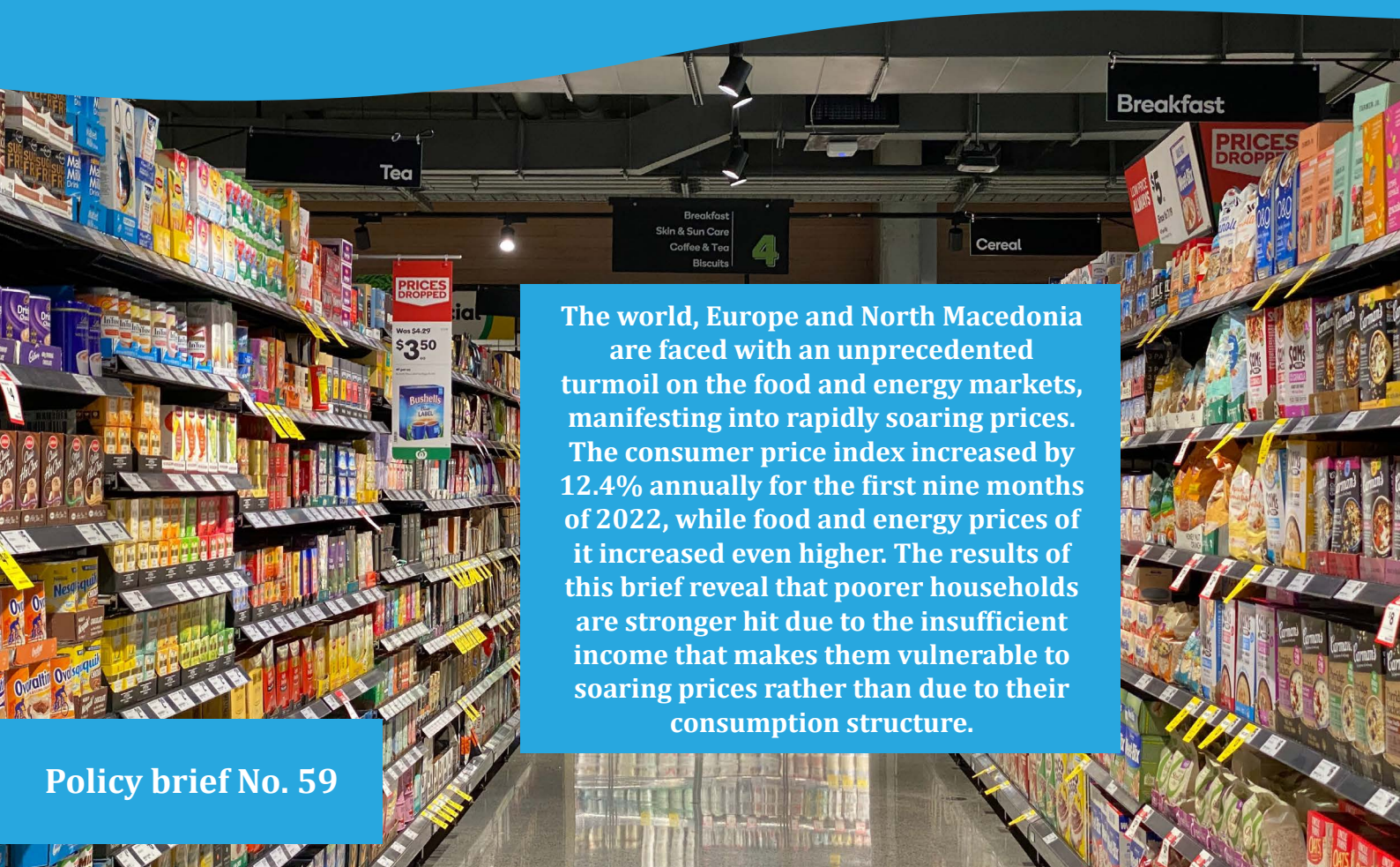


Soaring prices and households' strain: Debunking some myths



Policy brief No. 59

The brief recommends to the government to focus on aiding the households in the two poorest deciles of the income distribution as they face negative savings. This should be done by targeting of government assistance through direct cash transfers or food and electricity vouchers, as well as through gradual phasing out of the linear subsidization of the electricity consumption.

The world, Europe and North Macedonia are faced with an unprecedented turmoil on the food and energy markets, manifesting into rapidly soaring prices. The consumer price index increased by 12.4% annually for the first nine months of 2022, while food and energy prices of it increased even higher. The results of this brief reveal that poorer households are stronger hit due to the insufficient income that makes them vulnerable to soaring prices rather than due to their consumption structure.

PROBLEM

The invasion of the Russian Federation over Ukraine that started on February 24, 2022, followed by rounds of sanctions imposed onto it by the western allies, resulted in tectonic shifts on the global political and economic scene. Russia has been a large exporter of primary products, most notably a variety of basic food items, as well as oil and gas; with the severe impairment of their availability on the global, though particularly on the European market, the supply significantly reduced. At the time, the world and the European continent were exiting the pandemic, yet facing its lingering effects which mainly manifested through disturbed supply chains. On the side of electricity generation, the ambition related to the Green Agenda in Europe, over 2021 faced a lower supply of electricity due to lower power generation based on renewables due to weather conditions

amid closures of the power plants based on fossil fuels. The combination of factors resulted in price pressures – onto the basic food and energy commodity markets – even in late 2021, which then surged after Russia invaded Ukraine.

North Macedonia, as small and open economy, is exposed to such global and European developments. The country has favorable climate for food production yet it is a large net importer of food and related items. For instance, in 2021, the size of imports of food and live animals has been almost double than the exports in the same category (an exact factor of 1.91). Reasons may be sought in the agriculture being low-pay, low-productivity sector for years if not decades, hence unlikely having secured comparative advantage of the country on the global marketplace, neither having substantially benefited from the growing

agricultural subsidies, which mainly repose on their social role.

In the energy sector, the situation is equally dire. The country produces only about half of the electricity it consumes, and major part of it – about two thirds – is produced in the inefficient and fossil-fuel based thermo-power-plants, built about half century ago and already facing decay of the quality of the lignite sourced from the mines in their vicinity. About one third of the electricity production comes from renewables, yet dominantly water, as the country has only one wind power-plant and few solar power-plants which altogether participate with less than 2% in the electricity production. It is without saying that North Macedonia does not dispose with oil and gas sites, so that the entire consumption of these is based on imports, and particularly the gas has been coming from Russia, despite in relative sense its importance remained fairly low (less than 7% in total energy consumption in the country).

Therefore, North Macedonia is heavily exposed to the global and European crisis in the food and energy markets. The soaring prices on these markets very rapidly transposed into the domestic economy. For the first nine months of 2022, the CPI increased by 12.4% over the same period of

2021. The prices of food only soared by 18.5% for the same period and the prices of some food items within this category, as bread and cereals, and oils, increased by over 25%. The prices of electricity increased by 13%, but this has been strongly determined by the state-regulated price of the electricity for households and small companies, which is still held significantly below its market price (which is paid by the large firms who purchase electricity on open market), as well below the cost of electricity production in the domestic system as the difference (caused mainly by the need to import additional lignite and residual fuel oil) has been subsidized by the government. The prices of gas in the domestic economy increased by 43.5% over the same period, of liquid fuels by 53.6%, of solid fuels by 12.1% and of heating energy by 13.9%.

OBJECTIVE

The objective of this brief is to provide a snapshot of the situation with regard to the strain the food and energy crisis imposes onto Macedonian households. Namely, it is frequently argued that the weight of the crisis is heavier for the poorer households because they spend proportionally larger share of their budget on food

items, as well as potentially on energy products. However, we would like to understand if households are differently affected by the crisis due to their consumption structure or due to their income levels. It may pave the way for designing more appropriate government measures.

METHODOLOGY

The brief is based on two distinctive features of Finance Think portfolio. The first is the MK-MOD Tax and Benefit Microsimulation Model, built and maintained by Finance Think since 2017. The model is income-based, and as such prevents that an analysis on the consumption side is directly made. Hence, for this exercise, we introduced a new module into MK-MOD which captures the consumption side, based on its usual decomposition on 12 grand items, which is largely the level we work with.

This has been made possible with the second distinctive feature, i.e. the availability of both income and consumption in one single micro-survey that is our Quality of Life Survey. One drawback of it is the fact that it was collected in 2017; with MK-MOD, we were able to recalibrate its nominal values at the level of 2021, but we did not impose/assume any changes in the structure, as this would



have been rather arbitrary. With this in mind, we proceed with this analysis.

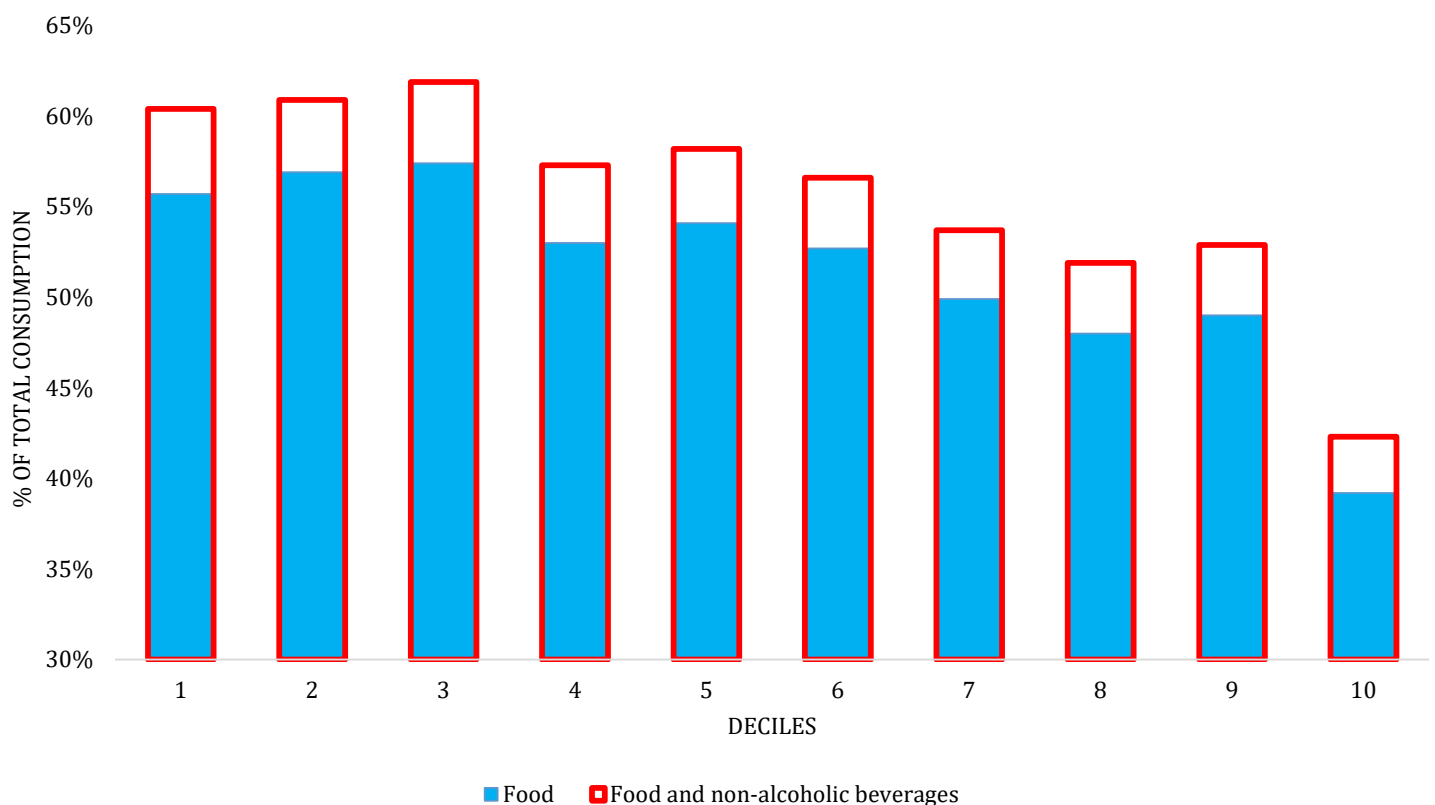
RESULTS

We first observe the share of food consumption into total household budget for the households along the income distribution, i.e. divided in 10 deciles according to their disposable income. It is worth noting that the disposable income includes all market and non-market items (like wages, pensions, remittances, social assistance etc.), but does not take into account loans or any other

type of borrowing. Figure 1 presents the share of food, and of food and non-alcoholic beverages, for the 10 income groups. We observe that there is a general downward trend, i.e. the richer the household, the lower the share of its budget spent on food. This is to be expected, however Figure 1 documents no stark differences. The largest share is actually spotted around the third decile, at 61.9%, while the smallest for the richest decile at 42.3%. However, for the ninth decile it is 52.9%, not that far from the largest share in the third decile.

Figure 2 presents the share of energy consumption in total consumption and reveals a rising trend, i.e. the richer the household, the higher share of energy consumption in the budget. This may likewise not be considered unexpected, as richer households are likely to heat larger homes, spend more on petroleum for transport and so on, despite the shares on the left may be determined also by some specifics of the survey (which imprecisely captures the irregular purchase of firewood, for example), as well some imminent problems related to usage of energy in the gray zones.

Figure 1: Share of food consumption in total consumption



Source: Finance Think's estimates.

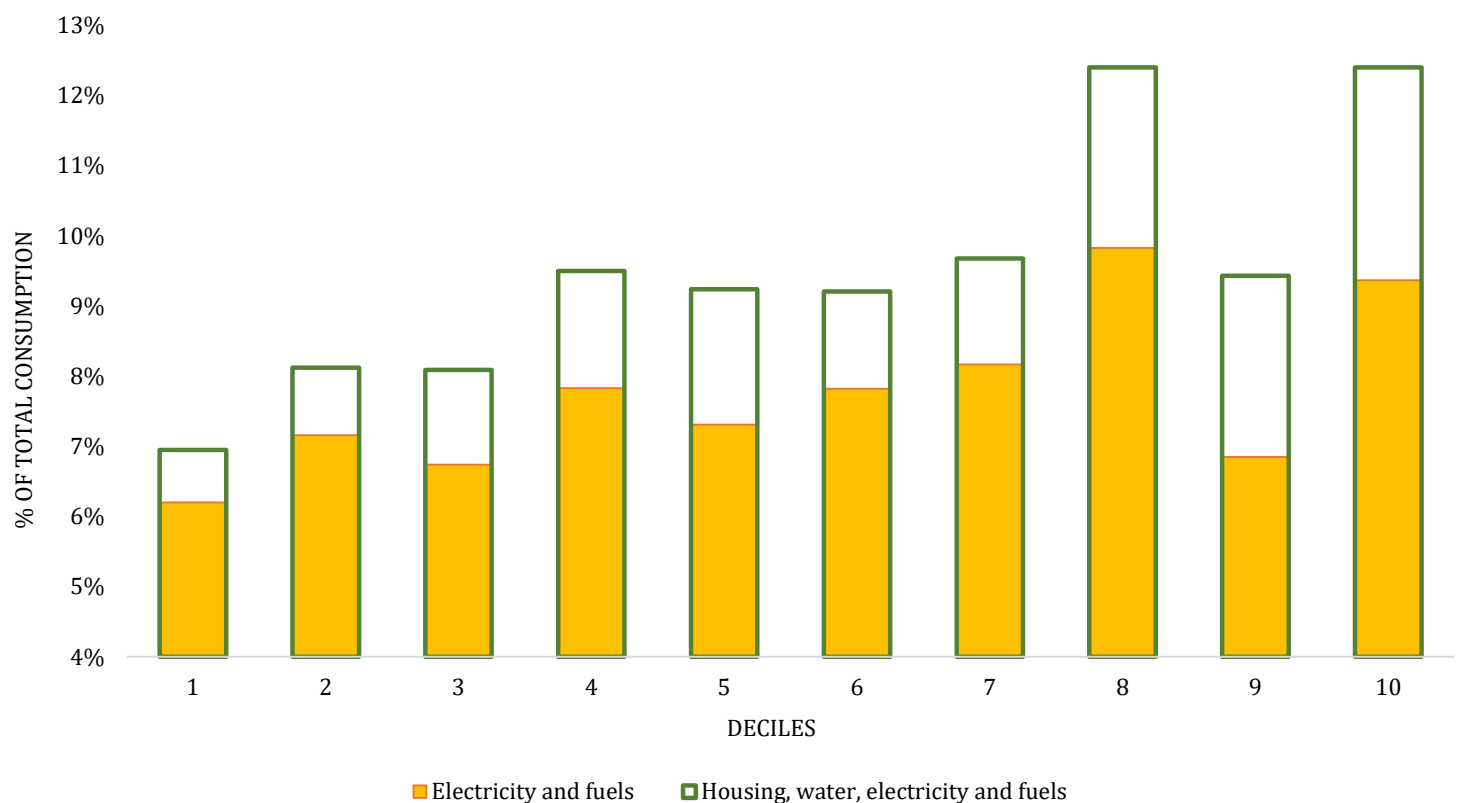
Hence, it is unlikely to be the case that poorer households have significantly larger shares of food consumption in relative sense. When both food and energy spending are taken together, their share in total household budget is rather not different for the different households by income status. Hence, if households were to retain their consumption pattern and habits during the recent price increases, their consumption would have increased as on Figure 3. On the figure, we impose the increases in prices of various consumption items

observed for the period January – September 2022 as published by the national statistics, and simply recalculate the consumption level. The figure may also be understood as a decline in purchasing power due to increasing prices, i.e. if households were not able to increase their consumption due to increasing prices, then they needed to adjust through reducing the consumption in terms of quantity.

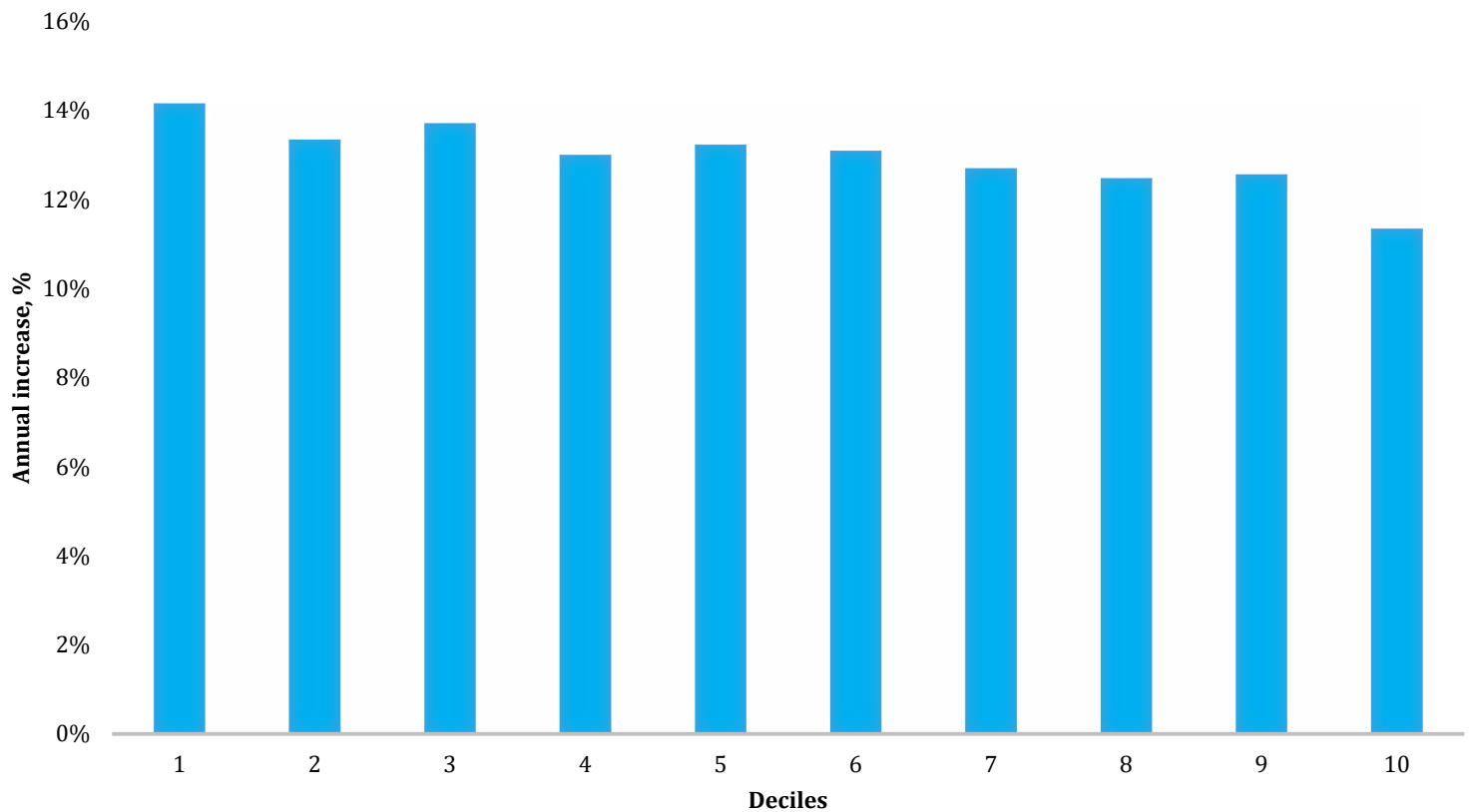
Again, Figure 3 reveals a declining pattern, suggesting that indeed the

hit of the crisis is the strongest for the poorest households, as they have lost 14.1% of their purchasing power, slightly over the 12.4% increase in prices on average, mainly due to their slightly larger spending on food in relative sense. However, if we see the richest households, they lost 11.3%, hence slightly below the average, but not dramatically below. The figure repeatedly reveals that all households have been almost equally hit by the soaring prices.

Figure 2: Share of energy consumption in total consumption



Source: Finance Think's estimates.

Figure 3: Increase of consumption due to increasing prices

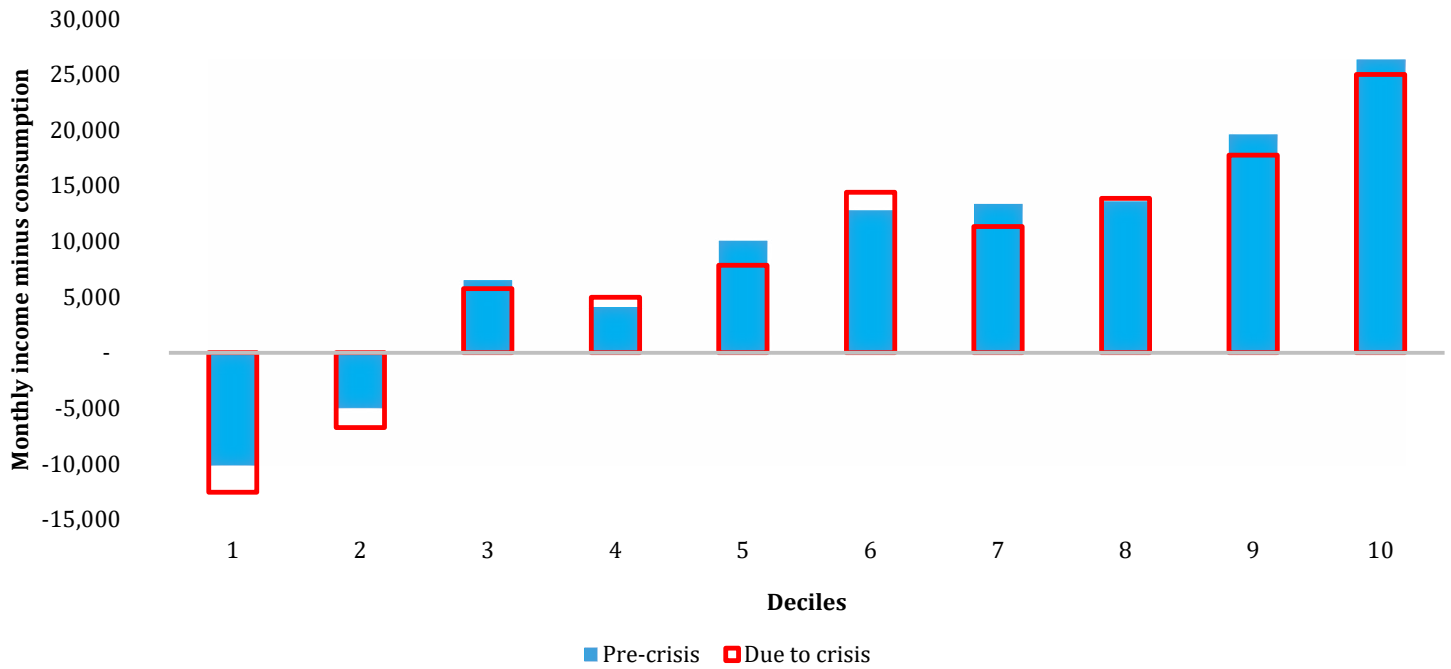
Source: Finance Think's estimates.

If the consumption patterns are not truly distinctive along the income latter, then the issue becomes clearer when consumption is confronted with the income. Clearly, households have different levels (and structures) of incomes which is the source of their vulnerability, not the consumption levels (and structures) per se. To illustrate this, we took the disposable income from the Quality of Life Survey and imposed assumed increases in the following manner: wages and related incomes increased by 9%, equal to the actual wage growth in the first half of 2022; pensions increased by 8.5%, equal to their cumulative increase by October 2022;

social assistances increased by 4%, reflecting annual adjustment usually made each March, while the rest of the income items were assumed to grow by 2.1%, the expected increase of the economy over 2022. Then, we took the changed income in 2022 reduced by the changed consumption due to increasing prices, and obtained a so-called 'excess income' to represent the savings households could make over 2022 given the afore-described developments. These are presented on Figure 4.

All households except those in the lowest two income deciles have positive savings, i.e. their income is larger than their consumption, both

before and during the current crisis. However, the crisis reduced savings almost for all households, though with some exceptions. Reductions are as large as 21.7% in the 5th decile (the middle class), though are then positive for the 6th decile, so rather without any meaningful pattern. It is more important to observe that due to the current crisis, the negative savings of the two poorest deciles deepened, by 24.1% in the first decile and by 35.4% in the second decile, representing a very severe impact of the crisis and the soaring prices onto these households.

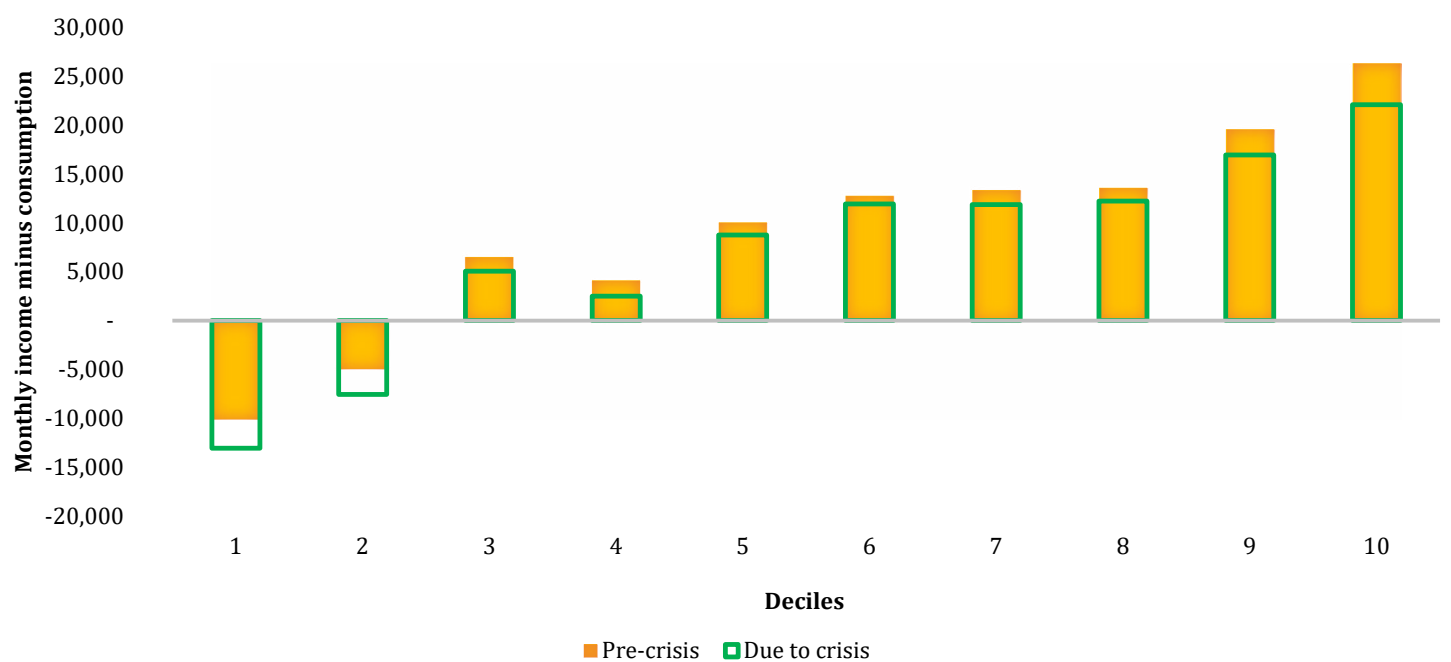
Figure 4: Savings before and during the current crisis

Source: Finance Think's estimates.

Figure 4 reveals that it is not the consumption structure but rather the income levels that warrant a focus of the government and its measures onto the poorest deciles. It also reveals that majority of the households are capable of bearing the brunt of the

crisis onto their shoulders without government support. On Figure 5, we make an arbitrary assumption that the price of electricity and fuels jumps by 50% instead of the current 13%, reflecting a cruel removal of the subsidizing of electricity prices

including through the preferred VAT rate. Results suggest that the impact will be stronger for the first two deciles, but they anyway needed a support. While, all the rest of the households have the space to bear such an increase.

Figure 5: Savings before and during the current crisis, with assumed removal of linear subsidies on electricity

Source: Finance Think's estimates.

CONCLUSION AND RECOMMENDATION

The share of food consumption in total consumption of households in North Macedonia is not starkly different between the poorest and the richest households. Conversely, richer households consume more electricity and fuels as shares in their budgets, so altogether the share of food and energy consumption in the budgets is similar for the different households along the income ladder. Hence, the poorer households are hit stronger by the current crisis because of their insufficient disposable income to cushion against higher prices and not because of their consumption structure. Namely, the poorest quintile has negative savings, so that these actually become deeper due to the loosing of purchasing power.

Then, the big question is if all households need to obtain government support to alleviate the

perils of the crisis? The answer is clearly no. Despite all households, of all income levels, have similar shares of their food and energy items in their consumption, sheer majority of them have sufficient space in their incomes to bear the brunt of the crisis. The government support is surely needed in the two poorest deciles to compensate the loss of purchasing power. This says that:

- The government needs to divert towards targeted measures towards the households in the two poorest deciles, either through aiding their income via direct cash transfers, or through extending vouchers for food and electricity/energy purchase;
- The government needs to embark onto gradual phasing out from the linear measures, currently primarily those related to the subsidization of the electricity consumption.



Finance Think is an independent Institute for economic research and policy in Skopje.

Our Vision

To steer economic thinking for increased wellbeing tomorrow.

Our Mission

To enhance the impact of economic and social trends and policies on citizens in North Macedonia and the Western Balkans, through economic research, evidence-based and data-driven advocacy, and steering critical debate on economic processes.

The research of Finance Think helps policymakers, policy advocates, opinion makers, journalists, and the public understand the issues affecting ordinary citizens.

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