

TANZANIAN NATIONAL VOUCHER SCHEME

Report on first Round of Retail Census

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DRAFT FOR COMMENT – Please do not quote

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Introduction

In October 2005 the Tanzania government, through funds from the Global Fund for Tuberculosis, Malaria and HIV/AIDS, launched the Tanzania National Voucher Scheme (TNVS), an 18 month national wide discounted voucher scheme for ITNs for pregnant women and under 5 year old children. Vouchers (worth 2750 Tshs each) are distributed to pregnant women at antenatal clinics and redeemed as part-payment for an ITN at a designated private outlets.

The TNVS is expected to support a rapid expansion of ITN use by both pregnant women and infants. In addition, it is hoped that the TNVS will encourage private sector involvement in the manufacture of ITNs and their delivery to poorer communities, since there will be widespread and predictable demand for ITNs by pregnant women.

The London School of Hygiene and Tropical Medicine and Ifakara Health Research and Development Centre have been contracted to do the Monitoring and Evaluation (M&E) of the scheme. This paper reports on the retail census component. The main objective of the retail census is to study the contribution of the private sector to the scheme and document the latter's influence on the private market. Specifically the census aims to:

- Evaluate the impact of TNVS on ITN availability.
- Assess the availability of shops accepting vouchers.
- Evaluate impact of TNVS on ITN prices.
- Provide an estimate of the average top-up price – across districts and shape/size of ITNs.
- Assess the impact of the TNVS on ITN market development

The retail census involves two survey rounds in each district. This report presents results from data which were collected from the first round of retail census in the twenty one sample districts from April to October 2005 and can be considered the 'baseline' against which the indicators above are mentioned. The baseline results presented here provide an opportunity to consider the environment in which the TNVS might be expected to influence the development of the ITN market.

Methods

The appendix provides more detailed information on methods used for the retail census. The launch of the scheme was phased in by district. For the purposes of the M&E, twenty one districts were randomly selected on the basis of launch dates (see Table 1) and the retail census was undertaken in all of these districts. Within each district we defined the ward as the sampling unit and wards were classified as either 'major trading centres' (MTCs) and 'non major trading centres' (NMTCs) (see appendix for more details). In each outlet a short questionnaire was administered by a trained interviewer which collected information about: the characteristics of the shop; whether or not they stocked ITN products (nets and insecticide); the prices of these products and other items stocked. The appendix provides detailed information on how outlets were selected for inclusion in the survey. Data from the survey were double entered using EPI-Info software. Data analysis was carried out using Stata v.9 software. It is important to note that for many districts the census occurred after or during the official launch period. Table 1 below shows the official launch dates, the census dates and 'exposure period' (i.e. the number of months in which the scheme had been operating before the census took place). Among districts that had already launched the mean time that the scheme had been operating was 4 months.

Table 1: launching and retail census dates for survey districts

	Districts	Number of wards	Official launching dates	Census dates	'Exposure' (months) ¹
1	Dodoma rural	14	25-Oct-04	16-20 May 05	7.3
2	Tanga	8	04-Dec-04	08-15 Apr 05	4.5
3	Kilombero	6	23-Dec-04	23-27 May 05	5.4
4	Igunga	8	09-Jan-05	14-18 July 05	6.6
5	Rufiji	6	25-Feb-05	21-23 Jun 05	4.1
6	Bagamoyo	4	01-Mar-05	17-20 Jun 05	3.9
7	Sumbawanga rural	8	20-Mar-05	03-11 Oct 05	7.0
8	Ludewa	6	20-Mar-05	09-18 Oct 05	7.3
9	Same	8	18-Apr-05	22-29 Apr 05	0.1
10	Singida	4	25-Apr-05	28 Jun- 03 Jul 05	2.3
11	Nachingwea	8	20-May-05	26-29 Jun 05	1.3
12	Tabora rural	6	08-Jun-05	15-19 July 05	1.3
13	Meatu	6	11-Jul-05	21-24 Aug 05	1.5
14	Tandahimba	8	18-Jul-05	24-26 Jun 05	-0.9
15	Karatu	4	29-Jul-05	04-08 July 05	-0.9
16	Magu	8	20-Sep-05	23-27 Aug 05	-1.0
17	Bunda	6	05-Oct-05	16-24 Aug 05	-1.8
18	Kibondo	6	21-Oct-05	15-19 Aug 05	-2.4
19	Biharamulo	8	18-Nov-05	13-26 Sep 05	-2.4
20	Simanjiro	4	19-Dec-05	27Sept – 03 Oct 05	-3.0
21	Mbulu	6	13-Jan-06	19-24 Sep 05	-4.1

¹ 'Exposure' refers to the number of months that the TNVS had been operating in each district prior to the first census. Negative values indicate that census took place *before* the official launch, the data for these districts can therefore be considered as a baseline.

Measuring ITN availability

The census is primarily interested in the extent to which the TNVS might be expected to influence ITN availability and the market for ITNs. One approach to measuring ITN availability is simply to take the number of outlets stocking ITNs as a proportion of the total number of outlets. However, this measure is sensitive to changes in the denominator due to for example, outlets opening and closing in an area. A different measure of availability is whether there is at least one outlet in a ward selling ITN products. In most cases, there is at least one antenatal clinic per ward providing discount vouchers to pregnant women. The presence of at least one outlet in that ward stocking ITNs and accepting vouchers makes it easier for a voucher recipient to buy an ITN and this measure is less sensitive to changes in the number of outlets in an area. Data on both measures are presented here.

Results

Table 2 provides summary data for the outlets included in round 1 of the retail census. A total of 2,307 outlets were surveyed, the majority being general shops (81.3%) followed by drug shops (10.6%), kiosks (6.5%), machinga (0.8%), pharmacies (0.4%) and supermarkets (0.3%). Similarly as shown in Table 3 general shops were most likely to stock ITNs (91.8%) and accept vouchers (78%). Drug shops rank second in terms of outlets accepting vouchers.

The number of outlets surveyed per district ranges from 31 outlets in Ludewa to 271 outlets in Tanga town with a mean of 108 outlets per district and median of 104. This is likely to reflect different socio-economic and rural-urban characteristics of the sampled districts. Table 3 shows the proportion of outlets in each district stocking ITNs and ngao. It is speculated that many factors influence ITN availability including: influences from past ITN projects, malaria endemicity and degree of specialization of outlets in a particular district.

Table 2: Summary of outlets surveyed in census 1

	Total outlet surveyed (N = 2307)	Stocking ITNs (N = 473)	Voucher agents (N = 49)
General shops	1,873 (81.3%)	434 (91.8%)	38 (78%)
Drug shops	244 (10.6%)	9 (1.9%)	9 (18%)
Kiosks	150 (6.5%)	23 (4.9%)	1 (2%)
Machinga	19 (0.8%)	4 (0.8%)	0 (0%)
Pharmacies	8 (0.4%)	1 (0.2%)	1 (2%)
Supermarkets	6 (0.3%)	0 (0%)	0 (0%)
Other	4 (0.2%)	2 (0.4%)	0 (0%)

Table 3: Summary of outlets surveyed, ITN and Ngao availability across districts

	Outlets surveyed per district	Outlets stocking ITNs		Outlets sticking Ngao	
		No	%	No.	%
BAGAMOYO	105	27	25.7%	25	23.8%
BIHARAMULO	89	24	26.9%	32	36.0%
BUNDA	96	33	34.4%	46	47.4%
DODOMA RURAL	98	11	11.2%	46	47.4%
IGUNGA	115	19	16.5%	39	33.9%
KARATU	114	29	25.4%	16	14.0%
KIBONDO	128	10	7.8%	11	8.6%
KILOMBERO	121	53	43.8%	26	21.3%
LUDEWA	31	0	0%	3	9.7%
MAGU	85	20	23.5%	44	51.8%
MBULU	123	28	22.8%	16	13.0%
MEATU	104	10	9.6%	22	21.2%
NACHINGWEA	81	25	30.9%	13	16.0%
RUFIJI	65	6	9.2%	26	40.0%
SAME	175	37	21.1%	57	32.6%
SIMANJIRO	125	10	8%	52	41.6%
SINGIDA	156	41	26.3%	51	32.7%
SUMBAWANGA RURAL	36	4	11.1%	5	13.9%
TABORA RURAL	83	16	19.3%	30	36.1%
TANDAHIMBA	82	32	39.0%	19	23.2%
TANGA	271	38	14.0%	98	36.2%

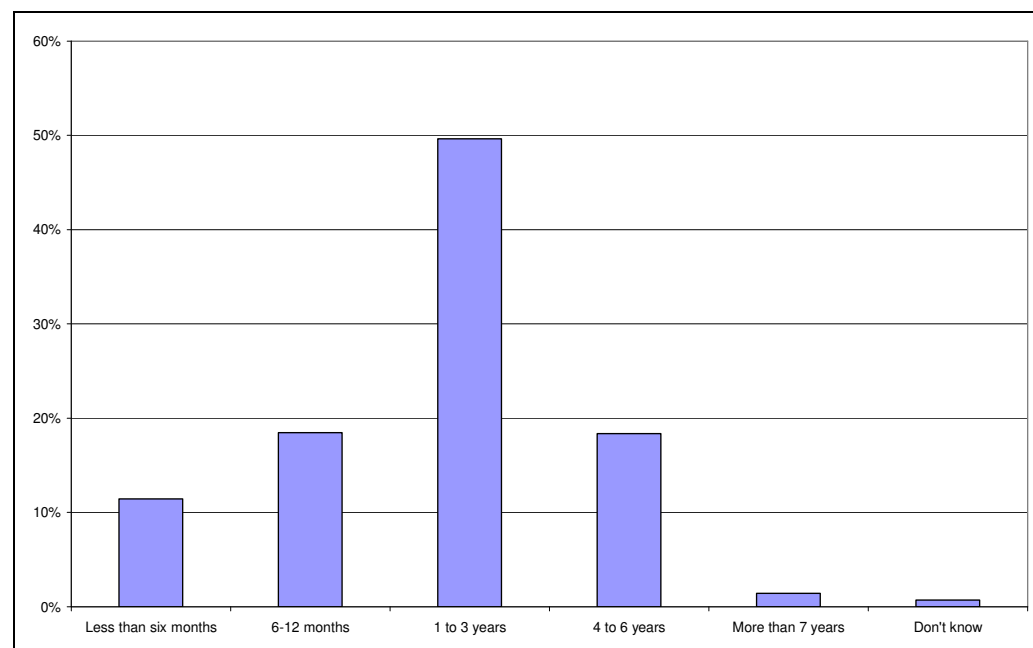
The table below shows the percentage of wards with at least one outlet stocking ITNs in the sampled districts. Only 3 of the 21 survey districts had wards where there was at least one outlet stocking ITNs (Bagamoyo, Tabora rural and Tandahimba). The majority of districts (18 out of 21) contained at least some wards where there was not one outlet stocking ITNs. Among the wards sampled in Ludewa district there were no outlets at all stocking ITNs.

Table 4: Wards with at least one outlet stocking ITN

	% of wards with at least one outlet stocking ITNs
BAGAMOYO	100%
TABORA RURAL	100%
TANDAHIMBA	100%
BUNDA	83%
KILOMBERO	83%
MBULU	83%
BIHARAMULO	75%
SAME	75%
TANGA	75%
DODOMA RURAL	50%
KARATU	50%
MAGU	50%
RUFJI	50%
SIMANJIRO	50%
SINGIDA	50%
IGUNGA	38%
NACHINGWEA	38%
MEATU	33%
KIBONDO	17%
SUMBAWANGA RURAL	13%
LUDEWA	0%

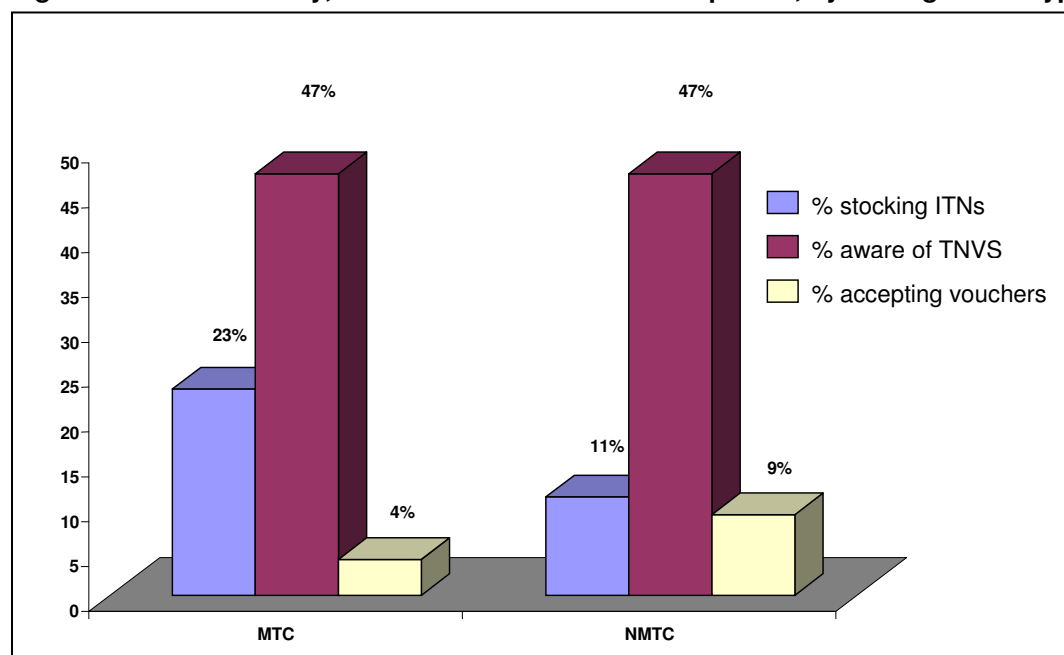
Time in ITN business

One objective of the census is to establish the extent to which the TNVS encourages new entrants to the ITN business. The survey asked respondents how long they had been stocking ITNs. Figure 1 shows that 30% of those outlets stocking ITNs had been in the business for less than 12 months. Half of outlets had been stocking ITNs for between 1 and 3 years.

Figure 1: Time in ITN business

TNVS awareness and voucher acceptance

ITNs are more available in major trading centres as the majority of outlets stock the product compared to the most rural and remote areas of the districts. However the level of the scheme awareness was found to be the same in both major and non-major trading centres. Forty seven percent of outlets reported to have heard about the scheme in both centres (see Figure 2 below). Table 5 shows the proportion of outlets who have heard of the TNVS scheme and who are accepting vouchers.

Figure 2: ITN availability, voucher awareness and acceptance, by trading centre type**Table 5: Voucher acceptance and TNVS awareness by district**

	Outlets surveyed per district		Outlets accepting vouchers		Outlets aware of TNVS	
	No.	%	No.	%	No.	%
BAGAMOYO	105		4	3.8%	85	81.0%
BIHARAMULO	89		2	2.2%	21	23.6%
BUNDA	96		0	0.0%	26	27.4%
DODOMA RURAL	98		8	8.2%	77	77.8%
IGUNGA	115		0	0.0%	45	39.5%
KARATU	114		1	0.9%	50	44.2%
KIBONDO	128		0	0.0%	37	28.9%
KILOMBERO	121		4	3.3%	92	76.7%
LUDEWA	31		0	0.0%	8	25.8%
MAGU	85		1	1.2%	21	25.0%
MBULU	123		0	0.0%	30	24.2%
MEATU	104		1	1.0%	33	31.7%
NACHINGWEA	81		5	6.2%	61	75.3%
RUFIJI	65		3	4.6%	27	42.2%
SAME	175		6	3.4%	66	37.7%
SIMANJIRO	125		0	0.0%	78	62.4%
SINGIDA	156		2	1.3%	75	48.1%

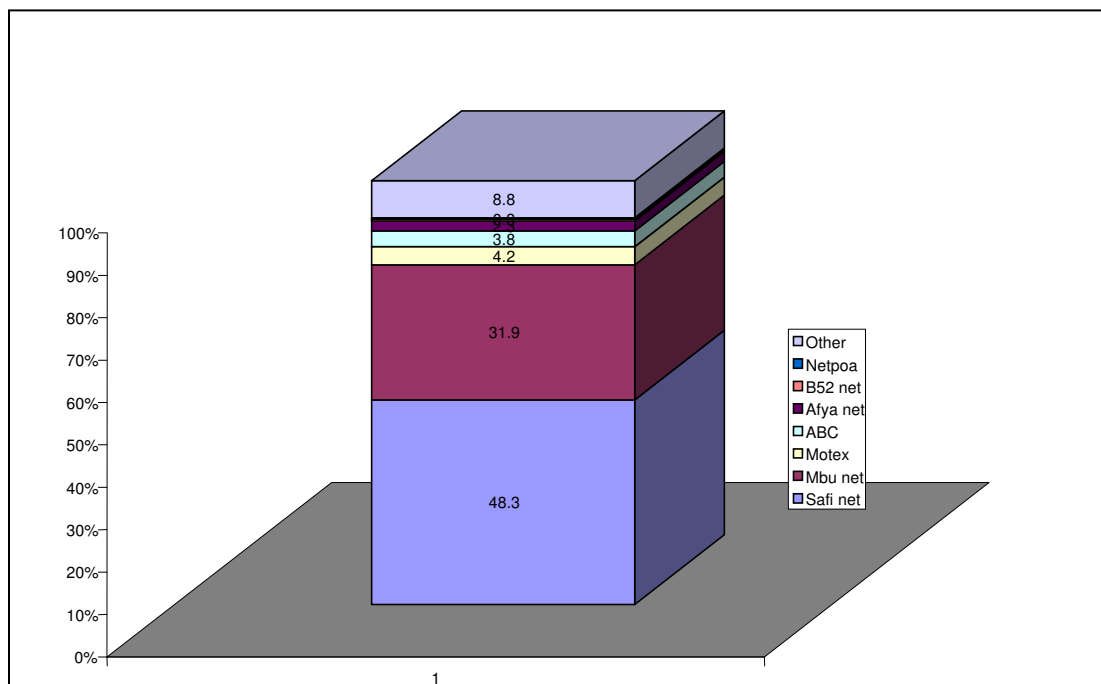
SUMBAWANGA RURAL	36	0	0.0%	7	20.6%
TABORA RURAL	83	4	4.8%	51	60.7%
TANDAHIMBA	82	1	1.2%	59	72.0%
TANGA	271	7	2.6%	122	45.2%

As far as voucher acceptance is concerned, low proportions of outlets were accepting vouchers in both major and non-major trading centres (4% in MTCs and 9% in NMTCs). One reason for this is that we visited some of the districts prior to or just after the official launching of the scheme in the respective district. In some instances ITNs were being distributed through health facilities. There were cases where an outlet in one ward was accepting vouchers from voucher beneficiaries from several wards. Thirdly, in most cases there at most two outlets accepting vouchers per ward. That is why the proportion of outlets accepting vouchers in non-major trading centres appear to be higher than in major trading centres since there are relatively fewer outlets there stocking ITNs and there are cases where we found only one outlet in a ward stocking ITNs and accepting vouchers. Most of the outlets in many remote rural areas started stocking ITNs after efforts and persuasion from the logistic contractor.

Market share

The questionnaire asks respondents to state the brands of nets that they stock. Figure 3 summarises the market share across outlets. Safi net was found to dominate the market with 48% of outlets stocking these nets, followed by Mbu net (31.9%). Other brands of nets included Chitetezo from Malawi, Chinese nets, Supernet, Zuia mbu and ABC from Uganda. The market shares from the first and second round of census will be compared to see to what extent the scheme influences shifts between brands.

Figure 3: Market share by brand



TNVS acceptance and satisfaction amongst ITN sellers

Overall, only 4.6% of all outlets which were stocking ITNs were accepting vouchers. Respondents gave a variety of reasons for not participating in the scheme including too small capital for the ITN business and lack of knowledge on how the scheme operates.

Of outlets which were accepting vouchers, the majority (91%) reported that they are satisfied with the redemption process. A very small proportion (1%) reported to have experience of voucher scheme prior to TNVS. Of those outlets not accepting vouchers, 66% expressed a willingness to be involved in the voucher scheme in the future.

Table 6: Satisfaction of redemption process and voucher experience

	Yes		No		N/A		Total
	N	(%)	N	(%)	N	(%)	
Accepting vouchers	49	(4.6%)	1,027	(95.5%)	0	(0%)	1076
Satisfied with redemption	30	(90.9%)	0	(0%)	3	(9.1%)	33
Accepted vouchers prior to TNVS launch	10	(1.0%)	988	(97.0%)	20	(2.0%)	1,019
Willingness to accept vouchers	660	(65.8%)	128	(12.8%)	204	(20.3%)	1,003

Display of point of sales materials

Very few outlets were displaying any point of sales materials (i.e. stickers/posters) for nets at the time of the census (3.4%). However, point of sales of materials for insecticides were more widely available (11.7%) compared with nets. Of those outlets accepting vouchers the majority (71.4%) were displaying point of sales material for vouchers.

Table 7: Point of sales and voucher materials

	Yes		No		Total
	N	%	N	%	
Point of sales for nets	77	(3.4%)	2,207	(96.6%)	2,284
Point of sales for insecticides	268	(11.7%)	2,015	(88.3%)	2,283
Point of sales for vouchers	35	(71.4%)	14	(28.6%)	49

ITN prices

An important component of the retail census is to monitor changes in price since the introduction of the scheme. The survey asks respondents to record the wholesale price, retail price and voucher 'top-up' prices (the amount which needs to be paid on top of the Tsh 2750 voucher) for different sized and shaped nets. The questionnaire asks respondents to provide the lowest and highest price for each different sized net to reflect the different brands available. Table 8 below provides the mean 'low' and

'high' wholesale, retail and top-up prices for all outlets stocking selected ITNs.¹ For example, for 3x6 nets the mean 'high' reported retail price was Tsh 3299 with an average top up price of Tsh 888. Prices for 4x6 and 6x6 nets were correspondingly higher.

Table 8: Mean wholesale, retail and top up prices, round nets

	'Low' price ¹				'High' price ¹			
	N	Mean 'Low' price (Tsh)	95% confidence interval		N	Mean 'High' price (Tsh)	95% confidence interval	
3x6								
Wholesale price	222	2516.0	2447.9	2584.1	222	2599.1	2533.6	2664.6
Retail price	281	3078.8	3007.8	3149.8	281	3299.6	3233.6	3365.6
Top up price	14	566.1	385.9	746.3	15	888.3	351.0	1425.6
4 x 6								
Wholesale price	24	2595.8	2380.0	2810.8	24	2729.2	2517.9	2940.4
Retail price	33	3239.4	3001.8	3477.0	33	3445.5	3214.4	3676.5
Top up price	0	-	-	-	1	750	-	-
6 x 6								
Wholesale price	124	2823.0	2702.7	2943.3	123	2901.6	2778.1	3025.1
Retail price	157	3512.1	3373.0	3651.2	157	3746.5	3627.5	3865.5
Top up price	6	791.7	43.3	1540.1	6	958.3	218.3	1698.3

¹ Respondents are asked to provide the lowest and highest range of prices for each sized net to reflect the different brands available.

A key question is the extent to which retailers charge different prices to those purchasing nets with a voucher. We therefore compared the effective total price (voucher plus top-up) with the retail price in those outlets accepting vouchers. The results for the different sized nets are conflicting, although none of the differences reach statistical significance (indicated by the overlapping 95% confidence intervals). For example the total effective price with a voucher for 3x6 round nets is Tsh 3638 compared to Tsh 3366 for a net paid for without a voucher. The results for 6 x 6 round nets is counter intuitive with the effective voucher price being less than the actual retail price. This probably reflects large variability in the mean price. However the extremely small sample sizes mean these results should be interpreted with caution.

¹ Although data were collected on prices of round and square nets, data here are presented for round nets only due to very small sample sizes for the square nets. Data on both shapes will be presented for Census 2.

Table 9: Top up vs. retail prices in those outlets accepting vouchers, round nets

	Low				High			
	N	Mean (Tsh)	95% confidence interval		N	Mean (Tsh)	95% confidence interval	
3x6 nets								
Total price with voucher	14	3316.071	3135.86	3496.283	15	3638.3	3101.036	4175.631
Reported retail price	14	3225	3042.427	3407.573	15	3366.7	3225.094	3508.239
4x6 nets								
Total price with voucher	1	3500	-	-	1	3500	-	-
Reported retail price	1	3000	-	-	1	3500	-	-
6x6 nets								
Total price with voucher	6	3541.667	2793.26	4290.073	6	3708.3	2968.328	4448.339
Reported retail price	6	3583.333	2742.947	4423.719	6	4133.3	2823.88	5442.787

It is interesting to compare the results from the retail census for ITN and top up voucher prices with those reported in the household survey. Table 10 suggests that the top-up prices reported by retailers are lower than those reported by household survey respondents. However, the extremely small sample sizes in the retail audit make it difficult to put too much weight on these findings at this stage.

Table 10: Price results from retail and household surveys

Net size	Household survey (currently pregnant)				Retail audit							
	N	Mean Top up	95% CI		N	'Low'			'High'			
		Mean Top up	95% CI			N	Mean Top up	95% CI		N	Mean Top up	95% CI
3.5x6	11	1094.4	778.7	1410.2	14	566.1	385.9	746.3	15	888.3	351.0	1425.6
4x6	44	895.8	792.2	999.4	0	-	-	-	1	750	-	-
6x6	37	1515	740.7	2289	6	791.7	43.3	1540.1	6	958.3	218.3	1698.3

Field observations

Whilst undertaking the retail census, research workers are asked to report their own findings from the field. It is important to appreciate that these observations are **not** necessarily representative of the TNVS more generally. Rather, they provide a feel for some of the issues facing the implementation of the programme on the ground which may require further investigation.

In some wards it was reported that designated outlets were not selling ITNs to non-voucher customers. Respondents reported to have been instructed to sell to voucher

customers only. It was not clear whether they were told so or if it was a misunderstanding from the training. This works against ITN private market development as other customers will think private shops sell ITNs to voucher recipients only. This is more serious for wards with only one outlet selling ITNs and accepting vouchers because people have no other choice of outlet. When the program ends it will be difficult for designated outlets to continue sell ITNs.

There are anecdotal reports of top-up price fixing in some wards. Pregnant women, upon receiving vouchers, are instructed to go to a specified designated outlet and pay a fixed amount as a top up price. This deprives voucher recipients of bargaining power.

Some designated outlets were reported to be selling one particular medium net size to voucher customers. They reasoned that most voucher customers are able to top-up for at most medium size nets as against large size nets. However, this deprives the customers of freedom of choosing their preferences. This is more critical in wards with only one outlet stocking and accepting vouchers and selling only to voucher customers.

Conclusions

The findings reported here provide important baseline information but cannot yet be used to assess the impact of TNVS. The second round of census data will provide much more information.

We found that general shops are the most likely type of outlet type to stock nets and accept vouchers and nearly one third of outlets stocking ITNs had come into the market within the last 12 months. In 14% (3 out of 21) of the sample districts there was at least one outlet stocking ITNs in every ward. For the majority of districts, however, there were at least some wards with no outlets at all stocking ITNs. It is hoped that this proportion decreases in the next census round.

Finally, awareness of the voucher scheme appears high in both MTCs and NMTCs and of those currently accepting vouchers the vast majority (90%) were satisfied with the redemption process. Of those not accepting vouchers, most (65%) expressed a willingness to do so in the future. Reasons cited by outlets for not accepting vouchers included: lack of information, limited capital and the claim that often only one outlet is selected in a given area.

Appendix 1: Methodology

Sampling

A sampling approach has been developed to assess availability of ITN products throughout the district. This uses the ward as the unit of sampling, with a sampling fraction of at least 30% of wards. The number of wards in a district was multiplied by 0.3, to give 30%, and rounded up to the nearest whole number. We then divided our sample (n) for each district into (n/2) wards considered as major trading centres (MTC) and (n/2) wards, which were considered as non-major trading centres (NMTC) (both rounded to nearest whole number). In order to determine whether wards were MTC or NMTC, wards were ranked in decreasing order of size depending on the number of outlets/businesses in each ward. This was done by obtaining data from the *Ofisi ya Biashara* (District level Business Office) records on the number of registered businesses by ward. Wards were then ranked by the number of outlets. The largest n/2 MTC were then automatically selected to obtain volumes and a picture of availability in MTC. Another n/2 NMTC wards were randomly sampled from the remaining wards within a district to obtain a picture of volumes and availability in NMTC². Qualitative confirmation that the selected districts were the major trading centres in the ward was obtained by discussion with key informants such as the Business Officer, District Medical Officer and other people knowledgeable of the district (e.g. local businesspeople). This confirmation was necessary since the list of registered businesses may not be fully accurate or up to date.

Within wards, the outlet survey was limited to what is defined as “trading centres” (discussed further below). This decision is justified as follows. In order to measure availability we must first establish whether products are available in trading centres, since if they are not available here they are highly unlikely to be available outside of these areas and investigating this would simply be a waste of resources.

Each selected ward was visited in order to undertake an assessment of availability of ITN products in a trading centre. Within each ward, the village or town bearing the same name as the selected ward was visited on the assumption that this was the centre for trade (and administration) within the ward. This assumption was verified with local informants wherever possible.

In order to explain how we defined and delineated the trading centre within the town or village it is useful to consider the MTC wards separately from the NMTC (generally much smaller) wards. When visiting the NMTC wards it was fairly easy to distinguish between areas used for business and residential purposes and those used for residential and agricultural or farming purposes. This is because usually the trading area is clustered around a market area or square, generally the number of outlets is very small and residents and shopkeepers are able to provide the number and location of all shops in the village. In the MTC wards, the delineation of where the trading centre ended was slightly more difficult, however it was still possible to

² Note: this sampling procedure implies that it is only possible to report availability in two separate (independent) population groups, i.e. the MTC and NMTC. If results from these two populations are pooled and reported as a single population the estimates will be biased because the MTC were not randomly sampled.

identify and visit the vast majority of outlets by simply travelling on foot around the town/village and systematically going down every street. We also asked members of the public whether there were any shops on certain streets or tracks. Working in this way we were able to visit a sufficiently high proportion of outlets to be confident that our estimates of availability are reliable.

Another issue which had to be resolved in the field was to develop working definitions of which businesses were to be included and which should be excluded from the data collection. The definition had to be sufficient to prevent wasting time and resources in visiting outlets which are extremely unlikely to carry ITN products, while at the same time it had to allow for the wide range of possible outlets to be included in data collection activities. Table 2 summarises our working definitions of those outlets that are to be included and excluded from the survey.

Data collection

After selecting an outlet for inclusion in the survey, the interviewer briefly explained the purpose of the activity and obtained verbal consent for the interview. The questionnaire (see Appendix 2) was then filled out and any further questions of the respondent answered.

Table A: Outlet inclusion and exclusion criteria

Outlets Included in Census	Outlets Excluded from Census
PRIMARY CRITERIA	
Shops selling more than one product line	Shops selling only one product line which is not an ITN product (net, net kit, Ngao)
SECONDARY CRITERIA	
General and food stuffs	
General Duka's (shops) (including those on petrol station forecourts) Grocery shops Kiosks	Duka la Nyama (Butchers shops) Fruit stalls and Magenge (stalls with very limited low cost stock, e.g. vegetables, dried fish, tea bags) Bakery Bottle stores
Other products	
	Video stores Hardware stores Petrol pumps with no shop attached Car/bicycle spare shops
Textile products	
New textile and clothing shops Tailors also selling ready made clothing and/or kanga cloths	Second hand clothing stalls/shops (not allowed by law to sell new items) Tailors (service only, no ready made clothes or kanga available)
Medical and veterinary products	
Duka la dawa (medical store) Pharmacy Agricultural and veterinary product stores	
Service industries	
	Hairdressers/barbers, Milling machines, Blade sharpeners, Hotels, Restaurants, Cafes, Tea/Coffee shops, Shoe shine, Bars, Photocopying/secretarial services, Internet Cafes

Appendix 2: List of wards selected within each district.

BAGAMOYO		KARATU	MBULU	SIMANJIRO	
CHALINZE	37	ENDAMARARIEK	11 BASHAY	11 MERERANI	75
DUNDA	37	KARATU	87 DONGOBESH	19 NGORIKA	13
MBWEWE	12	OLDEANI	10 GEHANDU	6 ORKESUMET	30
MIONO	19	RHOTIA	6 HAYDOM	31 SHAMBARAI	7
Total	105	Total	114 MBULU MJINI	Total	125
			5 SANU		
			Total	Total	124
BIHARAMULO		KIBONDO	MEATU	SINGIDA	
BIHARAMULO	35	BUNYAMBO	5 BUKUNDI	12 IPEMBE	110
BUKOME	5	KAKONKO	16 LUBIGA	5 MAJENGO	34
BUSERESERE	13	KIBONDO	81 MWAMISHALI	7 MANDEWA	5
BWANGA	4	KITAHANA	6 MWANDOYA	13 MTAMAA	7
CHATO	12	MABAMBA	16 MWANHUZI	63 Total	156
MUGANZA	8	MUGUNZU	4 NKOMA	4	
NYAMIREMBE	6	Total	Total	104	
RUNAZI	7	128			
Total	90				
BUNDA		KILOMBERO	NACHINGWEA	SUMBAWANGA RURAL	
BUNDA	38	IFAKARA	62 KILIMANIHEWA	5 KAENGESA	3
KIBARA	18	KIBEREGE	7 MNERO MREME	3 KALAMBANZITE	4
KUNZUGU	10	LUMEMO	11 NAIPANGA	9 LAELA	7
MIHINGO	4	MANG'ULA	20 NAMBAMBO	48 LUSAKA	4
NAMHULA	10	MCHOMBE	17 NANGOWE	3 MATAI	6
NYAMUSWA	16	SANJE	5 NDOMONI	1 MPUI	4
Total	96	Total	122 RUPONDA	7 MSANZI	4
			STESHENI	5 MWAZYE	4
			Total	Total	36
DODOMA RURAL		LUDEWA	RUFUJI	TABORA RURAL	
BAHI	11	LUANA	5 IKWIRIRI	17 BUKUMBI	18
CHILONWA	1	LUENDE	2 KIBITI	29 GOWEKO	26
DABALO	11	LUDEWA	13 KIONGORONI	2 IGALULA	9
FUFU	4	MANDA	3 MAHEGE	3 ILOLANGULU	8
IRINGA MVUMI	2	MLANGALI	6 RUARUKE	9 LUTENDE	10
KIGWE	10	NKOMANG'OMBE	2 UMWE	22 MABAMA	13
LAMAITI	7	Total	31 Total	82	
MAKANDA	2			Total	84
MAKANGWA	7				
MANCHALI	10				
MPALANGA	2				
MPWAYUNGU	10				
MVUMI MISSIO	16				
NGHAMBAKU	6				
Total	99				
IGUNGA		MAGU	SAME	TANDAHIMBA	
CHOMA	13	KALEMELA	16 HEDARU	23 KITAMA	13
IGUNGA	48	KISESA	19 KIHURIO	11 LUAGALA	4
IGURUBI	11	KITONGOSIMA	5 MAKANYA	21 MAHUTA	15
MBUTU	3	MAGU MJINI	24 MPINJI	10 MAUNDO	11
NANGA	15	MKULA	5 MWEMBE	9 MICHENJELE	6
NGULU	4	MWAMABANZA	2 MYAMBA	14 MIHAMBWE	5
NKINGA	16	MWAMANYILI	10 NDUNGU	16 NAHNYANGA	5
ZIBA	5	NG'HANYA	4 SAME	71 TANDAHIMBA	23
Total	115	Total	85 Total	Total	82
TANGA					
CENTRAL	7				
CHUMBAGENI	20				
KIRARE	4				
MABOKWENI	8				
MAKORORA	24				
NGAMIANI KAT	135				
NGAMIANI KUS	65				
PONGWE	8				
Total	271				

Appendix 2: Data collection tool

TNVS: CENSUS OF OUTLETS

OUTLET CODE

Module 1: Interview details

C1	Interviewer initials	<input type="text"/> <input type="text"/>
C2	Date of Interview (dd/mm/yyyy)	<input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
C3	District code	<input type="text"/> <input type="text"/> <input type="text"/>
C4	Ward Name	<input type="text"/>
C5	Ward code	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
C6	Name of outlet	<input type="text"/>

Module 2: Respondent and outlet details

C7	Name of respondent	<input type="text"/>
C8	Name of shop owner (if different from above)	<input type="text"/>
C9	Are you the: 1 = Shop/kiosk owner 2 = Shop/kiosk assistant 3 = Machinga – self-employed 4 = Family member 5 = Other (<i>Specify</i>)	<input type="text"/> <input type="text"/> <input type="text"/>
C10	Do you sell? 1= Retail only 2 = Wholesale only 3 = Wholesale and retail 99= Don't know	<input type="text"/> <input type="text"/> <input type="text"/>

Module 3: Types of goods sold**C11** What goods are on sale in this outlet today?INTERVIEWER: *Against each item write 1 = Yes, 2 = No or 9 = Don't know*

ITN Products and Drugs		Food, Drink and Groceries	
Nets (without insecticide)	[]	Fresh fruit and vegetables	[]
Net kits (net and Insecticide)	[]	Fresh meat	[]
Insecticides for treating nets (eg Ngao)	[]	Loose food by weight (e.g. maize flour, sugar, beans, dried fish)	[]
Anti-Malarial Drugs	[]	Pre-packaged foods (e.g. packet tea, canned foods, jars of jam)	[]
Drugs (other than anti-malarial drugs)	[]	Bottled drinks (e.g. sodas and beer)	[]
Mosquito coil	[]	Cleaning products (e.g. soap powder, washing soap)	[]
Insecticide sprays (eg Doom)	[]	Cosmetics Vipodozi	[]
Insect repellents	[]		

Clothing and Textiles		Others	
Ready made clothes	[]	General household goods (e.g. plasticware, bowls, pans, pots)	[]
Rolls of cloth	[]	Hardware (e.g. tools, cement, iron sheeting)	[]
<i>Kanga</i>	[]	Stationary (e.g. school books, pens, paper)	[]
<i>Kitenge</i>	[]	Watches, clocks, jewellery	[]
Bags or suit cases	[]	Radio	[]

Bedcovers, blankets or sheets	[]	Umbrella	[]
Mattresses	[]	Vehicle/bicycle spare parts	[]
Sandals (flip flops)	[]		
Shoes (exclude flip flops)	[]		

Module 4: Net sales

C12	Do you normally sell unbundled mosquito nets? 1= Yes 2 = No 99 = Don't know	
C13	Do you normally sell mosquito nets packaged with insecticide? 1= Yes 2 = No 99 = Don't know	
C14	Do you normally sell long-lasting treated nets or Magic Power nets? (Chandarua chenye dawa ya kudumu au Nguvu za ajabu) 1= Yes 2 = No 99 = Don't know	
C15	Do you normally sell insecticide for treating mosquito nets 1 = Yes 2 = No 99 = Don't know	

INTERVIEWER: If the respondent answered **NO** or **Don't know** to **ALL** of the above in Module 4, skip to Module 6.

C16	How long have you been in the business of selling unbundled nets? 1 = Less than 6 months, 2 = 6 to 12 months, 3 = 1 to 3 years 4 = 4 to 6 years 5 = More than 7 years 88 = Not applicable/ Don't sell these items 99 = Don't know	
C17	How long have you been in the business of selling net kits? 1 = Less than 6 months, 2 = 6 to 12 months, 3 = 1 to 3 years 4 = 4 to 6 years 5 = More than 7 years 88 = Not applicable/Don't sell these items 99 = Don't know	
C18	How long have you been in the business of selling long lasting treated nets or Magic Power nets? (Chandarua chenye dawa ya kudumu au Nguvu za ajabu) 1 = Less than 6 months 2 = 6 to 12 months 3 = 1 to 3 years 4 = 4 to 6 years 5 = More than 7 years 88 = Not applicable/Don't sell these items 99 = Don't know	
C19	How long have you been in the business of selling insecticide? 1 = Less than 6 months 2 = 6 to 12 months 3 = 1 to 3 years 4 = 4 to 6 years 5 = More than 7 years 88 = Not applicable/Don't sell these items 99 = Don't know	
C20	When do you stock/sell nets? 1 = All year round 2 = Part of the year 3 = On request 4 = Other (specify) 88 = Not applicable/Don't sell these items 99 = Don't know	
C21	Please give the NAME and LOCATION of the supplier of mosquito nets <i>Write '99' if not known or '88' if not applicable/don't sell these items</i>	
C22	Does your net supplier deliver to your outlet? 1 = Yes 2 = No 88 = Not applicable/Don't sell these items 99 = Don't know	

C23	Give the NAME and LOCATION of your supplier of insecticide <i>Write 99 if not known or '88' if not applicable/don't sell these items</i>	
C24	Does your insecticide supplier deliver to your outlet? 1 = Yes 2 = No <i>88 = Not applicable/Don't sell these items</i> 99 = Don't know	_ _

Module 5: ITN sales

C25 What brand of nets do you have in stock today? *Against each item write 1 = Yes, 2 = No or 9 = Don't know*

Nets brand	(Code: 1 = Yes, 2 = No, 9= Don't know)	Nets brand	(Code: 1 = Yes, 2 = No, 9= Don't know)
Safi nets	_	ABC	_
Mbu net	_	B52	_
Afya net	_	Motex	_
Net Poa	_	Other (please specify)	

INTERVIEWER: If answer is '2 = No' for all brands of net, skip to Module 7

C26 Please tell us more about the prices of **bundled net kits** (nets plus insecticide) you have in stock today

INTERVIEWER: Here we want you to record the lowest and highest price for each size of net listed below.

“*Cost price*” refers to the price paid by the shop owner to the wholesaler for each net.

“*Retail price*” refers to the price paid by a customer for a net without a voucher

“*Voucher price*” refers to the **top-up amount** which is paid by customers who buy a net with a voucher

Notes:

- Where there is only **one** price for a net size please write the **same** price in the Low and High boxes.
- Where a net size is **not stocked** please write ‘8888’ in the Low and High boxes.
- If any price is **not known** write ‘9999’.
- **Do not** leave any boxes blank.

Size/shape	Cost price (price at which net purchased)		Retail price		Voucher price (for net sold with voucher)	
	Low	High	Low	High	Low	High
Round 3.5X6X7						
Round 4X6X7						
Round 6X6X7						
Square 3.5X6X7						
Square 4X6X7						
Square 6X6X7						

INTERVIEWER: Now go to Module 7

Module 6: Reasons for not selling ITN products (for outlets not currently selling nets)

C27	Have you ever sold mosquito nets (bundled or unbundled) in the past? 1 = Yes 2 = No 99 = Don't know	<input type="text"/> <input type="text"/> <input type="text"/> If 'No' or 'Don't know' skip to C29
C28	Please give reason(s) why you stopped selling	Now go to Module 7
C29	Please give reason(s) why you have never sold these products.	

Module 7: Knowledge and involvement in the TNVS

C30	Have you heard of the voucher scheme for ITNs? 1 = Yes 2 = No 99 = Don't know	_____ If 'No' or 'Don't know' skip to Module 9
C31	Do you currently accept vouchers for ITNs 1 = Yes 2 = No 99 = Don't know	_____ If 'No' or 'Don't know' skip to module 8
C32	When did you start accepting vouchers? (mm/yyyy) <i>Write 99 if not known</i>	_____/_____
C33	How often do you redeem your vouchers? 1 = Weekly 2 = Every 2 weeks 3 = Monthly 4 = Other (please specify) 5 = Have not yet redeemed 99 = Don't know	_____
C34	How often would you like to redeem your vouchers? 1 = Weekly 2 = Every 2 weeks 3 = Monthly 4 = Other (please specify) 99 = Don't know	_____

INTERVIEWER: Tell the respondent that you now want them to think about the **last time** they redeemed _____ vouchers. If the respondent has not yet redeemed any vouchers skip to Module 9

C35	When was the last time you redeemed some vouchers? 1 = Less than 1 week ago 2 = 1-2 weeks ago 3 = 2-4 weeks ago 4 = More than one month ago 99 = Don't know	_____
C36	Approximately how many vouchers did you redeem on this occasion? (write number) <i>Write 9999 if not known</i>	_____
C37	Is the redemption process satisfactory or not satisfactory? 1 = Satisfactory 2 = Not satisfactory	_____ If 'satisfactory' or 'don't

	99 = Don't know/can't say	know' skip to Module 9
C38	If the redemption process is not satisfactory please explain why	Now skip to Module 9

Module 8: For shops not currently accepting vouchers

C39	Have you ever accepted vouchers in the past and then stopped? 1= Yes 2 = No 99 = Don't know	
C40	Why do you not currently accept vouchers? <i>(write reason here)</i>	
C41	Would you like to be involved in a voucher scheme in future? 1= Yes 2 = No 99= Don't know	

Module 9: Other outlets selling ITN products in the area

C42	Do you know of any outlets in your area that sell nets and/or insecticides? 1= Yes 2 = No 99 = Don't know	 If 'No' or 'don't know' skip to Module 10
C43	Give their names and physical addresses	

Module 10: Details of outlet and interview

INTERVIEWER: Inform the respondent that you are now going to write down details of the shop and check what point of sales materials are on display

C44	Are point-of-sales materials on display for Nets? 1= Yes 2 = No	
C45	Are point-of-sales materials on display for Ngao? 1= Yes	

	2=No	
C46	Are point-of-sales materials on display for TNVS? 1= Yes 2=No	
C47	Location of outlet (<i>Give as much detail as possible</i>)	
C48	Write down the GPS co-ordinates of outlet	E _____ ⁰ _____ S _____ ⁰ _____
C49	Type of outlet 1 = Machinga 2 = Kiosk/Kibanda 3 = Duka 4 = Supermarket 5 = Pharmacy (Part 1) 6 = Duka La Dawa (Baridi – Part 2) 7 = Other (please specify) 99 = Don't know/can't tell	_ _
C50	Status of Interview 1 = Interview was completed 2 = Outlet is closed temporarily <i>(take note to come back later)</i> 3 = Outlet is closed permanently <i>(report to supervisor)</i> 4 = Respondent is busy <i>(make appointment to come at convenient time)</i> 5 = No cooperation 6 = Other (<i>specify</i>)	_

Thank the Respondent