The differences among these forms of prepayment, including the differences between actuarial premiums and taxes which are not determined in relation to risk, are considered here to be less important than the distinction between payment unrelated to individual utilization of services and payment out of pocket which always is so related. Seven relative variables, shares of GDP, of total health spending or of total public expenditure of all types, were also published (2, Annex Table 8), and some of them are analyzed here.

The published estimates refer to the year 1997, although they may be based on data for earlier years as well. Estimates for nearly all countries for that same year have been revised, and these revised estimates are used here and presented in Table 1. (Further revisions are in prospect.) WHO has prepared a round of preliminary estimates for 1998, but these numbers are not yet available for analysis. The quality of the information varies considerably among countries, so the initial estimates for 1997 were classified as “complete data with high reliability”, “incomplete data with high to medium reliability” or “incomplete data with low reliability”. As more and better data have been obtained for the revisions to the 1997 numbers, the completeness and quality of the estimates have improved. When the classification is repeated, fewer countries’ data will be categorized as incomplete or of low or medium reliability. Pending that reclassification, the first-round categories are distinguished here in the graphic presentation. This understates the quality of the data, but allows the reader to see whether the initially least reliable data suggest a slightly different pattern than the more reliable numbers. In any case, the data that were less reliable do not show systematically higher variance around whatever pattern is found: they do not simply always contribute more noise.

The *World Health Report* also included analyses based on estimates of families’ spending on health, derived from household surveys (2, Annex Table 7), for 21

countries. These numbers include not only what the household recalled spending out of pocket or through insurance purchases and social security contributions, but also estimates of the taxes paid which end up financing health. These estimates allow the identification of households which suffered “catastrophic” expenses, in the sense of a large share of their non-subsistence income or consumption (50%, in the results reported here). The total amount of such catastrophic expenditure can then be derived and compared to total spending and to the sum of out-of-pocket expenditure--which is the cause of catastrophic outlays, since the various forms of prepayment never take a very large share of household income. WHO has continued to analyze household surveys, for a larger number of countries, but the new estimates are not yet available for any but preliminary and qualitative analysis.

The IMF publishes estimates of consolidated and budgetary central government revenues and expenditures for its member countries, which are most but not all of the WHO Member States (3, 4). On the revenue side, taxes (general revenue) are distinguished from social security and other taxes on payroll or employment, as well as from taxes on trade and non-tax revenues. When a country spends very little public money on health, these estimates allow one to see whether that is the result of very low tax intake, in dollars or as a share of GDP, or the result of a very low share of revenue being used for health. No systematic estimates are available of revenue-raising capacity, or the extent to which a country’s economic level and structure would permit, at reasonable cost, a higher public revenue relative to total income. On the expenditure side, the IMF numbers include estimates for central government health spending as well as for education, defense and interest payments. The numbers for health do not match the national health accounts estimates of total public spending on health, because spending from their own revenues by states or provinces and municipalities is excluded (earmarked transfer payments to sub-national governments are included), apart from differences in accounting for social security health spending. Estimates for 56 countries are available for 1997-98.

Most of the analysis which follows considers all the WHO Member States together, both to have the largest possible number of observations and to look for relations over a wide range of incomes. Since there may be some significant regional differences in health spending or in how it is financed, some analyses are also conducted by region, using the six WHO regions. These do not match exactly the classifications used by the World Bank or the IMF, but the IMF revenue and expenditure data have been regrouped to follow the WHO regions, as shares of GDP and in PPP dollars per capita (5). The largest single discrepancy is that Canada and the United States are grouped with the rest of the Americas in one WHO region, and Japan and Australia are similarly grouped with the Western Pacific countries, rather than these four countries being classed together with western Europe as high-income countries. Partly to remedy this, and to group countries more homogeneously with respect to health status, WHO further divides the six regions into 14 strata characterized by child mortality (under five) and by adult mortality (between 15 and 45). These groupings distinguish adult mortality as under 2%, between 2 and 6%, and over 6%, and child mortality relative to a 20% threshold and to a regression relating child and adult mortality among countries (6). They are used to present health status data in (2, pp. 204-205 and Annex Tables 3 and 4).

The combination of geographic region and mortality permits a closer look at possible relations between health spending and health status, but several of the strata are too small for meaningful analysis. In any case, the direction of causation, if any, between spending and health is complicated, with plausible influences in both senses (7). The revisions to the published 1997 estimates most strongly affect the results for the low-mortality stratum (B) in the European region, which includes several central Asian countries. There are also substantial changes to the estimates for India and China. These would affect estimates of total spending more than the patterns observed when all countries are treated equally rather than being weighted by population or income. Table 2 shows the composition of the six regions and 14 strata, classified also by three nearly-equal ranges of per capita income. There is, not surprisingly, a substantial correlation between stratum and income, except where countries with high child mortality differ markedly in adult mortality, due principally to the AIDS epidemic.

The analysis begins by looking at total health spending relative to GDP, as a function of GDP per head. Comparisons to any notion of need, however, require consideration of dollar amounts, so the per capita levels of total health expenditure, out-of-pocket spending, and public spending are next compared to per capita income, both in purchasing power parity dollars. (No analysis is conducted with exchange rate dollars or in national currency, nor with international dollars as calculated previously.) The remainder of the analysis looks at shares, relative to total health spending, government revenues or total public or central government expenditure. This draft does not include any econometric estimation, only description of patterns (or their absence). Where there appears to be a clear pattern within a region or stratum, or a marked difference among regions or strata, the analysis is at that level; otherwise, all countries for which there are data are considered together.

## *2. How much do countries spend on health ?*

Countries differ so widely in income, with so many of them bunched at low incomes, that the most useful way to visualize relations is to take logarithms of all money amounts. This also gives a visual clue to income-elasticities. The graphs that follow show per capita income in natural logs, over the range from 6 (equivalent to \$ 400) to 11 (equivalent to just under \$ 60,000).

The NHA data confirm once again the finding that health is a luxury good, taking a generally rising share of GDP as income increases, from around 2-3% to a typical level of 8-9% (Figure 1). A better comparison would be to income net of some measure of subsistence, but there is no common estimate of that concept. Many countries are so poor—28 have incomes under \$ 1,000 per year or about \$ 3 per day—that those of them which spend even as much as 4% of total income on health would show a quite high share of non-subsistence income, comparable to that in much richer countries. A striking finding is that the share varies greatly at all income levels. Even at low incomes, countries show almost as large a variation in how much of GDP goes for health, as at high incomes. The health share of GDP ranges from below 3% to 6% among African countries at incomes of less than \$ 2,500 (Figure 1a). This is as wide a range as the 5-10% spread among most of the countries in the Americas at incomes between \$ 10,000 and \$ 20,000 (Figure 1b) or the 3-6% range in the Eastern Mediterranean region in the same income interval (Figure 1c). This counter-intuitive result—that countries which seem to have less scope for variation nonetheless vary as

much as countries with more leeway for differences in spending—shows up repeatedly in what follows. The one clear exception is in the composition (not the level) of public spending, where rich countries show more variation in the importance of social security relative to general revenue expenditure.

These shares of GDP of course translate into a much wider range of dollar amounts per capita on health. All health expenditures are converted to dollars at the same PPP rates as incomes, because health-specific price indexes are only gradually becoming available. When the data are displayed linearly, the strong relation to income that appears for all countries together also characterizes every WHO region and every mortality stratum that includes at least six countries. (The data for several countries in the small strata are incomplete or of only low or medium reliability). This relation looks much weaker in relative (logarithmic) terms (Figure 2), and the apparent dispersion is reversed. Relative differences are largest in poor countries, sometimes as high as 5:1 at incomes under \$ 5,000 but no greater than about 2:1 among most countries at incomes of \$ 10-20,000. There are no marked differences among regions in either the shape or the slope of the expenditure/income relation. There are more substantial differences in the way that health is financed, but these do not seem to affect the total systematically: the WHO regions do not correspond to distinct levels of health financing, given income. In most countries, estimated total health spending is quite low--less than \$ 45 per person per year in 25 countries with incomes below \$ 1,000 and still below \$ 110 in another 32 countries at incomes under \$ 2,200.

Some countries spend in total less than the cost of an essential package of cost-effective services, as estimated by the World Bank in 1993 (8) at about \$ 12 per capita in very poor countries and \$ 22 in middle-income countries. Of course, even if correct so far as they go, these estimates do not suggest what total health spending should be, once it passes those levels. What is clear is that some countries are not now spending enough to assure that even a short list of highly justified services is provided to everyone in the population, whether the justification is based on cost-effectiveness, protection from catastrophic expense or some other criteria. Inadequate spending in this sense is quite distinct from the question whether such low health expenditure represents under-investment and loss of potential economic growth (7).

WHO has tried to find a threshold of expenditure by looking for changes in the slope or shape of a relation between health expenditure and health outcomes, as measured by disability-adjusted life expectancy (9). Countries below an expenditure level of about \$ 80 per person per year appear to achieve less of the potential for health than do countries that spend more. However, it is not clear that this is due to low spending as such, rather than the effects of the AIDS epidemic and the general problems of war and poor government that afflict many of the poorest countries. In any case, the frontier of the possible is too ill defined to establish a minimum or threshold above which health expenditure becomes significantly more effective. Arguments about the need to spend more are more solidly grounded on comparisons of cost and health status, than on any relation between expenditure and efficiency in the use of resources, and apply at very low levels of expenditure rather than generally.

There is no good answer to the question, *what should a country spend on health ?*, beyond trying to establish a (low) minimum, since that depends not only on the country's economic potential but also on the health problems its population faces, the

costs of interventions against those problems, the composition of health spending and the relative importance of other socially desired outcomes. In particular, it is impossible to specify an appropriate or optimal level of voluntary private spending on health, given differences in people's tastes and degree of aversion to risk, beyond observing that such expenditure should not expose anyone to catastrophic financial risk. Nonetheless, the findings just reported about total health expenditure, plus those presented below concerning public spending and prepayment generally, do suggest an argument for more expenditure and especially more public expenditure in poor countries, which is taken up later.

### *3. Paying beforehand or at time of need*

Because of its relation to financial risk, especially catastrophic risk, the most important distinction in how health is paid for is that between prepayment in all forms, and payment out-of-pocket at the time of service. Paying out of pocket makes sense for small expenditures, for all but the very poorest users. Covering them by explicit insurance involves administrative costs that are large relative to the benefits, while implicit coverage by public finance means fewer resources are available for the costly interventions against which people especially need protection (10, Figure 1). Since the poorer a country is, the lower is the threshold for catastrophic expenses for most people, the share of out-of-pocket spending ought to increase as income rises. Exactly the opposite occurs (Figure 3). At low incomes, the out-of-pocket share is high on average, and extremely variable, from about 20 to 80% of all health spending. With increasing income, not only does the average share fall sharply, but the range narrows. Except for a very few countries (only four or five with highly reliable data), there is a sharply defined frontier of maximal out-of-pocket spending, or minimal share of prepayment in the total. Such a downward-sloping frontier shows up, somewhat less markedly, in sub-Saharan Africa (Figure 3a), the Americas (Figure 3b) and the Eastern Mediterranean and North Africa (Figure 3c), but not in Europe, where the out-of-pocket share is nearly always below 40% to start with. The declining share of out-of-pocket spending does not offset the rapid rise in total spending on health, so that the dollar amount spent out of pocket still climbs rapidly as income and total spending increase (Figure 4).

A given overall share of out-of-pocket financing may represent relatively little financial risk to households if it is low and is distributed more or less proportionally to capacity to pay. Everyone is then buying those, and only those, health goods and services that are affordable. The WHO index of equality of household contribution to financing health (which also includes prepayment through taxes, social security contributions and insurance) attempts to measure the extent to which this is the case. However, the index suffers from the limitation that each household's contribution is compared to estimated average contribution across all households, so that equal index values in two countries can refer to quite different levels of catastrophic risk. This is apart from the fact that the index does not distinguish voluntary from involuntary contributions, nor progressive from regressive departures from equality (11).

A simpler indicator of the risk from relying on out-of-pocket expenditure is the fraction of households whose estimated contribution to paying for health exceeded 50% of their income net of food expenditures, which WHO has used as a measure of capacity to pay. In most of the 21 countries studied, these are 5% or fewer of all the



households in the survey, but in a few cases the share is over 10% (Figure 5). There is no relation between this share and the level of income. The sample is rather small; it includes no high-income countries; and there seems to be no connection between the overall level of out-of-pocket spending, which is what gives rise to catastrophic risks, and the fraction of households with very high levels of such spending.

Counting heads says nothing about the importance of catastrophically high health spending at the household level, in total health spending. This share might be expected to decrease with income, both because the threshold of “catastrophic” rises and because prepayment increasingly takes over from paying out of pocket. When “catastrophic spending” is measured by the total expenditure of all the households which suffered such spending, the share is often more than 10% of what all families together contributed to financing health, and sometimes over 20% (Figure 6). There is still no strong relation to income, for the reasons just mentioned, but now the highest value occurs at much lower income than for the household head-count. If “catastrophic spending” is re-defined as the sum of expenditures after deducting 50% of capacity to pay, the numbers are smaller but the pattern is hardly changed (Figure 7). That is, in every country studied, a small fraction of households account for a rather large share of total spending, and much of that spending represents a very high share of their potential for non-food spending out of income—it is truly catastrophic.

The household survey data for these countries do not include any information about how families actually financed those expenditures regarded as catastrophic. A recent survey in India (12, Figures 3.5 and 3.6) shows that it is very common for health needs to push families into selling assets or borrowing cash, even in the upper income quintiles. Only about half of all families can afford a medical emergency out of current income or savings, and the loss of savings can still leave them dangerously exposed to other risks. Reducing the risk of asset loss or impoverishment is the chief benefit from extending prepayment and confining out-of-pocket payment to affordable services, as incomes rise. Preliminary results from a larger sample of 44 countries, including some at incomes well above the incomes of the 21 countries reported here, seem to show this effect. The relation is not very marked, but the shares of households with catastrophic spending, and that of catastrophic spending in the total, tend to fall with rising income. Richer countries do not simply spend more on health; they generally distribute the burden more equitably, with less risk of financial catastrophe for individuals and households.

#### *4. How is prepayment financed ?*

Some mechanisms are not widely used and make very little contribution to total health spending, such as “health cards” that are bought in advance of need and amount to small purchases of a fixed monetary amount of insurance. Aside from these, there are three basic ways to finance prepayment: private insurance (which may be entirely voluntary, or employment-related), social security contributions, and taxes (general revenue). All publicly financed health is prepaid; private spending is divided between insurance and out-of-pocket payments. When private insurance finances a negligible share of health expenses, as it does in most countries and virtually all poor countries, the distinction between prepayment and out-of-pocket spending coincides with that between public and private expenditure. (This is one of two reasons why public spending is generally important in poor countries, the other reason being that only

public spending will pay for public goods and services with large externalities.) Public spending is then close to being the complement of the out-of-pocket share. As a share of total health spending, it shows the same sort of frontier, this time for the minimum rather than the maximum share (Figure 8). Public spending rises with total spending, but more rapidly, (Figure 9) when all countries are considered together. The relative variation in public spending shrinks, another example of convergence at high incomes. However, there is less apparent convergence and a tighter relation between public and total expenditure, when only the highly reliable data are examined, because in this case the less-reliable estimates systematically increase the scatter at low incomes. Europe is the only region where the public share is always above 40% and nearly always above 60%, with little relation to income (Figure 8a).

Within public spending as classified in national health accounts there is a further distinction between social security contributions and general revenues or “tax-financed” expenditure. The latter is the predominant, often the only, mode of public finance for health in most countries (Figure 10). Those countries where social security is the principal mode of public spending are heavily concentrated in Europe (Figure 10a), where some countries are usually classified as following a “Bismarckian” model of social insurance and others follow a “Beveridge” model of general revenue taxation (13). In these high-income countries, either model can achieve essentially full coverage of the population and account for a large share of total health expenditure. In low-income countries, in contrast, often neither mode accounts for as much as half of total spending.

The most obvious feature of the social security/general revenue distinction is that there is no convergence among countries, related to income. High income countries tend to rely chiefly on one model or the other, whereas at lower incomes there are more mixed models, with part of the population covered by social security and another part protected by a Ministry of Health financed chiefly from general revenue. In practice, and particularly in Latin America, there is a great variety of institutional arrangements, and the population nominally covered under one scheme often also uses services financed by a different mode (14). The lack of convergence and the variety of financing combinations arise for historical reasons, largely unrelated to income. There is considerable debate as to which system—social insurance or general taxation—is better (15), but nothing can be concluded about that from financing data alone. This is particularly true when public expenditure of both kinds together is only a small share of total health expenditure.

The third main mode of financing prepayment, private insurance, appears to be virtually non-existent in the majority of countries. In the data used here, there are only 47 countries where it accounts for as much as 5% of private health expenditure (only five of which are in Africa), and that may mean a share of total spending as low as 1-2%. Private insurance is even more of a luxury than public spending, being generally more important at high incomes (Figure 11). Most of the countries where insurance is a large fraction of private spending are in the Americas (Figure 11a) or Europe (Figure 11b). The shares that insurance is of total health spending vary considerably, because it may be a significant form of prepayment (as in South Africa and the United States) or may be purchased to complement publicly-funded services (as in Canada and several European and Latin American countries). The relative importance of private insurance also depends on whether the well-off are required to

purchase it and leave the public system (in the Netherlands) or encouraged to do so, by being allowed to direct their social security contributions to private insurers (in Chile). The current NHA data do not distinguish between insurance purchased voluntarily by individual consumers and that purchased on their behalf by employers, although that distinction can be incorporated in the future. Purchase by employers accounts for a large share of insurance in Brazil and the United States and for much of health financing for employees of the (much smaller) formal sector in a number of other countries.

##### *5. How much of public spending goes for health ?*

If public expenditure on health is, by some criterion, too low, there are two possible explanations: low total public expenditure, or a low share of that being devoted to health. (A country can of course suffer from both causes.) The NHA data relate public spending on health to total general government expenditure. This share almost never exceeds 20% and is below 10% for the majority of countries (Figure 12). Almost all countries in sub-Saharan Africa devote less than 10% of government expenditure to health (Figure 12a), and the same is true in the Eastern Mediterranean and North Africa (Figure 12b). There is a tendency for the health share to increase as income rises, from around 5-6% to about 10%, but with great variation at all income levels. Instead of convergence as income increases, there is more absolute variation and about the same amount of relative variation.

The pattern of health spending relative to total government spending closely resembles the pattern for health spending relative to GDP (Figure 1), because the share of GDP that passes through government varies rather little on average as a function of income. The IMF estimates total central government expenditure relative to GDP, and the fractions devoted to health, education, defense and interest payments, both domestic and foreign (Table 3). These estimates do not closely approximate the NHA numbers when much expenditure passes through sub-national governments, as in Brazil, China and India, so the share of GDP financed publicly is under-estimated. On average, the share of GDP spent by central governments from all sources increases only slightly (from 24 to 29%) from very low to middle incomes, with a further increase to 32% among high income countries. Within the lower income groups, and often within each mortality stratum, there is considerable variation, sometimes by as much as 3:1. Failure to capture a large enough share of a country's output for public use does not seem to be a general explanation for low health spending in poor countries, but it helps explain the low shares of GDP that central government spends for health in some countries. (El Salvador, China and the United Arab Emirates are examples: Chinese spending is much higher when general rather than central government is included.) At high incomes and low mortality, the shares converge somewhat for total spending, but much less so for health expenditure. In fact, the relation between the two fractions of GDP appears to fan out as central government accounts for a larger share of the economy (Figure 13). This is consistent with, but more marked than, the widening variation in the share of GDP spent on health as a function of income.

## 6. *Summing up*

Since this note is intended only to see whether a selection of data, primarily from national health accounts, show any patterns of interest, the analysis does not lead to any striking or unexpected conclusions. When absolute expenditures are examined, there is always a strong relation to income: out-of-pocket spending, total expenditure and public spending all rise rapidly with income, with elasticities that are close to constant, slightly above 1.0 and not very different from one another, and that increase in the order indicated. In consequence, there is also a strong relation between public spending and total spending on health.

When percentage shares rather than absolute amounts are looked at, the relations appear to fall into two groups: those that show some convergence toward a common pattern as income rises, especially at high incomes, and those that show no such convergence. In the latter category are the share of GDP spent on health in total; the share of public spending that is tax-funded or financed by general revenue rather than social security; and the share of health in total government spending. In the former category, where convergence does occur, it is more marked for the variation in a share than for the average level of that share. Thus as income rises, the variation in health spending narrows; the public share becomes more uniformly high; and the share of out-of-pocket spending becomes much more uniformly low.

Several stylized facts emerge as part of this pattern:

\* in many poor countries total health spending is very low, even compared to the cost of a package containing only a short list of highly justified interventions

\* a large share of that spending is private, and out-of-pocket spending is already high enough to be catastrophic for several percent of households. Thus even if consumers were willing to pay more out of pocket for better quality services, the poor still could not be expected to pay much more and would require preferential treatment (16)

\* private prepayment by way of insurance is quite limited to the wealthy and those with formal employment. The poor probably could afford meaningful insurance coverage, only with public subsidy

\* for these reasons, as well as for assuring that public goods and services with large externalities are adequately provided, public expenditure on health is particularly important in poor countries. However, these are generally the countries with the lowest relative public spending in health.

Increased prepayment, mostly via greater public spending, is what allows the out-of-pocket share to fall so markedly. This should reduce the risk of catastrophic financial risk for households. The evidence of this occurring is still preliminary: it does not show up for the first set of 21 countries for which analyses are complete, but it appears to emerge when a larger set of 44 countries, some of them at higher incomes, is examined.

These findings, so far as they go, reinforce the notion that the challenge for poorer countries is not merely to spend more on health, but to spend more of it equitably, by

increasing prepayment, especially for potentially catastrophic expenses and particularly via public resources. Rich countries have not converged on a single model of health financing nor a single institutional arrangement—but they have largely converged on a high degree of protection from financial risk and socialization of the burden of paying for health.

*7. Some speculation: needs versus actual spending, total and public*

Nothing in these findings indicates how much a country ought to spend on health. Partly that is because there is no consensus as to what services it ought to finance for its citizens, and different packages of services of course may have very different financial implications. However, a *given* package of services, chosen in whatever relation to a country's economic capacity and health status, and according to whatever combination of criteria (2, Figure 3.2), corresponds to a relatively well defined minimum cost, if it is to be provided for the whole population. One can then say that *if* the country is to deliver that package, it *should* spend at least the corresponding minimum amount.

The normative cost for a particular package of services will depend on a number of characteristics of the country, including its level of income. The package might cost more to provide in high-income countries than in poorer environments because inputs are more expensive. But the reverse is also possible: as a country is poorer, it may be costlier to reach everyone because more of the population is widely dispersed. In addition, the low level of schooling and generally worse health status may require more intensive intervention. Thus on average, the need for total spending on the services in the package may be constant or declining with per capita income, at least over some range. This problem of high cost for uniform, universal coverage may lead to a more limited package of services for the poor and those who are hard to reach.

Whatever the relation between income and *total* need defined relative to the package, the need for *public* expenditure on those services, as a share of the total need, almost surely declines with income, either by declining absolutely or by rising more slowly as the country is richer. People can afford more of the required expenditure privately, either because out-of-pocket expenses are less onerous or because of wider private insurance coverage. More public spending would simply crowd out some of that private expenditure.

The relation between actual total spending and actual public spending is just the opposite of that described with respect to needs. The difference between them narrows as income rises. The result is that any gap between needs and actual expenditure is greater for the public component than for the total (Figure 14). For a country with GDP per capita of  $Y^*$ , spending on health is not quite enough to provide the package to everyone—there is a gap indicated by the distance A-B. The public gap, indicated by C-D, is much larger. Even if the total gap were closed, there might still be a shortfall of public spending. Part of the population still would not benefit from the desired services, and the additional expenditure would go to other interventions and be distributed less equitably. If this line of reasoning is correct, the need in poor countries is not only to spend more on health, but—as already occurs in most high-income countries—to reduce the dependence on out-of-pocket payments and to fund a substantial part of the increase in prepayment from public resources.

*8. What this analysis does not treat*

Since the foregoing analysis deals only with how much is spent on health and how, *grosso modo*, it is financed, it is silent on the questions of how well resources are spent and what the outcomes are in health status or other indicators of how well the health system works. WHO has tried to use financial data to judge overall system performance, by relating outcomes to total per capita health spending; and as indicated in section 3 and particularly in the discussion of Figures 5, 6 and 7, it has used household-level financial data and estimates to assess the equality of families' contributions to paying for health (2). These uses of financial information have not made any further distinction among sources, nor have they considered the number and types of pools through which prepayment passes. There is some evidence that a high degree of population coverage by such pools leads to better results on all the dimensions WHO has studied (17); this analysis goes beyond the simple distinction here between prepayment of all types and out-of-pocket expenses.

Treating all tax revenues together, and distinguishing them only from social health insurance contributions, also means that there is no analysis of how good a country's tax system is, on such grounds as the cost of collection, equity among taxpayers, and minimal disincentives to economic performance by individuals and firms. A full analysis of how health is paid for in a country requires examination of these issues of fairness and efficiency in tax collection, insurance coverage and premiums, and the effects of fund pooling on people's financial burdens and on their access to care. These are all issues involved in judging how a country's health financing might be improved and therefore in WHO policy and advice to Member States.

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Figure 1: Total expenditure on health as % of GDP vs. GDP per capita (191 countries)

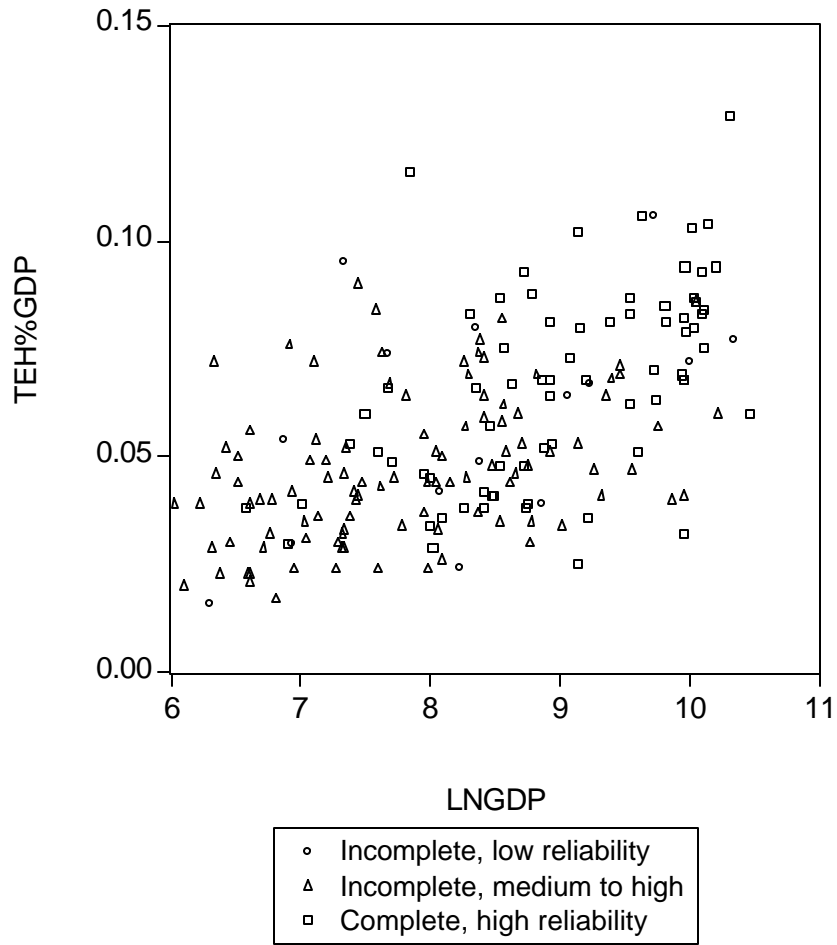


Figure 1a: Total expenditure on health as % of GDP vs. GDP per capita (Afro region)

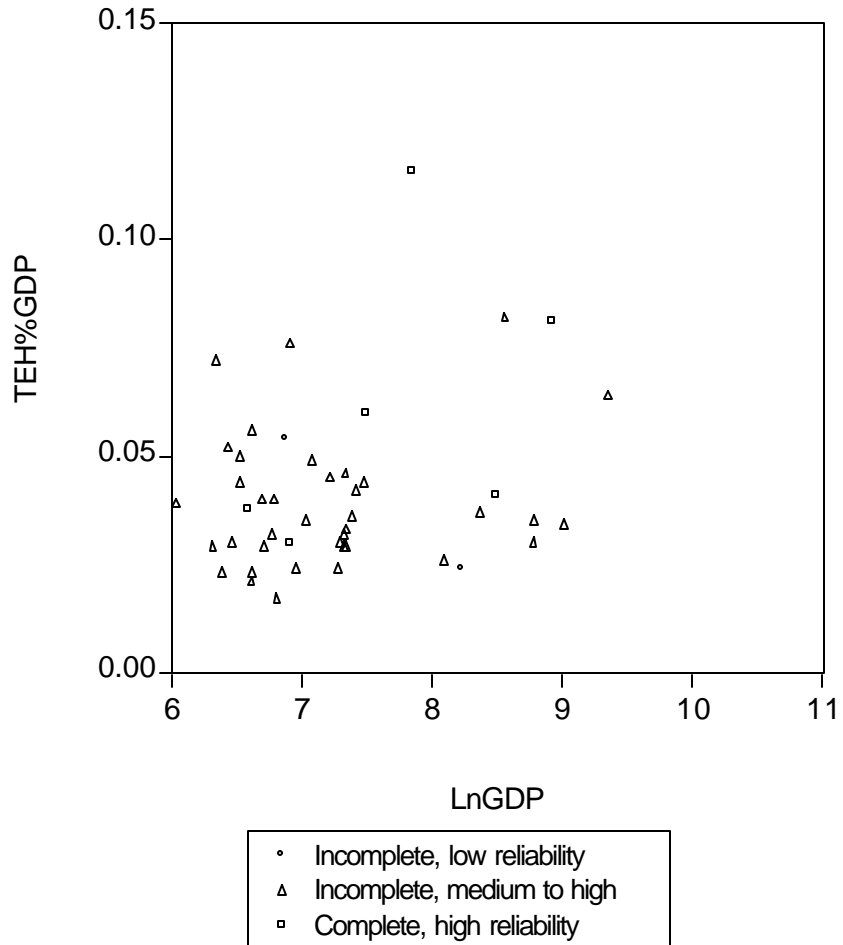


Figure 1b: Total expenditure on health as % of GDP vs. GDP per capita (Amro region)

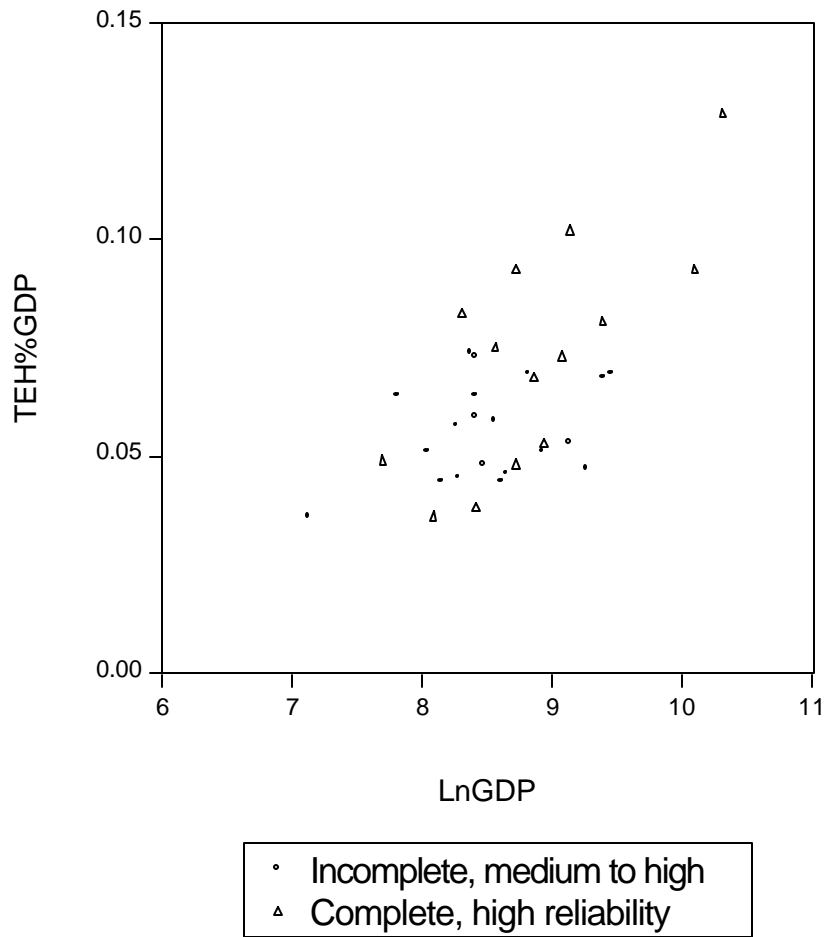


Figure 1c: Total expenditure on health as % of GDP vs. GDP per capita (Emro region)

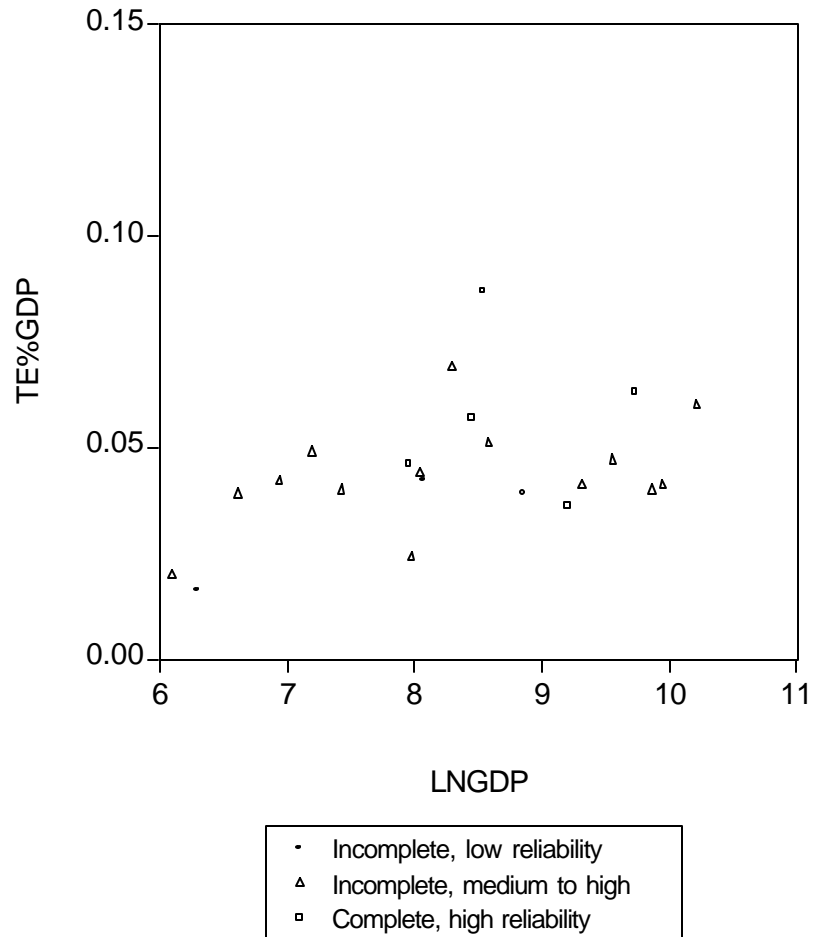


Figure 2: Total expenditure on health vs. GDP, per capita (191 countries)

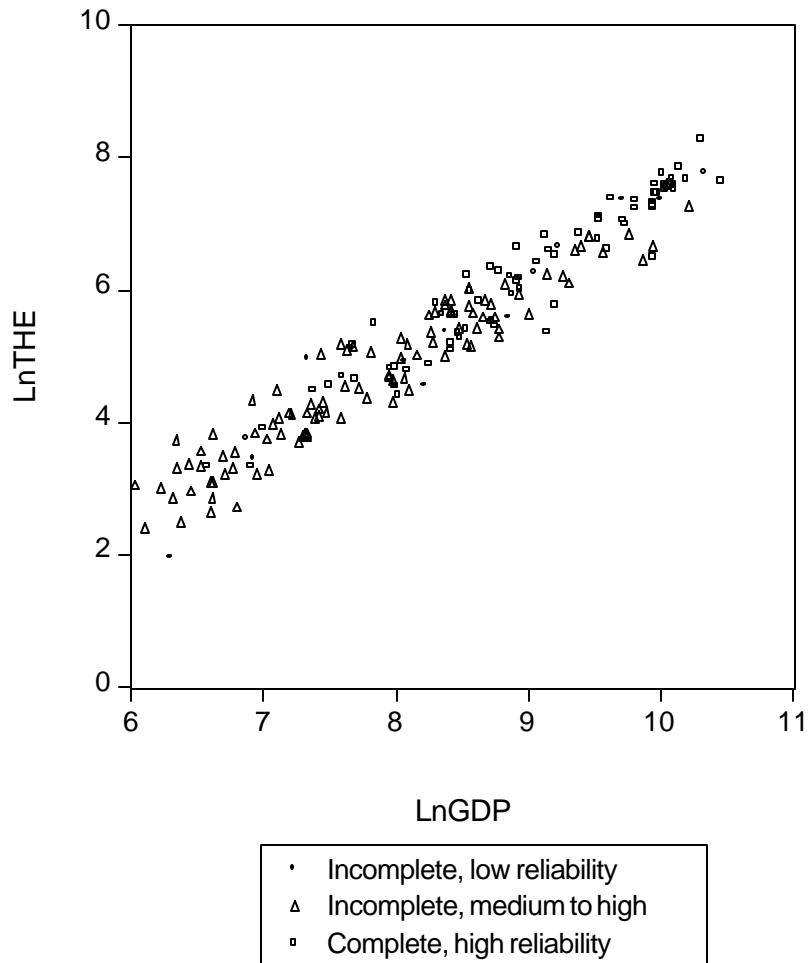


Figure 2a: Total expenditure on health vs. GDP, per capita (Afro region)

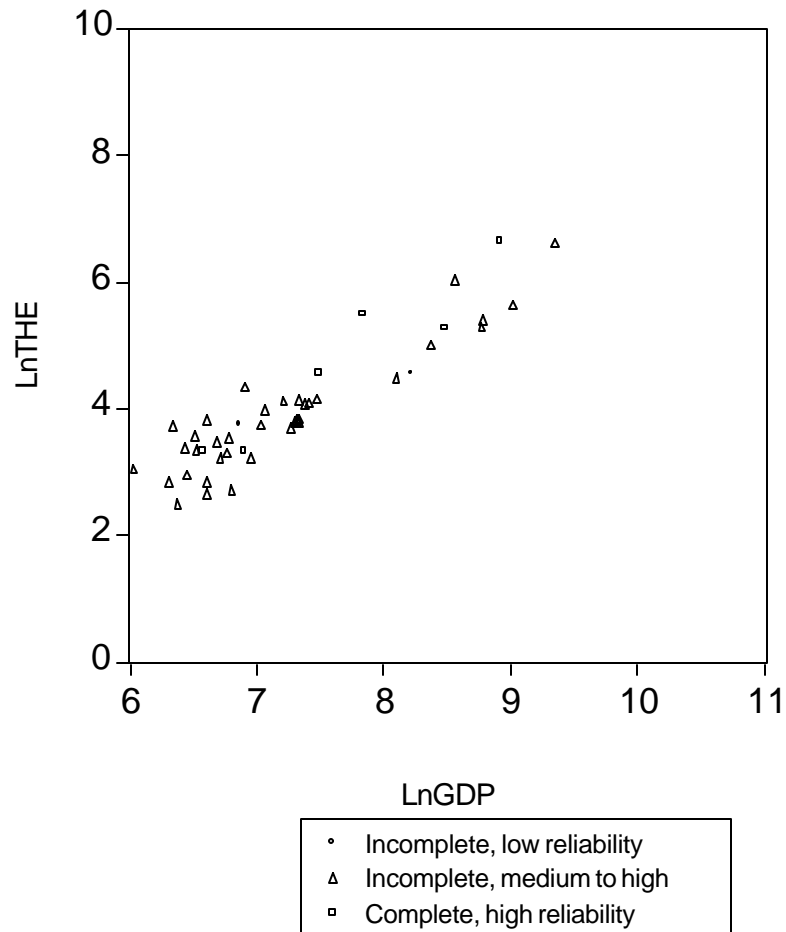


Figure 2b: Total expenditure on health vs. GDP, per capita (Amro region)

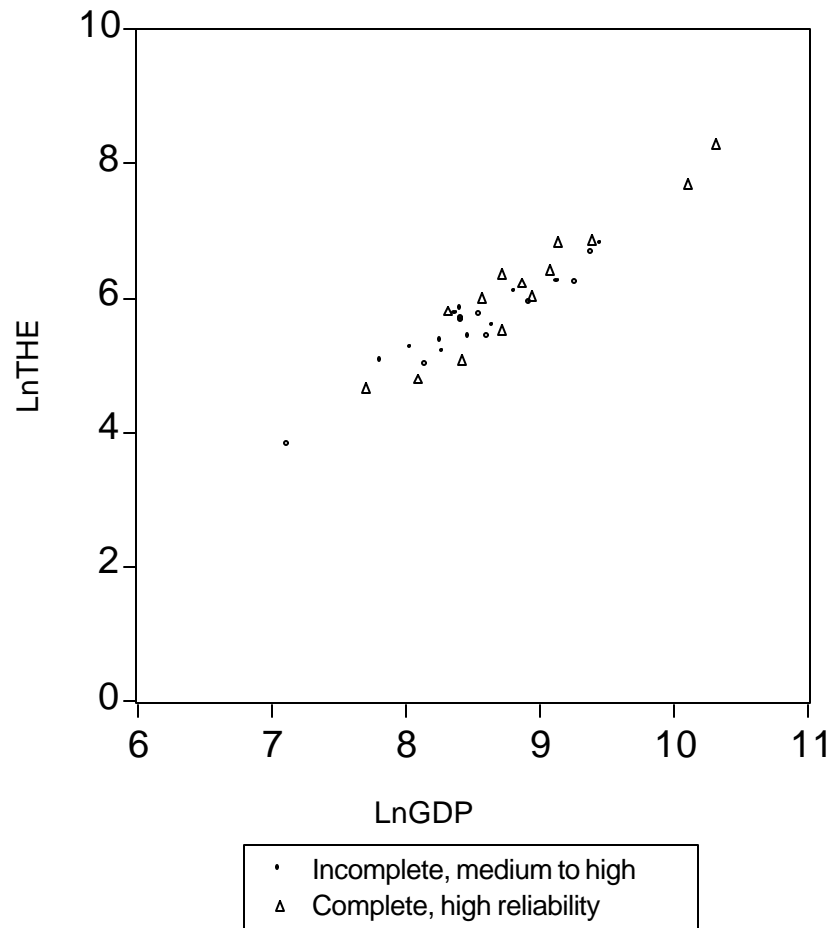


Figure 2c: Total expenditure on health vs. GDP, per capita (Emro region)

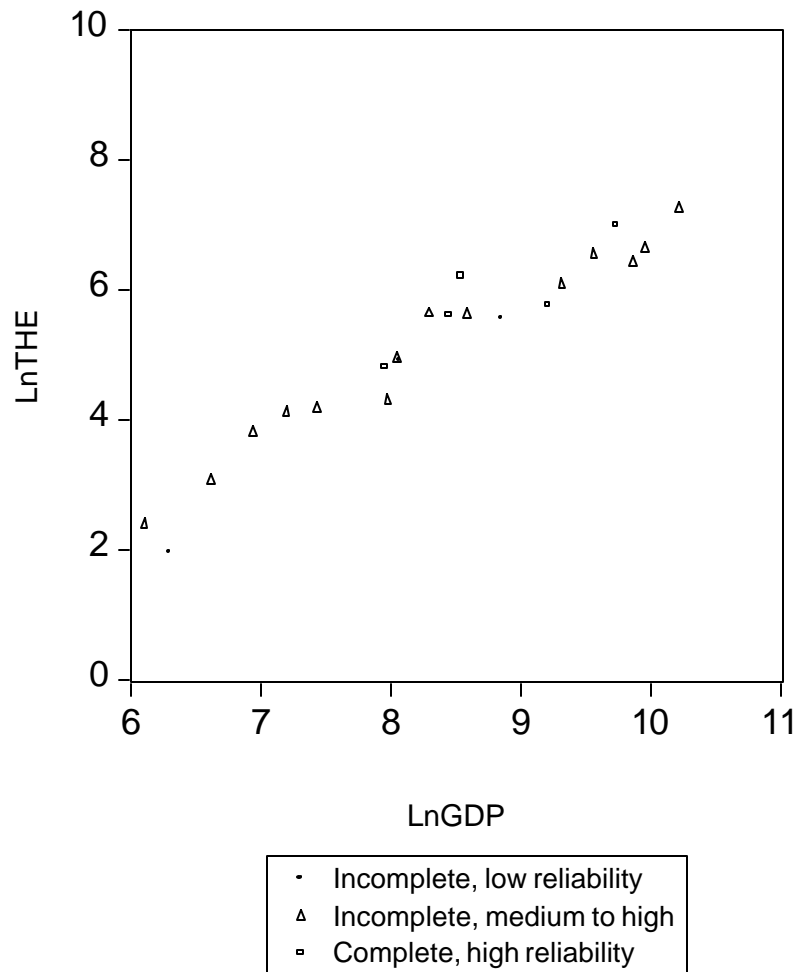




Figure 2d: Total expenditure on health vs. GDP (Euro region)

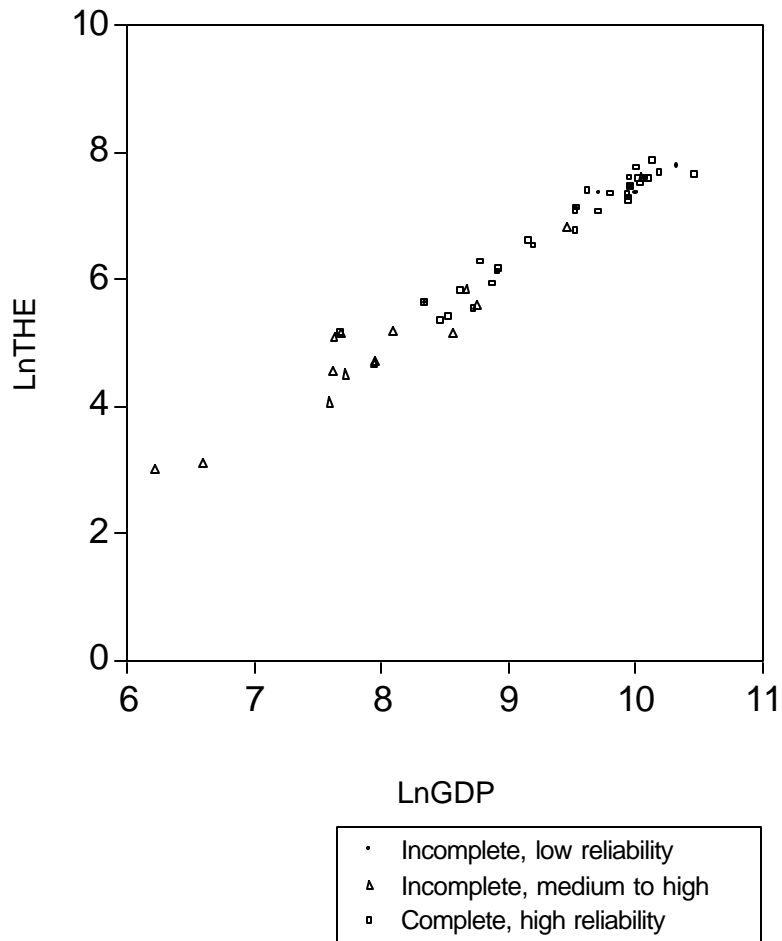


Figure 3: Out-of-pocket expenditure as % of total health expenditure vs. GDP, per capita (191 countries)

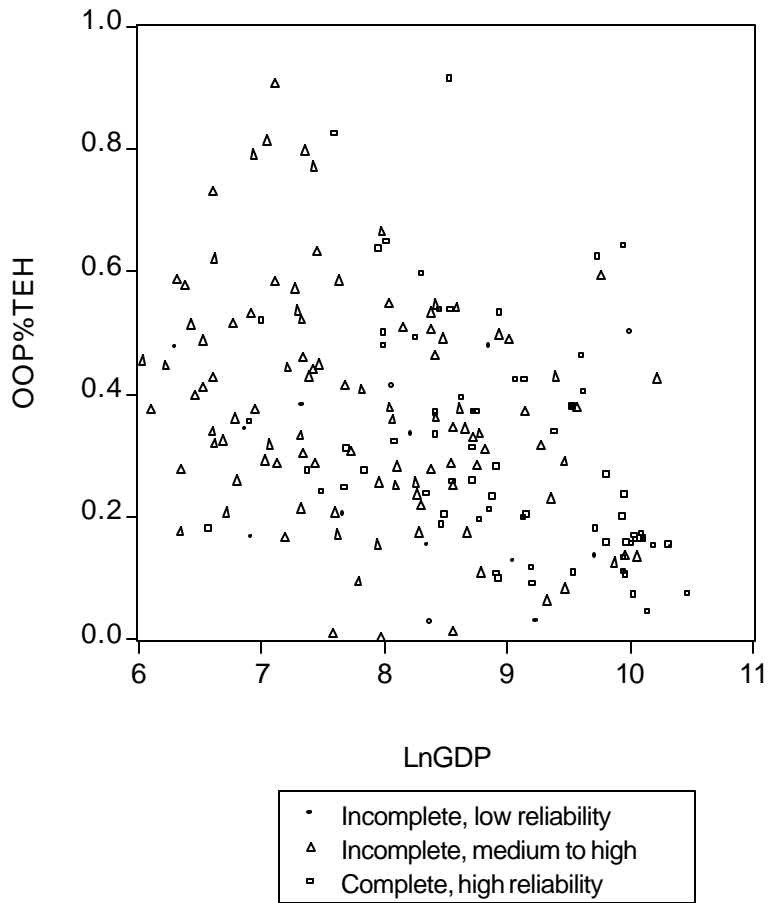


Figure 3a: Out-of-pocket expenditure as % of total health expenditure vs. GDP per capita (Afro region)

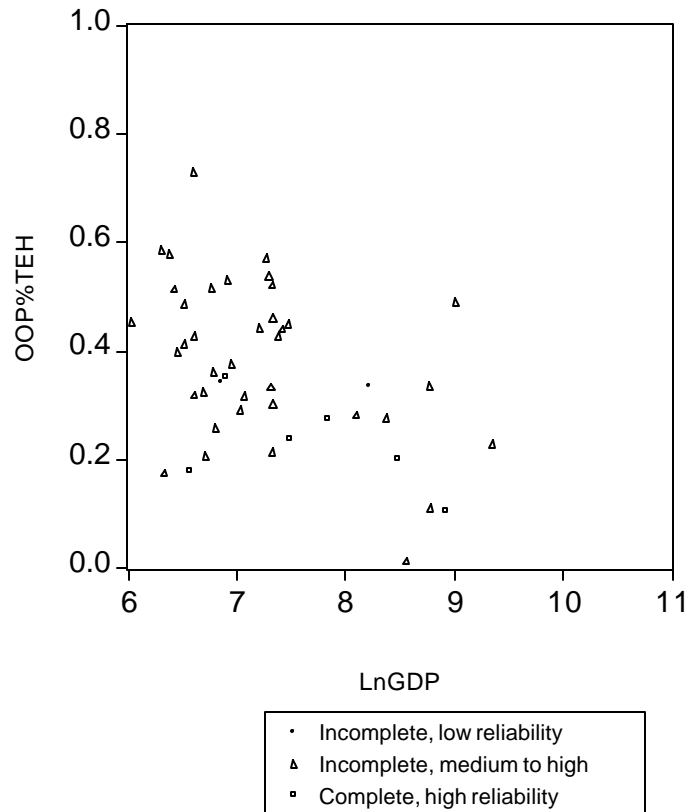


Figure 3b: Out-of-pocket expenditure as % of total health expenditure vs. GDP per capita (Amro region)

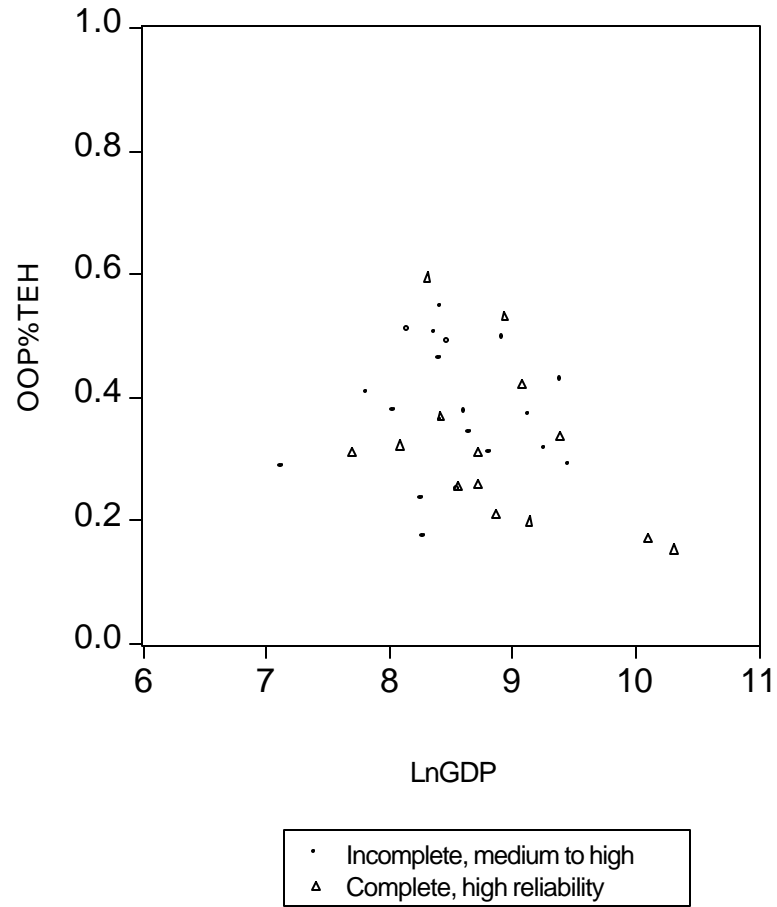


Figure 3c: Out-of-pocket expenditure as % of total health expenditure vs. GDP per capita (Emro region)

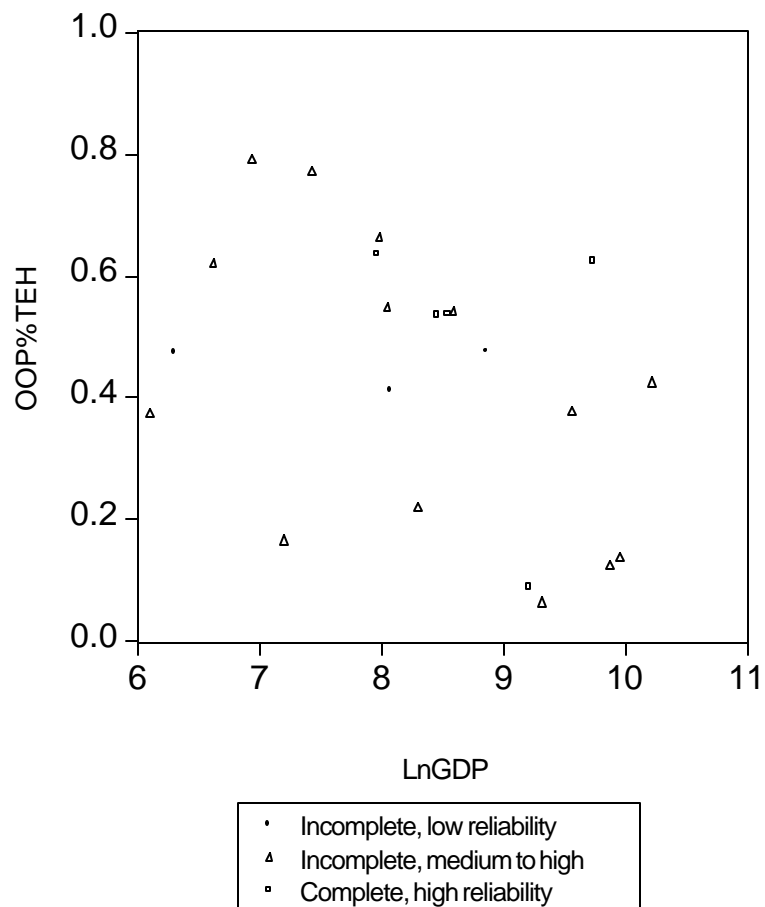


Figure 4: Out-of-pocket expenditure on health vs. GDP, per capita (191 countries)

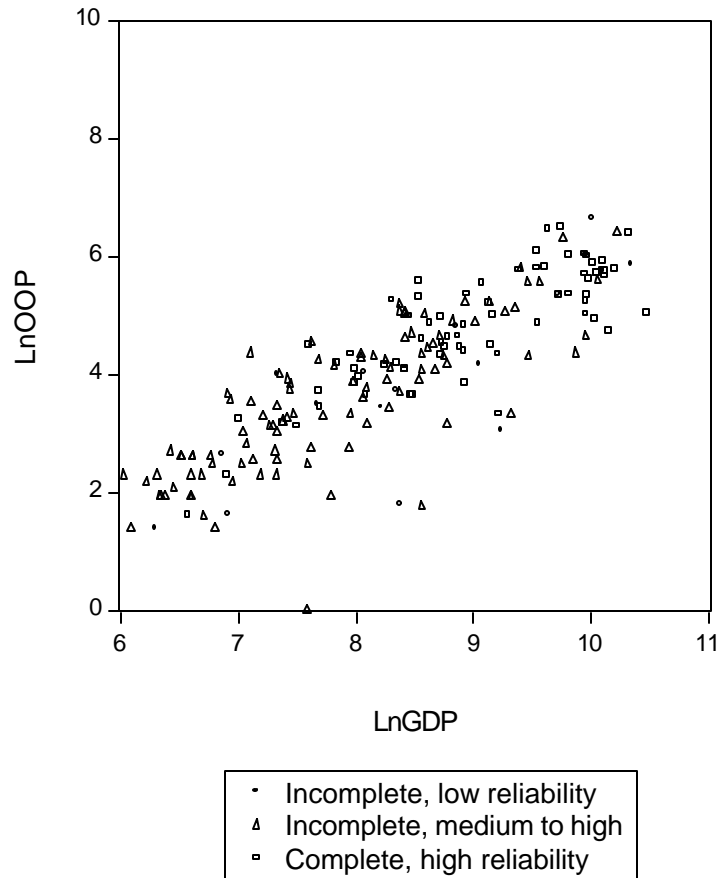


Figure 5: Share of households with catastrophic health expenses vs. GDP per capita. (21 countries)

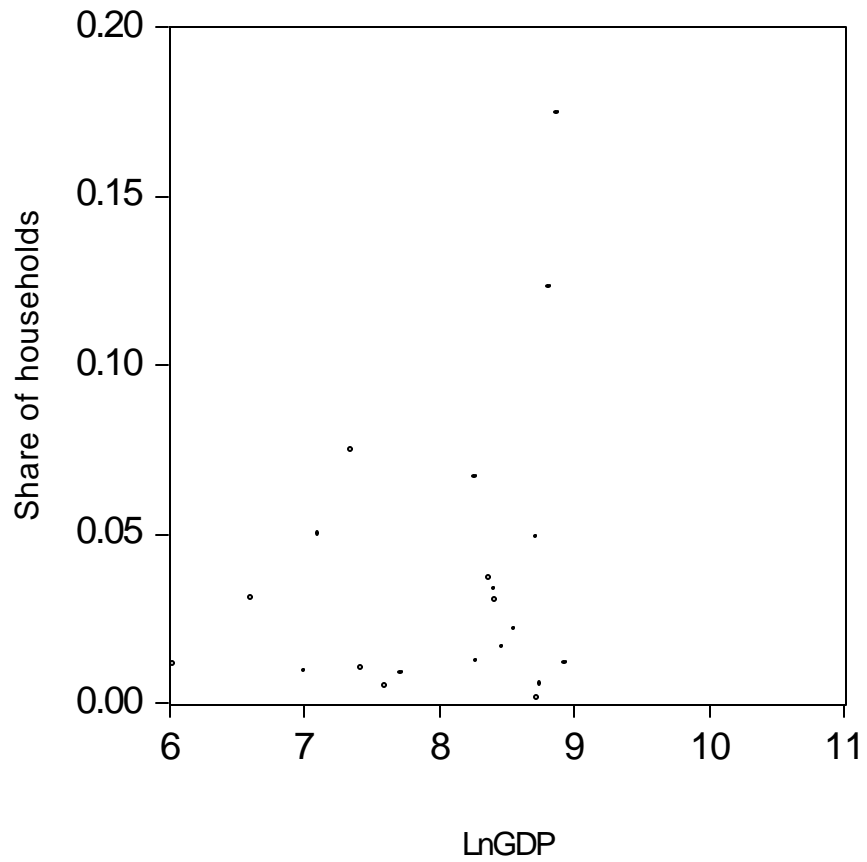


Figure 6: Share of catastrophic expenses in total household health expenses vs. GDP per capita (21 countries)

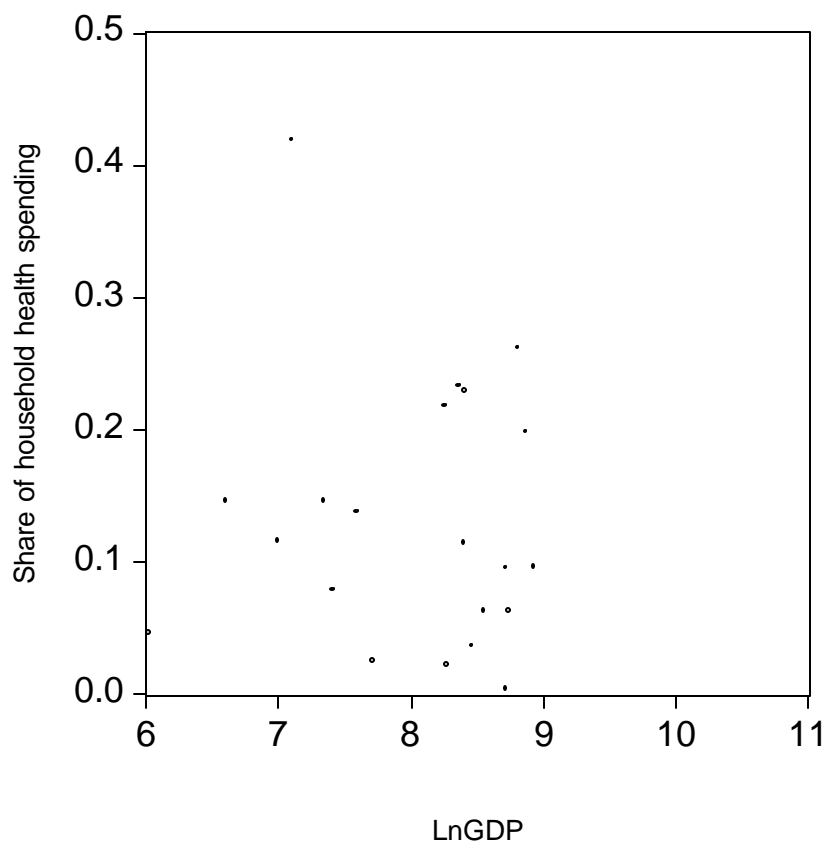




Figure 7: Share of expenses beyond 50% of capacity to pay in total household health expenses vs. GDP per capita (21 countries)

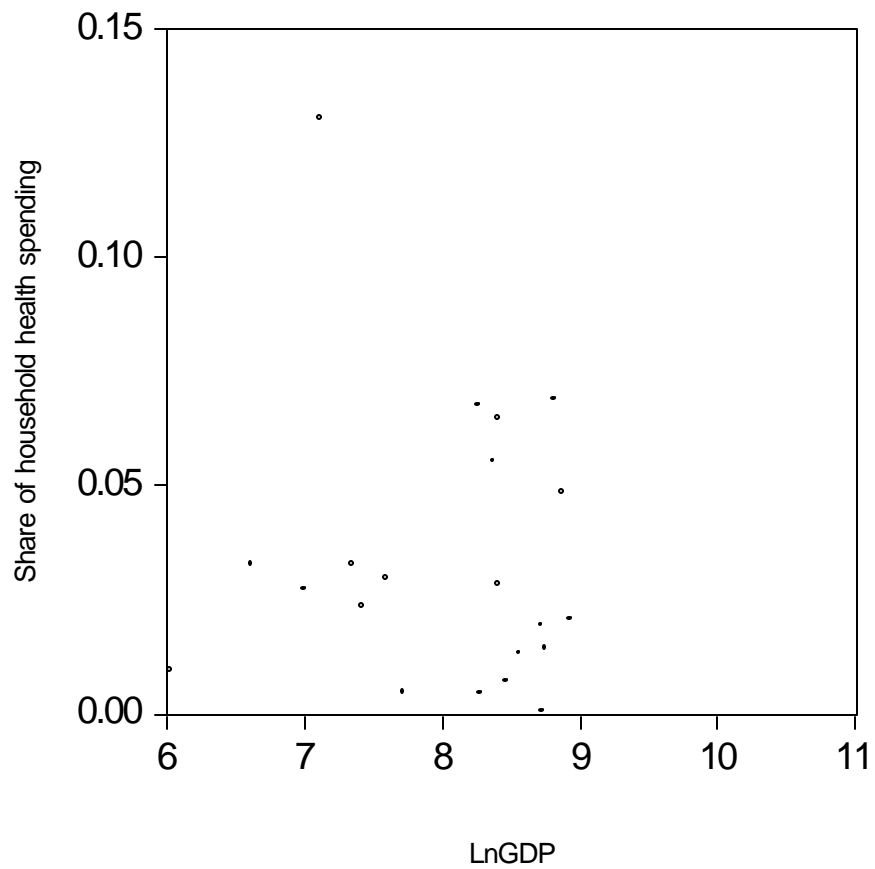


Figure 8: Public expenditure as % of total health expenditure vs. GDP per capita (191 countries)

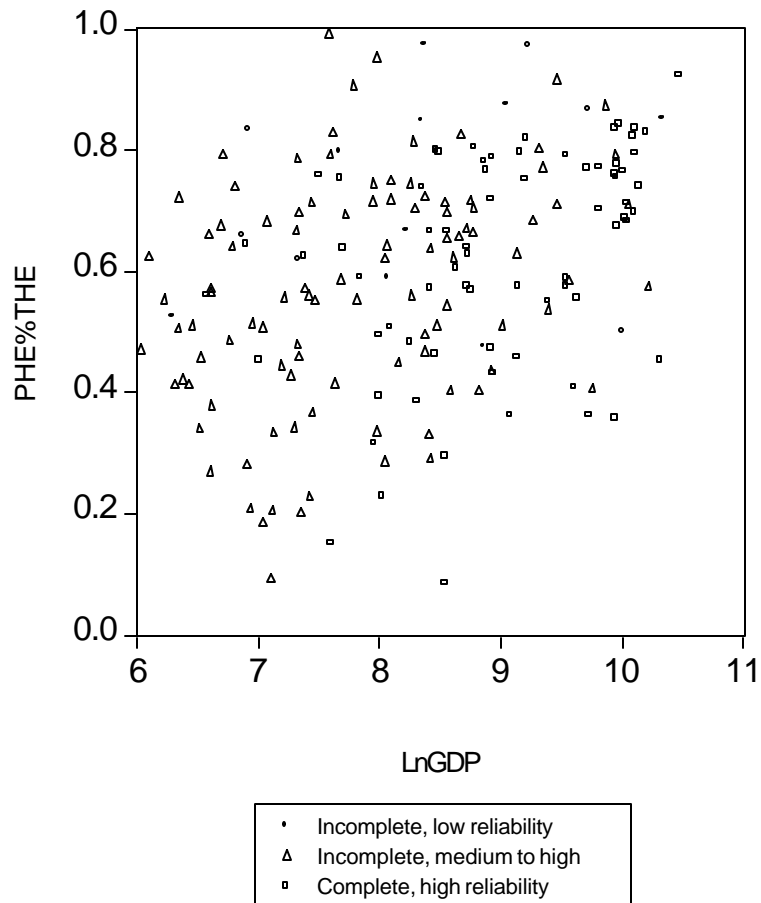


Figure 8a: Public expenditure as % of total health expenditure vs. GDP per capita (Euro region)

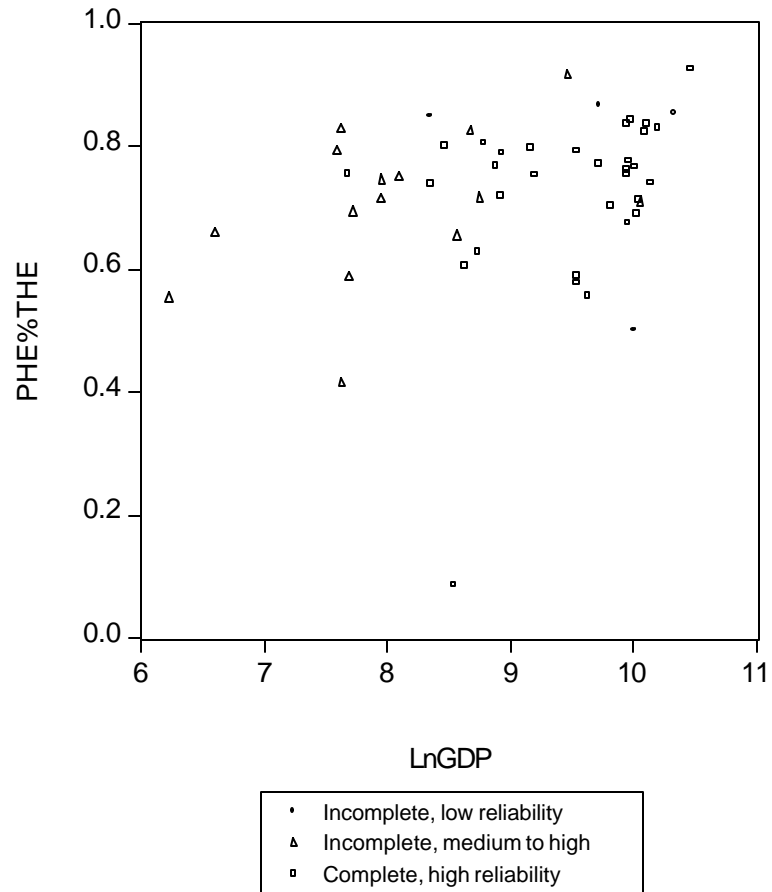


Figure 9: Public health expenditure vs. total health expenditure, per capita (191 countries)

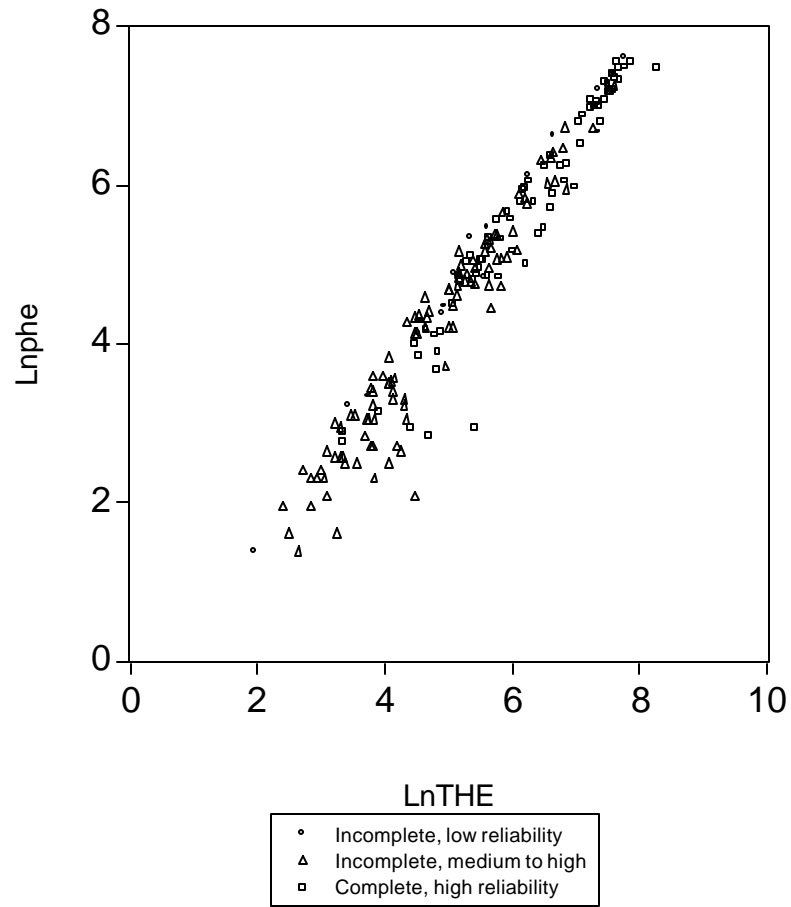


Figure 10: Tax-funded and other public expenditure as % of public expenditure on health vs. GDP per capita (191 countries)

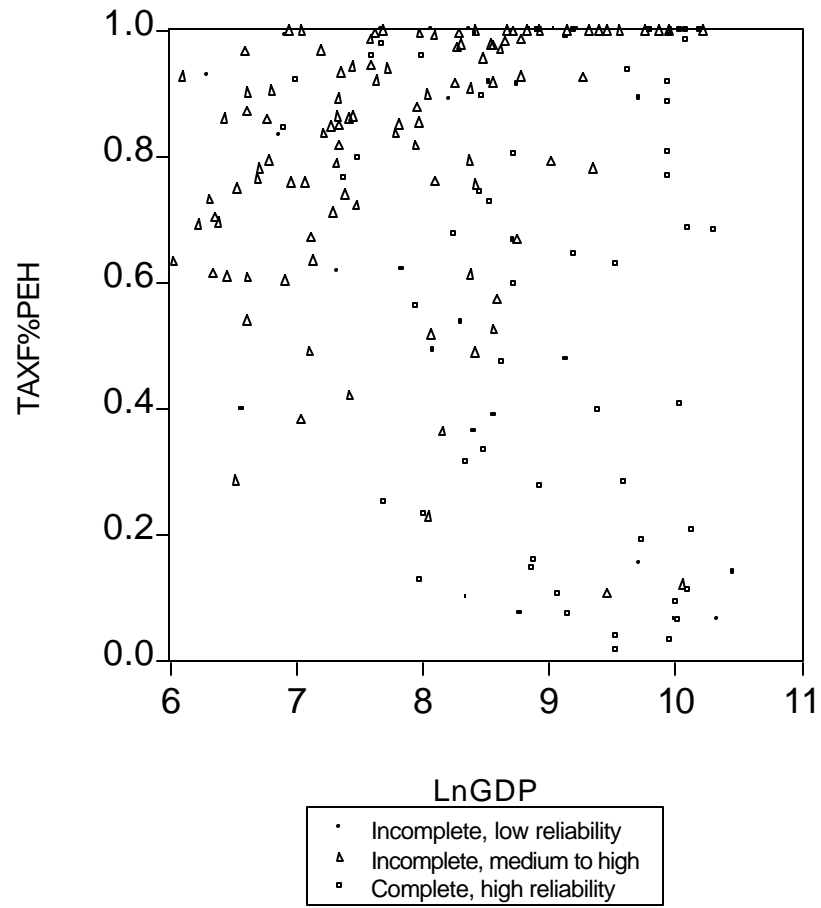


Figure 10a: Tax-funded and other public expenditure as % of public expenditure on health vs. GDP per capita (Euro region)

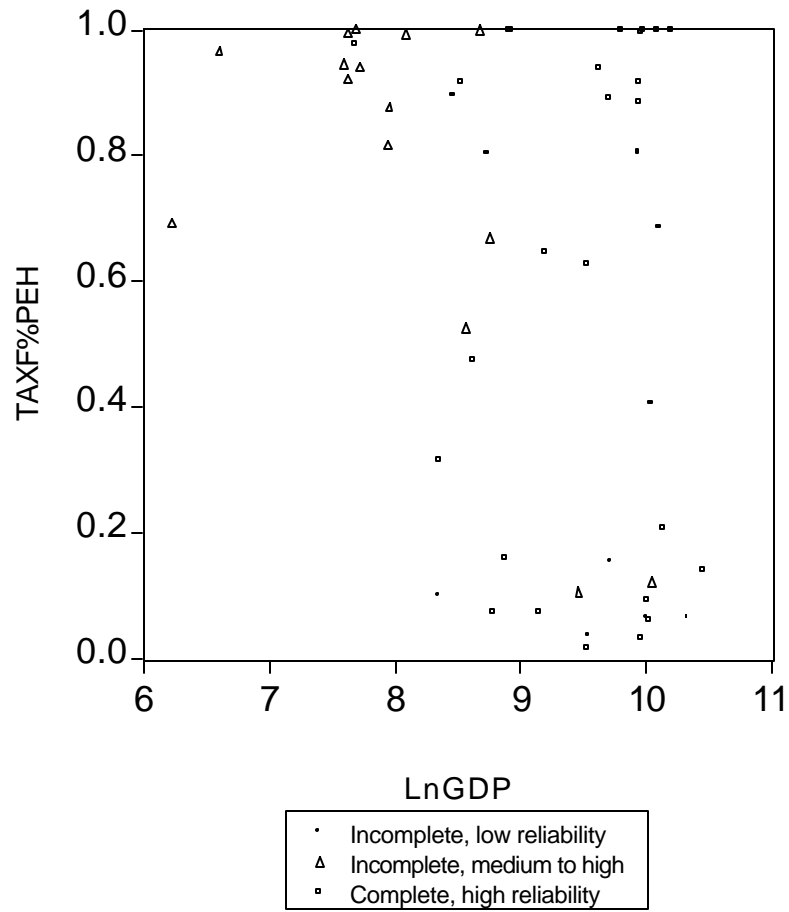


Figure 11: Private insurance as % of total private health expenditure vs. GDP per capita (191 countries)

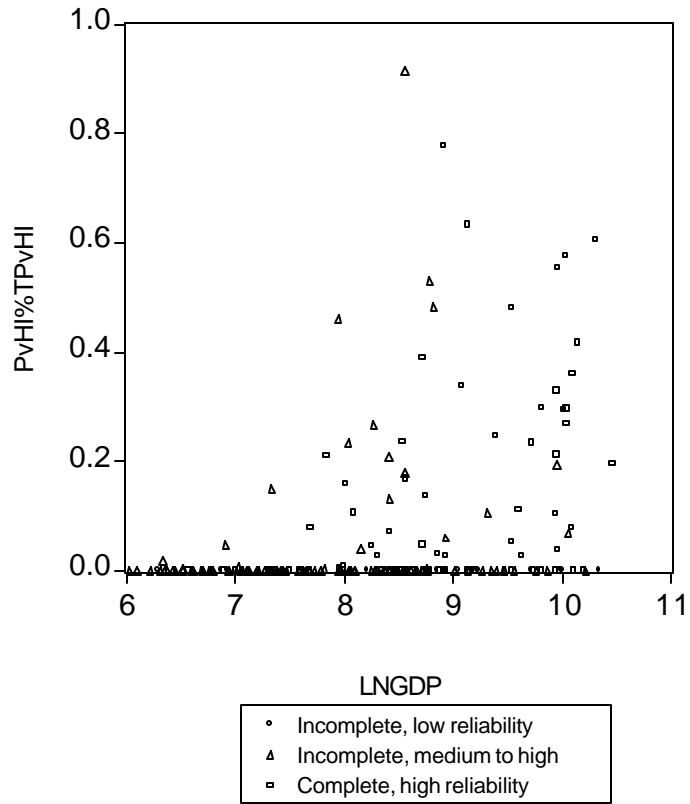


Figure 11a: Private insurance as % of total private health expenditure vs. GDP per capita (Amro region)

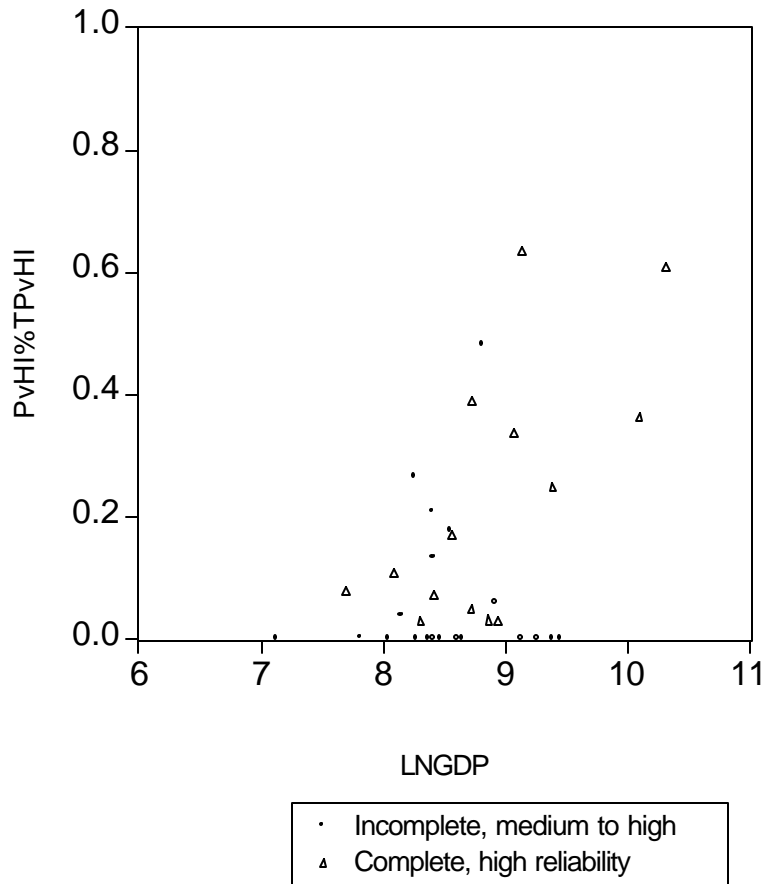




Figure 11b: Private insurance as % of total private health expenditure vs. GDP per capita (Euro region)

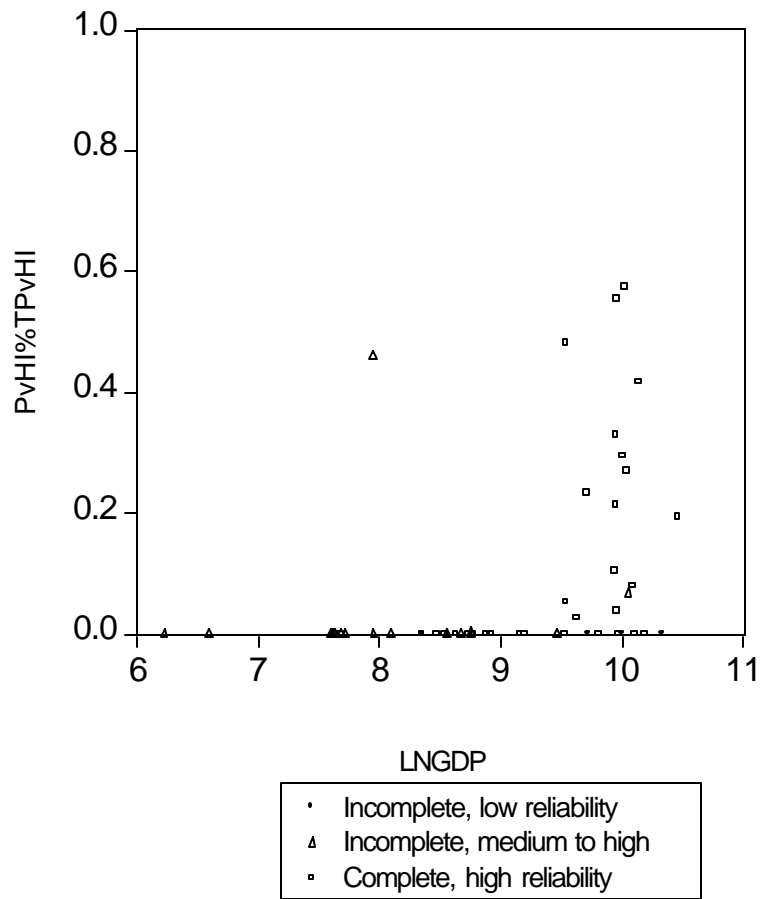


Figure 12: Public expenditure on health as % of total public expenditure vs. GDP per capita (191 countries)

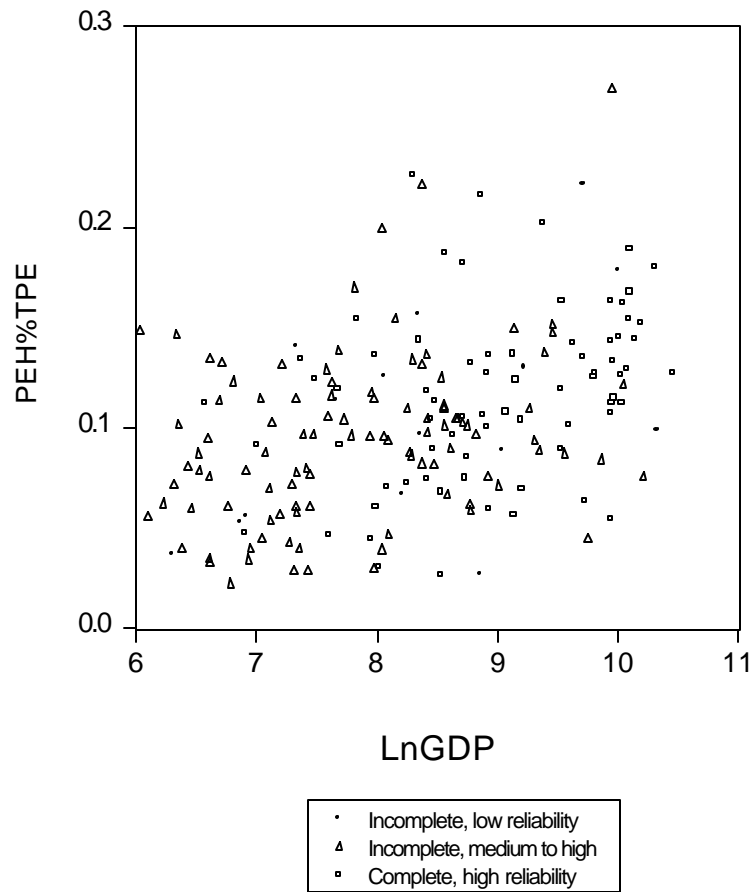


Figure 12a: Public expenditure on health as % of total public expenditure vs. GDP per capita (Afro region)

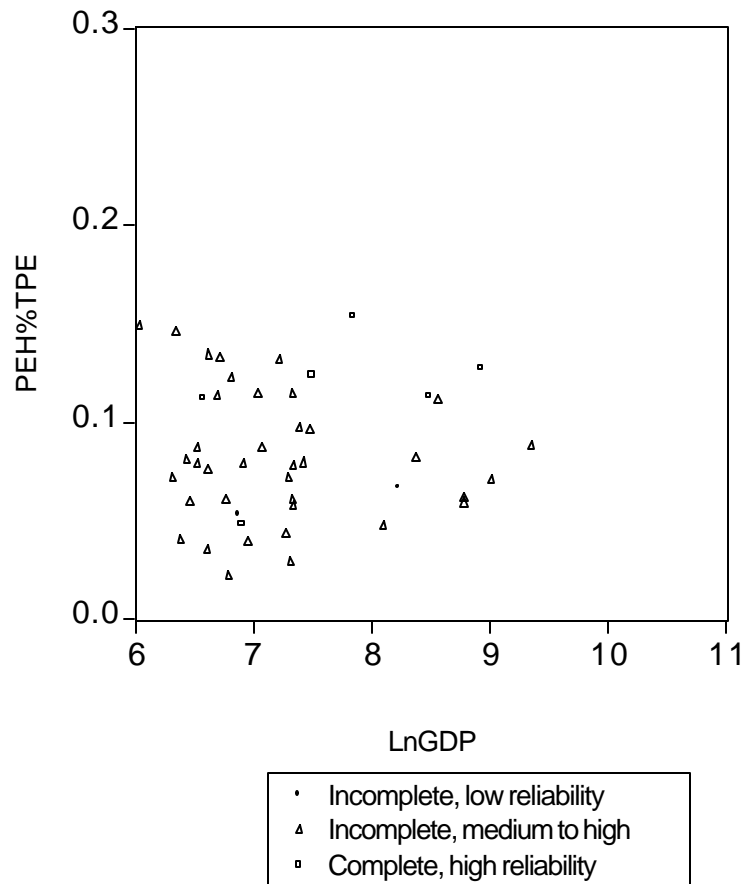


Figure 12b: Public expenditure on health as % of total public expenditure vs. GDP per capita (Emro region)

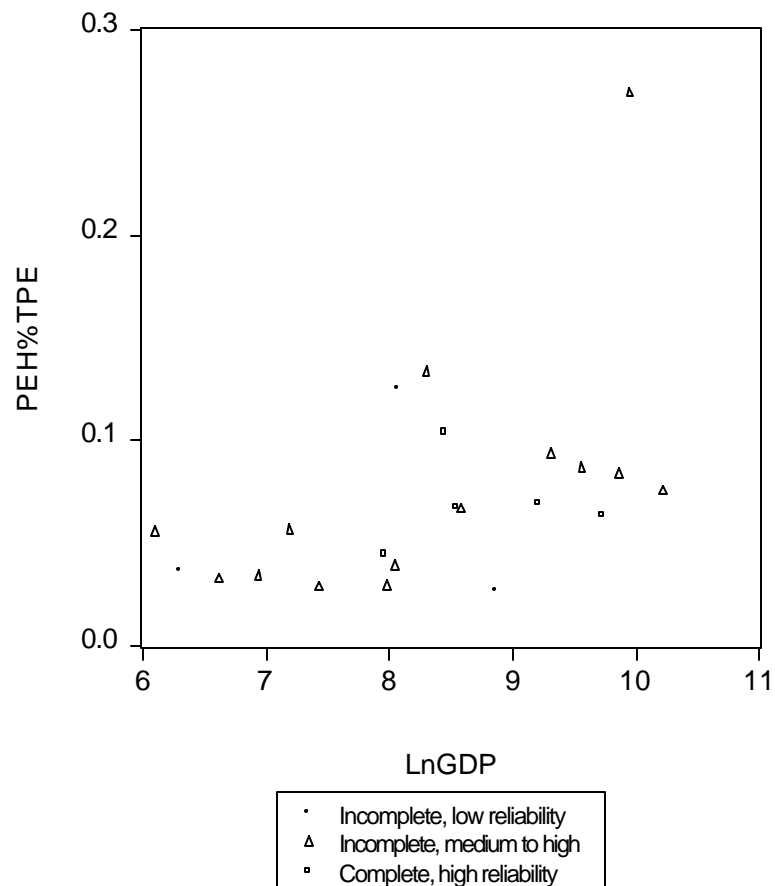


Figure 13: Central government spending on health as share of GDP vs. total spending as share of GDP, for 56 IMF member countries

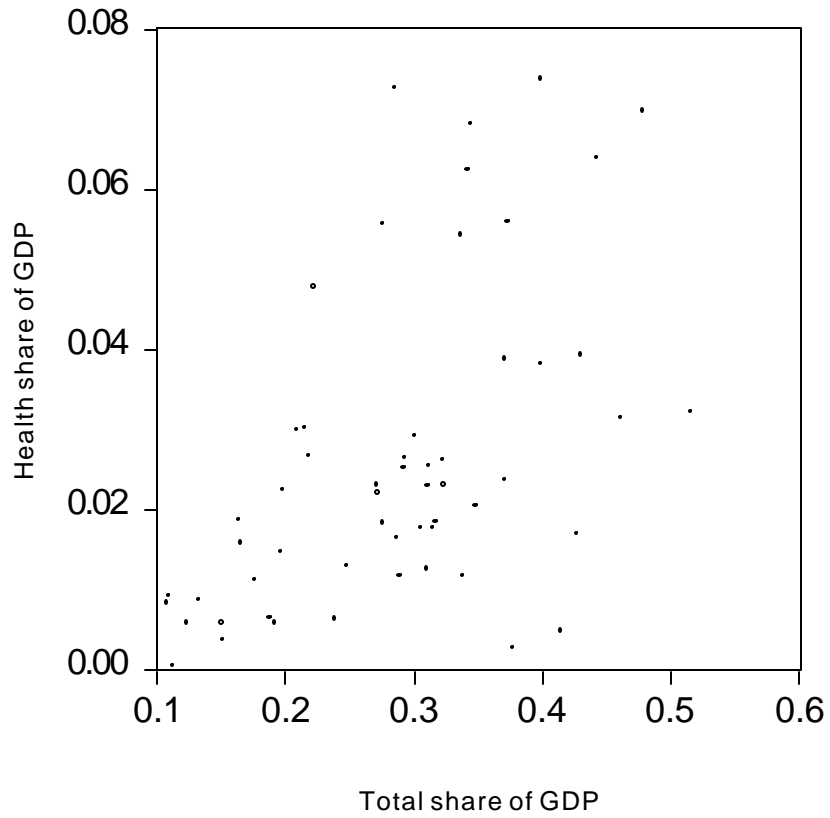
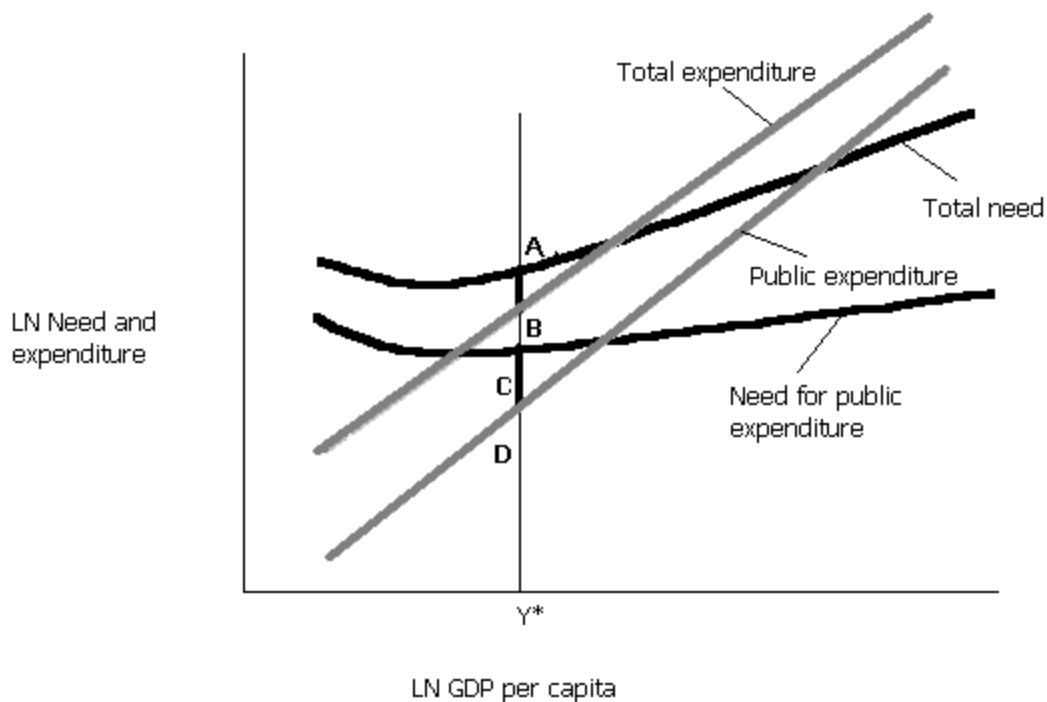


Figure 14 Hypothesised needs and actual spending for an essential package of health services vs. GDP per capita



- A-B Gap on total need vs. expenditure at GDP of  $Y^*$
- C-D Gap on public need vs. expenditure at GDP of  $Y^*$

	Percentage Shares: HE = Health Expenditure, T = Total, P = Public, Pvt = Private, GGE = General Government Expenditure, SocSec = Social Security, GenRev = General Revenue (Tax Funded), ExtRes = External Resources, Ins = Insurance, OOPS = Out of Pocket Spending									Per Capita Expenditures in PPP Dollars		
Country	THE /GDP	PHE /THE	PvtHE /THE	PHE /GGE	SocSec /THE	GenRev /PHE	ExtRes /PHE	PvtIns /PvtHE	OOPS /PvtHE	THE	PHE	OOPS
Afghanistan	1.4%	52.6%	47.4%	3.6%	0.0%	92.5%	7.5%	0.0%	100.0%	7	4	4
Albania	3.8%	71.5%	28.5%	9.5%	17.5%	81.6%	0.9%	46.0%	54.1%	107	76	16
Algeria	4.0%	79.8%	20.2%	11.3%	66.7%	33.3%	0.0%	0.0%	100.0%	195	155	39
Andorra	9.3%	86.6%	13.4%	22.1%	84.8%	15.3%	0.0%	0.0%	100.0%	1557	1348	209
Angola	4.1%	47.9%	52.1%	6.1%	0.0%	89.1%	10.9%	0.0%	100.0%	62	30	32
Antigua and Barbuda	5.5%	62.9%	37.1%	15.0%	0.0%	100.0%	0.0%	0.0%	100.0%	508	320	188
Argentina	8.0%	55.2%	44.8%	20.1%	60.2%	39.7%	0.2%	24.8%	75.3%	953	526	322
Armenia	7.8%	41.5%	58.5%	12.2%	0.0%	92.1%	7.9%	0.0%	100.0%	160	67	94
Australia	8.4%	68.3%	31.8%	16.2%	0.0%	100.0%	0.0%	29.6%	50.7%	1917	1309	309
Austria	8.0%	71.4%	28.6%	11.2%	59.5%	40.5%	0.0%	27.0%	58.8%	1819	1299	306
Azerbaijan	2.9%	79.3%	20.7%	10.6%	0.0%	94.4%	5.6%	0.0%	100.0%	58	46	12
Bahamas	6.5%	53.7%	46.3%	13.7%	0.0%	100.0%	0.0%	0.0%	92.6%	785	421	337
Bahrain	5.0%	58.5%	41.5%	8.7%	0.0%	100.0%	0.0%	0.0%	90.9%	706	413	267
Bangladesh	4.5%	45.4%	54.6%	9.1%	0.0%	92.0%	8.0%	0.0%	95.0%	50	23	26
Barbados	7.0%	71.0%	29.0%	15.1%	0.0%	100.0%	0.0%	0.0%	100.0%	901	640	262
Belarus	5.9%	82.6%	17.4%	10.5%	0.0%	99.9%	0.1%	0.0%	100.0%	344	285	60
Belgium	8.6%	71.0%	29.0%	12.2%	88.0%	12.0%	0.0%	6.8%	46.7%	1995	1416	271
Belize	4.7%	51.0%	49.0%	8.2%	0.0%	95.5%	4.5%	0.0%	100.0%	226	115	111
Benin	3.1%	48.5%	51.5%	6.0%	0.0%	85.8%	14.2%	0.0%	100.0%	27	13	14
Bhutan	4.7%	72.2%	27.8%	10.1%	0.0%	70.3%	29.7%	0.0%	100.0%	27	19	7
Bolivia	4.7%	63.9%	36.1%	9.1%	65.3%	24.9%	9.8%	7.8%	85.7%	104	66	32
Bosnia and Herzegovina	4.0%	55.4%	44.6%	6.2%	0.0%	69.1%	30.9%	0.0%	100.0%	20	11	9
Botswana	3.4%	70.5%	29.5%	5.9%	0.0%	98.5%	1.6%	52.9%	37.1%	220	155	24
Brazil	6.5%	40.4%	59.7%	9.7%	0.0%	100.0%	0.0%	48.1%	52.0%	438	177	136
Brunei Darussalam	5.4%	40.6%	59.4%	4.5%	0.0%	100.0%	0.0%	0.0%	100.0%	939	381	557
Bulgaria	4.4%	80.0%	20.0%	8.9%	10.5%	89.5%	0.0%	0.0%	93.5%	209	167	39
Burkina Faso	4.0%	67.6%	32.4%	11.3%	0.0%	76.4%	23.6%	0.0%	100.0%	32	22	10
Burundi	2.1%	42.2%	57.8%	4.0%	0.0%	69.4%	30.6%	0.0%	100.0%	12	5	7
Cambodia	7.2%	9.4%	90.6%	7.0%	0.0%	49.0%	51.0%	0.0%	100.0%	87	8	79
Cameroon	3.0%	34.2%	65.8%	7.2%	0.0%	71.0%	29.0%	0.0%	81.6%	44	15	23
Canada	9.0%	69.9%	30.1%	15.4%	1.6%	98.4%	0.0%	36.1%	56.9%	2181	1524	374
Cape Verde	2.6%	71.8%	28.2%	4.7%	0.0%	75.8%	24.2%	0.0%	100.0%	87	62	24
Central African Republic	2.4%	51.4%	48.6%	4.0%	0.0%	75.7%	24.3%	0.0%	77.3%	25	13	9
Country	THE /GDP	PHE /THE	PvtHE /THE	PHE /GGE	SocSec /THE	GenRev /PHE	ExtRes /PHE	PvtIns /PvtHE	OOPS /PvtHE	THE	PHE	OOPS
Chad	3.1%	79.3%	20.7%	13.2%	0.0%	78.0%	22.0%	0.0%	100.0%	25	20	5
Chile	7.0%	36.3%	63.7%	10.8%	89.3%	10.3%	0.4%	33.7%	66.3%	609	221	257
China	4.2%	39.4%	60.6%	13.6%	87.0%	12.6%	0.4%	0.0%	78.9%	125	49	60
Colombia	9.3%	57.6%	42.4%	18.2%	40.3%	59.5%	0.2%	38.9%	61.1%	569	328	147
Comoros	4.5%	68.2%	31.8%	8.7%	0.0%	75.8%	24.2%	0.0%	100.0%	53	36	17
Congo, Rep of (Brazz)	2.8%	64.6%	35.4%	4.8%	0.0%	84.5%	15.5%	0.0%	100.0%	28	18	10
Cook Islands	5.3%	67.1%	32.9%	10.3%	0.0%	99.8%	0.2%	0.0%	100.0%	319	214	105
Costa Rica	7.0%	78.3%	21.7%	21.6%	84.9%	14.5%	0.6%	3.0%	97.0%	498	390	105
Cote d'Ivoire	3.0%	46.0%	54.0%	5.7%	0.0%	81.6%	18.4%	14.9%	85.1%	46	21	21
Croatia	8.2%	80.5%	19.5%	13.2%	92.6%	7.4%	0.0%	0.0%	100.0%	530	427	103
Cuba	6.3%	87.5%	12.5%	10.0%	20.9%	79.0%	0.1%	0.0%	100.0%	87	76	11
Cyprus	6.4%	36.3%	63.7%	6.3%	80.9%	19.1%	0.0%	0.0%	97.9%	1085	394	677
Czech Republic	7.1%	91.7%	8.3%	14.7%	89.5%	10.5%	0.0%	0.0%	100.0%	910	835	76
Democratic People's Republic of Korea	3.0%	83.5%	16.5%	5.6%	0.0%	99.0%	1.0%	0.0%	100.0%	31	25	5
Democratic Rep of Congo (Kin)	1.6%	74.1%	25.9%	12.3%	0.0%	90.5%	9.5%	0.0%	100.0%	15	11	4
Denmark	8.2%	82.3%	17.7%	12.9%	0.0%	100.0%	0.0%	7.9%	92.1%	1969	1620	322
Djibouti	4.6%	44.4%	55.6%	5.7%	0.0%	96.7%	3.3%	0.0%	29.8%	62	27	10
Dominica	5.9%	69.6%	30.4%	11.0%	0.0%	97.5%	2.5%	17.7%	82.4%	309	215	77

Eritrea	4.4%	65.6%	34.2%	5.3%	0.0%	83.1%	16.9%	0.0%	100.0%	42	28	14
Estonia	6.4%	78.9%	21.2%	13.6%	0.0%	99.9%	0.1%	0.0%	46.1%	481	379	47
Ethiopia	4.7%	41.4%	58.6%	8.1%	0.0%	85.9%	14.1%	0.0%	87.6%	29	12	15
Fiji	4.0%	66.7%	33.3%	7.4%	0.0%	99.2%	0.8%	0.0%	100.0%	179	119	60
Finland	7.3%	76.1%	23.9%	10.7%	19.6%	80.4%	0.0%	10.4%	83.0%	1517	1154	301
France	9.4%	77.7%	22.3%	13.3%	100.0%	3.2%	0.0%	55.4%	47.1%	1994	1550	209
Gabon	3.1%	66.5%	33.5%	6.2%	0.0%	92.6%	7.4%	0.0%	100.0%	197	131	66
Gambia	3.0%	78.7%	21.3%	11.5%	0.0%	86.2%	13.8%	0.0%	100.0%	45	36	10
Georgia	4.4%	8.6%	91.4%	2.6%	0.0%	91.6%	8.4%	0.0%	100.0%	222	19	203
Germany	10.5%	76.6%	23.4%	14.5%	90.7%	9.3%	0.0%	29.5%	66.0%	2336	1789	361
Ghana	3.6%	55.1%	44.9%	9.6%	0.0%	72.1%	27.9%	0.0%	100.0%	63	35	28
Greece	8.5%	57.7%	42.3%	11.9%	37.2%	62.8%	0.0%	5.3%	89.4%	1177	679	445
Grenada	4.6%	65.7%	34.3%	10.4%	0.0%	98.2%	1.8%	0.0%	100.0%	265	174	91
Guatemala	4.3%	44.9%	55.1%	15.5%	57.7%	36.3%	6.1%	3.8%	92.3%	149	67	76
<b>Country</b>	<b>THE /GDP</b>	<b>PHE /THE</b>	<b>PvtHE /THE</b>	<b>PHE /GGE</b>	<b>SocSec /THE</b>	<b>GenRev /PHE</b>	<b>ExtRes /PHE</b>	<b>PvtIns /PvtHE</b>	<b>OOPS /PvtHE</b>	<b>THE</b>	<b>PHE</b>	<b>OOPS</b>
Guinea	3.6%	57.2%	42.8%	9.7%	0.0%	73.9%	26.1%	0.0%	100.0%	58	33	25
Guinea-Bissau	3.9%	64.0%	36.0%	2.2%	0.0%	79.2%	20.8%	0.0%	100.0%	34	22	12
Guyana	4.6%	81.5%	18.5%	8.6%	0.0%	99.4%	0.6%	0.0%	93.9%	180	147	31
Haiti	3.6%	33.5%	66.5%	10.2%	0.0%	63.4%	36.6%	0.0%	43.2%	45	15	13
Honduras	6.4%	55.4%	44.6%	17.0%	9.7%	84.9%	5.3%	0.1%	91.4%	158	88	64
Hungary	6.8%	75.3%	24.7%	10.4%	35.5%	64.5%	0.0%	0.0%	46.9%	677	510	78
Iceland	8.0%	83.7%	16.3%	18.9%	31.5%	68.5%	0.0%	0.0%	100.0%	1951	1633	318
India	5.5%	15.3%	84.7%	4.7%	0.0%	96.0%	4.1%	0.0%	97.3%	109	17	90
Indonesia	2.7%	22.9%	77.1%	3.0%	69.5%	23.0%	7.5%	16.0%	84.0%	82	19	53
Iran, Islamic Republic of	5.9%	46.4%	53.6%	10.4%	25.7%	74.3%	0.0%	0.0%	100.0%	275	128	148
Iraq	4.2%	58.9%	41.1%	12.5%	0.0%	100.0%	0.0%	0.0%	100.0%	136	80	56
Ireland	7.0%	75.6%	24.4%	16.3%	8.3%	91.7%	0.0%	32.9%	54.7%	1453	1099	193
Israel	8.6%	70.3%	29.8%	12.5%	0.0%	100.0%	0.0%	0.0%	90.2%	1553	1091	417
Italy	8.3%	67.5%	32.5%	11.2%	0.4%	99.6%	0.0%	3.9%	72.5%	1742	1176	410
Jamaica	5.4%	56.0%	44.0%	8.7%	0.0%	97.3%	2.7%	26.4%	53.5%	210	118	50
Japan	7.4%	79.5%	20.5%	16.7%	89.0%	11.0%	0.0%	0.0%	78.9%	1810	1439	293
Jordan	7.1%	70.3%	29.7%	13.4%	0.0%	97.8%	2.2%	0.0%	73.7%	285	200	62
Kazakhstan	3.3%	65.5%	34.5%	10.1%	47.0%	52.5%	0.5%	0.0%	100.0%	172	113	59
Kenya	7.6%	28.2%	71.8%	7.9%	13.5%	60.1%	26.3%	4.7%	73.9%	76	21	40
Kiribati	8.9%	99.2%	0.9%	12.9%	0.0%	98.5%	1.5%	0.0%	100.0%	175	174	1
Kuwait	3.3%	87.4%	12.6%	8.4%	0.0%	100.0%	0.0%	0.0%	100.0%	628	549	79
Kyrgystan	4.0%	69.4%	30.6%	10.4%	0.8%	94.0%	5.2%	0.0%	100.0%	90	62	27
Lao People's Democratic Republic	4.3%	36.8%	63.2%	6.0%	0.6%	86.3%	13.1%	0.0%	100.0%	74	27	47
Latvia	6.0%	60.6%	39.4%	9.6%	52.5%	47.4%	0.1%	0.0%	100.0%	338	205	133
Lebanon	9.8%	29.6%	70.4%	6.8%	26.9%	72.6%	0.5%	23.7%	76.3%	501	148	269
Lesotho	5.3%	76.0%	24.0%	12.4%	0.0%	79.5%	20.5%	0.0%	100.0%	96	73	23
Liberia	2.5%	66.7%	33.3%	6.7%	0.0%	88.8%	11.2%	0.0%	100.0%	94	62	31
Libyan Arab Jamahiriya	3.7%	47.6%	52.4%	2.6%	0.0%	100.0%	0.0%	0.0%	90.9%	260	124	124
Lithuania	6.6%	73.9%	26.1%	14.4%	68.6%	31.4%	0.0%	0.0%	90.9%	280	207	66
Luxembourg	5.9%	92.5%	7.5%	12.7%	86.0%	14.0%	0.0%	19.5%	99.2%	2076	1920	155
Madagascar	2.3%	57.2%	42.8%	7.6%	0.0%	87.1%	12.9%	0.0%	100.0%	17	10	7
Malawi	7.3%	50.6%	49.4%	14.6%	0.0%	61.3%	38.7%	1.6%	35.4%	41	21	7
Malaysia	2.3%	57.6%	42.4%	5.6%	0.0%	98.8%	1.2%	0.0%	100.0%	214	123	91
Maldives	7.1%	74.5%	25.5%	10.9%	0.0%	91.6%	8.4%	0.0%	100.0%	274	204	70
Mali	4.2%	45.8%	54.2%	7.9%	0.0%	74.9%	25.1%	0.0%	89.9%	28	13	14
Malta	6.3%	58.9%	41.1%	8.9%	98.5%	1.5%	0.0%	0.0%	92.6%	873	514	332
Marshall Islands	9.2%	61.9%	38.1%	14.1%	0.0%	61.5%	38.5%	0.0%	100.0%	141	87	54
Mauritania	2.9%	69.7%	30.3%	7.8%	0.0%	84.8%	15.2%	0.0%	100.0%	44	31	13
Mauritius	3.4%	51.1%	48.9%	7.1%	0.0%	79.1%	20.9%	0.0%	100.0%	277	141	135
<b>Country</b>	<b>THE /GDP</b>	<b>PHE /THE</b>	<b>PvtHE /THE</b>	<b>PHE /GGE</b>	<b>SocSec /THE</b>	<b>GenRev /PHE</b>	<b>ExtRes /PHE</b>	<b>PvtIns /PvtHE</b>	<b>OOPS /PvtHE</b>	<b>THE</b>	<b>PHE</b>	<b>OOPS</b>
Mexico	5.3%	43.3%	56.7%	6.0%	73.6%	27.6%	0.0%	2.7%	93.7%	406	176	216
Micronesia, Federated States of	7.6%	79.7%	20.3%	11.3%	0.0%	100.0%	0.0%	0.0%	100.0%	164	131	33



Nepal	4.7%	20.6%	79.5%	5.3%	0.0%	67.1%	32.9%	0.0%	73.5%	58	12	34
Netherlands	8.7%	68.9%	31.1%	12.6%	93.8%	6.2%	0.0%	57.5%	23.2%	1960	1350	142
New Zealand	7.6%	77.3%	22.7%	12.7%	0.0%	100.0%	0.0%	29.8%	68.9%	1381	1068	216
Nicaragua	7.3%	49.5%	50.5%	22.1%	18.7%	61.2%	20.1%	0.0%	100.0%	318	157	161
Niger	3.0%	51.1%	48.9%	6.0%	0.0%	61.0%	39.1%	0.0%	81.4%	19	10	8
Nigeria	1.9%	27.0%	73.0%	3.5%	0.0%	53.8%	46.2%	0.0%	100.0%	14	4	10
Niue	7.6%	97.3%	2.7%	13.0%	0.0%	100.0%	0.0%	0.0%	100.0%	774	753	21
Norway	8.1%	83.0%	17.0%	15.2%	0.0%	100.0%	0.0%	0.0%	88.9%	2152	1785	326
Oman	3.2%	82.1%	17.9%	6.9%	0.0%	100.0%	0.0%	0.0%	49.9%	319	262	28
Pakistan	4.0%	22.9%	77.1%	2.9%	55.1%	42.0%	2.9%	0.0%	100.0%	66	15	51
Palau	6.1%	87.5%	12.5%	8.9%	0.0%	100.0%	0.0%	0.0%	100.0%	520	455	65
Panama	7.6%	66.7%	33.3%	18.7%	60.6%	38.8%	0.6%	16.8%	76.8%	396	264	101
Papua New Guinea	3.3%	90.6%	9.5%	9.6%	0.0%	83.5%	16.5%	0.0%	100.0%	78	71	7
Paraguay	7.5%	33.1%	66.9%	13.6%	47.8%	48.8%	3.5%	20.8%	69.2%	338	112	156
Peru	3.5%	57.3%	42.7%	11.8%	61.1%	36.3%	2.6%	7.1%	86.4%	160	91	59
Philippines	3.5%	48.5%	51.5%	7.2%	30.9%	67.6%	1.5%	4.6%	95.4%	132	64	65
Poland	6.1%	72.0%	28.0%	10.1%	0.0%	100.0%	0.0%	0.0%	100.0%	456	328	128
Portugal	10.7%	55.6%	44.4%	14.2%	6.3%	93.7%	0.0%	2.7%	90.6%	1619	900	652
Qatar	5.3%	57.5%	42.5%	7.6%	0.0%	100.0%	0.0%	0.0%	100.0%	1433	824	609
Republic of Korea	5.0%	41.0%	59.0%	10.1%	71.9%	28.1%	0.0%	11.3%	78.2%	743	305	342
Republic of Moldova	8.0%	75.4%	24.6%	11.9%	0.0%	97.6%	2.4%	0.0%	100.0%	173	130	42
Romania	4.1%	62.9%	37.1%	7.5%	18.7%	80.3%	1.0%	0.0%	100.0%	253	159	94
Russian Federation	5.2%	76.8%	23.2%	10.6%	83.8%	15.7%	0.5%	0.0%	100.0%	376	289	87
Rwanda	5.2%	34.1%	65.9%	8.7%	0.9%	28.5%	70.6%	0.2%	62.4%	35	12	14
Saint Kitts and Nevis	4.7%	68.4%	31.6%	10.9%	0.0%	92.5%	7.5%	0.0%	100.0%	498	340	157
Saint Lucia	4.1%	62.3%	37.7%	9.0%	0.0%	97.0%	3.0%	0.0%	100.0%	226	141	85
Saint Vincent and the Grenadines	6.3%	63.8%	36.2%	9.8%	0.0%	99.9%	0.1%	0.0%	100.0%	286	182	103
Samoa	3.5%	71.4%	28.6%	12.5%	0.0%	97.8%	2.2%	0.0%	100.0%	176	126	50
San Marino	7.6%	85.2%	14.8%	9.9%	93.6%	6.4%	0.0%	0.0%	100.0%	2350	2002	348
<b>Country</b>	<b>THE /GDP</b>	<b>PHE /THE</b>	<b>PvtHE /THE</b>	<b>PHE /GGE</b>	<b>SocSec /THE</b>	<b>GenRev /PHE</b>	<b>ExtRes /PHE</b>	<b>PvtIns /PvtHE</b>	<b>OOPS /PvtHE</b>	<b>THE</b>	<b>PHE</b>	<b>OOPS</b>
Sao Tome and Principe	3.0%	66.7%	33.3%	2.9%	0.0%	78.8%	21.3%	0.0%	100.0%	45	30	15
Saudi Arabia	4.0%	80.2%	19.8%	9.4%	0.0%	100.0%	0.0%	10.5%	31.9%	444	356	28
Senegal	4.5%	55.7%	44.3%	13.2%	0.0%	83.6%	16.4%	0.0%	100.0%	61	34	27
Seychelles	6.4%	77.1%	22.9%	8.8%	0.0%	78.0%	22.0%	0.0%	100.0%	736	568	169
Sierra Leone	3.0%	41.4%	58.6%	7.2%	0.0%	73.2%	26.8%	0.0%	100.0%	17	7	10
Singapore	3.2%	35.8%	64.2%	5.5%	23.2%	76.8%	0.0%	0.0%	100.0%	663	237	425
Slovakia	7.8%	79.8%	20.2%	12.4%	92.8%	7.2%	0.0%	0.0%	100.0%	736	587	149
Slovenia	8.9%	79.3%	20.7%	16.3%	96.3%	3.7%	0.0%	48.1%	51.9%	1236	981	133
Solomon Islands	3.5%	95.3%	4.7%	11.4%	0.0%	85.3%	14.8%	0.0%	6.7%	102	98	0
Somalia	2.4%	62.5%	37.5%	5.6%	0.0%	92.6%	7.4%	0.0%	100.0%	11	7	4
<b>South Africa</b>	<b>10.3%</b>	<b>47.3%</b>	<b>52.7%</b>	<b>12.7%</b>	<b>0.0%</b>	<b>99.8%</b>	<b>0.2%</b>	<b>77.8%</b>	<b>20.2%</b>	<b>770</b>	<b>364</b>	<b>82</b>
Spain	7.0%	77.2%	23.5%	13.5%	10.9%	89.1%	0.0%	23.4%	76.6%	1162	897	210
Sri Lanka	3.2%	49.5%	50.5%	6.0%	0.0%	95.8%	4.2%	1.0%	99.0%	94	47	47
Sudan	4.4%	20.9%	79.1%	3.4%	0.0%	100.0%	0.0%	0.0%	100.0%	46	10	36
Suriname	6.2%	62.1%	37.9%	19.9%	44.7%	22.8%	32.5%	0.0%	100.0%	191	119	72
Swaziland	3.4%	72.3%	27.7%	8.2%	0.0%	79.3%	20.7%	0.0%	100.0%	148	107	41
Sweden	8.1%	84.3%	15.8%	11.5%	0.0%	100.0%	0.0%	0.0%	100.0%	1743	1469	275
Switzerland	10.2%	74.1%	26.8%	14.5%	79.3%	20.7%	0.0%	41.7%	16.6%	2598	1924	116
Syrian Arab Republic	2.5%	33.6%	66.4%	2.9%	0.0%	99.5%	0.5%	0.0%	100.0%	74	25	49
Tajikistan	3.0%	66.0%	34.0%	9.4%	0.0%	96.6%	3.5%	0.0%	100.0%	22	14	7
Thailand	3.7%	56.9%	43.1%	8.5%	8.4%	91.5%	0.1%	13.6%	86.2%	234	133	87
The former Yugoslav Republic of Macedonia	6.5%	84.8%	15.2%	15.6%	89.6%	9.9%	0.5%	0.0%	100.0%	276	234	42
Togo	2.8%	42.8%	57.2%	4.3%	0.0%	84.7%	15.3%	0.0%	100.0%	40	17	23
Tonga	7.9%	46.8%	53.2%	13.1%	0.0%	90.7%	9.3%	0.0%	100.0%	342	160	182
Trinidad and Tobago	5.0%	43.6%	56.4%	7.6%	0.0%	100.0%	0.0%	5.9%	88.0%	373	162	185
Tunisia	5.3%	40.4%	59.6%	6.7%	42.7%	57.2%	0.1%	0.0%	90.9%	281	114	152
Turkey	4.2%	71.6%	28.4%	10.1%	33.2%	66.8%	0.0%	0.2%	99.6%	265	190	75

United Republic of Tanzania	5.1%	47.1%	52.9%	14.8%	0.0%	63.3%	36.7%	0.0%	65.9%	21	10	10
United States of America	13.0%	45.5%	54.6%	18.0%	31.9%	68.1%	0.0%	60.6%	28.2%	3915	1780	603
Uruguay	10.0%	45.9%	54.1%	13.7%	51.7%	47.7%	0.6%	63.3%	36.7%	922	424	183
Uzbekistan	4.6%	82.9%	17.1%	11.6%	0.0%	99.4%	0.6%	0.0%	100.0%	94	78	16
Vanuatu	3.3%	64.3%	35.8%	9.6%	0.0%	51.6%	48.4%	0.0%	100.0%	104	67	37

Republic of	4.5%	20.3%	79.7%	4.0%	0.0%	93.3%	6.7%	0.0%	100.0%	71	14	56
Viet Nam	4.5%	20.3%	79.7%	4.0%	0.0%	93.3%	6.7%	0.0%	100.0%	71	14	56
Yemen	2.9%	37.9%	62.1%	3.3%	0.0%	90.1%	9.9%	0.0%	100.0%	22	8	14
Yugoslavia	7.8%	58.7%	41.4%	13.8%	0.0%	100.0%	0.0%	0.0%	100.0%	170	100	70
Zambia	6.0%	56.5%	43.5%	13.4%	0.0%	60.7%	39.3%	0.0%	73.3%	45	25	14
Zimbabwe	9.5%	59.1%	40.9%	15.4%	0.0%	61.9%	38.1%	21.0%	67.0%	242	143	66

Table 2. Countries grouped by WHO region, mortality stratum and GDP per capita

(PPP) Income Class →		Very Low < \$ 1000	Low 1000-2200	Middle 2200-7000	
WHO Region	Mortality Stratum (Child/Adult)				
AFRO	D Both high	Benin, Burkina Faso, Chad, Guinea-Bissau, Madagascar, Mali, Niger, Nigeria, Sierra Leone	Angola, Cameroon, Cape Verde, Comoros, Equatorial Guinea, Gambia, Ghana, Guinea, Mauritania, Sao Tome, Senegal, Togo	Algeria, Gabon, Liberia,	
	E High/very high	Burundi, Congo(B), Congo(K), Eritrea, Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Tanzania, Zambia	Central African Republic, Cote d'Ivoire, Lesotho, Uganda,	Botswana, Namibia, Swaziland, Zimbabwe	
AMRO	A Both very low		Cuba		
	B Both low			Belize, Brazil, Colombia, Dominica, Dominican Republic, El Salvador, Grenada, Guyana, Hondura Jamaica, Panama, Paraguay St. Lucia, St. Vincent, Venezuela	
	D Both high		Haiti	Bolivia, Ecuador, Guatemala, Nicaragua, Peru	

WHO Region	Mortality Stratum Child/Adult				
EMRO	B Both low			Iran, Jordan, Lebanon, Syria; Tunisia,	
	D Both high	Afghanistan, Somalia, Yemen	Djibouti, Pakistan, Sudan	Egypt, Iraq, Morocco	
EURO	A Both very low			Croatia	
	B Both low	Bosnia	Armenia, Azerbaijan, Tajikistan, Uzbekistan	Albania, Bulgaria, Georgia, Kyrgyzstan, Macedonia, Romania, Turkey, Turkmenistan, Yugoslavia	
	C Low/high		Moldova	Belarus, Kazakhstan, Latvia; Lithuania, Ukraine	
SEARO	B Both low			Indonesia, Sri Lanka, Thailand	
	D Both high	Bhutan, Myanmar	Bangladesh, India, Nepal, North Korea	Maldives	
WPRO	A Both very low				
	B Both low		Cambodia, Kiribati, Laos, Marshall Islands, Micronesia, Mongolia, Tuvalu, Viet Nam	China, Cook Islands, Fiji, Nauru, Papua New Guinea, Philippines, Samoa, Solomon Islands, Tonga, Vanuatu	

Table 3 Consolidated and budgetary central government expenditure by function, as shares (%) of GDP for 56 IMF Member Countries grouped by WHO region and mortality stratum and GDP per capita, 1997-98

Country	Total	Health	Education	Defense	Interest
<b>Very low income &lt; \$ 1,000, Afro region, mortality stratum E (high/very high)</b>					
Burundi	24.00	0.61	3.44	6.07	1.76
Congo (Dem Rep)	11.32	0.02	0.03	1.73	0.19
Ethiopia	24.84	1.27	3.47	2.10	2.47
Kenya	28.78	1.62	5.85	1.53	7.58
Zambia	29.45	2.63	4.16	1.82	3.41
<b>Very low income &lt; \$ 1,000, Afro region, mortality stratum D (high/high)</b>					
Madagascar	17.66	1.10	1.77	0.91	4.89
<b>Total, very low income</b>	<b>24.44</b>	<b>1.31</b>	<b>3.18</b>	<b>2.88</b>	<b>3.36</b>
<b>Low income \$ 1,000-2,200, Afro region, mortality stratum D (high/high)</b>					
Cameroon	12.46	0.56	2.11	1.35	2.83
Ghana	19.72	1.44	4.43	0.92	2.83
<b>Total, low income</b>	<b>24.21</b>	<b>1.26</b>	<b>3.72</b>	<b>1.85</b>	<b>3.04</b>
<b>Middle income, \$ 2,200-7,000, Amro region, mortality stratum B (low/low)</b>					
Belize	27.26	2.29	5.70	1.46	2.35
Brazil	31.82	1.83	1.09	0.98	3.42
Colombia	16.58	1.56	3.56	2.35	2.47
Dominican Republic	16.52	1.85	2.48	0.77	0.53
El Salvador	10.96	0.90	2.26	0.84	1.32
Grenada	30.18	2.90	4.70	---	2.08
Panama	34.65	6.79	6.53	1.63	5.09
Paraguay	13.29	0.84	2.53	1.49	0.85
St. Vincent	40.04	3.80	5.10	---	---
<b>Middle income, \$ 2,200-7,000, Euro region, mortality stratum B (low/low)</b>					
Albania	29.01	1.14	0.64	1.13	6.64
Bulgaria	31.63	1.75	1.69	2.69	6.43
Kyrgyzstan	21.59	3.00	4.93	1.50	---
Romania	19.87	2.23	3.06	2.09	2.62
Turkey	31.13	1.23	3.49	2.61	9.72
<b>Middle income, \$ 2,200-7,000, Wpro region, mortality stratum B (low/low)</b>					
China (general govt.)	18.89	0.62	1.86	1.14	---
Fiji	29.31	2.50	5.32	1.73	2.97
Papua New Guinea	27.75	1.81	5.32	1.62	4.15
Philippines	19.26	0.56	3.96	1.36	3.47
Tonga	51.75	3.20	5.74	---	---
Vanuatu	32.35	2.59	5.02	---	0.58
<b>Total, middle income</b>	<b>28.83</b>	<b>2.25</b>	<b>4.05</b>	<b>2.31</b>	<b>3.31</b>

Country	Total	Health	Education	Defense	Interest
<b>High income, &gt; \$ 7,000, Amro region, mortality stratum B (low/low)</b>					
Argentina	15.17	0.35	0.88	0.68	2.09
Bahamas	21.03	2.98	3.80	0.63	2.37
Chile	21.98	2.64	4.00	1.84	0.57
Costa Rica	22.29	4.76	4.43	---	3.55
Mexico	15.13	0.56	3.60	0.58	2.19
Trinidad & Tobago	27.28	2.18	3.74	0.49	5.18
Uruguay	30.67	1.75	2.13	1.25	1.46
<b>High income, &gt; \$ 7,000, Emro region, mortality stratum B (low/low)</b>					
Bahrain	31.29	2.52	3.61	4.67	0.97
Cyprus	37.18	2.35	4.40	1.45	5.55
Kuwait	46.29	3.13	6.56	8.88	1.70
Oman	32.47	2.28	4.83	10.94	1.81
United Arab Emirates	10.80	0.81	1.93	3.43	---
<b>High income, &gt; \$ 7,000, Emro region, mortality stratum A (very low/very low)</b>					
Czech Republic	34.34	6.21	3.55	1.63	1.06
Denmark	37.85	0.25	4.21	1.59	4.86
Finland	33.97	1.14	3.48	1.53	4.23
Greece	31.20	2.27	3.23	2.42	9.37
Iceland	28.65	7.25	2.97	---	2.56
Ireland	33.78	5.41	4.56	0.98	4.34
Israel	44.43	6.38	6.55	8.45	5.59
Malta	43.21	3.91	4.92	0.90	2.33
Netherlands	48.02	6.96	5.00	1.90	4.47
Norway	42.87	1.68	2.49	2.38	1.76
Poland	37.21	3.86	2.41	1.53	3.32
Slovak Republic	40.04	7.36	4.21	2.07	2.32
Spain	34.93	2.02	1.27	1.13	4.36
Sweden	41.55	0.46	2.60	2.26	5.71
Switzerland	27.66	5.55	0.65	1.43	0.91
United Kingdom	37.44	5.57	1.54	2.68	3.37
<b>Total, high income</b>	<b>32.49</b>	<b>3.08</b>	<b>3.46</b>	<b>2.38</b>	<b>3.38</b>