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Wodon, Quentin and Cong Nguyen, Minh and Tsimpo, Clarence

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MARKET SHARE OF FAITH-INSPIRED AND PRIVATE SECULAR HEALTH CARE PROVIDERS IN AFRICA: COMPARING DHS AND MULTI-PURPOSE INTEGRATED SURVEYS

Quentin Wodon, Minh Cong Nguyen and Clarence Tsimpo
World Bank

Much of the evidence used to-date to back up statements about the market share of faith-inspired providers of health care in sub-Saharan Africa comes from data on health care facilities, and especially on the share of hospital beds held by Christian Health Associations in the countries where these associations operate. In those countries, estimates of the market share of faith-inspired health care providers based on hospital beds or similar measures are the 30 percent to 50 percent range. On the other hand, the evidence available from multi-purpose integrated household surveys that ask households where they go for health care and that identify specifically faith-inspired providers in survey questionnaires tells a different story, with lower market shares for faith-inspired facilities. One could ask whether the evidence from these multi-purpose integrated household surveys is itself robust. The objective in this chapter is to assess whether this is the case. Specifically, the idea is to compare market share estimates obtained from different types household surveys, by considering not only multi-purpose integrated surveys, but also Demographic and Health Surveys for which country coverage is larger. The findings suggest that market share estimates for faith-inspired healthcare providers are of a similar order of magnitude in both Demographic and Health Surveys and multi-purpose integrated surveys.

INTRODUCTION

Market share estimates have often been used as a rather blunt instrument in order to advocate on behalf of faith-inspired providers of healthcare in sub-Saharan Africa to help convince governments and donors to provide more support (financial and otherwise) to them. The problem is that if existing market share estimates are not based on strong evidence, such advocacy efforts may be more detrimental than useful (Olivier and Wodon 2012a), and the available evidence seems at first to be contradictory.

Many statements have been made over the years to the effect that about half of all health services in sub-Saharan Africa may be provided by faith-inspired facilities and other faith-affiliated institutions. Examples of statements include that of past World Bank President James Wolfensohn who suggested that *"Half the work in education and health in sub-Saharan Africa is done by the church"* (quoted by Kitchen 2002), and a recent UNFPA (2009) report stating that that *"there is clearly an important parallel faith-based universe of development, one which provides anywhere between 30-60 percent of healthcare and educational services in many developing countries."* There is of course some empirical basis for these statements, but it is often misunderstood.

As discussed by Olivier and Wodon (2012a, 2012b), much of the evidence to-date backing up such statements comes from data on the share of hospital beds or related measures in countries where faith-inspired providers such as the Christian Health Associations (CHAs) have a strong presence. Indeed, most estimates of the hospital bed market share of faith-inspired providers in those countries are in the 30 percent to 50 percent range (see De Jong 1991, Dimmock 2007, Chand and Patterson 2007, Gilson et al 1994, Green et al 2002, Grills 2009, Hanson and Berman 1994, Hecht and Tanzi 1993, Kawasaki and Patten 2002, Rookes 2009, Schmid et al 2008, Turshen 1999).

However, the evidence provided by Olivier and Wodon (2012b) from multi-purpose integrated household surveys that ask households where they go for healthcare tells a somewhat different story, with substantially lower market shares obtained for faith-inspired facilities. What could explain such different market share estimates between data based on facilities and hospital beds and data from household surveys? As discussed by Olivier and Wodon (2012b), four main factors play a role in the differences between facilities and household survey based estimates of market share. First, within formal healthcare delivery mechanisms, a large share of health services are provided by other types of facilities than hospitals, such as clinics and health centers, as well as maternity homes and facilities from government-run community-based health planning and services which are primary healthcare focused services (sometimes with mobile units). Estimates of the market share of FIIs based principally on hospital beds may lead to overestimating the role of FIIs to the extent that the share of hospital-based care among services provided is often higher among FIIs such as CHAs than in public facilities.

Second, in part because private secular providers often operate independently of Ministries of Health, data on their role are often missing, even if one restricts the analysis to measures such as hospital beds. That is, most of the estimates of the share of FIIs are based on comparing FIIs with public sector facilities, without factoring in the existence of facilities operated by private non-religious providers (and for that matter also without factoring in some religious providers that are not part of large federations such as the Christian Health Associations – this is often the case for Islamic clinics and hospitals.)

A third issue with the reliance on statistics on hospital beds, or on measures of the use of pharmaceuticals and outpatient care, is that a large share of healthcare is provided by other types of providers that are not included in such statistics. At least two different groups must be mentioned. First, many countries have a significant traditional sector that operates alongside orthodox biomedical care, for example with patients mixing plural health-seeking modalities. While studies on religion and health-related behaviors recognize the role of traditional practices, this is rarely addressed in the literature on the market share of facilities-based faith-inspired providers. Second, self-medication has also been noted to be a significant practice in many countries – given the limited availability of doctors. Some studies suggest that self-medication with privately purchased drugs in some countries represents the most common treatment after home remedies.

Finally, many of the countries for which data are available on the share of hospital beds owned by faith-inspired facilities belong to Anglophone Africa. In many (although by no

means all) Francophone countries, faith-inspired providers have lower market shares, in part due to colonial policy. The fact that much of the literature has so far focused on CHAs in Anglophone Africa may have led to a bias upward in the assessment of the market share of faith-inspired providers in the region as a whole. These four factors are likely to lead to overestimation in the market share of faith-inspired facilities in health systems as a whole when the main data source being used refers to hospital beds.

One could ask however whether the evidence from multi-purpose integrated household surveys provided in Olivier and Wodon (2012b) is itself robust, and useful for the purpose of interrogating these issues. The objective in this chapter is to assess whether this is the case. Specifically, the idea is to compare market share estimates obtained from different types household surveys, by considering not only multi-purpose integrated surveys as done by Olivier and Wodon (2012b; see also Wodon, 2013), but also Demographic and Health Surveys (DHS) for which country coverage is larger. The next two sections provide the findings from the analysis, and a brief conclusion follows.

EVIDENCE FROM DEMOGRAPHIC AND HEALTH SURVEYS

While DHS surveys do not identify separately faith-inspired healthcare facilities, they do distinguish between three broad types of facilities: public facilities, private facilities, and others. Questions on the type of provider used are asked to individuals for various types of health needs, including fever/cough and diarrhea, as well as contraceptives, antenatal care, delivery, and other. The list of providers in the three broad categories changes slightly depending on the type of care being sought, but in the case of diarrhea for example, the public sector includes government hospitals and clinics, government health centers, government health posts, mobile clinics, fieldworkers, and other public providers. In the case of the private medical sector, the list consists of private hospitals and clinics, pharmacies, private doctors, mobile clinics, fieldworkers, other clinics, maternity homes, and other private medical care. Finally, the 'other' category includes shops and markets (and thereby self-medication), traditional practitioners, and drug peddlers. Because most visits to health facilities are related to fever/cough and diarrhea (these are more frequent occurrences in a household than a birth delivery), these are the data reported here first, with additional data provided next.

Table 1 provides the estimates of public, private, and other service provision for fever/cough and diarrhea obtained for 36 different countries – while the data for some of the countries are a bit dated, most of the surveys were implemented in the last ten years. In the case of diarrhea treatment, the largest market share for the private medical sector is obtained for Nigeria (45.67 percent market share for visits related to diarrhea treatment, and 54.34 percent market share for visits related to a fever or a cold), while the smallest market share is obtained for Mozambique (2.67 percent for diarrhea and 2.94 percent for fevers/colds). On average, the private medical sector market share is at 17.4 percent for diarrhea treatments and 24.28 percent for fevers/colds (these statistics are simple averages without taking into account different population weights for different countries). Recall that these market shares include both private secular and faith-inspired facilities. By contrast, the average public market share is above 50 percent for both types of

illnesses. In other words, the average market share of faith-inspired health facilities that would be inferred from the DHS data should be well below 17.4 percent. For example, if it were assumed that private secular provision in the various countries represents about 40 percent of total private facilities-based provision, then the average market share for faith-inspired providers would be at 10 percent (we will come back to this below).

Table 1: DHS Market Shares by Provider for Diarrhea and Fever/Cough (%)

	Diarrhea treatment			Fever and/or cough		
	Public	**Private**	**Other**	**Public**	**Private**	**Other**
Burkina Faso 2003	59.94	4.81	35.25	64.26	8.69	27.06
Benin 2006	39.64	15.89	44.46	37.54	20.51	41.95
Burundi 1987	20.15	19.28	60.58	15.93	19.97	64.10
Congo Democratic Republic 2007	74.16	20.15	5.69	37.80	53.83	8.36
CAR 1994-95	72.93	13.98	13.09	79.00	11.70	9.30
Congo (Brazzaville) 2005	46.30	10.94	42.76	57.45	15.39	27.16
Cote d'Ivoire 1998-99	48.24	6.17	45.59	61.83	9.33	28.84
Cameroon 2004	37.08	19.32	43.60	40.62	29.20	30.18
Ethiopia 2005	73.37	18.79	7.84	72.46	24.83	2.71
Gabon 2000	60.00	25.06	14.94	58.85	29.05	12.09
Ghana 2008	56.06	34.28	9.66	54.69	36.79	8.52
Guinea 2005	54.66	5.18	40.16	49.83	10.31	39.86
Kenya 2008-09	64.24	24.71	11.05	61.14	29.41	9.45
Comoros 1996	46.15	17.69	36.15	58.78	20.61	20.61
Liberia 2007	37.71	39.80	22.49	45.47	38.60	15.93
Lesotho 2009	60.11	30.40	9.49	50.58	42.43	6.99
Madagascar 2008-09	64.21	21.32	14.48	59.37	29.17	11.46
Mali 2006	53.14	6.67	40.19	49.36	12.57	38.07
Malawi 2010	71.90	15.03	13.07	69.18	18.21	12.61
Mozambique 2003	86.15	2.67	11.18	83.54	2.94	13.52
Nigeria 2008	36.52	45.67	17.81	35.94	54.34	9.71
Niger 2006	47.22	4.69	48.08	40.15	33.14	26.71
Namibia 2006-07	86.61	8.62	4.77	76.06	19.73	4.22
Rwanda 2005	64.71	16.11	19.18	68.41	14.89	16.70
Sudan 1989-90	50.79	11.59	37.62	-	-	-
Sierra Leone 2008	71.05	19.40	9.55	61.97	27.46	10.58
Senegal 2005	52.43	8.55	39.02	62.07	16.73	21.20
Sao Tome and Principe 2008-09	74.30	22.98	2.72	76.43	19.69	3.88
Swaziland 2006-07	68.33	27.87	3.80	69.16	28.11	2.73
Chad 2004	20.51	2.92	76.57	18.36	4.36	77.29
Togo 1998	48.36	5.46	46.18	45.15	9.81	45.04
Tanzania 2010	22.83	30.50	46.68	22.35	34.18	43.47
Uganda 2006	-	-	-	47.10	51.53	1.38
South Africa 1998	72.75	25.61	1.64	65.30	33.66	1.04
Zambia 2007	80.71	10.44	8.84	74.28	16.34	9.38
Zimbabwe 2005-06	64.76	16.66	18.59	49.69	22.18	28.13
Average	56.80	17.41	25.79	54.86	24.28	20.86

Source: Authors using DHS surveys.

What about some of the other indicators of market share that can be obtained from other types of health-related consultations observed in the DHS data? As shown in table 2, the private medical sector, both private secular and faith-inspired, on average accounts for 28.0 percent of the sources of modern contraceptive methods (the market shares are 54.8 percent for the public sector and 17.2 percent for the ''others' category), but only for 9.2 percent of family planning for non-users of modern contraception methods (the estimates are 86.3 percent for the public sector, and 4.5 percent for others).

Table 2: DHS Market Shares by Provider for Contraception/Family Planning (%)

	Source of modern contraceptive methods			Source of family planning for non-users of modern contraceptive methods		
	Public	**Private**	**Other**	**Public**	**Private**	**Other**
Burkina Faso 2003	53.93	13.77	32.30	91.19	4.83	3.97
Benin 2006	43.11	35.48	21.42	82.88	11.45	5.67
Burundi 1987	86.72	10.46	2.82	-	-	-
Congo Democratic Republic 2007	21.52	60.64	17.84	58.68	33.45	7.87
CAR 1994-95	50.96	32.78	16.26	-	-	-
Congo (Brazzaville) 2005	24.57	29.52	45.91	85.86	10.05	4.08
Cote d'Ivoire 1998-99	26.53	55.09	18.38	-	-	-
Cameroon 2004	21.42	25.27	53.31	73.60	20.75	5.65
Ethiopia 2005	79.50	16.73	3.77	93.72	5.50	0.78
Gabon 2000	26.86	51.42	21.71	-	-	-
Ghana 2008	41.68	54.11	4.21	90.76	8.98	0.26
Guinea 2005	36.19	19.55	44.26	71.04	14.08	14.88
Kenya 2008-09	58.19	36.09	5.73	92.92	5.57	1.52
Comoros 1996	77.83	7.83	14.35			
Liberia 2007	54.24	32.53	13.23	78.26	19.06	2.68
Lesotho 2009	56.32	27.88	15.80	88.52	10.95	0.53
Madagascar 2008-09	73.19	19.75	7.07	92.58	6.07	1.35
Mali 2006	53.00	37.66	9.34	75.03	18.93	6.04
Malawi 2010	74.10	21.89	4.00	94.76	4.80	0.44
Mozambique 2003	48.12	7.53	44.35	97.22	0.63	2.15
Nigeria 2008	23.65	61.16	15.19	90.55	7.34	2.10
Niger 2006	68.78	24.60	6.62	89.16	5.93	4.92
Namibia 2006-07	75.05	10.19	14.77	98.40	0.85	0.75
Rwanda 2005	-	-	-	-	-	-
Sudan 1989-90	58.45	35.81	5.74	-	-	-
Sierra Leone 2008	51.93	40.09	7.99	89.99	7.77	2.24
Senegal 2005	69.84	21.96	8.20	96.40	3.17	0.42
Sao Tome and Principe 2008-09	86.86	1.78	11.36	99.07	0.63	0.30
Swaziland 2006-07	48.00	32.85	19.15	82.01	10.88	7.11
Chad 2004	59.99	12.80	27.22	58.48	5.50	36.02
Togo 1998	48.57	14.98	36.45			
Tanzania 2010	63.56	21.74	14.70	87.50	7.75	4.74
Uganda 2006	35.06	52.08	12.85	89.02	9.93	1.05
South Africa 1998	84.51	14.56	0.93			
Zambia 2007	68.83	16.71	14.46	97.05	2.37	0.57
Zimbabwe 2005-06	67.85	22.04	10.11	84.85	12.37	2.78
Average	54.82	27.98	17.19	86.28	9.24	4.48

Source: Authors using DHS surveys.

Finally, in table 3 the market share of the private sector is 6.8 percent for the place of birth delivery for the last birth (45.8 percent for the public sector, and 47.4 percent for others, in part because of a large number of deliveries at home), and 10.6 percent for antenatal care visits (83.2 percent for the public sector, and 6.2 percent for others). Again, faith-inspired providers account for only part of the role played by the private medical sector, so that overall the DHS surveys indicate lower market shares for faith-inspired than estimates based on facilities data such as the share of hospital beds owned by CHAs.

Table 3: DHS Market Shares by Provider for Delivery and Antenatal Care (%)

	Place of delivery			Antenatal care		
	Public	**Private**	**Other**	**Public**	**Private**	**Other**
Burkina Faso 2003	39.72	0.76	59.52	-	-	-
Benin 2006	65.93	14.59	19.48	-	-	-
Burundi 1987	-	-	-	-	-	-
Congo Democratic Republic 2007	50.90	21.81	27.29	-	-	-
CAR 1994-95	45.65	3.20	51.15	-	-	-
Congo (Brazzaville) 2005	75.89	7.96	16.15	-	-	-
Cote d'Ivoire 1998-99	44.13	0.88	54.99	-	-	-
Cameroon 2004	43.00	18.96	38.05	-	-	-
Ethiopia 2005	5.78	0.61	93.61	87.99	8.20	3.81
Gabon 2000	67.86	17.79	14.35	-	-	-
Ghana 2008	50.74	9.45	39.81	87.84	10.98	1.17
Guinea 2005	30.07	1.80	68.13	-	-	-
Kenya 2008-09	35.31	12.01	52.68	83.13	15.43	1.43
Comoros 1996	42.40	0.11	57.49	-	-	-
Liberia 2007	30.20	11.56	58.24	64.40	16.77	18.83
Lesotho 2009	52.61	4.20	43.19	70.30	7.47	22.23
Madagascar 2008-09	34.44	3.20	62.36	86.26	5.98	7.76
Mali 2006	45.16	2.38	52.46	-	-	-
Malawi 2010	59.37	16.82	23.81	78.92	19.16	1.92
Mozambique 2003	51.55	0.26	48.19	99.03	0.84	0.13
Nigeria 2008	21.31	15.25	63.43	64.89	26.75	8.36
Niger 2006	17.70	0.46	81.84			
Namibia 2006-07	77.31	5.11	17.58	90.26	8.34	1.39
Rwanda 2005	49.37	0.91	49.72	97.05	1.91	1.04
Sudan 1989-90	-	-	-	-	-	-
Sierra Leone 2008	23.33	2.86	73.81	84.78	6.39	8.82
Senegal 2005	59.97	4.27	35.76	-	-	-
Sao Tome and Principe 2008-09	80.43	0.25	19.32	98.59	0.25	1.16
Swaziland 2006-07	60.36	5.59	34.05	70.20	25.31	4.49
Chad 2004	11.58	0.52	87.90	-	-	-
Togo 1998	45.99	4.44	49.57	-	-	-
Tanzania 2010	25.40	2.90	71.71	69.89	4.85	25.26
Uganda 2006	33.50	13.13	53.37	87.66	11.09	1.26
South Africa 1998	77.87	8.48	13.65	-	-	-
Zambia 2007	45.63	4.94	49.43	92.53	6.53	0.93
Zimbabwe 2005-06	56.67	12.93	30.40	84.41	14.73	0.86
Average	45.80	6.78	47.43	83.23	10.61	6.16

Source: Authors using DHS surveys.

COMPARISON WITH MULTI-PURPOSE INTEGRATED SURVEYS

How do estimates obtained from DHS data compare with those obtained from multi-purpose integrated household surveys that identify separately faith-inspired providers from private secular providers? In order to answer this question, estimates of the market share of faith-inspired and private secular providers were obtained by Olivier and Wodon (2012b) using multi-purpose household surveys for 14 countries.

Details on the surveys and the categories of health care providers identified in each survey are provided in the annex. Before presenting the results, three brief comments are in order. Firstly, in many cases, NGOs have been included together with faith-inspired providers. This is because in a few countries, NGOs are lumped together with faith-inspired providers in the way questions are asked in the surveys. To keep the data consistent, where NGOs are identified separately, they have then also been considered as faith-inspired providers. However, because the market share of NGOs is typically much smaller than that of faith-inspired providers, this should not lead to any major bias in the results, and in addition, at least some NGOs are faith-inspired. Secondly, traditional and faith healers have been included in the 'private secular' category in order to focus the assessment of faith-inspired providers on facilities-based care. Considering traditional and faith healers as private secular providers is a bit of a misnomer given that 'faith' often inspires traditional healers, but the term 'private secular' has been kept in order to simplify the terminology. Because the role of traditional and faith healers is often small in comparison to that of pharmacists and chemical stores (due to self-medication), this again should not lead to a large bias in most countries. Thirdly, because of the way questions are asked in the surveys, the identification of faith-inspired providers in some countries may be better than in others, but it is difficult to make a precise country-level assessment of the quality of this identification, so this will not be attempted here.

Table 4 provides the results already presented by Olivier and Wodon (2012b). The order of magnitude for the market share estimates tend to be comparable to the estimates obtained from DHS surveys, at least on average. Indeed, the average market share of public facilities-based care across the 36 countries for which DHS estimates are available is 55.9 percent for consultations related to fevers/coughs and 56.8 percent for consultations related to diarrhea. This compares to an average market share for public facilities in the multi-purpose integrated surveys of 55.2 percent. In the subset of countries where multi-purpose household surveys identify separately private secular and faith-inspired facilities, the average market share of faith-inspired providers is 6.0 percent. As already mentioned this is probably on the low side because some countries where faith-inspired providers are known to have very large market shares such as the Democratic Republic of Congo are missing. Overall, it would seem to be fair to say that in the multi-purpose integrated surveys, the market shares for faith-inspired in healthcare systems broadly defined may well at 10 to 15 percent, with a market share of other private facilities-care being of a similar order of magnitude if one considers in turn the DHS data. Note finally, in table 4, the market share of the private secular sector broadly conceived, which includes here not only private secular medical care, but also chemical stores, pharmacies, and traditional healers, tends to be larger than that of faith-inspired

providers. This is not surprising given that essentially the definition of the private sector in table 4 includes the 'others' category in the tables based on the DHS data.

Table 4: Market Shares from Multi-purpose Integrated Household Surveys (%)

	Public healthcare providers	Faith-inspired providers	Private secular providers
Burundi, 2006	69.3	11.5	19.2
Cameroon, 2007	44.9	15.1	40.0
Chad, 2003/04	53.1	10.7	36.2
Ghana, 2003	43.1	3.7	53.2
Ghana, 2005-06	44.4	6.6	49.0
Kenya, 2005	49.0	4.2	46.8
Malawi, 2004	36.9	3.9	59.2
Mali, 2006	68.5	1.0	30.5
Niger, 2007	77.6	1.5	20.9
Nigeria 2003/04	50.2	1.9	47.9
Republic of Congo, 2005	44.0	4.0	52.0
Senegal, 2005	65.0	2.3	32.7
Sierra Leone, 2003-04	60.1	2.0	37.9
Swaziland, 2009-10	66.4	13.2	20.3
Zambia, 2004	55.0	6.1	38.9
Average	55.2	5.8	39.0

Source: Authors using multi-purpose integrated surveys. See also Olivier and Wodon (2012b).

For easier reference, table 5 provides a synthesis of the average results obtained across countries with the two types of surveys, focusing on diarrhea and fevers/colds in the case of DHS data since consultations related to these two illnesses tend to be more frequent than for the other types of illnesses and health needs identified in the DHS.

Table 5: Comparison of Average Market Share Estimates Between Surveys (%)

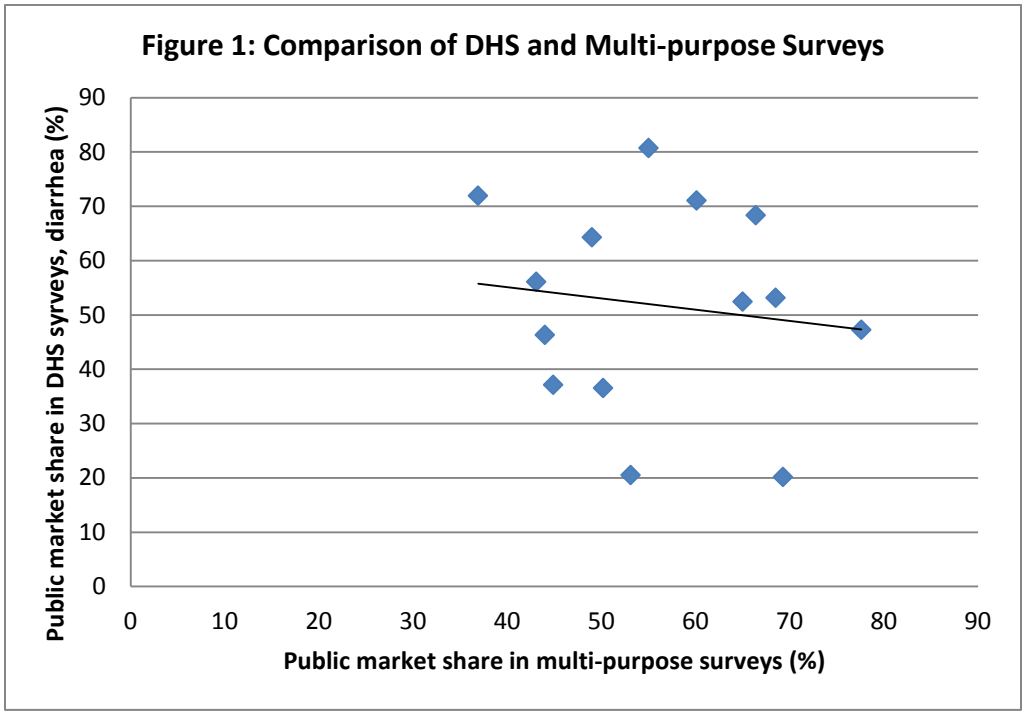
	Public facilities	All private facilities	Other private	Faith-inspired facilities	All other Private	Total
DHS, Fevers/coughs – 36 countries	54.9	24.3	20.9	-	-	100.0
DHS, Diarrhea – 36 countries	56.8	17.4	25.8	-	-	100.0
Multi-purpose – 14 countries	55.2	-	-	5.8	39.0	100.0

Source: Authors.

Importantly however, while on average the results obtained with the DHS and the multi-purpose integrated surveys tend to be of the same order of magnitude, as illustrated by similar average market shares for public providers of healthcare in the two sets of surveys, there is a lot of variation in estimates at the level of individual countries depending on which data source is used. This is best illustrated with country level public market shares which are displayed in Figure 1 for the set of countries for which both DHS and multi-purpose household surveys are available. The scatter plot in Figure 1 suggests that for many countries in the sample, there are large differences in public market share estimates depending on the type of survey used, and the relationship between the two sets of public market shares is essentially flat (it is actually negative).

The likely reason for this lack of fit between the two sets of estimates is that what is measured is often different in the DHS and multi-purpose integrated surveys, both in terms of the types of illnesses considered and in terms of the definitions of facilities. The

questions are asked in the multi-purpose integrated surveys in a different way from what is asked in the DHS surveys. In addition, the comparison of estimates also suggests that the data is somewhat noisy, possibly because of recall problems on the part of households. Thus, while it is legitimate to draw general conclusions about the order of magnitude of faith-inspired providers from those data, in that their market share is likely to be below the levels suggested by facilities data, caution is needed for work at the country level, and data from household surveys must be triangulated whenever feasible. Also, the substantial variations in estimates between surveys suggest that more efforts are needed to collect good data on the respective market shares of various types of providers.



Source: Authors.

CONCLUSION

The purpose of this short paper was to compare market share estimates for private facilities in DHS and multi-purpose integrated surveys in a large sample of sub-Saharan countries. The DHS surveys have the advantage of being comparable and standardized, and they are also available for a large set of countries. The multi-purpose integrated surveys selected for this analysis have the advantage of distinguishing between faith-inspired and private secular facilities, which is not the case in the DHSs. On average, the results obtained for the countries in the various sample suggest that the market share of faith-inspired providers in health systems broadly defined are below traditional estimates based on facilities data, and especially on the number of hospital beds owned by CHAs.

Several reasons already discussed by Olivier and Wodon (2012b) account for this result. Firstly, faith-inspired providers often have larger shares of hospital beds than their share of all health care facilities. Secondly, the market shares of CHAs in hospital beds often

do not account for the role of private secular health facilities. Thirdly, estimates based on the CHAs tend represent the situation of countries where faith-inspired providers have traditionally been strong, with lower market shares in other countries. Finally, estimates of market shares based on facilities-based care do not account for the role of a range of other providers, including traditional healers, pharmacists, and chemical stores. These various factors tend to generate lower market shares in household surveys than in databases that rely on hospital beds or closely associated measures.

As in Olivier and Wodon (2012b), the take-away from this analysis should not be that facilities-based estimates are proven 'wrong' by household surveys. Household surveys might underestimate the market share of some faith-inspired facilities when households do not know that their facility is faith-inspired. In addition, from the point of view of a Ministry that supports faith-inspired facilities in their service delivery activities, the market share of these facilities in the universe of faith-inspired and public facilities (as measured through hospital beds among others) is important for allocating funding, and probably more so than estimates of market share that take the broader health system into account. Thus, various types of estimates – whether based on facilities or household surveys – can and should be used for various purposes at the country or local level. Furthermore, even if estimates from DHS and multi-purpose integrated surveys tend to converge on average, there is a lot of variation in the estimates obtained from different sources at the level of individual countries, in part because different surveys measure different things. Clearly, when designing household surveys, more efforts should be undertaken to collect better data on the respective roles of various types of health care providers, and for this more detailed survey questionnaires would be highly welcome.

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Annex Table 1: Multi-purpose Integrated Household Surveys Used for Cross-country Comparisons

Country	Year	Survey Name	Number of households
Burkina Faso	2007	Enquête Annuelle sur les conditions de vie des ménages (EACVM-QUIBB)	8496
Burundi	2006	Enquête Questionnaire des Indicateurs de Base du Bien être (QUIBB)	7046
Cameroon	2007	Enquête sur les Conditions des Ménages Camerounais II (ECAM)	11391
Chad	2003/04	Deuxième Enquête sur la Consommation et le Secteur Informel au Tchad (ECOSIT)	6697
Dem. Rep. of Congo	2004/05	Enquête 1-2-3 (123 survey)	12098
Ghana	2005/06	Ghana Living Standards Survey, Fifth round (GLSS)	8687
Kenya	2005	Kenya Integrated Household Budget Survey (KIHBS)	13158
Malawi	2004	Malawi Integrated Household Survey (HIS)	11280
Mali	2006	Enquête Légère. Intégrée auprès des Ménages (ELIM)	4494
Niger	2007	Enquête nationale sur le budget et la consommation des ménages (ENBC)	4000
Nigeria	2003/04	Nigeria Living Standards Survey (LMS)	19158
Republic of Congo	2005	Enquête Congolaise auprès des Ménages pour l'évaluation de la pauvreté (ECOM)	5002
Senegal	2005	Enquête de Suivi de la Pauvreté au Sénégal (ESPS)	13568
Sierra Leone	2003	Sierra Leone Integrated Household Survey (SLIHS)	3720
Swaziland	2009	Swaziland Household Income and Expenditure Survey (SHIES)	3167
Uganda	2010	Uganda National Household Survey (UNHS)	6775
Zambia	2004	Zambia Living Conditions Monitoring Survey (LCMS)	19315

Source: Authors.

Annex Table 2: Identification of the Various Types of Healthcare Facilities in Multi-purpose Integrated Household Surveys

	Public	Faith-inspired and NGOs	Private secular
Burundi	Public hospital, Public clinic	Missionary hospital, Missionary clinic	Private hospital, Private clinic, Pharmacy, Private doctor, Private Sage-femme, Traditional healer
Cameroon	Public, Para-public	Private religious	Private non-religious
Chad	Public health center, Public district hospital, HGRN/Liberty	Religious health center and NGO, Religious/NGO hospital	Private health center, Private clinic, Private doctor or dentist, Home-based care
Ghana	Public	Private religious	Private non-religious
Kenya	Referral hospital, District/provincial hospital, Public dispensary, Public health center	Missionary hospital/dispensary	Private dispensary/hospital, Private clinic, Traditional healer, Pharmacy/chemist, Kiosk, Faith healer, Herbalist, Other
Malawi	Government health facility	Church/mission facility	Private health facility, Local pharmacy, Local grocery for medicine, Treatment with traditional healer, Treatment with faith healer, Help from relatives, Other
Mali	Public hospital, CSCOM, CSRef, Other public facilities	Religious health center	Private doctor or dentist, Private care facility, Private clinic, Traditional healer/marabou, Pharmacy, Other private facilities or NGOs
Niger	Public hospital, Integral health center, Maternity, Health post	Private Christian/NGO facility	Private hospital/clinic, Private health facility, Pharmacy, Traditional healer/marabou, Others
Nigeria	Federal Government, State Government, Local Government	Religious Body	Industrial, Private, Other
Republic of Congo	Public hospital/clinic, Integral Health Post	Church	Private hospital/facility, Private doctor or dentists, Traditional healer, Pharmacy, Other
Senegal	Hospital/Clinic/Dispensary, Hospital/Health Center, Dispensary/Health Post, Health Hut	Christian/NGO	Private Doctor/Dentist, Healer/Marabou, Sage Femme/Neighborhood nurse, Pharmacy/Pharmacist, Other
Sierra Leone	Government	NGO, Missionary, Catholic	Private, Other
Swaziland	Govt Hospital, Govt Health Centre, Govt Clinic	Mission Hospital, Mission Clinic	Private Hospital, Private Doctor, Traditional Healer, Pharmacy, Other
Zambia	Government Institution	Mission Institution	Industrial Institution, Private Institution, Pharmacy, Relatives, Neighbors, Friends, Traditional Healers, Other

Source: Authors.