

# The Malawi LGPI Survey

## *Sampling and Weighting*

The Local Governance Performance Index (LGPI) survey was conducted in Malawi during March and April 2016. This survey seeks to measure and better understand governance and service delivery at the local level. Importantly, this is a highly clustered survey, which facilitates measurement and inference at the local (in this case, village) level. The survey covers the following topics: political participation, social norms and institutions, education, health, security, welfare, corruption, land, and dispute resolution.

The sample was stratified on region (North, Central, South), the presence of matrilineal and patrilineal ethnic groups, and the ‘urban’/rural divide. Because patrilineal groups are rare in Malawi and we wanted to maximize variation in matrilineal and patrilineal heritage, we oversampled Primary Sampling Units (PSUs) from the patrilineal stratum. We sampled 22 PSUs, namely ‘Traditional Authorities’ (TAs). These 22 sampled TAs are located in 15 of Malawi’s 28 districts.<sup>1</sup> Within each TA (i.e., PSU), we selected randomly four enumeration areas (EAs) as Secondary Sampling Units (SSUs). EAs are comparable to census tracts. Both PSUs and SSUs were selected without replacement according to the principle of Probability of Selection Proportional to Measure of Size (PPMS). Within each EA, we sampled four villages, based on known geographical points provided on the maps of the EAs produced for Malawi’s latest population census. Once in the village, enumerators followed a random walk pattern to select households. After they entered the household, the interviewer collected the necessary data about composition of the household. Both the contact questionnaire and the main questionnaire were programmed on digital tablets, including the selection of the final respondent in the household through a digital version of the “Kish grid”. The target was to interview 22 respondents in each village. This process produced a sample of 8,100 respondents. See Table 1 for a list of the districts and TAs included in the sample and Table 2 for a list of the villages.

While the sampling procedures were planned as presented, of course in practice this was not always the case. In total, the research team had to draw 11 replacement EAs. One replacement EA was drawn because enumerators were chased out of a village and forced to withdraw from the EA. In the remaining 10 cases, EAs were not accessible (e.g. in one instance our team was unable to reach the designated EA because a bridge had washed away during heavy rains.). In these instances, backup enumeration areas were randomly selected within the same EAs (excluding already selected and inaccessible zones) and were used as replacements. Such cases, the variable “ea\_replacement” in the data takes a value of 1.<sup>2</sup> In addition, given that multiple enumerators conducted surveys in the same village, the target number of 22 respondents per village (neighborhood in urban areas) was not always reached precisely. In some instances more were surveyed and in others slightly fewer than 22 households were surveyed. In addition, the boundaries between villages and

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<sup>1</sup> Districts are the largest sub-national administrative units in Malawi.

<sup>2</sup> In total, only 11 of the 99 sampled EAs are replacement EAs.

neighborhoods were not always clear, which also caused our teams to deviate from the target of 22 per village/neighborhood.

In order to weight the sample for analysis, we constructed national-level post-stratification weights based on the 2008 census data based district population size, education, gender, ethnicity, and age.<sup>3</sup> This ensures that the analysis is representative of the Malawian population. In addition, the probability weights and finite population correction factors were computed at the PSU and SSU level. We were unable to obtain valid village level population estimate because villages are not included in the Malawian statistical system, in large part due to frequent fluctuations in village leadership and boundaries. Thus, the probability weight computation implies that households were drawn from SSUs directly and ignores the screening process at the village level. In short, the weights provided in the dataset are applicable to the TA and EA levels, but not the village level.

Region/Stratum	District	Traditional Authority
Northern	Chitipa	Mwaulambya
	Rumphi	Mwankhunikira
	Mzimba	Chindi Kampingo Sibande Mtwalo
	Nkhata Bay	Kabunduli
	Mzuzu	Viphya ward
Central	Kasungu	Simlemba
	Lilongwe City	Area 25 ward Area 36 ward
	Dedza	Pemba Tambala
	Ntcheu	Kwataine
	Balaka	Kalembo

<sup>3</sup> While we do use census data to create the weights, it is data obtained from IPUMS (Integrated Public Use Microdata Series) and is a random sample of 10% of the population. In the dataset, the variable “district\_pop” contains the population size of the district. In STATA, one can use the svyset command to weight the sample; the command to use to weight the sample at the TA level is:

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svyset TA, strata(pmu) fpc(fpc1) || EAid, fpc(fpc2) || village3 || _n , singleunit(scaled)
poststrata(poststratum) postweight(poststratsize)
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Southern	Blantyre	Kapeni
	Blantyre City	Namiyango ward
	Chikwawa	Chapananga Ngabu
	Mangochi	Jalasi
	Mulanje	Mabuka
	Nsanje	Mbenje
	Zomba	Mwambo

Table 1: Traditional authorities and local government wards included in the LGPI survey, Malawi 2016

Table 2: Villages included in the LGPI survey, Malawi 2016

<b>Northern Region</b>		
<b>Chitipa District, Mwabulambya TA</b>	<b>Mzimba District, Mtwalo TA</b>	<b>Mzimba District, Chindi TA</b>
Beard Ngwale Nyondo	Jamu Mbeye	Alifeyo Mphepo
Chamanthenga	Kajiso Shaba	Beleji
Isaac Nyondo	Kamukwamba	Bundi
James Nyondo	Nyambose	
Kasisi 1	Kamzunguzgeni Zgambo	Chimbizga Gondwe
Lazaro Chizimu	Katandula	Chimkungule
Moses Nyondo	Katandula Mkandawire	Chimujithe
	Lazaro Jere	Chitowo Kumwenda
	Mahekeya Blackwell	
Mukono Siyombwe	Makwakwa	Gayo
Mwakawanga	Mapale Masasa	Katona Jumbo
Mwalala Siyombwe	Mboyonga	Katuwa Nyasulu
Nankhalamu Katutula	Mkumbwa	Mabongo Nyirenda
Simwambi	Msokwa Phiri	Mdikangulu
Ten Nyondo	Muthakapoli Longwe	Mkandawire
	Simon Chingwa	
Yohani Chizimu Nyondo	Munthali	Thom Chirambo
Yotamu Nyondo 2	Sondwani Nhlema	Tizamwa
	Zebedia Makwakwa	Vavera Bota
	Zigondo Nhlema	
<b>Nkhatabay District, Kabunduli TA</b>	<b>Mzimba District, Kampingo Sibande TA</b>	<b>Mzimba District, Viphya Ward</b>
Chaola	Galuka Mbeya	Chapola
Chimuyawi	John Kaunda	Gezamgomo
Chindevu	Kampamayilo	Juma
Chinyakula 2	Kamweko Chavula	Mapale Masasa
Chipimbiniga	Kanyemba Shawa	Masasa
Chiuta Banthu	Kazuba Nkunika	Mithi
Dananji Mtayamo	Masiwa Soko	Mziya
John Kajiso	Mawelera Tembo	Zongendawa
Kamkhwilala	Mwanamsula Lozi	
Mdachi	Mwendayekha	
Moseni	Panganani Nyirenda	
Mphande	Satiel Sibande	
Mweza	Sitima Nkhambule	
Tunduma	Zawanje Nyirenda	
Vimaso		
Wajumpha		
Yohane		
<b>Rumphi District, Mwankhunikira TA</b>		
Chilipapa		
Chimalawanthu		
Chiphwantha		
Gota Harawa		

Julaniko  
 Kaidokere Munthali  
 Kasimba Mwatchuka  
 Katatawe Mzumara  
 Kayunga  
 Mkwayira Zolokere  
 Mundango  
 Mwanchuka  
 Nkhalikali A  
 Nkhalikali B  
 Nkhalikali C  
 Nthandala Mzumara  
 Vitanda  
 Wasambo

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**Central Region**

<b>Lilongwe District, Area 25 Ward</b>	<b>Dedza District, Pemba TA</b>	<b>Ntcheu District, Kwataine TA</b>
Area 25A	Chinthankhwa 2	Chikala
Area 25B	Chipanga	Gongonya
Area 25C	Chitimbe	Jolijo
Dzenza	Gowampingo	Kalazi
Kanengo Police	Kabinda	Kalimwayi
Lilongwe TTC	Kanyimbo	Kamzangaza
	Kuchipala	Kawere
	Mawere	Nachiye
	Mtengowagwa	Ndadzala
	Sitenala	Nenekeza
	Tchale	

<b>Lilongwe District, Area 26 Ward</b>	<b>Dedza District, Tambala TA</b>	<b>Kasungu District, Simulemba TA</b>
Biliati	Chilimata	Chakondwa
Chisumbi	Chiumbe	Chapwawa
Kafula	Kachulu	Chikunthu
Kandikole	Kamgunda	Chisazima
Kaondo	Kanyama	Dotolo
Katantha	Kasisi	Gideon
Mtengowagwa	Kasulo	Jumbo
Phwetekere	Kawire	Kamchocho
	Kumalaya	Makwenje
	Kumchiza	Mayira
	Majiya	Mgawa
	Mkajenda	Thomas Kamanga
	Mkwenembera	
	Mphonde	
	Napwanga	
	Nyongo	

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**Southern Region**

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**Nsanje District, Mbenje TA**

Blaiton  
Chapasuka  
Chimtedza  
Falawo  
Juma  
Kankhomba  
Lesitala  
Maere  
Minthanje  
Mphamba  
Samuel  
Sinosi  
Tambo 3  
Tchenyela

**Balaka District, Kalembo TA**

Amini  
Bonongwe  
Dinala  
Idi  
Kalembo  
Kapito  
Machemba  
Makuta  
Masautso  
Mboga  
Mpalasa  
Mpamasi  
Mphemba  
Msaliwa  
Njoka  
Saiwala

**Chikwawa District, Chapananga TA**

Chakumanika  
Chaleka  
Chamera  
Chigwata 1  
Dominiko  
Elemani  
Fulande  
Galonga  
Guta  
Gwada  
Jana  
Mdyamizu  
Simonzi  
Timbenao  
Tomasi

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**Zomba District, Mwambo TA**

Bokosi  
Chapalaki  
Kwindimbule  
Manyungwa  
Misomali  
Namapata  
Nambwale  
Nthunya  
Nyangu  
Sapali  
Somba  
Tambala  
Tholola

**Mangochi District, Jalasi TA**

Balakasi  
Chande  
Chiumba Mpasuka  
Kaliyapa  
Kamwendo  
Kamwepe  
Makalani  
Matewule  
Mkuti  
Mkweya  
Mlumbwa  
Mosiya

**Mulanje District, Mabuka TA**

Kapesi  
Katute  
Magabwa  
Michenga  
Mikundi  
Mjojo  
Murofinyo  
Nande  
Ngwezu

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**Zomba District, Mbenje TA**

Chimtedza  
Tambo 3

**Blantry District, Namiyango Ward**

Chilambe  
Maganga  
Masala

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**Chikwawa District, Ngabu TA**

Failos Kumwembe  
Jombo  
Matsukambiya  
Nkhwazi  
Santo  
Washeni

**Blantry District, Kapeni TA**

Chauwa  
Ching'amba  
Chingota  
Mazale  
Mchere  
Patsani  
Positi Masulani

### ***Training and Survey Team***

Interviewer training took place March 15-18 in which the research team trained 56 interviewers on survey administration, experimental question administration, and tablet computer use. Interviewers were recruited based on experience, qualifications, and languages spoken. The survey was conducted in Chichewa, Chitumbuka, and English. Interviewers were divided into teams of five, each with a team leader. On average, each team spent 4 days in a TA: one day for each EA. This helped facilitate callbacks given that the teams were in a single area for multiple days. The survey was completed over the course of 33 days: 26 March – 27 April.