



*This is the fourth in a series of Key Facts sheets that IFPRI is producing based on the third and fourth Integrated Household Surveys (IHSs). The purpose of the series is to present data relevant to key policy issues on agriculture, food systems, and development topics in Malawi. Other Key Facts sheets will be produced in the near future.*

### Highlights

- Overall consumption inequality between households decreased between 2010/11 and 2016/17, as poor households experienced stronger growth in consumption than better-off households.
- Inequality between districts increased between 2010/11 and 2016/17, but remains less severe than inequality between households within individual districts.
- The contribution of occupation and level of education of the household head towards inequality between households increased between 2010/11 and 2016/17, as did the contribution of household size.
- Gender, age, and ethnicity of household heads contribute little to overall inequality between households.

### Background to the Integrated Household Surveys (IHS)

This analysis draws from the third and fourth Integrated Household Surveys (IHS3 and IHS4), conducted by the Government of Malawi's National Statistical Office (NSO) as part of the World Bank Living Standards Measurement Study – Integrated Surveys on Agriculture (LSMS-ISA) initiative. The IHS3 was conducted between March 2010 and March 2011, covering a total of 12,271 households, while the IHS4 was conducted between April 2016 and April 2017, covering 12,447 households. Both surveys used four questionnaire instruments: (1) household, (2) agriculture, (3) fisheries and (4) community questionnaires. Once appropriately weighted, the IHS surveys are representative at national, district and urban/rural levels. All values presented in this Key Facts series have been adjusted using the sampling weights provided by the NSO. All prices have been adjusted for inflation using NSO's Consumer Price Index, and are reported in January 2017 values.

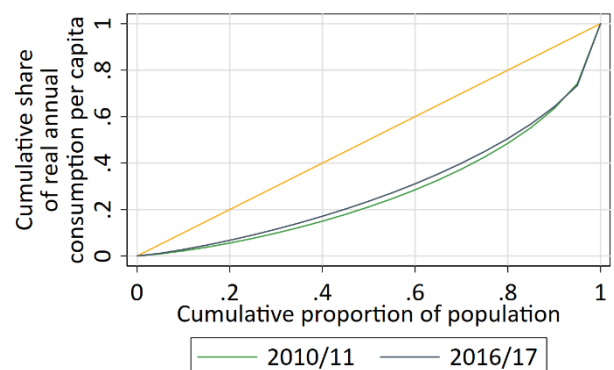
### Consumption inequality

Inequality is the difference in economic welfare between population groups, and can be represented as the distribution of an indicator of economic welfare (such as expenditures, income, assets, land, etc.) among individuals or households in a population. Following methodology used by the NSO and the World Bank, this Key Facts sheet considers inequality between households in terms of aggregate consumption expenditure, i.e. the monetary value of household consumption. Aggregate consumption expenditure combines the value of food and non-food items consumed by a household, as well as expenditures on durable goods and rent over a period of one year. It is important to note that consumed quantities (rather than produced or purchased quantities) are considered. Although no monetary indicator can capture all aspects of wellbeing, consumption is central to satisfying many basic human needs, and thus constitutes a central component of any measure of living standards. The IHS collects consumption data for entire households rather than individually for each household member. This Key Facts sheet therefore describes inequality between households, not inequality between individuals. However, it does account for household size by reporting consumption in per capita terms. It also takes household size into account when dividing the population in percentiles.

### Changes in consumption inequality

Inequality can be graphically represented in the form of a Lorenz curve, which plots the proportion of total per capita consumption by any given proportion of households in the population. A straight diagonal (45°) line would represent perfect equality, where, for example, the bottom 10 percent of the population consumes 10 percent of all goods and services, the bottom half consumes 50 percent of all goods and services, and so on. The further the Lorenz curve bends from the 45° line of equality, the more unequally consumption is distributed in the population. Figure 1 thus shows that overall consumption inequality decreased between 2010/11 and 2016/17, though not in a statistically significant way.

Figure 1. Consumption inequality



In 2010/11, the poorest fifth of the population consumed 5 percent of all goods and services, while the richest fifth consumed 53 percent. By 2016/17, the share of goods and services consumed by the poorest fifth of the population grew to 6 percent, while that going to the richest fifth declined to 51 percent.

The reduction in consumption inequality is also evident in non-visual measures such as the Gini coefficient, which is based on the Lorenz curve. It is defined as the ratio of the area between the line of equality and the Lorenz curve to the total area below the line of equality, and ranges from 0 and 1. A Gini coefficient of 0 indicates perfect equality, where everybody consumes the same amount of goods and services. A coefficient of 1, on the other hand, would indicate perfect inequality, where everything would be consumed by only one household. In practice, the Gini coefficient tends to range between 0.25 and 0.65. In Malawi, the Gini coefficient decreased from 0.45 in 2010/11 to 0.42 in 2016/17.

## Unequal growth

The reduction in consumption inequality occurred on a backdrop of solid consumption growth of 28 percent from MK 105,362 in 2010/11 to MK 134,393 in 2016/17, which is equivalent to an annual growth rate of 4.1 percent (all values adjusted for inflation). The growth in consumption was, however, far from uniform across various segments of the Malawian population. Consumption increased in households at nearly all levels of expenditure, from the poorest to the richest. In absolute terms, better-off households (with the exception of the top 10 percent) experienced larger increases in consumption (above the median of MK 29,031) than poorer ones. However, the relative increase was largest (over 50 percent) for the poorest households, who started from the smallest initial consumption. The better-off the households, the smaller was their relative increase in consumption, and in the case of the top 5 percent of households, consumption even decreased (Figure 2).

The relatively higher increase in total annual per capita consumption for poorer households resulted in the share of total consumption going to each individual in the three poorest quintiles of households to increase, while that going to those in the two wealthiest quintiles to decrease (Figure 3), explaining the reduction in overall consumption inequality.

Figure 2. Consumption growth by consumption percentile

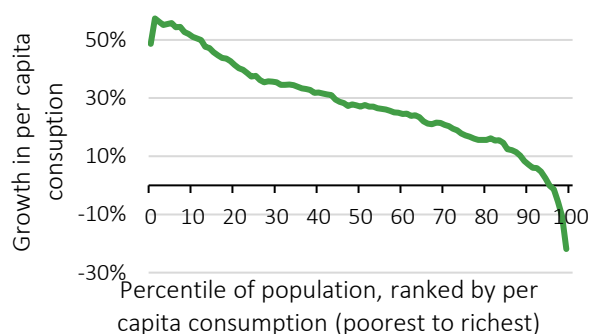
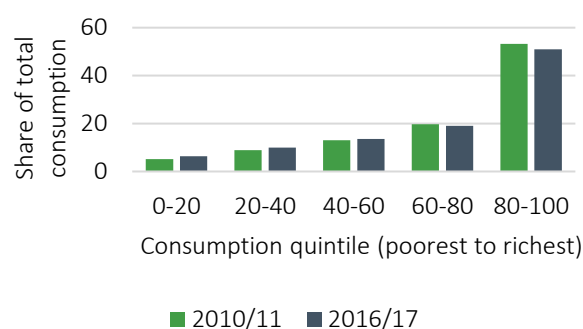


Figure 3. Share of real total annual consumption per capita by consumption quintiles



Consumption growth did not only vary with initial levels of consumption, but also across geographical areas. In absolute terms, the median increase in consumption was larger in urban areas (MK 28,217) than in rural areas (MK 26,334). However, given the large initial differences – a typical urban household consumed 2.20 times more per capita than a typical rural household in 2010/11 – the relative increase in consumption was larger in rural areas (28 percent) than in urban ones (13 percent). By 2016/17, a typical urban household thus consumed 1.96 times more per person than a typical rural one (Table 1). Consumption growth was similarly varied between Malawi's three administrative regions. In 2010/11, median per capita household consumption was a fifth larger in the Central region than in the Northern and the Southern regions. However, the Northern region saw a large (36%) increase in consumption over the next 6 years, while the changes in the same period were smaller for the Central (18%) and Southern (22%) regions. Consumption in the Northern region thus all but caught up with that in the Central region by 2016/17, with the Southern region still lagging (Table 1).

Table 1. Average real annual total consumption for urban and rural households

Location	2010/11		2016/17	
	Median consumption (MK)	Population share	Median consumption (MK)	Population share
Malawi	105,362	100%	134,393	100%
Rural	95,455	84%	121,789	81%
Urban	210,297	16%	238,514	19%
Northern	98,321	13%	138,249	10%
Central	116,448	43%	142,130	45%
Southern	96,345	44%	125,354	45%

At the district level, differences in consumption growth were even starker. In 6 districts (Chikhwawa, Mangochi, Neno, Nsanje, Mwanza, and Lilongwe rural), median consumption grew by more than 50 percent, reaching as much as 85 percent in Chikhwawa between 2010/11 and 2016/17. At the same time, it shrank in 4 districts (Thyolo, Nkhatakota, Chiradzulu, and Kasungu) by as much as 15 percent in Thyolo.

### Geographic patterns in inequality

Just like different geographic areas of the country experience varying levels of consumption and growth, they also show different levels of consumption inequality within them. In 2010/11 and in 2016/17, urban areas were more unequal than rural ones. There was also a higher level of inequality within the Southern region than within either the Central or Northern regions (Table 2). Differences between inequality levels within individual districts were even larger (and they grew between 2010/11 and 2016/17). In 2010/11, within-district inequality was lowest in Nkhata Bay with a Gini coefficient of 0.32, and highest Blantyre with a Gini coefficient of 0.50. By 2016/17, Chitipa became the least unequal with a Gini coefficient of 0.25, while Blantyre remained the most unequal (0.62).

*Table 2. Inequality (Gini) by geographic area*

	2010/11	2016/17
Malawi	0.45	0.42
Rural	0.38	0.32
Urban	0.49	0.50
Northern	0.39	0.34
Central	0.43	0.35
Southern	0.49	0.50

Despite these relatively large disparities between geographical areas, differences between households within individual areas accounted for most of the inequality in Malawi. Table 3 contains geographical decompositions of the Theil L index, which is similar to the Gini coefficient in that it takes on values of 0 (perfect equality) and above, but it does not have an upper limit of 1 (so non-zero values of the Theil L are therefore not directly comparable to the Gini coefficient). Importantly, unlike the Gini coefficient, the Theil L index can be decomposed to show to what extent inequality is driven by differences between population groups, or by differences between individuals or households within those groups. Table 3 shows that differences between rural and urban areas accounted for only 24 percent and 28 percent of total inequality in 2010/11 and 2016/17, respectively.

*Table 3. Decomposition of Theil L index by geographic location*

	2010/11		2016/17	
	Theil's L	Cont.	Theil's L	Cont.
Within Malawi	0.34	100%	0.31	100%
Within rural/urban areas	0.26	76%	0.23	72%
Between rural and urban areas	0.08	24%	0.09	28%
Within regions	0.34	99%	0.31	99%
Between regions	0.00	1%	0.00	1%
Within districts	0.24	71%	0.21	67%
Between districts	0.1	29%	0.1	33%

**Note:** Cont. is the contribution to consumption inequality.

In other words, differences between individual households within urban areas, as well as those between individual households within rural areas, were much larger than the difference between the typical urban household and the typical rural household. Similarly, it is differences between households residing within the same districts that account for most consumption inequality in 2016/17, rather than differences between districts – there are rich and poor households in each district, but differences between districts are not very large. In both 2010/11 and 2016/17, differences in consumption inequality between regions are extremely small when compared to differences within regions.

## Demographic patterns in inequality

Households can be categorized not only by their geographic location, but also by their socioeconomic characteristics. Patterns in consumption inequality can then be analyzed using these categories instead of geographic areas. For example, both in 2010/11 and 2016/17, consumption generally increased with increasing education of the household head (Figure 4). Yet, education of the household head accounted only for one third of total consumption inequality in 2010/11. In other words, differences between households with similarly educated heads were twice as important as differences between groups of households categorized by their heads' education level. Although the contribution of education of the household head to overall consumption inequality steeply increased in the following years, it still accounted for less than a half of total inequality in 2016/17 (Table 4).

Figure 4. Consumption by education of household head

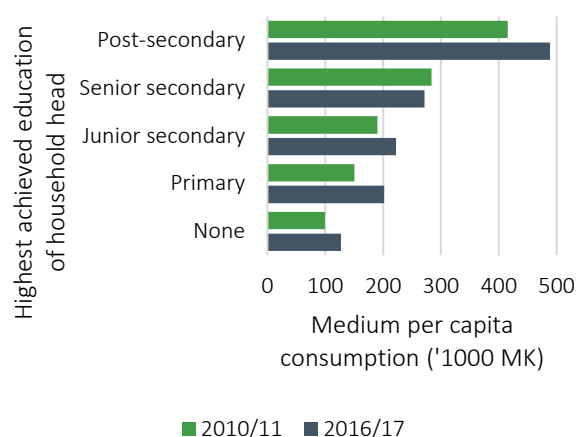


Table 4. Inequality decomposition by education level of household head

	2010/11		2016/17	
	Theil's L	Cont.	Theil's L	Cont.
Within education groups	0.23	67%	0.27	55%
Between education groups	0.11	33%	0.14	45%
All	0.34	100%	0.31	100%

Note: Cont. is the contribution to consumption inequality.

Household heads are often the main breadwinners in Malawian households, so their main occupation has a strong bearing on the per capita consumption of their households. In both 2010/11 and 2016/17, households whose heads were engaged in wage employment consumed significantly more goods and services than other households. Households whose heads relied on *ganyu* (unskilled casual labor) as their main source of livelihood, on the other hand, had the lowest consumption (Figure 5). Occupational differences contributed to 20 percent of total inequality in 2010/11, with the remainder stemming from differences between households whose heads had the same main occupation. By 2016/17, the contribution of differences in occupation to total inequality grew to 27 percent (Table 5).

Figure 5. Consumption by main occupation of household head

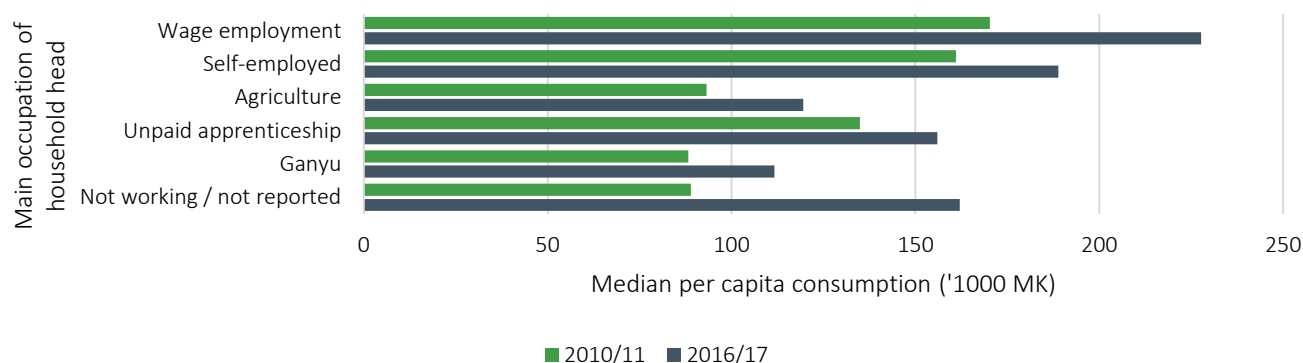


Table 5. Inequality decomposition by main occupation of household head

	2010/11		2016/17	
	Theil's L	Cont.	Theil's L	Cont.
Within occupation groups	0.27	80%	0.23	73%
Between occupation groups	0.07	20%	0.08	27%
All	0.34	100%	0.31	100%

Note: Cont. is the contribution to consumption inequality.

Per capita consumption generally decreases with increasing household size, or the number of individuals in the household (Figure 6). This reflects both the increasing poverty of larger households, as well as the possibility of economies of scale in household consumption. Consumption significantly increased for all household sizes between 2010/11 and 2016/17, albeit at different rates. Consumption inequality grew with increasing household size both in 2010/11 and 2016/17. Nevertheless, differences in household size contributed 10 percent to overall consumption inequality in 2010/11, and 15 percent in 2016/17 (Table 6).

Figure 6. Consumption by household size

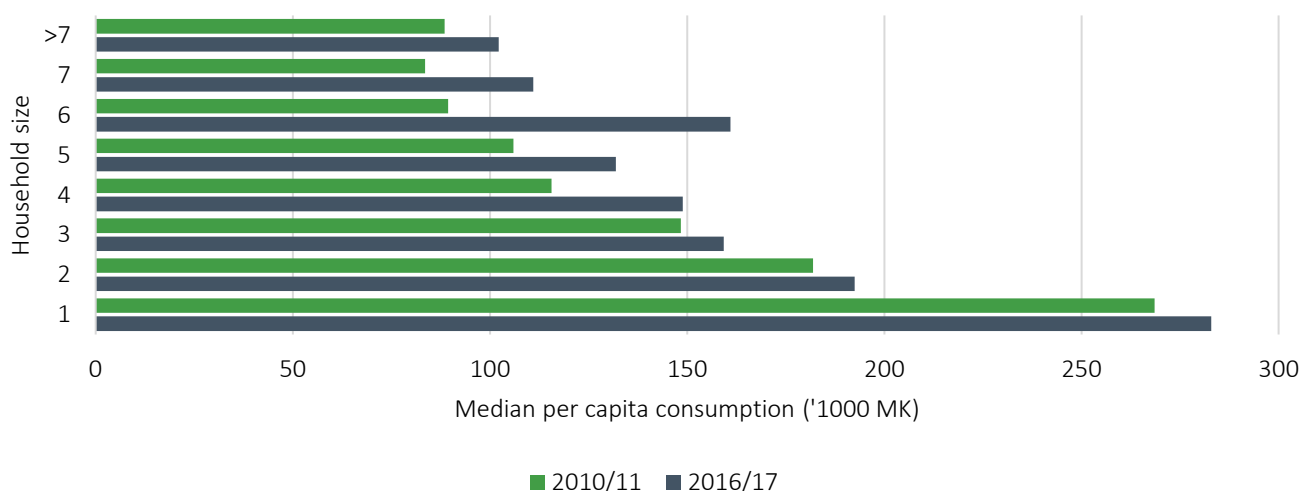


Table 6. Inequality decomposition by household size

	2010/11		2016/17	
	Theil's L	Cont.	Theil's L	Cont.
Within household size groups	0.31	90%	0.27	85%
Between household size groups	0.03	10%	0.05	15%
All	0.34	100%	0.31	100%

Note: Cont. is the contribution to consumption inequality.

When categorized by the gender, age, or ethnicity of their heads, between-group differences contributed to less than 5 percent of total inequality in per capita household consumption.

## Summary

Consumption inequality between Malawian households decreased between 2010/11 and 2016/17, albeit in a statistically insignificant manner. The reduction in inequality was due to stronger relative growth in household per capita consumption for poorer households compared to better-off ones and occurred primarily within rural areas. Inequality within urban areas and between rural and urban areas increased between 2010/11 and 2016/17.

Inequality was more pronounced in urban areas (Gini coefficient of 0.50 in 2016/17) compared to rural ones (0.32), and in the Southern region (0.50) compared to the Central and Northern regions (0.35 and 0.34 respectively). At the district level, variation in inequality was even larger, with within-district Gini coefficients ranging from 0.27 to 0.68. Nevertheless, differences between districts accounted for only about a third of overall inequality in the country. The remaining two thirds came from differences between households within the same district.

Between 2010/11 and 2016/17, per capita household consumption became more determined by differences in socioeconomic characteristics. Consumption inequality between households with similarly educated heads decreased, while inequality between households headed by individuals with different education levels increased. A similar pattern emerges when households are grouped by the main occupation of their head, or by their size. On the other hand, gender, age, and ethnicity of the household head matter very little in this respect.

Note that this Key Facts sheet represents a small fraction of the analyses that can be conducted using the IHS data. IFPRI Malawi has already produced Key Facts sheets on agriculture, food and nutrition security, and social safety nets, and plans to produce another one youth and employment. Please visit the IFPRI Malawi website to stay up to date on Key Facts sheets and other outputs: [massp.ifpri.info](http://massp.ifpri.info)



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