THE INFLATION EXPERIENCE OF LOW-INCOME HOUSEHOLDS

BOX 3: THE INFLATION EXPERIENCE OF LOW-INCOME HOUSEHOLDS[1,2]

There are two main measures of consumer price inflation in Malta: the RPI and the HICP.[3] Both indices measure changes in the cost of purchasing a representative basket of consumer goods and services. In the case of the RPI, this basket is mainly derived using expenditure shares for residents of Malta obtained from the Household Budgetary Survey (HBS). On the other hand, the HICP basket is derived from expenditure shares in national accounts consumption data, a methodology that is harmonised across the EU. Due to these basket differences, the RPI measures cost-of-living increases for resident households, while the HICP also takes into account the expenditure of non-residents.

This box focuses on the RPI, in view of the relevance of this index for adjusting wages and rents in Malta.

The use of average expenditure patterns to derive the weights for different categories of expenditure can mask significant differences in consumption across different household types, and hence differences in the rate of inflation faced by them. Therefore, the overall average inflation rate may not always accurately reflect the cost-of-living increases experienced by certain subsets of households, such as those in the bottom income quartile.

This box estimates the inflation rate faced by low-income households in Malta from 2010 to 2020 and assesses the implications on the real value of social benefits distributed to these households. This estimation is derived by re-weighting the official RPI inflation rate using expenditure shares for low-income households from the HBS, and is referred to in the text as the low-income household (LIH) rate. For the purposes of this study, a low-income household is defined as a household within the bottom income quartile, earning less than €12,491 per annum in disposable income in 2015.

The expenditure patterns of different household types

The products and quantities consumed can vary considerably across different kinds of households and over time within the same household. Chart 1 provides an example from the most recent HBS edition, which carries data for the reference year 2015. It shows how household budget shares vary across the income spectrum.[4,5] In particular, compared to other groups, low-income households exhibit larger shares of expenditure on basic necessities such as food, housing, energy and health. On the other hand, high-income households tend to spend a larger percentage of their incomes on restaurants and hotels, recreation and culture, as well as transport services.

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[2]   This box summarises the conclusions of "The Inflation Experience of Low Income Households", *Policy Note* (2021), Central Bank of Malta. Available at https://www.centralbankmalta.org/en/policy-notes-2021
[3]   See National Statistics Office (2008): "The RPI and the HICP".
[4]   HBS (2015) available at https://nso.gov.mt/en/publicatons/Publications_by_Unit/Documents/C1_Living_Conditions_and_Culture_Statistics/HBS%20Publication%202015.pdf
[5]   "Household expenditure in Malta and the RPI in inflation basket". *Quarterly Review* 2018:3, Central Bank of Malta, pp. 33-40.

Table 1

COMPARISON BETWEEN HBS AND OFFICIAL RPI WEIGHTS[1]

(Share of total)

	Bottom Income Quartile	RPI (as at 2020)
Food	31.2	22.6
Beverages & Tobacco	5.1	4.4
Clothing & Footwear	5.8	6.6
Housing	9.4	7.9
Energy	5.4	3.3
Household Equipment & Maintenance	5.5	7.0
Personal Care & Health	11.1	8.8
Transport & Communication	14.3	22.1
Recreation & Culture	4.9	9.9
Miscellaneous	7.3	7.3

Sources: HBS (2015); NSO; author's calculations.

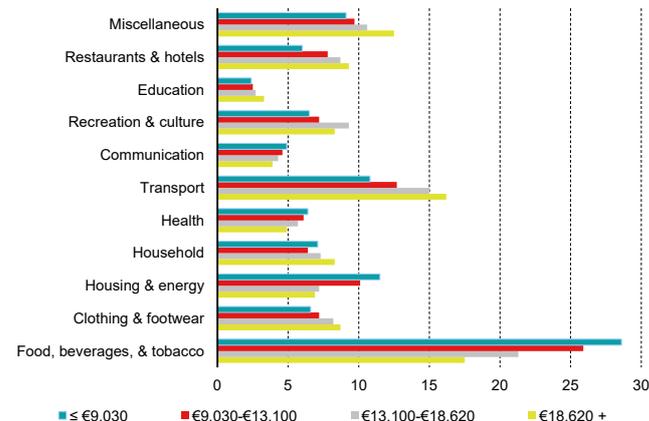[1] HBS subcomponents have been re-arranged to match RPI classification.

Due to such differences in expenditure patterns, overall measures of inflation may deviate from changes in the cost of living of certain household types. Indeed, Table 1 shows that current RPI weights are generally quite different from the expenditure shares defined in the latest HBS for low-income households. This discrepancy between official RPI weights and expenditure shares for low-income

Chart 1
EXPENDITURE BY EQUIVALISED HOUSEHOLD DISPOSABLE INCOME
(% of total annual average expenditure)

Sources: HBS 2015 (NSO); author's calculations.

households mainly occurs because the composition of the basket of goods and services used to determine overall inflation depends on all households' consumer spending on each good and service divided by the economy-wide spending. Hence, RPI weights tend to be skewed by the spending patterns of higher-income households, which account for a disproportionately larger share of total spending.

Did low-income households experience a higher inflation rate between 2010 and 2020?

In order to estimate the inflation rate faced by low-income households, this study re-weights the official RPI inflation rate between 2010 and 2020, using the consumption basket for households in the bottom income quartile. These expenditure shares are obtained from

disaggregated expenditure data provided by the NSO from the HBS 2008 and HBS 2015.

Chart 2 shows the estimated inflation rate calculated for low-income households (the LIH rate), compared with the official RPI inflation rate. Both the estimated LIH rate and the official rate generally followed the same trend since 2010. However, due to the difference in consumption baskets reported in Table 1, there have been periods where the inflation rate for low-income households has diverged from the official RPI. In particular, the inflation rate faced by households in the bottom income quartile was significantly higher during periods when food inflation was high, such as in the first half of 2010 and in 2013. The difference between the two rates peaked at over 1 percentage point during these two periods.

Chart 2
ESTIMATED INFLATION RATE FOR LOW INCOME HOUSEHOLDS[1]
(annual percentage change)

Source: Author's calculations.
[1] Defined as a household in the bottom income quartile, earning less than €12,491 per annum.

After 2013, the gap was generally smaller, following a sharp drop and subsequent stabilisation in energy prices. Between 2016 and 2019, inflation for low-income households on average stood 0.1% above the official RPI. However, the gap re-widened somewhat during 2020, to over 0.7 percentage point at one instance. This was mainly due to the sharp reduction in education tuition fees during the COVID-19 pandemic, which carries a much higher weight in the official RPI than in the LIH rate. This is primarily because low-income households tend to make more use of state-funded education (which is a benefit-in-kind) rather than private tuition.

The real value of social benefits

The next step in this study was to establish whether social benefits granted to low-income households maintained their real value during the intervening period. In Malta, the main mechanism used to compensate households for cost-of-living increases is the cost-of-living adjustment (COLA). The COLA is a partial indexation mechanism, whereby incomes and social benefits in Malta are adjusted for consumer price increases in the previous 12-month period. It is calculated on the basis of the percentage increase in the RPI applied to the social wage, established by agreement between the Government and social partners.

Chart 3 depicts the evolution of the actual minimum wage in Malta since 2010. It also shows the minimum wage as at 2010, incremented annually by both the RPI inflation rate and the estimated LIH rate. This shows by how much the minimum wage would have increased had
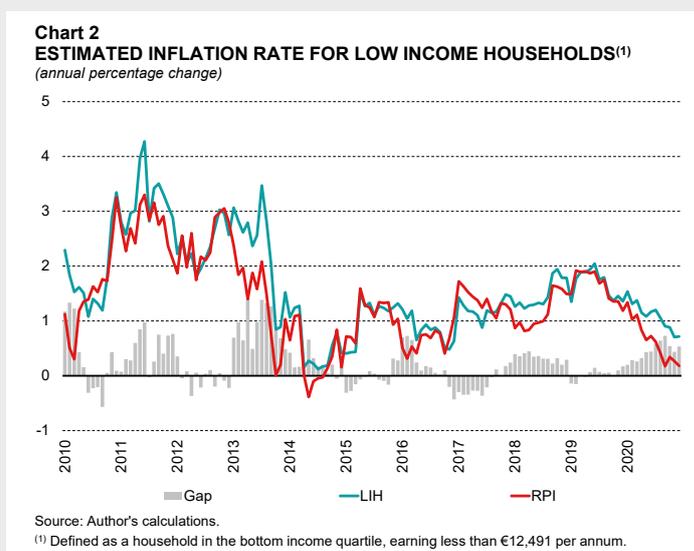
annual increments been based on pure inflation indexation – i.e. just enough to maintain its 2010 purchasing power.

The results suggest that the actual minimum wage as of 2020 stood above the minimum wage indexed only by RPI inflation, meaning that it exceeded its 2010 real value. There are two reasons for this. Firstly, as the minimum wage is lower than the social wage, the annual increments to the minimum wage as a result of the COLA are higher in percentage terms than the official inflation rate. Secondly, the minimum wage may also be supplemented by ad hoc government allowances unrelated to the COLA. For example, in 2017, the Government and social partners signed the National Agreement on the Minimum Wage.[6] As part of this agreement, the weekly COLA for 2018 and 2019 was to be supplemented by an additional €1 per week for persons earning the minimum wage.

Chart 3
NATIONAL MINIMUM WAGE
(2010 = 100; benefit as at 2010 indexed annually by inflation*)
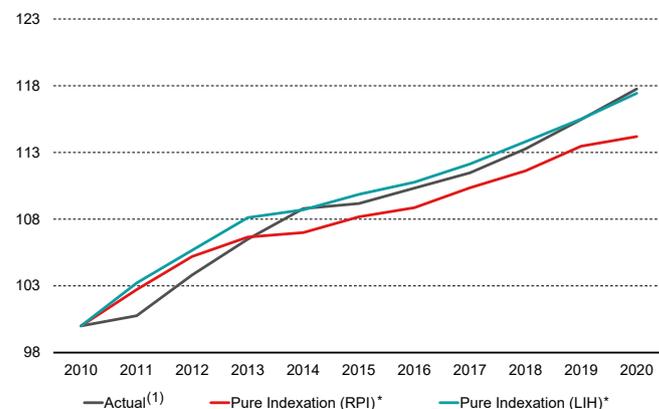
Sources: MSFC; author's calculations.
[1] Actual minimum wage is incremented annually by COLA and by ad hoc government allowances.

Chart 3 also suggests that the actual minimum wage as of 2020 stood at broadly the same level as the wage indexed by the estimated LIH inflation rate. Hence, even when accounting for the estimated inflation faced by low-income households, the minimum wage still maintained its 2010 real value in 2020. The closeness of the two series – particularly since 2014 – highlights the importance of the additional weekly supplement granted by Government during this period. In the absence of this supplement, the actual minimum wage in 2020 would have dropped below the LIH-indexed wage.

Apart from the minimum wage, a source of income received by a large number of households within the bottom income bracket is the national minimum pension. This is shown in Chart 4, along with a similar analysis of its real value as that done for Chart 3.[7] Unlike the minimum wage, the minimum pension is only incremented by two-thirds of the COLA. However, the minimum pension has been subject to non-COLA increments to a much larger extent than the minimum wage in recent years. Examples include the Cost-of-Living-Bonus (CLBO), which was introduced in 2008 and is equivalent to the one-third COLA, and a number of increments introduced from 2016 onward.[8]

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[6] See MCESD (2017) "National Agreement on the Minimum Wage".
[7] Minimum pension calculations are based on a person retiring in 2010.
[8] Budget measures affecting the national minimum pension can be found at https://finance.gov.mt/en/The-Budget/Pages/default.aspx

When accounting for all increments, the national minimum pension has significantly exceeded the inflation-indexed pension since 2013. This is the case when accounting for official RPI inflation as well as for the estimated LIH rate and suggests that the purchasing power of the national minimum pension as of 2020 was higher than in 2010.

Chart 4
NATIONAL MINIMUM PENSION (MARRIED, FULL RATE)
(2010 = 100; benefit as at 2010 indexed annually by inflation)*
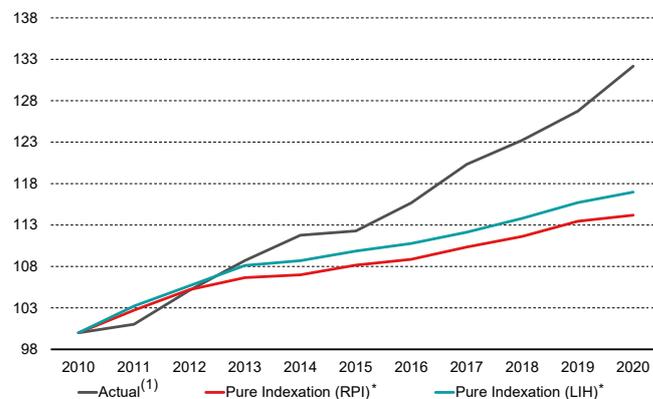
Sources: MSFC; author's calculations.
(1) Actual minimum pension is incremented annually by 2/3 COLA, the CLBO, and other ad hoc government allowances.

Conclusion and limitations

These results suggest that during the period between 2010 and 2020, households in the bottom income quartile did experience some periods of higher inflation compared with the official rate, particularly when food prices were rising. However, the differential between inflation faced by low-income households and the official RPI rate has narrowed significantly in recent years, mainly reflecting lower inflation for essential commodities such as energy.

When accounting for official RPI inflation, the minimum wage and the minimum pension in 2020 both recorded increases in their real value. When accounting for the estimated LIH inflation rate, the real value of the minimum wage was maintained, while that of the minimum pension increased. This is mainly due to additional government pension allowances beyond the COLA. Here it must be noted that the aim of this analysis was to assess the real value of social benefits over time, not to evaluate the adequacy of these benefits.

It is necessary to highlight some caveats with the above analysis. The calculation of consumption baskets based on the RPI classification requires the re-classification of the individual expenditure items found in the HBS, which depends heavily on the author's assumptions and calculations. Furthermore, the sample population surveyed by the HBS is taken from the latest Census, which was held in 2011. During the intervening period, the population of Malta grew rapidly due to migrant inflows, which may have significantly altered the household distribution away from that used in the HBS. The HBS is published very infrequently, and hence its ability to capture changes in consumption patterns over time is limited. A case in point is the change in consumption patterns during 2020 caused by the COVID-19 pandemic and subsequent containment measures.

Moreover, this study does not take into account the impact of social benefits in kind, such as public health and education. Since these benefits tend to be provided at zero cost or below market price by the Government, this might ultimately lead to an overestimation of the inflation rate faced by low-income households.

This study takes price changes as given by the official RPI index. The products included in the RPI basket are representative products, and hence the inflation rate does not take into account the wide range of substitutable products available for consumption, to which consumers can turn in response to price changes.

Further research in this area should include a more detailed, micro-level study on the specific products purchased by low-income households, as well as changes in the prices of these products. This research could be used to calculate an inflation index for low-income households, separate from the official RPI. Such an index could serve as a guide in measuring by how much social benefits could be increased over and above the COLA to ensure that the purchasing power of low-income households is maintained. This would make the granting of supplementary allowances more transparent and effective, as current benefit adjustments tend to depend on the prevailing cyclical fiscal position.[9]

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[9]　A similar suggestion was made by Caritas, with the proposal of a Minimum Essential Budget for a Decent Living in Malta for a number of different household types. See Caritas (2020) "A Minimum Essential Budget for a Decent Living".