2019 HOUEHOLD BUDGET SURVEY:

Key indicators and comparability with previous data

June 2020

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Preface

The National Bureau of Statistics of the Republic of Moldova asked support from the World Bank in the revision of the national poverty measures derived from the Household Budget Survey (HBS) in relation to updated population estimates and new approaches to consider the usual resident population. Moreover, it also asked for technical assistance in the analysis of the 2019 HBS, which used a new sampling frame and made some significant questionnaire changes. OPM was selected to provide this short term support given previous involvement on poverty measurement in the country.

The main objective of this report is to provide an overview of the 2019 HBS including the important changes occurred in 2019, an assessment of data quality and some of the key statistics, including poverty estimates. Important conclusions are also drawn on data comparability.

Table of contents

List of tables and figures

List of abbreviations

CPI	Consumer Price Index
GDP	Gross Domestic Product
HBS	Household Budget Survey
NBS	National Bureau of Statistics
NSIH	National Social Insurance House
LFS	Labour Force Survey

1 Introduction

The Household Budget Survey (HBS) is one of the main nationally representative surveys conducted by the National Bureau of Statistics (NBS) and its main objective is the monitoring of living standards, the calculation of household incomes and consumption expenditure, as well as non-monetary indicators covering education, health, employment, housing, asset ownership, and self-assessed living conditions. The HBS is the source of information for official poverty measures. Furthermore, the HBS is also used to determine weights for the consumer price index and a number of estimates for the national accounts (for the construction of the households' final consumption).

In 2019 HBS operations were modified in three important ways:

1) use a new sampling frame
2) significant questionnaire modifications
3) recruitment and employment of a new group of enumerators.

Such changes can have important implications on HBS estimates and the aim of this note is to explain why these changes were necessary, assess their impact on data quality, present findings on some of the key indicators, and then provide some conclusions on data comparability with previous years.

2 The need to update HBS operations

2.1 Sampling frame

The sampling frame contains information on the population in Moldova with details of where households live in the country, thus providing the basis for the extraction of the HBS sample. Usually the sampling frame is constructed from a mixture of information coming from the housing and population census and other administrative data. The last time the sampling frame was updated was in 2006, based on the 2004 Census. The new sampling frame instead is based on the 2014 Census, but for Chisinau it uses also information from the "Agency of Land Relations and Cadaster" and orthophotos (this is because in Chisinau the 2014 Census had a population coverage of only 59%).

The new sampling frame was very much needed, on one hand, because the large outmigration[1], especially from rural areas, did change significantly population composition and on the other, because, especially in Chisinau, there have been many new housing developments. According to some estimates the previous sampling frame ignored about 20% of the existing dwellings in Chisinau.

While the use of an updated sampling frame will provide a better representation of the population, there is also a risk that this could cause an issue of comparability between 2019 and previous HBS estimates, with the implication that changes in estimates are not genuine, but the result of the different sampling frames.

It is also important to clarify that an adjustment to the Census data has already occurred for HBS 2014-2018. This was done ex-post through calibration of sampling weights that reproduced some of the new population characteristics. This is commonly done for surveys such as the Household Budget Survey and indeed recommended by Eurostat to adjust for non-response. For the HBS calibration was done by region, urban/rural areas, households with children and households with pensioners. This process of calibration was also reviewed considering the resident population and factoring for the large 'long-term migration' (i.e. for people abroad for more than 1 year). However,

[1] This is also supported by the increasing percentage of households selected for interview who could not be found because abroad.

such calibration can only go up to a certain point, for example, it cannot adjust for the fact that some type of households have not been included in the sample.

2.2 Questionnaire changes

In 2019 there have been a number of significant changes to the HBS questionnaires (main questionnaire and the diary). Changes in the questionnaire are done to adapt to new international statistical definitions, better capture changing circumstances, but also to try and simplify procedures in order to reduce the burden of participation for the respondents.

The main changes in the household questionnaire affected the way people economic activity is collected and classified, simplification on information about land, livestock and durable items.

On the diary the biggest change involved the period in which people were asked to keep information about food expenses. All households interviewed need to keep a diary where they record income, expenditure and consumption from in-kind production or stock. However, recording of food expenses is only done for half a month. While until 2019 about half of the sample was recording such expenses in the first part of the month and another half was recording them in the second part of the month, in 2019 all households recorded such expenses in the first part of the month. Another important change involved the introduction of more items for which information is collected on a recall basis.

Various research has shown that the way questions are phrased, their sequence, level of details, etc. can have various consequences on the reporting of data and then consequently on key estimates. Once again if this happens, there is a risk that potential changes between 2019 and previous estimates rather than capturing a genuine change, could be the result of questionnaire changes.

2.3 New enumerators

More than 50% of enumerators that NBS uses to conduct interviews and collect the relevant data for the survey were newly recruited and trained for the 2019 HBS. This has been necessary because the places/villages where the HBS is conducted have changed and only some enumerators could remain involved in the survey activities. It is difficult to predict what could be the effect of this change, but the lack of experience could affect their ability to obtain responses from households and on other aspects of data quality.

While sampling, questionnaire changes and new enumerators could in theory affect HBS estimates, it is important to assess directly impact on data quality and key estimates in order to reach a conclusion on data comparability.

3 Data quality

An assessment of data quality is usually conducted at two levels: internal and external validation. Internal validation tries to verify to what extent there is evidence that data collected across different sections is complete and consistent, thus meeting certain criteria of data quality. External validation instead involves comparing the estimates coming from the survey with other data sources, which are either superior or providing in other ways an insight on data quality. We discuss briefly the findings from this type of analysis comparing results of 2018 and previous years with those of the 2019 HBS to see whether the 2019 data show better or worse indicators of data quality.

3.1 Internal validation

The first observation to make is that HBS data goes through a number of data checking steps, the first ones conducted by the enumerators when they collect responses and the diaries kept by the households, then by supervisors and at the NBS headquarters. These are conducted at two levels:

missing observations or incorrect skip pattern and then improbable or conflicting information. In all such cases the interviewer is asked to verify with the household the information provided.

Instead, the internal validation and resulting data quality we present below is at a higher aggregate level, looking at the level of non-response and the ratio between income and consumption expenditure.

Non-response

Non-response occurs whenever for various reasons an interview with a selected existing household does not take place. This is problematic because it can affect the quality of the data, since the representativeness of the survey could be compromised. For example, if non-response is particularly high among relatively better-off households we risk that the survey could underestimate the overall level of income in the country.

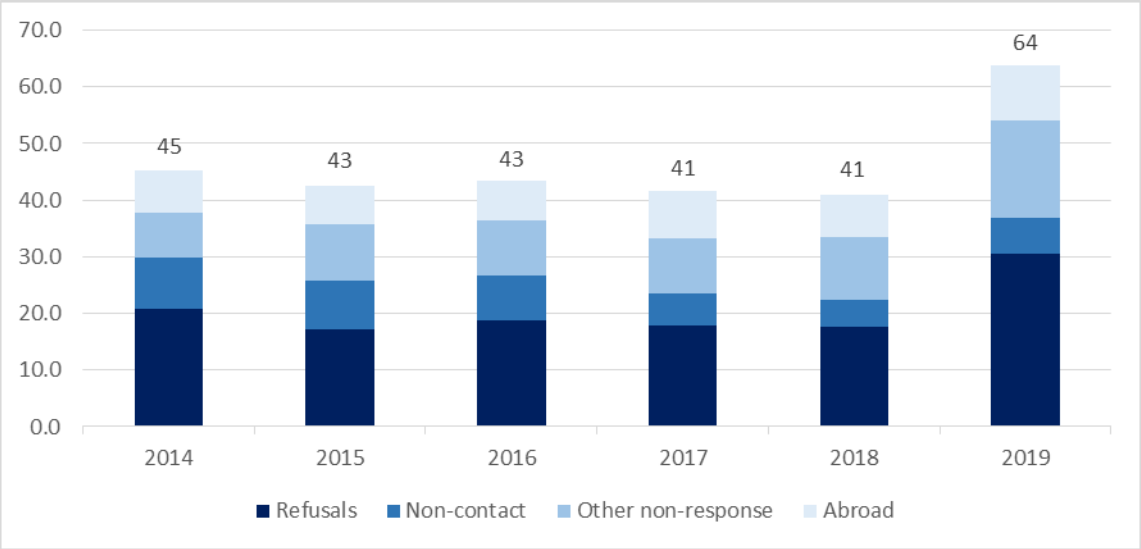
Non-response can be classified in four different types:

- Refusals where non-response is caused by three main reasons: 'lack of time', 'don't consider it useful', and 'don't believe information will remain confidential';
- Non-contacts, occurring when one can be found at the selected address, after multiple attempts, but with signs that somebody is indeed living at the address;
- Other non-interviews, representing cases where household members are not able to participate in the survey because of old age, health problems, etc.
- All household members are abroad: this is a specific situation faced in Moldova where the problem could either be the ineligibility of the household, if the household moved permanently abroad or at least for the whole year of the survey or a specific situation of non-contact, whereby the household could come back later in the year.

Usually refusals are more common among relatively better-off households, non-contacts can come from a mixed of household circumstances, whereas at least some of the 'other non-interviews' (physically unable to participate) are associated with relatively poor households.

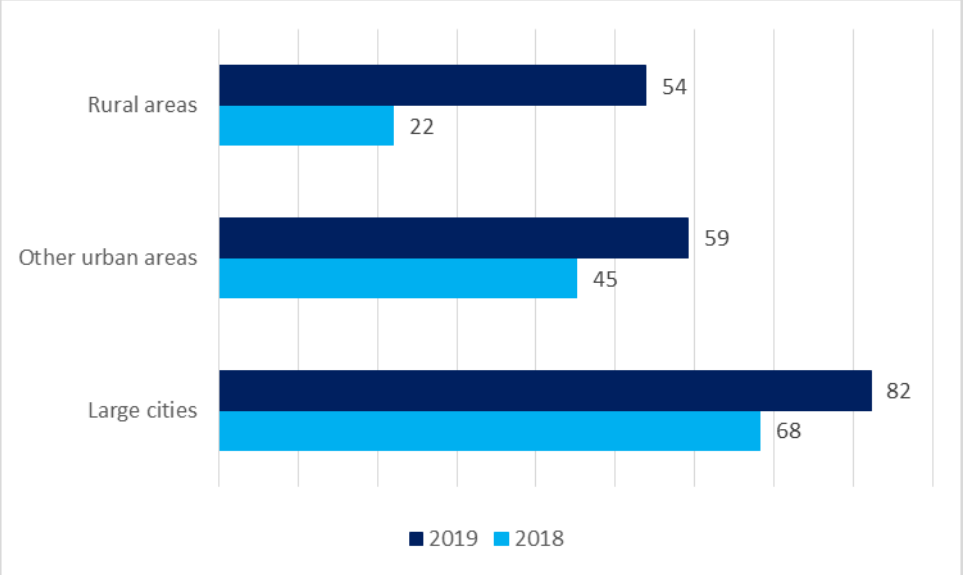
Figure 1 shows the percentage of non-response from 2014 to 2019 by the four types. It shows that while non response was relatively stable until 2018, it did drastically increase in 2019. There was an increase across all categories, and especially so for refusals and other non-interviews.

Figure 1: Percentage of non-response by type (2014-2019), %



Moreover, as shown in Figure 2, while in large cities non-response has increased by about 20%, it has surged significantly more in other urban areas and more than doubled in rural areas.

Figure 2: Percentage of non-response by geographical area, 2018 and 2019, %



It is not possible to know exactly the impact of non-response, but theory tells us that this can introduce bias in survey estimates, and it will be necessary to continue adopting approaches that try to reduce such a high level of non-response. It is possible that overall political instability could have been partly behind such increase, but it is also clear that it might be necessary to take significantly more drastic measures to reduce the burden of such interviews.

General non-response rate in the Labour Force Survey (LFS), which is another large household survey conducted by the NBS and that has seen the same change in the sampling frame between 2018 and 2019, has gone from 21.9% to 35.6%. Therefore, also in the LFS we have seen an increase in non-response similar to that in the HBS. This could be the result of dealing with areas where fieldwork is more difficult or the inexperience of some of the enumerators. Nevertheless, the overall non-response remains significantly lower than in the HBS. This is because the interview for the LFS is significantly shorter and people are not requested to keep a diary.

The clear effect of a higher non-response is that the overall number of observations in 2019 is lower than in 2018, even though the sample size increased. In 2018 5142 interviews were completed, whereas in 2019 this was reduced to 4408. The effect of a lower number of interviews is an increase standard errors in the HBS estimates.

A different problem is that of sampling frame imperfections, which occur when no one lives at the selected address, or the house is demolished, or it is an address of a business. Essentially all these cases should not have been in the sampling frame in the first place. Such cases represented 11% of all selected addresses in 2018, but dropped significantly in 2019 to only 3%, showing the significant improvement of the new sampling frame.

Relationship between income and consumption expenditure

A way of checking data quality in household budget surveys is to look at the relationship between income and expenditure. While, it is possible for expenditure to be higher than income for some households, and on the contrary for income to be much higher than expenditure, in general we would expect a correspondence between these two aggregates.

In 2019 we find that on average the income aggregate is almost 10% higher than consumption, but the median is only 1% higher. The same figures in 2018 were respectively 1% higher and almost

6% lower. Overall, the correlation coefficient between income and consumption is 0.73, a relatively high value, and it was similar also in 2018.

Looking at the ratio between income and consumption disaggregated by the main source of income, we find that income tends to be under-estimated for farmers as well as those who receive remittances and other income sources.

Table 1 Ratio of income over expenditure by main income source, 2019

Main source of income (of hhead)	Ratio of income over expenditure		No. of obs.
	Average	Median	
Farmer	0.921	0.825	312
Other self-employed	1.157	1.086	267
Paid-employee in agriculture	1.204	1.077	273
Other paid employee	1.201	1.099	1,226
Pensioner	1.047	0.961	1,866
Remittances	0.965	0.865	381
Other	0.885	0.881	83
Total	1.096	1.011	4,408

3.2 External validation

External validation involves comparing some of the key estimates produced by HBS with those from other sources. This comparison can only be done for some indicators, but it can still provide some insight on the representativeness of the HBS sample.

Since the sampling weights are calibrated for some of the demographic information available from the Census and population estimates (regions, urban/rural, households with children and elderly members), by design demographic indicators tend to match the expected values.

However, it is possible to compare information on other data. In particular, we can compare the estimates of the number of beneficiaries of old age pensions and disability pensions with those provided by the National Social Insurance House (NSIH). Similarly it is possible to compare average reported net wages with those available from formal wage statistics, and reconstruct a monthly food price index to be compared with the Consumer Price Index (CPI).

Figure 3 shows the HBS estimates of number of beneficiaries of old-age pension and disability pensions expressed as a percentage of those reported by the NSIH. If HBS and NSIH numbers coincide the number of beneficiaries as estimated by the HBS would be exactly 100% of those in the NSIH, whereas a number above 100 would represent an over-estimate and on the contrary a number below 100 an under-estimate. From the figure it is clear that the old-age pensioners are a bit under-estimated, but generally close to the NSIH numbers, whereas for recipients of disability pensions the HBS tend to over-estimate the actual number. However, for both old age and disability pensioners in 2019 the HBS estimates are very close to the administrative source, suggesting a more representative survey.

Figure 3: Pensioners, percentage of HBS estimate over administrative data, 2014-2019

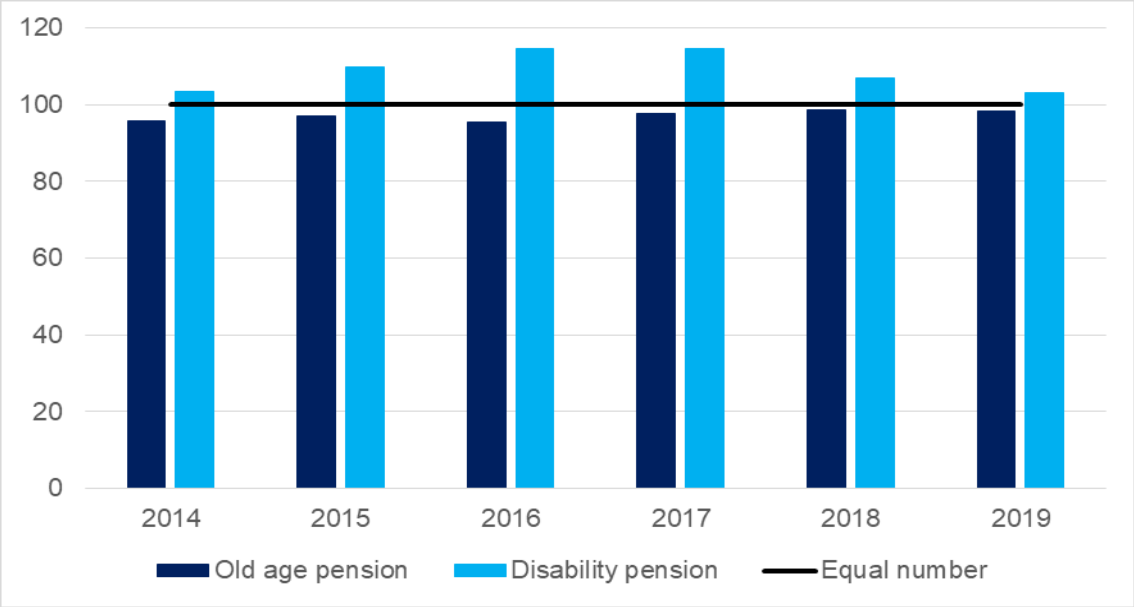
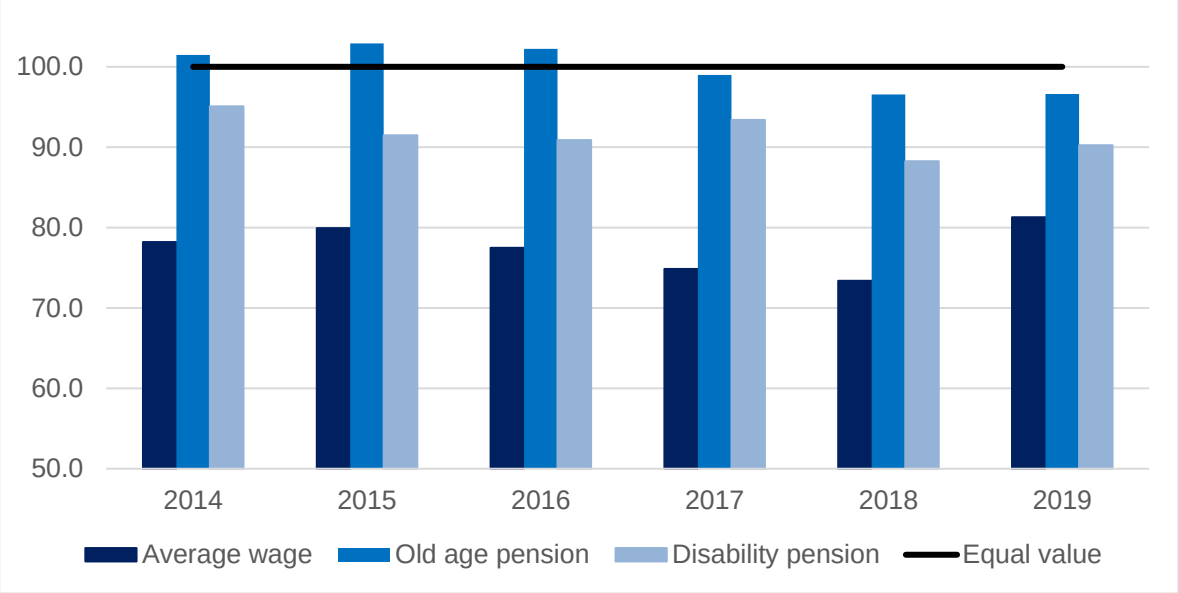


Figure 4 instead looks at values of average wages, old age pension, and disability pension. HBS estimates are expressed in percentage of the numbers available from administrative data (the NSIH for pensions and the wage statistics collected for all companies with at least one person formally employed). For pensions we do not see any significant change, in general values of old age pensions are very similar to those available from the NSIH. However, for disability pensions, HBS data provide a more significant under-estimate. However, data of particular interest are from wages. HBS estimates provide still a significant under-estimate of administrative data, but in 2019 the number is much closer than it was in 2018, going from being 73% of the administrative value to more than 81%. It is also significant to note that there could be good reasons for the HBS estimate to be lower than the administrative data, since HBS might capture wages and payment in the informal sector, which are likely to be lower than in formal sector.

Figure 4: HBS estimates of values of net wages and pensions as a percentage of those from administrative data, 2014-2019[2]



[2] The value of the average net wage in 2019 for units with one or more paid employees was estimated indirectly from the figure of the gross wage for units with 4 or more paid employees. We used the same ratio between these two numbers in 2018 to estimate the 2019 value.

The final comparison looks at the seasonal food price fluctuations across different geographical areas and then compares the implicit price index constructed using HBS data with the food CPI from price statistics. The implicit price index is constructed in HBS using item shares and reported unit values (prices) and then constructing a Paasche index (see for more detail explanation the technical note published on the NBS website in 2018). A usual seasonal pattern would see food prices increasing until May/June and then declining as fresh produce of the new harvest arrives in the market with prices falling until the late summer, before starting to pick up again. Moreover, we would expect prices to be higher in urban than in rural areas. The food price index produced using HBS data is reported in Figure 5 for the different areas of the country (large cities, other urban areas and rural areas) and for every month of the year. The average value of the index across the year and all households is set equal to 1, and value above/below 1 show a higher/lower level of prices. The results confirm the expectations and provide an indirect confirmation of data quality.

Figure 5: Paasche food price index by areas with different degree of urbanization, 2019

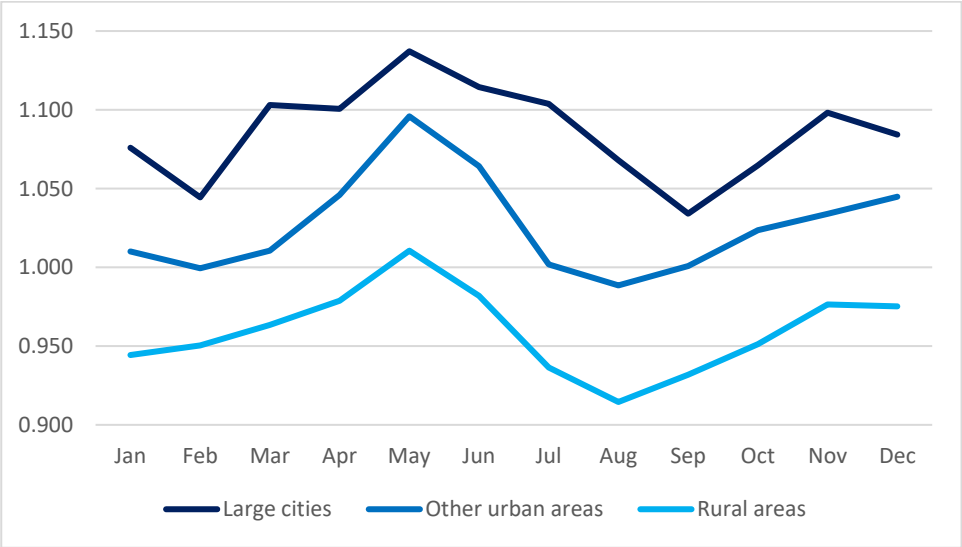
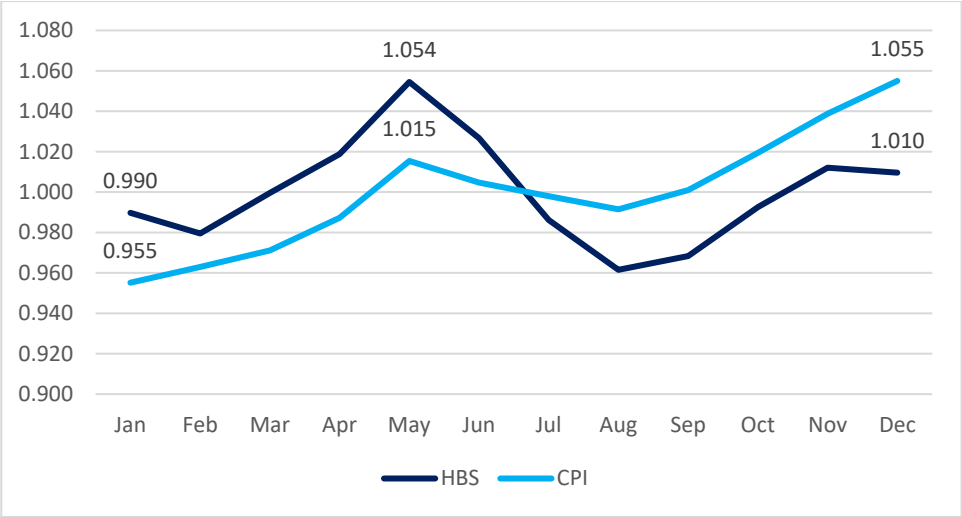


Figure 6 compares the overall national index constructed using HBS and CPI once again focusing exclusively on food prices. It emerges that while the seasonal pattern observed in the HBS is found also in the CPI, the latter reveals also a stronger inflationary effect with prices in December significantly higher than in January. Partly the different results between HBS and CPI could be explained by the different way of constructing the index. Indeed, while for the HBS the index is constructed using a Paasche approach, whereby the index is computed as the ratio of the cost of a basket chosen in a specific month compared to the cost of the same basket at average national prices, the CPI is constructed using a Laspeyres index, whereby we essentially compare the cost of the same basket of goods across time.

Figure 6: HBS food price index and food CPI, 2019



4 Disentangling the impact of the new sampling frame on some of the key indicators

Since, as explained in the introduction, a number of changes have occurred in 2019 compared to previous years, it is important to try to disentangle the possible impact of the new sampling frame. Indeed, while it could be possible to somewhat correct the effect of a questionnaire change, if we identify that problems occur as a result of the sampling frame, then there is little we can do to compare data and effectively we would need to consider 2019 as the year to start a new series of data.

The effect of the sampling frame can be isolated by looking at indicators that are unlikely to have been affected by questionnaire changes, since the questionnaire for those indicators did not change, and because questions are relatively easy and unlikely to be affected by the experience and skills of the enumerators. Therefore, we decided to look at information on some housing characteristics, assets' ownership, and self-reported living standards indicators. For all these indicators we can produce estimates from 2014 and 2019 and determine whether there are any changes occurred in the last year that appear to break the series and that are therefore very much likely to be the result of the new sampling frame.

Figure 7 starts by reporting some selected housing characteristics: the percentage of households living in dwellings built in 2006 or after, with a toilet in the house, with an autonomous heating system and with a boiler (electric or gas). While for almost all these indicators we do find that year after year there is an improvement, what clearly stands out is that the increase observed in 2019 is of a much higher proportion than all previous years. More specifically, the increase observed between 2019 and 2018 is equal or higher than the change occurred between 2015 and 2018. This is occurring also on characteristics that are unlikely to change very quickly, such as toilet or year of dwelling construction. On the other hand such changes are very much in line with what is known about the new sampling frame, i.e. the inclusion of new dwellings and construction developments that were excluded from the previous sampling frame. Inclusion of newer dwellings is then associated also to better facilities. As an example of the changes occurred, Annex A provides some aerial views of specific areas of Chisinau and suburbs taken in 2016 and 2007 and clearly showing the newly built areas.

Figure 7: Percentage of households with selected housing characteristics, 2015-2019, %

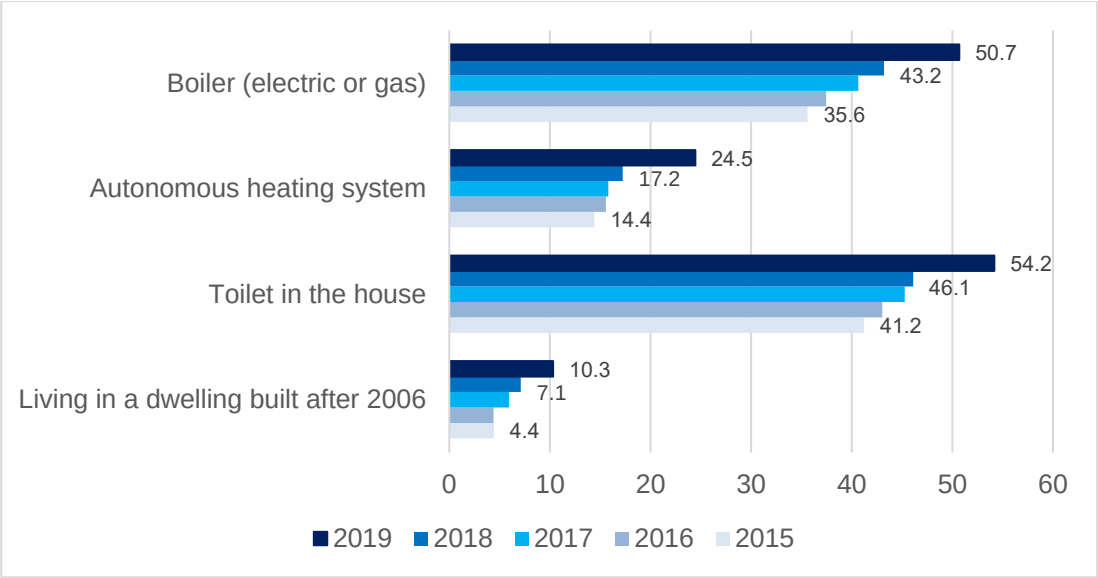
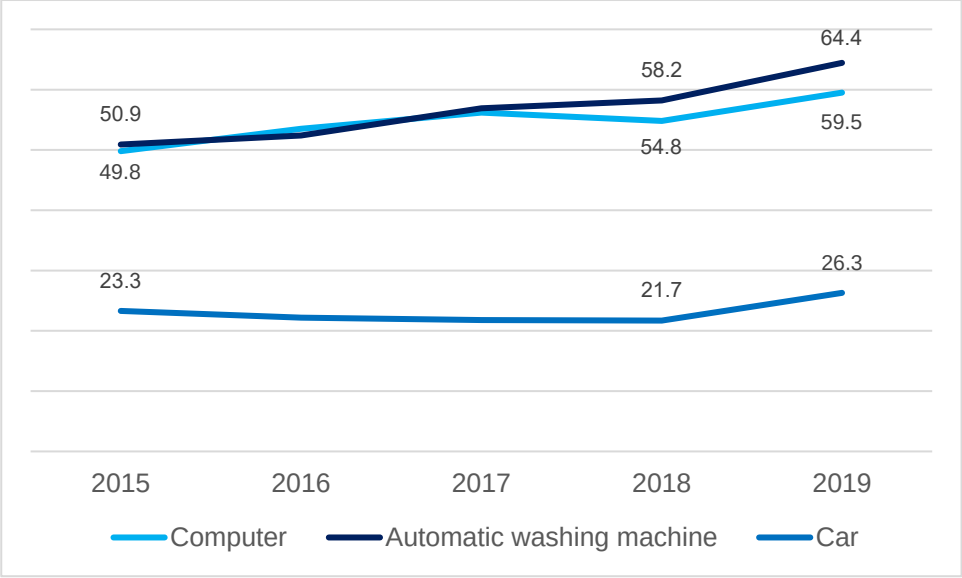


Figure 8 shows the percentage of households who own a computer, an automatic washing machine and a car between 2015 and 2019. Once again we observe a pattern similar to that described for housing characteristics, where the increase that occurs between 2019 and 2018 provides a significant jump, something that has not occurred in previous years.

Figure 8: Percentage of households with selected assets, 2015-2019, %



When looking at self-reported well-being indicators, the change in 2019 is even starker and more impressive. These are reported in Figure 9 where we look at the percentage of households declaring that they can afford a holiday or a sudden expense of 5000 lei, while Figure 10 shows the rate of increase year on year in the amount of income that people report is necessary to meet their minimum requirements. Such increase is compared with the increase in the CPI.

The percentage of households declaring they can afford holidays and a significant sudden expense increased abruptly in 2019. Moreover, while in previous years the increase in the self-reported income required to meet basic needs appeared to be clearly related to inflation and economic growth, in 2019 the increase is more than twice the increase of CPI. It is to be expected for the self-reported minimum income to be positively correlated to people's living conditions and, once again the numbers reported in Figure 10 suggests that we have a break in the series due to the

different sampling frame. In fact these changes are not supported by dramatic economic improvements (preliminary estimates of real GDP growth for 2019 are well below 5%).

Figure 9: Percentage of households who declare being able to afford holidays and a sudden expense, 2015-2019, %

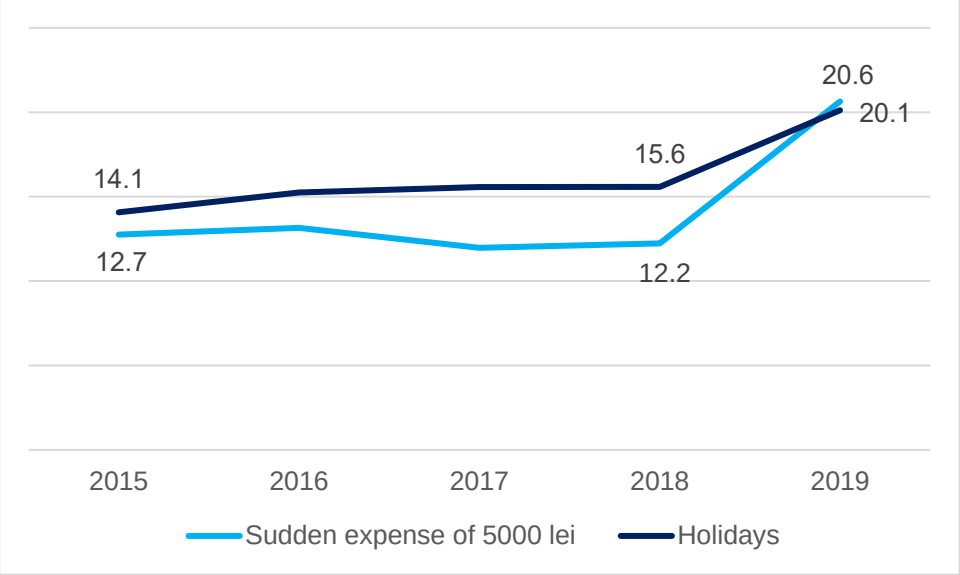
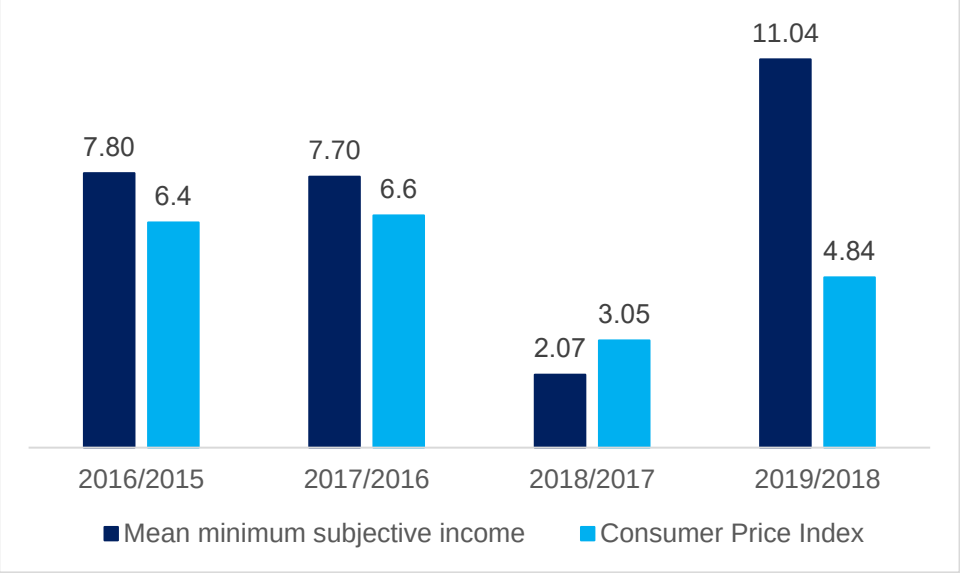


Figure 10: Nominal increase year on year in self-reported minimum income compared with CPI, 2016-2019



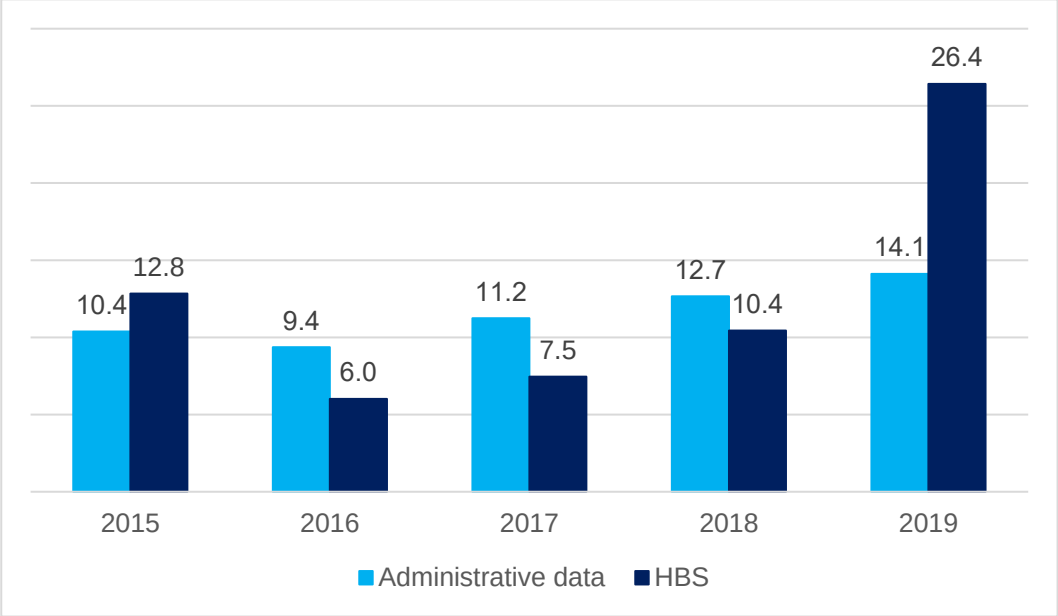
All the above indicators are provided in Annex B, together with more comprehensive tables on demographic characteristics, dwelling, assets' ownership, land and livestock, income sources, occupations and self-reported living standards indicators.

5 Income and consumption aggregates

The analysis of income and consumption aggregates have revealed that 2019 estimates compared to those of previous years are affected both by changes in the sampling frame and in questionnaire design.

For example, as we have already shown earlier, wages in 2019 are substantially higher than in 2018. The way of recording wages has not changed and therefore it is safe to assume that such change is related to the new sampling frame. This is further analysed looking at changes year on year of nominal net wages based on administrative data and HBS estimates (see Figure 11). The change occurring in 2019 is much higher than the increase in administrative data and also of the increase of the minimum wage in the real sector, which increase only by 6.3% in 2019. The other year where the HBS increase in wages was higher than the one registered by administrative data was in 2015 when the minimum wage increased by 15%.

Figure 11: Nominal increase year on year in net wages based on administrative and HBS data, 2015-2019[3]



On the other hand, a change in the questionnaire design clearly affected information on ajutor social (the main cash social assistance transfer) and the winter support allowance, which provide estimates significantly lower than those captured in 2018, something that does not appear from administrative data of the Ministry of Health, Labour and Social Protection.

Consumption expenditure is even more affected by questionnaire changes. In particular the main elements that appear to affect the comparison of data between 2019 and previous years is the different way of collecting consumption expenditure for purchased food; and the introduction of new items of expenditure within recall questions (for transportation and education services). However, even after trying to correct for different questionnaire changes we do find higher levels of expenditure, even after accounting for inflation. In particular, more households report expenditure for transport and food eaten outside home/restaurants, and expenditure is significantly higher not only for these items, but also for recreation and health. Overall, we also find a decrease in food share. This and the items where we find the higher increase all point to a sample that on average display better living standards.

Changes related to food expenses deserve further clarification. In fact, we should be wary that in 2019 both food and tobacco purchases are reported in a diary kept in the first half of the month for all interviewed households, whereas in previous surveys half of the sample was recording such purchases in the second half of the month. On the other hand food consumption from own

[3] The value of the average net wage in 2019 for units with one or more paid employees was estimated indirectly from the figure of the gross wage for units with 4 or more paid employees. We used the same ratio between these two numbers in 2018 to estimate the 2019 value.

production is reported throughout the month and this has not changed. From a theoretical point of view, expenditure in the two periods should be very similar. Indeed, while it is possible that some households have higher purchases at the beginning of the month, for example after they receive their salary, that should still guarantee that they can consume from stocks what was purchased at an earlier date. On the other hand, it is also possible that some households might actually consume a bit more at the beginning of the month than at the end of the month. In order to check the problem we analysed data from 2014 and 2018, producing some descriptive results, which are reported in Table 2. We compared average food expenditure of households that keep the diary for food purchases in the first part of the month with those keeping it in the second half. We find that in all years under analysis households recording expenses in the first half of the month have a significantly higher expenditure than those keeping the diary in the second half of the month. The difference is higher for purchased food, and it is reduced when accounting for stocks and own produced consumption. Nevertheless, for the overall food expenditure differences persist, while for tobacco expenditure there is not an emerging pattern.

Table 2 Food consumption in the first and second half of the month, 2014-2018

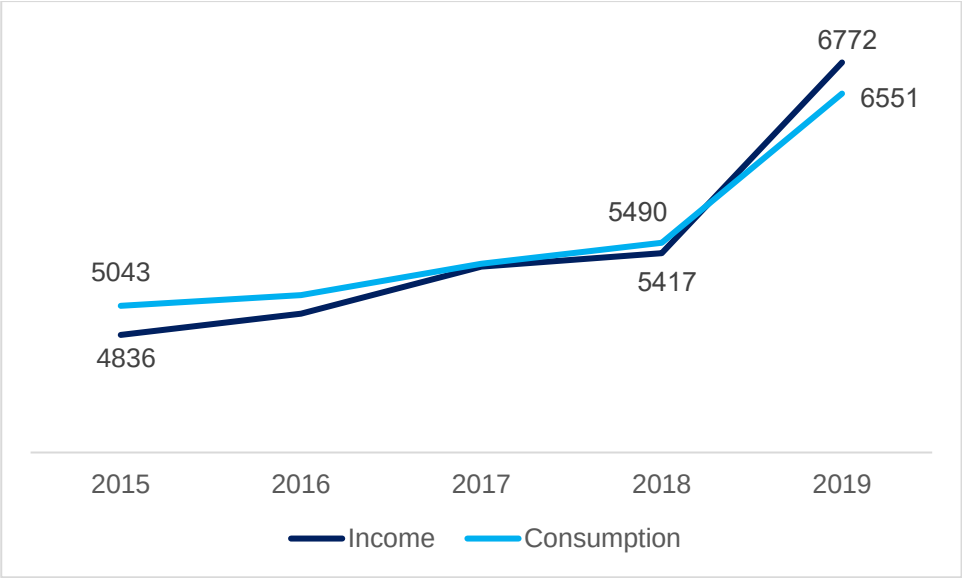
Year	Purchased and consumed at home			All food expenditure			Tobacco		
	Part 1	Part 2	Ratio	Part 1	Part 2	Ratio	Part 1	Part 2	Ratio
2014	1473.7	1322.3	1.115	1995.5	1849.8	1.079	63.6	57.8	1.100
2015	1563.3	1385.7	1.128	2125.6	1960.5	1.084	74.5	73.1	1.019
2016	1623.1	1527.4	1.063	2162.5	2058.2	1.051	75.6	85.2	0.887
2017	1792.4	1625.1	1.103	2338.3	2191.8	1.067	87.4	80.6	1.085
2018	1904.6	1692.1	1.126	2445.9	2223.2	1.100	88.6	92.0	0.963

However, before concluding that this represents a systematic bias, we have conducted a regression analysis. Indeed, to make sure that there is a bias, we need to verify whether the higher consumption levels are not due to other household characteristics. We have therefore regressed food consumption expenditure on non-food expenditure, household size, household location (large cities and other urban areas) and whether the household keeps the diary in the first part of the month. The period in which the household keeps the diary is highly significant even after controlling for other characteristics and so suggests that there is a systematic bias. Interestingly a similar exercise in 2006 found that such variable was not significant.

The conclusion from this analysis is that questionnaire changes are responsible for an increase in the reported food consumption expenditure in 2019 compared to 2018.

Figure 12 shows the household mean consumption and income levels from 2015 to 2019, where we can see the sudden upsurge occurring in 2019. As discussed above such result is not a genuine increase, but the effect of both the new sampling frame as well as changes in the questionnaire design.

Figure 12: Average nominal household income and consumption expenditure, 2015-2019, lei



6 Data comparability and conclusions

In 2019 HBS operations were modified in three important ways: the sample was extracted using a new sampling frame; the questionnaires were modified and more than 50% of new enumerators were recruited and employed for the interviews.

Such changes were necessary to ensure that the HBS better represent the reality of the country, better capturing the situation of Moldovan families as revealed by the Census and the expansion and developments that occurred since 2004.

However, such changes had important implications on HBS estimates, which means that 2019 data cannot be compared to previous estimates, since the changes that we observe are not due to genuine improvements of people circumstances, but are the result of using an updated sampling frame. For example, in Chisinau the previous sampling frame was ignoring about 20% of dwellings, their inclusion has meant that we started to survey a different group of households, who live in newer buildings, and display relatively better living conditions. Similar changes also occurred in other cities and towns as well as rural areas, with the result that the new sample provides a better reflection of where people live and their households' characteristics.

Looking at a set of indicators that have not been affected by questionnaire changes we can see that in 2019 there was a sudden change compared to 2018, a jump in estimates that was never recorded in previous year to year changes.

When looking at income and consumption expenditure we find also a questionnaire design effect. For example, because new items have been included in the questionnaire, expenditure for some categories of expenditure increases. However, especially for poverty measures, it is possible to construct an aggregate that it is as much as possible comparable. Nevertheless, we do find that the income structure is significantly different in 2019 compared to previous years. Once again, this is not a genuine change, but the result of the new sampling frame.

The conclusion is that users should exert caution in comparing HBS estimates between 2019 and previous years since the data is not strictly comparable. However, we believe that 2019 HBS estimates provide a better picture of households' circumstances in the country.

Annex A Aerial views of selected urban and peri-urban areas in Chisinau in 2007 and 2016

2007, Bubuieci

2016, Bubuieci

2007, Near Hospital No. 1

2016, Near Hospital No. 1

2007, Near Republican Hospital

2016, Near Republican Hospital

2007, Albisoara Street

2016, Albisoara Street

Annex B Detailed tables

Table 3 Percentage of households of different size, 2015-2019

Household size	2015	2016	2017	2018	2019
One	27.5	28.3	28.9	33.6	30.9
Two	31.4	32.2	33.4	31.0	31.9
Three	18.3	17.7	16.3	16.5	18.1
Four	15.0	14.5	14.0	12.4	12.7
Five	5.4	5.4	5.0	4.8	4.4
Six or more	2.4	2.0	2.4	1.8	2.0
Total	100.0	100.0	100.0	100.0	100.0

Table 4 Percentage of different household types, 2015-2019

Household composition	2015	2016	2017	2018	2019
Single	27.4	28.3	28.9	33.6	30.9
Couple	21.7	21.8	24.1	21.8	22.3
Other (only adults)	17.0	16.7	14.6	12.8	15.3
Single parent + children	1.9	2.5	2.1	2.3	2.4
Couple with children	18.9	18.2	18.0	18.1	17.8
Other (with children)	13.0	12.5	12.4	11.5	11.3
Total	100.0	100.0	100.0	100.0	100.0

Table 5 Distribution of housing characteristics, 2015-2019

Housing	2015	2016	2017	2018	2019
Dwelling type					
Apartment	29.7	30.7	30.5	30.3	28.3
House	67.8	66.7	67.4	67.8	68.8
Part of house	2.3	2.1	1.9	1.4	1.8
Other	0.2	0.5	0.3	0.6	1.1
Dwelling ownership					
Private	95.4	94.7	93.7	94.2	95.3
Rented	4.0	4.8	5.8	5.4	4.5
Other	0.6	0.5	0.4	0.4	0.2
Period of construction					
Before 1946	0.7	0.9	0.4	0.4	0.5
1946-1960	11.1	10.5	9.3	8.2	11.2
1961-1980	46.2	44.9	45.6	45.1	46.1
1981-2005	37.5	39.3	38.8	39.3	31.8
2006 and after	4.4	4.4	5.9	7.1	10.3
Number of rooms					
One	7.5	7.7	8.5	8.9	7.7
Two	26.2	28.4	25.3	26.0	29.2
Three	35.7	35.7	37.7	36.4	37.4
Four	21.9	19.8	20.2	20.9	18.8
Five or more	8.7	8.4	8.3	7.7	6.7
Toilet in the house	41.2	43.0	45.3	46.1	54.2
Sewerage system					
Public	33.0	34.3	35.2	35.5	33.0
Own system	31.1	30.4	32.6	34.1	38.4
Not available	36.0	35.3	32.2	30.3	28.6
Gas					
Public network	57.6	57.3	56.8	56.8	59.2
Bottle	39.9	39.8	40.5	40.8	37.7
Not available	2.4	3.0	2.7	2.4	3.2
Heating system					
Public network	19.3	19.8	19.2	19.2	14.6
Autonomous system	14.4	15.6	15.8	17.2	24.5
Stove (natural gas)	1.4	1.1	0.8	0.6	1.2
Stove (wood, coal, etc.)	63.4	62.4	62.9	61.5	58.6
Other	1.4	1.1	1.3	1.4	1.1
Not available	0.1	0.1	0.1	0.0	
Hot water source					
Public network	10.6	11.5	11.5	10.1	7.3
Boiler (electric or gas)	35.6	37.5	40.6	43.2	50.7
Boiler (wood/coal)	3.2	2.8	3.2	3.4	1.2
Not available	50.6	48.3	44.7	43.4	40.9
House surface (sqm)	68.7	67.5	68.9	68.2	69.0
Living area (sqm) - mean	47.1	46.0	46.9	46.4	46.2

Table 6 Assets ownership (percentage of households), 2015-2019

Type of asset	2015	2016	2017	2018	2019
TV	96.6	97.0	96.9	97.5	97.1
Computer	49.8	53.5	56.2	54.8	59.5
Fridge	93.0	93.8	94.6	95.5	97.1
Washing machine automat	50.9	52.4	56.9	58.2	64.4
Car	23.3	22.2	21.8	21.7	26.3

Table 7 Land and livestock ownership, 2015-2019

Land/livestock	2015	2016	2017	2018	2019
% of households who:					
Own land	71.9	69.9	70.3	70.0	72.3
Cultivated land	68.9	67.6	67.4	67.5	68.7
Rented out land	26.7	26.4	28.0	28.2	26.5
Amount of					
Total land	13010	12746	13050	12518	12420
Cultivated land	4675	4515	4499	3969	4409
Rented out land	20100	19691	19908	19967	20513
% of households who own:					
Livestock	27.5	25.4	23.0	21.8	21.3
Poultry	56.9	54.5	53.7	53.8	54.5

Table 8 Sources of income and persons abroad, 2015-2019

Sources of income	2015	2016	2017	2018	2019
Main sources of income					
Wages	28.7	29.4	29.8	30.0	30.6
Self-employment in agr.	9.0	8.7	7.9	7.3	7.3
Self-employment in non-agr.	4.1	3.7	3.6	4.0	4.0
Pension	20.7	21.1	21.5	21.4	21.5
Social transfers	3.4	3.6	4.1	3.8	4.4
Stipend	1.0	1.2	1.3	0.8	0.7
Remittances (from abroad)	8.9	8.3	8.1	8.5	6.7
Maintenance	23.5	23.2	23.0	23.4	24.2
Other	0.8	0.7	0.5	0.9	0.7
Main sources of income, household head					
Wages	36.0	37.1	39.0	38.6	40.7
Self-employment in agr.	7.6	7.6	6.4	6.0	7.6
Self-employment in non-agr.	6.3	5.7	5.5	6.1	6.5
Pension	33.6	33.9	33.9	33.0	33.4
Social transfers	1.0	1.6	2.0	1.5	1.8
Stipend	0.1	0.1	0.0	0.0	0.0
Remittances (from abroad)	14.6	13.3	12.5	14.2	9.6
Maintenance					0.0
Other	0.8	0.7	0.6	0.5	0.3
% of persons abroad	6.0	5.9	5.7	6.5	4.6
Households with:					
No member abroad	87.2	87.1	87.9	86.0	89.9
One member abroad	10.6	11.1	10.1	12.4	9.2
Two or more members abroad	2.2	1.8	1.9	1.6	1.0

Table 9 Self-reported living standards indicators, 2015-2019

Indicator	2015	2016	2017	2018	2019
Living standard					
Very good	0.1	0.1	0.2	0.1	0.2
Good	12.2	13.3	14.0	14.1	19.1
Satisfactory	73.6	74.6	75.8	77.4	73.8
Bad	13.6	11.9	9.8	8.3	6.9
Very bad	0.6	0.2	0.1	0.1	0.0
How did you fare compared to last year					
Much better	0.1	0.1	0.1	0.0	0.2
Better	5.2	5.4	4.1	4.3	5.3
The same	70.8	77.5	86.4	89.1	86.4
Worse	23.4	16.8	9.2	6.5	8.0
Much worse	0.6	0.2	0.1	0.0	0.1
Income required to satisfy a decent living					
Mean	8001.1	8344.9	8912.0	9184.6	10454.7
Median	7000.0	8000.0	8000.0	8000.0	10000.0
Income required to satisfy a minimum living					
Mean	3945.5	4253.3	4580.9	4675.9	5192.1
Median	3500.0	4000.0	4000.0	4000.0	5000.0
Can the household afford					
Sudden expense of 5000 lei	12.7	13.2	12.0	12.2	20.6
Meat or fish every other day	61.7	71.0	81.0	85.6	89.4
New clothes	48.3	67.0	73.7	74.9	77.2
Heating	71.5	65.7	66.9	66.6	67.7
New furniture	5.0	5.9	6.0	5.5	8.6
Medicines	91.1	91.9	95.1	95.8	93.6
Holidays	14.1	15.2	15.6	15.6	20.1
Host friends/relatives	43.5	39.5	40.1	38.9	39.8
Financial difficulty for utilities in the last 12 months?					
Yes, once	4.2	3.5	3.0	1.9	2.5
Yes, a few times	22.4	17.4	14.1	10.7	10.3
No	73.4	79.1	83.0	87.4	87.2
Financial difficulty for bank credit in the last 12 months?					
Yes, once	3.2	8.6	7.1	4.6	4.5
Yes, a few times	9.8	14.9	8.0	6.0	5.2
No	87.0	76.4	84.9	89.4	90.2