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Health Expenditures in Pakistan:

Cross-Checking Household Expenditure Data on Health for NHA and Adjustment with National Accounts

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Health Expenditures in Pakistan: Cross-Checking Household Expenditure Data on Health for NHA and Adjustment with National Accounts

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Abstract

According to hitherto available data, health expenditures in Pakistan are relatively low in international comparison. Data[2] published by the World Health Organization (WHO) for the year 2005 shows a lack of Pakistani health expenditures in most indicators, compared to other low-income countries (LIC). To answer the question whether these results reflect the real situation in Pakistan or whether they exist due to statistical problems, Pakistan, for the first time, developed its National Health Accounts (NHA) in 2009. Only the availability of good estimates of health expenditures allows for evidence-based policymaking and therefore for good governance.

The results clearly indicate that the situation in Pakistan is better than what was earlier estimated; however, the total health expenditure (THE) is still low compared to neighboring countries and other LIC. As a result, it is clear that the WHO health expenditure figures for Pakistan are understated, because they mainly comprise public and household out-of-pocket expenditures on health. Expenditures of many other entities, like military, cantonment boards, autonomous bodies, private hospitals, and so on, have not been taken into account in earlier estimations. Therefore, expenditure figures of NHA Pakistan are higher than those of WHO. Overall, the official NHA results show THE, which is 27 percent higher than WHO figures. Furthermore, this paper cross-checks NHA results with other already available data sources on household expenditure. This comparison includes preliminary results of the Family Budget Survey (FBS), which also includes health items as well as National Accounts (NA) data. In line with this comparison, we calculate a raising factor that can be used for the adjustment of NHA results according to NA. The raised NHA result shows 102 percent higher out-of-pocket (OOP) spending on health; this would result in OOP health expenditures of $25.15 USD per capita (compared to only $12.45 USD per capita in the NHA estimation). This result, based on the NA figure with $33 USD THE per capita, leads to a different evaluation in international comparison, since it nearly reaches the level of India, with $37.5 USD and more than the average of all LIC with $27 USD.

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[2] World Health Survey (WHS), WHO Statistical Information System (WHOSIS) and National Health Accounts estimations, http://www.who.int/nha/country/pak/en/.

1. Introduction

According to hitherto available data, health expenditures in Pakistan are relatively low in international comparison. Total health expenditure (THE) in Pakistan was estimated for fiscal year 2005–06 with only 2.1 percent (WHO) and 2.6 percent (NHA), compared to 4.6 percent as the average of world low-income countries (LIC). Data sources like World Health Survey (WHS), WHO Statistical Information System (WHOSIS), and National Health Accounts (NHA) estimations published by World Health Organisation (WHO) for the year 2005 show a lack of Pakistani health expenditures in most indicators, compared to other LIC. To answer the question whether these results reflect the real situation in Pakistan or whether they exist due to statistical problems, Pakistan developed its first NHA in 2009. Only the availability of good estimates of health expenditures allows for evidence-based policymaking and therefore for good governance. Making progress on a variety of health policy questions requires good national data on the sources and uses of funds in the health system, preferably comparable across countries. With such data, it is possible to begin answering questions such as, what are the best ways to allocate limited resources toward improving health? or, what level of funding is needed particularly in epidemiological and demographic contexts?

Health care financing is complex and is a key public finance policy issue, even though in Pakistan just a small share of public money is spent on health care services. Decision making in the government is lacking evidence and analysis of impacts of health-financing policies (Nishtar, 2010, 62 and 85). Typically, health sector budgets are forecasted and decisions are made without due consideration given to their efficiency in technical or allocation terms. (PHPF et al., 2007, 7).

As Pakistan increasingly faces cost pressures and challenges to long-term sustainability of its health-financing systems, the need for evidence to support effective decision making and policy review is becoming even more imperative. Poor management of resources is among the factors driving the cost of health care. As such, the importance of NHA has been increasingly recognized since its data—or "evidence"—allows seeing the whole picture on sector-level health resource flows, and evaluating measures for efficient allocation of resources across the health system.

The availability of NHA has and will—at least to some extent—affect the policy process in Pakistan in various factors. NHA was first implemented in Pakistan for 2005–06. Subsequent estimations are being undertaken for 2007–08 and following, which allow for trend analyses to assess indicators selected to monitor health sector reforms and to assess the efficiency of resource use and resource allocation patterns. NHA reports provide a mapping of the

Pakistani health sector that might contribute to an understanding of the system. In order to increase the policy use of NHA, country- and province-level workshops to disseminate NHA findings are conducted by NHA producers, which are the Federal Bureau of Statistics in close collaboration with GTZ. The majority of the stakeholders, like relevant ministries, medical associations, civil society, regional health departments, development partners, and social insurance and public accountant institutions, are regularly invited to technical and steering Committees on NHA. These measures are accompanied by the active involvement of NHA producers and stakeholders in technical trainings to strengthen capacity for NHA production data as well as user needs and exchange information between (raw) data suppliers and (NHA) data users. These consultations allow for the identification of key issues to be resolved for NHA capacity building for policy and advocacy work. They improve advocacy strategies and sensitize NHA and their integration in health sector policy development and policy use in Pakistan. Cooperation in networks like Pakistan Health Economic Network (PHEN) enables members to inform stakeholders about ongoing research activities and coordinate research on health economics, as well as to identify research areas for promoting NHA demand and use. Additional analyses based on NHA data show that health financing in the country was fragmented and inequitably appropriated between regions. Finally, NHA improves the availability of health expenditure data and therefore contributes to evidence-based decision making.

Additional analysis of the NHA database on household health expenditures was also performed, due to the high importance of this factor. On the basis of this analysis and the results of the second-round NHA, the burden of out-of-pocket costs by type of care and income group can be assessed (Lorenz, Richter, 2010). The same principle is true for the extent of catastrophic health expenditures by households, as well as the volume of informal payment. As a result, it has been found that the health expenditure figures for Pakistan are understated, because they mainly comprise the public and household out-of-pocket expenditures on health. Expenditures of many other entities, like military, cantonment boards, autonomous bodies, private hospitals, and so on have not been taken into account until now. Therefore, NHA has been prepared according to international standards of the NHA producers' guide (WHO, 2003).

But even with the inclusion of so-far missing data sources, the THE still could be underestimated. This underestimation could result from the lack of health-related questions on the household survey, since household private expenditures have the highest share of THE and therefore are critical for getting good estimates. In future NHA, this lack will be resolved

by an improved version of health-related questions for private households. For the time being, this paper cross-checks NHA results with other already available data sources on household expenditure. This comparison includes results of the Family Budget Survey (FBS), which also includes health items as well as National Accounts (NA) data. In line with this comparison, we calculate a raising factor that can be used for the adjustment of NHA results according to NA. The raised NHA result shows 102 percent higher out-of-pocket (OOP) spending on health; this finding would result in OOP health expenditures of $25.15 USD per capita (compared to only $12.45 USD per capita in the NHA estimation).

Section 2 of this paper compares Pakistan's NHA results with neighboring countries, as well as with other LIC of the world. Section 3 analyzes the official Pakistani NHA results and compares them with estimations from WHO for the same period. Section 4 benchmarks NHA results on OOP spending with results from the FBS, which also includes health items. Section 5 compares the results from the Household Integrated Economic Survey (HIES) on private household expenditure with data from National Accounts. In line with this comparison, we calculate a raising factor that can be used for the adjustment of NHA results according to NA. Section 6 concludes the paper.

2. International Comparison

This section demonstrates the importance of private OOP of THE in LIC, and especially in Pakistan, due to their high share of THE. NHA figures for Pakistan allow a direct comparison with neighboring countries, as well as with LIC all over the world.

**Table 1: International Comparison of Health Expenditure Indicators**

	Afgh.	Pakistan WHO (2005+2006)/2	Pakistan NHA 2005–06	Bangladesh	India	Nepal
Total health expenditure (THE) as % of GDP	5.3	2.1	2.6	3.0	5.0	5.8
General government exp. on health as % of THE	23.8	17.0	33.6	33.0	19.3	29.3
Private expenditure on health as % of THE	76.3	83.1	64.5	67.1	80.7	70.7
General government expenditure on health as % of total government expenditure	3.9	1.4	7.5	6.5	3.5	8.8
Social Security expenditure on health as % of general government expenditure on health	0.0	0.0	0.3	0.0	4.8	0.0
Out-of-pocket expenditure as % of private expenditure on health	97.3	98.0	99.7	88.3	94.0	86.1
Per-capita THE (USD)	21.5	15.2	20.1	12.5	37.5	16.5
Per-capita government expenditure on health (USD)	5.0	3.0	6.7	4.0	7.5	4.5

Source: WHOSIS for 2005, WHO NHA estimates, and Federal Bureau of Statistics, NHA 2005/06.

The table demonstrates that the situation in Pakistan is better than was estimated by WHO, but that the THE is still low compared to neighboring countries. Private household OOP expenditures are typically the first- or second-largest source of health care financing in developing countries. OOP payments have substantial negative side-effects, because they do not protect a person from the costs of illness. They may lead to impoverishment and hardship for patients, due to the fact that poorer people often are sicker, so they may not have the cash to pay out of their own pocket for their treatment. Either the illnesses remain untreated because of lack of funds, or the patients lose what little money they had and end up in dire need. The result may be that poorer people seek less care and remain in the vicious circle of illness and poverty.

The estimation of OOP is important, because private expenditures consist of expenditures by households, firms, nonprofit organizations, and medical insurance schemes. But outside a few high-income nations, private expenditures consist predominantly of household OOP spending (Rannan-Eliya, 2008). According to WHO figures, in Pakistan the share of OOP as a percentage of total private expenditures on health is relatively high, with 98.2 percent in the year 2000 and 98.0 percent in 2005. The official NHA figure is comparable, at 99.7percent
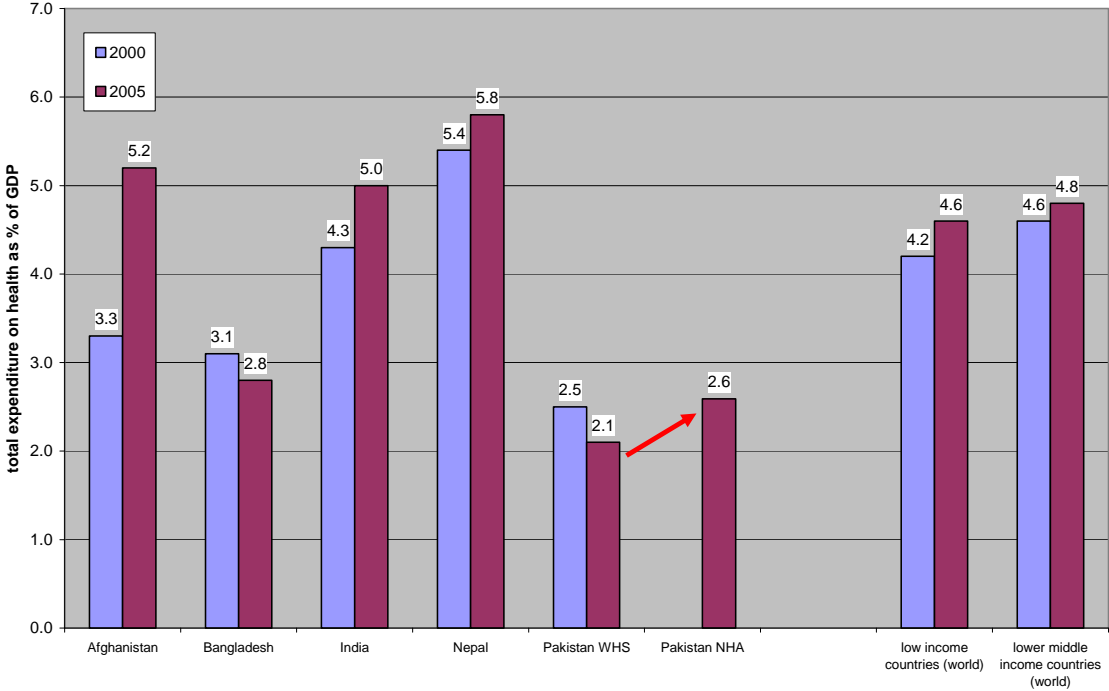
Figure 1: Out-of-Pocket Expenditure as Percentage of Private Expenditure on Health
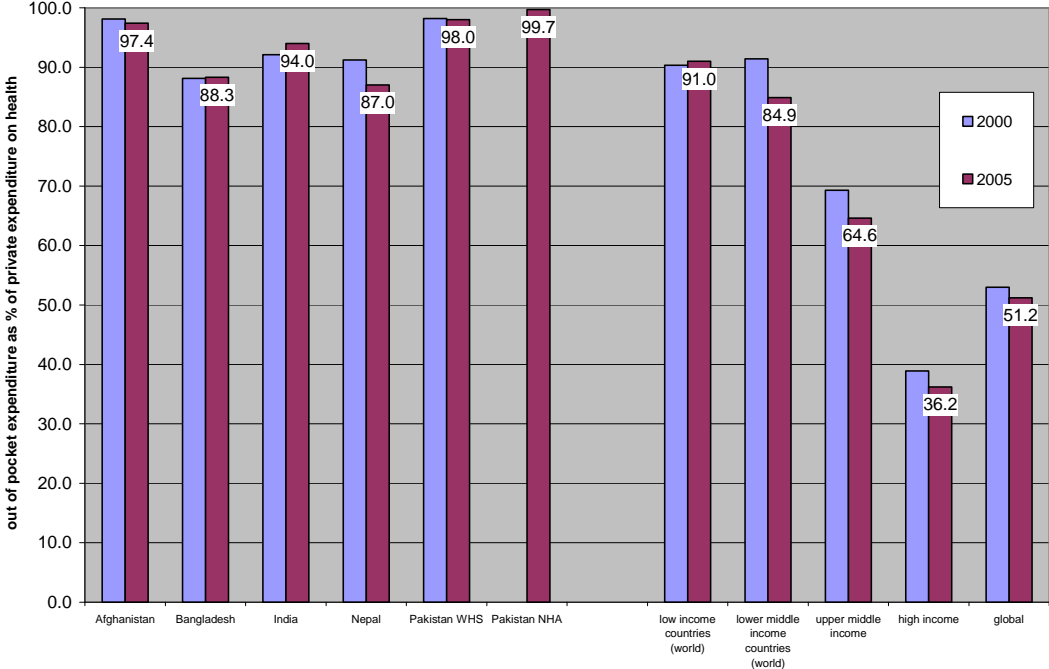
Source: Author's own figure, with data from WHO, World Health Statistics, and World Health Indicators, 2008.

The figure shows that the share of OOP as a percentage of total private expenditures on health is decreasing with the income in a country. This means that higher- income countries use not only OOP to finance their health, but additionally, to a greater extent, use some kind of insurance instead. This point is important, because in low-income countries with high OOP shares, sickness without (social or private) insurance can easily lead individuals into the poverty trap. Although most national estimates of private expenditures are unreliable, the relative size of private expenditures in overall national health expenditures is quite noticeable (Lorenz, 2009).

Figure 2: Total Health Expenditure (THE) as Percentage of GDP

Source: Author's own figure, based on data from WHO, World Health Statistics, World Health Indicators, 2008, and Federal Bureau of Statistics, National Health Accounts, 2009.

According to WHO figures, the THE as a percentage of gross domestic product (GDP) in Pakistan decreased from 2.5 percent in 2000 to 2.1 percent in 2005. But according to official NHA figures, THE has a share of 2.6 percent. Overall, THE in Pakistan is relatively low in the international comparison; THE in all neighboring countries is higher, and also the average of LIC is higher, with 4.6 percent.

The per-capita total expenditure on health at the average exchange rate increased, compared to WHO data, from $15.2 USD to $20.06 USD.[3] The per-capita government expenditure on health at the average exchange rate increased as well, from $2.6 USD to $6.5 USD (Struck, 2009, 8).

3. Comparison NHA results with WHO figures

This section compares the NHA results from official statistics in 2009 with WHO results taken from estimates for country NHA data (WHO, 2009) in 2008; both data sources cover the fiscal year 2005–06 and the calendar years 2005 and 2006, respectively. The differences between the two estimations can be explained mostly by applying different methods of data collection. The WHO aims at collecting general data that is easily available, and tries to

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[3] The WHO figure is the average of the figures for calendar year 2005 (14.56) and 2006 (15.9).

compare it over all countries. The actual approach was taken by the WHO to produce its annual expenditure estimates,[4] which are distinct from those of the WHS. For its annual estimates, WHO solicits information on public, donor, and household spending from country governments themselves (who sometimes submit NHA estimates if available), and failing this, will impute estimates from whatever data is accessible. The government-submitted information is then reviewed and analyzed by the WHO Geneva team, and at that stage, some changes may be made to ensure standardization across countries. The nature of these changes, however, is not readily known, and this issue has been raised by numerous researchers, donors, and others to the WHO. In response, the WHO is currently exploring ways to make its processes more readily transparent to data users.

But due to data availability reasons, international standards cannot be applied to the full extent, especially in development countries. Therefore, the NHA system has to be adjusted for each country according to its special data situation. These adjustments include cumbersome processes of data collection, which allow more detailed information and disaggregation on a national level than the international standards.

International as well as national standards have to be clear about the understanding of the definition of published indicators—particularly about what is meant by "public" expenditures, "donor" expenditures, and "household" (or "HH") OOP spending. For example, the WHO's "public" expenditures refer to government health spending at the financing-agent level (for example, the Ministry of Health and other ministries with health activities) and not at the financing-source level (for example, the Ministry of Finance, or MoF). This means that funds channeled to the Ministry of Health, even from nonpublic sources such as donors, would be counted as public. That said, WHO's "donor" spending estimates are reported at the financing-source level. So this amount would also include the amount given to the Ministry of Health, for example, from donors. Thus, there is an overlap between the two indicators.

This distinction of levels can be confusing, particularly in determining who finances health in a country. One solution might be the usage of an underlying matrix that shows the flow from "original sources" to "financing sources" (OSxFS). Such a system of underlying matrices would allow, for example, the indication of flows from original sources like private companies, governmental institutions, and the corporate sector (salaries), to the financing source "private households" (employees). This system could have several layers of submatrices. Related to health expenditures, the flows from original sources like MoF (own

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[4] That are published online at http://www.who.int/nha/country/pak/en/ and as part of the World Health Reports at http://www.who.int/whr/en/index.html.

collected taxes) and donors (financial budget aid) to financing-source MoF could be publicized in an OSxFS matrix.

As a result, it is clear that the health expenditure figures for Pakistan are understated, because they mainly comprise public and household out-of-pocket expenditure on health. Expenditures of many other entities, like military, cantonment boards, autonomous bodies, private hospitals, and so on, have not been taken into account in earlier estimations. Therefore, expenditure figures of NHA Pakistan are higher than those of WHO, as shown in the table:

Table 2: Comparison Between WHO and NHA Pakistan Results

	WHO			NHA Pakistan	
Expenditure	2005	2006	Average 2005–06	2005–06	Difference
General government on health	23,971	25,360	24,666	62,134	152%
Social Security	3,000	4,000	3,500	2,052	–41%
Private HH's OOP	110,682	126,192	118,437	118,952	0%
Official donor agencies	4,961	4,896	4,929	3,565	–28%
THE	136,928	154,210	145,569	185,070	27%
THE per capita in USD	14.6	15.9	15.2	20.1	29%
Per-capita government expenditure on health	2.6	2.6	2.6	6.5	152%

Source: Author's own table based on Federal Bureau of Statistics, NHA Pakistan, 2009, 53.[5] In million PKR.

Next, the differences between the estimations of WHO and NHA Pakistan are discussed[6] The general government expenditures are more than 150 percent higher than the WHO results. The reason is that NHA Pakistan does include military health expenditures, reimbursements of medical charges for government employees, health education expenditures, and so on. Overall, the official NHA figures show an increase in THE of 27 percent compared to WHO figures.

However, the NHA figure of expenditures on Social Security is only 68 percent of the WHO figure. The calculation of private household OOP expenditures is comparable, and small differences might occur due to different estimations of the total population in Pakistan. The health expenditures of donors are smaller in NHA estimations than in WHO. The reason might be that NHA Pakistan does not include the Federal Administered Tribal Areas (FATA), the Federal Administered Northern Areas (FANA), and Azad Jammu Kashmir (AJK) for the first round of NHA. Another reason could be the funds transferred from one source to another

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[5] For NHA Pakistan figures see FBS, http://www.statpak.gov.pk/depts/index.html, and for WHO figures see WHO, http://www.who.int/nha/country/pak/en/.
[6] For comparison reasons for WHO figures, the average of the two calendar years 2005 and 2006 has been taken, because NHA Pakistan is based on the Pakistani fiscal year July 2005 until June 2006.

source, i.e. donors to government, which have to be subtracted from the Economic Affairs Division (EAD) data, which include on- and off-budget expenditures. The NHA donor figure shows only agent expenditures, excluding financial aid to the government budget (Federal Bureau of Statistics, 2009, 53). Overall, the official NHA results show THE that is 27 percent higher than the WHO figures.[7]

4. Comparison OOP and FBS

In this section we compare the household health expenditures of two surveys (HIES and FBS). In HIES the OOP expenditures are calculated by taking the monthly per-capita expenditures given in the household survey and converting them to total OOP by multiplying the annual per-capita figures with the total population figure (Lorenz, 2009). The FBS is used to estimate the weights for several household items in the consumer price index (CPI). CPI results are available only for some urban regions within Pakistan. Therefore, the figures of annual total urban expenditure and annual urban expenditure per HH have to be estimated from HIES data.

Table 3: Estimation of Annual Urban Expenditures Per HH from HIES Data

Average monthly expenditure on **miscellaneous** items per HH in PKR for urban Pakistan[8]	1,724
Average **monthly health** expenditure per HH in PKR for urban Pakistan [9]	448
Annual expenditure on health in PKR urban per HH	5,376

Source: Federal Bureau of Statistics, HIES 05/06, 2007, 249. The highlighted cells show author's own estimations.

The HIES estimation (5,376 Pakistani rupees, or PKR) is compared with the FBS result (4,771 PKR). The HIES result is comparable but is about 12.7 percent higher than in FBS. The results are biased due to different base years and different regional boundaries.

Table 4: Household Expenditures on Health: FBS vs. HIES Results in PKR

	FBS 2007/8	HIES 2005/6
Annual total urban expenditure	258,208,086	290,956,415
Annual urban expenditure per HH	4,771	5,376

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[7] This figure will increase even further, when expenditures of autonomous bodies in the future are included in the estimation. This figure can be estimated at about one billion PKR (FBS, NHA, 2009, 39). The same principle is true for all institutions that are not covered by the Accountant General Pakistan Revenue, because therefore their expenditures are not yet included.

[8] The major consumption group "miscellaneous" has a share of about 13 percent of the expenditure on all items. See FBS, HIES 05/06, 2007, 257.

[9] The share of health expenditures of miscellaneous items is 26 percent in urban areas (FBS, HIES 05/06, 2007, 249).

| Annual urban expenditure per person[10] | 717 | 808 |
| Extrapolation OOP total population[11] | 111,463,710,887 | 125,600,565,957[12] |

Source: Preliminary data on CPI weights based on FBS. The highlighted cells show author's own estimations.

The estimated annual urban expenditure per household taken from HIES is used to estimate the annual total urban expenditure for the total population. Therefore, we apply the anticipated number of households in Pakistan, which is estimated at 23,363,910.[13]

However, we have calculated the annual urban expenditure per person, which is necessary for estimating the OOP on health of the total population. Overall, extrapolated on the total population, the HIES figure leads to about 14 billion higher health expenditures than the FBS figure. Besides the amount of health-related expenditures, the FBS also provides the share of health compared to all expenditures, which is 2.19 percent; this figure is lower than the HIES result of 4.3 percent. Both surveys have been carried out on a quarterly basis, but their main purpose and their regional boundaries are different. The FBS has to be viewed as less representative than the HIES, since it is limited to respondents from some urban areas only, namely 65 major cities, compared to the HIES, which is representative of the national and provincial level with an urban versus rural breakup.

5. Comparison of OOP with NA

This section compares the NHA results of private expenditure with National Accounts (NA). As in many other countries, private consumption in Pakistan, according to per-household surveys, is far below the respective results of NA and should be raised accordingly. According to NHA Pakistan, the total health expenditures (taken from NHA) are 2.59 percent of GDP (at current factor cost) in 2005–06.[14] The general government health expenditures (NHA figure) are 7.54 percent of the total general government expenditures (NA figure) in

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[10] The figure per person is calculated by dividing the per-household figure by the average urban household size of 6.65 for *urban* households (given in FBS, HIES 05/06, 2007, 3).

[11] For this calculation the total population figure of 155.37 million for 2005–06 is applied (taken from Ministry of Finance, Pakistan Economic Survey 2007, 202).

[12] The estimated figure, including urban and rural households in HIES, leads to total health expenditures of 121.823 billion PKR.

[13] The number of households in HIES is estimated by dividing the total population of 155.37 million (Ministry of Finance, Economic Survey) by 6.65 (Federal Bureau of Statistics, HIES 05/06, 2007, 3, average household size).

[14] Federal Bureau of Statistics, National Accounts, Gross National Product of Pakistan (at current factor costs), http://www.statpak.gov.pk/depts/fbs/statistics/national_accounts/table4.pdf.

On the one hand, these first NHA figures underestimate the total health expenditures, because expenditures on philanthropic organizations (like NGOs), private sector, state-owned enterprises, and so on are not yet included in the total health expenditures. These areas will be covered in the second round of NHA, which will allow inclusion due to special health surveys carried out by the Federal Bureau of Statistics in cooperation with GTZ.

On the other hand, these NHA results could be underestimated due to gaps in the household survey. The health-related questions cover only two items (medicines purchased and hospital or doctor fees) and can be found only under "miscellaneous" items. Another disadvantage of the HIES for use in NHA is that the data is surveyed only on a yearly basis. Specialized health surveys that focus on only health events and health expenditures can result in the reporting of more events or expenditures for a given period. Another important point is that household budget surveys, which are conducted to collect data on all types of household expenditure, tend to result in lower estimates of health spending than specialized health surveys, which focus only on health care use (Rannan-Eliya 2008, 14).

In some countries NHA and NA show different estimates of private health consumption. Based on the reasons discussed earlier in this paper that HIES might be underestimating OOP, the total expenditures of HIES should be adjusted to NA results of private consumption. Subsequently, the share of health expenditure (4.3 percent) is transferred as a raising factor from HIES to the actual NA figure for comparison reasons.

Table 5: Household OOP on Health Raised with NA Results 2005–06

		HIES	NA
Per-capita total expenditure	PKR	18,213.60	
Private total consumption expenditure	PKR		5,720,225,000,000.00
Total population	Persons		155,370,000.00
Private per-capita consumption expenditure	PKR		36,816.79
Per-capita health expenditure	PKR	783.60	1,583.96
Health share of total expenditure	Share	0.04302280	0.04302280

Source: HIES: Federal Bureau of Statistics, 2005-06, 50. Highlighted figures are author's own calculations.

The share of health expenditure in HIES is calculated by dividing the per-capita total expenditure by the health expenditure per capita (third column). The monthly OOP health

expenditures are taken from the 2005–06 HIES and are then converted to annual per-capita expenditures. The same principle is true for the total expenditure.

The fourth column shows the estimation of the health expenditure per capita based on the figure of the private total consumption expenditure taken from National Accounts. This figure is divided by the total population and results in the private per-capita consumption expenditure. This result is multiplied with the raising factor of 4.3 percent taken from the HIES results. The final result shows a per-capita health expenditure of 1,584 PKR in NA compared to 784 PKR in HIES. This NA result is 102.14 percent higher than the HIES-based estimation, which would result in health expenditures of $25.15 USD per capita (compared to $12.45 USD per capita in the NHA estimation). Therefore, the total health expenditure per capita in Pakistan would have to be increased with $12.7 USD, which would lead to $32.8 USD THE (compared to $20.1 USD in NHA results).

6. Conclusion

According to official NHA, the THE in Pakistan 2005–06 totaled 185 billion PKR, which is 2.6 percent of the GDP. About one-third of THE was funded by the government, and about two-thirds of THE was funded through the private sector, out of which about 99 percent was OOP health expenditure by private households (Federal Bureau of Statistics, 2009b). Overall, it has been found that Pakistani health expenditures were understated for many indicators, but that nevertheless the THE is still low compared to neighboring countries and LIC throughout the world.

Therefore, NHA results are reconciled with other data sources: First, THE is compared with WHO results, which for the same boundaries are 27 percent lower. Second, OOP results based on HIES are compared with other household expenditure figures: (a) In comparison, the OOP used in NHA is 12.7 percent higher than in FBS; (b) if we take the share of health-related expenditures from HIES and apply it to National Accounts data, we have a 102-percent higher health OOP. If we take the raising factor for health expenditure of 4.3 percent from the HIES results and apply it to the official NHA results, we see an increase of the total health expenditure per capita of $12.7 USD, which would lead to an absolute $32.8 USD THE (compared to $20.1 USD in NHA results).

Besides these methodological differences in estimate expenditure, we examined policy implications and outcomes of multiple and conflicting estimates. We were able to demonstrate the significance and importance of reducing multiple expenditure estimates and harmonizing data: Inaccurate expenditure estimates might cause stakeholders to make any potentially adverse policy choices or even erroneous decisions. We see often that data estimates,

particularly in data-poor country settings, once they are published, are not scrutinized heavily and are quickly accepted as fact, resulting sometimes in poor policy and programming decisions.

Therefore, we compare the policy impacts of these heterogeneous results. The following table gives an overview of the impacts of different household health expenditure resulting in different per-capita THE.

Table 6: Per-Capita THE for Different OOP Estimates

	Pakistan				LIC
	WHO	HIES	FBS	NA	WHO
THE pc USD	15.2	25.2	24.37[17]	32.8	27

Source: Federal Bureau of Statistics, HIES, FBS and National Accounts; WHO, NHA estimates.

The major policy impact of these results is the different assessment of the overall situation. The OOP per-capita figures in the estimations differ from $15 to $33 USD. The WHO figure underestimates, since several sources are not taken into account. The HIES figure is comparable to the FBS-based figure, but $25 USD higher. The result, based on the NA figure, with $33 USD, leads to a different evaluation in international comparison, since it nearly reaches the level of India, with $37.5 USD and more than the average of all LIC, with $27 USD.[18] Depending on the survey source for the estimation method, the situation is assessed in a different way.

Technically, the results of the different data sources can be triangulated for NHA use. It is helpful to make a preliminary assessment as to which estimate is more reliable. However, all results should be kept at hand, because the reconciliation stage that follows may reveal more about the relative strengths of the estimates. For the weighting of the estimates, it is necessary to determine which survey or data source is more representative. For example, FBS is less, since it covers only urban areas, and HIES might be underestimating OOP due to gaps in the household survey (chapter 5). Consequently, the total expenditures of HIES should be adjusted to NA results of private consumption.

Finally, we showed that estimates of THE differ between different data sources and that OOP expenditures have such a significant share of THE that it makes sense to reconcile the results and triangulate different sources.

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[17] FBS total OOP is only 93.7 percent of NHA figure, which leads to a reduction to $11.66 USD THE pc compared to $12.45 USD.
[18] WHO, World Health Statistics 2008, 91, Per capita total expenditure on health at average exchange rate (US$).

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