GAZA MULTI-PURPOSE CASH TRANSFER PROGRAMME IN PALESTINE - ENDLINE EVALUATION

Mercy Corps Palestine

7 AUGUST 2020

TABLE OF CONTENTS

List of Tables and Figures

Tables

Figures

Annexes

Acronyms

FCS	Food Consumption Scores
GMPC	Gaza Multi-Purpose Cash Programme
IER	Income Expenditure Ratio
MPCA	Multi-Purpose Cash Programme
MoSD	Ministry of Social Development
NFI	Non-food Items
PMTF	Proxy Means Test Formula
PDM	Post Distribution Monitoring
rCSI	reduced Coping Strategy Index

1. Executive Summary

This report presents the key findings of the pilot *Gaza Multi-Purpose Cash Programme* (GMPC) implemented by Mercy Corps Palestine in the Gaza Strip during 2019-20, with funding from the European Commission's Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO) and in partnership with the Bank of Palestine and the World Food Programme. The analysis was conducted by Causal Design, in collaboration with the Mercy Corps Palestine team.

The aim of the programme was to: 1) enable 1,227 poor and food insecure households (both refugee and non-refugee), in two governorates of the Gaza Strip (Gaza City and North Gaza), to meet their varied basic needs; and 2) compare the impact of the modalities on a range of welfare indicators, such as food consumption, use of coping strategies, and household cash flow (income and expenditure). The programme delivered three cash assistance modalities using two delivery mechanisms. All households received assistance for four months. The modalities and delivery mechanisms were:

1) **Multi-Purpose Cash Assistance (MPCA), via debit cards**: Unrestricted and unconditional cash transfers to severely poor households (i.e., below the Palestinian 'deep poverty line'). Cash could be withdrawn from ATMs across Gaza and used at point of sale devices.
2) **Food vouchers, via electronic vouchers (e-vouchers)**: Restricted cash transfers for food insecure households. The vouchers were redeemable for food items from selected retailers in Gaza.
3) **Multi-wallet transfers, via debit cards and e-vouchers**. This combined the above two modalities for severely poor *and* food insecure households (i.e., a food voucher plus MPCA top-up).

The programme identified recipients from the waiting list for the Palestinian National Cash Transfer Programme (PNCTP) run by the Ministry of Social Development (MoSD), applied the national Proxy Means Test Formula (PMTF) used in the PNCTP, and measured PMTF scores against the national poverty and deep poverty lines to determine eligibility. The key findings are as follows.

Usage of negative coping strategies declined significantly.

At baseline, 84 percent of households needed to purchase basic goods on credit or using loans. By endline, this had fallen to 35 percent (32 percent among MPCA and multi-wallet recipients). In addition, 61 percent of households resorted to reducing expenditure on non-food items, and a quarter to selling household assets, in order to meet their basic needs at baseline. By endline, less than 20 percent needed to reduce non-food expenditure to meet food needs, and no households needed to sell assets (*pages 16 – 19*).

The assistance allowed all recipients to put enough food on the table.

At baseline, e-Voucher and Multi-wallet recipients had 'poor' or 'borderline' Food Consumption Scores (FCS), and were using various negative coping strategies to ensure sufficient weekly food intake. By endline, 87 percent of recipients had 'acceptable' FCS, and less than 1% had 'poor' FCS (*pages. 21 – 24*).

All recipients closed their consumption gaps by the end of the programme.

At baseline, households were spending 1 Euro for every 65 cents of income. The data suggests this was driving significant indebtedness. By the end of the programme, monthly cash-flow had evened out, meaning households were able to cover their basic needs using income (which, for the majority, shifted from informal and unreliable sources to the cash assistance), without needing to obtain new loans or purchase goods on credit. Among MPCA recipients, this occurred within the first month of assistance (*pages 26 – 32*).

Taking on debt to cover basic needs declined significantly by the end of the programme.

At baseline, it became clear how indebted poor households in Gaza were, and how almost all of that debt was incurred simply to cover essential needs (only 3 percent used debt for investment). It also became clear that the programme would not enable households to repay their cumulative debts entirely, which for many households was thousands of Euros. *However, the programme did enable the majority of households to stop taking on new debt, and to repay some of their existing debts.* What households still lack is debt serviceability – i.e., reliable long-term monthly assistance or livelihoods for those able to work, to eliminate debt burdens (*pages 33 – 38*).

All recipients felt better able to meet a range of their basic needs by the end of the programme, especially those who received MPCA or multi-wallet assistance.

At baseline, most households said they felt 'fully unable' or only 'partially able' to meet a range of their basic needs. By endline, more households reported being 'mostly able' and even 'fully able' to meet a range of basic needs. When these perceptions were quantified, cash recipients felt better able to meet a broader range of their basic needs (*pages 39 – 40*).

All recipients reported satisfaction with the programme.

Recipients of all modalities reported high levels of satisfaction with the programme. This was especially so among MPCA and Multi-Wallet recipients *(page 25)*.

1.1 Programming Recommendations

Switch to multi-purpose cash for greater, sustained improvements in humanitarian cash indicators.

While all recipients showed improvements in key indicators and wellbeing outcomes, those receiving MPCA or multi-wallet showed slightly larger improvements (for example in FCS), and showed these improvements sooner. For the most vulnerable, who struggle to meet a range of basic needs, unrestricted and unconditional cash is recommended to enable these households to meet basic needs and reduce their financial burdens in the absence of opportunities for livelihoods.

Consider longer term assistance for the most vulnerable, indebted households.

After 4 months of assistance, food consumption was sufficient and the majority of households were no longer resorting to negative coping strategies. However, without longer-term assistance for vulnerable households, the trends seen in this evaluation would likely reverse and return to baseline levels. Greater impact would likely be seen over 8-10 months, and would be more likely to alleviate financial burdens. Supplemental programme modalities (such as livelihoods assistance) should be considered to enable more households to move beyond aid dependency.

Develop a livelihoods-based Coping Strategy Index.

While the key indicators used in the programme suffice as indicators of impact, going forwards a Gaza-specific Coping Strategy Index would offer a more holistic measure of both household vulnerability and needs, and MPCA programme impact. As the data shows that FCS is not a complete representation of household vulnerability, a more nuanced understanding of household coping strategies, both negative and positive is needed, particularly to more appropriately target interventions.

Research household debt.

Given that debt was the most commonly reported coping strategy, and the significant levels of debt households maintain, it is important to better understand what types of debt are taken on at a micro-level; how debt is used, including among wealthier or employed households; and the key barriers to repayment, including perspectives from lenders.

In conclusion, the endline shows the GMPC was successful in raising vulnerable households' food consumption and reducing their income/expenditure gap and negative coping strategies, at least in the short term. It also highlights that poor Gazan households use a range of coping strategies and their actual status and vulnerabilities are more complex than generally understood.

2. Introduction

Over the past two decades, increase in conflict, natural disasters, and economic crises has led to a rise in the implementation of social protection programmes to address the consequences of these challenges. Cash and cash-based assistance (commonly, cash and voucher assistance, or CVA) are a common tool used to protect individuals and households from shocks and support their day-to-day well-being. Such programmes have been widely used to increase access to goods and services, reduce the use of harmful coping strategies, and promote dignity as part of humanitarian response, as well as supporting broader economic recovery efforts.

Mercy Corps' cash transfer programing work represents part of an important policy response to high levels of household poverty and vulnerability in Palestine, specifically in the Gaza Strip. The population of the Gaza Strip face eroded households' purchasing power and resilience owing to: high rates of unemployment and poverty, electricity, water and fuel shortages, political tensions, and a drastic reduction in international aid. Key factors continuing to drive this protracted crisis include: the longstanding Israeli blockade, the internal Palestinian divide, public sector salary cuts, funding cuts for humanitarian programmes, recurrent outbreaks of violence, and the chronic energy crisis.

The main provider for these households, the Ministry of Social Development's (MoSD) National Cash Transfer Programme, is underfunded. In 2019, when Mercy Corps' programme was being established, MoSD had a waiting list of over 8,000 households. To address unmet needs and support the wider social protection system, humanitarian actors are providing cash transfers to allow vulnerable households to meet a range of urgent basic needs. As these programmes are aimed to prevent populations from sliding deeper into poverty, ensuring implementation effectiveness through evaluation has been a key part of Mercy Corps cash transfer design and delivery.

The Gaza Multi-Purpose Cash Programme

The Gaza Multi-Purpose Cash (GMPC) programme aimed to enable households in poverty to meet both basic and emergency needs. The programme was implemented by Mercy Corps with funding from ECHO and in partnership with the World Food Programme, the Bank of Palestine, and a payments subsidiary, PalPay. Over a period of five months, up to May 2020, cash-based assistance was provided to vulnerable households in Gaza City and North Gaza governorates of the Gaza Strip. The programme utilised three cash-based modalities to do so: 1) multi-purpose cash assistance (MPCA), 2) restricted e-vouchers for food items, and 3) a Multi-Wallet transfer comprised of both MPCA and food vouchers. This programme provided four monthly cash transfers to 1,227 households (4,908 transfers) across two of Gaza's governorates (Gaza City and North Gaza), with a transfer value derived from a minimum expenditure basket.

The outbreak of COVID-19 increased the concerns of the Gaza population, especially the most vulnerable households who are at risk of being left behind in times of crisis. More restrictions were imposed on movements in Gaza, and key service providers were either restricted or closed during March 2020 in particular. Mercy Corps proposed to ECHO an increased cash transfer value to ensure the programme caseload will be able to meet increased hygiene needs, which will in turn help reduce risks of infection. Two additional top-ups were provided to the programme caseload in April and May 2020. The additional value of was 25.5 Euros per household, based on the initial MEB's hygiene items prices, with a slight increase due to price changes following the onset of COVID-19.

Table 1: The Gaza Multi-Purpose Cash Programme

Cash Transfer Modality	Transfer Value (EUR)	Total Per Household	Number of Households
MPCA	175	700	627
Food Voucher	63	252	300
Multi-Wallet	112 (MPCA) 63 (Food Voucher)	700	300

The programme targeting used the household's position below the poverty line and, for two of the recipient groups, the household's food consumption score (FCS), as shown in **Figure 1** below. Eligibility for the programme was determined using a proxy means-test formula (PMTF) which was applied to households on the waiting list for assistance from the MoSD's Palestinian National Cash Transfer Programme (PNCTP). This approach allowed for the estimation of monthly household consumption, which was measured against the national poverty line and deep poverty line. The PMTF was used in tandem with the FCS because, after the baseline assessment, it was found that some households living below the deep poverty line were food secure, while others were food insecure. Using the FCS helped to determine who should receive a partly restricted transfer (Multi-Wallet assistance). In utilising this targeting approach, the programme aimed at assisting the most poor and food insecure households in Gaza City and North Gaza to meet their basic needs while also supporting the expansion of the PNCTP to vulnerable and underserved households. The MPCA transfer was 175 Euro per household per month, while the e-Voucher recipients received 63 Euro (equivalent to that provided by the World Food Programme for a household of six people).

Figure 1: GMPC Programme Targeting Framework
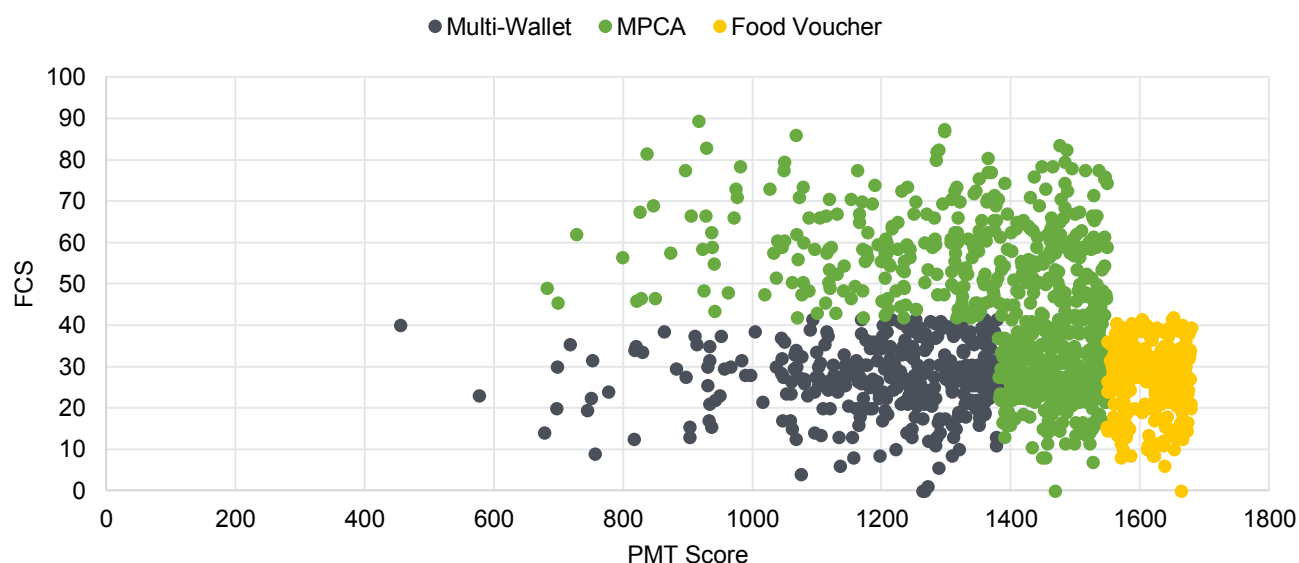
Understanding the Impact of the Programme

To understand how the different cash modalities compared across a range of key programme indicators, including food consumption, the use of coping strategies, and household basic needs expenditure, data was collected various points throughout the programme. At the start of the programme, baseline data was collected in December 2019 on all 1,277 eligible households[1]. A sample of 644 households[2] was then selected for follow up through three rounds of post distribution monitoring (PDM) at which similar variables were collected. Endline data was then collected in May 2020 on the same sample of households. The rounds of data provide the potential to explore a range of insights, such as the vulnerability profiles of beneficiary households in the target areas (Gaza City and North Gaza) as well as changes in multiple dimensions of household well-being.

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[1] The programme received 1,976 applicants, of which 1,277 were deemed eligible and received assistance.

[2] Sampling calculations indicated that 577 households were needed in order to meet sample size requirements. This number was increased to 650 at baseline, to account for attrition and ensure an adequate sample at endline.

3. Research Design

Research Questions

The following research questions and sub-questions were developed to provide the framework for conducting the evaluation.

QUESTION 1:

Which cash modality had the largest effect on the programme's key indicators (FCS, rCSI, and overall satisfaction with the programme)?

    a. Is there evidence that modalities impact dimensions' vulnerability differently (e.g. negative coping, reduced or lower quality consumption, etc.)?

QUESTION 2:

How did income and consumption patterns change over the duration of the programme for each of the recipient groups?

    a. How do the different categories of consumption change as percentages of total consumption, between the recipient groups?

    b. How do the income-expenditure and the food expenditure ratio change?

    c. Is there evidence of increased saving or investment into productive or household assets after receiving assistance among any of the recipient groups?

QUESTION 3:

After receiving the transfers, how does the use of negative coping strategies change among the different recipient groups?

    a. Are there, overall, reductions in the usage of the most common coping strategies? Are reductions in some strategies replaced by use of others? Are there any households who do not need to resort to any coping strategies?

    b. After receiving assistance, do households still resort to incurring debt, measured as a both a source of income and a coping mechanism? Do debt repayments exceed newly incurred debts?

    c. Do the sources of and reasons for incurring debt change? Is any recipient group more indebted after the assistance compared with other recipient groups and the baseline?

QUESTION 4:

How do recipient's perceptions of their ability to meet their needs change over the duration of the programme?

QUESTION 5:

Are any of the changes in the key indicators or economic metrics – FCS, coping strategies, cash-flow, or debt – influenced by or correlated with demographic factors, such as the sex of the head of the household or household size, individual vulnerabilities, such as chronic illnesses, or by human capital factors, such as levels of education?

Key Indicators and Outcomes

To answer the research questions, the evaluation focused on a number of key indicators to understand and estimate the potential impact of the GMPC programme. The key indicators are:

- Monthly coping strategy use;
- The household rCSI score;
- Food consumption scores (FCS);
- Income and expenditure (or cash-flow; measured using the income-expenditure ratio, or IER);
- Household debt levels;
- Satisfaction with the programme;
- Subjective ability to meet needs (measured using a novel Meeting Needs Index).

These indicators, many of which are commonly used in MPC programming, are used to inform the appropriateness and feasibility of MPC as a core component of future bash-based assistance in Gaza. Research shows that cash-based responses in emergencies are an appropriate, cost-efficient, and effective alternative to traditional, sectoral assistance focused on food and non-food items. More specifically, there is a growing body of evidence that suggests that cash transfer programmes positively impact a range of household well-being outcomes.

4. Methodology & Limitations

Sampling Strategy and Measuring Impact

To understand how different cash modality groups compared across the key indicators, data was collected at various points throughout the programme. Baseline data was collected in December 2019 on all 1,277 eligible households[3]. A sample of 644 households were then selected for follow up through three rounds of PDM during which data for the same variables was collected, enabling comparative estimation of programme impact[4]. The 1st round of PDM was sampled with a 95% confidence level and a 3% margin of error, to account for attrition during the subsequent surveys. Endline data was collected in May 2020 on the same sample of households (by endline, the sample had reduced to 556 households, a 4% margin of error). The endline evaluation uses descriptive statistics and analysis of variance to identify trends and associations that demonstrate the impact of the programme, and overall household wellbeing after 4 months of cash assistance.

Quantitative Approach and Analytical Methods

The quantitative approach for answering the research questions is summarized in **Figure 2** below. Various statistical methods were used, with comparison of descriptive statistics to understand how each transfer group fared post-assistance. These tests indicate whether observed differences across key indicators and outcomes at the level of each group were associated with the assistance received, or more likely the result of chance.

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[3] The programme received a list of 1,976 households, of which 1,277 were found eligible and received assistance.

[4] As there was no experimental process for assigning 'treatment,' it is important to note that the results from this research will be unable to directly attribute a causal relationship between cash assistance and household well-being.

Figure 2: Research Questions and Statistical Tests

Research Question		
Which cash modality had the largest effect on the programme's key indicators? → ANOVA → Post-Hoc Test		
How did income and consumption patterns change over the duration of the programme for each of the recipient groups? → T-Test → Trend Analysis		
After receiving the transfers, how does the use of negative coping strategies change among the different recipient groups? → T-Test → Trend Analysis		
How do recipient's perceptions of their ability to meet their needs change over the duration of the programme? → Frequencies → Trend Analysis		
Are any of the changes in the key indicators, cash-flow, investments, coping strategies, and debt influenced by or correlated with demographic or human capital factors? → Correlation Analysis		

Analysis of Variance, or ANOVA, is a statistical technique that is used to check if the means of two or more recipient groups are significantly different from each other. The ANOVA checks the impact of one or more factors by comparing the means of different samples. It is a parametric test based on a normal distribution and enables the evaluation of mean differences in a single hypothesis testing using a single alpha level. The hypotheses assumed is that all recipient group means are equal.

The ANOVA will be used to measure whether differences in average indicators or outcomes for a specific cash modality are due to the cash itself. After the ANOVA, a post-hoc analysis called a Tukey's test will be conducted. This test will compare means of all recipient groups to check if they are significantly different or similar. The test statistic for the Tukey's test is a modified t-statistic that corrects for multiple comparisons.

The T-test is an inferential statistic used to determine if there is significant difference between means of two recipient groups, which may be related in certain ways. The test is applied where the data follows a normal distribution, and is used as a hypothesis testing tool. The T-test will therefore be used to test the assumption (or 'null hypotheses) that there is no difference in the mean outcomes for recipient groups at baseline and at endline. If the null hypothesis is rejected, it will indicate that there *is* a difference between the baseline and endline means, indicating impact. Since the data from the GMPC programme is drawn from the same sample collected before and after treatment, a correlated (or paired) T-test will be used, in which case, each observation is used as a control sample against themselves. Frequencies, charts, plots, and line graphs will be used to summarise categorical and ordinal variables.

Furthermore, correlation analysis will be conducted to measure the association between the programme's key outcomes and household demographic factors such as gender, health, household size, and education. The Pearson's r correlation coefficient measures the strength of a linear relationship between two quantitative variables. The relationship is considered strong if the R-value is greater than 0.7, moderate between 0.5 and 0.7, and weak or having no correlation when less than 0.4.

Limitations

Data Collection

Following the onset of the COVID-19 pandemic in March 2020, the Gaza Strip was officially closed for all but essential entry and exit on 5th March, at both the Erez and Rafaa gates. Only individuals requiring emergency medical treatments outside of Gaza were permitted to leave. Following that closure, the Palestinian Authority and the de-facto government in Gaza introduced a series of social distancing measures, including the closure of schools, public offices, and other public places such as cafes and restaurants. This restricted field work meant the 2nd and 3rd rounds of PDM, and the endline survey, were conducted remotely over the phone.

The National Cash Transfer Programme

The GMPC programme identified participants from the waiting list for the national cash programme. In January 2020, while the first payments were being prepared, Mercy Corps was informed that 140 of the households eligible for the GMPC programme would also receive support from the national programme. Mercy Corps was later informed that the full waiting list would receive assistance for one year, provided through quarterly payments. While the national transfers were scheduled to be phased, overlap in payments is very likely to have occurred between April and May 2020. This likely explains the spike in reported monthly expenditure shown in Section 5.4 below (in addition to other factors such as Ramadan).

5. Results

Impact on Coping Strategy Use

Across all recipient groups, households reported significantly reduced use of negative coping strategies by endline. In particular, there was a substantial decline in households reporting the need to 'purchase basic goods using credit' and those that 'reduced expenditures on non-food items (NFIs)', suggesting that cash and e-Voucher support was successful in enabling households to meet their various needs without resorting to harmful behaviours. There is also evidence that asset shedding in the form of selling household items and spending household savings were reduced to nearly zero across all households by endline. This potentially indicates a more lasting or stabilizing impact of the assistance.

Surveyed households during five rounds of data collection were asked to respond to questions about their use of coping strategies when faced with lack of means to meet basic needs (i.e., livelihoods or income). Figures 3a and 3b show the most and least common strategies used, as well as a declining trend in the use of the most common coping strategies following cash and voucher assistance.

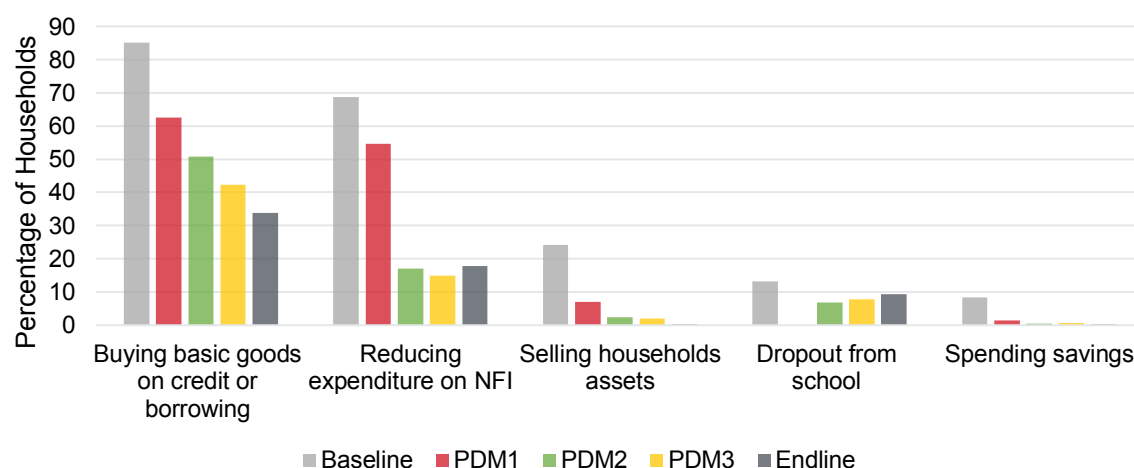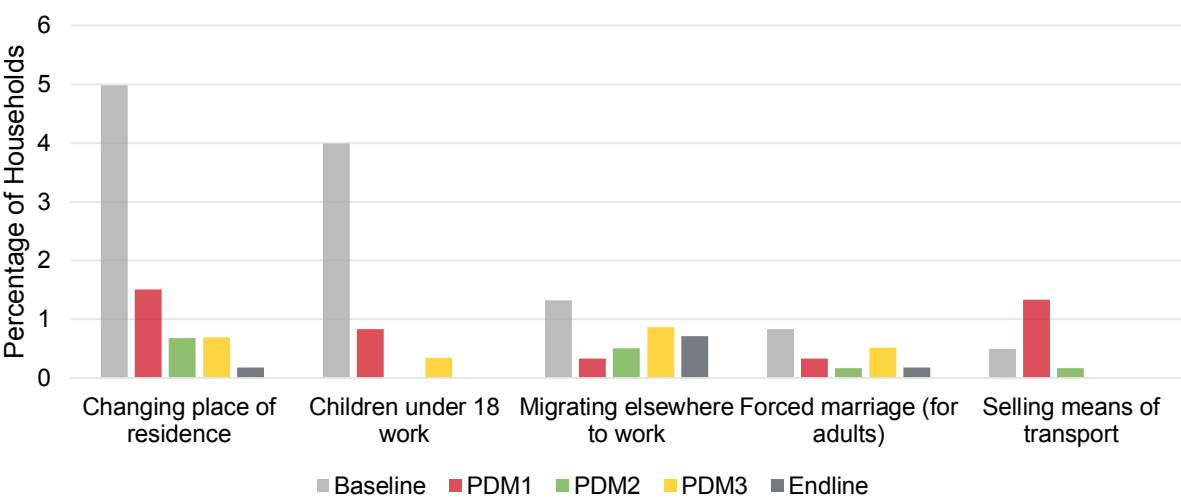**Figure 3a: Use of Most Common Coping Strategies**

Figure 3b: Use of Least Common Coping Strategies

As noted, different coping strategies were reported at baseline with most households resorting to four main strategies[5]: 1) 'buying basic goods on credit', 2) 'reducing expenditure on non-food items', 3) 'selling household assets', and 4) 'reducing school attendance'. Regardless of cash modality, the percent of households reporting use of these negative coping strategies generally declined at each round of PDM, and by endline.

- **Buying basic goods on credit:** The most common strategy at baseline, this coping strategy saw an overall decline of 51 percentage points between baseline and endline. This decline was a consistent trend across the PDM data. Household debt itself is discussed in Section 5.5.
- **Reducing expenditure on non-food items:** From baseline to endline, this coping strategy demonstrated a 51 percentage point drop in usage. There was a significant fall in usage by PDM 1, after which approximately 20 percent households continued to utilize the strategy through endline.
- **Selling Household Assets:** While not as widely reported as the other two at baseline, this strategy is effectively reduced from 24 percent at baseline to less than one percent by the endline survey, across all recipient groups. This is also mirrored by another variable around asset-shedding, 'spending savings', which also saw a decline to nearly zero.
- **Reducing school attendance:** This coping strategy showed the least movement despite following a slightly negative trend, suggesting that, within this context, cash transfers and food assistance did little to reduce this behaviour from initial levels.

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[5] The coping strategy 'relying on food on from social or religious events' was only collected at baseline, due to sensitivities during assessment, and was therefore removed from the analysis.

Coping Strategy Use by Modality

Trends seen in coping strategy use overall were also seen at the level of each modality group. Cash recipients showed the largest immediate reduction in 'buying basic goods on credit' (the most common coping strategy), but all recipient groups eventually converged by endline. The exception, however, is in the use of 'reducing school attendance'. The data suggests that while the e-Voucher and Multi-Wallet groups show a general decline in this over time, there is a lack of change in this behaviour among MPCA recipients (although, this was not overly common to begin with).

Table 2 shows a breakdown of the four main coping strategies by modality. The figures illustrate the trends of the most common coping strategies used by each of the modality groups.

Table 2: Change in the Most Common Coping Strategies, by Modality

e-Voucher (%)						% total change
	Baseline	**PDM1**	**PDM2**	**PDM3**	**Endline**	
Buying basic goods on credit or borrowing	85.1	64.3	58.9	46.4	35.1	-50.0
Reducing expenditure on NFI	60.9	58.3	20.2	17.3	14.3	-46.6
Selling households assets	24.4	3.6	2.4	3.6	0	-24.4
Reducing school attendance	7.7	0	2.9	4.8	2.9	-4.7
MPCA (%)						**% total change**
	Baseline	**PDM1**	**PDM2**	**PDM3**	**Endline**	
Buying basic goods on credit or borrowing	88.1	67.8	51.1	45.4	33.5	-54.6
Reducing expenditure on NFI	72.3	53.7	17.6	14.9	19.4	-52.9
Selling households assets	25.9	9.7	1.3	0.9	0	-25.9
Reducing school attendance	11.9	0	9.8	12.3	12.8	+0.9
Multi-Wallet (%)						**% total change**
	Baseline	**PDM1**	**PDM2**	**PDM3**	**Endline**	
Buying basic goods on credit or borrowing	85.1	54.0	43.5	34.1	32.9	-52.2
Reducing expenditure on NFI	69.6	51.6	14.3	14.3	19.3	-50.3
Selling households assets	22.9	7.5	4.4	1.2	0.6	-22.4
Reducing school attendance	18.6	0	8.0	4.9	11.2	-7.5

While the trends generally appear uniform across modalities, there is a deviation when comparing school attendance: MPCA households show little change over the life of the programme, and it shows the only endline percentage increase in any coping strategy. It is not evident in the data why this is, however this coping strategy was the least common among MPCA recipients at baseline, and is likely driven by social circumstances not captured in the assessment.

Why some households continued to purchase basic goods on credit at endline is inconclusive. They did not have larger households than the overall average, average monthly incomes were very similar (211 Euro, *vs.* 226 Euro for those no longer purchasing on credit), as was average monthly spending. While they did have larger total debts (6,962 Euro *vs.* 6,036 Euro), this was uncorrelated with still needing to use debt or credit to meet basic needs[6].

Changes in the Reduced Coping Strategy Index

Analysis of reduced Coping Strategy Index (rCSI) scores shows that there are statistically significant improvements across all households from baseline to endline, with overall rCSI scores declining by an average of 84 percent. However, there are no significant differences in scores between modalities nor between recipients in Gaza City and North Gaza.

The endline assessment also included the reduced coping strategy index (rCSI) module, which measures the negative coping behaviours that households resort to in periods of crisis, but specifically to meet weekly food needs (or what is done in the absence of sufficient food), and is a frequency-based measure with a shorter recall period (one week, rather than one month). The higher the score, the more often coping strategies were used. **Figure 4** shows the improvement of rCSI scores, across all recipients, by endline.

Figure 4: Changes in rCSI Scores from Baseline to Endline

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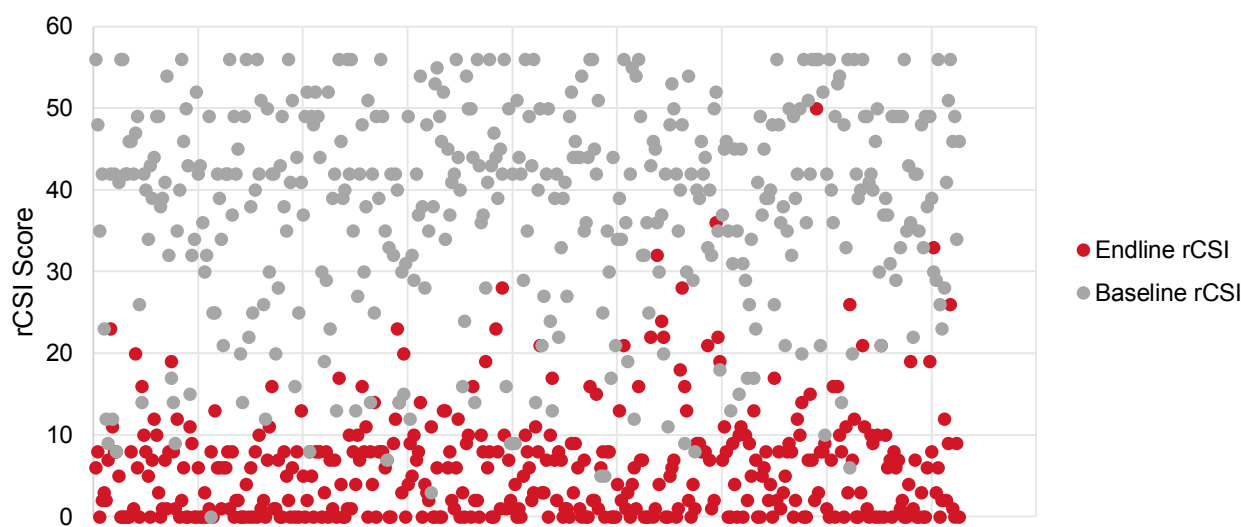
[6] Pearson's r coefficient: 0.0296.

Table 3 provides a summary of rCSI scores among the three recipient groups, which by endline are consistently and significantly lower compared with baseline, indicating that, overall, the majority of recipients were less food insecure after receiving assistance. Testing and analysis confirmed that these differences were statistically significant[7].

Table 3: Summary of Baseline and Endline rCSI Scores

Assistance Modality	Baseline		Endline		% change
	Mean	Sd.	Mean	Sd.	
e-Voucher	36.3	14.8	6.1	7.5	-83%
MPCA	36.2	13.8	6.0	6.9	-83%
Multi-Wallet	37.6	13.8	5.6	5.9	-85%
Total	**36.7**	**14.1**	**5.9**	**6.8**	**-84%**

Similarly, ANOVA was used to determine if there was a significant difference in endline rCSI scores across the different modalities. The results showed that there were no significant differences in mean rCSI scores among the three recipient groups at endline[8], suggesting that the modalities themselves provided similar levels of relief from negative coping strategy use. **Table 4** shows changes in rCSI scores by location. There is a nearly uniform reduction in scores for recipients in Gaza City and North Gaza, with an 83 percent and 87 percent change, respectively.

Table 4: rCSI Scores by Governorate

Location	Baseline		Endline		% change
	Mean	Sd.	Mean	Sd.	
Gaza City	36.6	14.3	6.2	7.1	-83%
North Gaza	36.9	13.5	4.9	5.5	-87%

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[7] A test of significance of the difference between baseline and endline rCSI scores was conducted to compare the mean score for each recipient group. The results show that a statistically significant change occurred in the food security level of the households after the intervention.

[8] ANOVA results on the rCSI scores: (F(2, 553) = 0.27, p=>0.766).

Impact on Food Consumption

There is an overall improvement in FCS for all households receiving assistance. In particular, the e-Voucher and Multi-Wallet groups, which had lower average baseline levels of FCS, were able to move from 'borderline' levels to 'acceptable' levels of food consumption by endline.

The food consumption score (FCS) is intended to capture both diet quantity and quality, as it measures dietary diversity and food frequency, and is used as a key indicator to quantify the sufficiency of weekly food intake. Households are classified as having 'poor,' 'borderline,' or 'acceptable' food consumption, depending on where their FCS falls within the standardized cut-offs[9]. Topline results show that the average FCS was 34.81 ('borderline') at baseline, and increased to 50.69 by endline ('acceptable'). **Figure 5** shows the general trend towards higher FCS across all recipients. The large variance in baseline FCS is due to MPCA recipients who, as noted above, had scores ranging from 'poor' to 'acceptable'. This leads to a less significant shift in average scores from baseline to endline.

Figure 5: Changes in Food Consumption Scores

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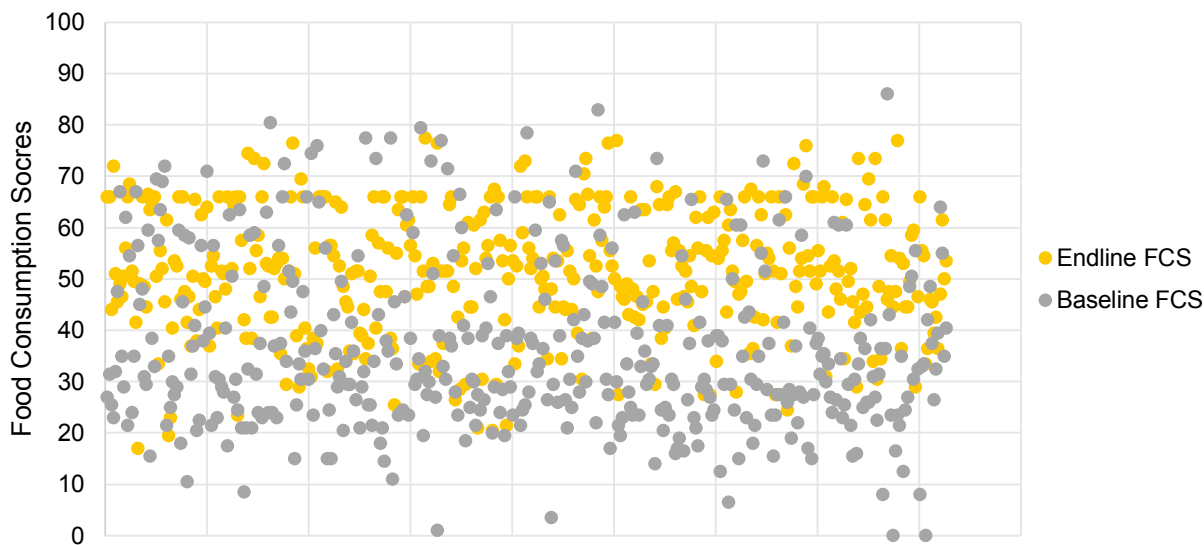
[9] The FCS uses the following thresholds: 0-21 = 'poor', 21.5 to 35 = 'borderline', and >35 = 'Acceptable'. The maximum attainable FCS is 112, which implies that each food group was consumed in full quantities every day for the past seven days.

Figure 6 shows the trend in FCS over the duration of the programme. It shows that after the first distribution of the assistance, all recipient groups were able to increase their weekly food consumption over the course of the programme. The graph shows a rapid convergence of the average FCS for the recipient groups to a level within the 'acceptable' range.

Figure 6: Trend in Food Consumption Scores
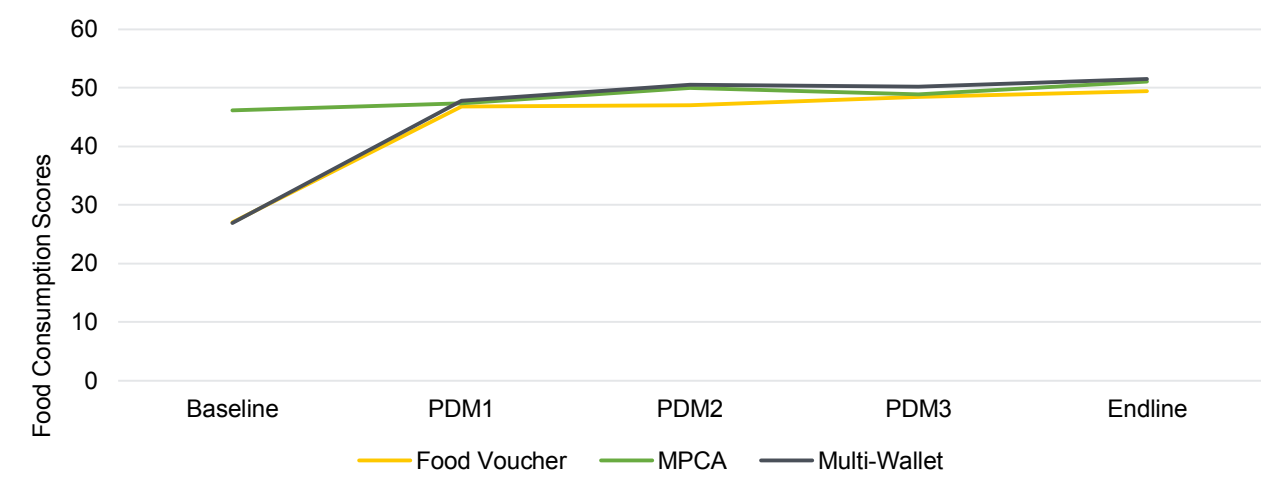
Food Consumption by Modality

The trends observed in the data suggest that e-Voucher and Multi-Wallet transfers were successful in improving FCS levels for their respective recipients. By endline, all modalities had converged to similar levels of 'acceptable' scores, providing further evidence that cash and food assistance are useful for stabilizing food security. However, there was no evidence to show that one modality was more effective than another in achieving this outcome. A similar convergence was observed when looking across geographic areas.

Of the three modalities, e-Voucher and Multi-Wallet recipients showed the greatest increases in FCS at endline, however they were selected for these modalities because they displayed lower FCS at baseline than MPCA recipients (**Table 5**). This suggests that these modalities were successful in changing the food consumption patterns of the households and bringing them in line with the average values seen in the MPCA group. As noted in **Section 2.1**, the MPCA recipient group has a wider distribution of FCS (shown in the standard deviation) due to the targeting criteria used for this specific group. Unlike the e-Voucher and Multi-Wallet recipients, MPCA had their eligibility determined solely by their PMTF score, regardless of FCS.

Table 5: Average Food Consumption Scores, by Modality

Assistance Modality	Baseline (FCS)		Endline (FCS)		% change
	Mean	**Sd.**	**Mean**	**Sd.**	
Food Voucher	26.99	9.30	49.41	13.68	83%
MPCA	46.19	17.66	51.06	12.91	11%
Multi-Wallet	26.93	8.18	51.5	10.72	91%
Total	34.81	16.19	50.69	12.58	46%

Further statistical analysis was carried out to test the significance of baseline and endline FCS. A T-test was used to compare means for each of the recipient groups, and showed that for all recipient groups, the endline mean FCS is significantly larger than the baseline score[10].

This indicates that for each recipient group, a statistically significant change took place in the quality and quantity of food consumed after the implementation of the intervention. The change in FCS for the MPCA recipient group is smaller than the other two recipient groups, but this is largely due to the targeting considerations discussed above.

An ANOVA test was also used to determine the effects of the three assistance modalities for improving households' FCS. The dependent variable was the FCS, with the assistance modalities serving as the independent variables. Although MPCA recipients had slightly larger endline FCS, the differences between the three recipient groups were not statistically significant[11]. **Figure 7** shows the status of food consumption for all sampled households at baseline and at endline, for each assistance modality. It shows the significant shift towards 'acceptable' scores, and the reduction of 'poor' levels of food consumption to almost zero.

Figure 7: Baseline and Endline FCS, by Modality Group
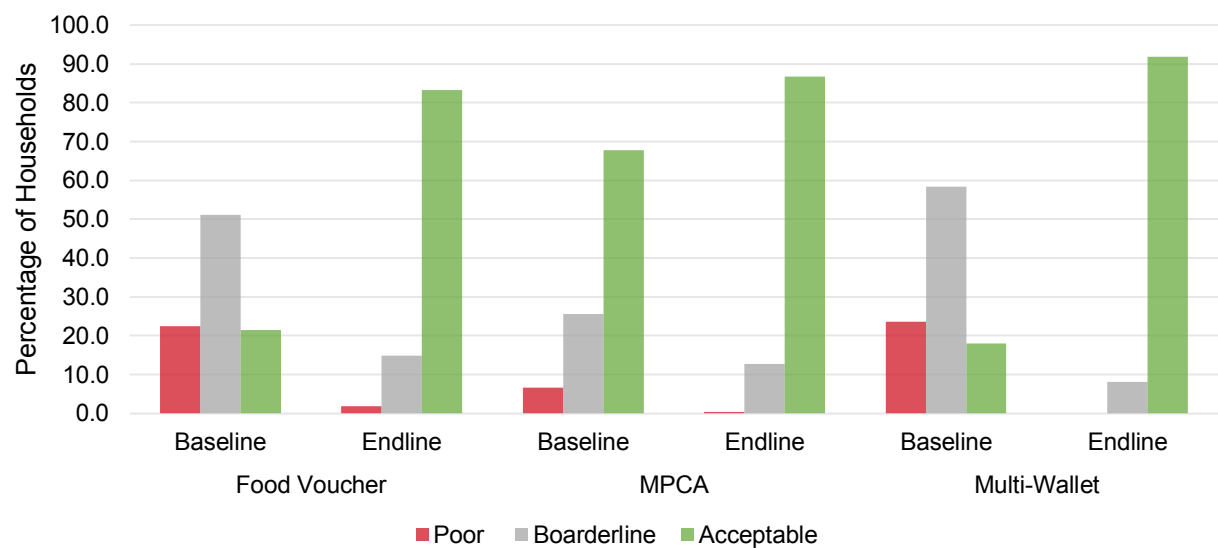
Further statistical tests were conducted to compare outcomes by location. **Table 6** shows the average FCS for Gaza City and North Gaza. In both locations average endline FCS are larger than baseline averages, with a 45 percent increase in Gaza City and a 50 percent increase in North Gaza. A paired sample t-test for both Gaza City and North Gaza[12] confirms that the endline scores for both locations is significantly higher than the baseline score.

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[10] The results for the three groups are: t =18.3648, Pr(T > t) = 0.0000 for the e-Voucher Group, t = 3.4432, Pr(T > t) = 0.0003 for the MPCA group, and t=23.63, Pr(T > t) = 0.0000 for the Multi-Wallet group.

[11] The ANOVA results for testing equality of means across the three recipient groups is F(2,553)=1.30, p>0.2726.

[12] The results for the paired samples t-test for Gaza city is (t=16.30, p>0.000), and for North Gaza is (t=9.46, p>0.0000).

Comparing changes by assistance modality in the two locations, **Figure 8** shows that Gaza City FCS across modalities are similar at endline, while in North Gaza, e-Voucher beneficiaries have a slightly lower FCS, followed by MPCA and Multi-Wallet recipients.

In general, households from all modality groups in North Gaza can be said to have improved their food security to a greater degree than households in Gaza City, given the lower baseline scores for e-Voucher and MPCA recipients.

Figure 8: Geographic Comparison of Food Consumption Scores
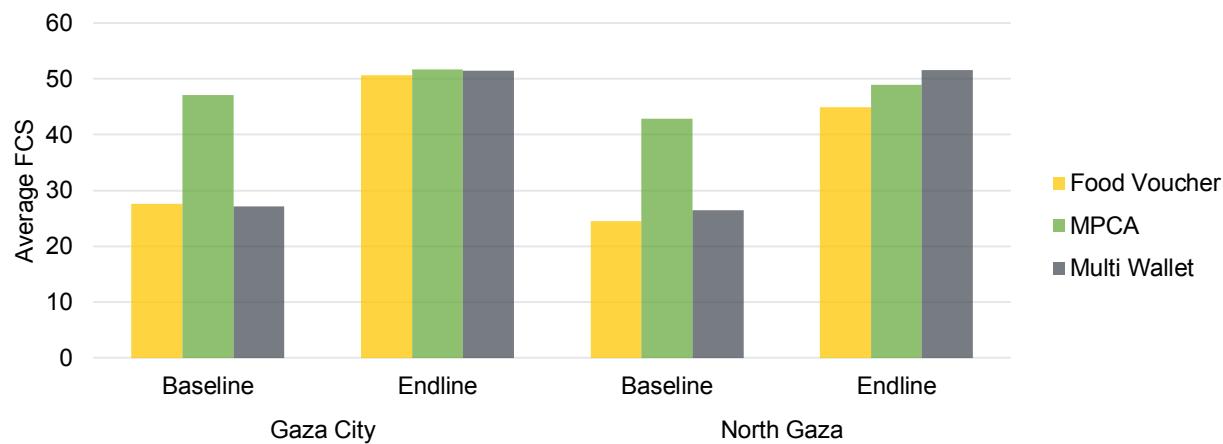
Table 6: Food Consumption Scores per Governorate

Location	Baseline		Endline		% Change
	Mean	Sd.	Mean	Sd.	
Gaza City	35.5	16.1	51.3	12.5	+45
North Gaza	32.4	16.3	48.6	12.6	+50

Further analysis was conducted on specific food groups within the FCS survey module, to see whether any of the recipient groups had moved to more diverse diets. **Figure 9** shows a broad shift towards increased consumption of staples (cereals), diary, and meat post-assistance, however this did not differ between groups – indeed the average food group scores were identical across recipients.

Figure 9: Changes in Food Consumption
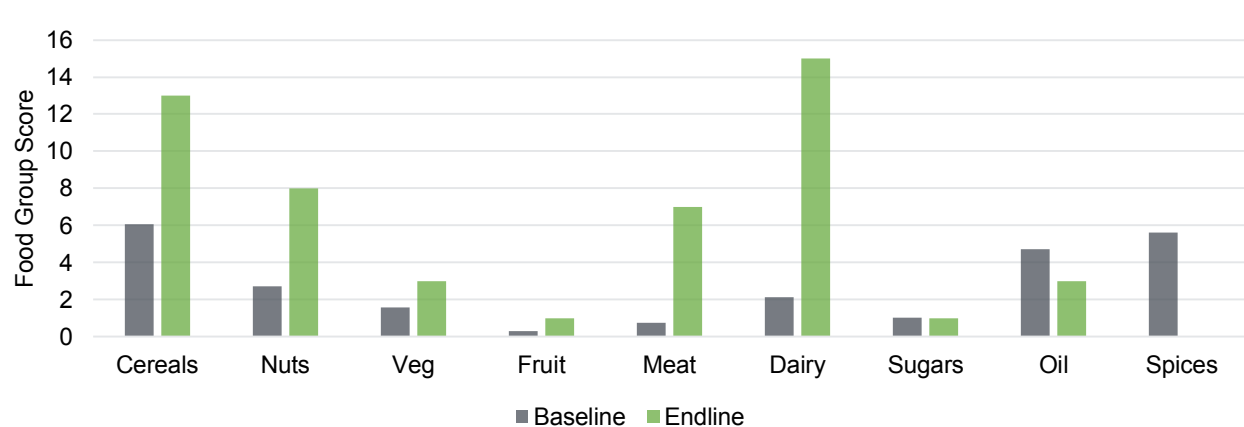
Satisfaction with Assistance Received

By the endline survey, recipients of all modalities reported high levels of satisfaction with the programme. This was especially so among cash (MPCA and Multi-Wallet) recipients, which showed nearly unanimous levels of high satisfaction among all beneficiaries. The e-Voucher group started less satisfied, but converged with the other two groups by endline.

All households in the endline sample were asked about their satisfaction with the programme, including overall satisfaction, and with specific components of the programme (targeting, the amount of cash, and with the orientation sessions). Endline respondents could express satisfaction on a scale of 1 to 4, with 1 being 'not satisfied at all' and 4 being 'very satisfied'. **Figure 9** shows the trend in the level of satisfaction with assistance received. After the first round of assistance, the share of households reporting being 'very satisfied' increased and those reporting being 'not satisfied at all' decreased. When we combine 'satisfied' and 'very satisfied', MPCA recipients were the most satisfied, but over 95 percent of all three recipient groups report programme satisfaction (**Table 7**).

Figure 10: Overall Satisfaction with the Assistance

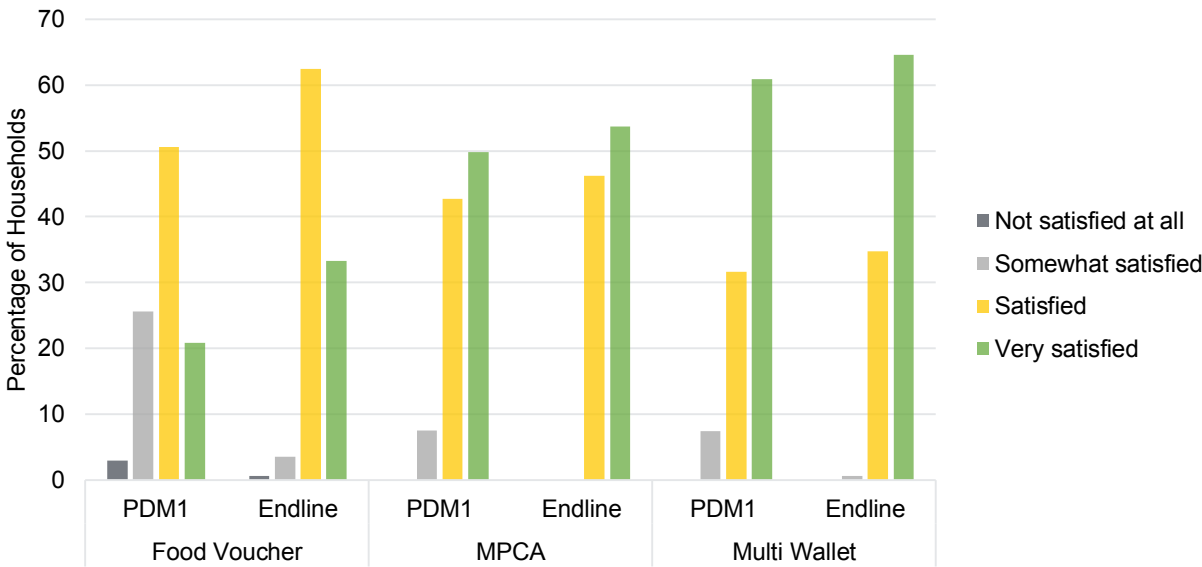**Table 7: Reported Satisfaction with Assistance Received (percentage of households)**

Reported Satisfaction	e-Voucher		MPCA		Multi-Wallet	
	PDM1	Endline	PDM1	Endline	PDM1	Endline
'Not satisfied at all' or 'Somewhat satisfied'	28.6	4.2	7.5	0.0	7.5	0.6
'Satisfied' or 'Very satisfied'	71.4	95.8	92.5	100.0	92.6	99.4

Income and Expenditure

At baseline, average monthly incomes were roughly 60 percent less than average monthly expenditure, suggesting households were spending beyond their means to meet their basic needs, and for many, using debt to close the consumption gap. While incomes increased between the baseline and endline, largely due to the transfer itself, endline incomes did not increase by any more than the transfer value. Instead, incomes rose to meet endline consumption levels, effectively closing the consumption gap and, as explained in Section 5.5 below, reducing the dependency on debt.

Table 8: Income and Expenditure Comparison (€)[13]

	Baseline		Endline		% Mean Change	% Median Change
	Mean	Median	Mean	Median		
Income	103	74	227	191	121%	158%
Expenditure	159	116	224	190	41%	64%

The broad aim of any MPCA programme is to raise household consumption, or close consumption gaps. By endline, the consumption gaps seen among almost all households had closed, as shown in **Table 8**. **Table 9** shows the increase in expenditure at endline compared to baseline for all three recipient groups. After applying a statistical significance test of the mean expenditure difference per recipient group[14], only e-Voucher recipients did not show significant increases in monthly expenditure. However, for MPCA and Multi-Wallet recipients, endline expenditure is significantly higher than baseline total expenditure. This is likely because MPCA and Multi-Wallet recipients receive a larger total tranche of assistance, due to having much lower PMT scores (so lower predicted per capita consumption). However, this indicates that in future multi-modality programmes, at least a partial cash transfer may be beneficial to raise consumption for all programme participants.

Table 9: Baseline and Endline Expenditure per Modality (€)

	Baseline		Endline		% Change Mean	% Change Median
	Mean	Median	Mean	Median		
Food Voucher	153	114	162	122	+6	+7
MPCA	161	109	253	190	+57	+75
Multi-Wallet	162	119	248	44	+53	-63

Table 10: Baseline and Endline Average Income per Modality (€)

|	Baseline		Endline		% Change Mean	% Change Median
	Mean	Median	Mean	Median		
Food Voucher	83	49	165	129	+100	+161
MPCA	111	74	248	189	+123	+155
Multi-Wallet	112	74	251	191	+125	+158

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[13] The 2020 rate of exchange used is 1 Israeli Shekel = 0,247358 Euro.

[14] The test results are as follows: Food Voucher: t = -0.7381, Pr(T < t) = 0.2308, MPCA: t = -7.5361, Pr(T < t) = 0.0000, Multi-wallet: t= t = -5.4840, Pr(T < t) = 0.0000.

Income Expenditure Ratios (IER)

One method of measuring the effect of the assistance on monthly household cash-flow is the income-expenditure ratio (IER). The baseline IER for the 3 recipient groups averaged 0.65:1, meaning that for every 0.65 Euro earned as income, households spent 1 Euro. The first round of transfers appear to have had an immediate effect on the IER, and by the first round of PDM the ratio had improved to 1.03:1. This suggests households were able to cover their expenditures from their reported income, and is further evidence that the GMPC programme achieved a key aim of closing the consumption gaps that lead households to incur debts. **Figure 11** shows the trend in IER for the three recipient groups, which all converge around the ratio of 1.01:1.

Figure 11: Income and Expenditure Ratios
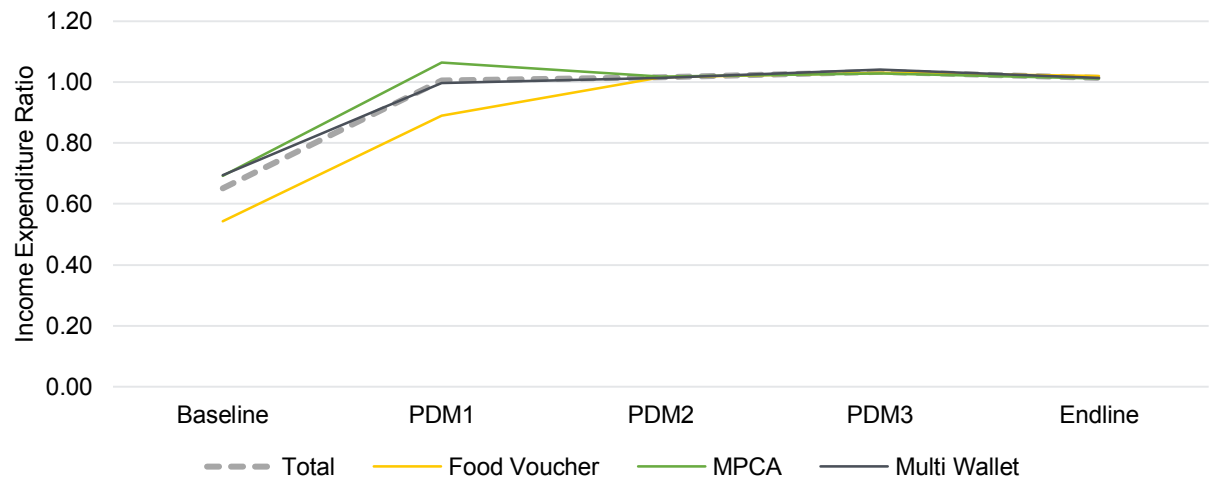
Further statistical testing of endline income showed a significant increase. The average income across all surveyed recipients was NIS 416 at baseline and NIS 918 at endline. A paired sample T-test was conducted to measure the significance of the difference in average income per recipient group. The results obtained show that for each recipient group, endline income is statistically significantly larger than baseline[15].

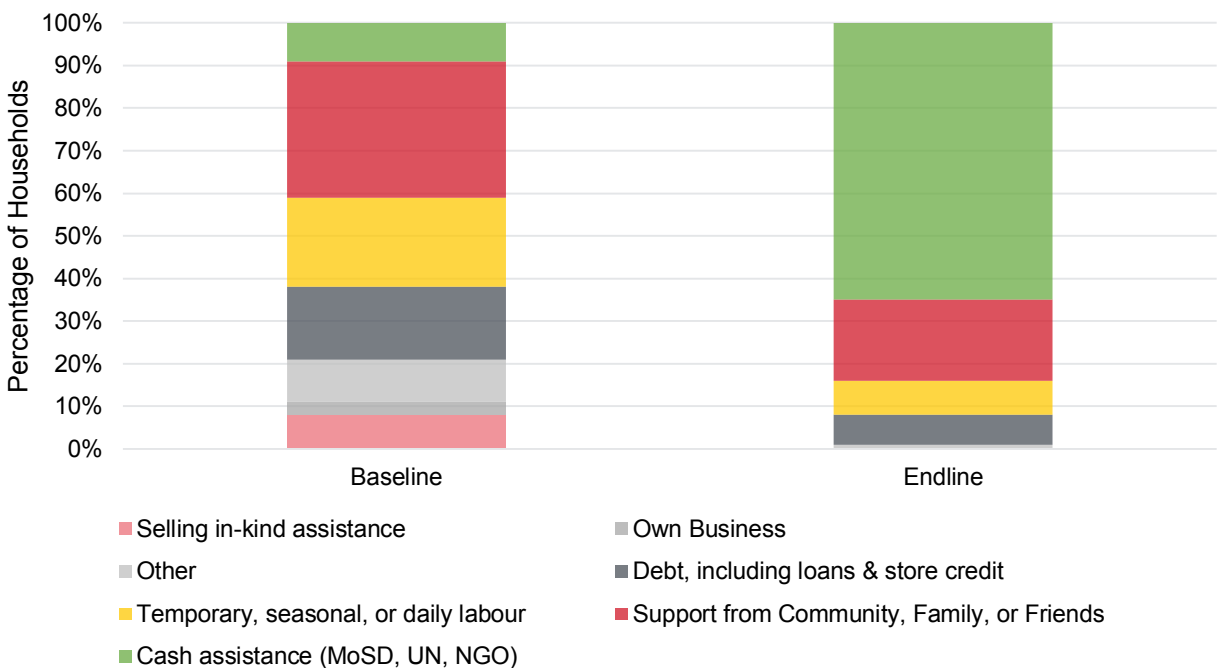[15] Comparing the e-Voucher recipients at baseline and endline yields a result of t=7.744, p>0.0000, with the MPCA yielding t=14.08 and Multi-Wallet yielding t=11.52, and a P value of 0.0000.

Sources of Income

Across all recipient groups, there is a general shift away from informal, unreliable, and social network-based sources of income as households begin to receive transfers. The shift away from debt, however, appears to be smaller in the e-Voucher group, suggesting that voucher recipients continued to rely on debt to meet other household needs.

Figures 12 shows the different sources of income across all recipient groups; the most common sources of income did not differ significantly between recipient groups at baseline or endline. At baseline, support from the local community, family, or friends was the most common source of income (for a third of households), followed by temporary, seasonal, or daily labour, and debt (including loans and store credit). By endline, cash assistance – whether from the MoSD, an NGO, or a UN agency – was the most common source of income among all recipients, replacing the informal, unreliable, and social network-based sources, including debt, which reduced significantly for all groups, though the fall in reliance on debt was lower among e-Voucher recipients. Otherwise, cash assistance because the primary source of income for between 54 and 61 percent of recipient households.

Figure 12: Income Sources (All Recipients)

Legend:
- Selling in-kind assistance
- Own Business
- Other
- Debt, including loans & store credit
- Temporary, seasonal, or daily labour
- Support from Community, Family, or Friends
- Cash assistance (MoSD, UN, NGO)

Household Expenditure

Tracking changes in monthly household spending on a range of goods and services highlighted four main areas of expenditure growth: food, debt repayment, NFIs, and hygiene products. The largest absolute increase in monthly expenditure was observed for food items, however the largest percentage increase was seen in non-food items, followed by hygiene items.

To monitor household spending throughout the programme, respondents at baseline, PDM, and endline completed an expenditure module covering all basic needs, with a one-month recall period for each category of expenditure. **Figure 13a** shows that households spent the most on food, healthcare, debt repayment, and transport at baseline. By endline, households still spend the most on food each month, but are spending considerably more than at baseline (as also indicated by the increased FCS and lower rCSI scores). Expenditure on NFIs and hygiene products is also higher at endline, as is debt repayment. Rent, interestingly, remained low as a percentage of monthly expenditure, but only 8% of households in the endline sample reported renting their dwelling. **Figure 13b** shows the shift in the distribution of expenditure from the start to the end of the programme, with most households reporting monthly expenditure between 175 Euro (the MPCA transfer value) and 250 Euro.

As noted above, households on the waiting list for the national cash transfer programme were scheduled to receive assistance as the GPMC programme was being implemented. While these national payments were due to be phased, overlapping transfers between the PNCTP and the GMPC programmes is very likely to have occurred between April and May 2020. This likely explains the spike in reported monthly expenditure shown below, as well as factors such as Ramadan, Eid, and the possible receipt of Zakat.

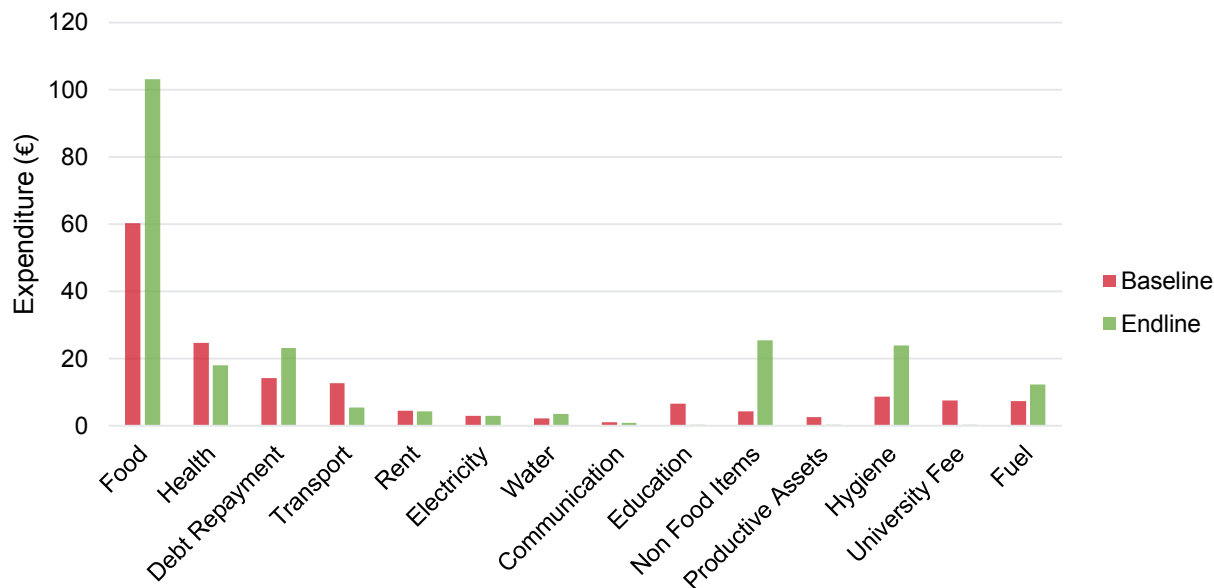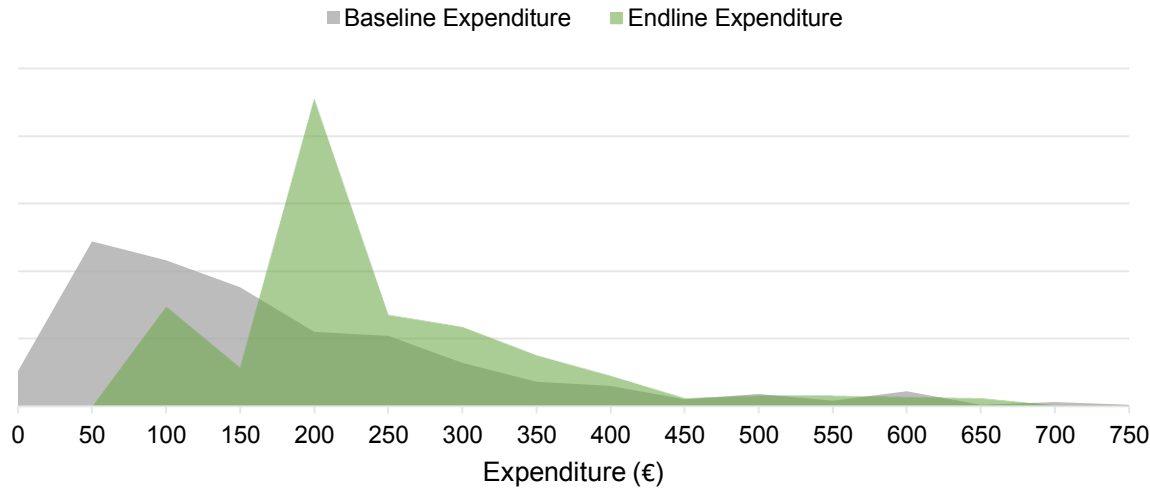**Figure 13a: Comparison of Overall Monthly Expenditure (€)**

Figure 13b: Shift in the Distribution of Household Spending

Figures 14, 15, and 16 show how monthly expenditure has changed over the duration of the programme, for each of the modality groups. Total household expenditure reflects all reported spending using any type of income or voucher within the past 30 days. In general, households were able to increase their expenditure on food and non-food items, as well as increase spending on hygiene products.

There was very little difference in how the different modality groups spent their income, suggesting that despite different levels of vulnerability at baseline (e-Voucher recipients being the least vulnerable, as per PMT scores), basic household priorities, measured through consumption, are more or less similar across households.

Households also increased their debt repayment after the first transfer, then reduced repayments through to endline, except for a brief but significant increase recorded by the 3rd round of PDM (after the 3rd transfer). The cause of this is not immediately clear in the data, though it does coincide with the peak of reported income and expenditure, which may be associated with Ramadan. Households eligible for the GMPC programme may also receive 'zakat' during this time, which may partly explain the brief peak in spending and, consequentially, debt repayment. Ramadan may have also led to informally-sourced debts being called-in by creditors, given it is a period of cultural celebration with associated cultural expenses.

Mercy Corps also increased the transfer value during April and May, which may partly account for the increased spending on hygiene items seen from PDM3 onwards. Following the additional transfers, 98.6% of the beneficiary household reported they were able to better cope with the increased health, safety, and hygiene measures introduced after the onset of the COVID-19 crisis. A more general point that is important to note is that all recipients could continue to access cash during the month long lockdown in Gaza due to them having access to ATMs (when banks were closed) and goods via e-Vouchers.

Another interesting trend is the gradual reduction in expenditure on healthcare, for all recipient groups, from baseline (with the exception, again, of an increase following the 3rd transfer). The reason for this is likewise not evident in the data, but may indicate that even prior to assistance, most households felt more able to meet their healthcare needs with the access they had to local healthcare services.

Figure 14: Average Household Expenditure for Food Voucher Recipients
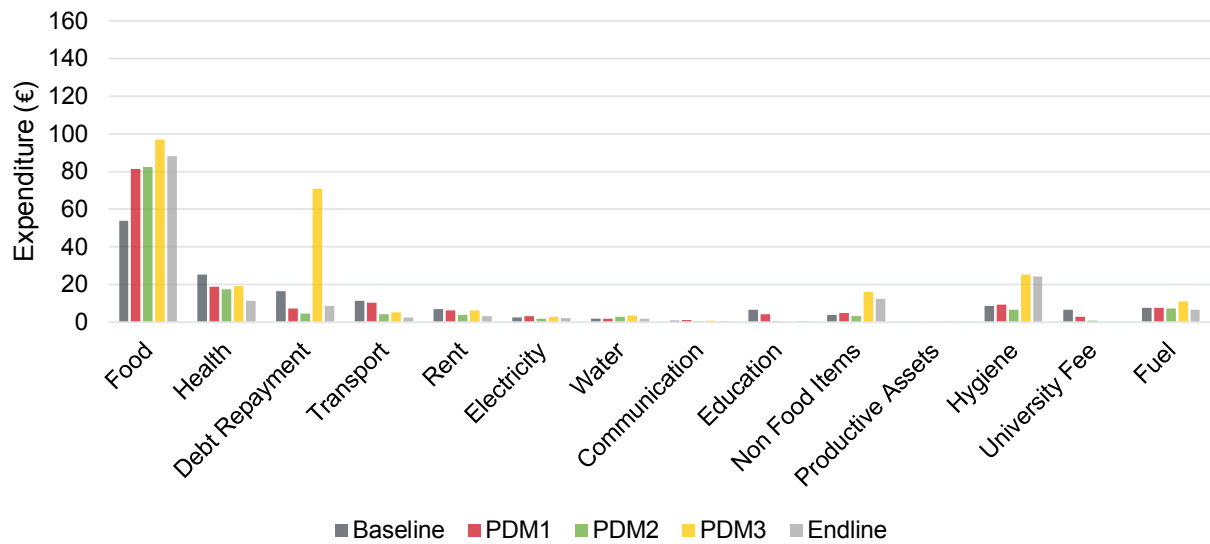
Figure 15: Average Household Expenditure for MPCA Recipients
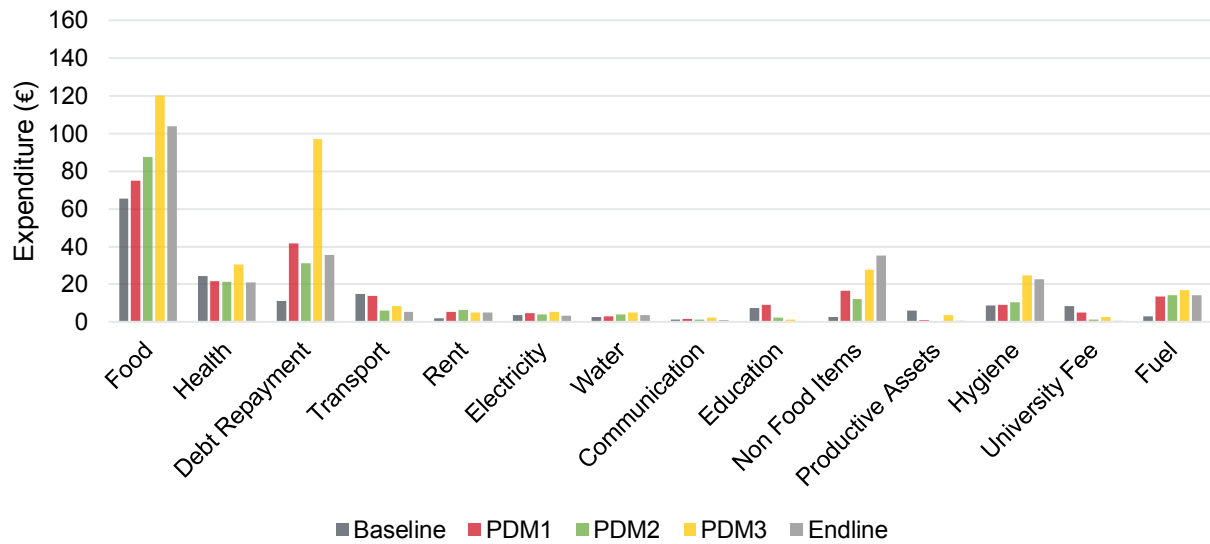
Figure 16: Reported Household Average Expenditure for Multi-Wallet Recipients
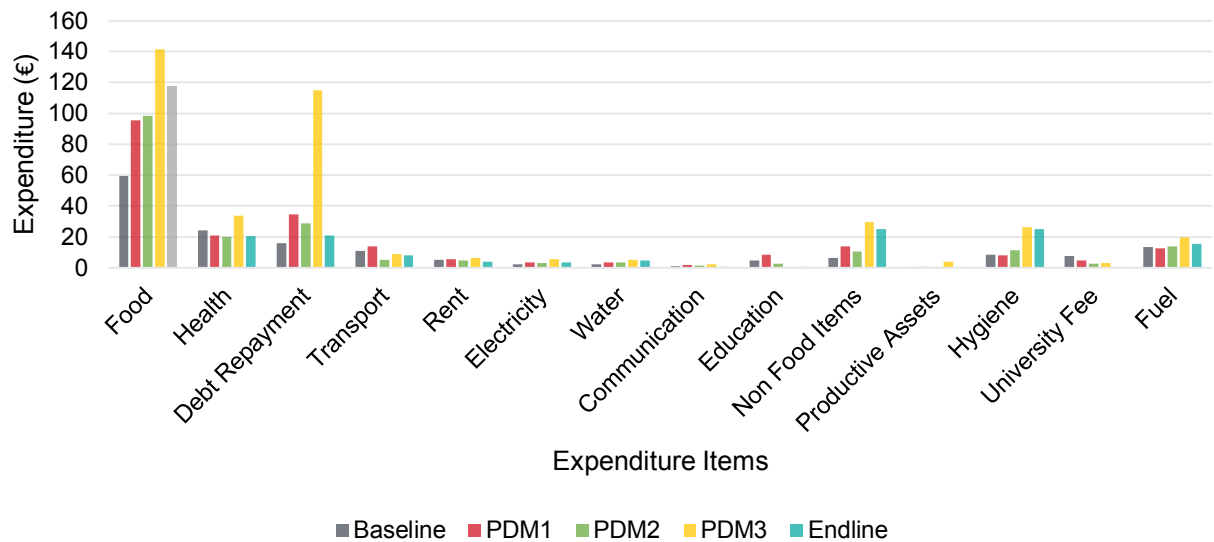
Figure 17 shows the trends in total income, total expenditure, and food expenditure over the duration of the programme. It shows the consumption gap close by the 1st round of PDM, as noted above, which peaks at the 3rd round of PDM (after the 3rd transfer). The 3rd round of PDM coincided with Ramadan which could partially explain a temporary spike in spending, as well as the possible overlap in payments made by the PNCTP. Spending then returned roughly to levels seen at the 2nd round of PDM.

Figure 17: Comparison of Total Income, Total Expenditure, and Food Expenditure
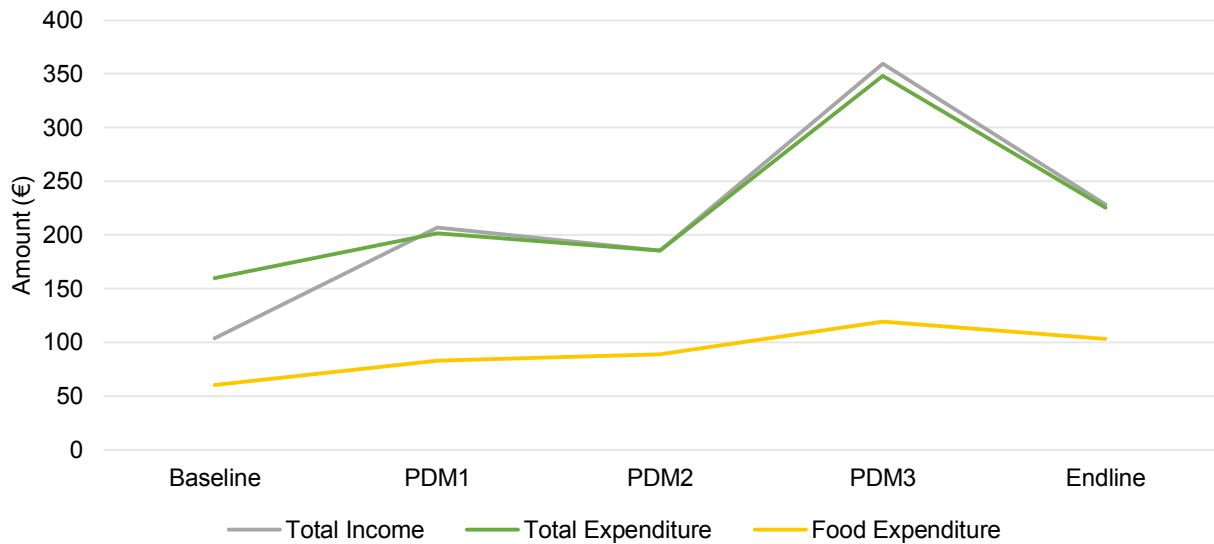
Changes in Savings and Debt Levels

Across all the recipient groups, by endline the rates and levels of savings remains relatively unchanged from baseline. This is in line with the IER data, which showed that household's income equalled expenditure, leaving little financial space for active savings. Debt is more complicated: average total household debt fell over the course of the programme (as also seen in reduced coping strategy use), and levels of debt repayment increased.

However, total average debt at baseline was extremely high compared with average incomes and rates of repayment, and with high rates of unemployment across the Gaza Strip, households lack debt serviceability. This means many households still hold financial burdens that would realistically only ease with significant continued assistance or access to sustainable livelihoods.

Figure 18 shows the trend for household savings in the past 30 days. After the third round of assistance, there is a notable (but in absolute Euro terms, small) increase in household savings over the previous 30 days. As mentioned in previous sections, this is likely closely associated with the Ramadan holiday and should not be indicative of general behaviour.

Figure 18: Monthly Savings by Modality
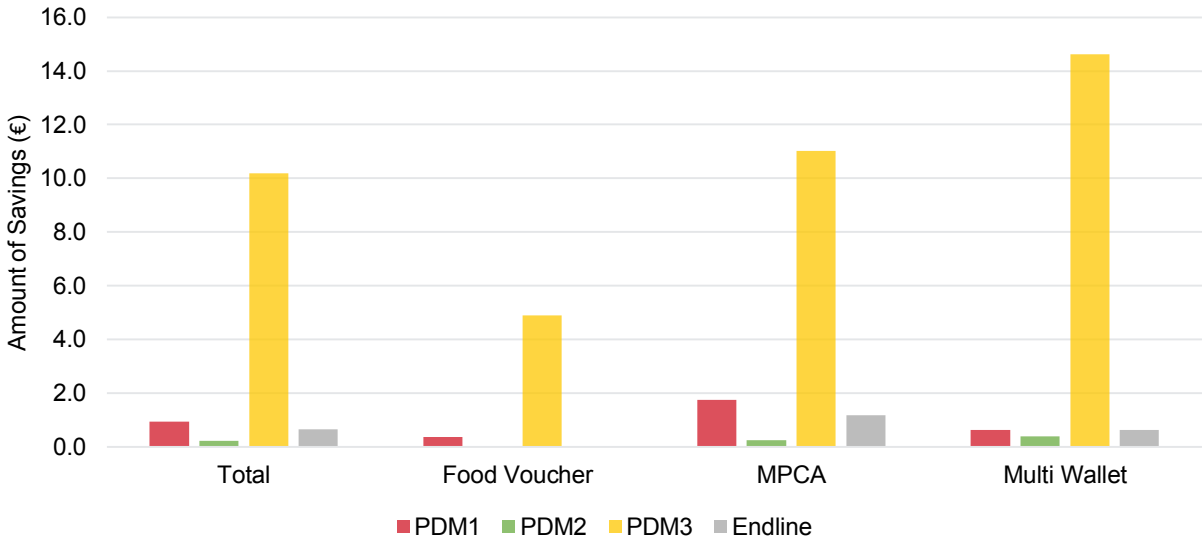
Comparing across groups at the third round of PDM, the increase in savings is found to be highest in the Multi-Wallet group, followed by the MPCA group, and finally, the e-Voucher group. ANOVA test results[16] do not show any significant difference across the modality groups in monthly savings at the third round of PDM. Paired samples T-test results show no significant difference in the monthly savings for the households in each recipient group between the first round of PDM and the endline survey.

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[16] ANOVA test results for monthly savings: $F_{(2,554)}= 2.62$, $P> 0.0738$.

All household surveys also collected data on total and new household debt. Given that the programme intervention focused on providing cash and food assistance, understanding the initial levels of debt at the outset of the programme can give some insight into how the assistance may or may not alter the behaviours of recipient households. The average total household debt at baseline was 1,777 Euro[17]. Given average pre-assistance monthly repayment rates (14 Euro), and assuming no new debt, it would have taken the average household 10.5 years to repay all of their debts.

Figure 19 below shows the trend in average total debts across all recipient groups, when extreme outliers are removed. Multi-Wallet recipients saw a large increase in their level of indebtedness, which started to fall by endline. At baseline, the e-Voucher group had the lowest levels of debt, and while this increased during the programme, they had the lowest levels of debt by endline. MPCA recipients started with the highest levels of debt, which changed very little by endline.

Figure 19: Changes in Total Household Debt
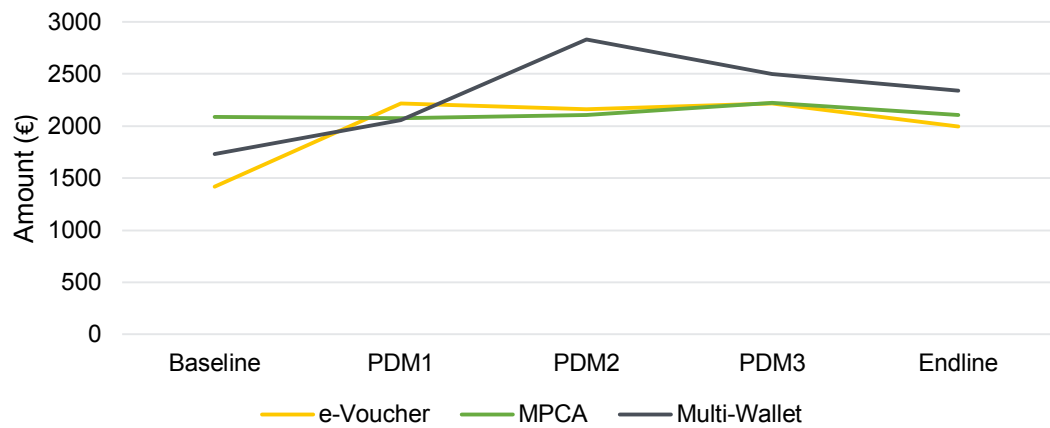
The driver of this appears to be a continued need for debt, even with assistance. While the amount of debt repaid each month increases after the first round of transfers, the value of new debt (i.e., incurred in the past 30 days) is always larger than the amount repaid (except at the 3rd round of PDM), meaning there is a persistent deficit – overall debt continues to increase, even while the value of new debt (whether loans or goods bought on store credit) does fall over the course of the programme. Encouragingly, the percentage of households taking on new debts each month falls throughout the duration of the programme, from 84 percent to 41 percent of households, as shown in **Figure 20**. This roughly corresponds to those resorting to using debt as a coping strategy.

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[17] This is with extreme outliers removed (> 100,000 Shekels, which was less than 5% of the sample).

Figure 20: Changes in New Debt and Monthly Debt Repayment
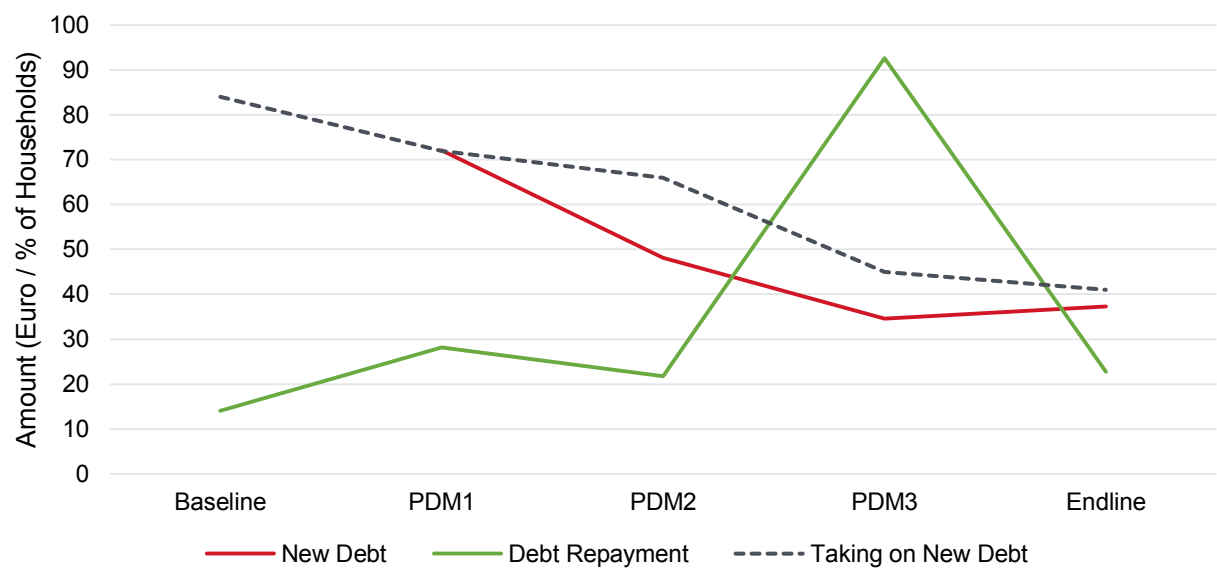
The value of new debt exceeding monthly repayments is also seen at the level of the recipient group, at all stages of monitoring except the 3ʳᵈ round of PDM, as shown in **Figure 20** below.

Figure 21: Comparison of New Debt across each Modality, and Average Debt Repayment
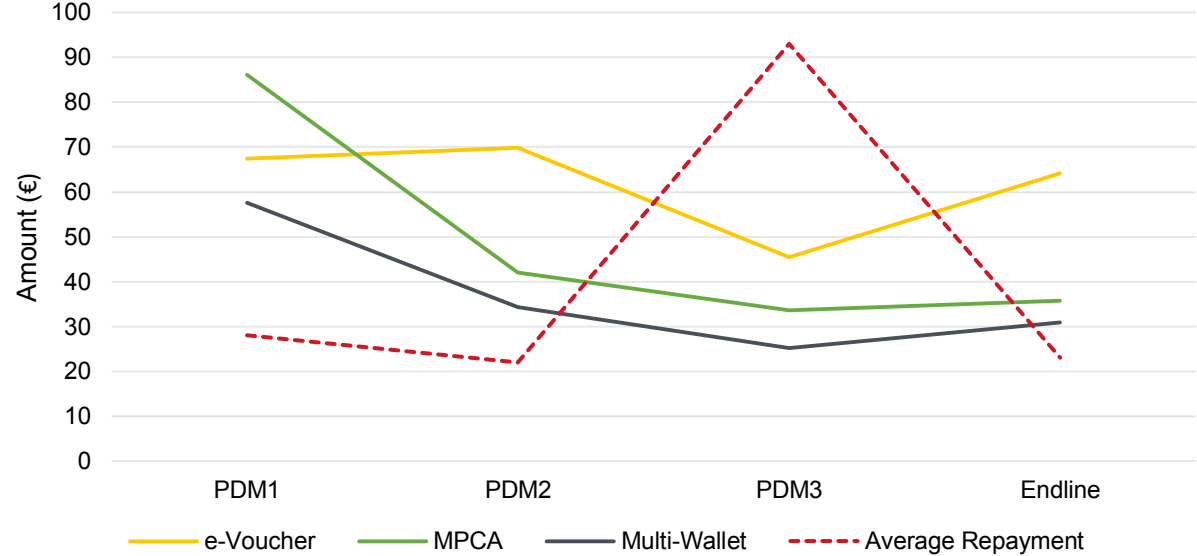
Figure 22: Debt or Credit used for Basic Goods as a Coping Strategy
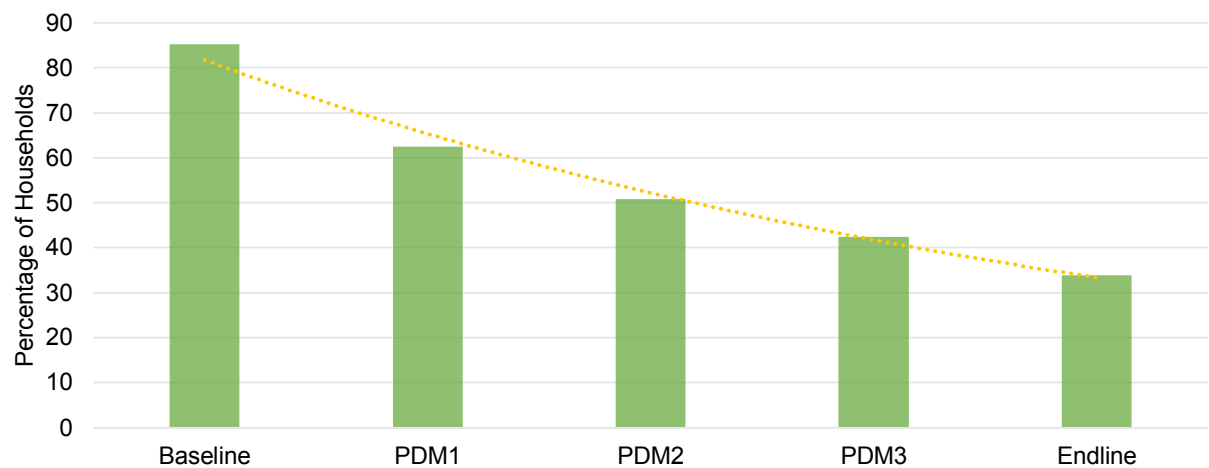
As shown in **Figure 22** above (and noted in **Section 5.2**), there was a steady reduction in the use of debt or credit to access basic goods as a coping strategy across all recipient households, which roughly corresponds with the fall in households taking on new debt. Endline debt is lower than baseline debt as an average across the three recipient groups, however, for the e-Voucher recipient group, the reduction in total debt is not statistically significant.

Sources of Debt

Overall, the most common sources of debt were informal: family, friends, and community members. However, between baseline and endline debt sourced from an employer saw a large percentage increase. This increase – observed across all modality groups – does not accompany a decrease in reliance on other sources, reinforcing the continued need for debt shown above.

Figures 23, 24, and **25** show the sources of debt for the different recipient groups. At baseline, debt was largely accessed informally from family, friends, and members of their local community. At endline, all three groups registered an increase in the number of households incurring debt from their employer. For some households. As noted above, the majority of households relied on some type of borrowing at endline.

Figure 23: Sources of Debt among e-Voucher Recipients
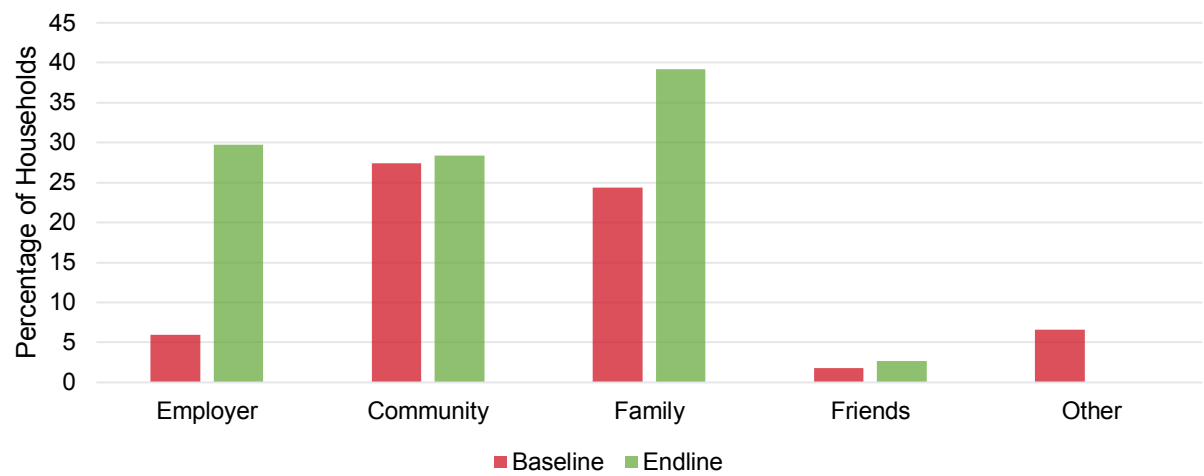
Figure 24: Sources of Debt among MPCA Recipients
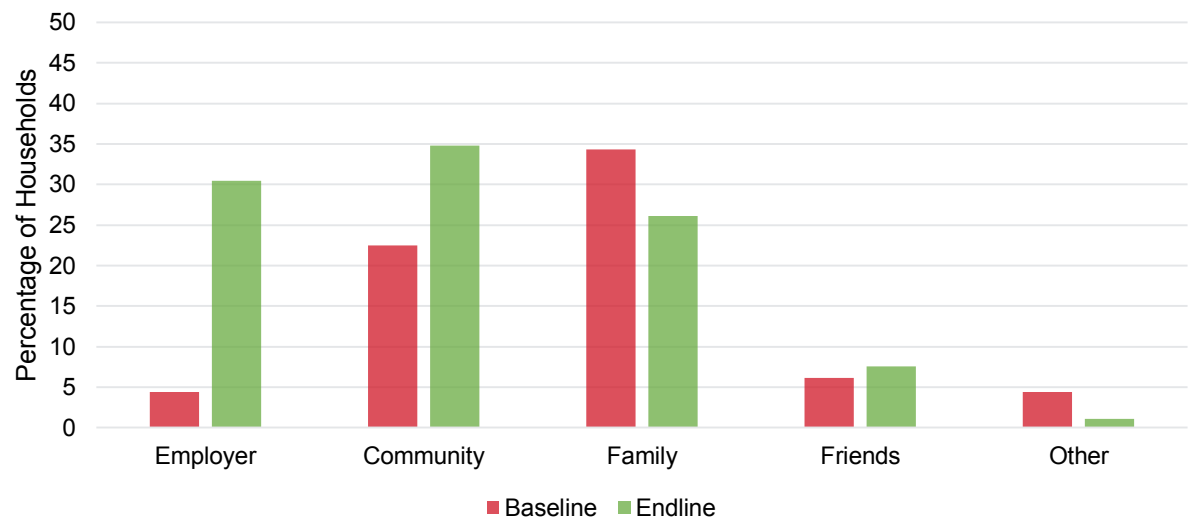
Figure 25: Sources of Debt among Multi-Wallet Recipients
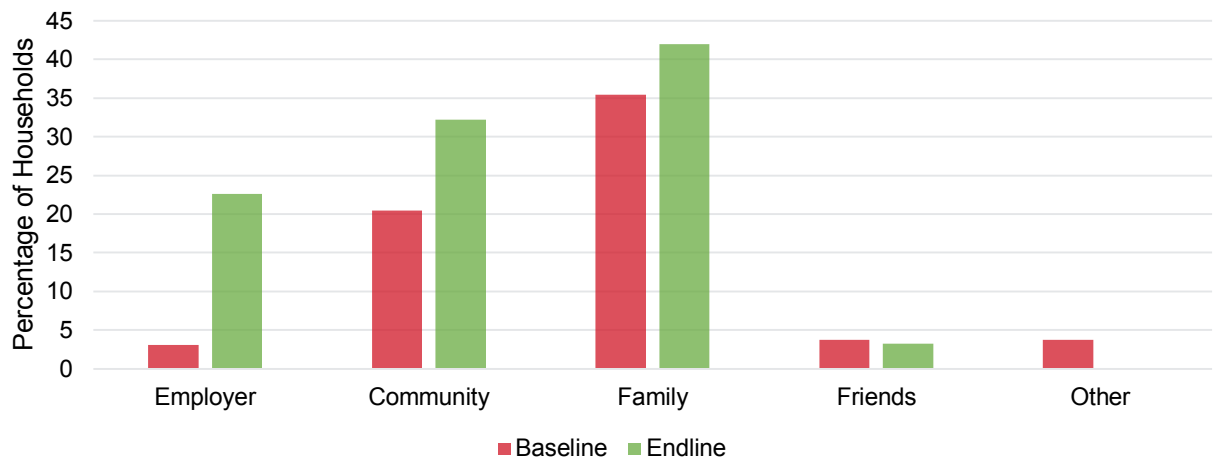
Finally, **Figure 26** shows why households continue to take on debt: it is largely to cover basic expenses that cannot be met through income, whether cash assistance, income from work, or from informal and social network-based sources. The reasons for incurring debt at baseline are more diverse than at endline, where the percentage of households borrowing to cover the costs of food increases, as does those borrowing to cover healthcare costs, but borrowing for reconstruction and to cover educational costs falls to zero. The reasons for incurring debt differed very little between recipient groups.

Figure 26: Reasons for Incurring Debt
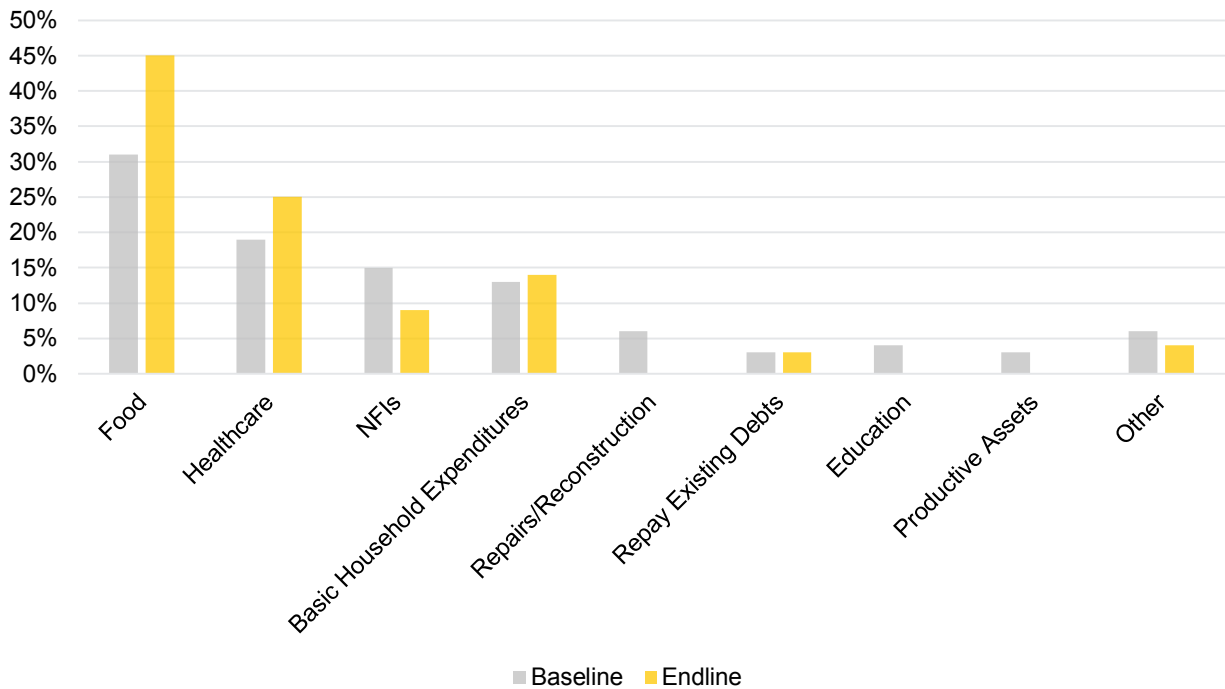
Ability to Meet Needs

The endline found good evidence to show that the programme led to an improvement in recipients' ability to meet their varied basic needs. This lends support to the effectiveness of cash and food transfer programmes as a vehicle for improving the overall wellbeing of recipient households. Further, there is evidence to show that cash-based transfers (MPCA and Multi-Wallet) increase a household's ability to meet basic needs to a larger degree than e-Vouchers.

The baseline, PDM, and endline surveys also included a module that asked households how they rated their ability to meet a range of basic needs[18]. For each need, households had four options: fully able to meet the need, mostly able, partially able, or fully unable. While not a key programme indicator, this perceptions-based measure was used to give Mercy Corps an idea of how, from the recipient's point of view, they think they are faring, pre- and post-assistance. Across all households and all needs, there is a clear shift away from seeing themselves as 'fully unable' to meet their needs, towards 'mostly able' and 'fully able' to meet their needs by endline.

Figure 27 shows the changes in the recipient's perception of their ability to meet their needs. While only 7 percent of the recipients reported being 'fully able' to meet a range of needs at baseline, 16 percent reported this at the end of the intervention, which represents approximately a 129 percent increase. There was a 60 percent reduction in the percentage of respondents reporting being 'fully unable' to meet a range of needs by endline. There was only a slight percentage change (0.7 percent increase) in recipients who reported being partially able to meet needs.

Figure 27: Changes in Perceived Ability to Meet Basic Needs

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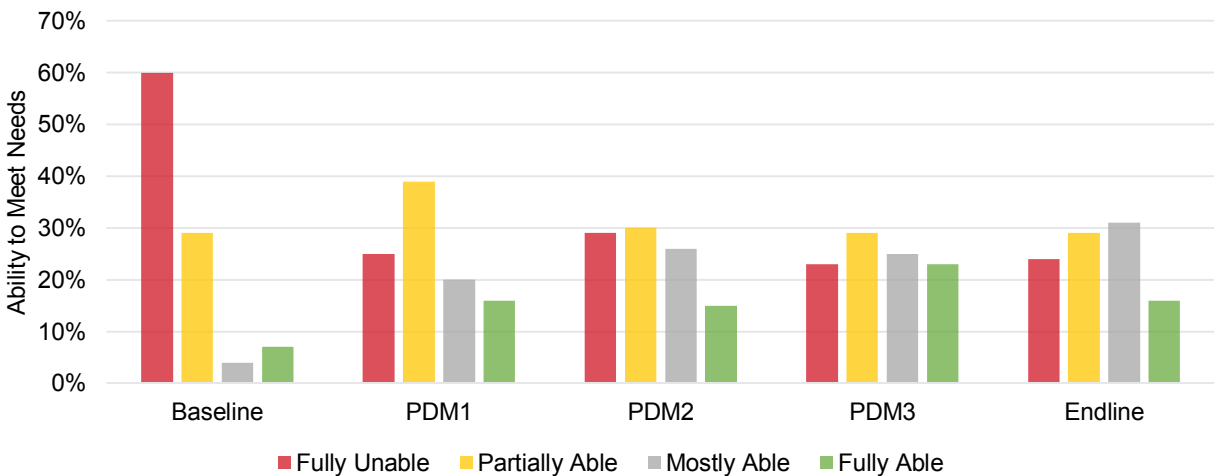
[18] The needs are: income, food, water, healthcare, hygiene, clothing, energy and fuel, shelter, education, transportation, household items, and communication. With the exception of income, these are all components of the Gaza Minimum Expenditure Basket (MEB).

To better quantify recipients' assessment of their own welfare, each of the responses to each individual need was re-coded and combined into a composite index, using a balanced weighted average approach where each need represents a component of the index, and each possible response, from 1 to 4, represents a sub-component[19]. After completing the module, each recipient household is given a score from 0 to 1, where 0 means they are *fully unable to meet any need*, and 1 means they are *fully able to meet all needs*. A score in the 0.4 to 0.7 range would indicate they see themselves as partially or mostly able to meet the majority of their needs.

Figure 28: Changes in the Meeting Needs Index from baseline to Endline
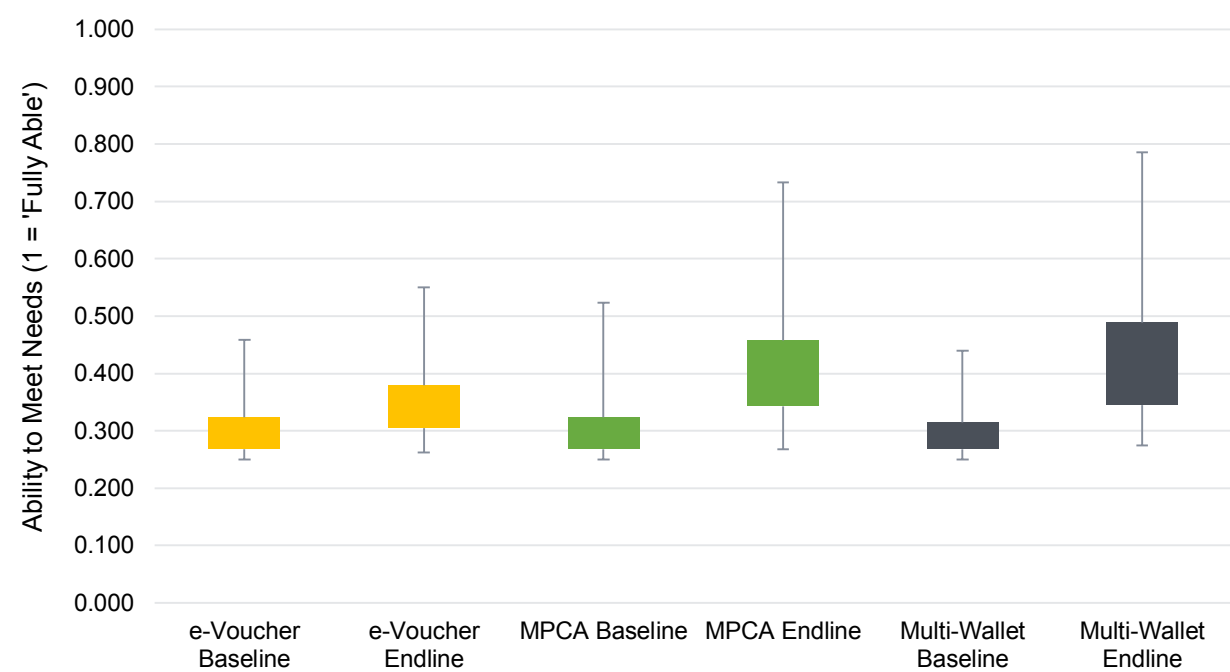
As shown in **Figure 28** above, there is a clear shift, post-assistance, among all households to higher index scores. Interestingly, the scores increased by the first round of PDM, then remained constant until endline. The MPCA and Multi-Wallet assistance show a higher increase at endline than the e-Voucher group, suggesting the cash recipients felt better able, overall, to meet a more varied range of their basic needs. It also suggests that cash may be a more appropriate modality if the aim is to cover multiple urgent needs.

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[19] The index score is obtained with the following, $\text{NMI}_H = 1 - \left(\frac{\sum_{i=1}^{11} W_{Mi} M_H}{\sum_{i=1}^{11} W_{Mi}} \right)$, where NMI_H is the Meeting Needs Index score for the household, M_H is each component, and where the weight of each component, W_{Mi}, is determined by the value of the sub-component.

Household Demographics

The evaluation also aimed to see whether the outcomes on the key programme indicators are influenced by other factors. To do this, the evaluation considered household demographics such as head of household gender and household size, vulnerability factors such as the presence or absence of a chronically ill member in the household, and human capital factors, such as the head of household level of education. Broadly, these demographic, vulnerability, and human capital factors do not correlate with key indicators, with some exceptions discussed below.

Gender of Head of Household

Overall, the results show that male-headed households had higher average FCS than female-headed households. However, there was no difference in rCSI scores between male- and female-headed households. Another statistically significant difference was observed in debt levels across the e-Voucher recipients: male-headed households had much higher average levels of total debt at endline.

Table 11: Demographic Factors – Gender of Household Head

Household Head	Food Voucher (%)	MPCA (%)	Multi-Wallet (%)	FCS Average (Endline)	rCSI Average (Endline)	Avg. Total Debt - € (Endline)	Avg. Total Expenditure - € (Endline)
Male	62.5	79.3	72.7	51.8	5.9	6,688	227
Female	37.5	20.7	27.3	47.7	5.9	4,343	221

These results are consistent across all recipient groups. Results of t-tests show that there is no difference in the endline rCSI scores for male- and female-headed households. However, male-headed households have a significantly higher FCS (at 5 percent confidence) than female-headed households, which is also reflected in comparisons within the recipient groups. When endline household debt was compared between male- and female-headed households overall, while male-headed households have higher average levels of debt, the difference is not significant. When the t-test is applied to each recipient group, however, results show that male-headed households receiving e-Vouchers had significantly higher levels of debt than female-headed households (4,309 EUR). The data does not explain why this is, and may be a by-product of a larger sample, but could indicate either that more males with families cannot find work (and so take on debt), or reflect more restricted access to borrowing among female-headed households. This difference was not observed among other modality groups.

Household Size

The analysis also tested for relationships between the key programme indicators and household size. The strongest correlation was between household size and monthly expenditure – the larger the household, the more they spend. Similarly, smaller households had much lower levels of debt. However, there was very little correlation between household size and their FCS or rCSI score.

The evaluation also aimed to see whether the key programme and economic indicators were correlated with household size. **Table 12** provides summary of key indicators and variables by household size, and show higher values for households with more than 4 members compared to those with 4 or less members.

Table 12: Demographic Factors – Household Size

Household Size	e-Voucher (%)	MPCA (%)	Multi-Wallet (%)	FCS Average (Endline)	rCSI Average (Endline)	Avg. Cumulative Debt - € (Endline)	Avg. Total Expenditure - € (Endline)
Less than Four	44.05	15.42	6.21	49.7	5.5	3,311	192
Four or more	55.95	84.58	93.79	50.9	6.0	6,765	233

Correlation analysis was carried out to measure the strength of the relationship between the key indicators and household size. **Table 12** summarizes the correlation between household size and baseline and endline programme outcomes[20]. The results show that there is a lower likelihood that household size influenced the outcomes of the programme, given no coefficients were found greater than 0.3.

Table 13. Correlation between Household Size and Key Programme Outcomes[21]

	Baseline	Endline
Food Consumption Score	0.1629	0.0578
rCSI Score	-0.0349	-0.0012
Total Debt	0.0994	0.0826
Household Income	0.0949	0.1841
Household Expenditure	0.1493	0.1851

*values between 0.5 and 0.7 are considered to have moderate correlation while anything less than 0.4 is considered to be weak or have no correlation

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[20] The Pearson r correlation coefficient was calculated, providing thresholds of weak, moderate, and strong correlation, as a measure of the association between the two variables. If the coefficient value lies between ± 0.50 and ± 1, then it is said to be a strong **correlation**. If the value lies between ± 0.30 and ± 0.49, then it is said to be a medium **correlation**. When the value lies below + . 29, then it is said to be a small **correlation**.

[21] Endline and Baseline FCS are significant at the p < 0.05 level.

Chronic Illness

The data do not show much difference in FCS, rCSI scores, or monthly expenditure between households with chronically ill members and those without, but do again show that total debt is higher in households with at least one member who is ill, suggesting that may be a factor in those households needing to take on debt. This is particularly true for the Multi-Wallet group, which showed an average increase of 5,868 EUR of debt among households with a chronically ill member compared to households with none.

Table 14 provides a summary of the key programme indicators and households with at least one chronically ill member.

Table 14: Demographic Factors – Chronic Illness

Chronic Illness	e-Voucher (%)	MPCA (%)	Multi-Wallet (%)	FCS Average (Endline)	rCSI Average (Endline)	Avg. Cumulative Debt - € (Endline)	Avg. Total Expenditure - € (Endline)
At least one member	43.5	44.1	43.5	50.1	6.0	7,407	233
No members	56.6	56	56.5	50.9	5.8	4,953	217

A total of 323 households reported having a member with a chronic illness. Statistical tests confirm the visual inspection of the data in the table above, and give no statistically significant results for difference in FCs or rCSI scores.

However the results shows that Multi-Wallet recipients with at least one chronically ill member of the household had a higher total debts by endline, compared to households without an ill member (5,868 EUR), and this difference is statistically significant[22]. For the MPCA and e-Voucher groups, the difference in total household debt is not statistically significant.

Education

The majority of recipients had completed only primary or lower education. When comparing outcomes by the education level of the head of household, however, the results seem to show that education does not have any strong influence on any of the key indicators.

Table 15 shows outcome results based on level of education of the household head. Recipients showed a small difference in endline FCS. The households with secondary or vocational had better rCSI scores than those with primary or university levels of education. Further, households with university education household heads have higher levels of debt, but lowest level of monthly expenditure.

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[22] The results for the t-test for Multi-Wallet recipients are: t = -2.2920, (Pr(T < t) = 0.0121.

Table 15: Demographic Factors – Education Level of Household Head

Education Level	e-Voucher (%)	MPCA (%)	Multi-Wallet (%)	FCS Average (Endline)	rCSI Average (Endline)	Avg. Cumulative Debt - € (Endline)	Avg. Total Expenditure - € (Endline)
Primary or lower	42.26	60.35	67.7	50.9	7.9	5,966	247
Secondary or Vocational	49.41	32.16	24.85	50.7	4.2	5,745	237
University Degree	8.33	7.49	7.45	50.3	6.5	7,313	225

ANOVA was applied to check if the differences seen in rCSI scores and debt were statistically significant. The results show that the FCS for all households are not affected by education[23]. Similarly, rCSI scores, total debt, and expenditure, all showed non-significant results[24].

---

[23] Results for difference in FCS according to education of the household head is $(F_{(7,548)}=1.77, P>0.0913)$.

[24] The ANOVA results for rCSI scores were $F_{(7,548)}=1.68, P>0.1109$, for income were $F_{(7, 548)}=1.49, p>0.1680$, and for total debt were $F_{(7,512)}=0.61, p>0.7511$.

6. Discussion and Conclusion

The GMPC programme is a promising solution towards the broad goal of improving well-being and short run resilience outcomes among the target population.

Food security – a well-tested proxy for overall well-being – improved for all recipients, especially among cash recipients. Likewise, rCSI scores and monthly cash-flow also saw significant improvements, with all recipients showing reduced use of harmful coping strategies and closing detrimental consumption gaps. Indeed, the research notes that improvements and trends in these outcomes are very sensitive to the provided cash- and food-based support, and suggests the assistance had immediate positive impacts on highly vulnerable communities. These takeaways reinforce findings in the wider literature showing that the use of cash-based assistance is effective at providing immediate economic stabilization and helps to ensure that basic, vital, and emergency needs are met.

What remains to be seen, however, is the extent these benefits offer an immediate or useful pathway for households to escape cycles of poverty, which in Gaza appear to be driven by ever-increasing debt burdens in the face of a lack of livelihoods and falling pre-assistance income-to-expenditure ratios. Interventions like the GMPC programme provide a useful lifeline for these households to find relief from this cycle and give household members a chance to recover and potentially seek out more optimal economic conditions. This was demonstrated in the immediate and sustained alignment of income and expenditure throughout the programme, as well as the consensus among programme beneficiaries that their primary needs were being met. However, while it seems clear the programme had immediate positive impacts, there does not seem to be any evidence that households have changed behaviours that are likely to reshape their economic futures. This is also reinforced in the observed interplay between debt, savings, and investment, where households seem to rely more on long term debt-financing than strategic saving or investment.

This study offers insight into how different cash-based modalities influence behaviours that promote more virtuous household cycles. Apart from the benefits of allowing households to meet basic needs and reduce food insecurity, each transfer type was able to affect some range of positive behaviours. Cash-based aid showed some promise in reducing the acquisition of new debt, while food-based aid provided clearer movements away from informal, unreliable, and social-based networks as primary sources of income.

It is recommended humanitarian aid providers continue to implement various cash-based modalities in the Gaza Strip and continue to monitor the same indicators and outcomes used in this evaluation. More deliberate and refined research design can allow for more definitive answers around the marginal benefits of different transfer modalities, or a single modality such as MPCA, while also exploring further programme components that would work towards longer-term economic and poverty-reducing outcomes.

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Annexes:

Annex Table 1: ANOVA Results for Comparison of Baseline mean FCS

```
         Number of obs =        556    R-squared      =  0.3416
         Root MSE      =    13.1567    Adj R-squared =  0.3392

   Source |  Partial SS         df         MS          F      Prob>F

    Model |  49669.648           2   24834.824     143.47    0.0000

     mode |  49669.648           2   24834.824     143.47    0.0000

 Residual |  95723.899         553   173.09928

    Total |  145393.55         555   261.97035
```

Annex Table 2: Tukeys' Post Hoc Test Results

```
                                       Tukey              Tukey
          Contrast   Std. Err.      t     P>|t|     [95% Conf. Interval]

     mode
   2 vs 1   19.20056  1.338994    14.34    0.000    16.05387    22.34725
   3 vs 1  -.0593944  1.451035    -0.04    0.999    -3.469384    3.350595
   3 vs 2  -19.25995  1.355619   -14.21    0.000    -22.44571    -16.0742
```

Annex Table 3: ANOVA Results for Comparison of Endline FCS

```
         Number of obs =        556    R-squared      =  0.0047
         Root MSE      =    12.5713    Adj R-squared =  0.0011

   Source |  Partial SS         df         MS          F      Prob>F

    Model |  411.77524           2   205.88762       1.30    0.2726

     mode |  411.77524           2   205.88762       1.30    0.2726

 Residual |   87394.19         553   158.03651

    Total |  87805.965         555   158.20895
```

Annex Table 4: ANOVA Results for Comparison of mean Baseline CSI

```
           Number of obs =        556    R-squared     =  0.0018
           Root MSE       =     14.129    Adj R-squared = -0.0018
```

Source	Partial SS	df	MS	F	Prob>F
Model	199.97914	2	99.989571	0.50	0.6063
mode	199.97914	2	99.989571	0.50	0.6063
Residual	110394.03	553	199.62753		
Total	110594.01	555	199.26848		

Annex Table 5: ANOVA Results for Comparison of mean Endline CSI

```
           Number of obs =        556    R-squared     =  0.0010
           Root MSE       =     6.81198   Adj R-squared = -0.0027
```

Source	Partial SS	df	MS	F	Prob>F
Model	24.670324	2	12.335162	0.27	0.7667
mode	24.670324	2	12.335162	0.27	0.7667
Residual	25660.889	553	46.403054		
Total	25685.559	555	46.280287		

Annex Table 6: Correlation of Key Variables with Household Size

	Household Size	Baseline FCS	Endline FCS	Endline CSI	Baseline CSI	Endline 30-day Savings	Endline Cumulative Debts	Baseline Cumulative Debts	Endline Total Income
Household Size	1								
	556								
Baseline FCS	0.1629	1							
	0.0001								
	556	556							
Endline FCS	0.0578	0.0611	1						
	0.1734	0.1503							
	556	556	556						
Endline CSI	-0.0012	0.0446	0.1259	1					
	0.9766	0.294	0.0029						
	556	556	556	556					
Baseline CSI	-0.0349	-0.0211	-0.0531	0.0333	1				
	0.4119	0.62	0.2113	0.4327					
	556	556	556	556	556				
Endline 30 day Savings	0.0151	0.02	0.0258	-0.0648	-0.0386	1			
	0.7232	0.6387	0.5443	0.1271	0.3634				
	556	556	556	556	556	556			
Endline Cumulative Debts	0.0826	0.0218	0.0104	0.0066	-0.049	-0.0136	1		
	0.0599	0.6197	0.8123	0.8798	0.2643	0.7577			
	520	520	520	520	520	520	520		
Baseline Cumulative Debts	0.0994	0.0127	0.0138	0.0072	-0.0956	-0.0068	0.1758	1	
	0.0191	0.7653	0.7453	0.8648	0.0242	0.8729	0.0001		
	556	556	556	556	556	556	520	556	
Endline Total Income	0.1841	0.1477	-0.0482	-0.1279	0.0373	0.0785	-0.0301	0.0263	1
	0	0.0005	0.2562	0.0025	0.3804	0.0643	0.4936	0.5357	
	556	556	556	556	556	556	520	556	556

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