Commentary

Household Expenditure Survey, Housing and Energy Costs in Saudi Arabia

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The Household Income and Expenditure Survey for Saudi Arabia was conducted by statistical agency GASTAT in 1999, 2007, 2013 and 2018. In this economic commentary, we discuss some of the key findings and developments over the period under consideration. We devote particular attention to the “housing, water, electricity, gas and other fuels” category, which includes fundamentally important goods and services such as electricity, gas, water, and housing rent. In addition, we undertake comparisons between household expenditure surveys and other data surveys. Regional variations are examined.

Key Findings:

• The average monthly expenditure by Saudi and non-Saudi households for the broader category of “housing, water, electricity, gas and other fuels” rose from SAR 1,748 in 2007 to SAR 2,440 in 2013 and then to SAR 2,989 in 2018.

• As a share of total monthly spending, the outlays by households on the housing and housing-related group increased from 17.0% (in 2007) to 21.2% (in 2013) and then to 23.3% in 2018. Thus, this category has grown in terms of significance.

• Within the composite grouping, household spending on electricity, water and other fuels is modest relative to that of rentals and has been subject to differing trends, at first falling in nominal terms from SAR 304 in 2007 to SAR 266 in 2013 and then increasing to SAR 422 in 2018.

• The causes of the initial decline in spending are unclear; however, the period from 2007 to 2013 was one of the administered pricing periods for residential electricity and water tariffs in Saudi Arabia. The partial deregulation of electricity, water and fuel prices occurred after this period. Note that transport fuels are considered separately and are not enumerated as part of the housing group.

• An analysis of historical data for the consumer price index and its components shows that there were marked increases in the prices of electricity, gas, and other fuels in both 2016 and 2018. A first round of reforms in 2016 resulted in a reduction in government subsidies and a partial freeing up of those electricity and water prices charged to households (Ministry of Finance). A second round of reforms, commencing in 2018, affected a broader range of fuels and resulted in a further transition away from the administered prices. From 2014 to 2018, the prices that households paid for goods in the household energy subcategory (excluding transport fuels) rose at a faster rate than did the overall price index and the specific price index for “housing, water, electricity, gas and other fuels”. Furthermore, the underlying price index for housing and housing-related goods was subject to declines from 2017 onward (see Figure 7).

• From 2019 to 2022, consumer price inflation was at a low level, in the low single digits, while electricity, gas and other fuel prices remained relatively flat. Notably, the price index for housing and housing-related goods, which is, of course, composed of a substantial rental component, fell consistently from 2019 to 2021, before apparently levelling off in 2022.

Figure 1 below presents a breakdown, into categories, of average monthly household expenditure in 2018. The largest composite category is clearly housing, water, electricity, gas, and other fuels (with a 23% share of total spending), followed by personal goods and services (with a 20% share). Note that the figures are shown as an average for households of all nationalities, both Saudi
and non-Saudi\(^1\). The results for the housing composite category can be broken down further, which is done in the second part of Figure 1. Housing rent is the item with the highest value, accounting for 82% of spending within the category. Average monthly housing rent is reported to be SAR 2,458. Furthermore, if rent is considered an item in its own right, then it can be shown to have accounted for 19.2% of total monthly spending.

**Figure 1.** Composition of expenses for all households in Saudi Arabia and the breakdown of spending in the housing composite category (2018, SAR and %)

Note: The letters in the chart denote the following composite categories or subcategories:

- **C** – Culture and entertainment (3% of household spending)
- **E** – Education (3% of household spending)
- **H** – Health (approximately 1% of household spending)
- **T** – Tobacco (SAR 69.9 or less than 1% of household spending)
- **M1** – Maintenance (materials; approximately 2% of the housing composite category)
- **M2** – Maintenance (services; less than 2% of the housing composite category)
- **W** – Water supply and sanitation (less than 4% of the housing composite category)
- **G** – Natural gas (LPG; less than 1% of the housing composite category)
- **L** – Liquid and solid fuels (less than 1% of the housing composite category)


\(^1\) Under the convention applied by GASTAT, the nationality of the household head determines whether a household is classified as Saudi or non-Saudi.
The comparative figures and proportions for 2013 are shown in Figure 2. Household expenditure on housing, water, electricity, gas, and other fuels was assessed as being SAR 2,439.5 per month (with a 21% share of total spending), followed again by personal goods and services (with a 20% share). A decomposition of the housing composite category yields that the average monthly rent was SAR 2,061.3, or 84% of spending in the category as a whole. Relative to total spending by households, the share of total spending by renters was 17.9%. As in the previous examples, the results reported here are those for both Saudi and non-Saudi households in aggregate.

Figure 2. Composition of expenses for all households in Saudi Arabia and the breakdown of spending in the housing composite category (2013, SAR and %)

Note: Letters indicate the following categories or subcategories:
C – Culture and entertainment (approximately 3% of household spending)
E – Education (approximately 3% of household spending)
H – Health (approximately 2% of household spending)
T – Tobacco (SAR 53.8 or less than 1% of household spending)
M1 – Maintenance (materials; approximately 2% of the housing composite category)
M2 – Maintenance (services; approximately 2% of the housing composite category)
W – Water supply and sanitation (approximately 2% of the housing composite category)
G – Natural gas (LPG; less than 1% of the housing composite category)
L – Liquid and solid fuels (less than 1% of the housing composite category)
Source: Based on the General Authority for Statistics (2013).
Figure 3 provides a summary perspective of the breakdown of household spending by major composite category in 2007. The tiled chart indicates that the share of household expenditure allotted to housing, water, electricity, gas, and other domestic fuels was 17%, approximately the same as that spent on food and beverages.

**Figure 3.** Breakdown of the total expenses of all households in Saudi Arabia by category (2007, SAR and %)

A comparison of the three above charts makes clear that the average monthly expenditure by Saudi and non-Saudi households on the broader category of “housing, water, electricity, gas and other fuels” rose by 71.0%, from SAR 1,748.0 in 2007 to SAR 2,988.7 in 2018.

If attention is concentrated on energy and water alone, then total spending could be seen to increase from SAR 304 in 2007 to SAR 422 in 2018, representing an overall growth of 38.7%. To cast doubt aside, these amounts represent household spending on electricity, gas (LPG), domestic water, liquid fuels, and solid fuels. As noted previously, initially, in 2013, there was a reduction in total household spending to SAR 265.7. An additional factor that could have had an effect on these results is that household spending on transport fuels is evaluated separately as part of the broader transportation composite category.

Figure 4 gives a regional perspective of household spending in the composite category. As may be discerned from the mapped chart with a spending overlay, the share of household expenditure that is reportedly attributable to housing, water, electricity, gas, and other fuels ranges from 18.3% in the southwest (Jazan) to 28.0% in the north (Northern Frontier region). The dispersion of results by geographic region is partly a consequence of variations in income distribution. For example, the HES for 2018 records the highest average monthly household income for the Eastern province (SAR 14,902), which may explain
the relatively low share of the household budget (21.8%) allocated to the housing (and energy) composite category in that region. Household incomes are also relatively high for Riyadh (SAR 12,668), and the resulting household budget share for housing and energy (24.8%) is shown to be marginally higher than that in the east, perhaps also reflecting the higher housing costs in the capital city. Consistent with the earlier presentation, these figures are for Saudi and non-Saudi households combined.

Of course, there may, in addition, be a different dynamic in the regional housing markets that is not captured by the HES. At the time of the 2018 survey, the mean monthly household income in Madinah (SAR 9,646) was lower than the national average (SAR 11,984), although the share of the household budget allocated to the housing and energy composite category remained comparatively modest, at 20.7%.

There is also the standard problem of statistical error, or sampling error, which is generally more pronounced when examining survey outcomes at the regional level compared to at the national level. From the available documentation for the household expenditure surveys, it is not clear whether GASTAT was able to stratify its population samples for the regions using population census data.

A further consideration is that whereas the survey seems to have recorded household expenditure for all members of the household, the recording of household income has apparently been confined to the household head, which would explain why, for all of the regions of Saudi Arabia, the reported average monthly household expenditure surpassed the reported average monthly household income in 2018. It should be emphasized that the HES is based on a household’s own identification of its earned income and expenditure as incurred.

At the national level, the average monthly household expenditure was SAR 12,818 in aggregate in 2018, whereas the average monthly household income was SAR 11,984. Household expenditure was composed of consumption and nonconsumption items, with the latter including the purchases of shares, purchases of buildings and land, payments of instalments on home loans backed by mortgages, marriage dowry payments, and loans and gifts to others.

**Figure 4.** Heatmap. Share of average monthly household expenditure spent on the composite category “Housing, water, electricity, gas, and other fuels” in 2018. The results are for all households by region.

A geographic pictorial of the results in 2013 is presented in Figure 5. The chart shows that the share of average monthly household spending directed toward housing, water and domestic energy ranged from 18.9% in Al Baha to 30.3% in Al Qassim. There was thus a relatively wide dispersion of shares, similar to the situation that prevailed, subsequently, in 2018. Household incomes were not reported as part of the 2013 HES results.

**Figure 5.** Heatmap: Share of average monthly household expenditure spent on the composite category “Housing, water, electricity, gas, and other fuels” in 2013. The results are for all households by region.

Source: Based on the General Authority for Statistics (2013).

Figure 6 shows that in 2007, household expenditure on the composite category of housing, water and domestic energy was lowest, as a share of reported total spending, in the southern regions of Al Baha, Asir, and Najran. The similarities in the expenditure shares for these three regions were recorded, despite differences in actual total spending levels (on all goods and services). In Al Baha, the average monthly household expenditure was SAR 8,058, compared to SAR 10,081 in Asir Province and SAR 6,441 in the Najran region.
For the Eastern region and Riyadh, the rise in the share of expenditure from 2007 to 2013 was noteworthy. The growth in spending on housing, water and domestic energy surpassed the growth in total household expenditure. In the Eastern region, average monthly household expenditure in the studied category surged from SAR 2,213 to SAR 3,009, while in Riyadh, spending rose less markedly, from SAR 2,211 to SAR 2,457 over the same period. The change in the Eastern region was likely a consequence of a tightening housing market and an increase in housing rents. The partial deregulation of electricity prices that occurred in January 2018 was also a contributing factor.

Similar to the situation in 2013, it appears that household incomes were not reported as part of the 2007 survey results.

Figure 6. Heatmap: Share of average monthly household expenditure spent on the composite category “Housing, water, electricity, gas, and other fuels” in 2007. The results are for all households by region.

Source: Based on the General Authority for Statistics (2007).
Consumer Price Index and Its Constituents

Figure 7 presents a summary of the changes in the consumer price index and selected components since 2013. The index was rebased in 2013, and data were available in a consistent fashion beginning in January of that year.

Figure 7. Consumer price index and component subindices, 2014 to 2022

From Figure 7, it can be observed that the housing rental component of the CPI was subject to consistent declines from 2017 through 2021. In other words, the average charges for rental accommodations diminished steadily over the period, with a drop of 10.2% recorded in 2019 alone. These price reductions were caused by an increase in the vacancy rates of rental properties, with the underlying contributing factor being the departure of expatriate families from Saudi Arabia. There is not a nationally consistent source of data available for residential rental property vacancies; however, population age cohort models have been developed by Oxford Economics, among others. The evidence suggests that non-Saudi children and elderly persons...
were among the largest groups of persons to leave the country. According to Oxford Economics, the population of nonnationals in non-working-age categories fell by nearly 12.8% in 2018, to 3.7 million persons, and by a further 5.4%, to 3.5 million persons, in 2019. By looking further into the issue, it can be understood that the abovementioned departure of persons was brought about by the introduction of government levies on expatriate families, which took effect in July 2017. The initial fee for dependents was set to SAR 100 per family member to be paid on a monthly basis by the expatriate worker. The initial fee and the schedule of fee increases were presented in the Fiscal Balance Program policy document published by the Ministry of Finance (2016). From July 2020 onward, the monthly charge was set to SR 400 per dependent (spouse or child).

A further consideration is that the CPI and its subcomponents do not include the interest charges on home loans, and thus, such a measure is not representative of the costs of owner-occupied housing finance. Since 2015, there has been significant growth in both home ownership and mortgage-based finance due largely to government initiatives. Publicly funded housing projects have been developed under the auspices of the Sakani Affordable Housing Programme. Government initiatives to increase the availability of housing finance have also been very successful. The Saudi Real Estate Development Fund (REDF) has assisted prospective home buyers with mortgage-backed home loans provided on a concessional basis. Concurrently, the Saudi Real Estate Refinance Company, a subsidiary of the Public Investment Fund, has worked to create a secondary market in securitized home loans. Figures reported by Bloomberg Intelligence (2023) suggest that the value of outstanding home loans was equivalent to 33% of nominal, nonoil GDP in 2022, having increased from a 7% share in 2015. The omission of housing finance charges from the CPI means that the index is less likely to pick up on the impact on households of such factors as the increases in interest rates on home loans. In 2022, there was a widening of the margin between the Saudi Inter-Bank Offered Rate (SAIBOR) and the relevant overseas interest rate benchmark, the Secured Overnight Financing Rate (SOFR).

Figure 7 also shows the marked increases in the prices of electricity, gas, and water that were recorded in 2016 and 2018. These changes resulted from the Saudi government’s easing of the administered energy and water prices charged to residential users. The government foreshadowed the partial freeing up of energy and water prices as part of its fiscal balance program; reference should be made to the inaugural publication in 2016 and to the 2018 update (Ministry of Finance 2016 and 2018).

Information from household expenditure surveys is normally used to determine the weights to be assigned to different items in the CPI basket. This is a practice applied by statistical agencies in numerous jurisdictions, including Saudi Arabia. As of March 2023, a 25.5% weight was given to the housing, water, electricity, gas, and other fuels category. This weight corresponds, approximately, to the share of the same expenditure items in overall household spending (23.3%), as assessed with the results from the 2018 Household Expenditure Survey. The CPI’s weight currently given to housing alone is 21.0%. With housing accorded a relatively high weight, the reduction in the rental rates for housing from 2017 to 2021 helped dampen the overall trends in the CPI. Accordingly, the outcomes for overall price inflation were relatively modest, as can be deduced from the results for the general index shown in Figure 7. In 2019, actual price deflation occurred, with average prices reportedly falling by 2.09%.

In conclusion, the Household Expenditure Survey, conducted periodically by GASTAT, provides important baseline information to the Saudi economy on the composition of household spending. The HES provides some insight into the changing patterns of energy use over time and has the advantage of showing the results separately for Saudi and non-Saudi households, as well as presenting a regional dimension. The HES can be used to corroborate industry data on the sales of energy products. Above all, the HES is used to inform the composition of the basket of goods and services, the prices of which are monitored on a monthly basis, to determine movements in the CPI, which is a core macroeconomic indicator.
References


