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AVAILABLE
DATA SOURCES
TO MEASURE VOLUNTEER
WORK IN AFRICA: THE CASE
OF ETHIOPIA**



**Reimagining
Volunteering**
for the 2030 Agenda
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USE OF AVAILABLE DATA SOURCES TO MEASURE VOLUNTEER WORK IN AFRICA: THE CASE OF ETHIOPIA

Tesfaye Yimer

In many countries volunteer work is calculated as part of national Labour Force Surveys. However least developed countries in particular have not measured volunteering consistently in this way. So can alternate and available data sources (national household surveys and censuses) help measure volunteer work and serve as input to show the role of volunteers to the economy and the achievement of the Sustainable Development Goal (SDG) indicators?

This chapter focuses on identifying appropriate available data sources, checks their potential in providing volunteer work information, models and tests a volunteer measurement approach, and assesses the opportunities and challenges of measurement of volunteer work taking Ethiopia as a case in point.

Data availability for measuring and reporting volunteer work

The minimum data requirements for estimating the total number of hours volunteered or time spent for a community work by year (disaggregated by gender) either directly and/or through organizations nationwide are: (a) Time spent by a volunteer by day, week, or month for a volunteer work in hour; and (b) Number of days, weeks, or months by a year a volunteer provides volunteer work.

Many Volunteer Involving Organizations (VIO) serving as state and non-state actors document volunteers' activities, that is, the types and volumes of activities performed by volunteers. In some cases, the volunteer hours are calculated but estimation on the monetary value of the volunteers labour and skill contribution is not commonly practiced.¹ In addition, in such cases, only organization-based volunteering would be captured, which is about 13 per cent of the total volunteer work in Africa.² Furthermore, there are no information-sharing mechanisms among VIOs, limiting the production of a consolidated regional and federal level reports on the contribution of volunteers.³

Estimating the value of volunteer work depends on the capacity to conduct comprehensive measurements, without leaving out important groups of volunteers particularly those working informally. As such, administrative data such as documentation of VIOs offers a limited capacity to achieve this objective. In this regard, we must count on survey and/or census results for calculation of volunteering related values. The current study explores the available surveys in Ethiopia to understand if they could provide the required volunteer work data.

Ethiopia Time Use Survey and Ethiopia Socioeconomic Survey

From existing data sources, Labor Force Survey (LFS), Urban Employment Unemployment Survey and national census, Ethiopia does not have volunteer work-related information. The Ethiopia Time Use Survey (ETUS)⁴ and the Ethiopia Socioeconomic Survey (ESS)⁵ are the only available macro surveys that hold relevant information on volunteering in Ethiopia.

Specifically, we have one round of consolidated ETUS and three waves of surveys on ESS. These data sources are general surveys which include information on volunteer work. The strength and limitations on these available surveys in providing volunteer work data is presented below. The explanation for how and under what conditions we could use some of the information from these sources is also discussed, and efforts were made to make some volunteer work estimations like national volunteer hours, Full-Time Equivalent (FTE) volunteer workforce and the economic value of volunteer work using the available data. Finally, suggestions that enhance the effectiveness of new and existing national household surveys and population census towards providing timely, comprehensive and more accurate volunteer data have been provided.

2013 ETUS was conducted by Central Statistics Agency (CSA) with the support of UN Women and Ministry of Women, Children and Youth Affairs. The data collection was carried out in February 2013. The main objective of the survey was to measure and analyze the time spent on paid and unpaid work and non-productive/leisure activities of persons aged 10 years and older. The average time on unpaid work from the 2013 ETUS includes time spent on volunteer work disaggregated by age and sex in a 24-hour recall period. The survey was designed to make visible the full extent of the work of women and all their values to the national economy, including their value in the unremunerated domestic sectors. The 2013 ETUS report of Ethiopian Central Statistics Authority is freely accessible online.⁶

- ETUS and ESS surveys used widely divergent measurement approaches, definitions, population age groups, and reference periods in the data collection and analysis that makes the comparability of these two surveys difficult.
- For instance, ETUS covered all individuals age 10 years and older unlike ESS which collected data from all family members age 7 years and older.
- ESS only collected information on volunteer numbers, while ETUS collected information on both the number of people involved, and the amount of time given by volunteers.
- The ESS that asked respondents only about the amount of any time spent on work performed for other households, free of charge, as exchange laborer, or to assist for nothing in return, uses narrow definition of volunteering that focused on direct volunteering, and excluded association/organization-based volunteering.
- The data collection questionnaire in ESS provided quite general questions without any detail on the categories of volunteer works to be included in the survey. The use of the term 'exchange of laborer' in ESS can provoke the respondent to report work that is not within the boundary of volunteer work. This is because 'exchange of laborer' means 'exchange of services', e.g. providing unpaid help because there is an agreement to receive unpaid help in return—which is not volunteer work.
- Both surveys only asked about participation in volunteer activities into surveys addressing a wide range of other topics, and thus there are important limitations in the information they make available.⁷

The questions specific to collecting data on voluntary work are more specific and clearer to the enumerators and the respondents in ETUS. Further, ETUS questionnaire is more inclusive as it applied both organizations based and direct volunteering concept of volunteering and provide detail explanation on the categories of volunteer works to be included in the survey and has the potential in providing detail volunteer work data. Among others, the questionnaire provided 18 categories of volunteer work that can help the data collectors to make better probing with the respondents.

Recall period across survey tools

ETUS and ESS tried to address recall back issue by shortening the reference period to 24 hours or one day and seven days or one week respectively. The challenge, however, is that ETUS and ESS did not consider seasonal variations in the design of the survey as the field work for the ETUS was done only in one month (February 2013). This approach limits delivery of accurate data as volunteer activities have different pick and slake period depending on the type of the volunteer activity, and the demographic characteristics of the volunteer. The time use activities in this survey reflect the post-harvest period in February during which the interviews were carried out. In this time, people in rural areas often spend more time on unpaid volunteer work. On the other hand, the use of a very short reference period (24 hours) in measuring volunteer work decreases the probability of capturing less regular volunteering (especially direct volunteering). This could lead to underestimation or overestimation of the volunteer rate and may exclude specific activities and group of volunteers.

The ETUS used a 24-hour activity diary, divided into one-hour slots, as the core instrument to record activities of respondents. In each slot, provision was made for a maximum of five activities to be recorded. The challenge, however, is that a diary offers limited options to detect participation in volunteer work, compared to administering a dedicated volunteer survey module as recommended in the 2011 ILO Manual on the measurement of the volunteer work. Concepts used in the TUS diary are subject to interpretation by enumerators and respondents and might not always correspond with official definitions, and lead to misreporting. For example, citizens participating in historic events (e.g., national victory day) is categorized as “socializing and communication, community participation and religious practice” major activity division but it could be wrongly reported as volunteer work.

In sum the above discussion indicates that volunteer work-related data from ESS is less detailed, accurate and reliable when compared to the results from 2013 ETUS. For example, ESS survey reports the national volunteer rates in the reference period (Proportion of household members aged 7 years and above who spent on time on apprentice or unpaid type of work in the 7 days preceding the survey) to be 14.8 per cent male and 9.4 per cent female in 2011/12 but the rate significantly decreased and found to be 0.3 per cent male and 0.2 per cent female volunteer rate in 2013/14. In contrast, the ETUS found the volunteering rate in reference period (Proportion of household members aged 10 years and above who spent on volunteer work in the 24 hours preceding the survey) to be about 12.5 per cent male and 7.8 per cent female in 2013, with much discrepancy with the 2013/14 results of ESS. The partial explanation for the low estimates resulted from ESS may be is related to the methodologies and definitions in this survey.

Availability of data in measuring and reporting volunteers input towards the achievement of the SDGs

In the Growth and Transformational Plan (GTP) II document that will be implemented between 2015/16 and 2019/20, the government of Federal Democratic Republic of Ethiopia (FDRE) has indicated its commitment to achieve the 2030 Sustainable Development Agenda. Volunteer work is clearly indicated in the 2030 Agenda as one means to achieve the universal target of leaving no one behind. Even though, the term volunteer work is not explicitly highlighted in GTP II, the role of ‘community participation’ towards achieving the socio-economic targets of the national plan are clearly described in the document.

Existing household surveys including 2013 ETUS do not hold detailed time use information that would connect typical volunteer activities to specific SDG indicators to show the contribution of a volunteer work

for the achievement of each SDG indicator. If some adjustment is made on the design of TUS and other national household surveys, they could have the potential to integrate and generate information on the type and amount of time spent by a volunteer disaggregated by occupation, the industry and main economic activities such as agriculture, education, health, mining, manufacturing, electricity, construction, and transportation. This can be done if ILO recommendations of using dedicated survey modules on volunteer work is systematically integrated with national household surveys.⁸

The third national population and housing census of Ethiopia were conducted in 2007. The 1995 Constitution of the Federal Democratic Republic of Ethiopia, Article 103, states that a national population's census shall be conducted every ten years. Ethiopia has postponed the fourth National Population and Housing Census, which is expected to be held every 10-year, mainly due to security challenge. This could be a good opportunity to the FDRE government to include volunteer activities in the design of the fourth national Population and Housing Census in Ethiopia by adopting the ILO Model question on volunteer work for Population and Housing Censuses.⁹

Availability of data in measuring, reporting and reflecting volunteer work in the national SNA using satellite accounts

Alignment of national household survey tools with the UN system would enable compilation of household satellite accounts as per the SNA. In among the available data sources, the eighteen diary data filtering questions administered in 2013 ETUS are in line with International classification for Time-Use Statistics (ICATUS)¹⁰. The questionnaire included both unpaid direct and organization-based volunteering; that is, volunteering for associations and organizations, various forms of community work, informal help to other households. The 2013 ETUS report has data to produce meaningful statistics on total time spent on volunteering that shows the value of volunteers to the economy.

Both forms of volunteering fall within the definition of volunteer work but only organization-based volunteer work can be considered as SNA production and counted towards the satellite account of NPI.¹¹ Organization-based volunteer work is conceptually included in the ETUS, but the data in 2013 ETUS are not disaggregated by organization-based and direct volunteer work. That means, their separation in the data was important for classification and reporting purposes. Accessing time-use survey microdata at the desired level of aggregation and recalculating them could provide data on organization-based volunteer work that can be converted into financial terms by assigning a wage rate to the estimated FTE volunteer workforce.

Treatment of volunteer work by the National Accounts Statistics of Ethiopia

Organization-based volunteering is in the SNA production boundary and can be counted towards the satellite account of NPIs.¹² However, it is not reflected in the concepts and methods used in the National Accounts Statistics of Ethiopia

The SNA has room for special interest accounting– as satellite accounting approach.¹³ According to the Manual on the measurement of volunteer work, most volunteer work specifically organization-based volunteer work fall within SNA production boundary of the economy.¹⁴ Although the volunteers' activities are not a specific industry, its contribution to the economy can be compared with selected key industries to provide a point of reference.

In the concepts and methods used in the 2014 National Accounts Statistics of Ethiopia, 'other community, social and personal services' is one of the economic activities. Specific activities covered under this category include the outputs of the labor force in the NPI including religious congregations, NGOs, and others.¹⁵ As mentioned in the 2008 SNA, labor in the NGOs, religious congregations, and others, includes both volunteer and paid workers. However, the inclusion of the volunteers' value is not stated in the 2014 Ethiopian SNA.

For example, gross value added of membership organizations including religions are estimated in the National Accounts Statistics of Ethiopia. However, the monetary value of the religious activities has been estimated based on the number and average salary of the priests, deacons and other workers of the church only.¹⁶ That means there is no volunteer value estimates for the unpaid activities of the Sunday school (e.g., dancing and coordination work without payment) and the Church members (e.g. unpaid work like fencing of Churches) in the National Accounts Statistics of Ethiopia.

The value added of the NPIs in the Ethiopia's SNA is determined by estimates obtained from the urban employment and unemployment survey 2010-11 and national labour force survey 2005¹⁷ but these surveys provide data only on paid NPI employees.¹⁸ NPIs, specifically NGOs, unlike for-profit and government agencies, often make extensive use of volunteer labour.¹⁹ However, an estimate of the value of the organization-based volunteer labour used in the NGOs work was not accounted for in the National Accounts Statistics of Ethiopia.

National volunteer hours²⁰

Millions of Ethiopians join the voluntary sector as members and perform numerous activities in local communities through allocating their time, energy and talents. However, the volunteer work is not systematically researched, measured and integrated in the main economic statistics in Ethiopia despite its importance.²¹ Partly, limitation in exploring and use of available data (e.g. TUS) is becoming the main bottleneck in reporting the value of volunteer work.

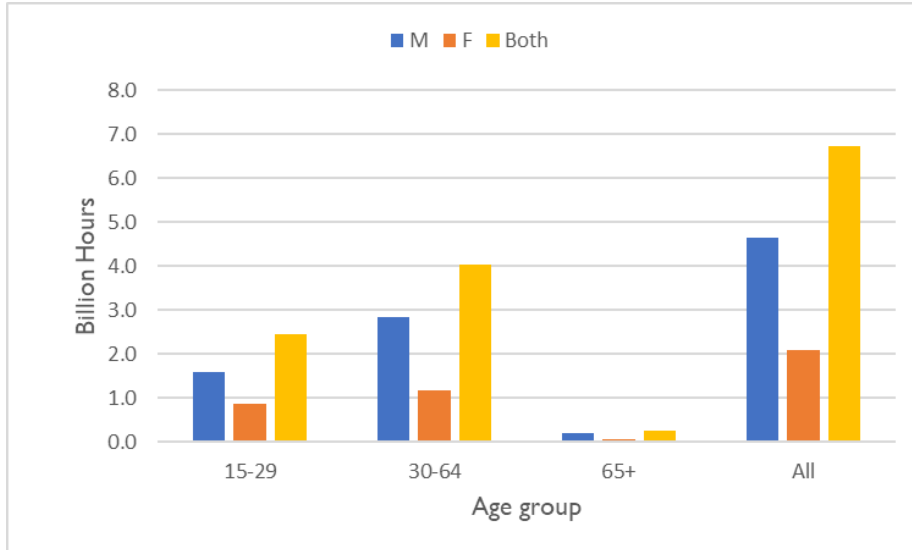
In the current project, it has been tried to design and test a volunteer measurement model that provides estimates like national volunteer hours for Ethiopia. In the absence of other sources of data that provides better estimates, we rely on available data from CSA (2013 ETUS) as it provides volunteer work data. The results in this study will be useful as starting point for further efforts in the development of volunteer measurement and reporting method for the valuation of volunteer work in Ethiopia or elsewhere in Africa.

The analysis done based on the information from the 2013 ETUS data of CSA indicates that about 5.1 million Ethiopians (2 million female) age 15+ volunteered (direct and organization-based volunteer work) 18.4 million hours by each day as shown in Figure 1; which is about 6.7 billion hours (women = 2.1 billion volunteer hour) of their services in 2013. In the Ethiopian situation, most of the annual volunteer work (69 per cent) is carried out by men.

As discussed above, we relied on the ETUS for extrapolation of the daily volunteering time to the estimation of national volunteer hour. Extrapolation of survey result found based on a short recall back period approach for the entire year (i.e. y amount of average volunteer hour by day X the estimated number of volunteers by country by day X 365 days), may overestimate or underestimate the volunteer hours because the survey/data collection that was done in our case in February 2013 did not take into

account seasonal variations of volunteering activities (even though time is said to be additive). However, additional adjustment was not made to take account of these limitations of the data gap from TUS.

Figure 1 National volunteer hours in 2013 in Ethiopia disaggregated by sex (billion hours), population age 15+



Source: Calculated based on 2013 Ethiopia TUS weighted results

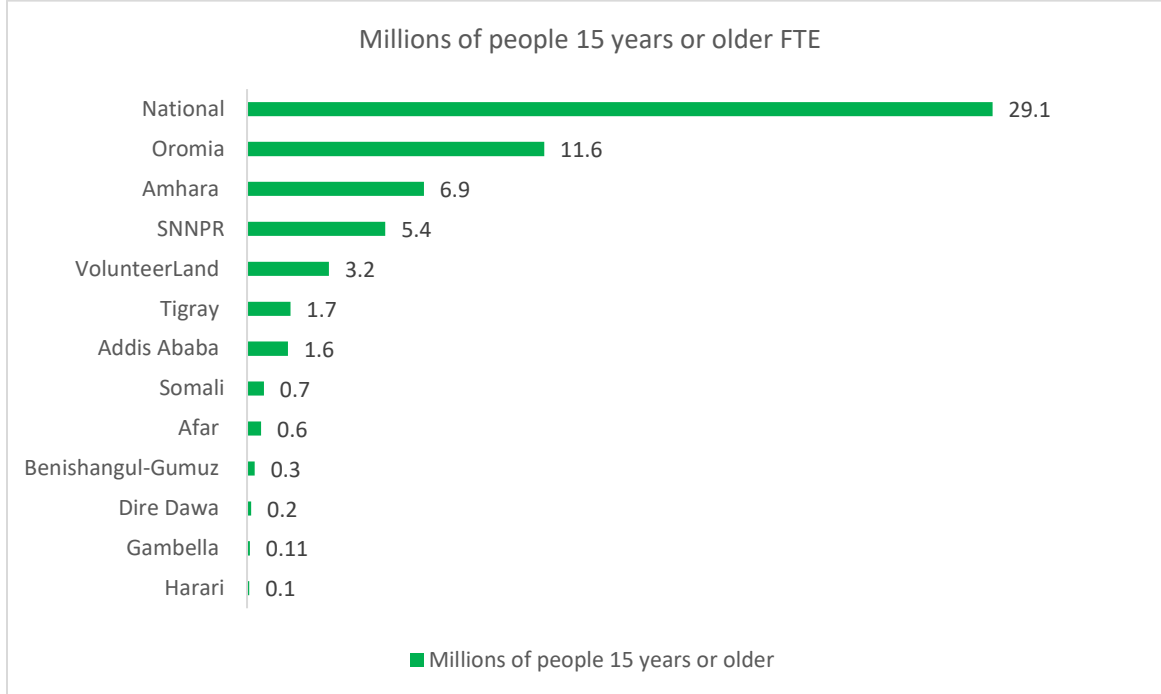
Aggregate picture of volunteering in Ethiopia

The total amount of annual volunteer time in a country can be converted into the number of Full-Time Equivalent (FTE) volunteers by year that the volunteers represent. The national annual volunteer hours, population 15 years of age or older, have been converted to FTE volunteer workers by dividing it by the number of hours by full-time employment by year (2,080 hrs).²²

It has been estimated that the annual national volunteer effort represent the equivalent of 3.2 million (1 million female) full-time-equivalent workers based on the 2013 data in Ethiopia²³; which is roughly equivalent in size to the total paid FTE employment (population age 15+) in Tigray region and Addis Ababa city administration combined (Figure 2).

This also means that if we gathered all the Ethiopian volunteers age ≥ 15 (expressed as FTE volunteers) on a single land mass, it would have the fourth largest FTE workforce population age ≥ 15 in Ethiopia, behind Oromia, Amhara and SNNPR, but ahead of Tigray, Addis Ababa, Somali, Affar, Benishangul-Gumuz, Dire Dawa, Gambella and Harari.

Figure 2 Number of FTE unpaid volunteer national workforce vs. FTE paid employment (age 15+) at national, regional states and city administration levels in Ethiopia, 2013



Source: (1) Total Employed Population (age 15+) at national, regional and city administration level in 2013 (Source: Statistical report on the 2013 National Labour Force Survey); and (2) FTE paid employee and unpaid volunteer worker calculated based on 2013 ETUS estimation on national annual volunteer hours and Mean No. Hours Worked for population age 15+ by Week calculated based on Statistical report on the 2013 National Labour Force Survey

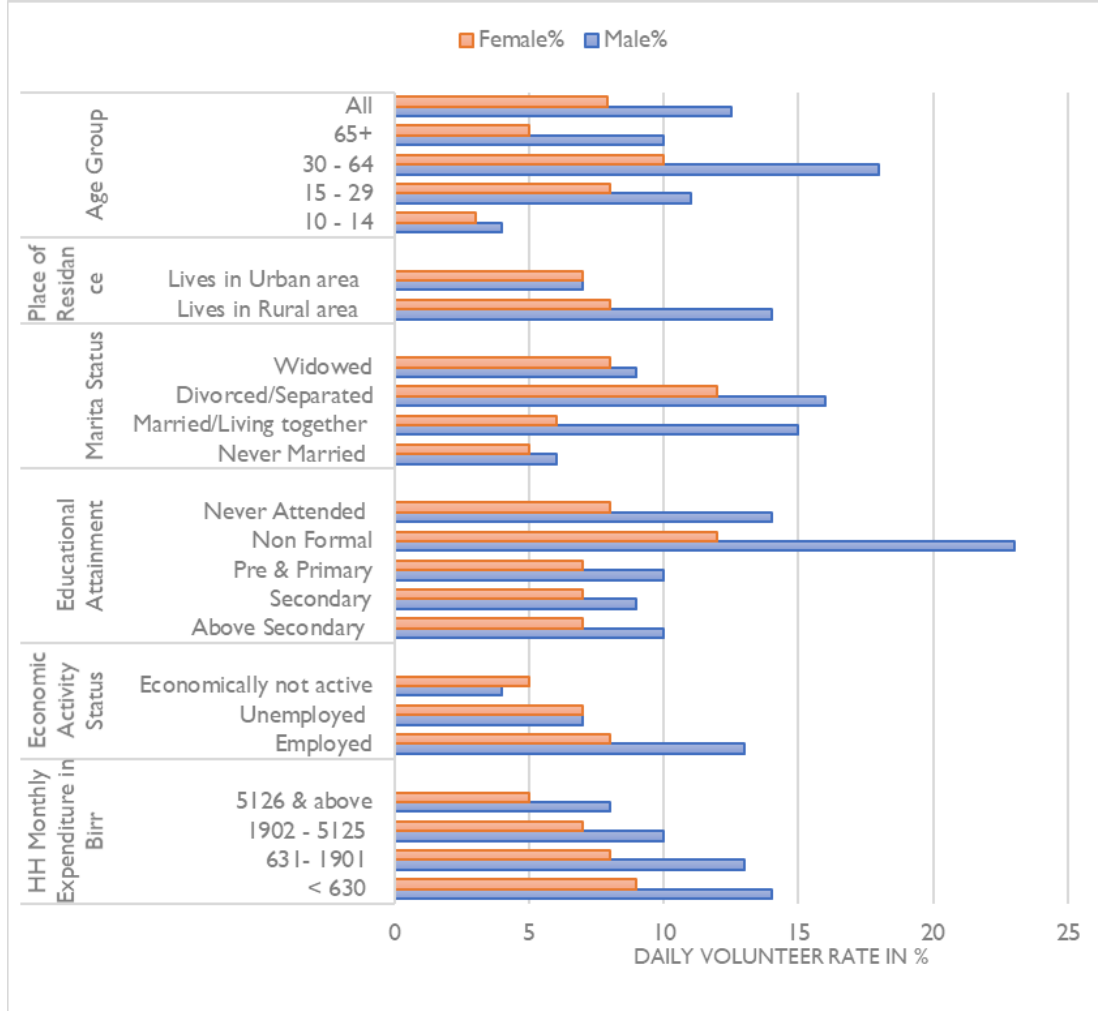
Valuation of the monetary value of volunteers

In the current study, Estimate of the Value of Volunteer Activity (EVVA) has been done to provide estimate of the economic (Birr) value of the time volunteers contribute by assigning a wage rate to each FTE volunteer worker. According to this study, in 2013 direct and organization-based volunteers in Ethiopia donated nearly Birr 51.4 billion in services in Ethiopia if we attach financial value to the FTE national volunteer workforce at national wage equivalent; i.e. about Birr 39.3 billion and Birr 12.1 billion per annum of economic value of male and female volunteers in 2013 respectively. This valuation would reveal the invisible value of the volunteer work to the national economy. The findings significantly assist government to make policy decisions that enhance the contribution of the volunteer work. VIOs can use this estimate, to demonstrate the enormous value volunteers provide to the policy makers, the public, donors, and volunteers themselves how volunteer contributions scale up organizations budget, activities, and services.

Socioeconomic characteristics of volunteers in Ethiopia

From all reviewed available data sources, it is only ETUS that provides volunteer work data for the generation of diverse national level volunteer information for Ethiopia. The analysis based on the 2013 ETUS shall serve as a starting point in future research’s on volunteerism in Ethiopia. The participation of women in volunteer work (for most of the socio-economic characteristics) tended to be lower than men, and they spend somewhat limited time per day in unpaid volunteer service. On average day, 7.9 per cent women age10+ and 12.5 per cent men age10+ provide volunteer service in Ethiopia (Figure 3).

Figure 3 Daily Volunteer Rate by Participants (Actors), Population 10+ for all demographic characteristics, 2013



Source: 2013 ETUS, CSA

The data in 2013 ETUS indicated that higher educational attainment, particularly at the secondary and post-secondary levels, is associated with less participation in informal volunteer work. Participation rate in unpaid volunteer services tended to decrease when the level of income increased. Compared to the unemployed and economically inactive individuals, the participation of employed men and women in volunteer work was found to be much higher. The propensity to volunteer in unpaid volunteer service for old adult (30-64) is much higher than the young adult (15-29).

Whereas the participation of senior citizens in volunteer work was found to be much lower when compared to the young and old adult, both for female and male. Volunteer rate in rural Ethiopia was found to be higher than the urban community. Compared to women and men who were widowed and unpaired; women and men who were divorced/married did tend to participate in unpaid volunteer services.

Measuring national volunteer time

The gross national hours spent for people who engaged in volunteer activities for a volunteer work by year can be calculated by using the following formula:

$$n = (fx + my) \times 365$$

where,

n = Gross annual national volunteer hours for the year 2013

f = Average hours a female volunteer spent by day for people who engaged in volunteer activities

x = Estimated number of national female volunteers by each day at national level in the reference period (24 hours or one day)

fx = Gross national hours spent by those females involved (actors/participants) by each day of the year for providing voluntary services

m = Average hours spent by day for a male volunteer who engaged in volunteer activities

y = Estimated number of national male volunteers by each day at national level in the reference period (24 hours or one day)

my = Gross national hours spent by those males involved (actors/participants) by each day of the year for providing voluntary services

Estimating the value of volunteer work

The estimate of the economic (e.g. Birr or USD) value of the time volunteers contribute could be estimated by assigning a wage rate to each FTE volunteer workforce. The value of volunteer time is based on the average monthly earnings (approximated from monthly values using a replacement cost approach) of all sectors (industries) for the total paid employees of the country (based on existing survey statistics). This information is easily available from Ethiopian 2013 LFS.²⁴ The average earnings for employees are related to gross remuneration and include bonus, overtime, allowances and other benefits that are obtained only from the main job.

Step by step calculation of the volunteer work value

1. The number of FTE volunteers is used in the calculations. The average monthly earnings per a full-time equivalent volunteer worker has been determined using a replacement cost approach measuring the value of volunteering in terms of the average monthly earnings of a paid employee.
2. The mean amount of earnings for the total paid employees of the country is estimated to be Birr 1,471.00 (for male paid employee) and Birr 1,008.00 (for paid female employee) per month in 2013.²⁵
3. There were 2,900,751 male and 1,304,129 female Full-Time Equivalent (FTE) volunteer workers in 2013
4. $EVVA = (\text{Total number of male FTE volunteers} \times \text{Average Monthly wage rate of paid male employees} \times 12 \text{ Months}) + (\text{Total number of female FTE volunteers} \times \text{Average Monthly wage rate of paid female employees} \times 12 \text{ Months})$
5. $= (2,228,558 \text{ male FTE volunteer worker} \times 1,471.00 \text{ Birr/Month} \times 12 \text{ Months}) + (1,001,922 \text{ female FTE volunteer worker} \times 1,008.00 \text{ Birr/Month} \times 12 \text{ Months})$
 $= \text{Birr } 39,338,505,715.98 \text{ per annum of economic value of male volunteers in 2013} + \text{Birr } 12,035,085,821.37 \text{ per annum of economic value of female volunteers in 2013}$
 $= \text{Birr } 51,373,591,537.3 \text{ per annum of economic value of volunteers in 2013}$

Limitations, risks, challenges, lessons

Extrapolation of survey results (ETUS) found based on a short recall back period approach for the entire year, may underestimate or overestimate the volunteer time because this estimate does not consider seasonal variations of volunteering activities. The first round of TUS of Ethiopia was done in 2013 and not repeated since then. This limited us to deliver up-to-date information on the value of volunteer work in the country. Household surveys and censuses should be done regularly and periodically to provide meaningful time series data.

Discussion and conclusions

Availability of strong evidence provides insight into the experience of forging a national level programme and legal framework for volunteering. Quantifying volunteers' contribution to the sustainable development of countries can only be done by regularly estimating the number of volunteers, time spent doing this work, type of tasks performed, etc. This requires encouraging a better measurement of volunteer work, and regularly updating data collection tools to provide reliable estimates as well as interpreting and utilizing the assessment findings. The project highlighted the potential of the existing data sources in measuring and providing data on volunteer work.

Our project on "Use of available data sources to measure volunteer work in Africa, the case of Ethiopia" explores the existing national household surveys and national population census mainly in Ethiopia, check their potential in providing the required volunteer work information, and design and test a volunteer measurement model. Given the unavailability of other sources of data that provides better volunteer work data, 2013 ETUS report has been used to test the model that measures the aggregate value of volunteers specifically to approximate national volunteer hour and FTE volunteer workforce.

Use of available data in terms of measuring and reflecting the value of volunteering in the national SNA is crucial to making household surveys more relevant. Available data sources specifically 2013 ETUS could enable to generate economic values performed through direct and organization-based volunteering. However, the value of volunteering specifically organization-based volunteer work was not measured and systematically reflected in the Ethiopian SNA using satellite accounts. Regular discussions with CSA, MoFED, and other stakeholders can address the existing gaps in showing the total value of organisational based volunteering service to the wider economy. This can include collaborating with CSA to further improve the methodology for the measurement of volunteer activities that provide reliable data.

One of the core challenges; however, is that existing data sources including TUS don't provide information on type of work performed (i.e., occupation) and field (industry) in which the volunteer work is performed. This could limit the efforts to link the contribution of volunteer works to the specific SDG indicators. Further, existing national surveys in Ethiopia (e.g., LFS and employment and unemployment survey) do not include questions that measure volunteer work.

The limitation of household surveys could be addressed by attaching dedicated volunteer survey modules as recommended by ILO, which offers a model questionnaire to be attached to household surveys. There is also an option of doing a standalone, dedicated household survey specifically designed to measure volunteer work. It is also possible to measure some aspects of volunteer work by using national population censuses. However, the resource implication and sustainability of different options should be taken in account.

NOTES

¹ UNV 2017.

² UNV 2018a.

³ UNV 2017.

⁴ Used a national representative sample of 52,262 persons aged 10 years and above from 20,280 Households living in rural and urban areas. It has sex disaggregated data by different age groups (10-14; 15- 29; 30-64 and 65+); which can be used for estimating volunteer hour, FTE volunteer workforce and value for population 15 years old and above

⁵ Used a nationally representative sample of 5,469 households living in rural and urban areas. Data collected for household members 7 years old and above

⁶ CSA 2014a.

⁷ UNV 2018a.

⁸ ILO 2011.

⁹ ILO 2019.

¹⁰ See UN 2005. ICATUS was produced by the United Nations in 2004 as part of an effort to standardize and enhance international comparisons of time use activities.

¹¹ ILO 2011; UN 2008.

¹² ILO 2011.

¹³ UN 2009.

¹⁴ ILO 2011.

¹⁵ MoFED 2014.

¹⁶ MoFED 2014.

¹⁷ MoFED 2014.

¹⁸ CSA 2014c; CSA 2014d.

¹⁹ UN 2018.

²⁰The total number of volunteer hours was calculated within the reference period of one day by multiplying the average number of minutes per person-day by 365 days, dividing minutes by 60 to convert to hours, multiplying the result by the size of the population 15 years of age or older in Ethiopia to obtain the total number of volunteer-hours in Ethiopia in a year. The project used the population data provided in the 2013 ETUS, page 40 disaggregated by sex; that is 25, 910,444 men, and 26, 903,460 women for the population categorized by age group of 10-14; 15-29; 30-64; 65+ for the calculation of national volunteer hours or FTE volunteer workforce.

²¹ UNV 2017.

²² 2,080 working hrs per year per a full-time employee = 40 hrs per week per full time employee X 52 working weeks per year.

²³ There is large discrepancy between our estimate (3.2 million FTE volunteers in 2013) and the 2018 State of the World's Volunteerism Report (Organization-based =40,484; direct= 235,482; both=275,482 FTE volunteers in 2015) on the number of FTE volunteers in Ethiopia population 15 years of age or older. Both analyses used the data from TUS for estimating the number of the direct FTE volunteers, but the number of populations aged 15 or older used in the 2018 SWVR, i.e. 11.4 million population 15 years of age or older is much lower than the figure used in our analysis; i.e. 44.4 million population 15 years of age or older. Further, the estimations on organization-based FTE volunteers was done based on data from elsewhere (regional averages).

²⁴ See CSA 2014a. The basic question in valuing the time spent on voluntary services is whether to use the opportunity cost of the person performing the task or a comparator/replacement cost. The International Labour Organization Manual on the Measurement of Volunteer Work, SNA 2008 and Johns Hopkins University suggest the use of the replacement cost approach. Thus, assuming the shadow wage for volunteer as the average gross salary for occupational activities the value of volunteer work was estimated by multiplying the average gross salary with the number of FTE volunteer workers.

²⁵ CSA 2014b.

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