
# Measuring the impact of multi-purpose cash transfers on the well-being of Syrian refugees in Lebanon

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# Outline

- Background
- Objectives
- Data and empirical strategy
- Findings
- Conclusion

# Background

- By the end of 2018, the global forcibly displaced population reached 70.8 million (UNHCR, 2019).

- Humanitarian crises affect an increasing number of people and the average crisis now lasts more than 9 years.
  - Growth in volume and length of humanitarian assistance over the past decade (OCHA, 2019), gradually directed toward protracted crises.

- In 2016, an estimated $2.8 billion in humanitarian assistance were disbursed through cash and vouchers, up 100% from 2014 (CaLP, 2018).

# Syrian refugees in Lebanon

- Lebanon currently hosts the world's largest refugee population per capita.

- Nearly 1.5 million Syrian refugees are currently in the country, of which 910,256 are registered as refugees with the United Nations Higher Commissioner for Refugees (UNHCR) (Government of Lebanon and United Nations, 2019).

- 73% live below the poverty line set at $114 per person per month, and 55% live below the lower poverty line set at $87 per person per month (VASyR 2019).

# The Multipurpose Cash Programme (MPC)

- Starting November 2017, the World Food Programme (WFP) joined UNHCR and other organizations in the delivery of multipurpose cash assistance (MPC, $173.5/$175* per household per month) to eligible households over a 12-month period.

- This study was commissioned by the Cash Monitoring Evaluation Accountability and Learning Organizational Network (CAMEALEON) and the Multi-Purpose Cash (MPC) Steering Committee in Lebanon.

** $173.5 provided by WFP and $175 provided by UNHCR*

# Objectives

- This study aims to measure the causal impact of MPC provided by WFP and UNHCR.
- The impact is measured across multiple dimensions of well-being
  - household expenditures, food security, housing, water and sanitation, education, employment, and health.
- Specifically, the study tackles two main questions:
  - How does variation in duration of MPC affect the well-being of households across multiple well-being dimensions? short-term (<12months) vs long-term (12+ months)
  - Does MPC discontinuation have an effect?

# Contribution

- Significant variation in the evidence available on cash transfers in *development settings*.
  - There is substantial evidence on the effectiveness of cash assistance in improving food security, but more limited evidence on its effectiveness for health, education, shelter and sanitation.

- There is a need to further develop the evidence for the use of cash-based assistance in *humanitarian settings* (World Bank, 2016).

- While some impact evaluations of cash assistance in Lebanon have been carried out (IRC, 2014; LCC, 2016; AIR and UNICEF, 2018; WFP & BCG, 2017), this study is the first to analyze duration variability of cash assistance and discontinuation for several well-being dimensions using multiple waves of data collection.

# Programming questions

- Is MPC only effective after exposure that's longer than 12 months? (it takes time to see the gains)
- Are the measured gains associated with receiving cash cumulative? (gains grow with length of exposure)
- Are they temporary, reversible and lost when a household gets discontinued?
- Current practice is to re-assess eligibility for the program every year. Should this practice be revised?

# DATA AND EMPIRICAL STRATEGY

**A household survey was implemented across three regions in Lebanon (Bekaa, North and Mount Lebanon) over three waves of data collection, 6 months apart**

The different waves of data collection straddle two cash cycles:
each cycle involves giving $175 per household/month of MPC to beneficiary households for 12 months.

## Eligibility

- Households are selected on a yearly basis, based on a proxy-means tested formula that assigns to each household a “vulnerability” score based on a set of socio-demographic characteristics from the UNHCR registration database. Households are ranked according to the score from most to least vulnerable.

- The formula for the score is re-estimated yearly based on newly collected survey data, and recalculated for each household using data from the UNHCR registration database.

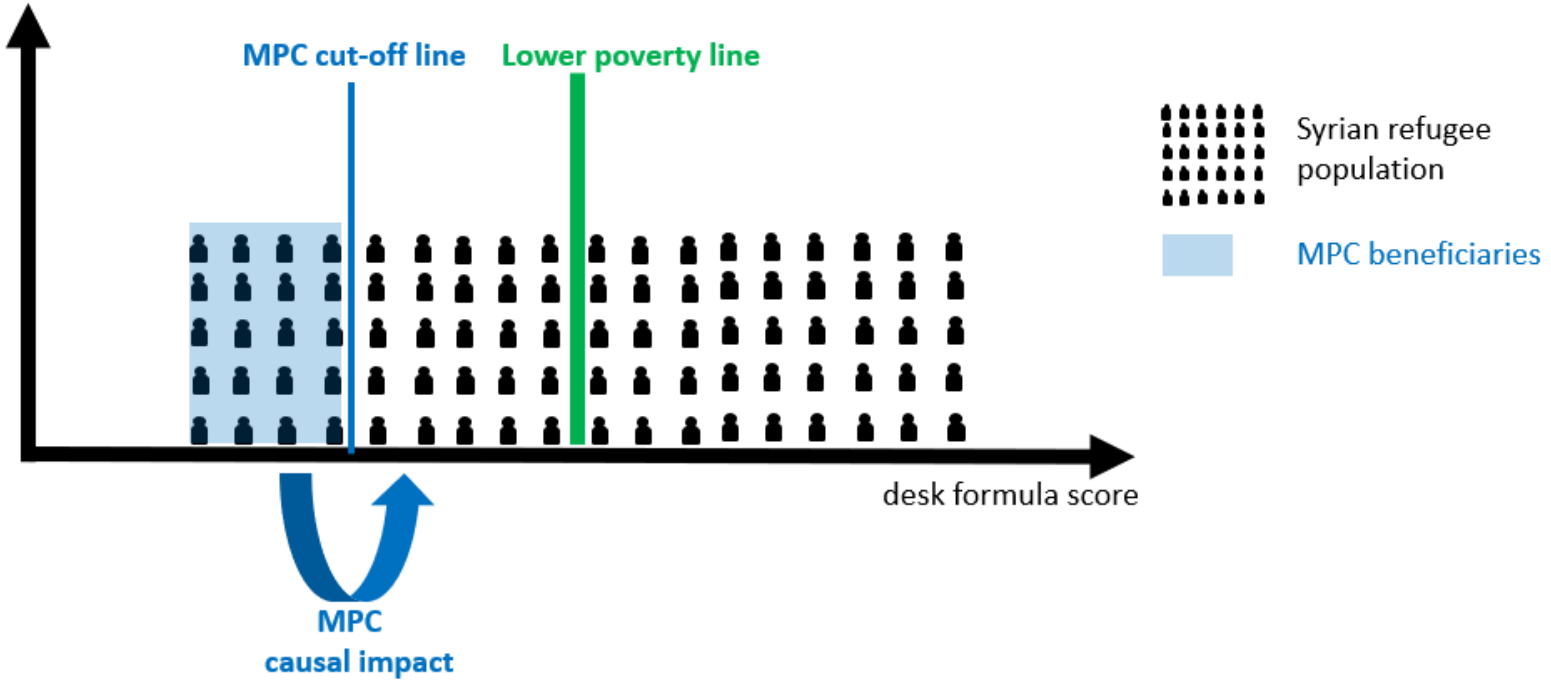
- All households with a score below the lower poverty line ($87 per person per month) are eligible for MPC.

## Eligibility

- UNHCR employs a geographical bottom-up targeting by including the most vulnerable households in each geographic region until the region's allocated proportion is reached given its budget constraints.

- WFP follows a bottom-up approach to distribute MPC by including in the programme households starting from the lowest scores and moving up the scores until the allocated funding is fully disbursed.

# Disbursement in each region and each wave



## Quasi-experimental design

- The point at which the funding is fully disbursed creates an arbitrary cut-off line creating a quasi-natural experiment around the last eligible households:
  - households below this arbitrary cut-off line receive MPC, those above it don't.

- If we can show that households on either side of the cut-off are similar (since the cut-off is arbitrary), then any difference in outcomes between households on either side of the cut-off can arguably be caused by the receipt of MPC (Imbens and Lemieux, 2008).

- To check the validity of this approach, the similarity of households on observable characteristics across the arbitrary cut-off is also explicitly tested.

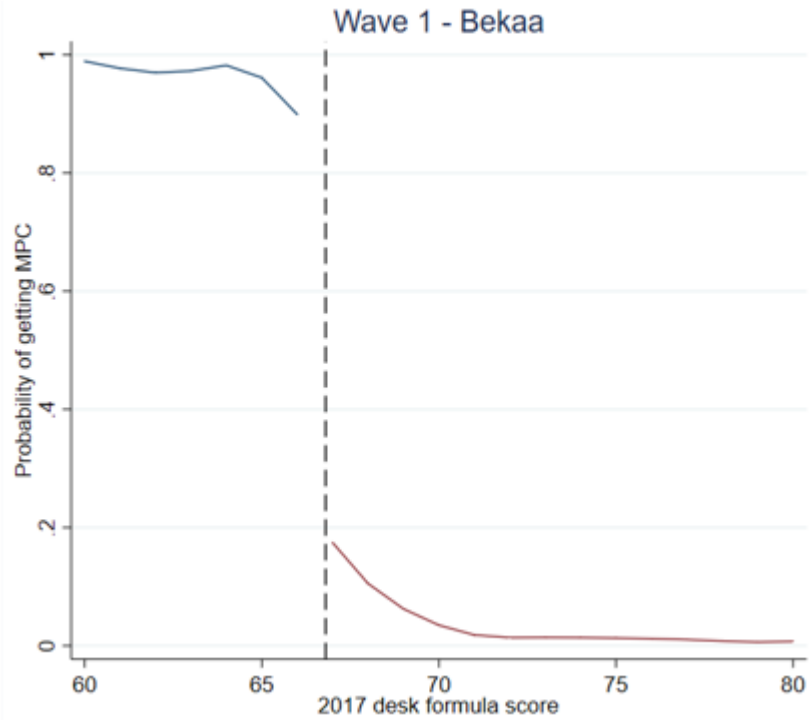
## Quasi-experimental design

- Given that compliance with the treatment assignment was not perfect, model employs a fuzzy Regression Discontinuity Design (RDD).

- The samples for the three waves were extracted from the population of households in the UNHCR database around the cut-off score.

- We append to the data collected in our surveys administrative data on household access to various cash assistance programmes.

# Probability of receiving MPC as a function of the vulnerability score is fuzzy, but almost sharp

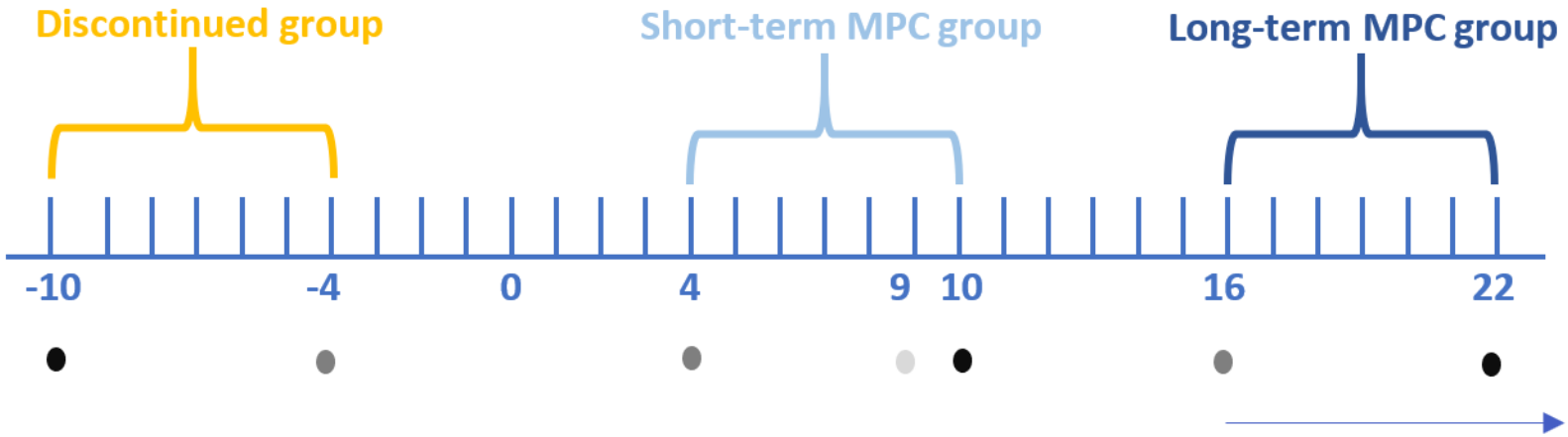


## Shift in MPC beneficiary households

- The yearly re-estimation of the formula for the vulnerability score took place between the first and second waves of data collection and led to a shift in the MPC beneficiary households, while total number of households assisted remained stable.

# MPC treatment groups

*Each is compared to the control group that did not receive MPC*




*Negative values indicate the number of months since the household got discontinued from MPC after having received it for 12 months.*

## Empirical strategy

- The advantages of using RDD are the fact that estimators of the local average treatment effect are unbiased around the cut-off score or threshold (Imbens & Lemieux, 2008).

- This estimate can be interpreted as causal if the core RDD assumptions hold, namely that
  - the running variable (in this case, the PMT formula score) does not exhibit discontinuity at the threshold, and therefore, shows no sign of score manipulation, and
  - observable household characteristics are also continuous at the treatment cut-off line.

## For our outcomes of interest Y, we calculate the fuzzy RDD Local Average Treatment Estimator (LATE) as follows:

$$\lim_{\epsilon \to 0} \frac{E(Y|score = c - \epsilon) - E(Y|score = c + \epsilon)}{Pr(MPC|score = c - \epsilon) - Pr(MPC|score = c + \epsilon)}$$

- This translates to estimating the difference in the outcome, Y, as the score approaches the cut-off $(c)$ divided by the difference in the probability of receiving the treatment $(MPC)$ from both sides of the cut-off.

- Each component of the LATE is obtained through a non-parametric estimation of *Y* (for the numerator) and of MPC (for the denominator) as a separate function of the score on each side of the cut-off *c*. The functions on each side of the cut-off are fitted using a kernel-weighted local polynomial regression.

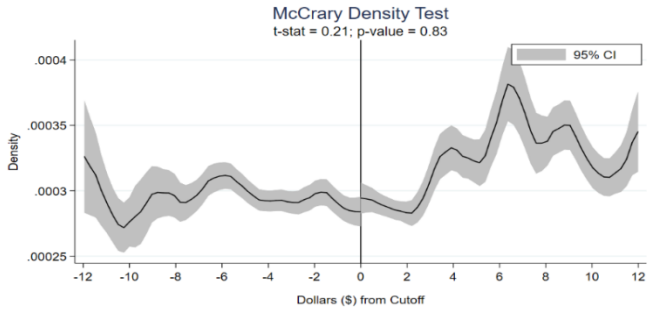
## Score manipulation

- The running variables used in our analysis, the 2017 and 2018 PMT scores are not prone to human manipulation.

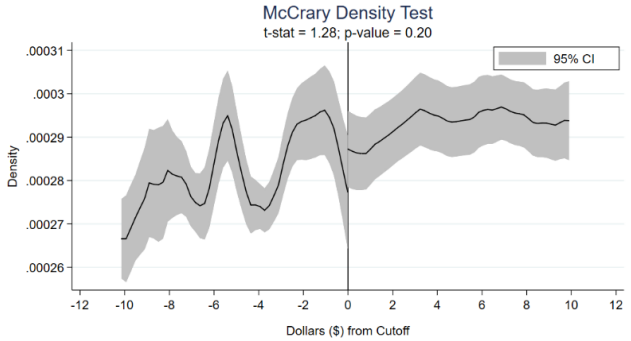
- The PMT formula does not rely on household visits data, but instead is based on regression coefficients and data from the UNHCR registration database.

# We use the McCrary (2008) density test, which showed no significant discontinuity in the final analyses run on the data from the 3 waves

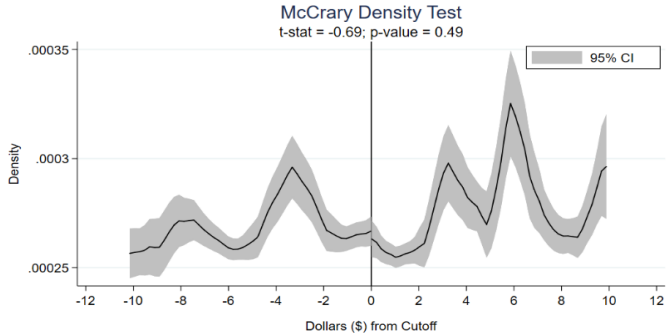
**Wave 1**




**Wave 2**




**Wave 3**



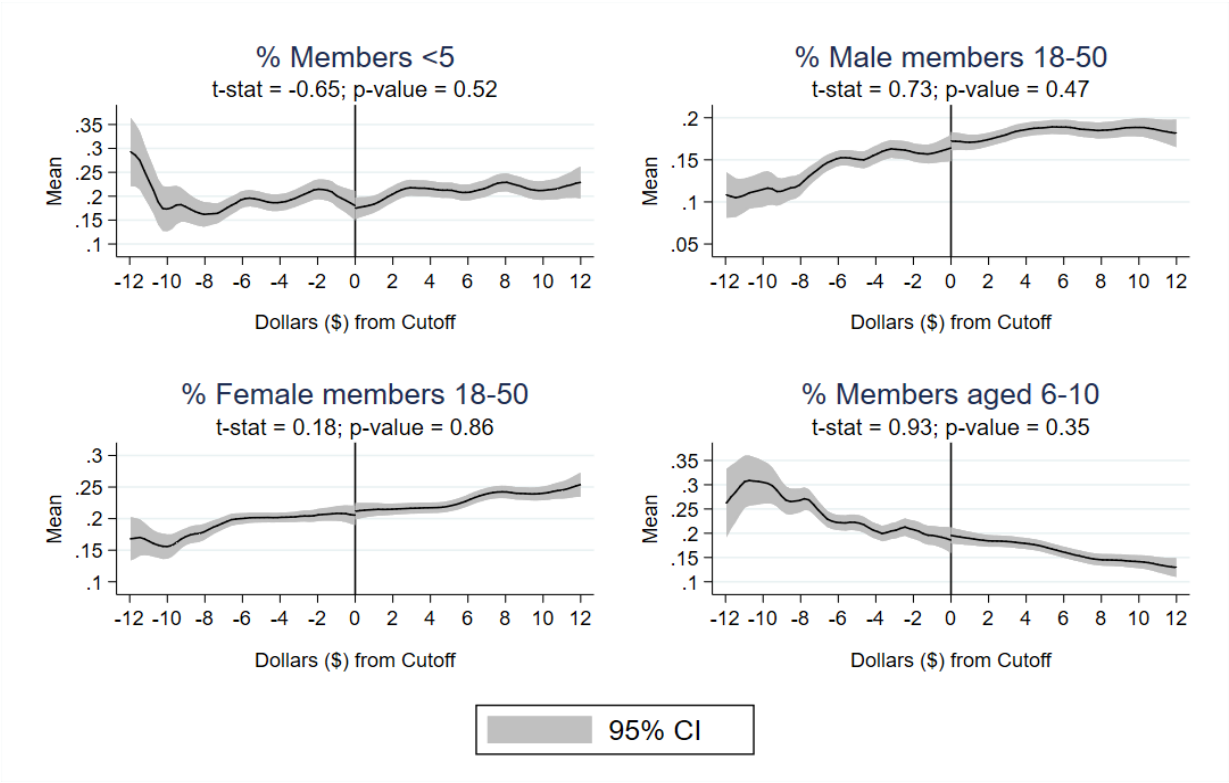
# Balance checks

- We also check that observable household characteristics are continuous at the cut-off.

- Tested observables include:
  - other types of cash assistance (UNHCR winter cash assistance, UNICEF child assistance, WFP cash or voucher food assistance)
    - key socio-demographic variables (age, sex, and level of education of the head of household)
    - other observable characteristics of the household (disability, age composition, marital status, etc...)

- Balance checks showed no discontinuity at the cut-off except for few variables (household size, dependency ratio and share of members above 60) but the difference in means between the groups above and below the cut-off was negligible and would not affect the identification of the treatment.

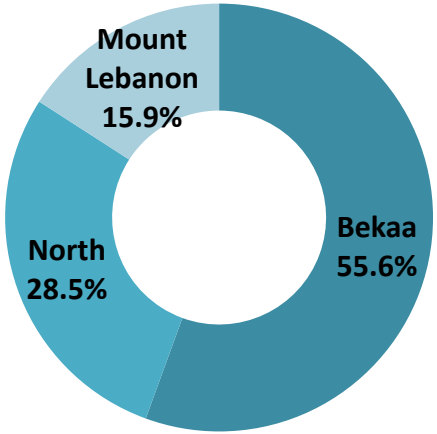
# Example of wave 1 balance checks

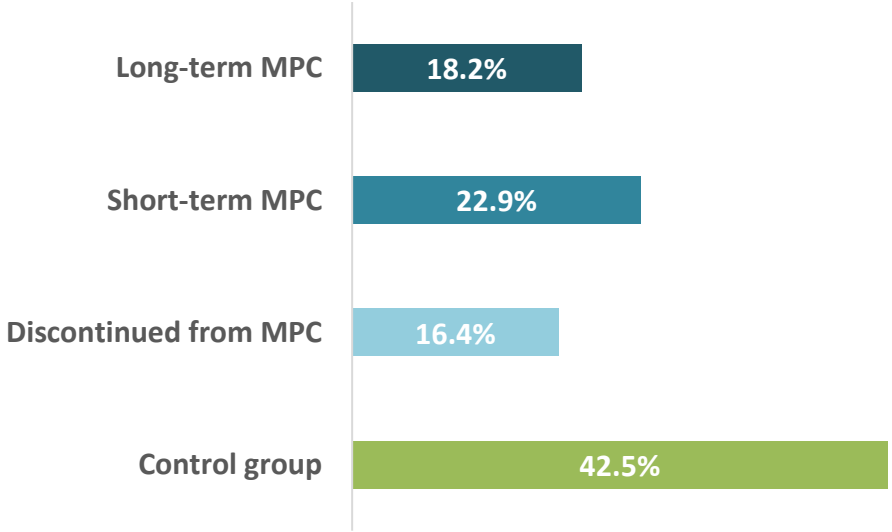



# DESCRIPTION OF THE POPULATION OF INTEREST

# Regional distribution and treatment groups

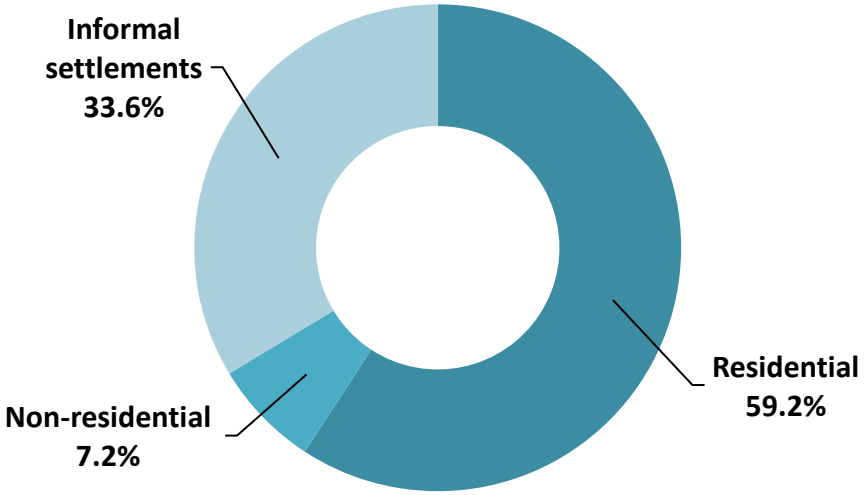
*Total sample size: 11,457 HHs*

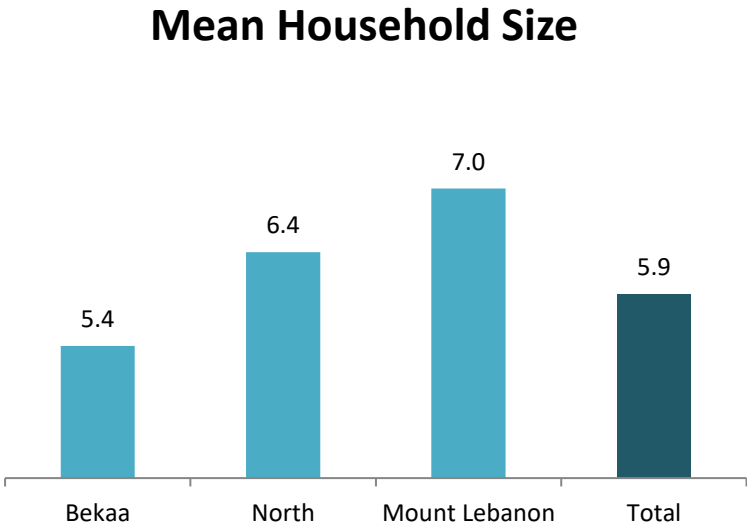


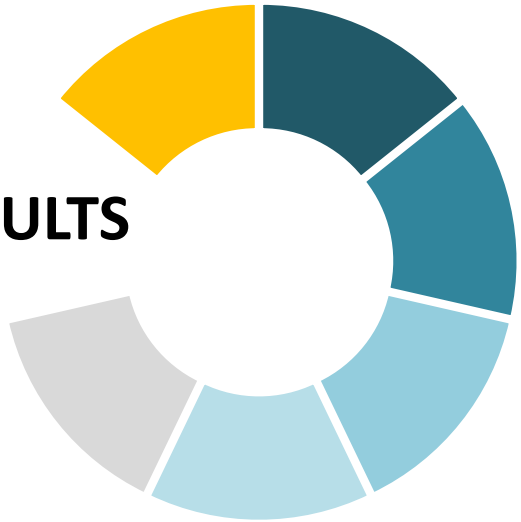

*The North, Bekaa and Mount Lebanon regions include 85% of the total Syrian refugee population and 94% of MPC beneficiaries.*
*-UNHCR registration database (November 2018)*

# A third of HHs live in informal tented settlements, with a mean household size of 5.9 members

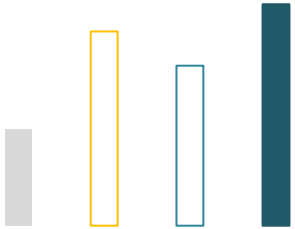


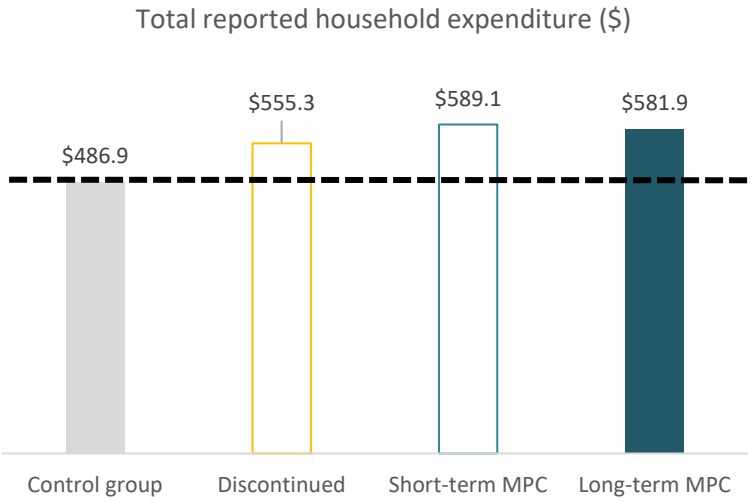
# RESULTS



# HOUSEHOLD EXPENDITURES



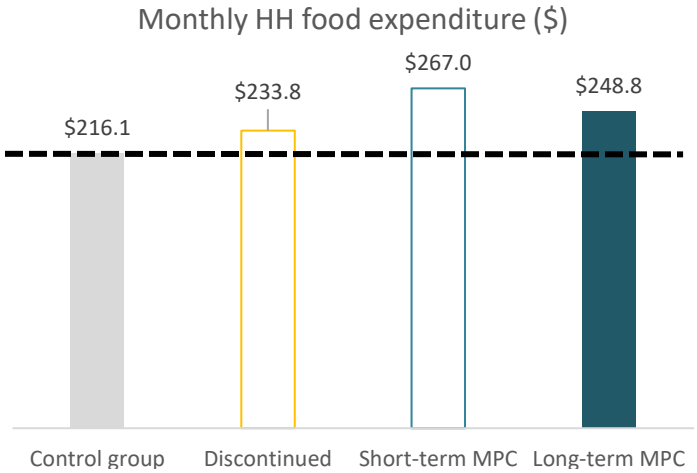
# MPC led to a significant increase in total reported monthly household expenditure from $486.9 among the control group to $581.9 among the long-term MPC group (p-value=0.009)




*Note: Colour-filled bars indicate statistically significant results at P<0.1*

- The estimated change in total reported expenditure ($95.0) is lower than the MPC transfer value ($173.5/$175)
- self-reported expenditure can be affected by recall bias and respondents might misreport expenditures if they believe it would affect their access to assistance.

# A $32.7 significant increase in monthly food expenditure was observed for the long-term MPC group compared to the control group (p-value=0.065)

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**No significant impact was detected for other household expenditures including rent and health.**

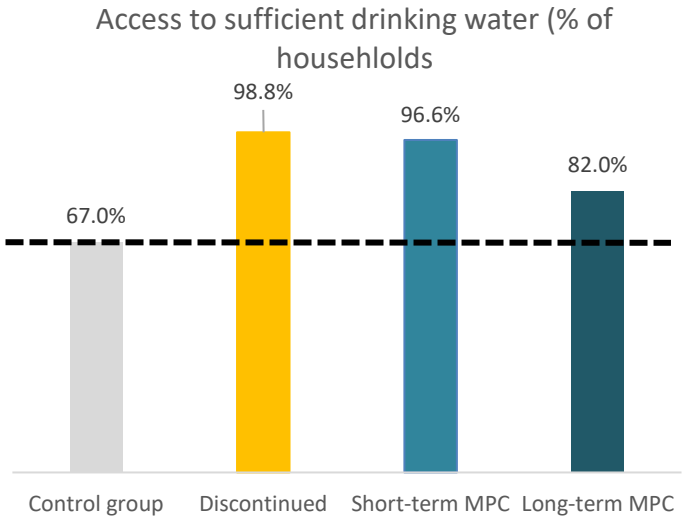
# HOUSING, WATER AND SANITATION

## Housing

- No significant impact was detected on changes in household rent expenditures and residential housing for the three treatment groups compared to the control group.

- Syrian refugees face a housing market that was already saturated before their arrival, and is now squeezed beyond any measure that a cash assistance programme alone can address.

# The impact of MPC on households reporting sufficient access to drinking water was significant on all treatment groups.

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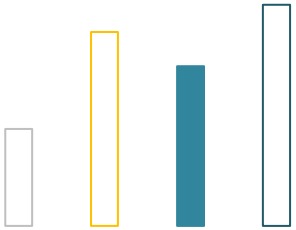
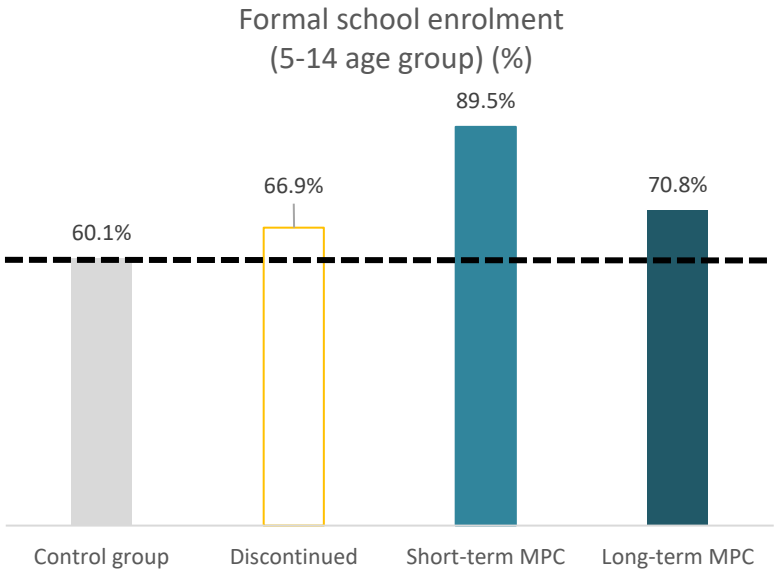
- 15 to 32 percentage point significant increase above the control group level of access at 67 per cent of households.
- p-value for the discontinued, short-term and long-term respectively are 0.006, 0.046 and 0.023.

# EDUCATION



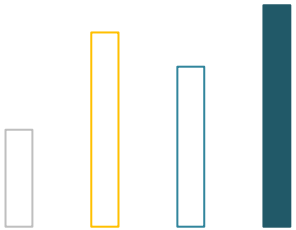
# MPC led to a significant increase in formal school enrolment in the short-term and long-term groups.



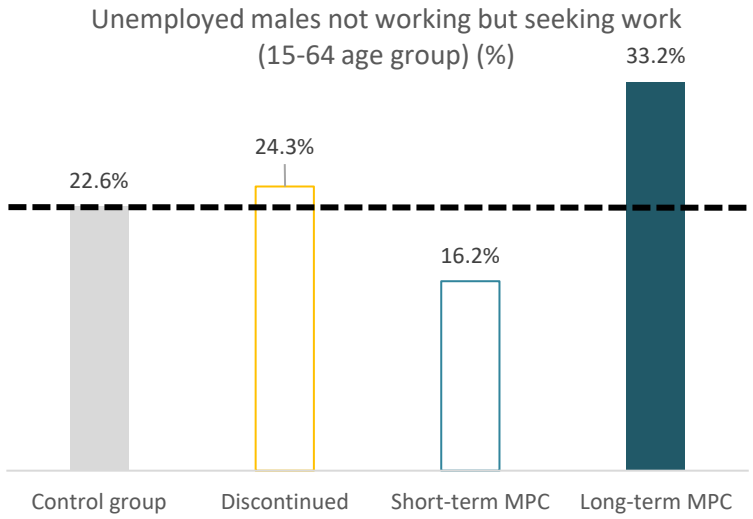

*Note: Colour-filled bars indicate statistically significant results at P<0.1*

- Cost of education was cited as the main reason for not enrolling in education.
- P-value=0.004 for the short-term impact and 0.063 for the long-term impact.

# EMPLOYMENT



# Long-term MPC allows working-age men to be more selective about the jobs they take and possibly leave hazardous or unfair work conditions.



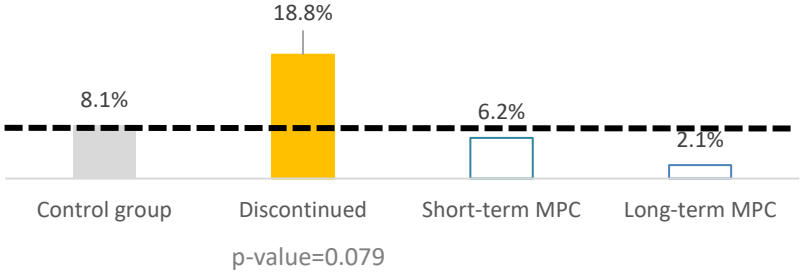

*Note: Colour-filled bars indicate statistically significant results at P<0.1*

- Long-term MPC significantly reduces employment for men from 53% in the control group to 36.3% (p-value=0.015), while significantly increasing the rate of the unemployed men actively seeking for work from 22.6% to 33.2% (p-value=0.085).

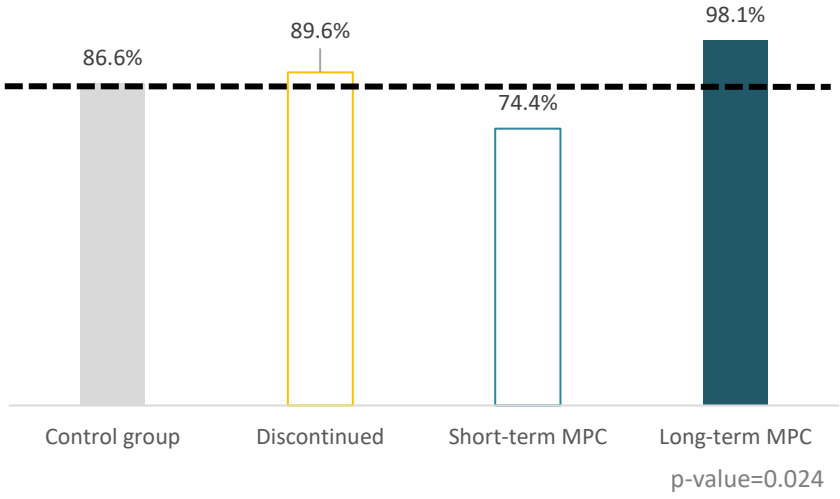
- In fact, access to any duration of MPC was correlated with a lower probability of working in hazardous conditions or having a work injury among the employed in our target population, a finding that was confirmed qualitatively.

**Long-run MPC appears to give women the option to leave the labour force and avoid low-paying and often hazardous jobs they would have otherwise had to take part in and prioritize housework and child care, a finding that was confirmed qualitatively.**

Employment - Females (15-64 age group) (%)




Female inactivity rate (15-64 age group) (%)

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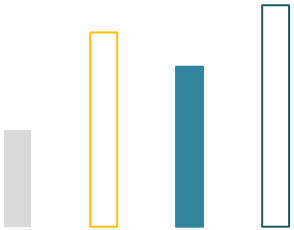
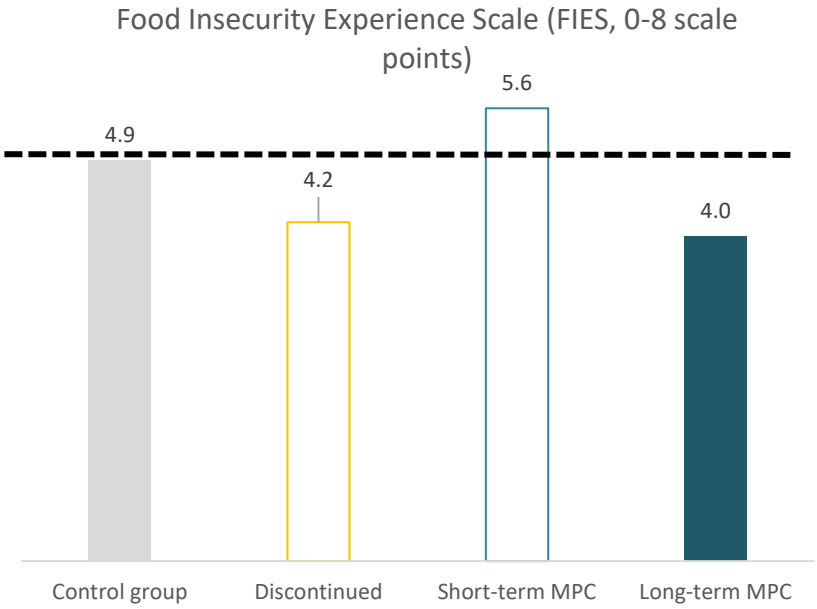
# FOOD SECURITY



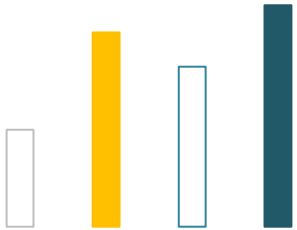
# Long-term MPC had a significant positive impact on the food security of households over and above any effect of food assistance.




*Note: Colour-filled bars indicate statistically significant results at P<0.1*

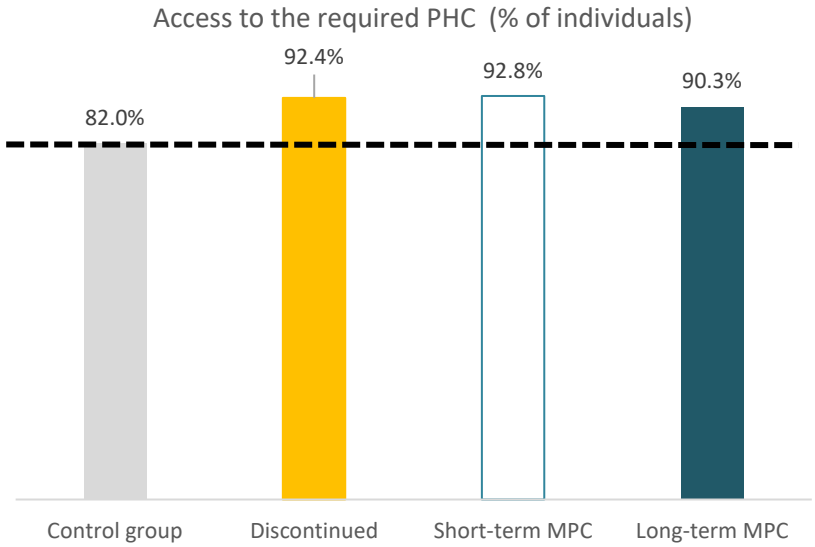
- Food insecurity was measured using households' reliance on emergency coping strategies and the Food Insecurity Experience Scale (FIES), a Food and Agriculture Organization validated experiential measure of severity of food insecurity (Ballard, Kepple, & Cafiero, 2013).
- This indicator is based on responses to eight questions about the constraints households face when trying to obtain adequate food. The scale can take values from 0 to 8, with 8 indicating the highest level of experienced food insecurity.
- MPC leads to a significant decrease in the household food insecurity experience as reported using the FIES in the long-term by 0.9 scale points from 4.9 to 4.
- A decrease of 1 point out of eight in this scale is indicative of the significant improvement in food security of this population in the long-term.

# HEALTH



## MPC led to a significant increase in access to any type of PHC.

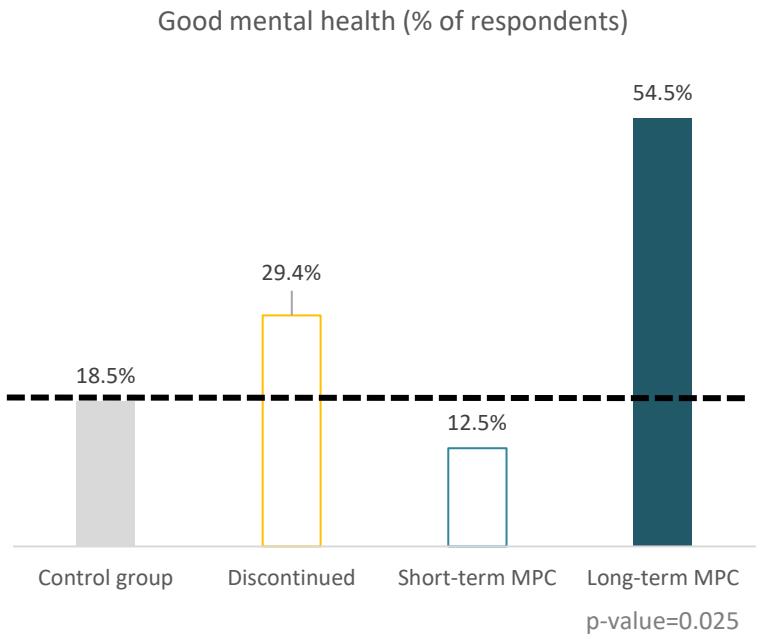
*Specifically, the long-term improvement in access to PHC is observed for children, an indication that households prioritize PHC for their most vulnerable household members.*




- A significant increase of 8.3 percentage points among individuals in long-term MPC households (p-value=0.018).
- A significant increase of 10.4 percentage points among individuals living in discontinued households (p-value=0.068).
- Improvement in access to PHC for children under 5 (from 87.5 per cent to 99.5 per cent, (p-value 0.014)) and children aged 5 to 19 years (from 83.5 per cent to 92.7 per cent, (p-value 0.066)).

*Note: Colour-filled bars indicate statistically significant results at P<0.1*

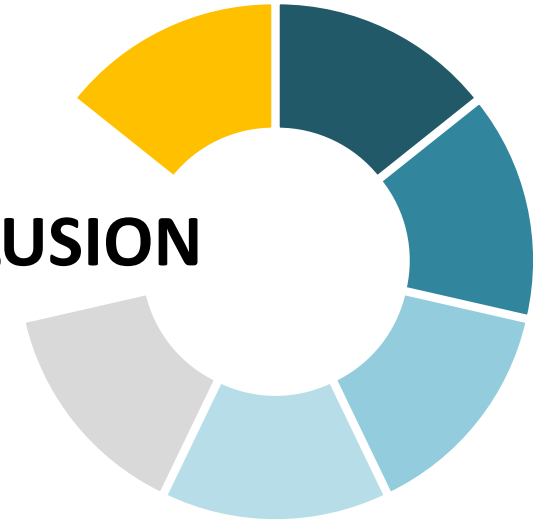
# Access to long-term MPC almost tripled the number of respondents who reported having good mental health.




- Mental health of proxy respondents was assessed in wave 3 using the five-item validated version of the Mental Health Inventory (MHI-5) in Arabic.
- MHI-5 is widely used in surveys of general health and is a good predictor of anxiety, depression, behavioural control and general distress.

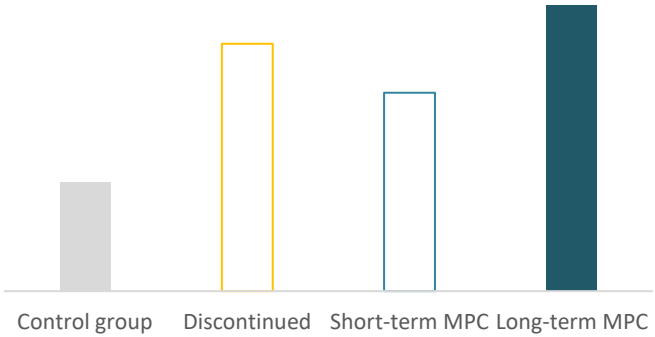
*Note: Colour-filled bars indicate statistically significant results at P<0.1*

# CONCLUSION



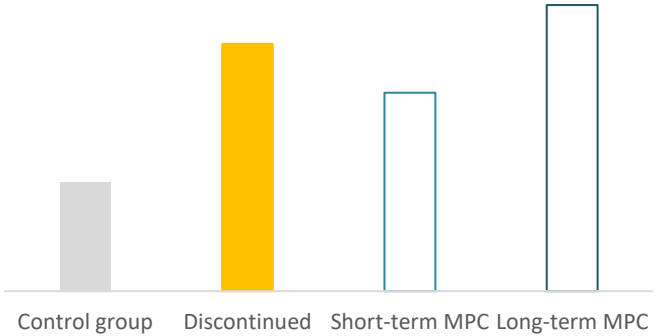
## Key take-away message 1

- The impact of MPC materialized across most dimensions of well-being in the long-term (more than 12 months), indicating the importance of households' access to a longer duration of MPC.



## Key take-away message 2

- Discontinued households do not fare worse than the control group, but they also do not have significantly better outcomes.



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- The work was commissioned by the Cash Monitoring Evaluation Accountability and Learning Organizational Network (CAMEALEON) composed of the Norwegian Refugee Council (NRC), Oxfam and Solidarités International (SI) and includes the American University of Beirut (AUB), Economic Development Solutions (EDS), Overseas Development Institute (ODI), and Cash Learning Partnership (CaLP) as implementing partners and WFP as part of the steering committee.

- The team is grateful to the CAMEALEON team and to WFP and UNHCR for the provision of data on their programming and their feedback and technical support in the design and implementation of the research project.

- The views expressed do not necessarily reflect the official policies of the governments or organizations involved.

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Thank you!